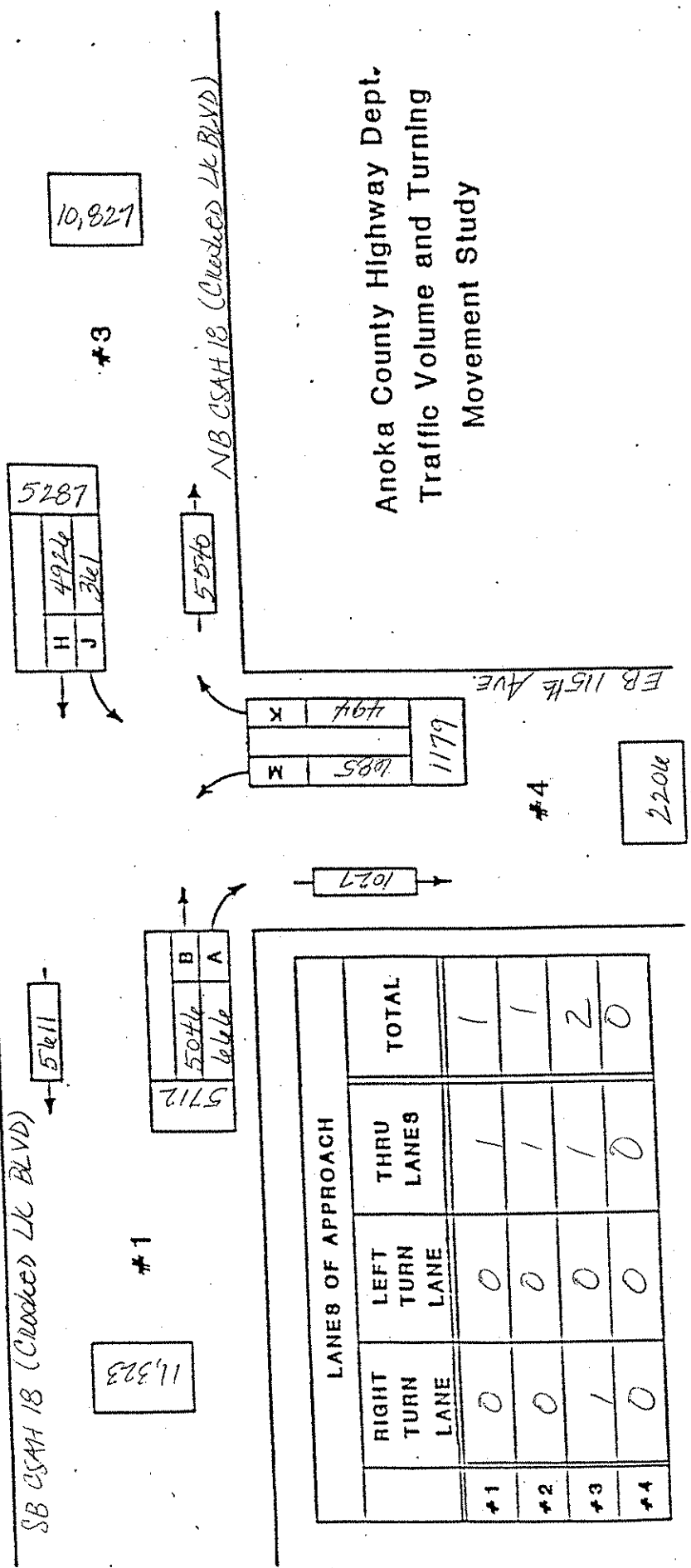




North

Date 4-28-93 AM 7-29-93 PM
 C.S. _____
 Location CSAH 18 (Crested Lk Blvd) @ 115th Ave.



Anoka County Highway Dept.
 Traffic Volume and Turning
 Movement Study

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

ANOKA COUNTY HIGHWAY DEPARTMENT
 TRAFFIC ENGINEERING SECTION
 TRAFFIC VOLUME AND
 TURNING MOVEMENT STUDY

Site Code : 93
 Start Date: 07
 File I.D. : TM
 Page : 1

Counter : TDC EIGHT
 Counted by: Josie/Pat

Vehicle group 1

Date	SB CSAH 18 Southbound				Westbound				NB CSAH 18 Northbound				EB 115TH AVE Eastbound				Vehicle Total
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	
06:00	0	1	15	0	0	0	0	0	2	0	9	1	0	9	0	6	41
06:15	1	3	30	0	0	0	0	0	0	0	21	0	0	9	0	6	69
06:30	0	1	32	0	0	0	0	0	0	0	10	2	1	17	0	8	70
06:45	3	3	56	0	0	0	0	0	3	0	25	0	0	11	0	15	110
Hr Total	4	8	133	0	0	0	0	0	5	0	65	3	1	46	0	35	290
07:00	0	7	49	0	0	0	0	0	0	0	21	1	0	15	0	10	103
07:15	2	8	78	0	0	0	0	0	1	0	26	0	1	15	0	12	139
07:30	3	5	58	0	0	0	0	0	0	0	27	4	0	15	0	9	118
07:45	4	2	78	0	0	0	0	0	1	0	43	4	1	14	0	6	147
Hr Total	9	22	263	0	0	0	0	0	2	0	117	9	2	59	0	37	507
08:00	0	3	53	0	0	0	0	0	0	0	32	6	0	8	0	8	110
08:15	1	4	36	0	0	0	0	0	2	0	37	0	0	5	0	9	91
08:30	7	4	58	0	0	0	0	0	1	0	27	0	0	5	0	5	99
08:45	3	2	57	0	0	0	0	0	6	0	46	1	2	8	0	13	127
Hr Total	11	13	204	0	0	0	0	0	9	0	142	7	2	26	0	35	427
09:00	1	4	76	0	0	0	0	0	3	0	32	1	0	4	0	4	121
09:15	1	6	57	0	0	0	0	0	2	0	41	3	1	11	0	8	126
09:30	1	6	47	0	0	0	0	0	3	0	50	2	0	6	0	3	114
09:45	2	7	62	0	0	0	0	0	7	0	77	2	0	5	0	6	159
Hr Total	5	23	242	0	0	0	0	0	15	0	200	8	1	26	0	21	520
10:00	1	6	68	0	0	0	0	0	0	0	44	3	1	11	0	12	144
10:15	1	7	67	0	0	0	0	0	2	0	57	5	0	6	0	5	147
10:30	1	10	82	0	0	0	0	0	3	0	77	6	0	3	0	6	184
10:45	1	11	67	0	0	0	0	0	2	0	63	4	0	5	0	10	160
Hr Total	4	34	284	0	0	0	0	0	7	0	241	18	1	25	0	33	635
11:00	2	9	79	0	0	0	0	0	1	0	67	4	0	3	0	7	169
11:15	4	8	100	0	0	0	0	0	2	0	79	8	0	6	0	8	209
11:30	1	9	77	0	0	0	0	0	2	0	84	3	1	11	0	13	197
11:45	1	7	82	0	0	0	0	0	2	0	85	8	0	10	0	4	196
Hr Total	8	33	338	0	0	0	0	0	7	0	315	23	1	30	0	32	771
12:00	3	5	84	0	0	0	0	0	0	0	84	2	0	7	0	12	194
12:15	1	9	95	0	0	0	0	0	3	0	61	5	1	3	0	12	185
12:30	4	12	76	0	0	0	0	0	1	0	85	5	0	7	0	8	193
12:45	1	8	77	0	0	0	0	0	3	0	92	5	0	5	0	5	192
Hr Total	9	34	332	0	0	0	0	0	7	0	322	17	1	22	0	37	764

ANOKA COUNTY HIGHWAY DEPARTMENT
 TRAFFIC ENGINEERING SECTION
 TRAFFIC VOLUME AND
 TURNING MOVEMENT STUDY

Site Code : 93
 Start Date: 07
 File I.D. : TM
 Page : 2

Counter : TDC EIGHT
 Counted by: Josie/Pat

Vehicle group 1

Date	SB CSAH 18 Southbound				Westbound				NB CSAH 18 Northbound				EB 115TH AVE Eastbound				Vehicle Total
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	

07/29/93	-----																
13:00	2	13	76	0	0	0	0	0	0	0	90	2	1	6	0	10	197
13:15	0	7	78	0	0	0	0	0	5	0	103	6	2	5	0	17	216
13:30	1	7	79	0	0	0	0	0	0	0	87	4	0	6	0	14	197
13:45	4	10	88	0	0	0	0	0	1	0	83	2	0	9	0	6	198
Hr Total	7	37	321	0	0	0	0	0	6	0	363	14	3	26	0	47	808
14:00	0	8	69	0	0	0	0	0	3	0	87	5	0	11	0	9	189
14:15	3	4	79	0	0	0	0	0	1	0	94	6	0	3	0	8	194
14:30	2	12	80	0	0	0	0	0	1	0	77	3	0	5	0	7	184
14:45	3	7	80	0	0	0	0	0	3	0	88	6	0	3	0	8	192
Hr Total	8	31	308	0	0	0	0	0	8	0	346	20	0	22	0	32	759
15:00	0	8	80	0	0	0	0	0	5	0	74	10	1	6	0	8	186
15:15	2	12	70	0	0	0	0	0	1	0	81	5	0	3	0	8	179
15:30	3	12	105	0	0	0	0	0	2	0	89	5	2	5	0	18	234
15:45	1	11	82	0	0	0	0	0	1	0	93	4	1	7	0	12	209
Hr Total	6	43	337	0	0	0	0	0	9	0	337	24	4	21	0	46	808
16:00	3	17	100	0	0	0	0	0	1	0	113	15	1	7	0	13	265
16:15	2	21	82	0	0	0	0	0	3	0	87	15	0	8	0	10	223
16:30	4	18	105	0	0	0	0	0	2	0	88	11	0	12	0	14	248
16:45	0	21	108	0	0	0	0	0	3	0	136	12	0	9	0	24	310
Hr Total	9	77	395	0	0	0	0	0	9	0	424	53	1	36	0	61	1046
17:00	1	16	110	0	0	0	0	0	1	0	158	10	0	9	0	23	326
17:15	1	15	124	0	0	0	0	0	1	0	144	12	0	7	0	13	315
17:30	0	16	113	0	0	0	0	0	2	0	110	18	0	10	0	14	281
17:45	0	21	132	0	0	0	0	0	2	0	126	13	0	9	0	11	312
Hr Total	2	68	479	0	0	0	0	0	6	0	538	53	0	35	0	61	1234
18:00	0	11	139	0	0	0	0	0	1	0	121	5	0	12	0	14	302
18:15	0	16	152	0	0	0	0	0	0	0	112	8	0	7	0	15	310
18:30	0	14	115	0	0	0	0	0	0	0	105	6	0	10	0	13	263
18:45	0	10	93	0	0	0	0	0	0	0	116	14	0	5	0	20	258
Hr Total	0	51	499	0	0	0	0	0	1	0	454	33	0	34	0	62	1133
19:00	0	24	118	0	0	0	0	0	0	0	113	6	0	12	0	17	290
19:15	2	13	93	0	0	0	0	0	0	0	85	5	0	10	0	14	220
19:30	0	21	91	0	0	0	0	0	0	0	109	5	0	4	0	17	247
19:45	0	18	91	0	0	0	0	0	0	0	103	9	0	5	0	10	236
Hr Total	2	76	393	0	0	0	0	0	0	0	410	25	0	31	0	58	993

ANOKA COUNTY HIGHWAY DEPARTMENT
 TRAFFIC ENGINEERING SECTION
 TRAFFIC VOLUME AND
 TURNING MOVEMENT STUDY

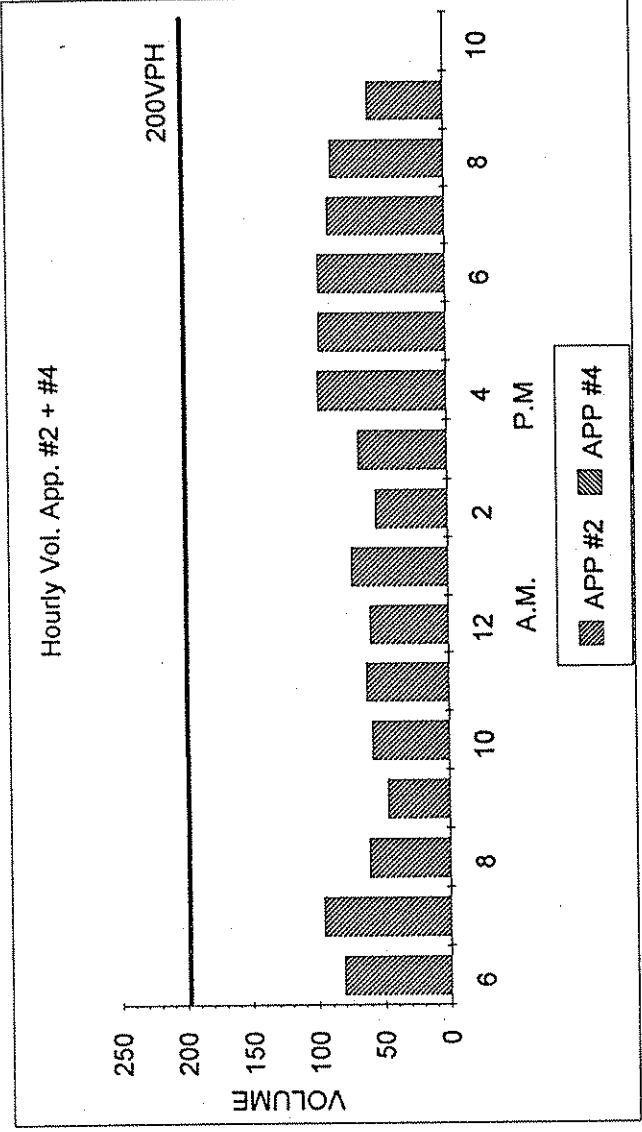
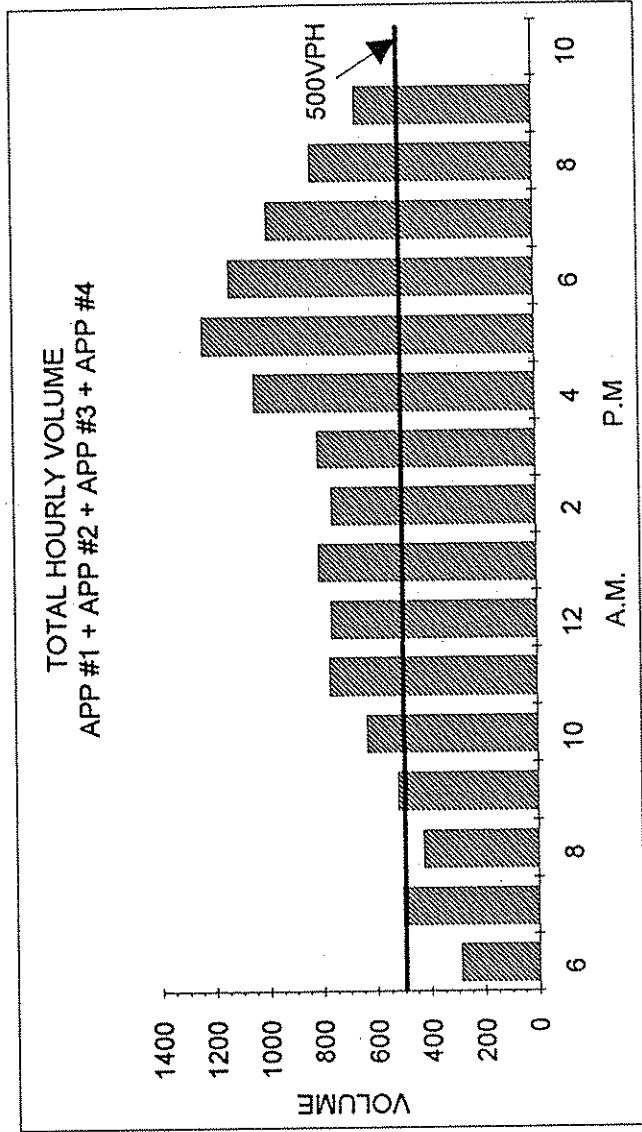
Site Code : 93
 Start Date: 07
 File I.D. : TM
 Page : 3

Counter :TDC EIGHT
 Counted by:Josie/Pat

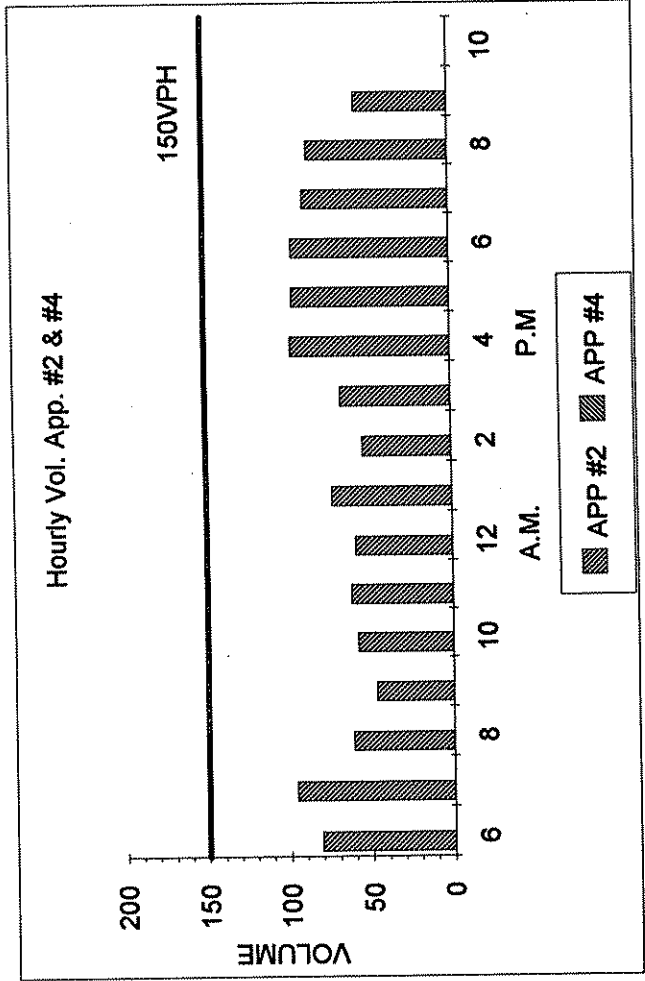
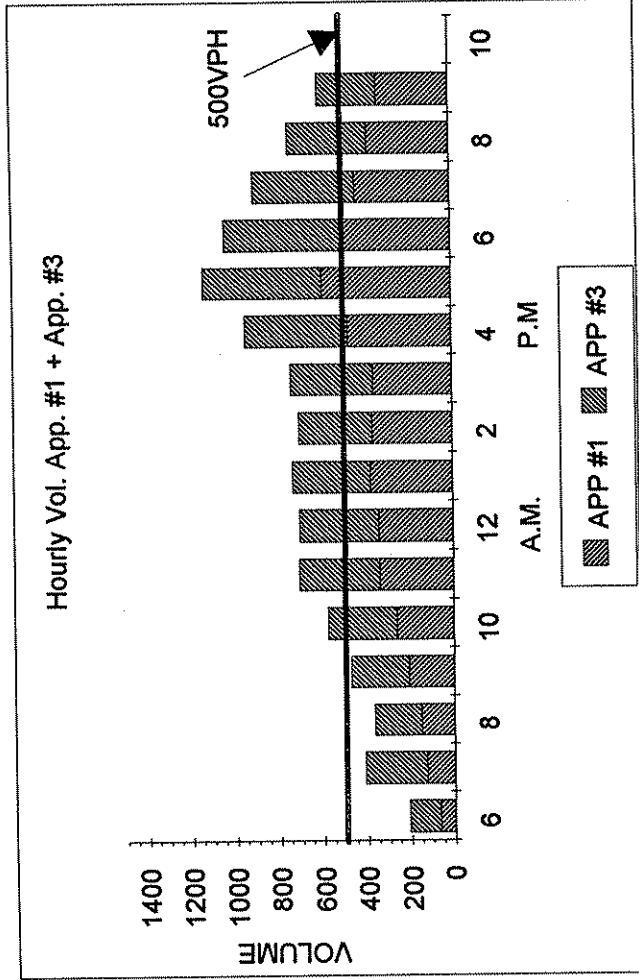
Vehicle group 1

Date	SB CSAH 18 Southbound				Westbound				NB CSAH 18 Northbound				EB 115TH AVE Eastbound				Vehicle Total
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	
20:00	0	17	98	0	0	0	0	0	0	0	66	6	0	10	0	16	213
20:15	0	13	57	0	0	0	0	0	0	0	82	9	0	5	0	12	178
20:30	1	19	77	0	0	0	0	0	0	0	110	8	0	11	0	12	237
20:45	0	19	63	0	0	0	0	0	0	0	89	7	1	3	0	17	198
Hr Total	1	68	295	0	0	0	0	0	0	0	347	30	1	29	0	57	826
21:00	0	11	58	0	0	0	0	0	0	0	96	8	0	10	0	11	194
21:15	0	9	62	0	0	0	0	0	0	0	76	5	0	7	0	10	169
21:30	0	11	57	0	0	0	0	0	0	0	67	6	0	6	0	4	151
21:45	0	17	46	0	0	0	0	0	0	0	66	5	0	3	0	6	143
Hr Total	0	48	223	0	0	0	0	0	0	0	305	24	0	26	0	31	657
TOTAL	85	666	5046	0	0	0	0	0	91	0	4926	361	18	494	0	685	12178

TMC9314 STOP WARRANT STUDY



TMC9314 SIGNAL WARRANT 1 STUDY



TMC9314 SIGNAL WARRANT 2 STUDY

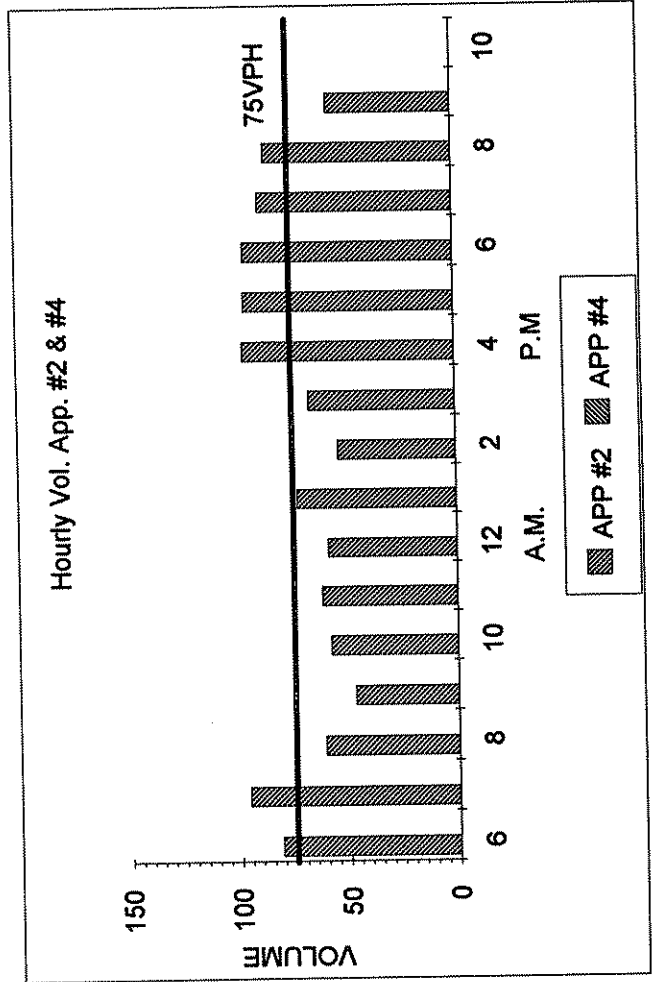
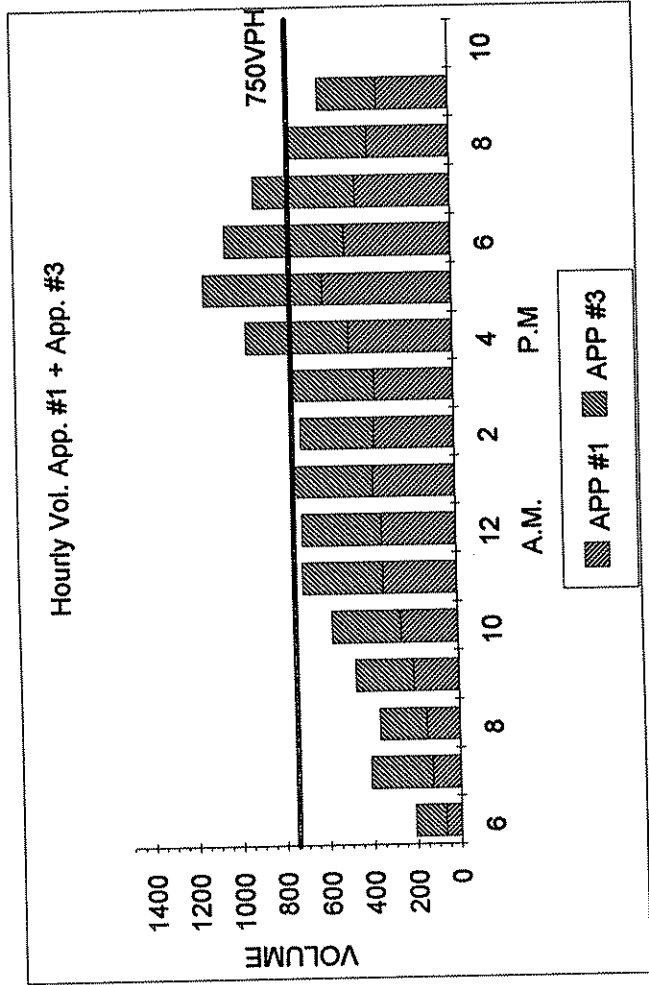
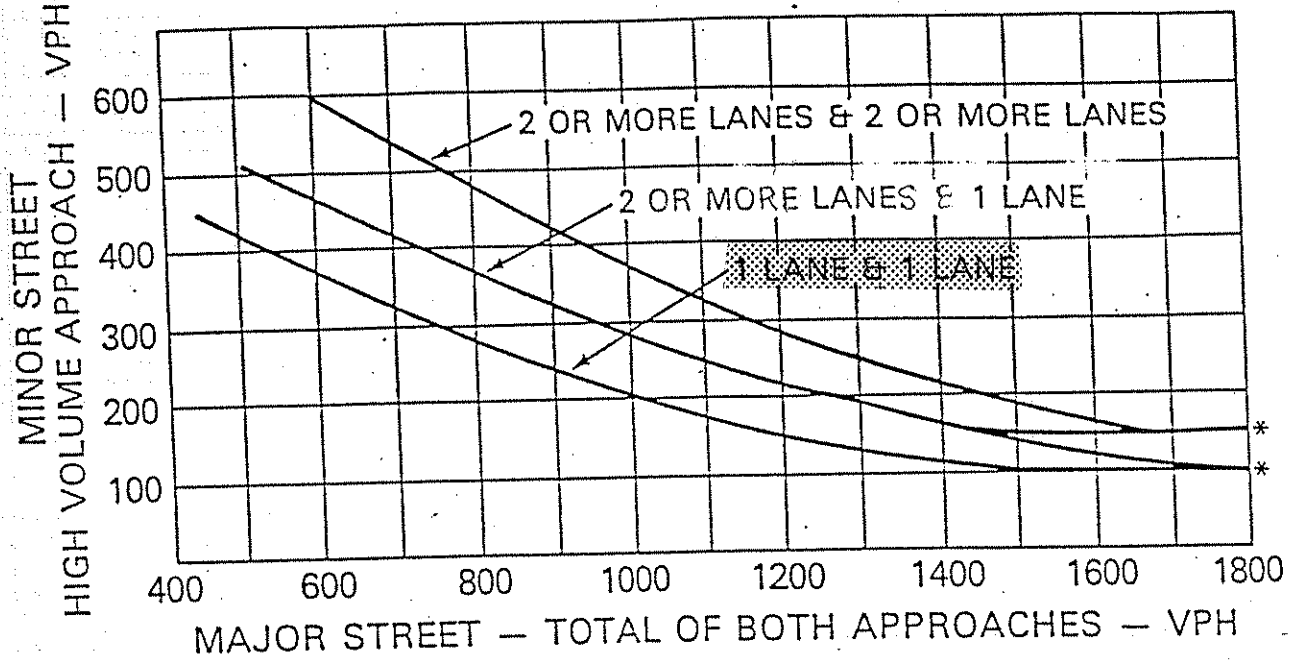


FIGURE 4-5. PEAK HOUR VOLUME WARRANT



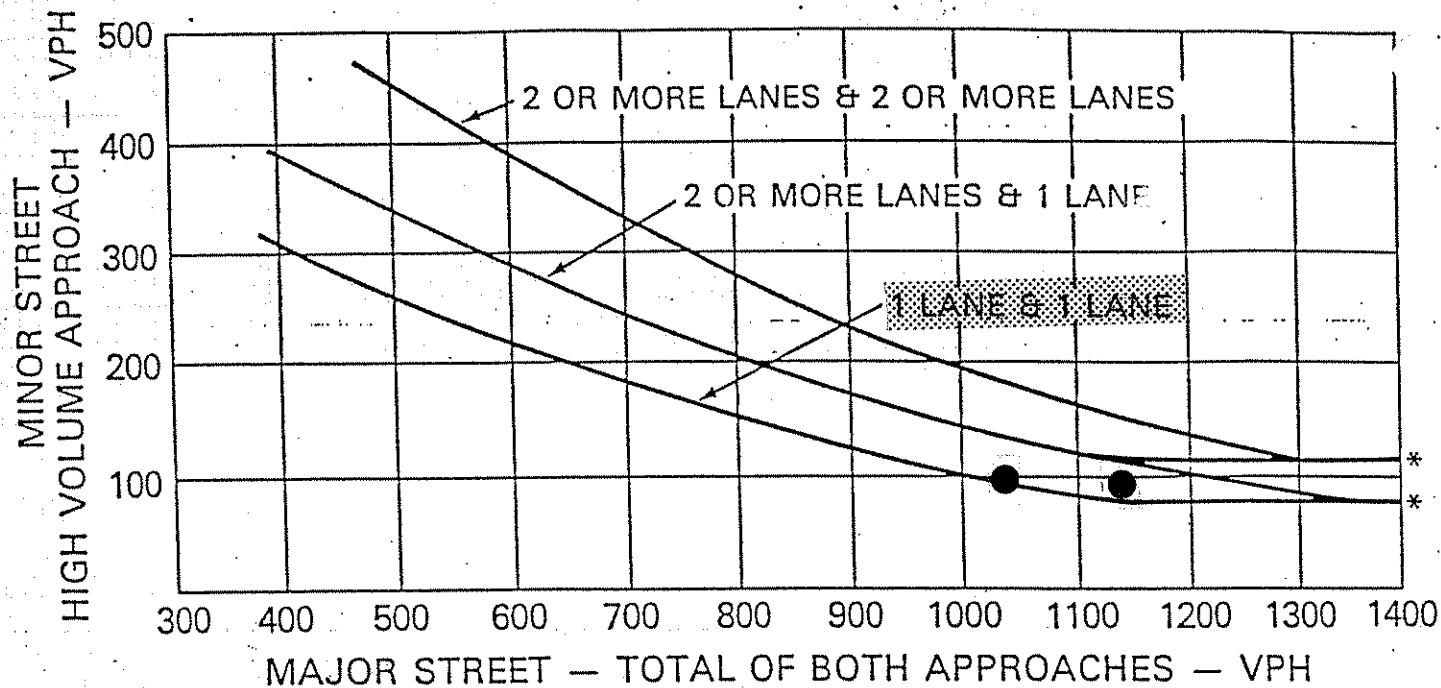
*NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

● = VOLUMES WHICH EXCEED THE THRESHOLD AND ARE REPRESENTED ON THE GRAPH.

★ = VOLUMES WHICH EXCEED THE THRESHOLD BUT CANNOT BE REPRESENTED ON THE GRAPH.

TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
6-7 am	209	81
7-8 am	411	96
8-9 am	366	61
9-10 am	473	47
10-11 am	577	58
11-12 pm	709	62
12-1 pm	705	59
1-2 pm	735	73
2-3 pm	705	54
3-4 pm	741	67
4-5 pm	949	97
5-6 pm	1138	96
6-7 pm	1037	96
7-8 pm	904	89
8-9 pm	740	86
9-10 pm	600	57

FIGURE 4-7. FOUR HOUR VOLUME WARRANT



*NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

● = VOLUMES WHICH EXCEED THE THRESHOLD AND ARE REPRESENTED ON THE GRAPH.

★ = VOLUMES WHICH EXCEED THE THRESHOLD BUT CANNOT BE REPRESENTED ON THE GRAPH.

TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
6-7 am	209	81
7-8 am	411	96
8-9 am	366	61
9-10 am	473	47
10-11 am	577	58
11-12 pm	709	62
12-1 pm	705	59
1-2 pm	735	73
2-3 pm	705	54
3-4 pm	741	67
4-5 pm	949	97
● 5-6 pm	1138	96
● 6-7 pm	1037	96
7-8 pm	904	89
8-9 pm	740	86
9-10 pm	600	57



NORTH

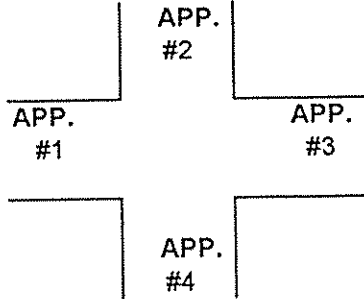
APP. #1= SB CSAH 18
(CROOKED LK BLVD)
APP. #2=
WB (GAS STATION)
APP. #3= NB CSAH 18
(CROOKED LK BLVD)
APP. #4= EB 115TH AVE

COUNT LOCATION:

CSAH 18 (CROOKED LAKE BLVD)
115TH AVE NW

DATE:

6/28/93



- 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						2		
6:30-6:45			1		1			
6:45-7:00						5		1
HOURLY TOTAL					1	HOURLY TOTAL		9
7:00-7:15								
7:15-7:30						3		1
7:30-7:45			1		1	2		1
7:45-8:00	3				3	4	1	1
HOURLY TOTAL					4	HOURLY TOTAL		13
8:00-8:15								
8:15-8:30						3		
8:30-8:45				1		7		
8:45-9:00	3				3	2	1	
HOURLY TOTAL					3	HOURLY TOTAL		13
9:00-9:15						4		
9:15-9:30						2		1
9:30-9:45	2				2	4		
9:45-10:00						9		1
HOURLY TOTAL					2	HOURLY TOTAL		21
10:00-10:15			1		1	2		
10:15-10:30						2		
10:30-10:45			2		2	4		
10:45-11:00			1		1	3		
HOURLY TOTAL					4	HOURLY TOTAL		11
11:00-11:15			1	1	2	3		
11:15-11:30						6		
11:30-11:45			2			5		
11:45-12:00			1		1	3		
HOURLY TOTAL					3	HOURLY TOTAL		17
12:00-12:15			1	2	3	2		
12:15-12:30			3		3	6		
12:30-12:45	1		2	1	4	5	1	1
12:45-1:00			1	1	2	3		
HOURLY TOTAL					12	HOURLY TOTAL		18
1:00-1:15				1	1	3		
1:15-1:30			3		3	6	1	
1:30-1:45				2	2	1		
1:45-2:00						4		1
HOURLY TOTAL					6	HOURLY TOTAL		16

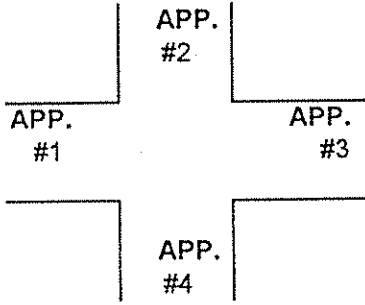


NORTH

APP. #1=SB CSAH 18
(CROOKED LK BLVD)
APP. #2=
WB (GAS STATION)
APP. #3=NB CSAH 18
(CROOKED LK BLVD)
APP. #4=EB 115TH AVE.

COUNT LOCATION: CSAH 18 (CROOKED LAKE BLVD)
115TH AVE NW

DATE: 6/29/93



- 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	2	6	3		
2:15-2:30			1	1	2	2		2
2:30-2:45				1	1	3		
2:45-3:00			1	1	2	4	1	1
HOURLY TOTAL					11	HOURLY TOTAL		16
3:00-3:15				2	2	5		
3:15-3:30						2		
3:30-3:45						3	1	3
3:45-4:00			4	1	5	3		
HOURLY TOTAL					7	HOURLY TOTAL		17
4:00-4:15			2	1	3	5		1
4:15-4:30			4	3	7	5		
4:30-4:45			3	2	5	7		
4:45-5:00	1			2	3	3		
HOURLY TOTAL					18	HOURLY TOTAL		21
5:00-5:15				4	4	2		
5:15-5:30			5		5	2		
5:30-5:45			3		3	2		
5:45-6:00				6	6	2		
HOURLY TOTAL					18	HOURLY TOTAL		8
6:00-6:15			3	1	4	1		
6:15-6:30			3	4	7			
6:30-6:45				1	1			
6:45-7:00			4	2	6			
HOURLY TOTAL					18	HOURLY TOTAL		1
7:00-7:15								
7:15-7:30				4	4	2		
7:30-7:45			4	8	12			
7:45-8:00				7	7			
HOURLY TOTAL					23	HOURLY TOTAL		2
8:00-8:15				4	4			
8:15-8:30			2	1	3			
8:30-8:45							1	
8:45-9:00			2		2	1		
HOURLY TOTAL					9	HOURLY TOTAL		2
9:00-9:15				4	4			
9:15-9:30								
9:30-9:45								
9:45-10:00								
HOURLY TOTAL					4	HOURLY TOTAL		