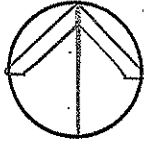


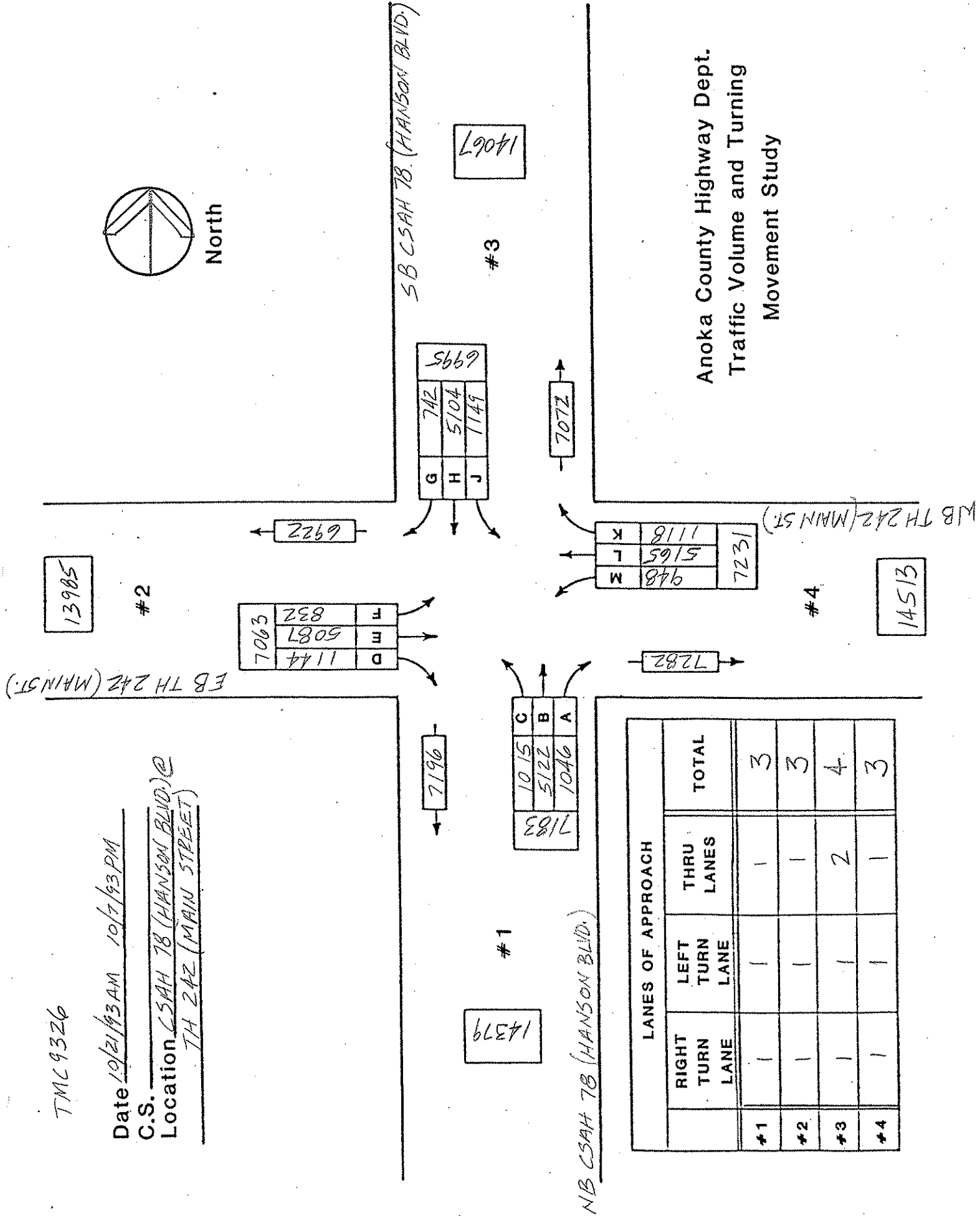
TMC 9326

Date 10/21/93 AM 10:17/93 PM

C.S. Location CSAH 78 (HANSON BLVD.) @ TH 242 (MAIN STREET)



North



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

Anoka County Highway Dept.  
Traffic Volume and Turning  
Movement Study

14513

14379

14067

13985

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

Site Code : 93260201  
 Start Date: 10/14/93  
 File I.D. : TMC93261  
 Page : 1

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

Vehicle group 1

Date 10/14/93	CSAH 78 (HANSON BLVD) Southbound			I TH 242 (MAIN ST.) Westbound			CSAH 78 (HANSON BLVD) Northbound			I TH 242 (MAIN ST.) Eastbound			Vehicle Total	Other Total				
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left						
06:00	1	3	95	4	2	0	37	5	0	6	7	2	3	13	36	1	209	6
06:15	1	5	158	22	4	6	37	5	0	9	6	3	4	23	43	2	319	9
06:30	3	6	207	21	2	2	66	7	0	4	21	3	2	19	57	5	418	7
06:45	2	9	223	19	1	9	92	13	0	15	38	9	0	42	63	4	536	3
Hr Total	7	23	683	66	9	17	232	30	0	34	72	17	9	97	199	12	1482	25
07:00	6	9	170	22	9	4	81	13	4	4	24	8	2	38	47	5	425	21
07:15	3	9	177	26	14	11	78	10	2	4	48	3	2	38	63	6	473	21
07:30	1	10	149	22	3	15	97	11	3	17	52	8	3	35	67	6	489	10
07:45	3	8	150	22	6	11	96	19	4	12	44	13	4	21	82	13	491	17
Hr Total	13	36	646	92	32	41	352	53	13	37	168	32	11	132	259	30	1878	69
08:00	9	12	122	13	3	17	67	19	5	8	45	12	2	22	49	4	390	19
08:15	14	18	111	20	3	10	64	7	5	12	37	8	9	18	74	7	386	31
08:30	12	18	100	18	3	9	82	14	10	23	35	12	6	13	56	4	384	31
08:45	9	8	101	23	5	14	81	13	4	12	40	8	8	10	78	3	391	26
Hr Total	44	56	434	74	14	50	294	53	24	55	157	40	25	63	257	18	1551	107
09:00	3	7	79	13	4	12	65	14	8	12	42	15	4	16	64	15	354	19
09:15	14	19	86	12	7	17	61	15	6	15	50	10	4	10	67	4	366	31
09:30	6	10	76	20	4	27	64	9	9	16	52	16	4	22	56	7	375	23
09:45	13	20	88	26	8	17	82	11	2	12	41	10	4	20	64	6	397	27
Hr Total	36	56	329	71	23	73	272	49	25	55	185	51	16	68	251	32	1492	100
10:00	9	20	57	16	6	8	65	8	7	16	38	8	11	18	63	15	332	33
10:15	14	20	48	10	3	9	80	10	4	6	36	12	12	11	91	12	345	33
10:30	14	22	59	14	10	5	85	13	4	17	32	6	12	10	81	18	362	40
10:45	8	16	52	10	11	19	60	12	4	21	37	5	8	9	79	13	333	31
Hr Total	45	78	216	50	30	41	290	43	19	60	143	31	43	48	314	58	1372	137
11:00	6	9	56	6	17	16	75	20	6	14	52	4	11	15	89	12	368	40
11:15	14	12	57	14	4	13	60	10	1	11	62	12	14	17	95	15	378	33
11:30	16	17	45	18	6	17	61	9	6	16	47	12	10	14	64	15	335	38
11:45	6	19	55	12	6	11	97	10	1	16	56	10	10	11	92	14	403	23
Hr Total	42	57	213	50	33	57	293	49	14	57	217	38	45	57	340	56	1484	134
12:00	7	12	54	18	5	10	66	10	5	16	54	10	15	14	93	22	379	32
12:15	8	16	63	14	8	10	75	15	9	14	55	16	9	17	85	8	388	34
12:30	10	11	65	21	8	13	79	15	5	12	57	14	10	19	79	20	405	33
12:45	8	6	45	14	8	18	68	16	12	17	61	10	9	16	67	14	352	33
Hr Total	33	45	227	67	29	51	288	56	31	59	227	50	43	66	324	64	1524	136

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

Site Code : 93260201  
 Start Date: 10/14/93  
 File I.D. : TMC93261  
 Page : 2

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

Vehicle group 1

Date 10/14/93	CSAH 78 (HANSON BLVD) Southbound				I TH 242 (MAIN ST.) Westbound				CSAH 78 (HANSON BLVD) Northbound				I TH 242 (MAIN ST.) Eastbound				Vehicle Total	Other Total
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left		
13:00	10	4	61	11	7	15	71	16	8	12	64	16	12	13	94	20	397	37
13:15	7	12	57	16	6	16	74	21	9	17	69	13	14	20	88	20	423	36
13:30	13	10	60	11	9	14	80	17	1	14	54	10	8	16	64	10	360	31
13:45	38	21	84	18	8	13	67	14	8	13	48	8	14	11	79	13	389	68
Hr Total	68	47	262	56	30	58	292	68	26	56	235	47	48	60	325	63	1569	172
14:00	31	3	64	24	8	20	81	17	5	17	55	15	9	13	70	15	394	53
14:15	16	13	58	19	7	19	71	11	7	13	73	9	4	11	97	18	412	34
14:30	33	25	67	30	7	12	91	19	13	14	89	27	9	9	77	14	474	62
14:45	11	6	68	16	7	15	90	15	8	26	68	19	7	24	84	21	452	33
Hr Total	91	47	257	89	29	66	333	62	33	70	285	70	29	57	328	68	1732	182
15:00	14	14	73	18	8	18	100	16	11	23	100	21	10	21	102	20	526	43
15:15	13	18	61	13	10	17	107	28	10	24	107	13	9	20	87	34	529	42
15:30	13	18	66	19	10	38	96	16	8	17	127	20	11	17	104	29	567	42
15:45	14	18	76	19	9	20	109	19	4	26	162	28	5	19	105	17	618	32
Hr Total	54	68	276	69	37	93	412	79	33	90	496	82	35	77	398	100	2240	159
16:00	5	19	69	15	23	37	138	12	5	22	145	17	4	13	106	16	609	37
16:15	12	20	90	19	14	40	102	18	22	34	175	21	4	13	104	22	658	52
16:30	6	19	86	30	7	36	105	22	9	29	167	28	5	16	100	22	660	27
16:45	11	15	90	41	4	30	125	22	5	43	167	28	4	21	120	17	719	24
Hr Total	34	73	335	105	48	143	470	74	41	128	654	94	17	63	430	77	2646	140
17:00	6	8	92	27	6	38	100	20	2	35	184	31	10	14	104	18	671	24
17:15	2	16	93	34	3	36	116	34	3	32	165	35	5	19	89	20	689	13
17:30	3	11	79	19	5	28	102	21	5	29	169	38	5	23	105	18	642	18
17:45	1	10	85	23	6	34	137	37	6	30	141	28	6	31	104	22	682	19
Hr Total	12	45	349	103	20	136	455	112	16	126	659	132	26	87	402	78	2684	74
18:00	4	13	85	18	5	39	159	21	5	20	169	35	6	26	126	17	728	20
18:15	0	8	115	31	2	23	109	27	4	22	164	34	1	34	103	18	688	7
18:30	1	8	72	24	2	27	110	19	3	17	139	22	0	25	92	18	573	0
18:45	3	7	79	28	3	24	121	19	1	19	104	20	1	21	81	8	531	8
Hr Total	8	36	351	101	12	113	499	86	13	78	576	111	8	106	402	61	2520	41
19:00	3	9	95	24	1	16	84	20	4	20	121	17	3	25	75	11	517	13
19:15	0	6	58	28	4	22	93	15	2	12	97	18	0	23	96	10	478	0
19:30	2	11	55	20	1	19	59	11	0	9	91	19	0	16	78	8	396	3
19:45	2	3	39	12	0	15	56	17	0	9	89	18	2	16	71	8	353	0
Hr Total	7	29	247	84	6	72	292	63	6	50	398	72	5	80	320	37	1744	24

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

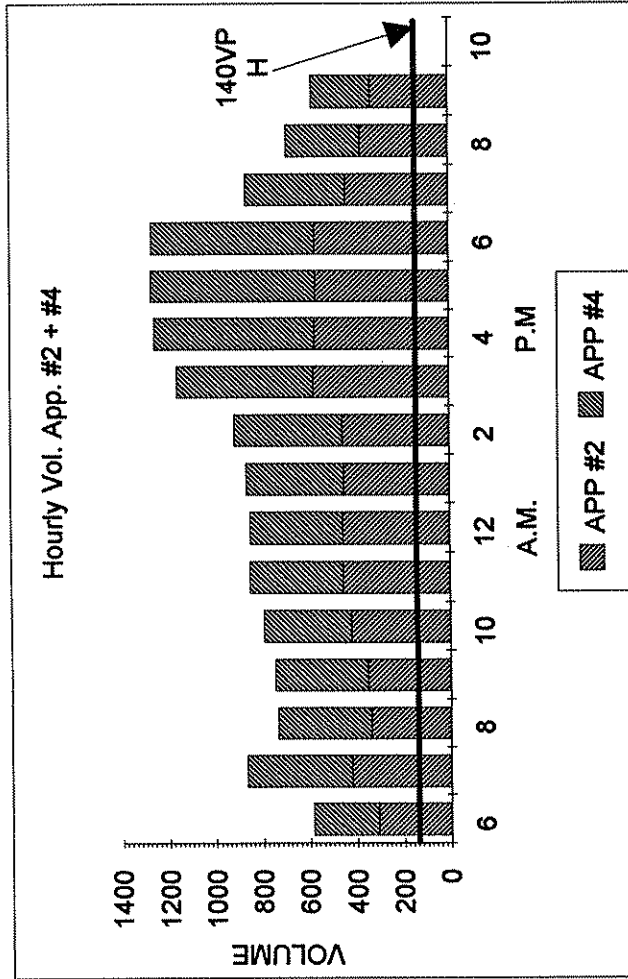
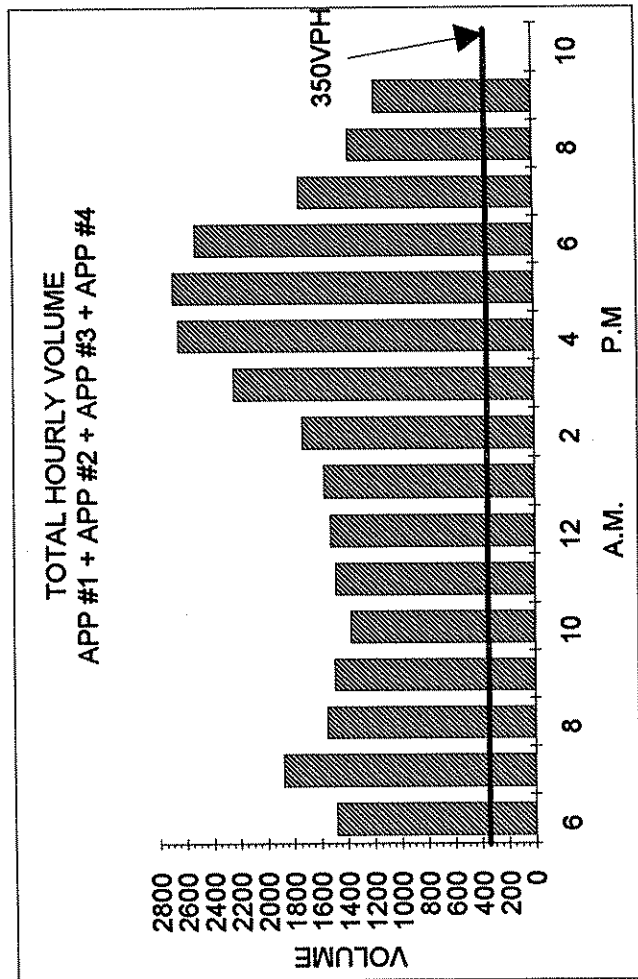
ANOKA COUNTY HIGHWAY DEPARTMENT  
 TRAFFIC ENGINEERING SECTION  
 TRAFFIC VOLUME AND  
 TURNING MOVEMENT STUDY

Site Code : 93260201  
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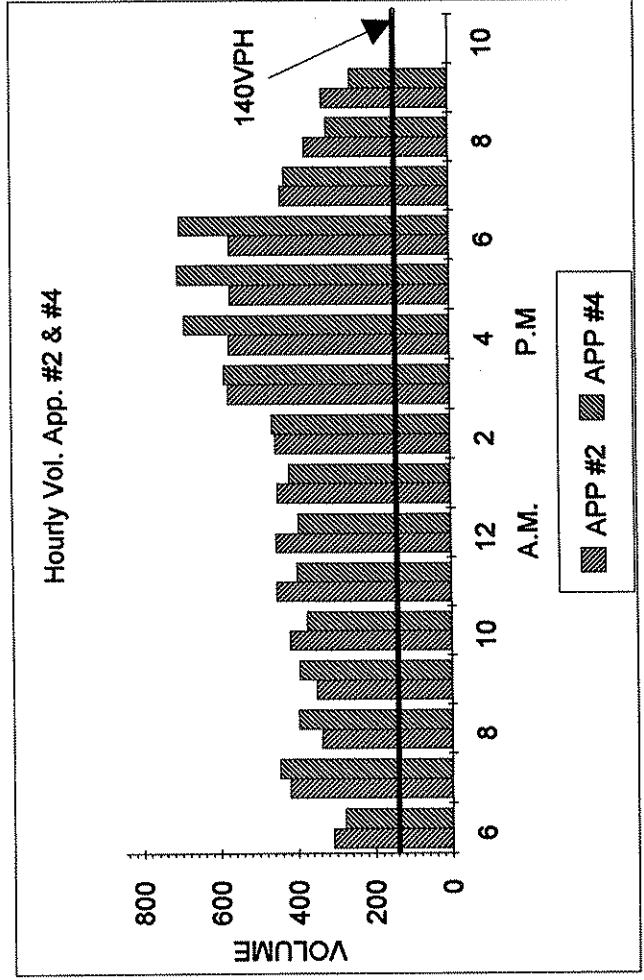
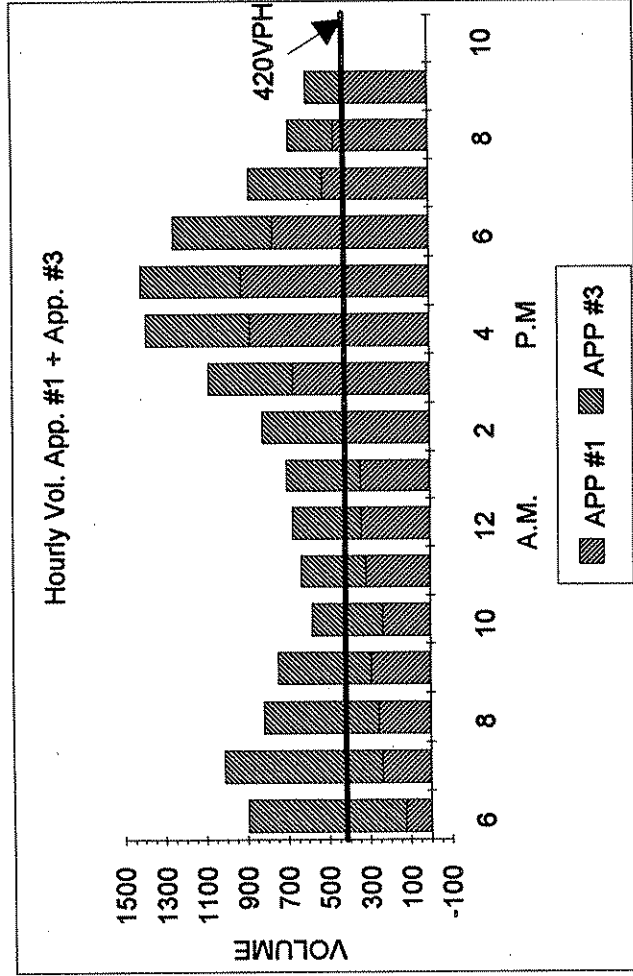
Vehicle group 1

Date	CSAH 78 (HANSON BLVD) Southbound			TH 242 (MAIN ST.) Westbound			CSAH 78 (HANSON BLVD) Northbound			TH 242 (MAIN ST.) Eastbound			Vehicle Total	Other Total				
	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left						
10/14/93																		
20:00	0	10	51	13	1	17	57	8	2	13	81	16	2	7	85	13	371	5
20:15	0	8	34	8	1	13	57	14	2	17	80	23	0	9	66	12	341	3
20:30	0	6	38	9	2	17	49	11	3	10	82	20	1	14	80	5	341	6
20:45	0	4	28	15	0	12	49	12	1	15	83	23	0	7	58	16	322	1
Hr Total	0	28	151	45	4	59	212	45	8	55	326	82	3	37	289	46	1375	15
21:00	1	9	39	7	0	10	56	8	2	15	95	21	2	13	73	7	353	5
21:15	0	2	32	12	2	19	53	5	0	8	92	19	1	14	63	10	329	3
21:30	2	5	36	6	1	7	40	8	0	5	69	15	2	11	64	4	270	5
21:45	1	2	21	2	1	12	30	5	2	8	68	11	0	8	49	11	227	4
Hr Total	4	18	128	27	4	48	179	26	4	36	324	66	5	46	249	32	1179	17
*TOTAL*	498	742	5104	1149	360	1118	5165	948	306	1046	5122	1015	368	1144	5087	832	28472	1532

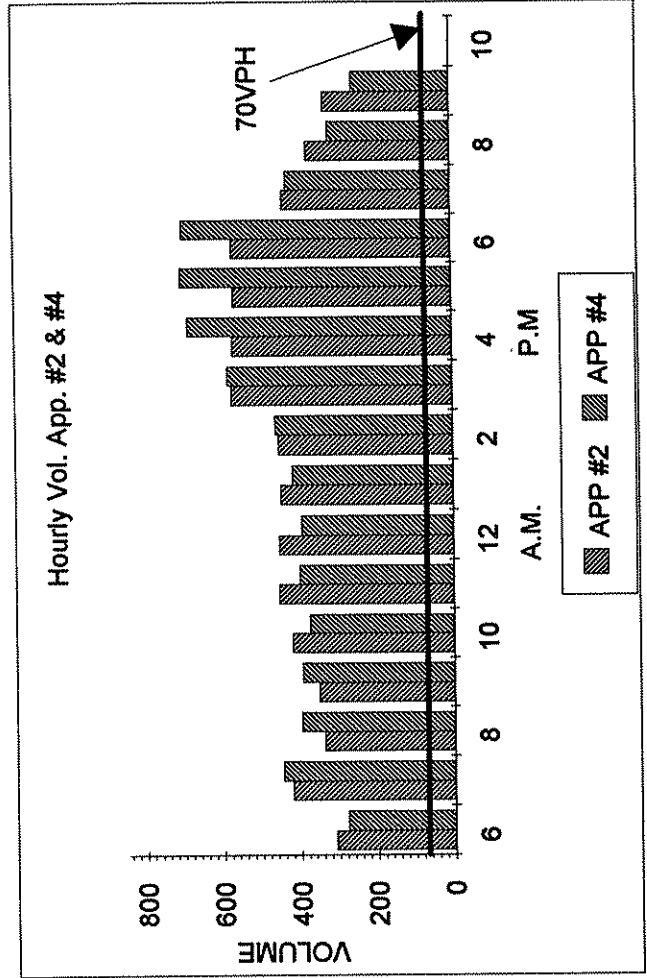
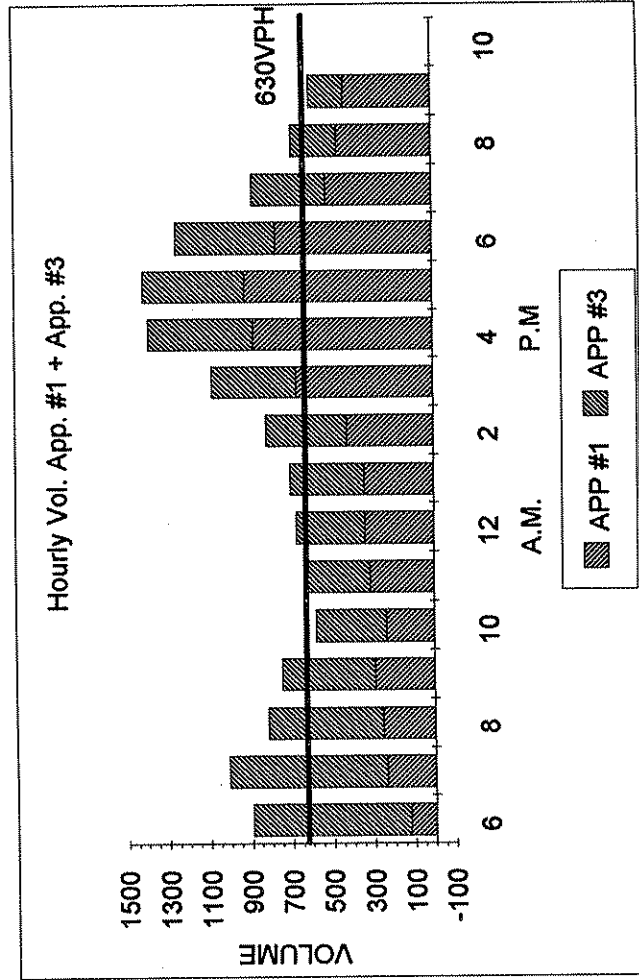
TMC9326 STOP WARRANT STUDY



TMC9326 SIGNAL WARRANT 1 STUDY

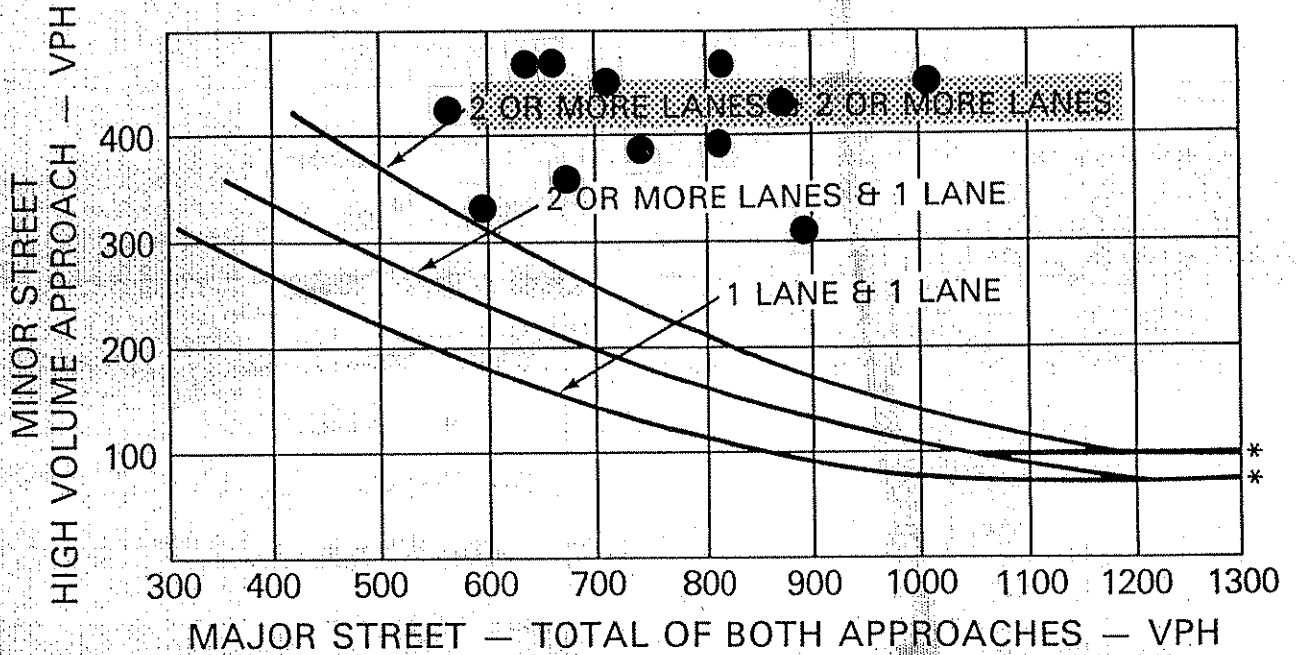


TMC9326 SIGNAL WARRANT 2 STUDY



# 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.

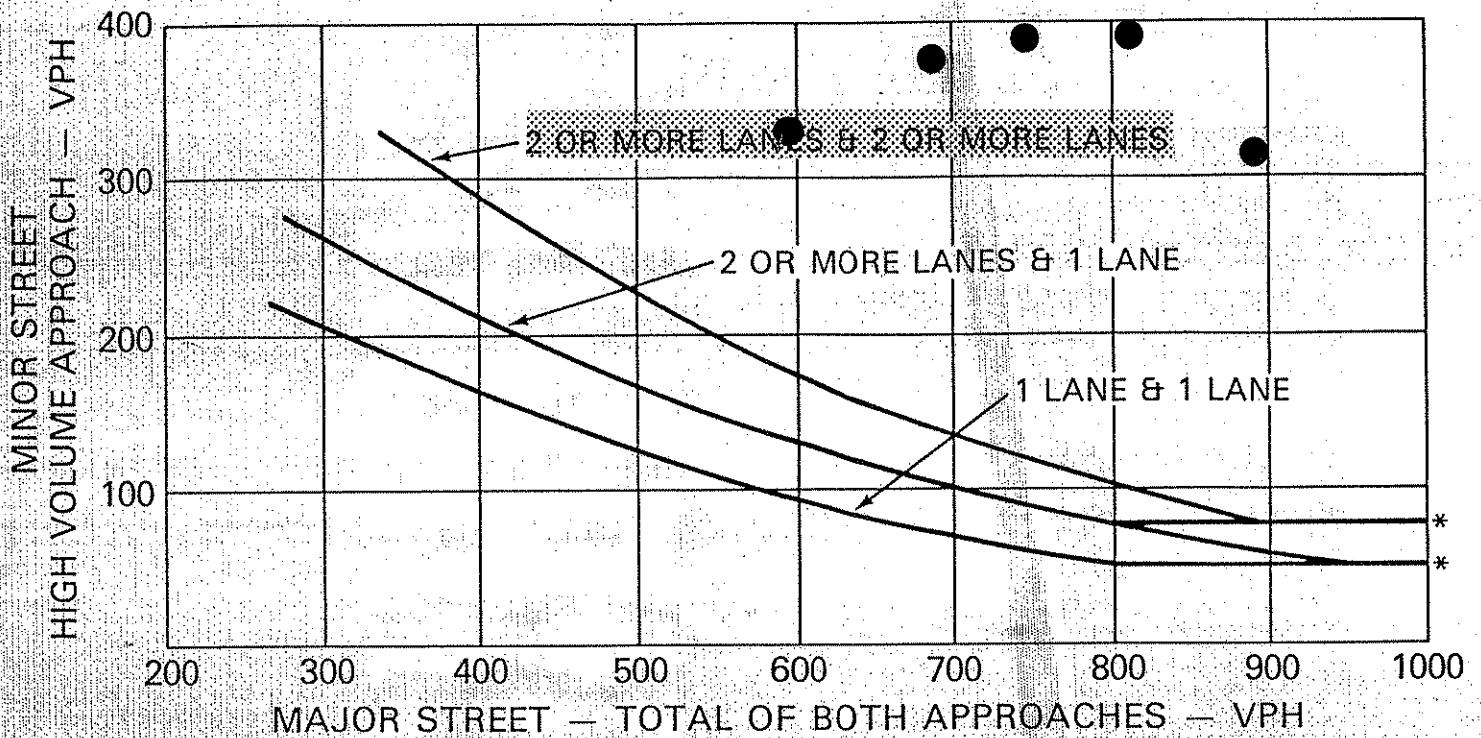
TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
● 6-7 am	895	308
● 7-8 am	1011	446
● 8-9 am	816	397
● 9-10 am	747	394
● 10-11 am	578	420
● 11-12 pm	632	453
● 12-1 pm	675	454
● 1-2 pm	703	448
● 2-3 pm	818	461
★ 3-4 pm	1081	584
★ 4-5 pm	1389	687
★ 5-6 pm	1414	703
★ 6-7 pm	1253	698
● 7-8 pm	880	437
● 8-9 pm	687	372
● 9-10 pm	599	327

TMC9326 CSAH 78 (HANSON BLVD) @ TH 242 (MAIN STREET)



# 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.

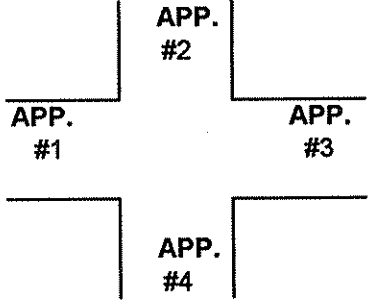
TIME	MAJOR STREETS (VPH)	MINOR STREET (VPH)
6-7 am	895	308
7-8 am	1011	446
8-9 am	816	397
9-10 am	747	394
10-11 am	578	420
11-12 pm	632	453
12-1 pm	675	454
1-2 pm	703	448
2-3 pm	818	461
3-4 pm	1081	584
4-5 pm	1389	687
5-6 pm	1414	703
6-7 pm	1253	698
7-8 pm	880	437
8-9 pm	687	372
9-10 pm	599	327

TMC9326 CSAH 78 (HANSON BLVD) @ TH 242 (MAIN STREET)

COUNT LOCATION: CSAH 78 (HANSON BLVD) @  
TH 242 (MAIN STREET)

DATE: 10/21/93  
10/14/93

**NORTH**  
 APP. #1=EB TH 242  
 (MAIN STREET)  
 APP. #2=SB CSAH 78  
 (HANSON BLVD)  
 APP. #3=WB TH 242  
 (MAIN STREET)  
 APP. #4=NB CSAH 78  
 (HANSON BLVD)



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		
6:15-6:30						10		
6:30-6:45						7		
6:45-7:00						3		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>25</b>
7:00-7:15						20		
7:15-7:30						20	1	
7:30-7:45						9		1
7:45-8:00						18		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>69</b>
8:00-8:15						17		1
8:15-8:30						30		1
8:30-8:45						32		
8:45-9:00						26		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>107</b>
9:00-9:15						18		1
9:15-9:30						30		
9:30-9:45						21		2
9:45-10:00						22	1	1
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>96</b>
10:00-10:15						28		1
10:15-10:30						31		6
10:30-10:45						34		6
10:45-11:00						24		6
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>136</b>
11:00-11:15						19		18
11:15-11:30						28		12
11:30-11:45						29		10
11:45-12:00						19		4
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>139</b>
12:00-12:15						22		10
12:15-12:30						26		8
12:30-12:45						26		7
12:45-1:00						28		9
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>136</b>
1:00-1:15						31		6
1:15-1:30						27		8
1:30-1:45						27		3
1:45-2:00						66		3
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>171</b>

COUNT LOCATION: CSAH 78 (HANSON BLVD) @  
TH 242 (MAIN STREET)

DATE: 10/7/93

**NORTH**

APP. #1=EB TH 242  
(MAIN STREET)  
APP. #2=SB CSAH 78  
(HANSON BLVD)  
APP. #3=WB TH 242  
(MAIN STREET)  
APP. #4=NB CSAH 78  
(HANSON BLVD)

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
2:00-2:15PM						17	1	36
2:15-2:30						18	1	15
2:30-2:45						30		29
2:45-3:00						19		14
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>180</b>
3:00-3:15						28	1	14
3:15-3:30						28	1	13
3:30-3:45						29		15
3:45-4:00						23		10
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>162</b>
4:00-4:15	1			1	2	17		24
4:15-4:30						23		28
4:30-4:45						21		5
4:45-5:00	9				9	19		6
<b>HOURLY TOTAL</b>					<b>11</b>	<b>HOURLY TOTAL</b>		<b>143</b>
5:00-5:15						21		3
5:15-5:30						10		3
5:30-5:45						15		3
5:45-6:00						15		4
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>74</b>
6:00-6:15						16		4
6:15-6:30						4		3
6:30-6:45						4		2
6:45-7:00						5		3
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>41</b>
7:00-7:15						9		2
7:15-7:30						4		1
7:30-7:45						2		1
7:45-8:00						4		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>23</b>
8:00-8:15						5		
8:15-8:30						1	2	
8:30-8:45						6		
8:45-9:00						1		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>15</b>
9:00-9:15						3		2
9:15-9:30						1		2
9:30-9:45						4		1
9:45-10:00						2		2
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>17</b>