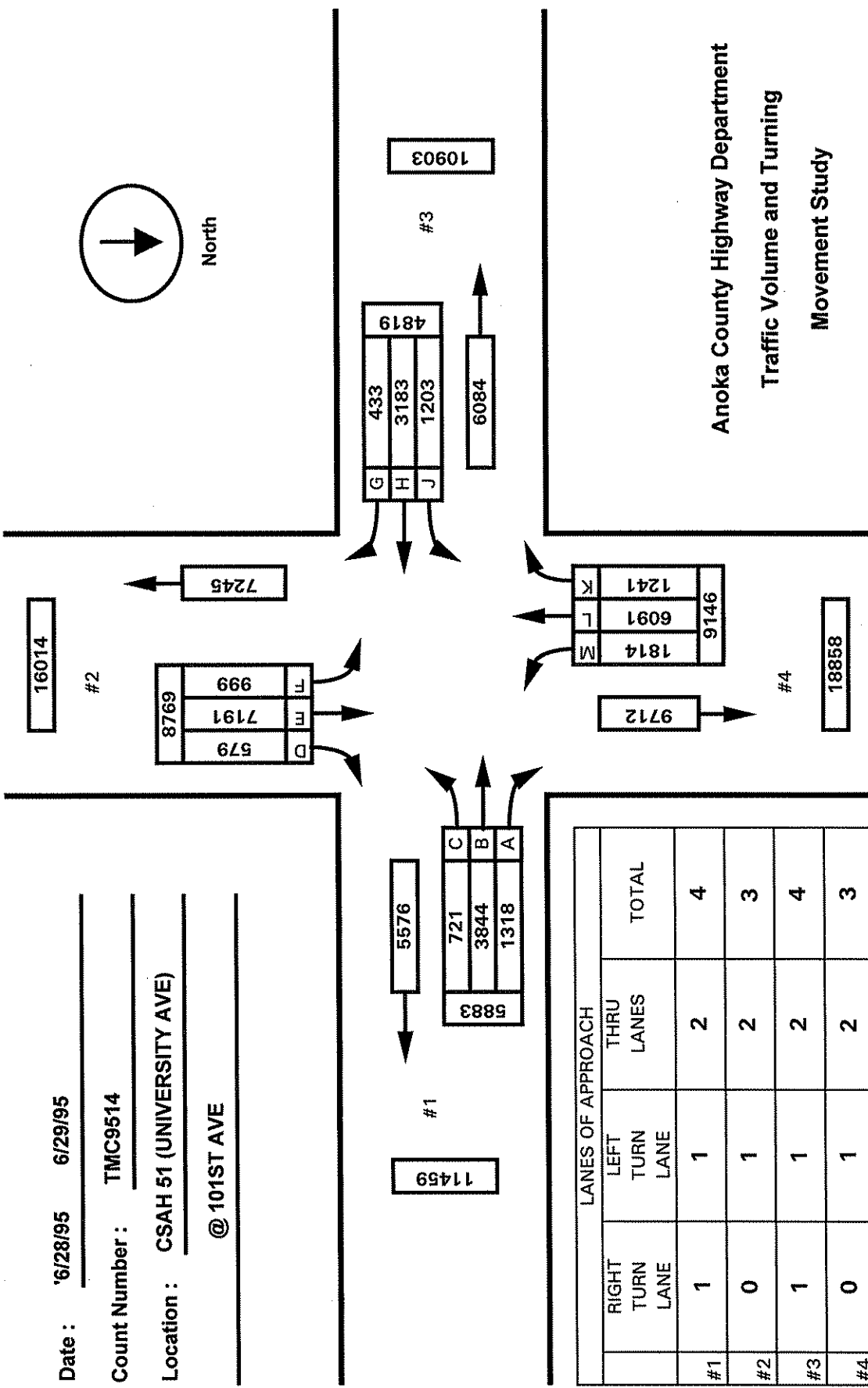
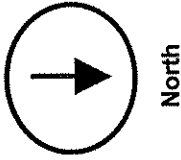


Date : '6/28/95 6/29/95
 Count Number : TMC9514
 Location : CSAH 51 (UNIVERSITY AVE)
 @ 101ST AVE



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

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

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

Site Code : 140201
 Start Date: 06/28/95
 File I.D. : TMC9514
 Page : 1

Counter : JDC sight
 Counted by ANN/LAURIE
 OVERCAST

Vehicle group 1

Date	CSAH 51 (UNIVERSITY AVE) Southbound				CSAH 51 (UNIVERSITY AVE) Northbound				101ST AVE Westbound				101ST AVE Eastbound										
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Vehicle Total	Other Total	
06:00	1	47	86	29	4	7	40	5	0	0	10	5	1	2	29	8	268	6					
06:15	2	48	162	38	3	1	49	12	0	0	12	12	3	3	52	2	391	8					
06:30	3	49	177	43	1	2	49	16	3	1	22	11	0	3	69	5	447	7					
06:45	1	60	227	45	3	4	66	21	0	2	15	10	4	4	82	9	545	8					
Hr Total	7	204	652	155	11	14	204	54	3	3	59	38	8	12	232	24	1651	29					
07:00	5	40	181	56	3	7	55	8	1	2	19	3	2	9	60	14	454	11					
07:15	2	48	148	55	9	4	66	21	0	3	34	9	2	8	64	8	468	13					
07:30	3	41	161	50	2	12	62	10	2	6	28	5	3	3	72	7	457	10					
07:45	4	40	149	52	4	9	66	15	4	3	26	12	3	7	96	7	482	15					
Hr Total	14	169	639	213	18	32	249	54	7	14	107	29	10	27	292	36	1861	49					
08:00	4	34	107	48	4	4	49	15	0	3	31	2	1	4	69	3	369	9					
08:15	2	20	99	28	2	5	52	13	3	4	23	7	2	2	54	7	314	9					
08:30	7	22	74	27	4	13	53	9	1	4	36	9	1	6	52	5	310	13					
08:45	2	32	87	28	4	10	56	7	2	11	39	12	1	8	44	6	340	9					
Hr Total	15	108	367	131	14	32	210	44	6	22	129	30	5	20	219	21	1333	40					
09:00	2	22	74	19	5	13	43	10	2	5	35	5	2	5	32	11	274	11					
09:15	3	25	65	15	0	13	35	7	2	2	37	6	1	4	51	7	267	6					
09:30	2	19	82	24	1	16	39	10	0	5	55	11	2	4	24	11	300	5					
09:45	1	14	87	22	3	11	51	19	1	6	59	4	3	5	44	9	331	8					
Hr Total	8	80	308	80	9	53	168	46	5	18	186	26	8	18	151	38	1172	30					
10:00	1	10	95	21	2	12	37	15	1	11	59	9	2	11	35	10	325	6					
10:15	1	11	86	23	4	10	51	9	1	10	77	13	0	7	26	10	333	6					
10:30	0	7	74	27	3	15	40	8	3	6	52	14	4	4	33	7	287	10					
10:45	1	14	106	15	4	16	49	12	0	7	77	10	5	9	37	14	366	10					
Hr Total	3	42	361	86	13	53	177	44	5	34	265	46	11	31	131	41	1311	32					
11:00	2	8	71	26	5	15	40	16	2	11	83	12	4	9	31	10	332	13					
11:15	2	15	114	12	0	18	38	12	2	6	92	9	2	4	29	8	357	6					
11:30	0	5	90	25	4	12	40	12	4	5	90	11	3	7	38	10	345	11					
11:45	4	18	108	11	5	17	46	15	3	9	95	18	5	8	37	13	395	17					
Hr Total	8	46	383	74	14	62	164	55	11	31	360	50	14	28	135	41	1429	47					
12:00	0	11	81	25	4	21	41	9	1	14	105	8	3	2	37	14	368	8					
12:15	5	9	80	32	8	18	51	14	0	8	105	18	2	3	38	14	390	15					
12:30	1	15	69	23	7	21	36	12	4	9	96	12	6	8	37	8	346	18					
12:45	6	11	105	24	2	13	44	14	4	13	98	15	1	5	38	15	395	13					
Hr Total	12	46	335	104	21	73	172	49	9	44	404	53	12	18	150	51	1499	54					

Vehicle group 1

Date	CSAH 51 (UNIVERSITY AVE) Southbound				101ST AVE Westbound				CSAH 51 (UNIVERSITY AVE) Northbound				101ST AVE Eastbound				Vehicle Total	Other Total		
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left			Right	Thru
13:00	4	12	94	28	3	24	37	12	2	9	137	18	1	16	39	14	1	10	440	10
13:15	5	12	98	18	1	17	43	7	1	8	106	18	6	8	50	16	6	13	401	13
13:30	4	20	95	30	0	8	36	13	2	14	98	10	5	6	36	16	5	11	382	11
13:45	2	23	86	14	2	13	49	17	1	6	115	16	3	5	35	12	3	12	391	8
Hr Total	15	67	373	90	6	62	165	49	6	37	456	62	15	35	160	58	15	58	1614	42
14:00	2	13	85	23	5	17	48	17	2	7	120	16	6	8	50	14	6	15	418	15
14:15	3	13	91	15	3	13	57	11	5	3	112	13	3	9	47	18	3	14	402	14
14:30	8	15	105	20	1	22	56	5	4	8	142	12	5	5	49	17	5	18	456	18
14:45	5	10	76	21	2	21	60	12	1	7	119	16	2	5	36	31	2	10	414	10
Hr Total	18	51	357	79	11	73	221	45	12	25	493	57	16	27	182	80	16	80	1690	57
15:00	4	13	82	22	5	31	55	9	0	6	148	15	4	9	53	20	4	13	463	13
15:15	4	10	70	27	3	22	62	7	1	14	166	17	5	10	53	35	5	13	493	13
15:30	0	23	93	19	1	31	75	4	3	9	171	33	6	5	56	35	6	10	554	10
15:45	2	10	114	33	3	44	85	10	1	17	206	19	4	5	61	32	4	10	636	10
Hr Total	10	56	359	101	12	128	277	30	5	46	691	84	19	29	223	122	19	122	2146	46
16:00	2	15	58	21	2	42	87	19	3	8	187	23	2	10	71	45	2	13	586	9
16:15	2	15	84	24	2	43	103	9	1	17	205	30	2	8	54	24	2	7	616	7
16:30	3	10	79	34	5	49	123	9	3	20	228	25	3	4	56	40	3	14	677	14
16:45	2	24	91	46	3	54	139	14	1	15	255	51	2	6	64	33	2	8	792	8
Hr Total	9	64	312	125	12	188	452	51	8	60	875	129	9	28	245	142	9	142	2671	38
17:00	4	12	87	42	2	55	132	9	4	16	267	44	2	6	60	40	2	12	770	12
17:15	1	25	90	38	3	44	142	12	1	13	304	33	8	4	66	35	8	13	806	13
17:30	0	15	99	29	1	55	115	6	3	19	269	38	2	7	70	50	2	6	772	6
17:45	1	17	110	38	1	55	100	10	1	16	252	33	2	4	60	34	2	5	729	5
Hr Total	6	69	386	147	7	209	489	37	9	64	1092	148	14	21	256	159	14	159	3077	36
18:00	2	5	92	46	2	34	90	18	4	8	207	36	1	8	74	42	1	9	660	9
18:15	0	28	95	38	0	32	89	14	3	17	187	23	0	6	41	31	0	3	601	3
18:30	0	21	101	22	0	27	99	21	2	15	132	14	3	17	62	26	3	5	557	5
18:45	0	24	120	37	1	29	60	12	0	10	129	26	1	7	56	21	1	2	531	2
Hr Total	2	78	408	143	3	122	338	65	9	50	655	99	5	38	233	120	5	38	2349	19
19:00	0	19	95	40	1	28	50	9	1	12	126	21	0	10	49	31	0	2	490	2
19:15	0	10	116	21	2	19	56	16	0	10	151	11	2	5	46	25	2	4	486	4
19:30	0	9	85	35	0	13	43	7	0	8	121	17	3	14	57	35	3	3	444	3
19:45	0	13	75	24	0	23	51	12	0	16	124	11	0	11	46	15	0	15	421	0
Hr Total	0	51	371	120	3	83	200	44	1	46	522	60	5	40	198	106	5	9	1841	9

ANOKA COUNTY HIGHWAY DEPARTMENT
 TRAFFIC ENGINE [G] SECTION
 TRAFFIC VOLUME AND
 TURNING MOVEMENT STUDY

Site Code 5140201
 Start Date: 06/28/95
 File I.D.: TMC9514
 Page : 3

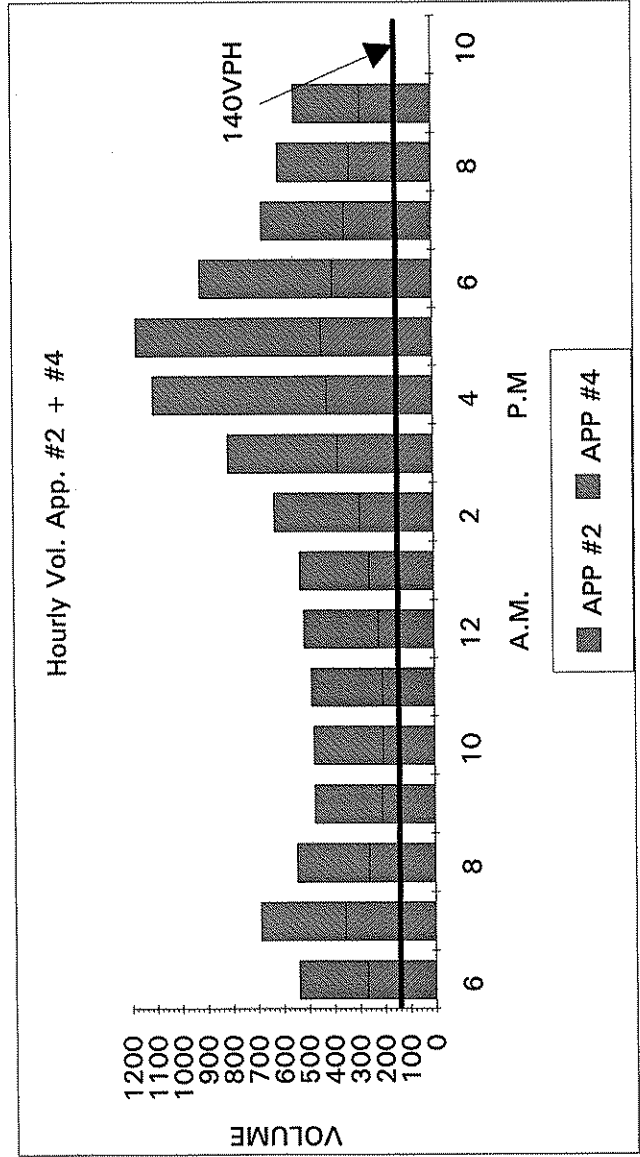
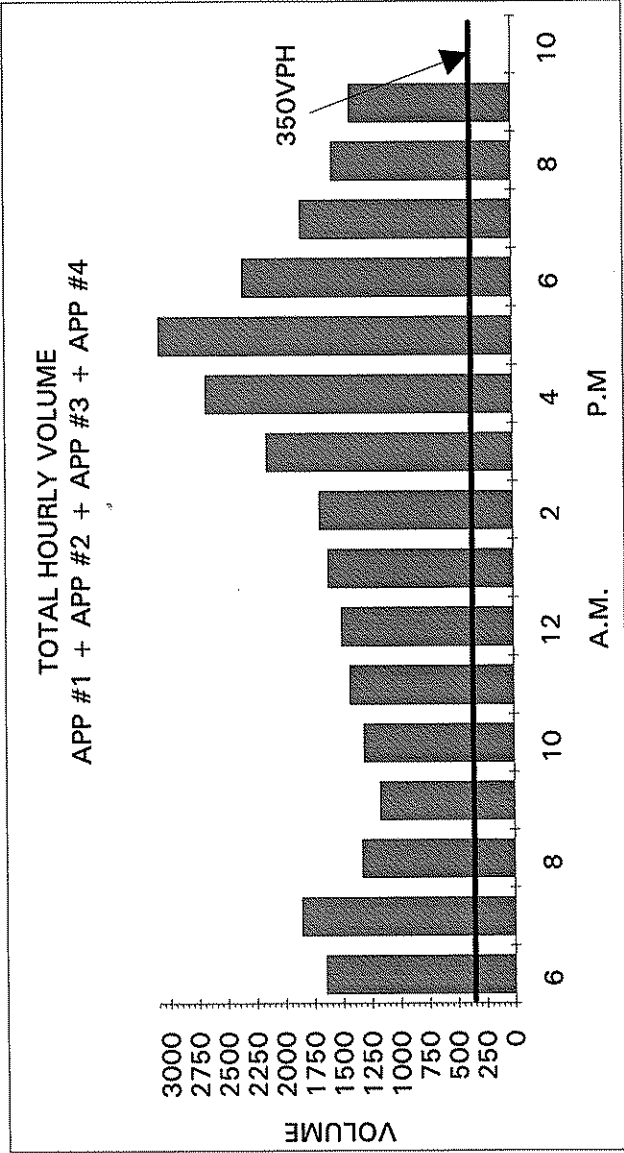
Counter : TDC-EIGHT
 Counted by ANN/LAURIE
 OVERCAST

Vehicle group 1

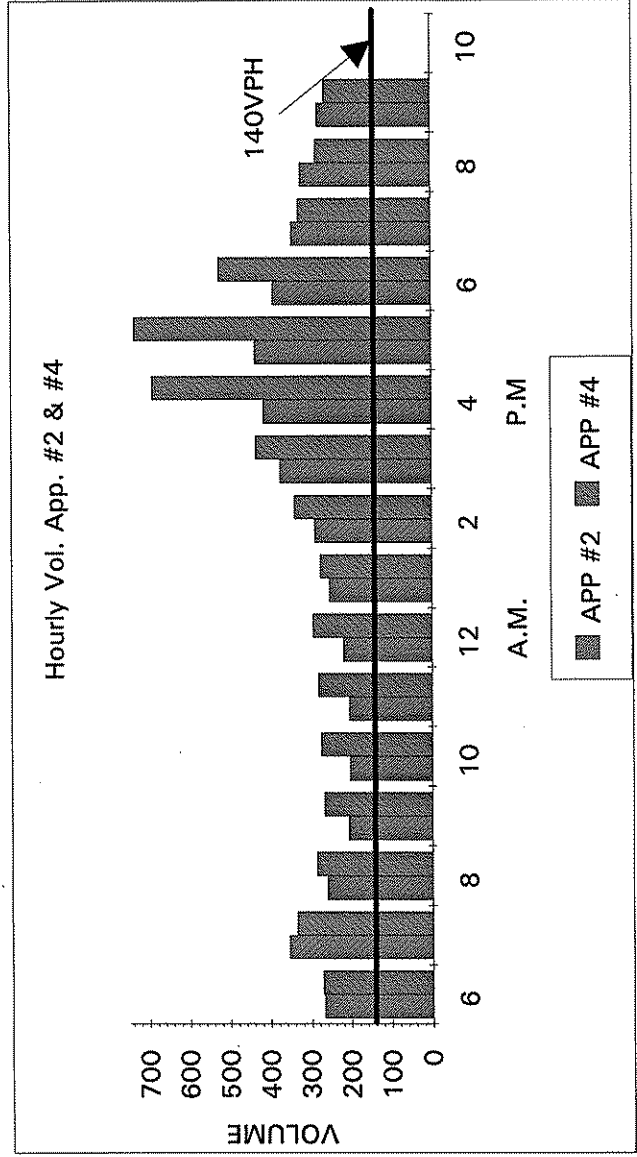
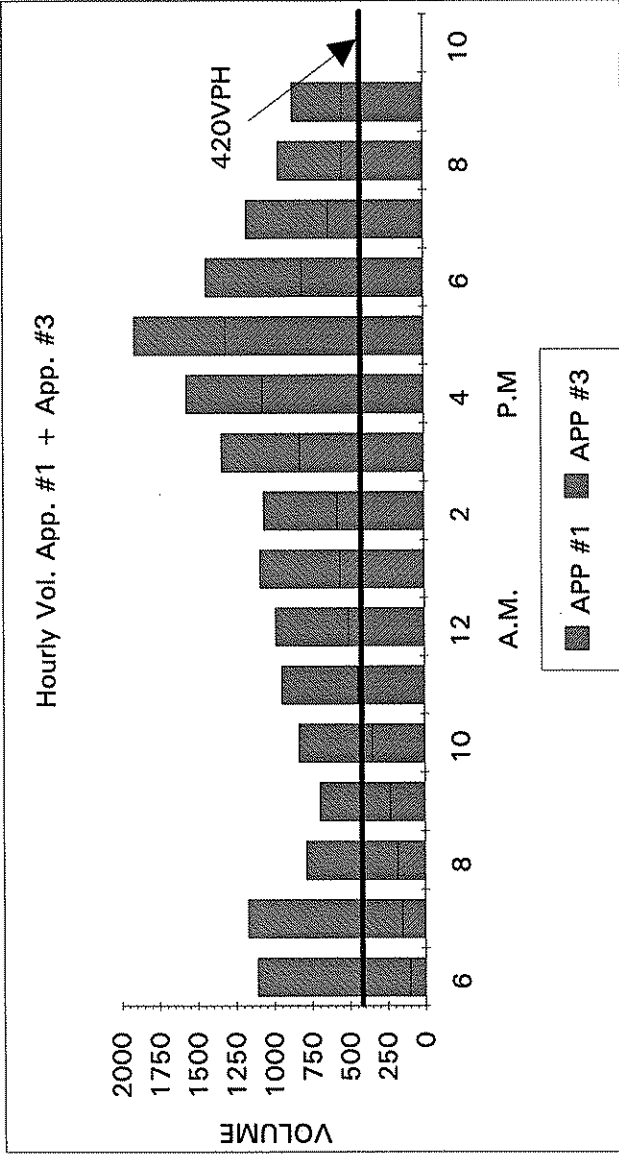
Date 06/28/95	CSAH 51 (UNIVERSITY AVE) Southbound			101ST AVE Westbound			CSAH 51 (UNIVERSITY AVE) Northbound			101ST AVE Eastbound			Vehicle Total				
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Total			
20:00	0	12	84	17	2	18	45	9	0	10	112	17	1	9	48	24	405
20:15	1	19	67	16	2	23	46	9	0	5	103	11	0	8	47	26	380
20:30	0	19	56	24	0	21	53	7	1	13	105	14	0	13	49	23	397
20:45	0	13	63	33	1	8	39	6	0	10	125	11	0	6	41	28	383
Hr Total	1	63	270	90	5	70	183	31	1	38	445	53	1	36	185	101	1565
21:00	1	10	73	15	1	20	43	5	0	13	128	14	0	3	49	19	392
21:15	0	8	56	16	1	15	47	4	1	16	121	8	1	9	52	14	366
21:30	0	17	40	28	0	10	40	7	0	8	114	6	1	8	51	11	340
21:45	0	12	41	17	0	19	45	7	0	10	89	7	0	5	39	19	310
Hr Total	1	47	210	76	2	64	175	23	1	47	452	35	2	25	191	63	1408

TOTAL 129 1241 6091 1814 161 1318 3844 721 98 579 7191 999 154 433 3183 1203 28617 542

TMC9514 STOP WARRANT STUDY



TMC9514 SIGNAL WARRANT 1 STUDY



TMC9514 SIGNAL WARRANT 2 STUDY

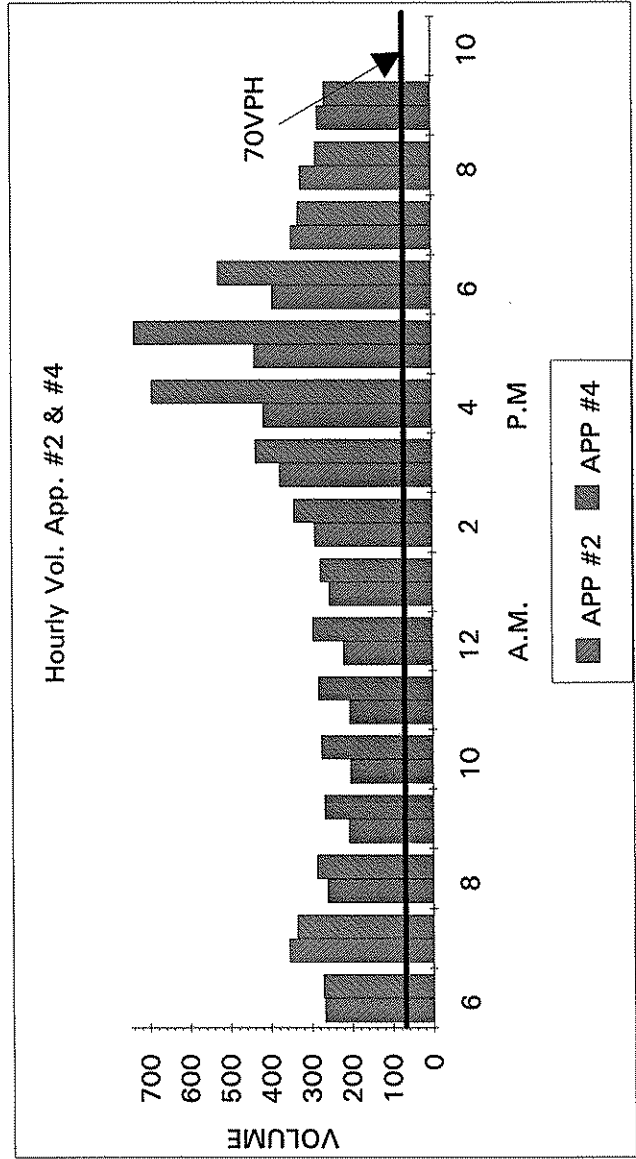
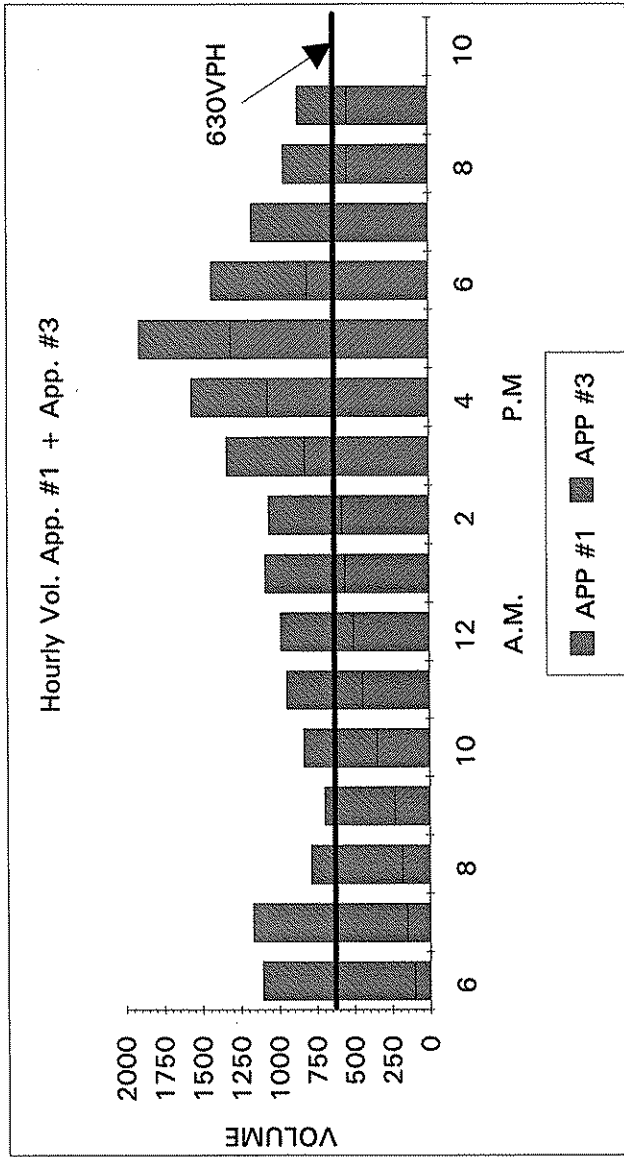
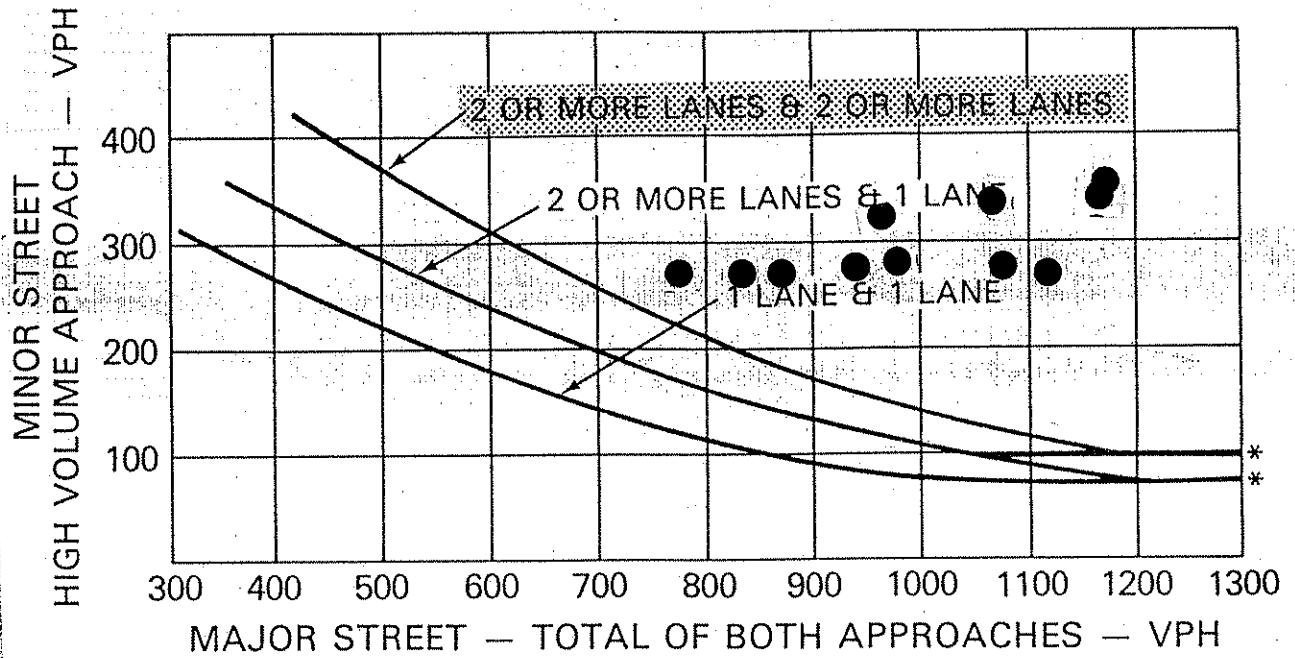


FIGURE 4-6. PEAK HOUR VOLUME WARRANT

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

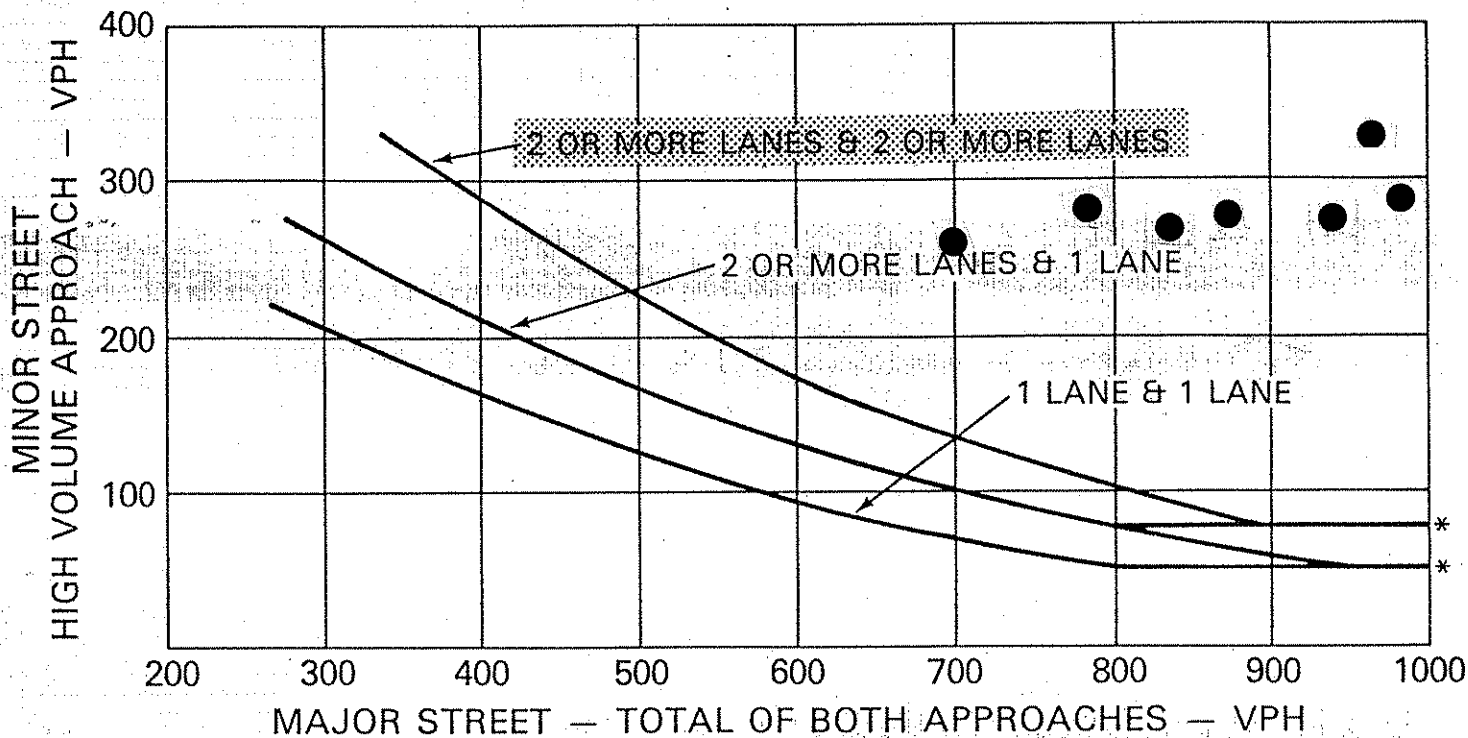
● = VOLUMES WHICH EXCEED THE THRESHOLD AND ARE REPRESENTED ON THE GRAPH.

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

TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
● 6-7 am	1111	272
● 7-8 am	1171	355
● 8-9 am	787	286
● 9-10 am	698	267
● 10-11 am	834	274
● 11-12 pm	944	281
● 12-1 pm	986	294
● 1-2 pm	1085	276
● 2-3 pm	1062	339
★ 3-4 pm	1337	435
★ 4-5 pm	1565	691
★ 5-6 pm	1906	735
★ 6-7 pm	1433	525
● 7-8 pm	1170	344
● 8-9 pm	959	322
● 9-10 pm	867	279

FIGURE 4-8. FOUR HOUR VOLUME WARRANT

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

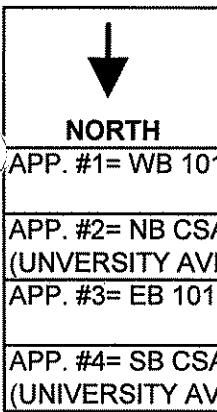


*NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

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

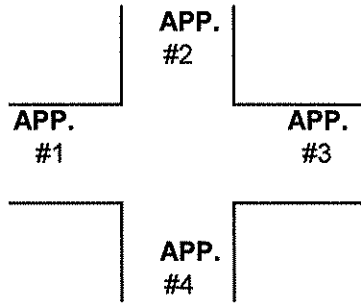
★ = VOLUMES WHICH EXCEEDED THE THRESHOLD BUT CANNOT BE REPRESENTED ON THE GRAPH.

TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
★ 6-7 am	1111	272
★ 7-8 am	1171	355
● 8-9 am	787	286
● 9-10 am	698	267
● 10-11 am	834	274
● 11-12 pm	944	281
● 12-1 pm	986	294
★ 1-2 pm	1085	276
★ 2-3 pm	1062	339
★ 3-4 pm	1337	435
★ 4-5 pm	1565	691
★ 5-6 pm	1906	735
★ 6-7 pm	1433	525
★ 7-8 pm	1170	344
● 8-9 pm	959	322
● 9-10 pm	867	279



COUNT LOCATION: CSAH 51 (UNIVERSITY AVE)
@ 101ST AVE

DATE: 6/29/95



- 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.

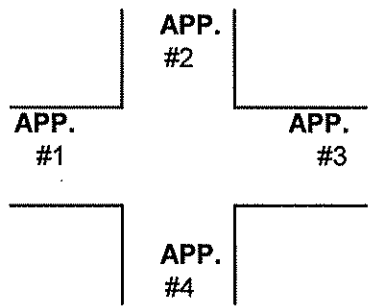
TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
6:00-6:15AM						5		1
6:15-6:30						8		
6:30-6:45						4		3
6:45-7:00						6		2
HOURLY TOTAL						HOURLY TOTAL		29
7:00-7:15						9		1
7:15-7:30						11		
7:30-7:45						7		3
7:45-8:00						13		3
HOURLY TOTAL						HOURLY TOTAL		47
8:00-8:15						7		2
8:15-8:30						8		2
8:30-8:45						11		3
8:45-9:00						8		1
HOURLY TOTAL						HOURLY TOTAL		42
9:00-9:15						10		1
9:15-9:30						4		2
9:30-9:45						3		3
9:45-10:00		7			7	7		2
HOURLY TOTAL					7	HOURLY TOTAL		32
10:00-10:15						5		1
10:15-10:30		7			7	5	1	
10:30-10:45						8		2
10:45-11:00						9		2
HOURLY TOTAL					7	HOURLY TOTAL		33
11:00-11:15	1				1	13		1
11:15-11:30						5		1
11:30-11:45						10		1
11:45-12:00						16		1
HOURLY TOTAL					1	HOURLY TOTAL		48
12:00-12:15						8		
12:15-12:30						15		
12:30-12:45	1			1	2	16		3
12:45-1:00						12		1
HOURLY TOTAL					2	HOURLY TOTAL		55
1:00-1:15						7		1
1:15-1:30						13		
1:30-1:45						12		1
1:45-2:00						8		
HOURLY TOTAL						HOURLY TOTAL		42



COUNT LOCATION: CSAH 51 (UNIVERSITY AVE)
@ 101ST AVE

DATE: 6/28/95

- APP. #1=WB 101ST AVE
- APP. #2=NB CSAH 51 (UNIVERSITY AVE)
- APP. #3=EB 101ST AVE
- APP. #4=SB CSAH 51 (UNIVERSITY AVE)



- 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						13		2
2:15-2:30		1			1	14		
2:30-2:45						15		2
2:45-3:00						13		
HOURLY TOTAL					1	HOURLY TOTAL		59
3:00-3:15	1				1	13		1
3:15-3:30						13		
3:30-3:45						12		1
3:45-4:00						6		1
HOURLY TOTAL					1	HOURLY TOTAL		47
4:00-4:15						9		
4:15-4:30						7	1	
4:30-4:45						15		
4:45-5:00						7		
HOURLY TOTAL						HOURLY TOTAL		39
5:00-5:15						10		3
5:15-5:30						11		
5:30-5:45						3	1	2
5:45-6:00						5		
HOURLY TOTAL						HOURLY TOTAL		35
6:00-6:15						6		2
6:15-6:30						3		
6:30-6:45						4		1
6:45-7:00						2		
HOURLY TOTAL						HOURLY TOTAL		18
7:00-7:15						1		1
7:15-7:30						4		
7:30-7:45						1		1
7:45-8:00								
HOURLY TOTAL						HOURLY TOTAL		8
8:00-8:15						3		
8:15-8:30						3		
8:30-8:45						2		
8:45-9:00						1		
HOURLY TOTAL						HOURLY TOTAL		9
9:00-9:15	2				2	2		
9:15-9:30						3		
9:30-9:45						1		
9:45-10:00	2				2			
HOURLY TOTAL					4	HOURLY TOTAL		6