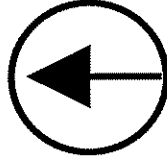


Date : 730/97AM 7/31/97PM

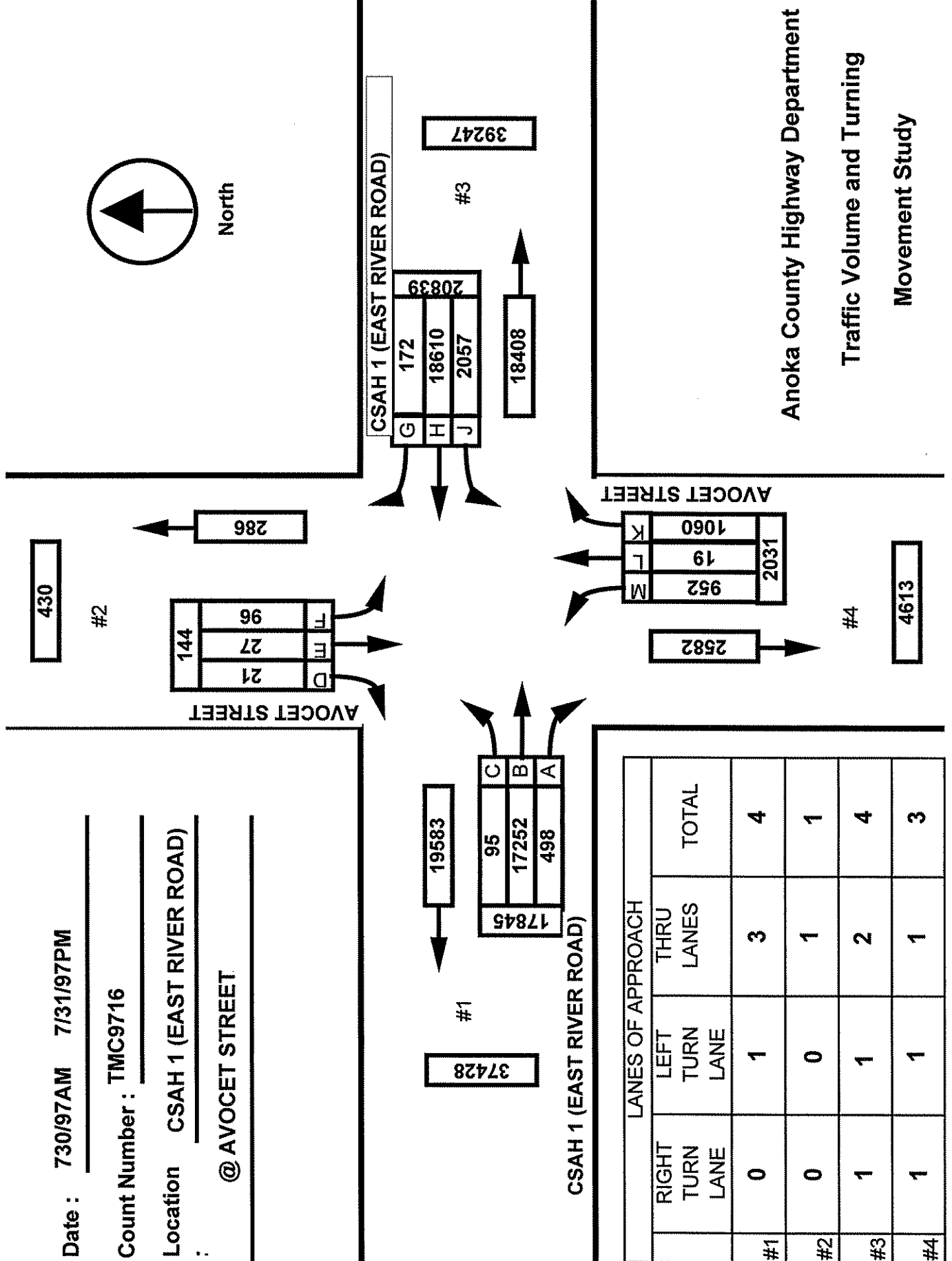
Count Number : TMC9716

Location CSAH 1 (EAST RIVER ROAD)

@ AVOCET STREET



North



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

Anoka County Highway Department  
 Traffic Volume and Turning  
 Movement Study

Weather : OVERCAST  
 Counted by: SARAH AND JANELLE  
 Board # :  
 ther :

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 Horsham, PA.

Study Name: TMC9716  
 Site Code : 97160202  
 Start Date: 07/30/97  
 Page : 1

Vehicle group 1

Start Time	AVOCET STREET Southbound				CSAH 1 (EAST RIVER ROA Westbound				AVOCET STREET Northbound				CSAH 1 (EAST RIVER ROA Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
07/30/97																			
06:00	0	0	0	0	5	76	1	5	2	0	9	2	0	509	2	7	618	14	604
06:15	0	0	0	0	4	114	5	8	5	0	15	5	0	642	4	7	809	20	789
06:30	1	0	0	0	6	122	8	6	3	0	15	1	0	652	1	5	820	12	808
06:45	1	0	0	0	9	86	2	10	2	0	15	4	1	599	2	5	736	19	717
Hour	2	0	0	0	24	398	16	29	12	0	54	12	1	2402	9	24	2983	65	2918
07:00	0	0	0	0	7	131	17	6	6	1	8	0	1	679	2	5	863	11	852
07:15	1	0	0	0	14	128	1	8	3	0	20	2	0	595	2	4	778	14	764
07:30	0	0	0	0	10	188	1	9	8	0	9	1	0	568	9	9	812	19	793
07:45	0	0	0	0	19	140	2	6	12	0	13	2	0	397	7	5	603	13	590
Hour	1	0	0	0	50	587	21	29	29	1	50	5	1	2239	20	23	3056	57	2999
08:00	1	0	0	0	19	152	3	10	10	0	9	3	1	363	8	16	595	29	566
08:15	0	0	1	0	19	128	0	13	5	0	8	3	0	344	7	0	528	16	512
08:30	0	0	0	0	20	164	1	9	13	0	11	2	0	268	11	4	503	15	488
08:45	0	0	0	0	22	135	2	8	7	0	15	1	2	243	8	4	447	13	434
Hour	1	0	1	0	80	579	6	40	35	0	43	9	3	1218	34	24	2073	73	2000
09:00	0	0	0	0	20	132	0	8	13	0	12	0	0	221	9	4	419	12	407
09:15	1	1	1	0	13	190	2	14	8	0	22	0	1	240	7	8	508	22	486
09:30	3	0	0	1	21	187	3	10	16	1	29	2	2	216	8	10	509	23	486
09:45	0	1	0	0	23	148	8	15	15	0	8	1	1	184	3	8	415	24	391
Hour	4	2	1	1	77	657	13	47	52	1	71	3	4	861	27	30	1851	81	1770
10:00	1	0	1	0	19	180	1	6	12	1	16	2	4	214	12	5	474	13	461
10:15	2	1	0	3	33	176	0	11	13	0	20	0	0	163	6	4	432	18	414
10:30	0	1	0	0	29	204	0	5	14	0	20	3	0	203	7	10	496	18	478
10:45	8	1	1	1	18	200	1	8	20	1	14	1	1	216	10	3	504	13	491
Hour	11	3	2	4	99	760	2	30	59	2	70	6	5	796	35	22	1906	62	1844
11:00	1	0	1	0	26	193	2	9	9	0	14	1	0	226	14	7	503	17	486
11:15	1	0	1	1	36	218	0	8	13	1	20	2	2	207	10	6	526	17	509
11:30	1	0	0	1	26	241	0	12	17	1	21	3	2	250	12	7	594	23	571
11:45	1	1	0	1	39	213	1	12	16	0	19	2	2	233	14	9	563	24	539
Hour	4	1	2	3	127	865	3	41	55	2	74	8	6	916	50	29	2186	81	2105
12:00	1	0	1	0	35	193	15	7	19	0	19	1	2	241	5	10	549	18	531
12:15	3	1	0	0	25	234	2	10	11	1	11	1	1	253	8	7	568	18	550
12:30	0	0	0	0	33	242	4	3	10	1	15	1	1	235	3	8	556	12	544
12:45	1	0	0	0	42	268	3	8	17	0	18	3	6	256	10	4	636	15	621
Hour	5	1	1	0	135	937	24	28	57	2	63	6	10	985	26	29	2309	63	2246

Weather : OVERCAST  
 Counted by: SARAH AND JANELLE  
 Board # :  
 ther :

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Study Name: TMC9716  
 Site Code : 97160202  
 Start Date: 07/30/97  
 Page : 2

Vehicle group 1

Start Time	AVOCET STREET Southbound				CSAH 1 (EAST RIVER ROA Westbound				AVOCET STREET Northbound				CSAH 1 (EAST RIVER ROA Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
13:00	1	0	0	1	37	275	2	9	16	1	18	0	2	230	13	8	613	18	595
13:15	0	0	0	0	28	240	5	8	28	0	27	1	2	220	8	4	571	13	558
13:30	0	0	0	0	30	269	1	5	16	0	16	2	1	241	6	7	594	14	580
13:45	0	0	0	0	34	228	2	3	23	1	17	0	4	250	7	6	575	9	566
Hour	1	0	0	1	129	1012	10	25	83	2	78	3	9	941	34	25	2353	54	2299
14:00	0	0	0	0	33	255	1	5	15	0	12	0	3	256	11	8	599	13	586
14:15	1	1	0	0	54	316	3	8	23	2	27	1	0	255	11	8	710	17	693
14:30	1	1	1	0	36	381	0	4	17	1	16	6	4	238	13	12	731	22	709
14:45	6	0	0	0	59	371	2	10	31	0	24	2	0	222	10	13	750	25	725
Hour	8	2	1	0	182	1323	6	27	86	3	79	9	7	971	45	41	2790	77	2713
15:00	3	0	1	0	43	390	4	11	25	0	28	1	2	253	13	10	784	22	762
15:15	5	0	1	0	51	450	1	8	19	0	16	0	0	235	7	4	797	12	785
15:30	4	1	1	0	70	516	5	6	28	0	17	3	0	269	15	8	943	17	926
15:45	2	0	1	0	57	512	2	1	24	0	19	0	2	192	4	11	827	12	815
Hour	14	1	4	0	221	1868	12	26	96	0	80	4	4	949	39	33	3351	63	3288
16:00	0	0	0	0	67	635	3	9	30	0	25	0	3	294	4	9	1079	18	1061
16:15	0	0	0	0	71	618	0	6	20	1	14	0	3	213	10	7	963	13	950
16:30	0	3	0	0	65	675	5	12	22	0	28	1	5	266	9	5	1096	18	1078
16:45	6	2	0	0	58	685	6	12	29	1	32	1	1	232	9	2	1076	15	1061
Hour	6	5	0	0	261	2613	14	39	101	2	99	2	12	1005	32	23	4214	64	4150
17:00	2	3	0	0	71	714	6	8	28	0	18	2	2	258	8	6	1126	16	1110
17:15	1	0	0	0	55	651	5	9	17	0	32	0	9	253	12	6	1050	15	1035
17:30	2	4	2	0	60	643	3	6	25	1	23	3	8	254	6	5	1045	14	1031
17:45	4	1	1	0	50	540	3	3	14	0	17	0	5	228	6	1	873	4	869
Hour	9	8	3	0	236	2548	17	26	84	1	90	5	24	993	32	18	4094	49	4045
18:00	5	1	2	0	39	529	2	10	14	0	26	0	4	230	3	1	866	11	855
18:15	3	0	2	0	39	387	2	6	14	0	12	0	0	212	5	1	683	7	676
18:30	9	0	1	0	33	350	3	6	15	0	11	2	0	247	6	1	684	9	675
18:45	4	0	0	0	44	326	1	4	12	0	15	0	0	245	18	1	670	5	665
Hour	21	1	5	0	155	1592	8	26	55	0	64	2	4	934	32	4	2903	32	2871
19:00	3	0	1	0	23	284	1	4	12	0	21	1	1	214	10	0	575	5	570
19:15	1	0	0	0	25	296	1	3	9	1	12	0	1	171	3	3	526	6	520
19:30	2	2	0	0	22	261	1	1	20	0	15	0	0	240	7	4	575	5	570
19:45	0	1	0	0	29	270	2	2	10	0	15	0	0	201	4	3	537	5	532
Hour	6	3	1	0	99	1111	5	10	51	1	63	1	2	826	24	10	2213	21	2192

Weather : OVERCAST  
 Counted by: SARAH AND JANELLE  
 Board # :  
 ther :

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Study Name: TMC9716  
 Site Code : 97160202  
 Start Date: 07/30/97  
 Page : 3

Vehicle group 1

Start Time	AVOCET STREET Southbound				CSAH 1 (EAST RIVER ROA) Westbound				AVOCET STREET Northbound				CSAH 1 (EAST RIVER ROA) Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
20:00	1	0	0	0	24	220	4	2	17	0	11	0	0	169	3	0	451	2	449
20:15	0	0	0	0	27	227	0	1	18	0	15	0	2	148	5	3	446	4	442
20:30	0	0	0	0	13	252	0	1	12	1	15	1	0	150	3	1	449	3	446
20:45	2	0	0	0	32	242	0	1	11	0	7	0	0	155	10	1	461	2	459
Hour	3	0	0	0	96	941	4	5	58	1	48	1	2	622	21	5	1807	11	1796
21:00	0	0	0	0	25	256	0	0	6	0	8	0	1	152	11	1	460	1	459
21:15	0	0	0	0	22	202	0	1	16	0	8	1	0	140	9	1	400	3	397
21:30	0	0	0	0	26	202	8	0	11	0	12	1	0	182	15	1	458	2	456
21:45	0	0	0	0	13	159	3	3	6	1	6	1	0	120	3	1	316	5	311
Hour	0	0	0	0	86	819	11	4	39	1	34	3	1	594	38	4	1634	11	1623
Total	96	27	21	9	2057	18610	172	432	952	19	1060	79	95	17252	498	344	41723	864	40859
% Apr.	62.7	17.6	13.7	5.8	9.6	87.4	0.8	2.0	45.1	0.9	50.2	3.7	0.5	94.8	2.7	1.8	-	-	-
% Int.	0.2	-	-	-	4.9	44.6	0.4	1.0	2.2	-	2.5	0.1	0.2	41.3	1.1	0.8	-	-	-

Weather :OVERCAST

Counted by:SARAH AND JANELLE

Board # :

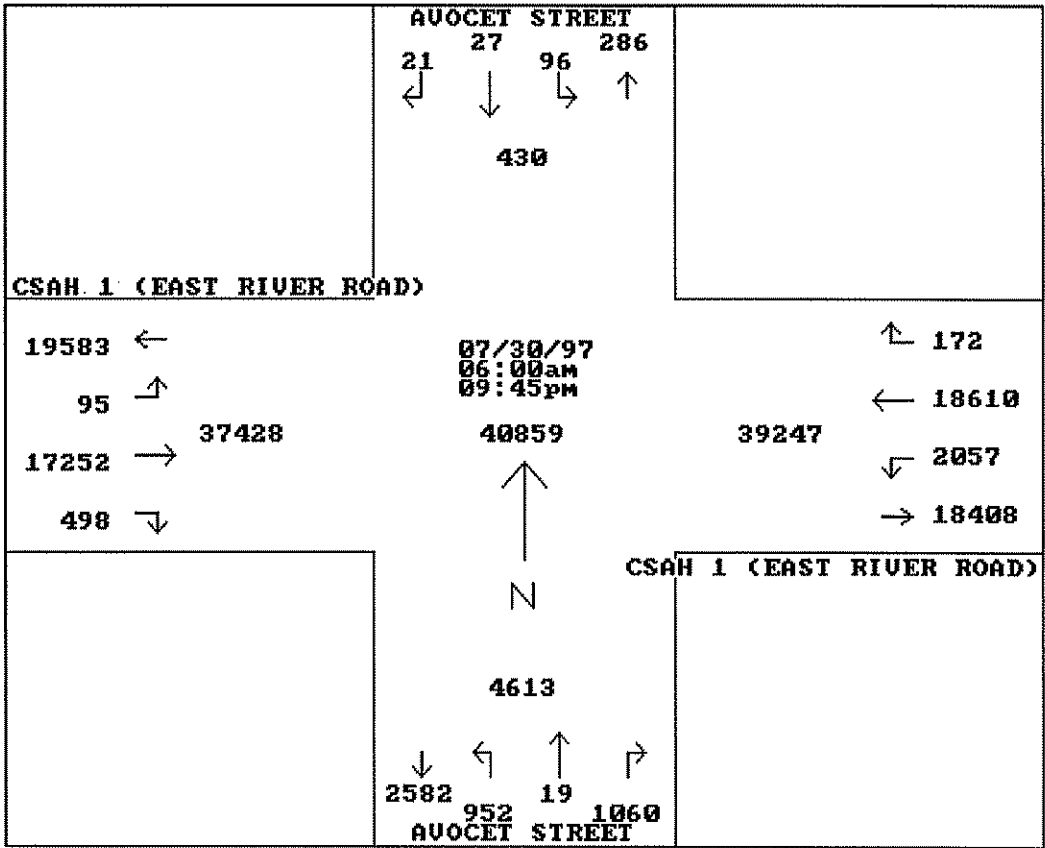
Other :

Southbound: AVOCET STREET

Westbound: CSAH 1 (EAST RIVER ROAD)

Northbound: AVOCET STREET

Eastbound: CSAH 1 (EAST RIVER ROAD)



Major Street Approaches:

Eastbound:

CSAH 1 (EAST RIVER ROAD)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9716.PDF  
 Count Type: IMC. Channel: 0. Count Date: 7/30/97  
 Number of Lanes: 2  
 Approach Speed: 45  
 Total Approach Traffic: 17845

Westbound:

CSAH 1 (EAST RIVER ROAD)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9716.PDF  
 Count Type: IMC. Channel: 0. Count Date: 7/30/97  
 Number of Lanes: 2  
 Approach Speed: 45  
 Total Approach Traffic: 20839

Minor Street Approaches:

Northbound:

AVOCET STREET

Data File: C:\APPS\PETRA2\DATAFILE\TMC9716.PDF  
 Count Type: IMC. Channel: 0. Count Date: 7/30/97  
 Number of Lanes: 2  
 Approach Speed: 0  
 Total Approach Traffic: 2031

Southbound:

AVOCET STREET

Data File: C:\APPS\PETRA2\DATAFILE\TMC9716.PDF  
 Count Type: IMC. Channel: 0. Count Date: 7/30/97  
 Number of Lanes: 1  
 Approach Speed: 0  
 Total Approach Traffic: 144

Analysis of 8-Hour Volume Warrants (Criteria refers to high volume side street for that hour):

Hour	Main (Total)	Side			Warrant 1		Warrant 2		Warrant 8	
		Vol.	Dir.	Rank	Meets?	Criteria	Meets?	Criteria	Meets?	Criteria
0	0	0	S	17		105		52		84
1	0	0	S	18		105		52		84
2	0	0	S	19		105		52		84
3	0	0	S	20		105		52		84
4	0	0	S	21		105		52		84
5	0	0	S	22		105		52		84
6	2850	66	N	16	MAIN	140	MAIN	70	MAIN	112
7	2918	80	N	13	MAIN	140	--BOTH--	70	MAIN	112
8	1920	78	N	14	MAIN	140	--BOTH--	70	MAIN	112
9	1639	124	N	8	MAIN	140	--BOTH--	70	--BOTH--	112
10	1697	131	N	6	MAIN	140	--BOTH--	70	--BOTH--	112
11	1967	131	N	7	MAIN	140	--BOTH--	70	--BOTH--	112
12	2117	122	N	9	MAIN	140	--BOTH--	70	--BOTH--	112
13	2135	163	N	5	--BOTH--	140	--BOTH--	70	--BOTH--	112
14	2534	168	N	4	--BOTH--	140	--BOTH--	70	--BOTH--	112
15	3093	176	N	2	--BOTH--	140	--BOTH--	70	--BOTH--	112
16	3937	202	N	1	--BOTH--	140	--BOTH--	70	--BOTH--	112
17	3850	175	N	3	--BOTH--	140	--BOTH--	70	--BOTH--	112
18	2725	119	N	10	MAIN	140	--BOTH--	70	--BOTH--	112
19	2067	115	N	11	MAIN	140	--BOTH--	70	--BOTH--	112
20	1686	107	N	12	MAIN	140	--BOTH--	70	MAIN	112
21	1549	74	N	15	MAIN	140	--BOTH--	70	MAIN	112
22	0	0	S	23		105		52		84
23	0	0	S	24		105		52		84

## Warrant Summary:

Rural values apply.

## Warrant 1 - Minimum Vehicular Volumes

NOT SATISFIED. Required values reached for 5 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

## Warrant 2 - Interruption of Continuous Traffic

SATISFIED for 15 hours. Criteria--Main St.: 630; Side St.: See Volume Summary.

## Warrant 3 - Minimum Pedestrian Volumes

NOT SATISFIED. Ped volumes too low. Criteria--190 Peds in peak hour, 100 peds in 4th high hour.

## Warrant 4 - School Crossing

NOT APPLICABLE. Gap data has not been defined.

## Warrant 5 - Progressive Movement

NOT SATISFIED. Adjacent signals closer than 1000 feet and/or not part of coordinated system.

## Warrant 6 - Accident Experience

NOT SATISFIED. 0 correctable accidents is fewer than required 5.

Correctable Accidents: 0; Right Angle Accidents: 0; Left Turn Accidents: 0; Other Accidents: 0.

## Warrant 7 - Systems Warrant

NOT SATISFIED. At least one street has no major approaches. Peak hour total entering volume: 4150.

- Approaches which are part of the principal through traffic roadway network.
- Approaches which include rural or suburban highways outside, entering or traversing a city.
- Approaches which appear as a major route in an official transportation plan.

## Warrant 8 - Combination of Warrants

SATISFIED for 11 hours. Criteria--Main: 504; Side: See Volume Summary.

## Warrant 9 - Four Hour Volumes

SATISFIED for 13 hours.

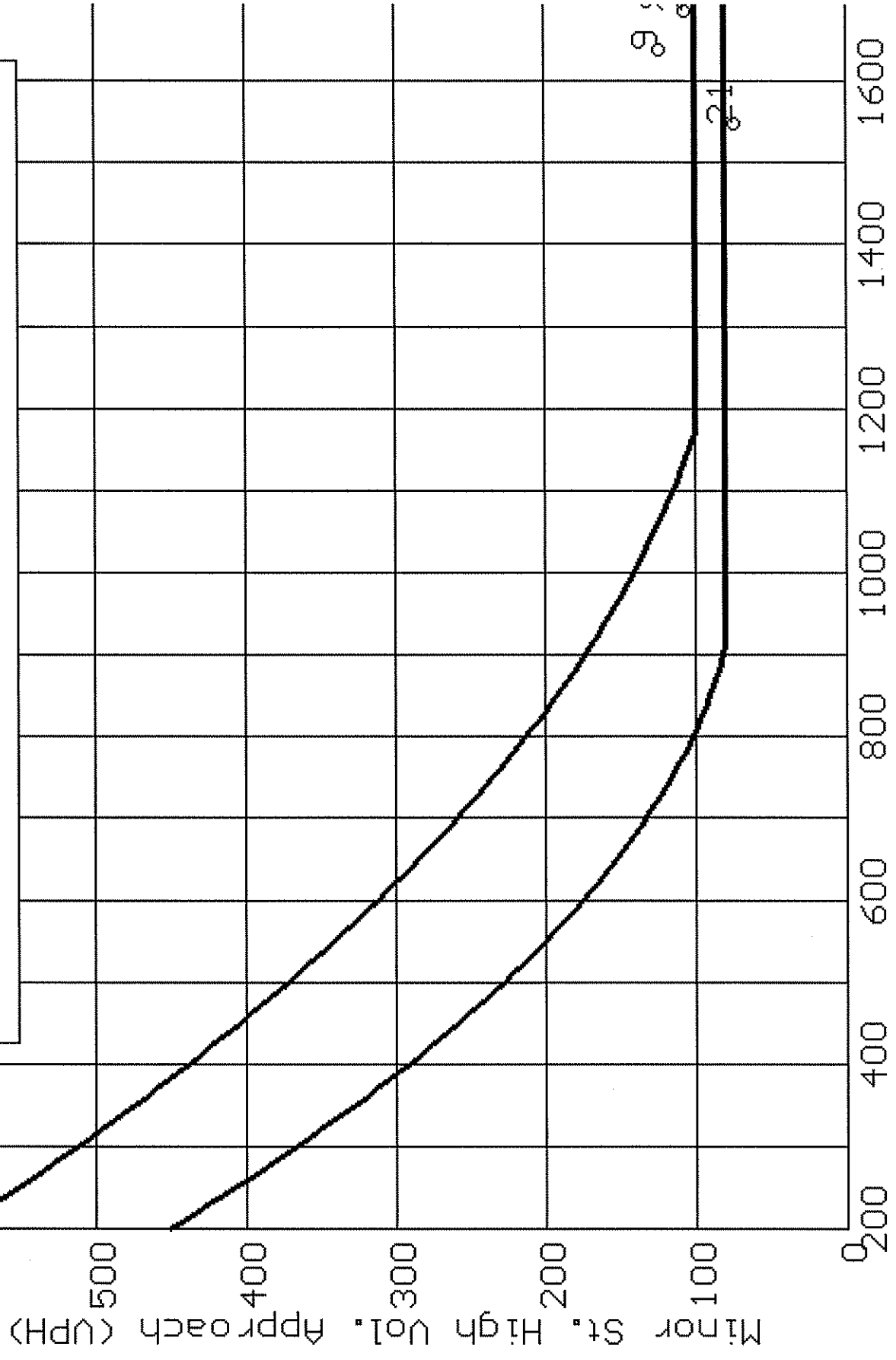
## Warrant 10 - Peak Hour Delay

NOT APPLICABLE. Volume requirements satisfied, but side street peak hour delay not defined.

Criteria--Main St.: 800 (4 approaches), 650 (3 approaches); Side St.: 150.

## Warrant 11 - Peak Hour Volume

SATISFIED for 12 hours.



— Warrant 9, Four-Hour Volumes  
 — Warrant 11, Peak-Hour Volumes

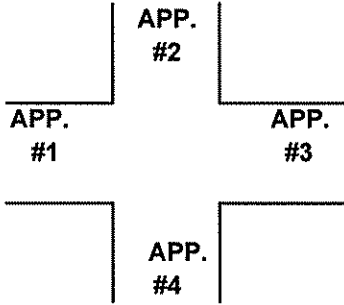
Major St. Total of Both Approaches (UPH)





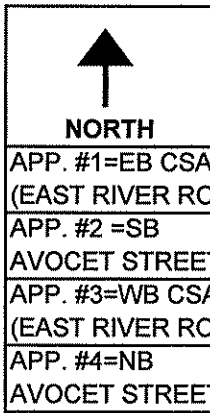
**COUNT LOCATION:** TMC 9716 CSAH 1 (EAST RIVER RD) **DATE:** 7/30/97  
 @ AVOCET STREET

APP. #1=EB CSAH 1  
(EAST RIVER ROAD)  
 APP. #2 =SB  
 AVOCET STREET  
 APP. #3=WB CSAH 1  
(EAST RIVER ROAD)  
 APP. #4=NB  
 AVOCET STREET



- 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.

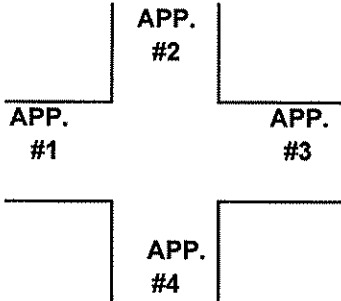
TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
6:00-6:15AM						15		2
6:15-6:30						8		9
6:30-6:45			1	1	2	11		2
6:45-7:00						12		6
<b>HOURLY TOTAL</b>					<b>2</b>			<b>65</b>
7:00-7:15						8		4
7:15-7:30						8		5
7:30-7:45	1	1			2	15		4
7:45-8:00						11		2
<b>HOURLY TOTAL</b>					<b>2</b>	<b>HOURLY TOTAL</b>		<b>57</b>
8:00-8:15			1	1	2	26		5
8:15-8:30		1			1	14	1	2
8:30-8:45			1		1	12		1
8:45-9:00	2				2	10		2
<b>HOURLY TOTAL</b>					<b>6</b>	<b>HOURLY TOTAL</b>		<b>73</b>
9:00-9:15		5			5	8		4
9:15-9:30						22	22	1
9:30-9:45						23		4
9:45-10:00						21		1
<b>HOURLY TOTAL</b>					<b>5</b>	<b>HOURLY TOTAL</b>		<b>106</b>
10:00-10:15						9		2
10:15-10:30						20	1	1
10:30-10:45		2			2	11		2
10:45-11:00	3		1		4	12		
<b>HOURLY TOTAL</b>					<b>6</b>	<b>HOURLY TOTAL</b>		<b>58</b>
11:00-11:15	2	1			3	13		2
11:15-11:30						19	1	2
11:30-11:45				1		15	2	2
11:45-12:00						19	2	5
<b>HOURLY TOTAL</b>					<b>3</b>	<b>HOURLY TOTAL</b>		<b>82</b>
12:00-12:15						17	2	3
12:15-12:30						15	1	
12:30-12:45						9		1
12:45-1:00						15		2
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>65</b>
1:00-1:15						10	1	3
1:15-1:30						13		1
1:30-1:45			1		1	13		1
1:45-2:00						9		
<b>HOURLY TOTAL</b>					<b>1</b>	<b>HOURLY TOTAL</b>		<b>51</b>



**COUNT LOCATION:** TMC 9716 CSAH 1 (EAST RIVER RD)  
@ AVOCET STREET

**DATE:**

7/31/97



- 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						12		2
2:15-2:30						18		1
2:30-2:45	3	3	4	1	11	19		2
2:45-3:00						21		2
<b>HOURLY TOTAL</b>					<b>11</b>	<b>HOURLY TOTAL</b>		<b>77</b>
3:00-3:15			1		1	22		2
3:15-3:30	1	2	5		8	11		3
3:30-3:45	2				2	11		1
3:45-4:00			1		1	13		1
<b>HOURLY TOTAL</b>					<b>12</b>	<b>HOURLY TOTAL</b>		<b>64</b>
4:00-4:15			2		2	11		8
4:15-4:30						7	1	6
4:30-4:45	1				1	17		2
4:45-5:00	3				3	14		3
<b>HOURLY TOTAL</b>					<b>6</b>	<b>HOURLY TOTAL</b>		<b>69</b>
5:00-5:15	1				1	7		8
5:15-5:30	4	2	2	1	9	7		7
5:30-5:45						8		3
5:45-6:00	2				2	2		1
<b>HOURLY TOTAL</b>					<b>12</b>	<b>HOURLY TOTAL</b>		<b>43</b>
6:00-6:15						7		4
6:15-6:30	4	2			6	10		1
6:30-6:45						4		1
6:45-7:00			4		4	3		1
<b>HOURLY TOTAL</b>					<b>10</b>	<b>HOURLY TOTAL</b>		<b>31</b>
7:00-7:15			3		3	5		
7:15-7:30			1	1	2	3		1
7:30-7:45						5		1
7:45-8:00	1			2	3	4		1
<b>HOURLY TOTAL</b>					<b>8</b>	<b>HOURLY TOTAL</b>		<b>20</b>
8:00-8:15	1		2		3	2		
8:15-8:30						4		
8:30-8:45	1	1			2	3		1
8:45-9:00						3		
<b>HOURLY TOTAL</b>					<b>5</b>	<b>HOURLY TOTAL</b>		<b>13</b>
9:00-9:15						2		
9:15-9:30						2		
9:30-9:45						2		
9:45-10:00						5		
<b>HOURLY TOTAL</b>						<b>HOURLY TOTAL</b>		<b>11</b>