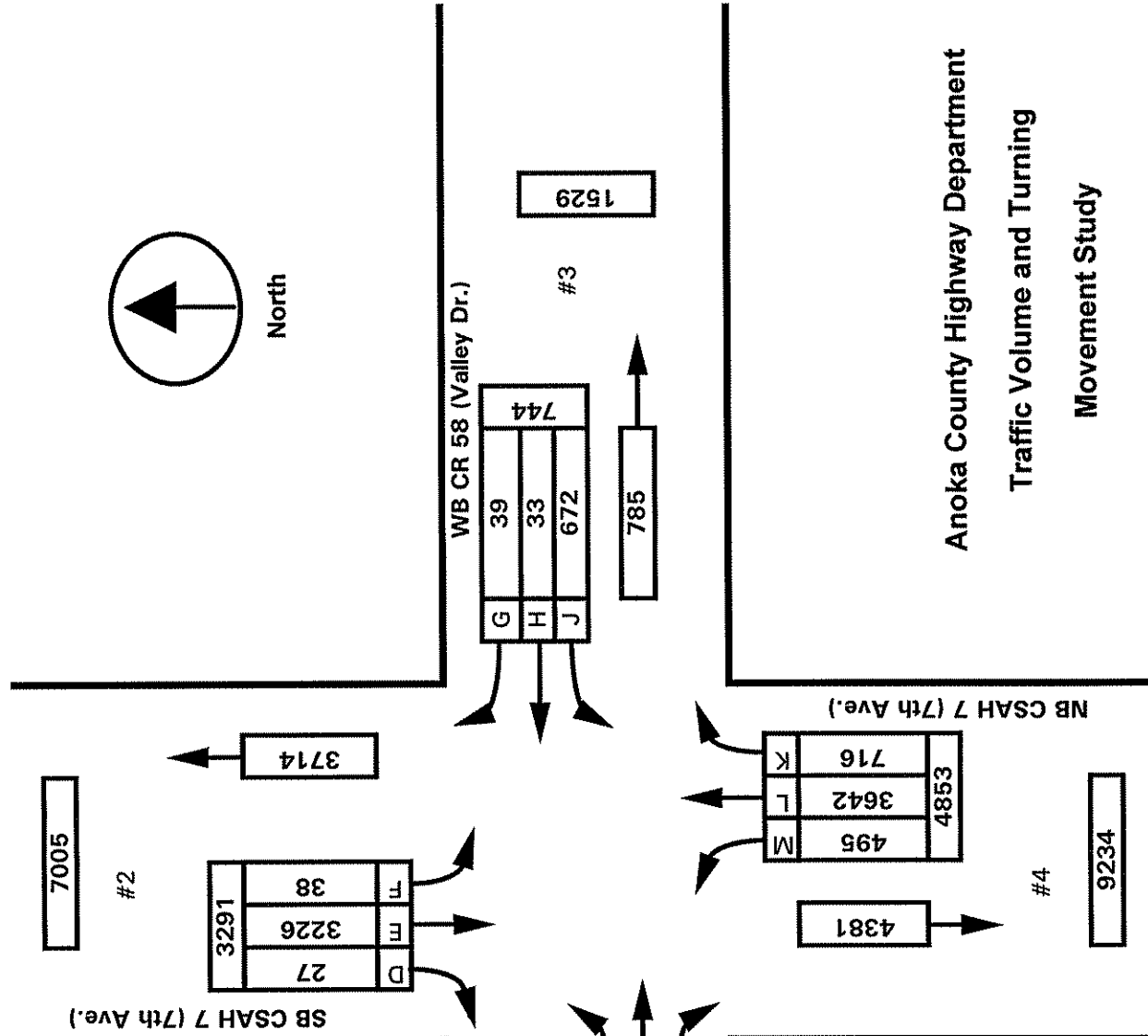


Date : 7/19/96 AM 7/16/96 PM

Count Number : TMC 9609

Location : CSAH 7 (7th Ave.) @

CR 58 (Valley Dr.)



Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

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

ANOKA COUNTY HIGHWAY DEPARTMENT

TRAFFIC ENGINEERING SECTION

TRAFFIC STUDY

Weather :
 Counted by: Ann and Gabe
 Ward # :
 Other :

Study Name: TMC9609
 Site Code : 96090202
 Start Date: 07/16/96
 Page : 1

Vehicle group 1

Start Time	CSAH 7 (7TH AVE) From North				CR 58 (VALLEY DR.) From East				CSAH 7 (7TH AVE) From South				159TH AVE NW From West				Intvl	Exclu	Inclu
	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY			
07/16/96																			
06:00	0	80	0	1	0	1	18	0	1	10	0	0	6	1	0	0	118	1	117
06:15	0	145	1	1	0	0	33	0	4	7	1	1	11	0	0	0	204	2	202
06:30	0	139	0	2	0	0	23	1	7	12	0	3	10	0	0	0	197	6	191
06:45	0	156	0	4	0	0	34	1	2	17	0	2	9	0	0	0	225	7	218
Hour	0	520	1	8	0	1	108	2	14	46	1	6	36	1	0	0	744	16	728
07:00	0	86	1	2	0	0	19	0	4	13	2	3	12	0	1	0	143	5	138
07:15	0	82	0	0	1	0	15	1	10	23	3	2	12	1	1	1	152	4	148
07:30	0	88	1	1	0	2	18	1	1	23	1	0	8	1	2	0	147	2	145
07:45	0	105	0	0	1	0	18	0	1	31	3	0	10	0	0	0	169	0	169
Hour	0	361	2	3	2	2	70	2	16	90	9	5	42	2	4	1	611	11	600
08:00	0	61	2	4	1	0	12	1	3	25	3	0	14	0	0	0	126	5	121
08:15	0	56	0	2	1	0	19	0	6	22	4	7	11	0	1	0	129	9	120
08:30	0	61	0	0	0	0	13	2	5	23	2	2	8	0	0	0	116	4	112
08:45	0	62	2	1	0	0	12	0	4	30	2	1	4	0	0	0	118	2	116
Hour	0	240	4	7	2	0	56	3	18	100	11	10	37	0	1	0	489	20	469
09:00	1	49	0	0	1	0	11	0	5	23	6	2	13	0	2	1	114	3	111
09:15	1	43	2	1	0	0	7	0	4	18	6	2	7	1	2	1	95	4	91
09:30	0	48	0	2	1	0	12	1	6	15	3	3	6	1	1	0	99	6	93
09:45	1	41	0	2	0	0	8	0	7	29	3	1	4	0	0	0	96	3	93
Hour	3	181	2	5	2	0	38	1	22	85	18	8	30	2	5	2	404	16	388
10:00	0	47	1	2	0	0	9	1	3	23	7	3	5	0	0	0	101	6	95
10:15	0	51	0	0	1	0	11	0	6	25	4	0	4	0	0	1	103	1	102
10:30	0	35	4	1	0	0	11	0	5	35	3	5	5	1	0	1	106	7	99
10:45	0	36	1	3	0	1	8	1	4	28	2	0	4	2	0	0	90	4	86
Hour	0	169	6	6	1	1	39	2	18	111	16	8	18	3	0	2	400	18	382
11:00	0	32	0	1	0	1	7	0	7	37	8	3	7	0	1	0	104	4	100
11:15	0	34	0	1	0	0	10	1	7	41	3	1	5	0	0	0	103	3	100
11:30	0	34	0	0	1	0	6	0	11	29	7	3	7	2	0	0	100	3	97
11:45	0	37	0	3	1	0	8	0	10	27	10	2	5	0	1	0	104	5	99
Hour	0	137	0	5	2	1	31	1	35	134	28	9	24	2	2	0	411	15	396
12:00	1	29	0	2	0	2	6	0	15	45	8	2	7	0	0	1	118	5	113
12:15	1	36	0	1	0	0	4	0	10	50	6	4	8	1	2	1	124	6	118
12:30	0	33	0	2	0	1	13	0	12	33	8	3	5	1	0	0	111	5	106
12:45	2	43	0	4	1	1	6	0	7	37	7	1	13	0	0	1	123	6	117
Hour	4	141	0	9	1	4	29	0	44	165	29	10	33	2	2	3	476	22	454

ANOKA COUNTY HIGHWAY DEPARTMENT

TRAFFIC ENGINEERING SECTION

TRAFFIC STUDY

Weather :
 Counted by: Ann and Gabe
 Ward # :
 Other :

Study Name: TMC9609
 Site Code : 96090202
 Start Date: 07/16/96
 Page : 2

Vehicle group 1

Start Time	CSAH 7 (7TH AVE) From North				CR 58 (VALLEY DR.) From East				CSAH 7 (7TH AVE) From South				159TH AVE NW From West				Intvl	Exclu	Inclu
	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY			
13:00	1	38	0	1	0	0	9	0	12	49	5	6	10	0	1	0	132	7	125
13:15	0	39	1	3	1	0	5	0	12	52	2	0	2	0	0	0	117	3	114
13:30	0	33	0	1	0	0	7	0	13	40	7	1	7	0	1	0	110	2	108
13:45	0	52	2	0	0	0	15	0	13	52	6	0	5	0	1	0	146	0	146
Hour	1	162	3	5	1	0	36	0	50	193	20	7	24	0	3	0	505	12	493
14:00	0	42	1	1	0	0	7	1	11	31	7	1	4	0	0	0	106	3	103
14:15	0	63	0	2	0	1	7	0	5	50	10	2	8	1	0	0	149	4	145
14:30	0	70	1	1	0	0	9	0	8	43	10	1	10	0	0	0	153	2	151
14:45	0	41	0	2	0	1	11	2	11	58	12	2	14	0	2	0	156	6	150
Hour	0	216	2	6	0	2	34	3	35	182	39	6	36	1	2	0	564	15	549
15:00	0	38	1	4	0	2	6	1	10	79	9	2	9	0	2	1	164	8	156
15:15	0	34	0	3	1	1	4	0	10	115	11	0	3	2	0	0	184	3	181
15:30	0	40	0	5	1	0	6	1	20	108	5	2	7	0	0	0	195	8	187
15:45	0	37	0	1	5	1	9	0	21	101	9	3	6	0	0	0	193	4	189
Hour	0	149	1	13	7	4	25	2	61	403	34	7	25	2	2	1	736	23	713
16:00	1	29	1	2	1	0	6	0	20	119	20	4	2	0	0	0	205	6	199
16:15	1	36	0	2	2	2	8	1	26	122	14	3	6	2	0	0	225	6	219
16:30	0	43	1	1	1	0	14	0	28	120	17	2	8	3	1	2	241	5	236
16:45	3	57	2	2	0	3	9	0	22	157	11	5	6	0	1	0	278	7	271
Hour	5	165	4	7	4	5	37	1	96	518	62	14	22	5	2	2	949	24	925
17:00	1	47	1	0	0	1	14	0	23	121	13	1	7	0	1	0	230	1	229
17:15	0	44	3	2	2	0	10	0	32	133	15	0	6	0	0	0	247	2	245
17:30	2	45	2	0	0	2	7	2	16	113	16	1	6	1	0	0	213	3	210
17:45	0	49	1	1	3	1	12	0	19	123	18	1	15	1	0	0	244	2	242
Hour	3	185	7	3	5	4	43	2	90	490	62	3	34	2	1	0	934	8	926
18:00	0	47	0	2	0	1	14	0	26	118	22	2	7	2	0	0	241	4	237
18:15	1	63	0	1	2	0	7	0	31	101	15	0	11	0	0	0	232	1	231
18:30	1	50	0	0	1	1	17	0	18	99	20	1	22	1	0	1	232	2	230
18:45	2	33	1	0	0	1	10	0	13	88	6	1	10	1	1	0	167	1	166
Hour	4	193	1	3	3	3	48	0	88	406	63	4	50	4	1	1	872	8	864
19:00	0	38	0	1	1	1	14	0	16	79	10	1	7	1	0	0	169	2	167
19:15	1	38	0	0	0	0	8	0	9	74	7	0	6	0	2	0	145	0	145
19:30	0	46	1	1	1	1	5	0	9	81	5	1	5	0	1	0	157	2	155
19:45	0	29	0	0	0	0	4	0	5	69	9	1	10	0	0	0	127	1	126
Hour	1	151	1	2	2	2	31	0	39	303	31	3	28	1	3	0	598	5	593

ANOKA COUNTY HIGHWAY DEPARTMENT

TRAFFIC ENGINEERING SECTION

TRAFFIC STUDY

Weather :
 Counted by: Ann and Gabe
 Ward # :
 Other :

Study Name: TMC9609
 Site Code : 96090202
 Start Date: 07/16/96
 Page : 3

Vehicle group 1

Start Time	CSAH 7 (7TH AVE) From North				CR 58 (VALLEY DR.) From East				CSAH 7 (7TH AVE) From South				159TH AVE NW From West				Intvl	Exclu	Inclu
	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY	Right	Thru	Left	HEAVY			
20:00	1	29	1	1	1	1	9	0	12	48	10	0	12	0	0	1	126	2	124
20:15	1	34	0	0	1	0	4	0	10	42	8	0	4	0	0	0	104	0	104
20:30	1	36	1	1	1	0	3	0	12	62	6	1	3	1	0	0	128	2	126
20:45	2	38	0	1	2	3	7	0	8	50	12	0	6	1	1	0	131	1	130
Hour	5	137	2	3	5	4	23	0	42	202	36	1	25	2	1	1	489	5	484
21:00	1	36	0	0	0	0	9	0	11	62	9	1	3	0	1	0	133	1	132
21:15	0	28	0	1	1	0	3	1	14	47	7	0	12	2	0	1	117	3	114
21:30	0	29	0	0	1	0	6	0	13	53	12	1	4	0	2	0	121	1	120
21:45	0	26	2	2	0	0	6	0	10	52	8	0	0	0	1	0	107	2	105
Hour	1	119	2	3	2	0	24	1	48	214	36	2	19	2	4	1	478	7	471
Total	27	3226	38	88	39	33	672	20	716	3642	495	103	483	31	33	14	9660	225	9435
% Apr.	0.7	95.4	1.1	2.6	5.1	4.3	87.9	2.6	14.4	73.4	9.9	2.0	86.0	5.5	5.8	2.4	-	-	-
% Int.	0.2	33.3	0.3	0.9	0.4	0.3	6.9	0.2	7.4	37.7	5.1	1.0	5.0	0.3	0.3	0.1	-	-	-

or Street Approaches:

Northbound:

CSAH 7 (7TH AVE)

Data File: C:\PETRA2\DATAFILE\TMC9609.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/16/96
 Number of Lanes: 2
 Approach Speed: 55
 Total Approach Traffic: 4853

Southbound:

CSAH 7 (7TH AVE)

Data File: C:\PETRA2\DATAFILE\TMC9609.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/16/96
 Number of Lanes: 2
 Approach Speed: 55
 Total Approach Traffic: 3291

Minor Street Approaches:

Eastbound:

159TH AVE NW

Data File: C:\PETRA2\DATAFILE\TMC9609.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/16/96
 Number of Lanes: 1
 Approach Speed: 30
 Total Approach Traffic: 547

Westbound:

CR 58 (VALLEY DR.)

Data File: C:\PETRA2\DATAFILE\TMC9609.PDF
 Count Type: IMC. Channel: 0. Count Date: 7/16/96
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 744

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 W	17	140	70	112
1	0	0 W	18	140	70	112
2	0	0 W	19	140	70	112
3	0	0 W	20	140	70	112
4	0	0 W	21	140	70	112
5	0	0 W	22	140	70	112
6	582	109 W	1	MAIN 140	SIDE 70	MAIN 112
7	478	74 W	2	MAIN 140	SIDE 70	112
8	373	58 W	3	140	70	112
9	311	40 W	8	140	70	112
10	320	41 W	7	140	70	112
11	334	34 W	14	140	70	112
12	383	37 E	10	105	52	84
13	429	37 W	11	MAIN 140	70	112
14	474	39 E	9	MAIN 105	52	84
15	648	36 W	12	MAIN 140	MAIN 70	MAIN 112
16	850	46 W	6	MAIN 140	MAIN 70	MAIN 112
17	837	52 W	5	MAIN 140	MAIN 70	MAIN 112
18	755	55 E	4	MAIN 105	--BOTH-- 52	MAIN 84
19	526	35 W	13	MAIN 140	70	MAIN 112
20	424	32 W	15	MAIN 140	70	112
21	420	26 W	16	MAIN 140	70	112
22	0	0 W	23	140	70	112
23	0	0 W	24	140	70	112

Warrant Summary:

Final 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 1 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. Peak hour total entering volume 926 does not meet criteria of 1000

- 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 0 hours.

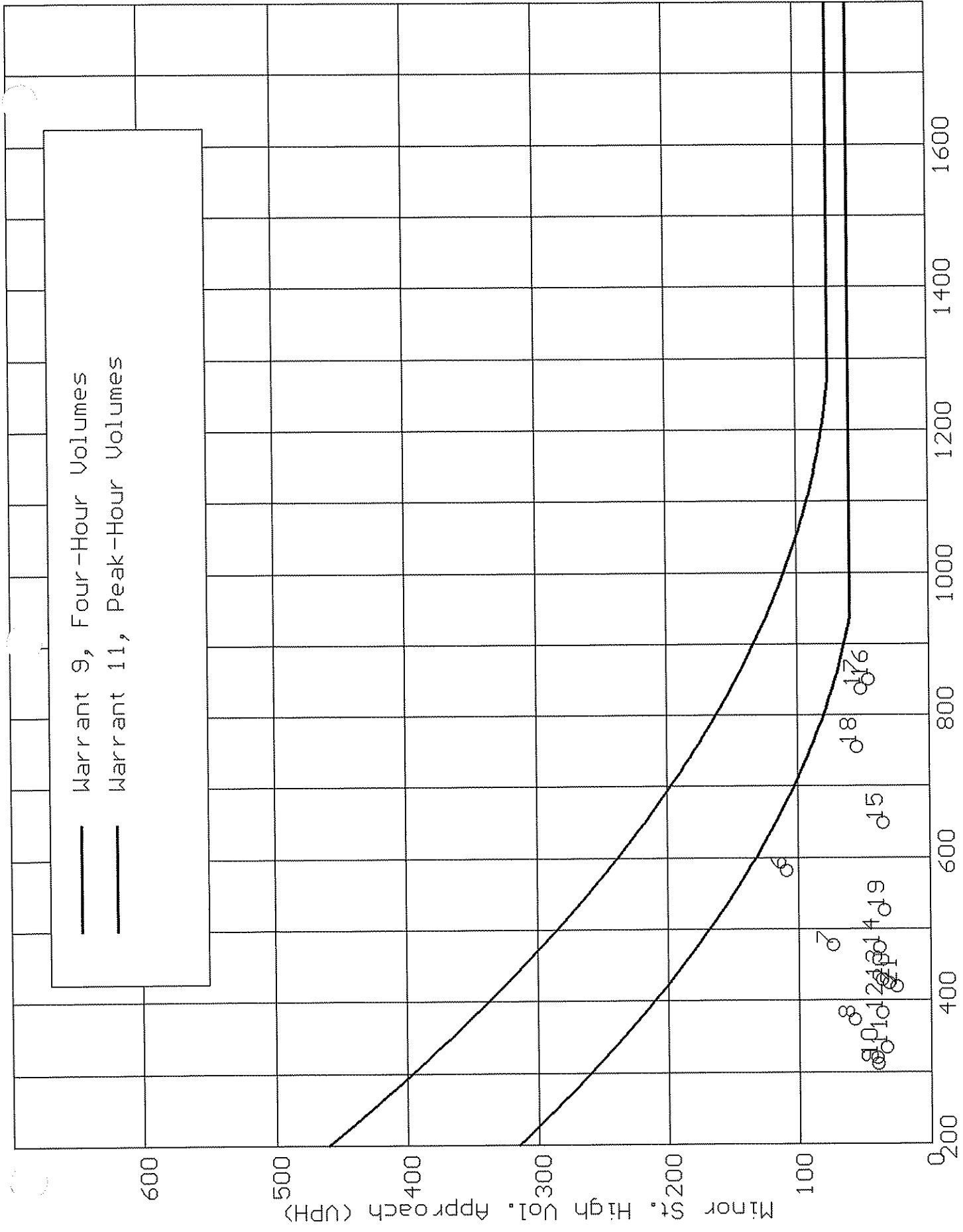
Warrant 10 - Peak Hour Delay

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

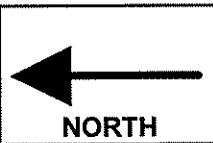
Criteria--Main St.: 800 (4 approaches), 650 (3 approaches); Side St.: 100.

Warrant 11 - Peak Hour Volume

NOT SATISFIED.



Major St. Total of Both Approaches (UPH)



COUNT LOCATION: CSAH 7 (7TH AVE. NW) @
CR 58/159TH AVE. NW

DATE: 7/16/96

APP. #1=
SB CSAH 7 (7th Ave. NW)
APP. #2 =
WB CR 58 (Valley Drive)
APP. #3=
NB CSAH 7 (7th Ave. NW)
APP. #4=
EB 159th Ave.

APP. #2 50 MPH	APP. #3 55 MPH
APP. #1 55 MPH	APP. #4 30 MPH

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		1			1	3		
2:15-2:30		1			1	4		
2:30-2:45						2		
2:45-3:00						6		
HOURLY TOTAL					2	HOURLY TOTAL		15
3:00-3:15						8		
3:15-3:30						3		
3:30-3:45						8		
3:45-4:00						4		
HOURLY TOTAL						HOURLY TOTAL		23
4:00-4:15						6		
4:15-4:30						5		1
4:30-4:45						5		
4:45-5:00						4		3
HOURLY TOTAL						HOURLY TOTAL		24
5:00-5:15						1		
5:15-5:30						2		
5:30-5:45						3		
5:45-6:00						2		
HOURLY TOTAL						HOURLY TOTAL		8
6:00-6:15						4		
6:15-6:30						1		
6:30-6:45						1	1	
6:45-7:00						1		
HOURLY TOTAL						HOURLY TOTAL		8
7:00-7:15						1		
7:15-7:30								
7:30-7:45						2		
7:45-8:00						1		
HOURLY TOTAL						HOURLY TOTAL		4
8:00-8:15						2		
8:15-8:30								
8:30-8:45						2		
8:45-9:00						1		
HOURLY TOTAL						HOURLY TOTAL		5
9:00-9:15						1		
9:15-9:30						3		
9:30-9:45						1		
9:45-10:00						2		
HOURLY TOTAL						HOURLY TOTAL		7