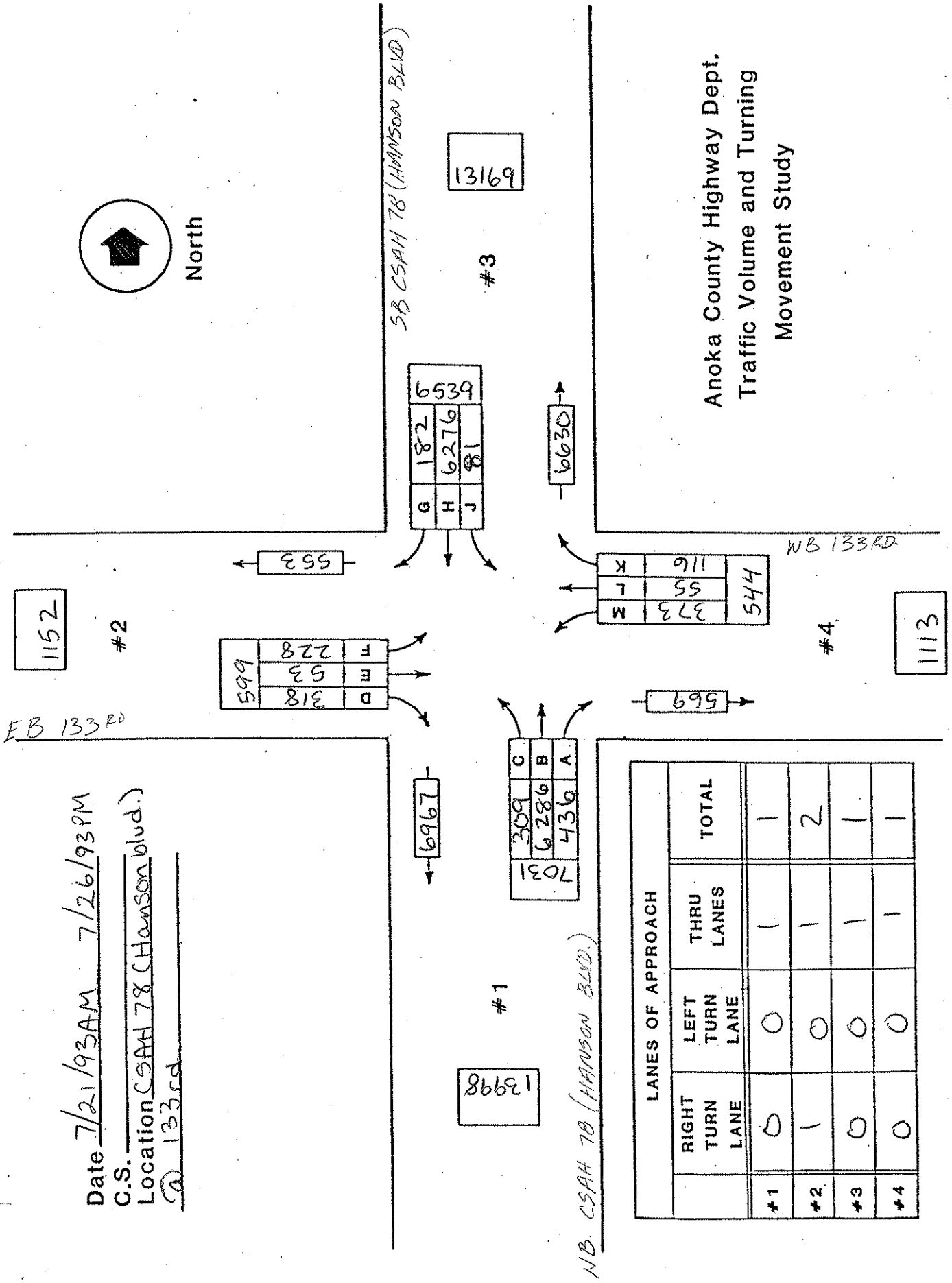


Date 7/21/93AM 7/26/93PM  
 C.S. Location CSAH 78 (HANSON BLVD.)  
 @ 133rd



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	1	0	1	2
#3	0	0	1	1
#4	0	0	1	1

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

WEATHER: CLEAR/70 CLEAR/75

Counter : TDC EIGHT

Counted by Naomi/Eileen

Vehicle group 1

Date	SB CSAH 78 (HANSON BLVD) Southbound				WB COMPOST SITE Westbound				NB CSAH 78 (HANSON BLVD) Northbound				EB 133rd AVE Eastbound				Vehicle Total
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	
07/21/93																	
06:00	0	2	145	0	0	0	0	0	0	0	11	1	0	2	0	0	161
06:15	2	0	166	0	0	0	0	0	2	0	29	2	1	9	0	3	209
06:30	5	0	189	0	0	0	1	0	1	1	44	2	1	6	0	3	246
06:45	2	1	174	1	0	0	0	0	0	0	50	4	0	6	0	0	236
Hr Total	9	3	674	1	0	0	1	0	3	1	134	9	2	23	0	6	852
07:00	2	0	191	0	0	1	0	1	6	7	51	1	0	12	2	2	268
07:15	10	5	197	0	0	1	0	4	11	3	73	4	0	10	0	2	299
07:30	11	6	177	0	0	1	0	1	22	5	65	4	3	10	0	5	274
07:45	22	1	155	0	0	1	0	6	17	3	80	2	2	4	0	7	259
Hr Total	45	12	720	0	0	4	0	12	56	18	269	11	5	36	2	16	1100
08:00	20	4	120	2	0	1	0	1	18	4	73	3	3	3	0	4	215
08:15	15	4	109	0	0	0	0	4	14	11	61	2	2	10	1	4	206
08:30	12	2	108	2	0	1	0	6	18	7	70	0	3	6	0	6	208
08:45	14	1	114	0	0	2	0	1	23	7	88	4	0	2	0	2	221
Hr Total	61	11	451	4	0	4	0	12	73	29	292	9	8	21	1	16	850
09:00	24	0	103	3	0	2	2	6	11	8	50	3	1	7	2	2	188
09:15	14	3	93	0	0	0	0	5	13	7	60	3	2	11	2	3	187
09:30	16	1	83	1	0	1	3	5	16	10	53	3	1	2	1	3	166
09:45	14	2	93	1	0	0	3	8	19	4	88	3	1	7	1	3	213
Hr Total	68	6	372	5	0	3	8	24	59	29	251	12	5	27	6	11	754
10:00	17	5	82	3	0	2	0	5	14	7	69	5	0	0	0	1	179
10:15	15	0	90	2	0	2	0	6	13	7	58	2	1	2	0	4	173
10:30	8	3	89	3	0	3	1	4	10	7	80	2	1	2	1	6	201
10:45	37	4	90	0	0	2	1	7	24	8	90	5	2	7	2	3	219
Hr Total	77	12	351	8	0	9	2	22	61	29	297	14	4	11	3	14	772
11:00	14	4	88	3	1	1	1	6	17	3	90	6	0	2	0	4	208
11:15	22	0	86	4	1	2	0	6	15	11	73	3	2	2	3	4	194
11:30	15	6	85	2	3	5	2	9	17	9	81	6	2	4	1	7	217
11:45	15	2	94	0	0	3	0	11	24	10	86	2	0	0	0	1	209
Hr Total	66	12	353	9	5	11	3	32	73	33	330	17	4	8	4	16	828
12:00	17	6	93	0	1	0	2	6	18	5	101	0	2	0	2	3	218
12:15	16	3	92	2	2	1	2	4	17	6	79	1	1	4	1	5	200
12:30	16	4	78	5	0	1	0	5	12	11	103	10	1	2	1	1	221
12:45	17	4	97	1	0	3	1	12	21	7	100	5	2	6	1	7	244
Hr Total	66	17	360	8	3	5	5	27	68	29	383	16	6	12	5	16	883

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

WEATHER: CLEAR/70 CLEAR/75

Counter : TDC EIGHT

Counted by Naomi/Eileen

Vehicle group 1

Date	SB CSAH 78 (HANSON BLVD) Southbound				WB COMPOST SITE Westbound				NB CSAH 78 (HANSON BLVD) Northbound				EB 133rd AVE Eastbound				Vehicle Total
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	
07/21/93																	
13:00	13	1	86	4	0	2	2	14	15	17	75	4	0	5	0	6	216
13:15	14	9	75	2	0	4	1	13	15	10	106	1	1	2	0	5	228
13:30	17	4	85	1	0	2	0	14	14	9	93	3	0	3	0	4	218
13:45	11	3	83	1	0	2	3	8	21	11	89	4	1	6	2	2	214
Hr Total	55	17	329	8	0	10	6	49	65	47	363	12	2	16	2	17	876
14:00	17	4	85	1	0	2	1	4	13	6	83	10	1	4	1	5	206
14:15	7	1	87	0	0	2	2	8	25	16	96	4	1	0	2	3	221
14:30	28	3	127	0	0	4	1	9	19	12	90	4	0	4	0	5	259
14:45	14	4	109	1	2	1	1	10	14	13	95	6	1	4	0	4	248
Hr Total	66	12	408	2	2	9	5	31	71	47	364	24	3	12	3	17	934
15:00	14	2	95	0	1	2	1	8	12	7	117	2	3	6	1	5	246
15:15	9	7	86	3	0	3	1	5	17	5	152	5	1	5	2	4	278
15:30	17	4	91	2	0	1	1	3	21	1	151	5	2	0	1	6	266
15:45	11	2	94	0	0	0	3	2	10	4	173	4	1	3	2	2	289
Hr Total	51	15	366	5	1	6	6	18	60	17	593	16	7	14	6	17	1079
16:00	11	1	81	0	1	2	0	7	13	9	166	6	2	7	0	6	285
16:15	12	0	105	0	0	3	1	4	11	6	161	16	0	9	0	6	311
16:30	11	3	106	1	0	3	2	7	15	12	170	11	0	6	1	2	324
16:45	10	3	115	2	0	0	0	7	13	8	204	9	0	11	1	3	363
Hr Total	44	7	407	3	1	8	3	25	52	35	701	42	2	33	2	17	1283
17:00	5	3	97	2	0	2	1	8	12	6	217	6	2	8	0	2	352
17:15	5	6	87	3	0	1	3	10	16	9	180	10	6	10	5	7	331
17:30	15	7	109	3	0	8	0	8	15	8	220	12	1	6	2	4	387
17:45	8	6	111	3	0	3	3	6	9	12	181	19	3	10	2	4	360
Hr Total	33	22	404	11	0	14	7	32	52	35	798	47	12	34	9	17	1430
18:00	6	2	97	1	0	6	2	12	2	13	169	3	0	5	3	1	314
18:15	7	1	83	1	0	1	1	13	1	11	127	8	0	7	0	4	257
18:30	0	1	85	1	0	4	1	7	0	14	108	7	0	5	0	4	237
18:45	1	1	80	3	0	6	1	21	0	19	90	1	0	3	0	4	229
Hr Total	14	5	345	6	0	17	5	53	3	57	494	19	0	20	3	13	1037
19:00	2	3	96	6	0	5	1	14	6	16	112	4	0	4	5	3	269
19:15	2	3	72	3	0	7	3	14	1	6	81	7	1	3	2	6	207
19:30	1	2	62	1	0	2	0	4	4	1	96	7	0	7	0	5	187
19:45	0	5	62	1	0	2	0	1	0	1	96	6	0	3	0	1	178
Hr Total	5	13	292	11	0	16	4	33	11	24	385	24	1	17	7	15	841

WEATHER: CLEAR/70 CLEAR/75  
 Counter : TDC EIGHT  
 Counted by Naomi/Eileen

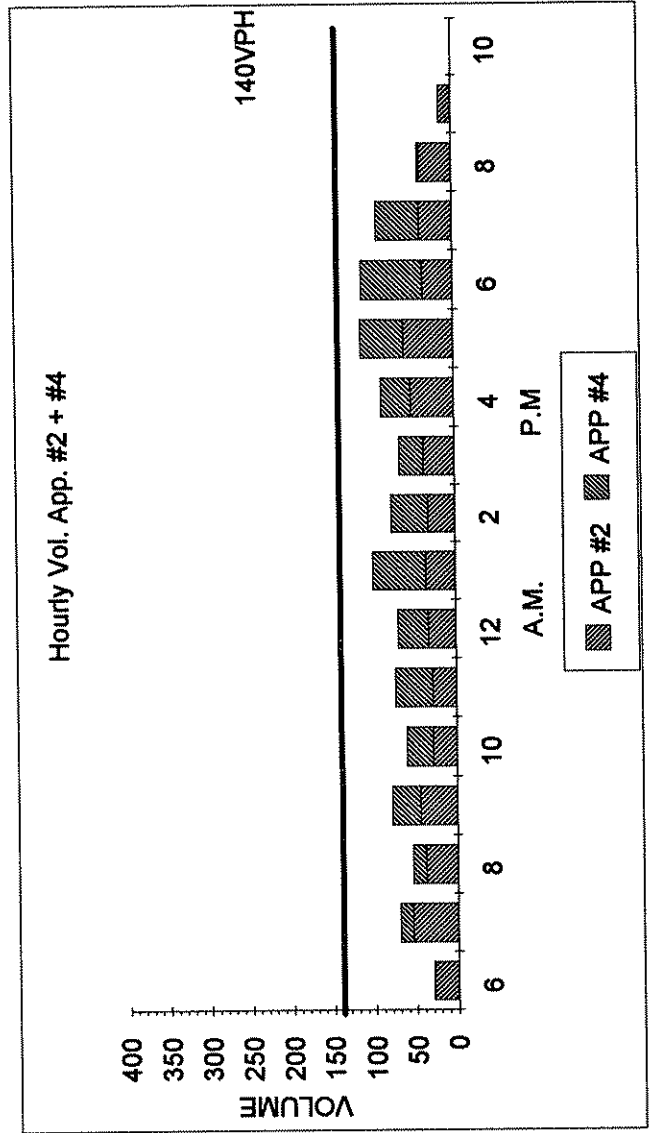
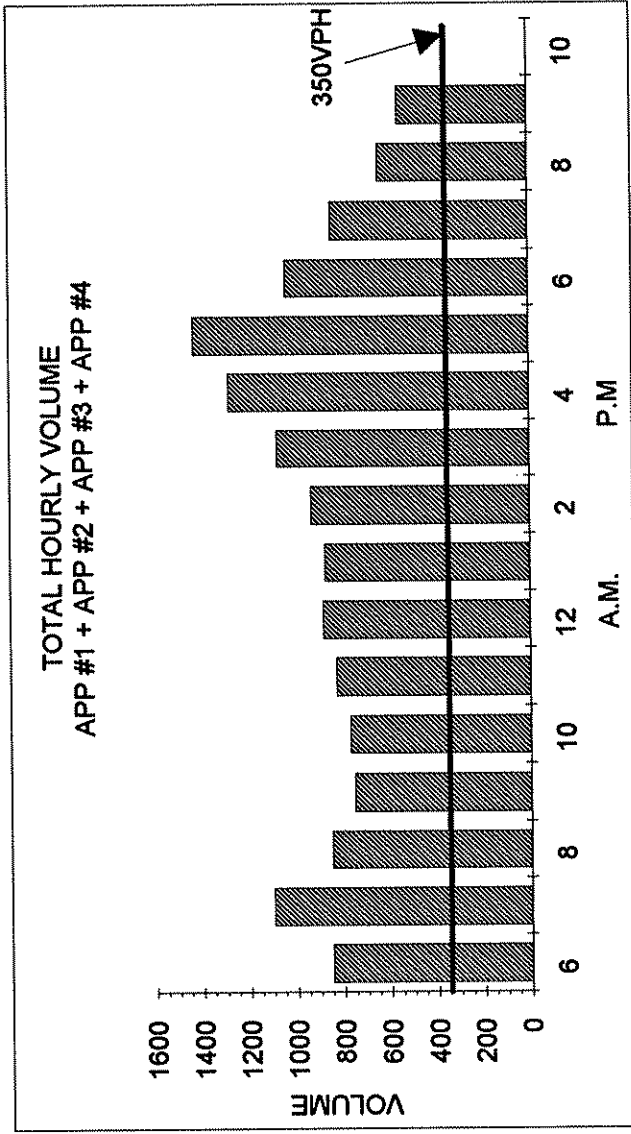
ANOKA COUNTY HIGHWAY DEPARTMENT  
 TRAFFIC ENGINEERING SECTION  
 TRAFFIC VOLUME AND  
 TURNING MOVEMENT STUDY

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

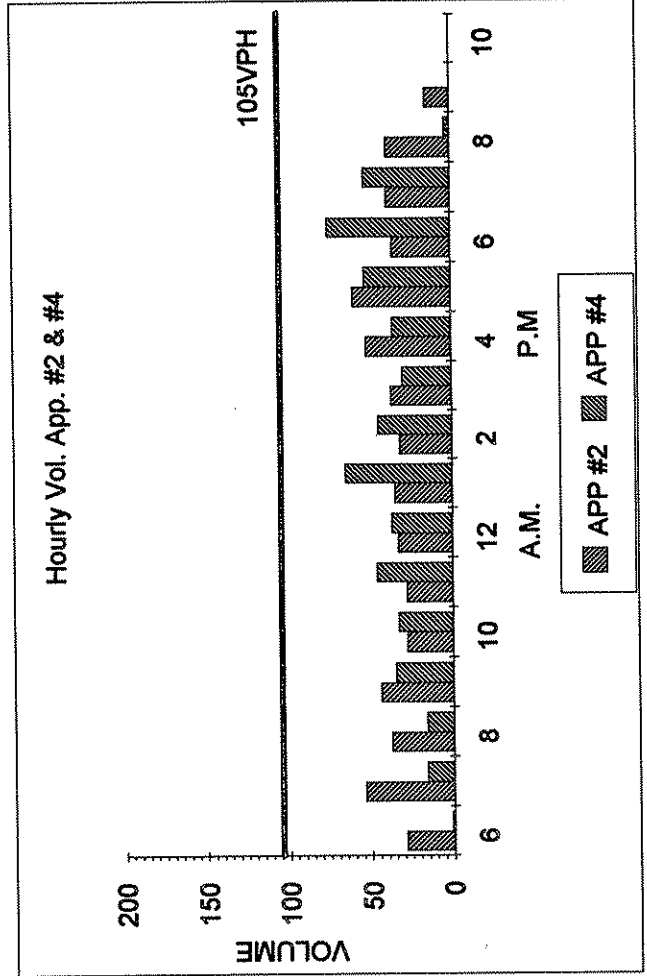
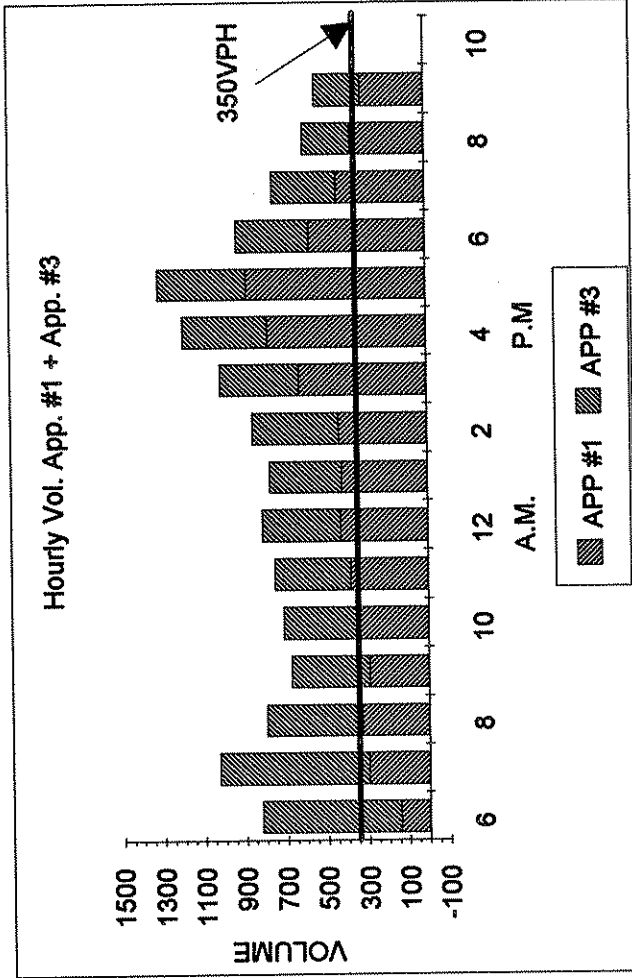
Vehicle group 1

Date	SB CSAH 78 (HANSON BLVD) Southbound				WB COMPOST SITE Westbound				NB CSAH 78 (HANSON BLVD) Northbound				EB 133rd AVE Eastbound				Vehicle Total
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	
07/21/93																	
20:00	0	3	54	0	0	0	0	1	0	3	95	4	0	2	0	4	166
20:15	2	1	61	0	0	0	0	1	0	1	90	5	0	6	0	7	172
20:30	0	4	47	0	0	0	0	1	0	1	75	3	1	11	0	1	143
20:45	0	1	62	0	0	0	0	0	0	0	80	8	0	4	0	4	159
Hr Total	2	9	224	0	0	0	0	3	0	5	340	20	1	23	0	16	640
21:00	0	2	63	0	0	0	0	0	0	0	76	5	0	2	0	1	149
21:15	0	2	51	0	0	0	0	0	0	0	84	7	0	4	0	1	149
21:30	0	3	56	0	0	0	0	0	1	0	67	1	0	3	0	2	132
21:45	0	2	50	0	0	0	0	0	0	0	65	4	0	2	0	0	123
Hr Total	0	9	220	0	0	0	0	0	1	0	292	17	0	11	0	4	553
*TOTAL*	662	182	6276	81	12	116	55	373	708	435	6286	309	62	318	53	228	14712

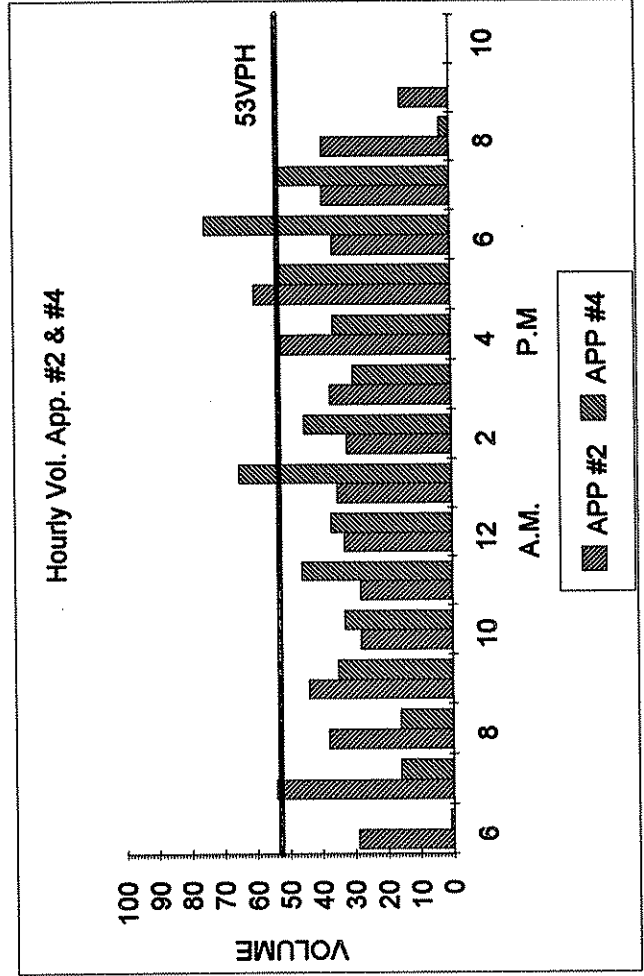
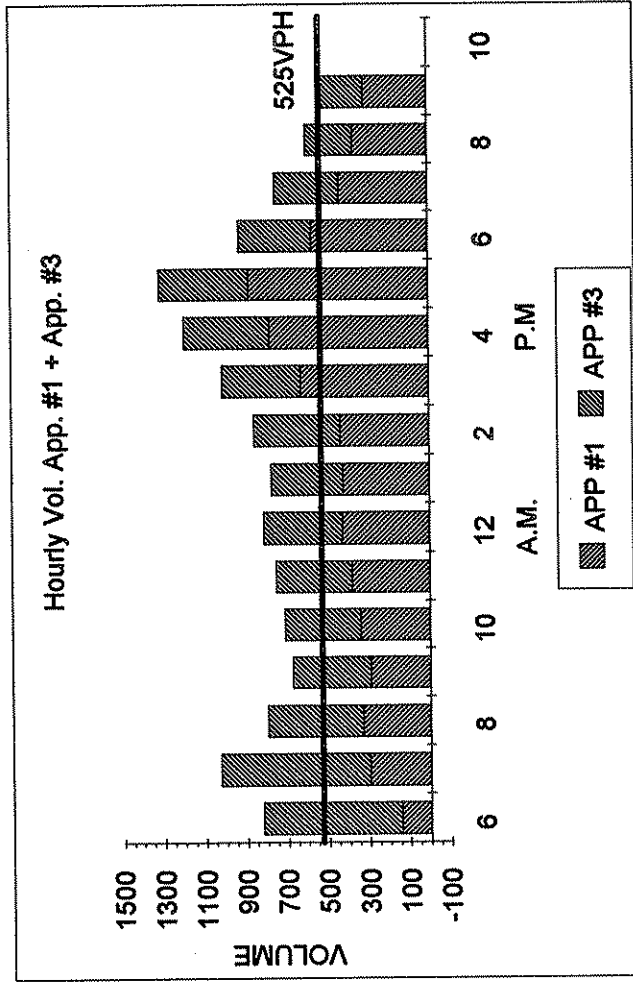
TMC9324 STOP WARRANT STUDY



TMC9324 SIGNAL WARRANT 1 STUDY

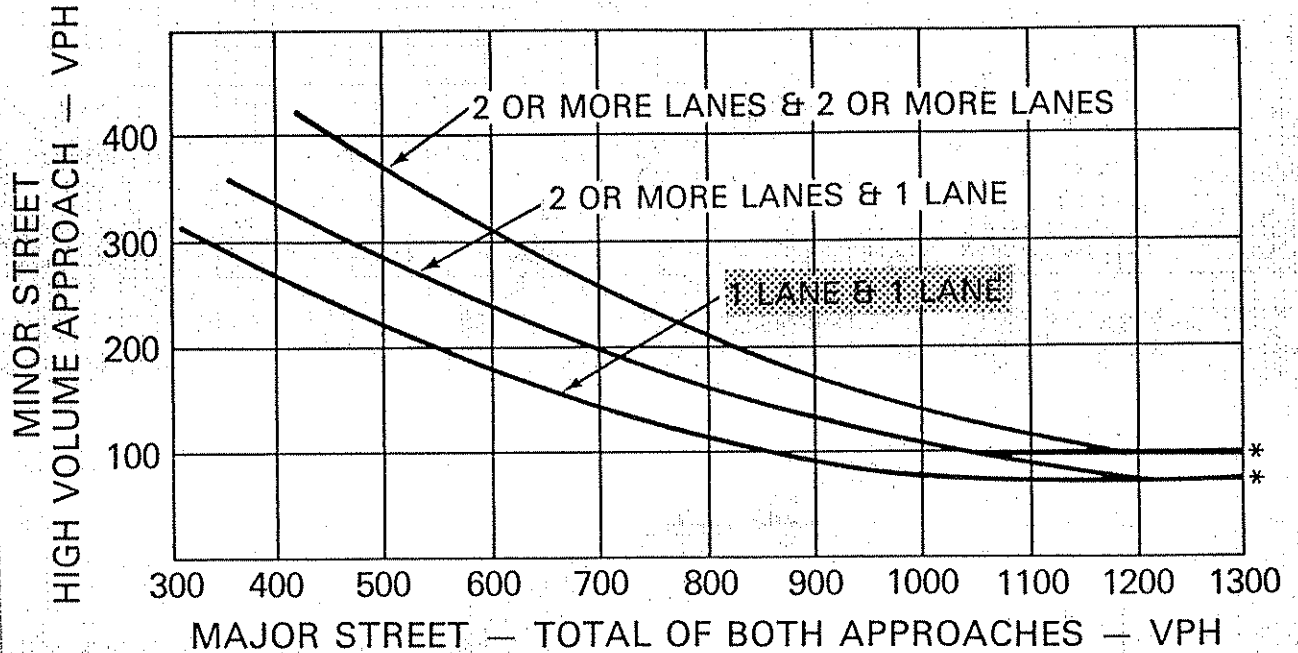


TMC9324 SIGNAL WARRANT 2 STUDY



# 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.

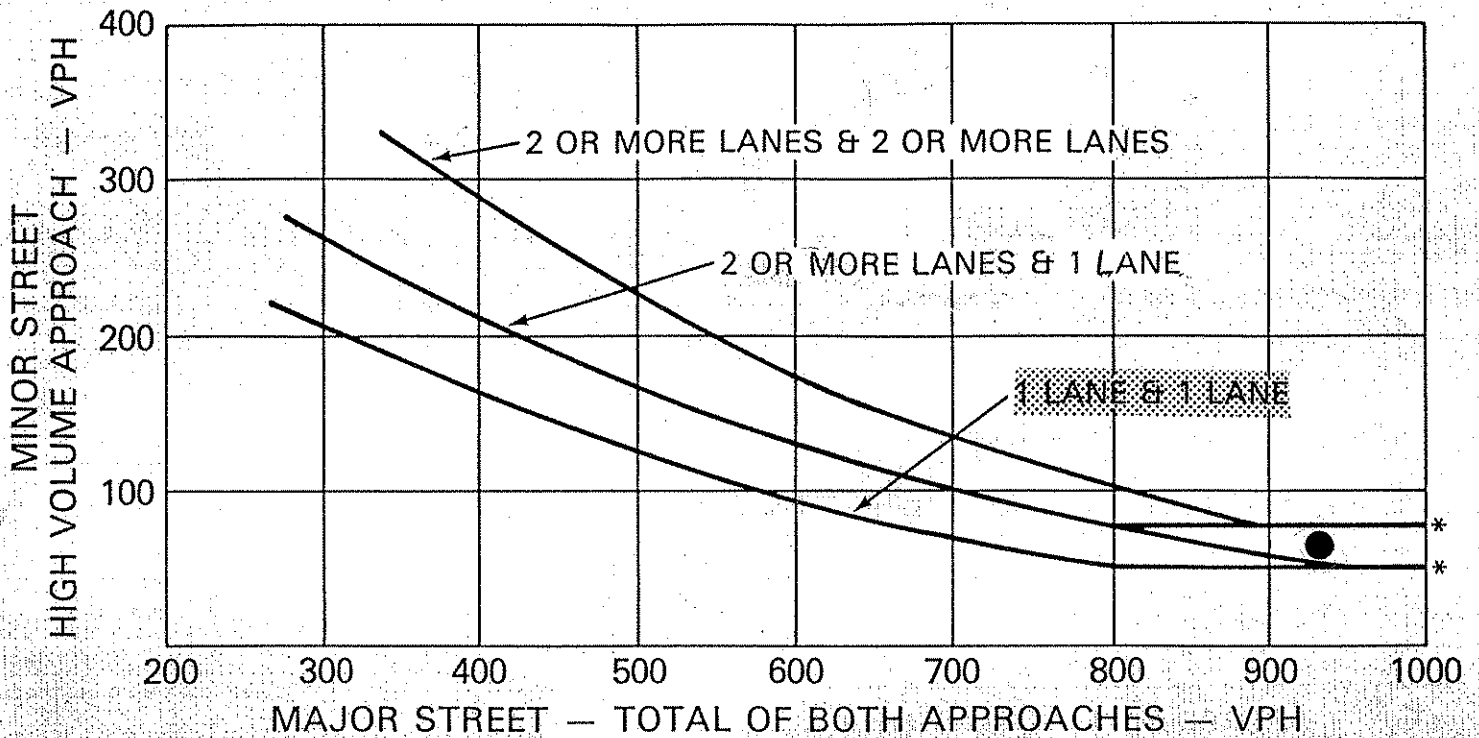
★ = VOLUMES WHICH EXCEED THE THRESHOLD BUT CANNOT BE REPRESENTED ON THE GRAPH.

TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
6-7 am	822	29
7-8 am	1030	54
8-9 am	796	38
9-10 am	675	44
10-11 am	711	33
11-12 pm	754	46
12-1 pm	813	37
1-2 pm	776	65
2-3 pm	857	45
3-4 pm	1012	37
4-5 pm	1195	52
5-6 pm	1317	60
6-7 pm	926	75
7-8 pm	749	53
8-9 pm	598	39
9-10 pm	538	15



# 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	822	29
7-8 am	1030	54
8-9 am	796	38
9-10 am	675	44
10-11 am	711	33
11-12 pm	754	46
12-1 pm	813	37
1-2 pm	776	65
2-3 pm	857	45
3-4 pm	1012	37
4-5 pm	1195	52
★ 5-6 pm	1317	60
● 6-7 pm	926	75
7-8 pm	749	53
8-9 pm	598	39
9-10 pm	538	15



**NORTH**

APP. #1=NB CSAH 78  
(HANSON BLVD)

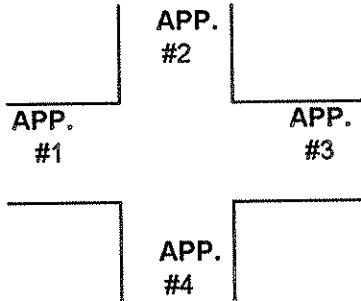
APP. #2=WB 133RD AVE

APP. #3=SB CSAH 78  
(HANSON BLVD)

APP. #4=EB  
COMPOST SITE

**COUNT LOCATION:** CSAH 78 (HANSON BLVD) @  
133RD AVE / COMPOST SITE

**DATE:** 7/21/93



- 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								
6:15-6:30						4		1
6:30-6:45						7	1	
6:45-7:00						2		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>15</b>
7:00-7:15						7		1
7:15-7:30						18		2
7:30-7:45						35		1
7:45-8:00						36		2
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>102</b>
8:00-8:15						43		5
8:15-8:30						30		1
8:30-8:45		1				32		1
8:45-9:00						38		1
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>151</b>
9:00-9:15		1			1	36		1
9:15-9:30						31		
9:30-9:45						31		
9:45-10:00						33		1
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>133</b>
10:00-10:15						31		
10:15-10:30						28		1
10:30-10:45						18		1
10:45-11:00						48		16
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>143</b>
11:00-11:15						35		1
11:15-11:30		2		2	4	35		4
11:30-11:45						36		
11:45-12:00						37		2
<b>HOURLY TOTAL</b>					<b>4</b>	<b>HOURLY TOTAL</b>		<b>150</b>
12:00-12:15						39		
12:15-12:30				2	2	34		2
12:30-12:45						29		1
12:45-1:00						37		3
<b>HOURLY TOTAL</b>					<b>2</b>	<b>HOURLY TOTAL</b>		<b>145</b>
1:00-1:15						26	1	1
1:15-1:30		2			2	30		
1:30-1:45						30		1
1:45-2:00		1			1	33		
<b>HOURLY TOTAL</b>					<b>3</b>	<b>HOURLY TOTAL</b>		<b>122</b>

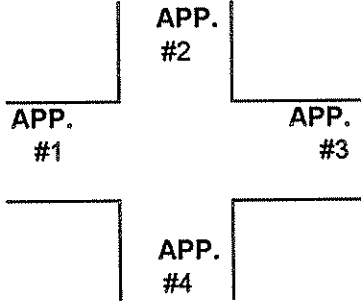


**NORTH**

APP. #1=NB CSAH 78  
(HANSON BLVD)  
APP. #2=WB 133RD AVE  
APP. #3=SB CSAH 78  
(HANSON BLVD)  
APP. #4=  
EB COMPOST SITE

**COUNT LOCATION:** CSAH 78 (HANSON BLVD) @  
133RD AVE/ COMPOST SITE

**DATE:** 7/26/93



- 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						30		1
2:15-2:30				1	1	33	1	
2:30-2:45						47		
2:45-3:00						32		
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>144</b>
3:00-3:15						30		
3:15-3:30						28		
3:30-3:45				1	1	40		1
3:45-4:00		1			1	22		
<b>HOURLY TOTAL</b>					<b>2</b>	<b>HOURLY TOTAL</b>		<b>121</b>
4:00-4:15		1		1	2	27		
4:15-4:30						22	1	
4:30-4:45						25		
4:45-5:00						24		
<b>HOURLY TOTAL</b>					<b>2</b>	<b>HOURLY TOTAL</b>		<b>99</b>
5:00-5:15			1		1	19	1	
5:15-5:30			1		1	26		1
5:30-5:45						30	1	1
5:45-6:00						20		
<b>HOURLY TOTAL</b>					<b>2</b>	<b>HOURLY TOTAL</b>		<b>99</b>
6:00-6:15				2	2	9		
6:15-6:30						7		
6:30-6:45								
6:45-7:00						1		
<b>HOURLY TOTAL</b>					<b>2</b>	<b>HOURLY TOTAL</b>		<b>17</b>
7:00-7:15						7		1
7:15-7:30						3		1
7:30-7:45		1			1	4	1	
7:45-8:00		2			2			
<b>HOURLY TOTAL</b>					<b>3</b>	<b>HOURLY TOTAL</b>		<b>17</b>
8:00-8:15								
8:15-8:30		2			2	2		
8:30-8:45		3			3	1		
8:45-9:00		1			1			
<b>HOURLY TOTAL</b>					<b>6</b>	<b>HOURLY TOTAL</b>		<b>3</b>
9:00-9:15								
9:15-9:30								
9:30-9:45						1		
9:45-10:00								
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>1</b>