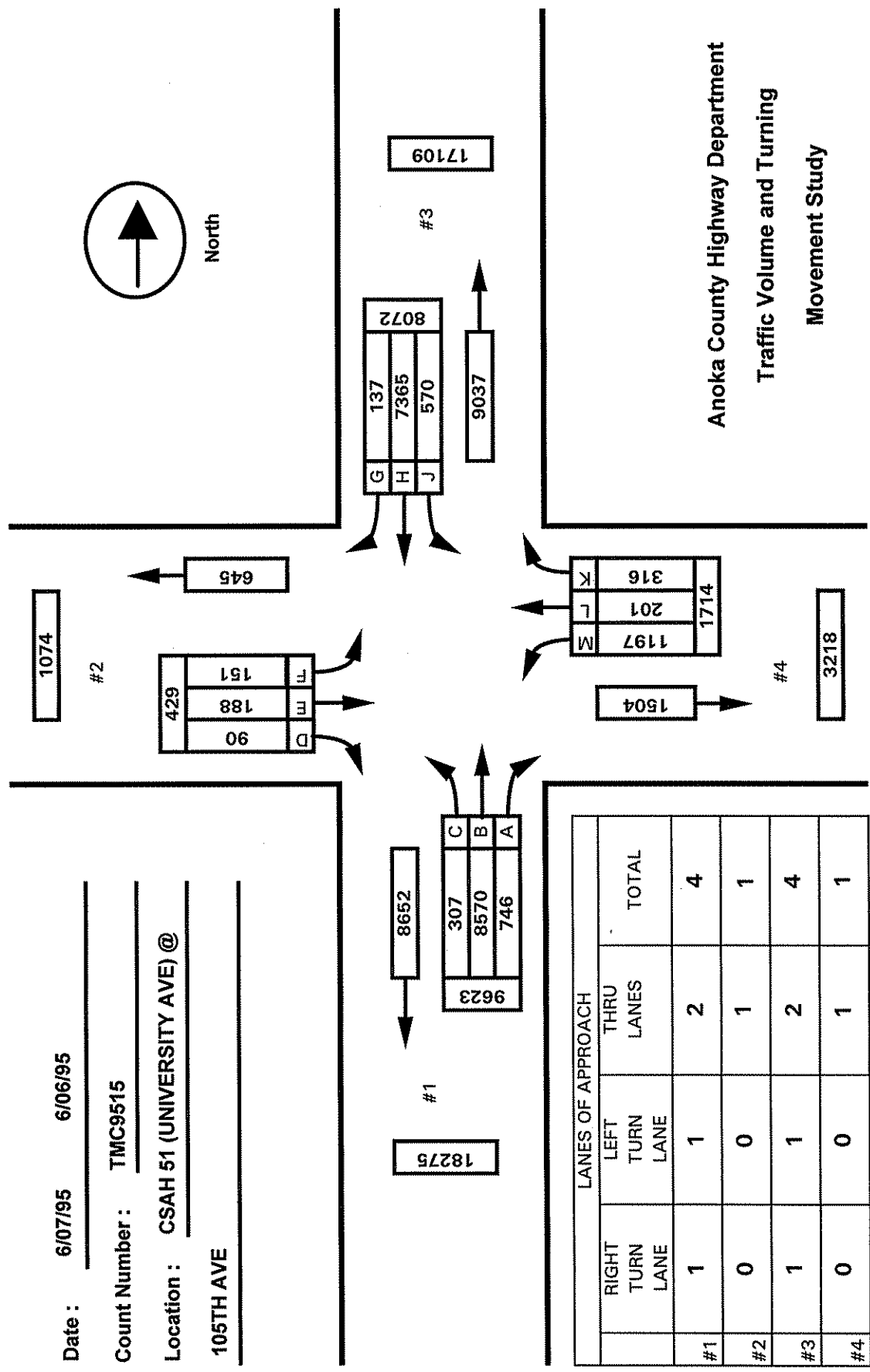
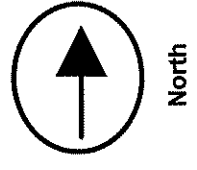


Date : 6/07/95 6/06/95

Count Number : TMC9515

Location : CSAH 51 (UNIVERSITY AVE) @
105TH AVE



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

Anoka County Highway Department
Traffic Volume and Turning
Movement Study

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

Site : 95150101
 Start date: 07/06/95
 File I.D. : TMC9515]001
 Page : 1

Counter : ADC EIGHT
 Counted by RANDY BETTINGER

Vehicle group 1

Date 07/06/95	CSAH 51 (UNIVERSITY AVE) Southbound				105TH AVE Westbound				CSAH 51 (UNIVERSITY AVE) Northbound				105TH AVE Eastbound				Vehicle Total	
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Vehicle Total	Other Total
06:00	0	0	107	0	1	2	3	34	0	2	19	0	1	4	1	1	173	2
06:15	0	0	138	0	0	0	3	13	0	2	16	0	0	1	0	1	174	0
06:30	0	1	225	2	2	1	2	27	1	4	11	3	0	2	1	1	280	3
06:45	1	0	235	6	2	2	1	35	0	3	18	4	0	3	1	0	308	3
Hr Total	1	1	705	8	5	5	9	109	1	11	64	7	1	10	3	3	935	8
07:00	0	0	223	5	1	2	0	27	2	5	43	1	0	1	1	1	309	3
07:15	4	0	207	2	1	1	1	31	1	3	28	1	0	1	2	0	277	6
07:30	1	0	186	3	0	5	2	28	0	2	35	3	0	3	3	2	272	1
07:45	2	0	206	2	1	2	2	32	2	1	40	2	0	3	4	1	295	5
Hr Total	7	0	822	12	3	10	5	118	5	11	146	7	0	8	10	4	1153	15
08:00	3	2	129	5	0	4	1	14	0	2	36	2	0	1	3	4	203	3
08:15	4	2	102	8	0	6	1	23	3	3	35	1	0	1	1	1	184	7
08:30	1	0	80	5	1	5	4	12	3	3	49	3	0	1	1	2	165	5
08:45	3	1	115	9	2	2	3	15	5	4	51	0	0	0	2	2	204	10
Hr Total	11	5	426	27	3	17	9	64	11	12	171	6	0	3	7	9	756	25
09:00	2	1	93	7	0	4	4	15	5	2	46	3	0	0	0	2	177	7
09:15	3	2	102	7	0	2	3	18	1	6	46	7	0	0	1	0	194	4
09:30	0	0	83	3	0	4	7	20	2	3	52	5	0	0	2	1	180	2
09:45	0	1	116	10	2	5	3	15	2	4	63	3	0	2	2	0	224	4
Hr Total	5	4	394	27	2	15	17	68	10	15	207	18	0	2	5	3	775	17
10:00	3	2	99	7	1	5	3	9	3	11	90	1	0	0	1	0	228	7
10:15	5	5	100	6	0	7	2	17	2	10	108	6	1	0	5	4	270	8
10:30	3	1	102	9	0	7	0	17	4	6	90	2	0	2	1	0	237	7
10:45	2	0	107	6	1	1	3	25	1	8	84	3	0	0	3	0	240	4
Hr Total	13	8	408	28	2	20	8	68	10	35	372	12	1	2	10	4	975	26
11:00	1	0	97	7	1	4	3	21	1	13	115	2	0	1	1	2	266	3
11:15	4	0	105	10	0	5	2	14	0	6	119	3	0	2	2	2	270	4
11:30	3	0	119	7	1	6	2	22	3	9	117	5	0	0	1	1	290	7
11:45	4	2	102	15	1	2	5	20	4	10	120	5	0	2	2	1	286	9
Hr Total	12	2	423	39	3	17	12	77	8	38	471	15	0	7	5	6	1112	23
12:00	3	3	116	9	2	4	2	15	0	13	112	10	0	0	4	3	291	5
12:15	2	1	98	8	0	10	2	21	2	10	143	5	0	2	3	1	304	4
12:30	3	1	139	14	0	9	5	20	2	12	150	4	0	0	4	0	358	5
12:45	3	2	118	9	0	3	3	18	2	15	162	5	0	0	3	3	341	5
Hr Total	11	7	471	40	2	26	12	74	6	50	567	24	0	2	14	7	1294	19

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

Site : 95150101
 Start Date: 07/06/95
 File I.D. : TMC9515}001
 Page : 2

Counter : OC EIGHT
 Counted by RANDY BETTINGER

Vehicle group 1

Date 07/06/95	CSAH 51 (UNIVERSITY AVE) Southbound				CSAH 51 (UNIVERSITY AVE) Northbound				105TH AVE Westbound				105TH AVE Eastbound					
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Vehicle Total	Other Total
13:00	4	1	103	6	2	2	1	26	2	12	143	5	0	2	2	3	306	8
13:15	1	1	125	10	0	5	1	15	0	9	142	2	0	0	0	3	313	1
13:30	2	1	94	10	1	6	1	16	4	9	126	5	0	1	3	1	273	7
13:45	6	9	139	10	0	6	3	22	4	16	138	3	0	0	7	4	357	10
Hr Total	13	12	461	36	3	19	6	79	10	46	549	15	0	3	12	11	1249	26
14:00	2	1	114	10	1	6	1	15	2	11	115	4	0	1	2	4	284	5
14:15	0	2	88	11	0	5	5	24	1	12	152	5	0	3	4	1	312	1
14:30	4	1	97	4	2	2	2	17	5	14	153	4	0	1	1	1	297	11
14:45	3	0	129	11	2	3	1	17	2	16	154	5	0	0	5	2	343	7
Hr Total	9	4	428	36	5	16	9	73	10	53	574	18	0	5	12	8	1236	24
15:00	1	4	111	11	0	6	0	16	1	20	144	3	0	2	2	3	322	2
15:15	1	3	106	10	0	5	3	19	3	14	183	4	0	2	3	1	353	4
15:30	2	1	93	12	0	4	1	18	4	23	199	5	0	1	4	0	361	6
15:45	1	2	133	15	1	6	7	16	2	17	224	9	0	2	3	4	438	4
Hr Total	5	10	443	48	1	21	11	69	10	74	750	21	0	7	12	8	1474	16
16:00	4	3	115	9	0	5	4	17	4	22	266	6	0	0	3	5	455	8
16:15	3	3	103	13	0	7	2	16	1	15	257	7	0	5	7	3	438	4
16:30	1	4	114	10	0	8	4	11	4	18	264	10	0	0	5	0	448	5
16:45	6	1	125	11	0	4	7	12	1	27	272	12	0	2	5	3	481	7
Hr Total	14	11	457	43	0	24	17	56	10	82	1059	35	0	7	20	11	1822	24
17:00	1	0	122	7	1	4	10	26	5	23	313	7	0	1	2	4	519	7
17:15	1	5	108	10	0	7	9	15	2	21	344	10	0	1	8	4	542	3
17:30	1	20	81	11	0	10	9	21	2	21	293	12	0	1	4	6	489	3
17:45	0	1	101	11	0	12	4	11	3	22	263	7	1	0	3	1	436	4
Hr Total	3	26	412	39	1	33	32	73	12	87	1213	36	1	3	17	15	1986	17
18:00	0	3	128	9	0	4	5	23	2	15	239	7	0	5	5	5	448	2
18:15	0	5	124	16	0	11	7	26	3	19	206	7	0	1	10	3	435	3
18:30	0	2	130	13	1	8	3	14	2	16	159	6	0	2	1	6	360	3
18:45	0	7	135	15	2	6	4	22	0	18	175	6	0	2	8	4	402	2
Hr Total	0	17	517	53	3	29	19	85	7	68	779	26	0	10	24	18	1645	10
19:00	1	1	120	10	0	4	2	16	1	13	160	5	0	4	3	7	345	2
19:15	1	2	130	15	0	5	10	21	1	11	144	11	0	0	6	3	358	2
19:30	0	3	100	15	0	6	1	18	0	14	152	7	0	4	2	4	326	0
19:45	0	2	99	12	0	3	1	21	0	18	157	7	0	2	3	6	331	0
Hr Total	2	8	449	52	0	18	14	76	2	56	613	30	0	10	14	20	1360	4

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

Site : 95150101
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 Page : 3

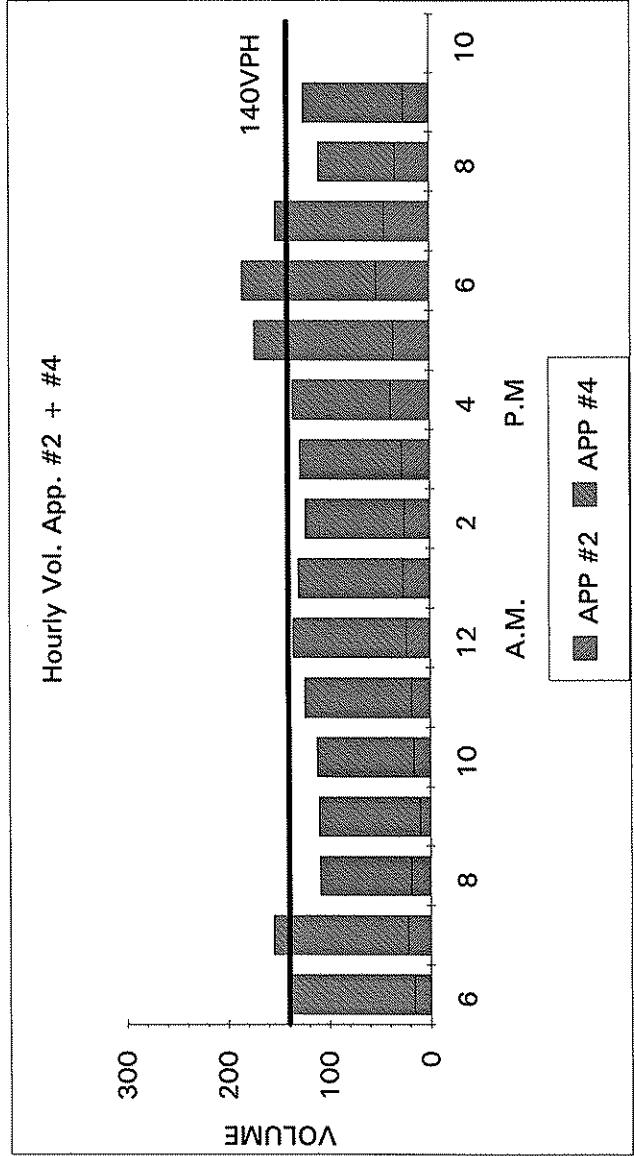
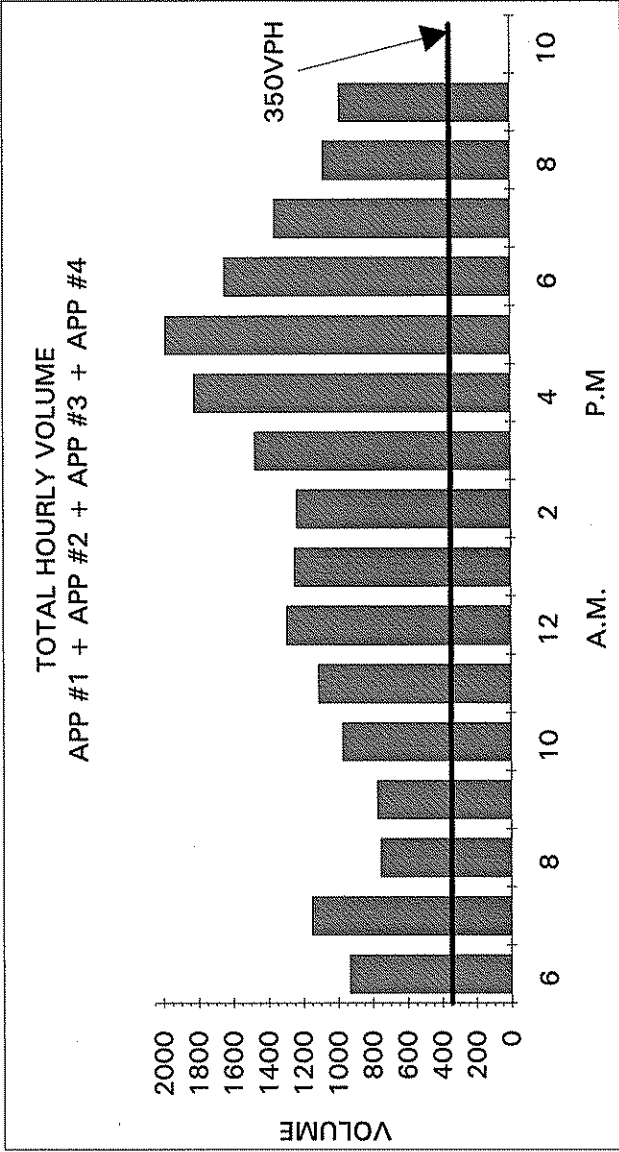
Counter : DC EIGHT
 Counted by RANDY BETTINGER

Vehicle group 1

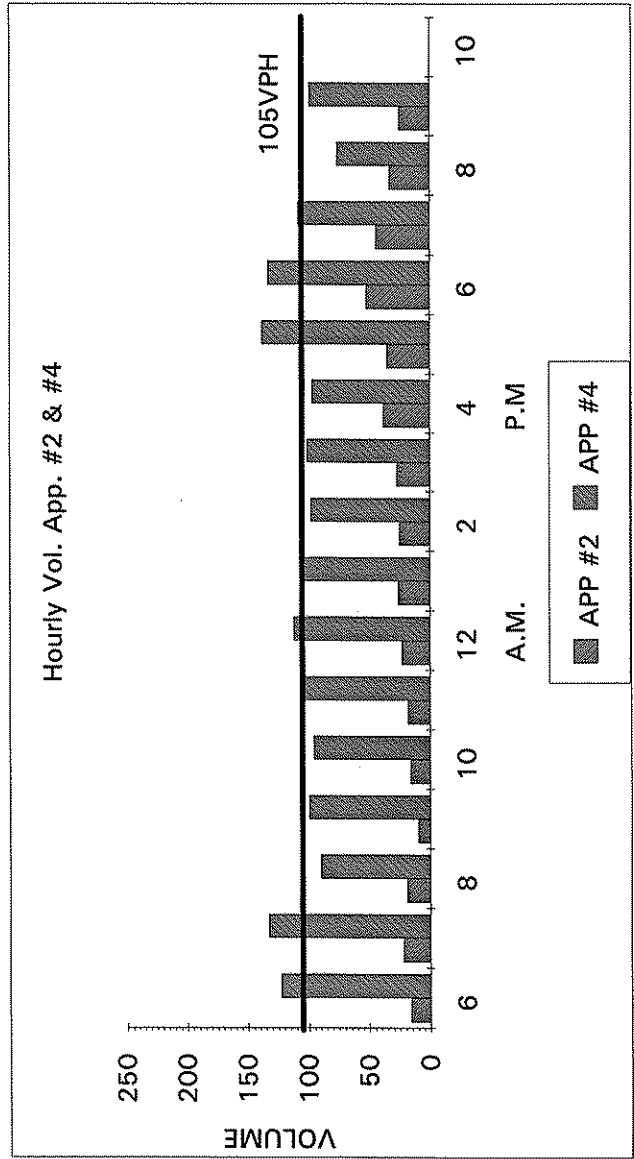
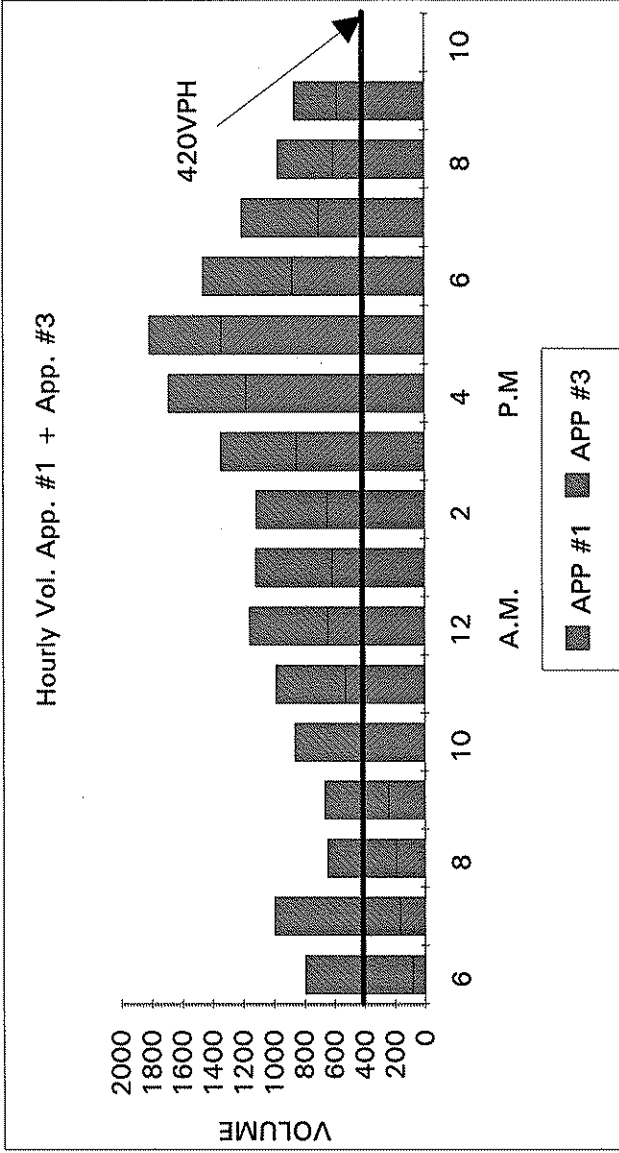
Date 07/06/95	CSAH 51 (UNIVERSITY AVE) Southbound			105TH AVE Westbound			CSAH 51 (UNIVERSITY AVE) Northbound			105TH AVE Eastbound			Vehicle Total	Other Total			
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left					
20:00	0	1	81	12	0	8	3	13	2	12	129	1	0	2	5	270	2
20:15	0	2	79	10	0	4	6	7	1	12	152	8	0	3	2	286	1
20:30	0	5	74	12	0	4	1	10	0	13	135	4	0	5	4	268	0
20:45	0	6	75	11	1	4	2	14	2	13	120	4	0	4	3	256	3
Hr Total	0	14	309	45	1	20	12	44	5	50	536	17	0	14	14	1080	6
21:00	1	2	66	14	0	4	2	12	2	21	138	11	1	0	3	275	4
21:15	0	3	71	5	0	12	2	21	0	10	141	4	0	4	5	280	0
21:30	1	1	54	9	0	6	4	13	0	8	133	5	0	1	0	235	1
21:45	0	2	49	9	0	4	1	18	0	19	87	0	0	4	2	196	0
Hr Total	2	8	240	37	0	26	9	64	2	58	499	20	1	9	10	986	5

TOTAL 108 137 7365 570 34 316 201 1197 119 746 8570 307 4 90 188 151 19838 265

TMC9515 STOP WARRANT STUDY



TMC9515 SIGNAL WARRANT 1 STUDY



TMC9515 SIGNAL WARRANT 2 STUDY

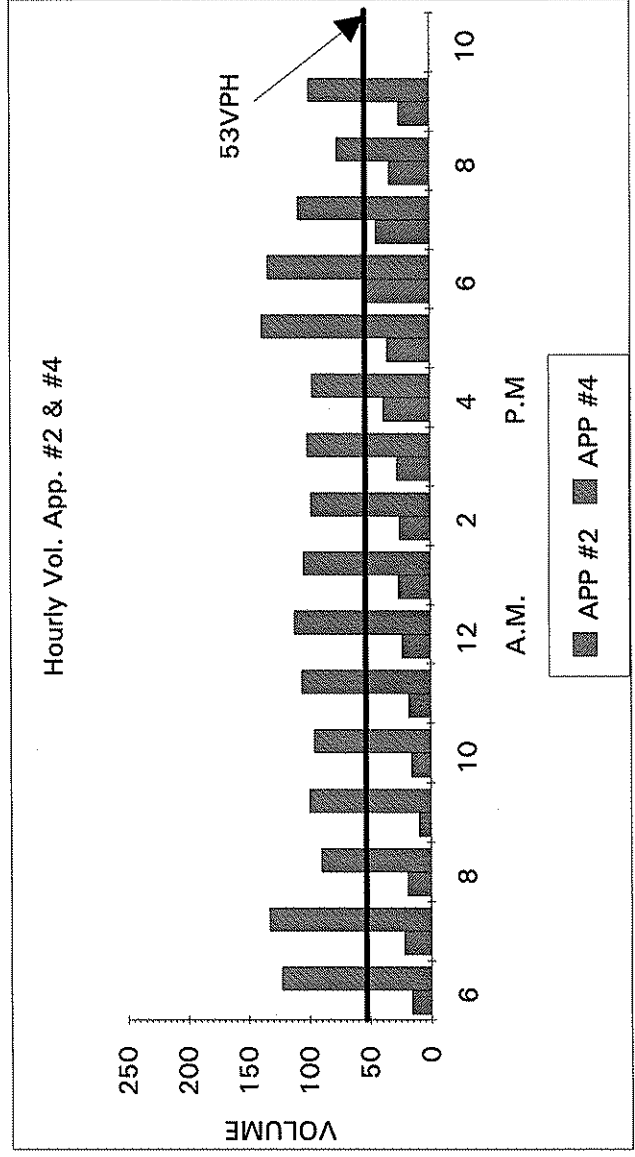
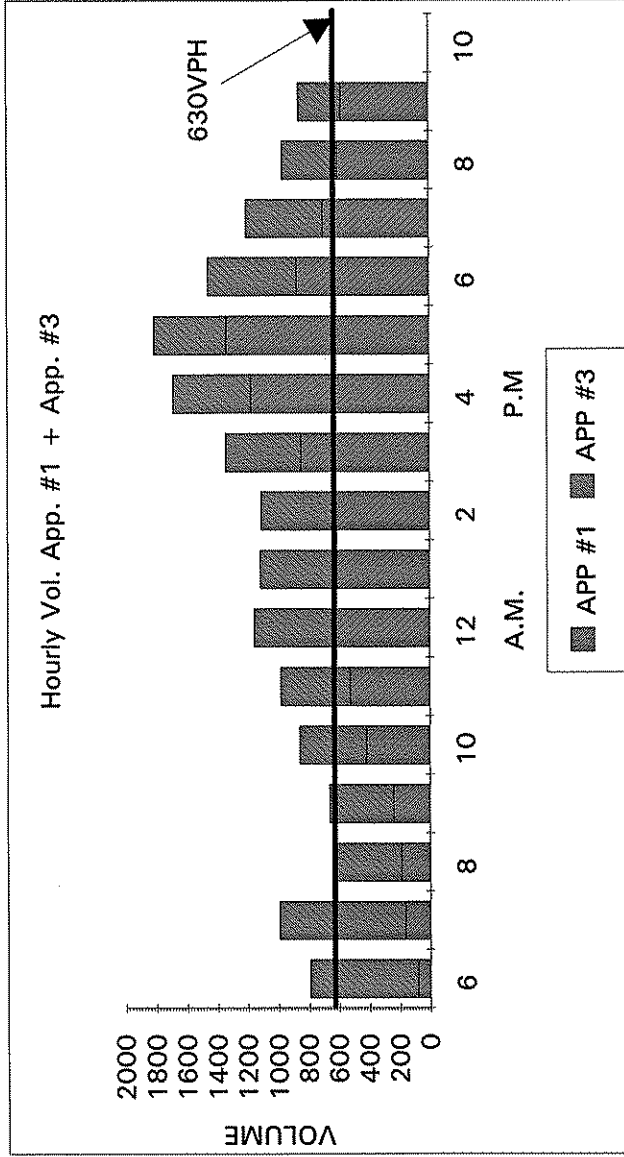
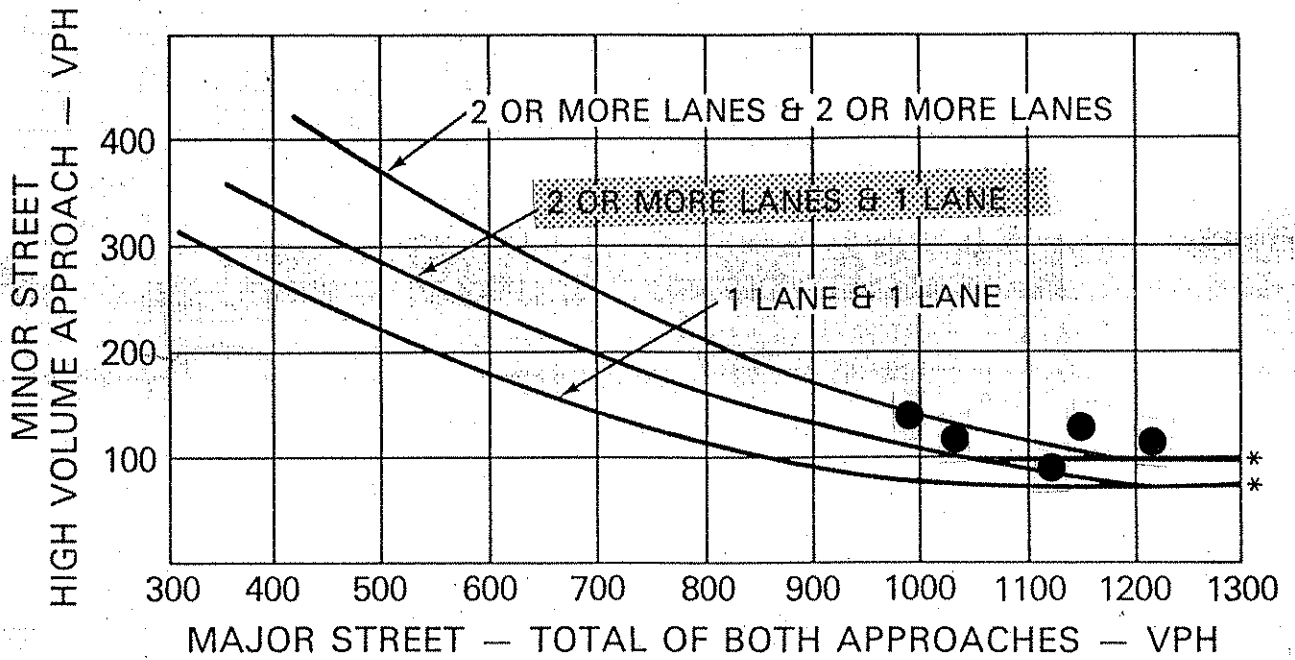


FIGURE 4-6. PEAK HOUR VOLUME WARRANT

(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.

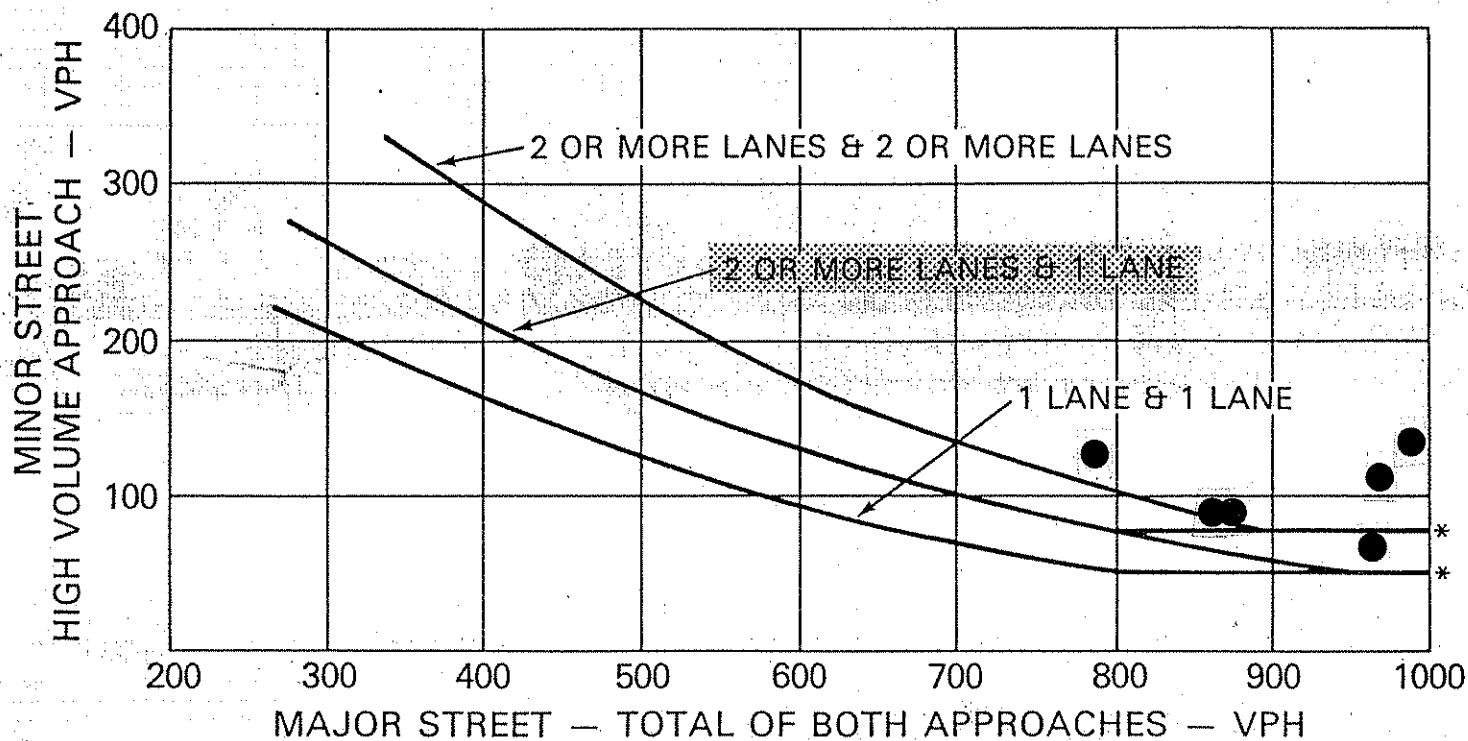
★ = VOLUMES WHICH EXCEED THE THRESHOLD BUT CANNOT BE REPRESENTED ON THE GRAPH.

TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
6-7 am	796	123
● 7-8 am	998	133
8-9 am	647	90
9-10 am	665	100
10-11 am	863	96
11-12 pm	988	106
● 12-1 pm	1159	112
● 1-2 pm	1119	104
● 2-3 pm	1113	98
★ 3-4 pm	1346	101
★ 4-5 pm	1687	97
★ 5-6 pm	1813	138
★ 6-7 pm	1460	133
● 7-8 pm	1208	108
8-9 pm	971	76
9-10 pm	862	99

TMC 9515 CSAH 51 (UNIVERSITY AVE) @ 105TH AVE

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	796	123
● 7-8 am	998	133
● 8-9 am	647	90
● 9-10 am	665	100
● 10-11 am	863	96
● 11-12 pm	988	106
★ 12-1 pm	1159	112
★ 1-2 pm	1119	104
★ 2-3 pm	1113	98
★ 3-4 pm	1346	101
★ 4-5 pm	1687	97
★ 5-6 pm	1813	138
★ 6-7 pm	1460	133
★ 7-8 pm	1208	108
● 8-9 pm	971	76
● 9-10 pm	862	99



NORTH

APP. #1= NB CSAH 51
(UNIVERSITY AVE)
APP. #2=EB 105TH AVE
APP. #3=SB CSAH 51
(UNIVERSITY AVE)
APP. #4=WB 105TH AVE

COUNT LOCATION: CSAH 51 (UNIVERSITY AVE) @
105TH AVE

DATE: 7/7/95

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						1		1
6:15-6:30						1		
6:30-6:45			1		1			3
6:45-7:00						2		
HOURLY TOTAL					1	HOURLY TOTAL		8
7:00-7:15						2		
7:15-7:30						5		1
7:30-7:45				1	1	2		
7:45-8:00				2	2	2		3
HOURLY TOTAL					3	HOURLY TOTAL		15
8:00-8:15				4	4	3		
8:15-8:30						4		2
8:30-8:45						3		2
8:45-9:00						6	2	1
HOURLY TOTAL					4	HOURLY TOTAL		23
9:00-9:15						6		1
9:15-9:30						1		
9:30-9:45						2		
9:45-10:00				2	2	3		1
HOURLY TOTAL					2	HOURLY TOTAL		14
10:00-10:15				1	1	6	1	
10:15-10:30						5	2	2
10:30-10:45								
10:45-11:00						2		
HOURLY TOTAL					1	HOURLY TOTAL		18
11:00-11:15				3	3	2		1
11:15-11:30						4		
11:30-11:45		5				5		1
11:45-12:00				3	3	10		
HOURLY TOTAL					6	HOURLY TOTAL		23
12:00-12:15						3		
12:15-12:30				2	2	2		
12:30-12:45		5			5	3		2
12:45-1:00						4	1	
HOURLY TOTAL					7	HOURLY TOTAL		15
1:00-1:15	2				2	5	1	2
1:15-1:30						1		
1:30-1:45						6		1
1:45-2:00						10		
HOURLY TOTAL					2	HOURLY TOTAL		26

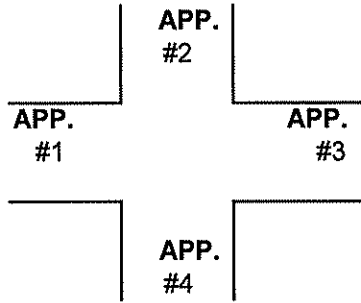


NORTH

COUNT LOCATION: CSAH 51 (UNIVERSITY AVE) @
105TH AVE

DATE: 7/6/95

- APP. #1= NB CSAH 51 (UNIVERSITY AVE)
- APP. #2= EB 105TH AVE
- APP. #3= SB CSAH 51 (UNIVERSITY AVE)
- APP. #4= WB 105TH 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						4		1
2:15-2:30						1		
2:30-2:45						9		2
2:45-3:00						6		1
HOURLY TOTAL						HOURLY TOTAL		24
3:00-3:15						2		
3:15-3:30						3	1	
3:30-3:45						3		2
3:45-4:00				1	1	3		1
HOURLY TOTAL					1	HOURLY TOTAL		15
4:00-4:15				2	2	9		1
4:15-4:30						1		1
4:30-4:45						3		1
4:45-5:00						6		1
HOURLY TOTAL					2	HOURLY TOTAL		23
5:00-5:15						3		4
5:15-5:30				2	2	2	1	
5:30-5:45						1		2
5:45-6:00						3	1	
HOURLY TOTAL					2	HOURLY TOTAL		17
6:00-6:15						1		1
6:15-6:30						2		2
6:30-6:45	3				3	1		1
6:45-7:00						2		
HOURLY TOTAL					3	HOURLY TOTAL		10
7:00-7:15				2	2	1		1
7:15-7:30		1			1	1	1	
7:30-7:45	1				1			
7:45-8:00								
HOURLY TOTAL					4	HOURLY TOTAL		4
8:00-8:15				1	1	1		
8:15-8:30		2		1	3	1		
8:30-8:45				1	1			
8:45-9:00		2			2	3		
HOURLY TOTAL					7	HOURLY TOTAL		5
9:00-9:15						4		
9:15-9:30								
9:30-9:45						1		
9:45-10:00								
HOURLY TOTAL						HOURLY TOTAL		5