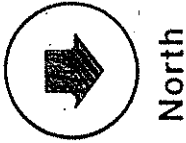
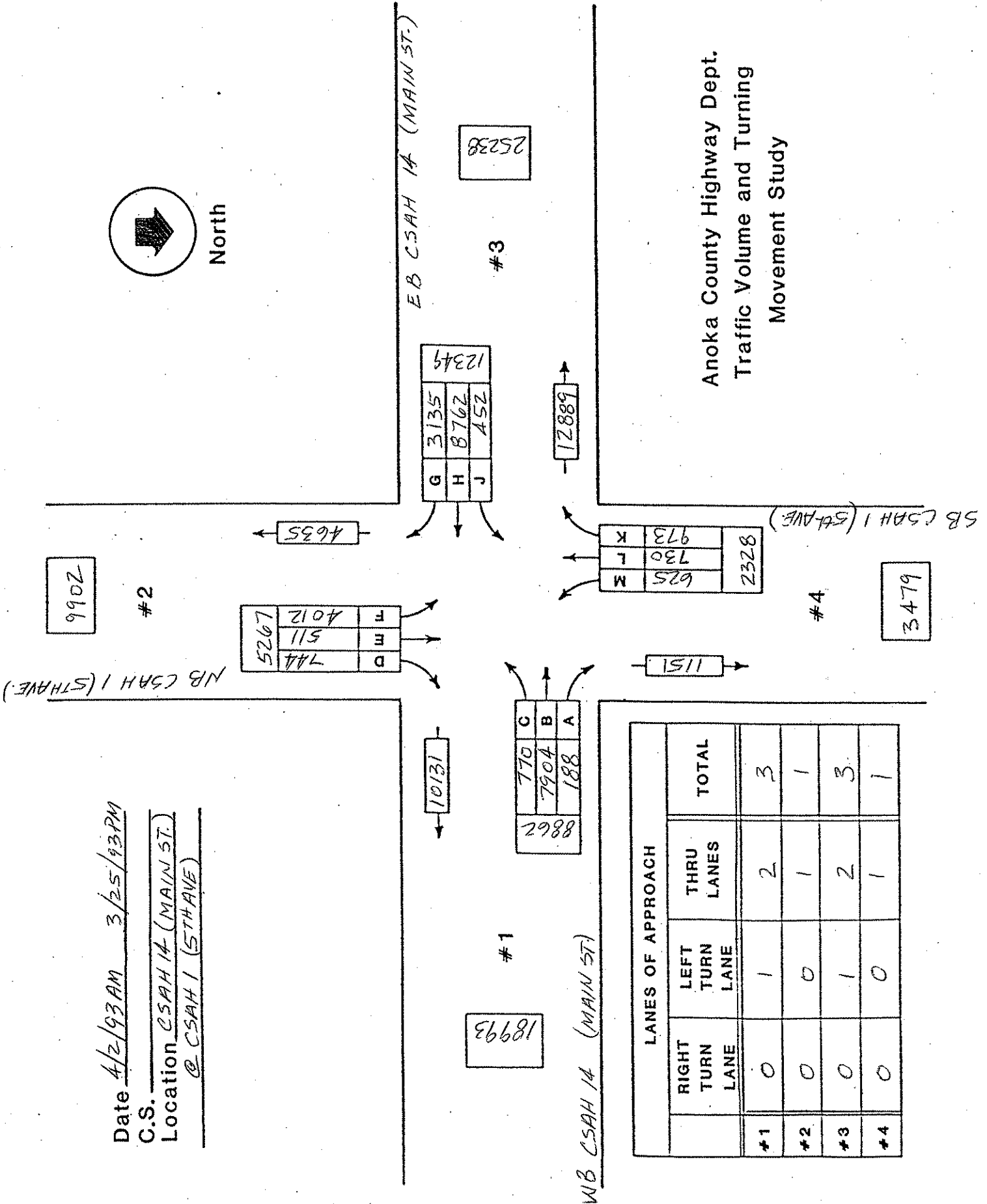


Date 4/2/93 AM 3/25/93 PM
 C.S. CSAH 14 (MAIN ST.)
 Location @ CSAH 1 (5TH AVE)



North



Anoka County Highway Dept.
 Traffic Volume and Turning
 Movement Study

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

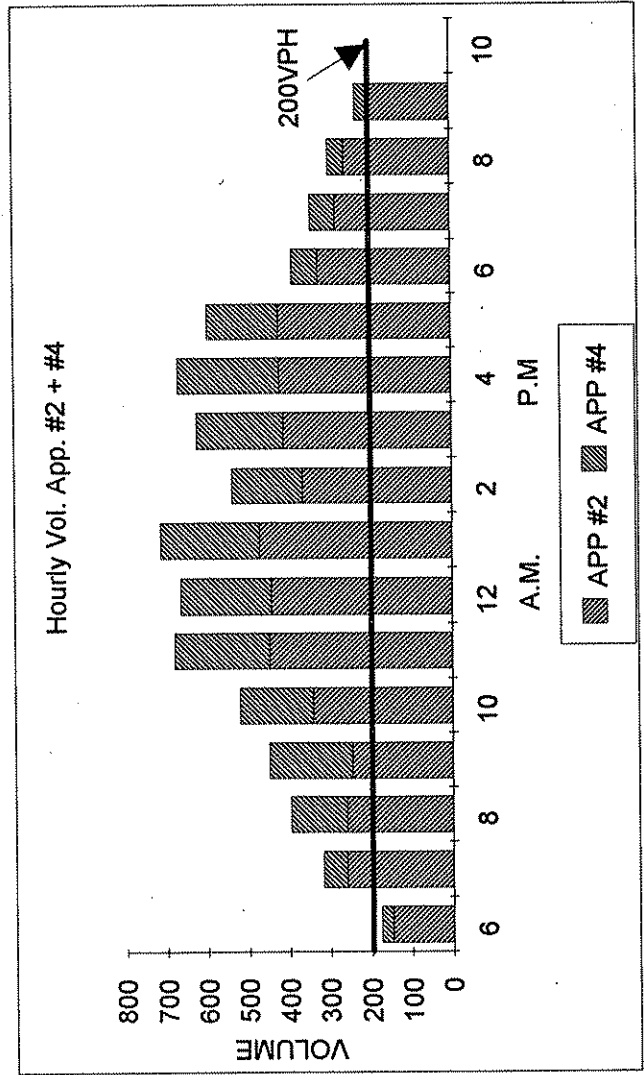
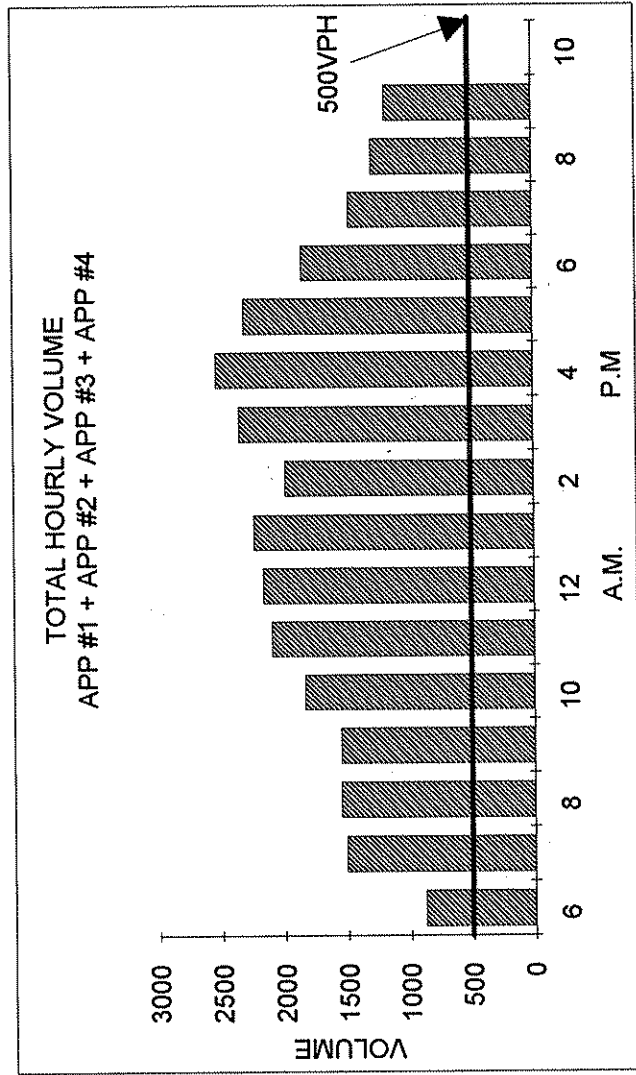
DATE 4/2/93AH 3/25/93PH ANOKA COUNTY HIGHWAY DEP. AT
 C.S.S. TRAFFIC ENGINEERING SECTION
 LOCATION CSAH 14 (MAIN STREET) @ CSAH 1 (5TH AVE)
 H.V. OF PEDS H.V. TRAFFIC VOLUME AND
 LANES OF APPROACH TURNING MOVEMENT STUDY

VOLUME & MOVEMENT

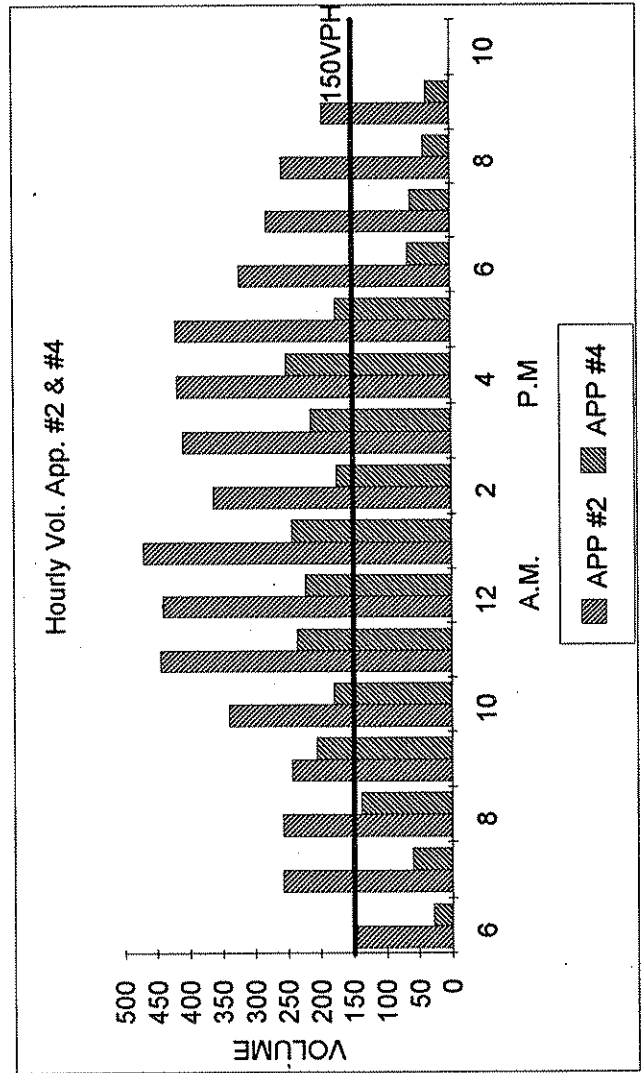
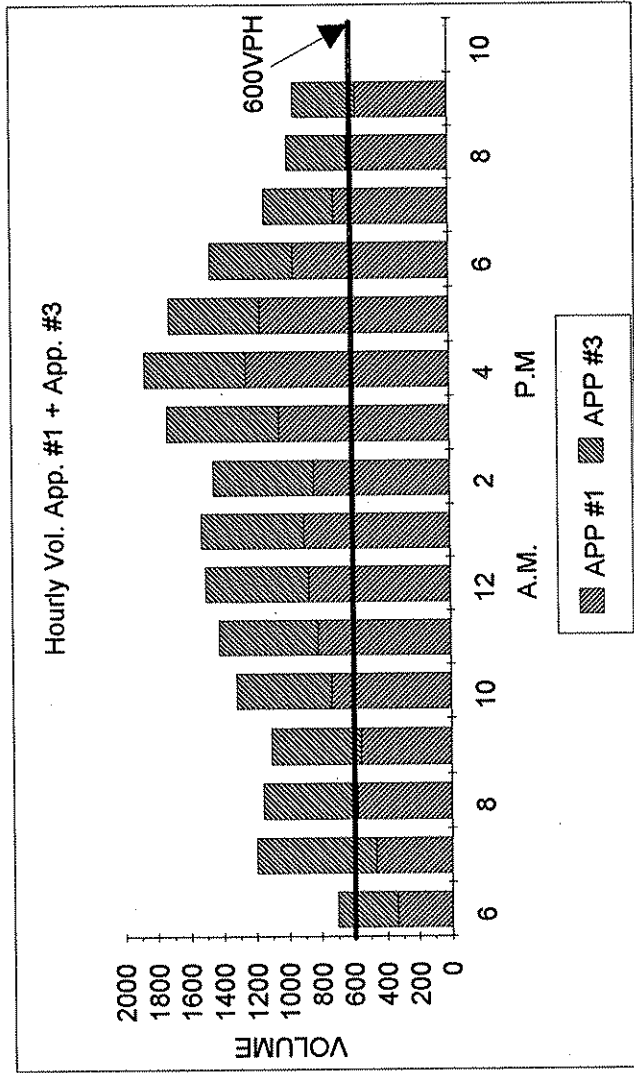
#	TURN L.	LEFT	THRU	TOTAL	DESCRIPTION	# RT. TURN		THRU		LT. TURN		SUB	
						TO	FROM	TO	FROM	TO	FROM	TOTAL	OPPOSING
1	0	1	2	3	WESTBOUND CSAH 14 (MAIN STREET)	1	188	7904	770	8862	10131	18993	
2	0	0	1	1	NORTHBOUND CSAH 1 (5TH AVE)	2	744	511	4012	5267	4635	9902	
3	0	1	2	3	EASTBOUND CSAH 14 (MAIN STREET)	3	3135	8762	452	12349	12889	25238	
4	0	0	1	1	SOUTHBOUND CSAH 1 (5TH AVE)	4	973	730	625	2328	1151	3479	

TIME INTERVALS	WESTBOUND APPROACH # 1		EASTBOUND APPROACH # 3		NORTHBOUND APPROACH # 2		SOUTHBOUND APPROACH # 4	
	TO	FROM	TO	FROM	TO	FROM	TO	FROM
6:00 - 6:15	0	1 65	4	0 32 12	1	17 2 2	21	0 0 1
6:15 - 6:30	0	8 82	5	0 42 28	1	24 1 5	30 6:00 to	0 0 3 2
6:30 - 6:45	3	5 119	2	0 60 39	1	31 4 6	41 7:00	0 2 6 1
6:45 - 7:00	2	12 72	2	2 77 44	1	37 11 8	56 148	0 3 6 4
7:00 - 7:15	3	15 118	6	1 76 23	1	30 6 5	41	0 1 4 0
7:15 - 7:30	3	28 155	7	4 48 43	7	42 6 7	55 7:00 to	0 0 10 7
7:30 - 7:45	7	34 157	6	3 77 49	1	42 17 8	67 8:00	1 4 11 4
7:45 - 8:00	10	46 162	8	5 105 33	2	58 25 12	95 258	0 2 8 9
8:00 - 8:15	4	14 114	11	2 81 44	0	52 10 9	71	1 2 3 12
8:15 - 8:30	1	12 136	7	3 60 51	2	38 6 8	52 8:00 to	0 2 8 7
8:30 - 8:45	5	21 117	1	1 86 66	5	55 10 8	73 9:00	0 11 20 24
8:45 - 9:00	3	14 132	5	7 119 58	2	48 8 6	62 258	0 19 13 17
9:00 - 9:15	6	8 128	4	4 82 27	0	46 3 1	50	0 11 13 21
9:15 - 9:30	5	14 123	4	2 85 39	2	52 4 8	64 9:00 to	1 12 17 22
9:30 - 9:45	4	5 125	3	7 93 53	2	66 4 6	76 10:00	0 21 20 18
9:45 - 10:00	6	9 126	3	2 105 53	2	45 4 5	54 244	1 8 18 24
10:00 - 10:15	6	11 120	5	5 117 46	1	68 4 14	86	1 11 15 17
10:15 - 10:30	3	15 126	9	6 116 60	3	60 8 13	81 10:00 to	0 11 10 15
10:30 - 10:45	1	9 137	10	6 128 53	1	77 7 8	92 11:00	0 13 13 25
10:45 - 11:00	2	13 141	3	11 124 58	1	66 7 8	81 340	0 19 18 13
11:00 - 11:15	7	12 134	4	4 128 68	3	99 7 20	126	0 11 19 20
11:15 - 11:30	4	19 131	6	4 137 45	4	73 6 13	92 11:00 to	2 14 23 23
11:30 - 11:45	3	15 144	0	8 149 64	2	80 8 20	108 12:00	1 14 17 38
11:45 - 12:00	4	7 135	2	144 606	1	87 13 19	119 445	1 17 14 25
12:00 - 12:15	6	10 132	2	144	1	93 8 14	115	0 22 20 25
12:15 - 12:30	1	11 164	2	177 12:00 to	0	86 15 9	110 12:00 to	0 14 13 18
12:30 - 12:45	0	9 122	1	132 1:00	1	79 7 8	94 1:00	0 17 24 31
12:45 - 1:00	4	21 156	3	180 633	0	102 10 10	122 441	0 9 8 21
1:00 - 1:15	1	16 120	4	140	4	107 19 16	142	1 21 16 24
1:15 - 1:30	4	9 166	2	177 1:00 to	2	78 6 15	99 1:00 to	0 21 14 29
1:30 - 1:45	5	10 137	0	147 2:00	4	93 9 13	115 2:00	0 18 27 26
1:45 - 2:00	5	9 156	1	166 630	6	88 9 17	114 470	1 13 14 20
2:00 - 2:15	1	9 118	1	128	8	60 5 15	80	2 11 10 24

TMC9308 STOP WARRANT STUDY



TMC9308 SIGNAL WARRANT 1 STUDY



TMC9308 SIGNAL WARRANT 2 STUDY

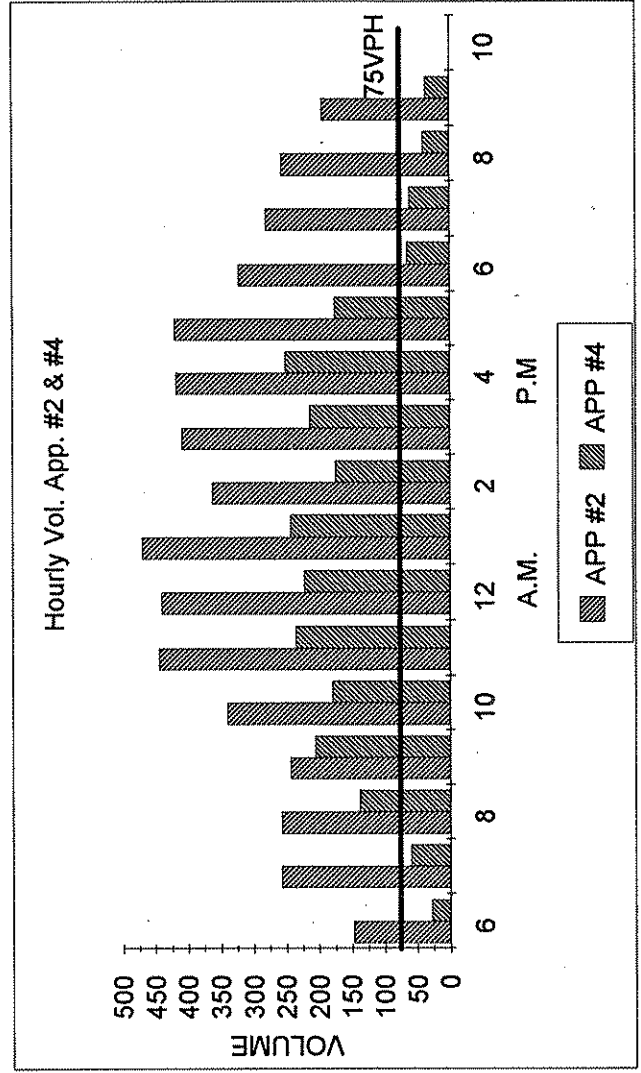
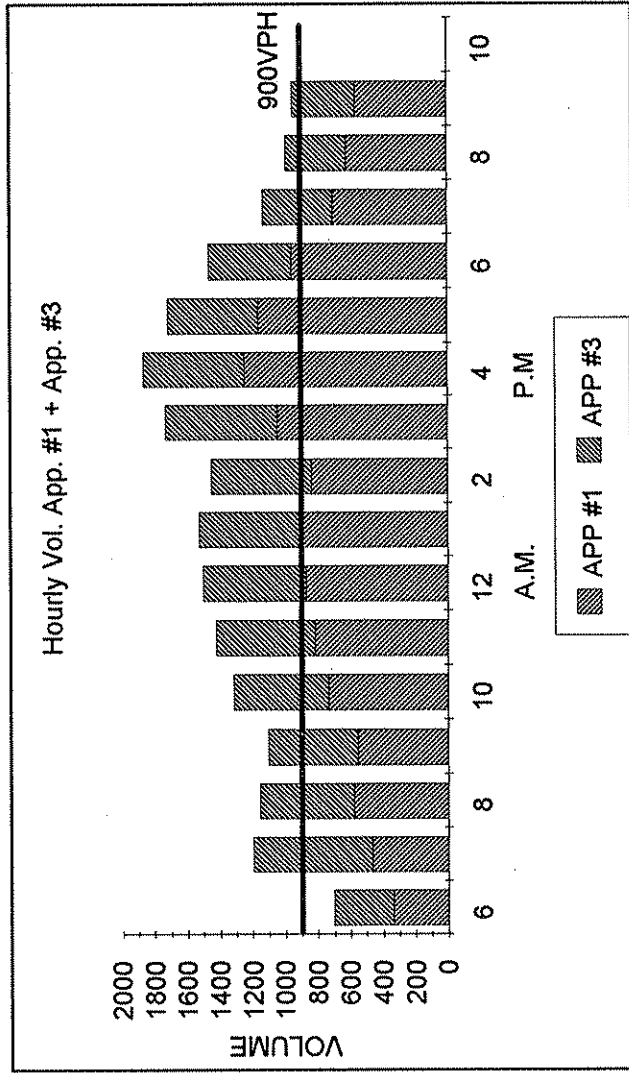
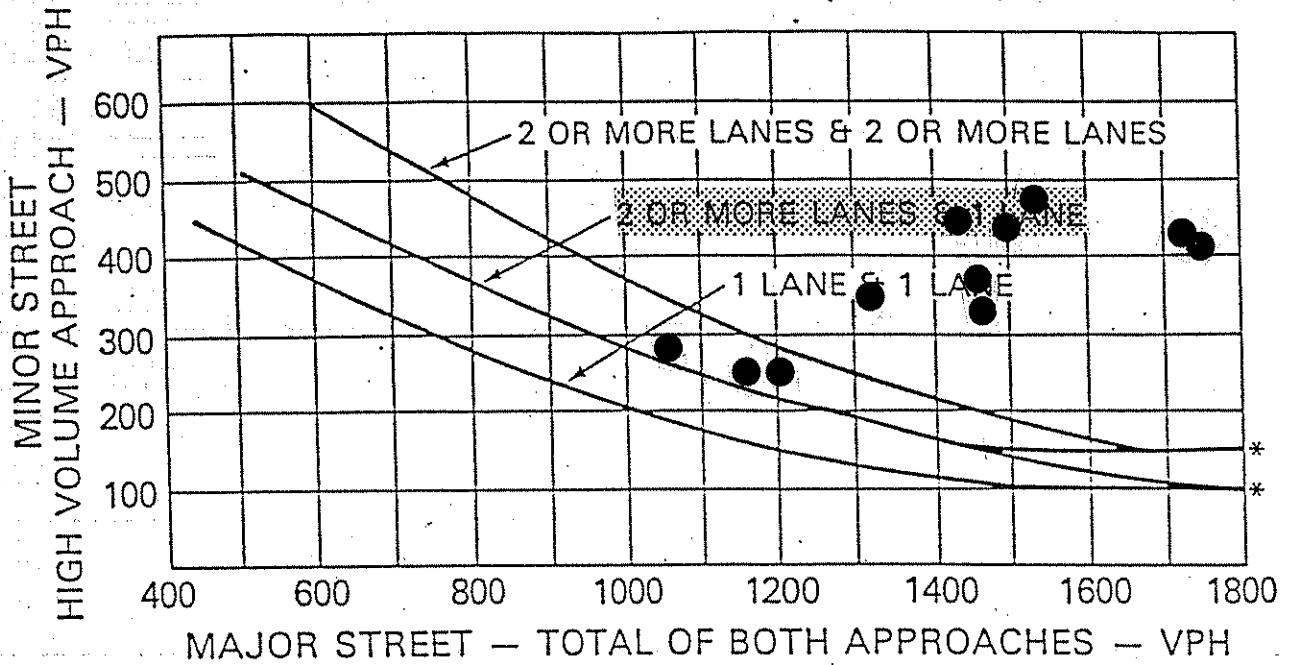


FIGURE 4-5. PEAK HOUR VOLUME WARRANT



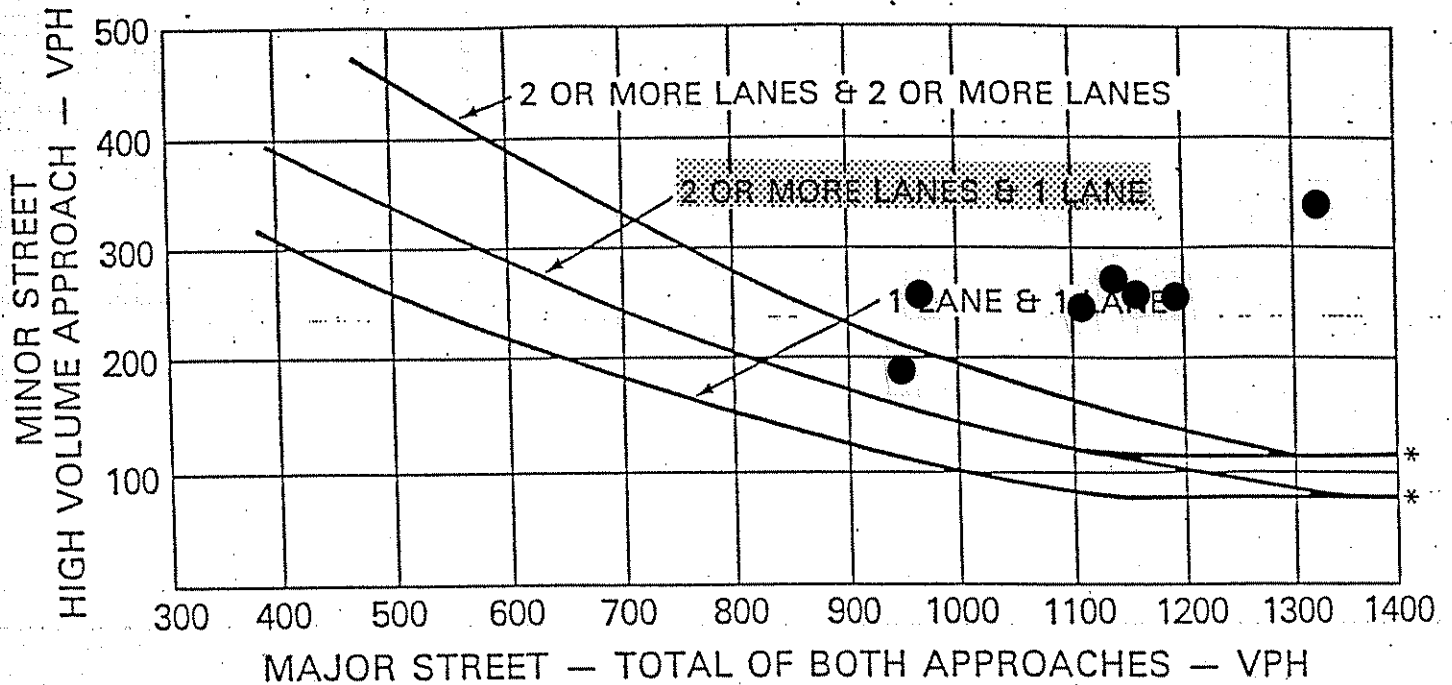
*NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

● = 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	704	148
● 7-8 am	1196	258
● 8-9 am	1158	258
● 9-10 am	1104	244
● 10-11 am	1317	340
● 11-12 pm	1421	445
● 12-1 pm	1502	441
● 1-2 pm	1526	470
● 2-3 pm	1450	363
● 3-4 pm	1730	409
★ 4-5 pm	1866	418
● 5-6 pm	1713	420
● 6-7 pm	1460	322
● 7-8 pm	1130	280
● 8-9 pm	988	257
● 9-10 pm	946	194

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 EXCEEDED THE THRESHOLD AND ARE REPRESENTED ON THE GRAPH.

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

TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
6-7 am	704	148
7-8 am	1196	258
8-9 am	1158	258
9-10 am	1104	244
10-11 am	1317	340
11-12 pm	1421	445
12-1 pm	1502	441
1-2 pm	1526	470
2-3 pm	1450	363
3-4 pm	1730	409
4-5 pm	1866	418
5-6 pm	1713	420
6-7 pm	1460	322
7-8 pm	1130	280
8-9 pm	988	257
9-10 pm	946	194



NORTH

APP. #1= WB CSAH 14
(MAIN STREET)

APP. #2= NB 5TH AVE

APP. #3= EB CSAH 14
(MAIN STREET)

APP. #4= SB CSAH 1
(5TH AVE)

COUNT LOCATION: CSAH 14 (MAIN STREET) @
CSAH 1 (5TH AVE)

DATE: 4/2/93

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
6:00-6:15AM						3		2
6:15-6:30						3		3
6:30-6:45	1			1	2	4		2
6:45-7:00						3		2
HOURLY TOTAL					2	HOURLY TOTAL		22
7:00-7:15	1			1	2	4		6
7:15-7:30		1	1	2	4	10		5
7:30-7:45	1				1	3		10
7:45-8:00	1	1		2	4	6		11
HOURLY TOTAL					11	HOURLY TOTAL		55
8:00-8:15						11		4
8:15-8:30				1	1	8		2
8:30-8:45				3	3	8		3
8:45-9:00						9		1
HOURLY TOTAL					4	HOURLY TOTAL		46
9:00-9:15						7	1	
9:15-9:30	1	2		4	7	8		3
9:30-9:45	1			2	3	8		3
9:45-10:00	1			2	3	11		1
HOURLY TOTAL					13	HOURLY TOTAL		42
10:00-10:15	1	1		3	5	10		2
10:15-10:30	2	1			3	13		4
10:30-10:45	2				2	9		
10:45-11:00	7			7	14	7		
HOURLY TOTAL					24	HOURLY TOTAL		45
11:00-11:15				4	4	9		4
11:15-11:30			2	3	5	14		2
11:30-11:45		1		1	2	11		1
11:45-12:00		5	1	6	12	9		2
HOURLY TOTAL					23	HOURLY TOTAL		52
12:00-12:15	3	3	1	6	13	9		1
12:15-12:30	1	1		1	3	4		2
12:30-12:45	1		1	6	8	5		
12:45-1:00	5	8	3	9	25	11		1
HOURLY TOTAL					49	HOURLY TOTAL		33
1:00-1:15		2		1	3	9		1
1:15-1:30		1	2	2	5	14		
1:30-1:45	4	4		3	11	9		1
1:45-2:00	2	3		3	8	12		3
HOURLY TOTAL					27	HOURLY TOTAL		49