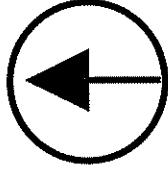


Date : 12/31/96AM 12/30/96PM

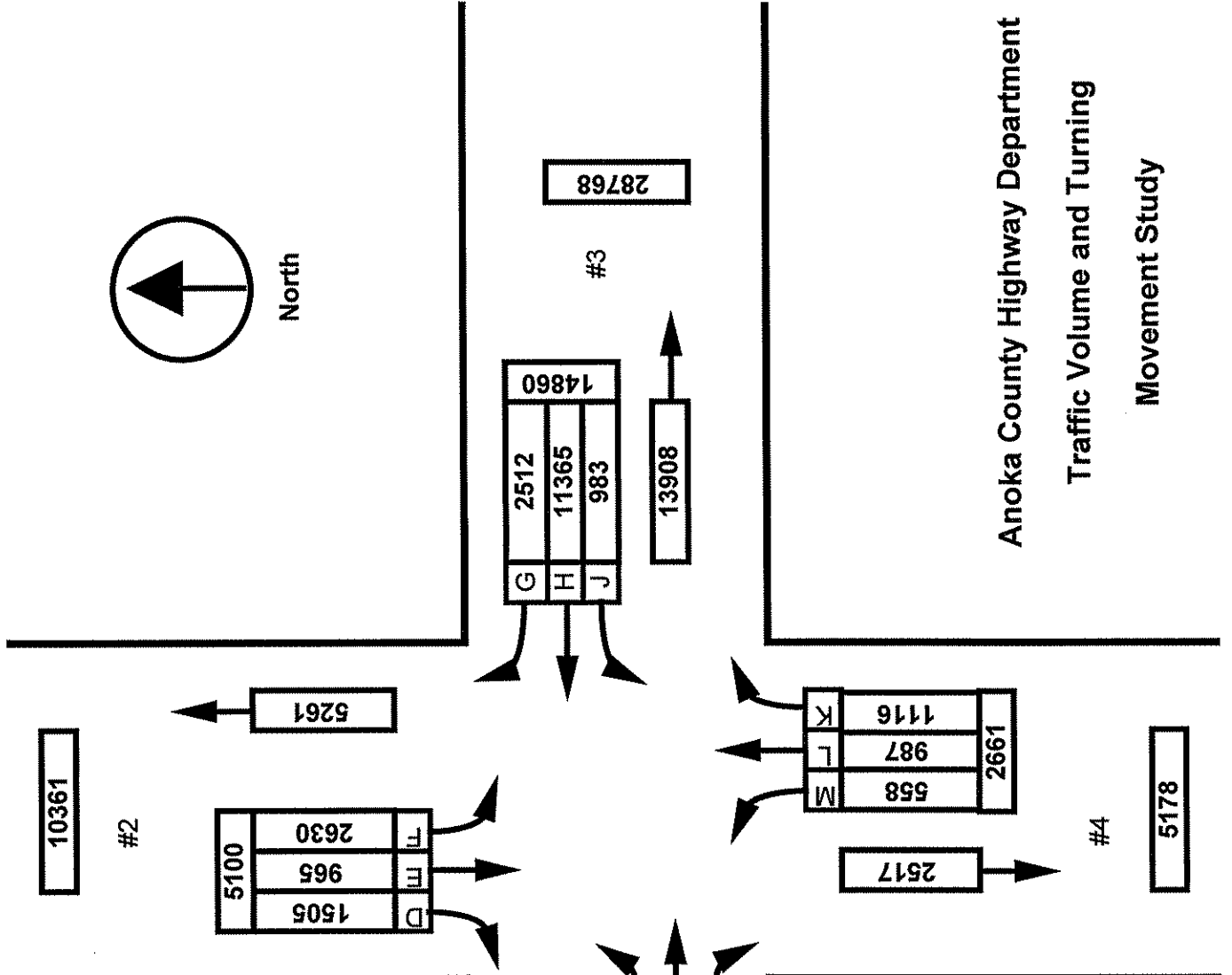
Count Number : TMC9628

Location : CSAH 78 (HANSON BLVD) @

CSAH 1 (COON RAPIDIS BLVD)



North



Anoka County Highway Department
Traffic Volume and Turning
Movement Study

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

Weather :
 Counted by: Ann and Chuck
 Board # :
 Other :

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 Horsham, PA.

Study Name: TMC9628
 Site Code : 96280202
 Start Date: 12/31/96
 Page : 1

Vehicle group 1

Start Time	CSAH 78 (Hanson Blvd) Southbound				CSAH 1 (Coon Rapids Bl Westbound				Hanson Blvd Northbound				CSAH 1 (Coon RapidsBlv Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
12/31/96																			
06:00	60	2	1	1	3	24	8	3	1	9	22	2	2	145	6	3	292	9	283
06:15	87	10	2	1	3	25	16	0	4	9	43	1	3	174	4	1	383	3	380
06:30	96	14	2	1	7	54	12	2	3	7	43	3	5	240	4	4	497	10	487
06:45	98	21	6	2	6	70	14	3	2	12	44	0	7	231	7	7	530	12	518
Hour	341	47	11	5	19	173	50	8	10	37	152	6	17	790	21	15	1702	34	1668
07:00	78	15	7	1	8	44	7	0	4	13	39	1	7	246	3	7	480	9	471
07:15	99	24	8	4	11	74	7	2	1	12	39	1	8	235	13	3	541	10	531
07:30	53	19	7	0	9	106	17	4	7	17	43	0	16	236	9	4	547	8	539
07:45	66	8	8	2	14	97	18	3	5	23	40	2	9	210	12	3	520	10	510
Hour	296	66	30	7	42	321	49	9	17	65	161	4	40	927	37	17	2088	37	2051
08:00	51	16	17	1	7	82	13	5	5	13	24	1	15	163	5	1	419	8	411
08:15	41	9	12	2	4	99	18	3	4	22	21	2	16	126	3	4	386	11	375
08:30	48	16	15	4	5	106	15	9	8	13	18	2	11	143	3	5	421	20	401
08:45	45	4	12	1	6	103	16	3	6	17	28	1	11	142	3	7	405	12	393
Hour	185	45	56	8	22	390	62	20	23	65	91	6	53	574	14	17	1631	51	1580
09:00	41	12	23	4	9	92	17	11	7	16	21	1	14	108	2	5	383	21	362
09:15	42	17	20	2	11	98	20	4	9	13	21	1	9	107	3	8	385	15	370
09:30	38	14	25	5	7	105	16	5	10	14	22	0	22	138	10	8	439	18	421
09:45	30	19	36	2	10	128	17	11	5	9	16	1	25	144	8	7	468	21	447
Hour	151	62	104	13	37	423	70	31	31	52	80	3	70	497	23	28	1675	75	1600
10:00	34	11	26	3	13	128	24	10	5	15	19	3	28	133	2	4	458	20	438
10:15	37	16	33	3	11	134	20	12	5	15	18	2	32	156	5	4	503	21	482
10:30	35	10	21	2	11	162	23	9	6	15	15	2	28	157	6	7	509	20	489
10:45	47	17	25	2	20	159	32	8	6	19	15	0	37	178	7	12	584	22	562
Hour	153	54	105	10	55	583	99	39	22	64	67	7	125	624	20	27	2054	83	1971
11:00	29	14	29	0	11	165	26	7	14	15	12	7	26	167	7	5	534	19	515
11:15	39	12	43	4	17	167	21	5	13	18	12	1	29	179	4	5	569	15	554
11:30	46	16	45	0	14	175	28	4	11	20	28	0	38	169	7	7	608	11	597
11:45	42	9	42	5	13	181	42	7	14	15	11	0	46	192	13	10	642	22	620
Hour	156	51	159	9	55	688	117	23	52	68	63	8	139	707	31	27	2353	67	2286
12:00	50	17	31	2	12	172	40	4	14	14	13	1	36	162	8	2	578	9	569
12:15	34	17	48	2	14	207	35	1	9	12	7	0	45	171	15	5	622	8	614
12:30	35	18	26	1	18	211	41	3	13	14	11	0	34	168	13	5	611	9	602
12:45	37	9	23	2	18	210	36	6	4	21	13	0	36	207	12	4	638	12	626
Hour	156	61	128	7	62	800	152	14	40	61	44	1	151	708	48	16	2449	38	2411

Weather :
 Counted by: Ann and Chuck
 Board # :
 Other :

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Study Name: TMC9628
 Site Code : 96280202
 Start Date: 12/31/96
 Page : 2

Vehicle group 1

Start Time	CSAH 78 (Hanson Blvd) Southbound				CSAH 1 (Coon Rapids Bl) Westbound				Hanson Blvd Northbound				CSAH 1 (Coon Rapids Blv) Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
13:00	36	20	32	3	16	164	38	7	9	14	11	0	45	204	8	9	616	19	597
13:15	47	22	43	3	11	210	40	7	10	18	18	0	60	193	6	9	697	19	678
13:30	38	13	42	2	9	243	33	6	13	14	11	0	48	193	11	2	678	10	668
13:45	51	16	44	1	21	197	34	1	11	13	17	0	41	175	11	4	637	6	631
Hour	172	71	161	9	57	814	145	21	43	59	57	0	194	765	36	24	2628	54	2574
14:00	27	8	19	1	1	0	0	0	3	7	5	0	30	160	2	6	269	7	262
14:15	49	23	35	1	10	184	24	7	11	5	12	0	34	209	13	9	626	17	609
14:30	41	17	31	3	14	185	33	3	12	13	19	0	34	196	12	7	620	13	607
14:45	37	24	34	4	12	221	44	3	8	12	19	1	33	209	15	4	680	12	668
Hour	154	72	119	9	37	590	101	13	34	37	55	1	131	774	42	26	2195	49	2146
15:00	36	12	28	5	15	213	57	6	12	14	17	2	25	179	12	4	637	17	620
15:15	34	15	33	1	28	244	56	5	11	21	18	4	34	177	10	7	698	17	681
15:30	55	10	17	0	27	250	65	4	9	14	17	1	48	206	17	7	747	12	735
15:45	42	23	26	3	26	264	54	6	9	14	11	0	28	190	15	9	720	18	702
Hour	167	60	104	9	96	971	232	21	41	63	63	7	135	752	54	27	2802	64	2738
16:00	44	15	35	4	22	292	62	6	11	16	19	1	41	156	8	3	735	14	721
16:15	34	19	27	1	24	337	78	6	7	17	15	5	43	182	12	6	813	18	795
16:30	35	14	32	2	25	330	70	2	8	25	13	2	43	159	10	2	772	8	764
16:45	37	28	34	7	27	346	88	10	13	15	16	2	36	177	14	0	850	19	831
Hour	150	76	128	14	98	1305	298	24	39	73	63	10	163	674	44	11	3170	59	3111
17:00	29	16	30	2	24	358	101	6	14	26	15	2	43	160	5	2	833	12	821
17:15	41	19	12	1	18	267	69	2	5	16	8	1	29	158	15	3	664	7	657
17:30	30	19	35	3	27	299	100	15	17	18	14	0	21	148	11	3	760	21	739
17:45	23	18	24	1	28	388	109	6	27	27	13	3	39	158	16	4	884	14	870
Hour	123	72	101	7	97	1312	379	29	63	87	50	6	132	624	47	12	3141	54	3087
18:00	31	28	18	3	33	366	106	4	6	15	11	4	30	141	10	2	808	13	795
18:15	41	21	32	1	23	347	93	12	21	27	15	2	34	137	18	2	826	17	809
18:30	38	22	23	3	30	312	68	6	17	21	10	2	32	133	13	1	731	12	719
18:45	26	12	13	0	29	252	56	5	11	24	13	2	20	123	6	2	594	9	585
Hour	136	83	86	7	115	1277	323	27	55	87	49	10	116	534	47	7	2959	51	2908
19:00	35	20	13	1	10	227	58	7	8	20	19	0	26	144	10	3	601	11	590
19:15	37	29	18	5	18	204	51	7	15	18	13	2	24	103	10	1	555	15	540
19:30	29	12	23	1	17	129	25	3	5	15	18	1	39	106	11	3	437	8	429
19:45	25	5	28	0	15	157	42	2	5	21	7	0	26	110	2	2	447	4	443
Hour	126	66	82	7	60	717	176	19	33	74	57	3	115	463	33	9	2040	38	2002

Weather :
 Counted by: Ann and Chuck
 Board # :
 Other :

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Study Name: TMC9628
 Site Code : 96280202
 Start Date: 12/31/96
 Page : 3

Vehicle group 1

Start Time	CSAH 78 (Hanson Blvd) Southbound				CSAH 1 (Coon Rapids Bl) Westbound				Hanson Blvd Northbound				CSAH 1 (Coon Rapids Blv) Eastbound				Intvl	Exclu	Inclu
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other			
20:00	14	14	25	0	16	149	30	0	11	8	9	0	21	121	11	3	432	3	429
20:15	20	8	12	0	17	124	35	1	8	13	7	0	30	99	8	1	383	2	381
20:30	21	7	10	0	17	137	31	3	5	7	10	0	26	106	11	2	393	5	388
20:45	27	13	23	2	23	134	28	1	5	17	7	0	24	100	10	1	415	4	411
Hour	82	42	70	2	73	544	124	5	29	45	33	0	101	426	40	7	1623	14	1609
21:00	21	5	13	0	13	105	24	2	6	12	10	0	26	95	7	0	339	2	337
21:15	23	13	13	0	20	102	28	1	5	10	8	0	23	80	9	1	336	2	334
21:30	13	10	15	0	9	102	30	1	10	15	3	0	11	91	5	1	316	2	314
21:45	25	9	20	0	16	148	53	1	5	13	10	0	20	57	11	0	388	1	387
Hour	82	37	61	0	58	457	135	5	26	50	31	0	80	323	32	2	1379	7	1372
Total	2630	965	1505	123	983	11365	2512	308	558	987	1116	72	1762	10162	569	272	35889	775	35114
% Apr.	50.3	18.4	28.8	2.3	6.4	74.9	16.5	2.0	20.4	36.1	40.8	2.6	13.8	79.6	4.4	2.1	-	-	-
% Int.	7.3	2.6	4.1	0.3	2.7	31.6	6.9	0.8	1.5	2.7	3.1	0.2	4.9	28.3	1.5	0.7	-	-	-

Major Street Approaches:

Eastbound:

CSAH 1 (Coon Rapids Blvd)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9628.PDF
 Count Type: IMC. Channel: 0. Count Date: 12/31/96
 Number of Lanes: 2
 Approach Speed: 45
 Total Approach Traffic: 12493

Westbound:

CSAH 1 (Coon Rapids Blvd)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9628.PDF
 Count Type: IMC. Channel: 0. Count Date: 12/31/96
 Number of Lanes: 2
 Approach Speed: 45
 Total Approach Traffic: 14860

Minor Street Approaches:

Northbound:

Hanson Blvd

Data File: C:\APPS\PETRA2\DATAFILE\TMC9628.PDF
 Count Type: IMC. Channel: 0. Count Date: 12/31/96
 Number of Lanes: 2
 Approach Speed: 40
 Total Approach Traffic: 2661

Southbound:

CSAH 78 (Hanson Blvd)

Data File: C:\APPS\PETRA2\DATAFILE\TMC9628.PDF
 Count Type: IMC. Channel: 0. Count Date: 12/31/96
 Number of Lanes: 2
 Approach Speed: 40
 Total Approach Traffic: 5100

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

Hour	Main	Side	Warrant 1	Warrant 2	Warrant 8
Begin	(Total)	Vol. Dir.	Meets? Criteria	Meets? Criteria	Meets? Criteria
0	0	0 S 17	140	70	112
1	0	0 S 18	140	70	112
2	0	0 S 19	140	70	112
3	0	0 S 20	140	70	112
4	0	0 S 21	140	70	112
5	0	0 S 22	140	70	112
6	1070	399 S 2	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
7	1416	392 S 3	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
8	1115	286 S 13	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
9	1120	317 S 9	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
10	1506	312 S 10	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
11	1737	366 S 4	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
12	1921	345 S 6	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
13	2011	404 S 1	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
14	1675	345 S 7	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
15	2240	331 S 8	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
16	2582	354 S 5	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
17	2591	296 S 12	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
18	2412	305 S 11	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
19	1564	274 S 14	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
20	1308	194 S 15	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
21	1085	180 S 16	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
22	0	0 S 23	140	70	112
23	0	0 S 24	140	70	112

Warrant Summary:

Rural values apply.

Warrant 1 - Minimum Vehicular Volumes

SATISFIED for 16 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

SATISFIED for 16 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: 3111.

- 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 16 hours. Criteria--Main: 504; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

SATISFIED for 16 hours.

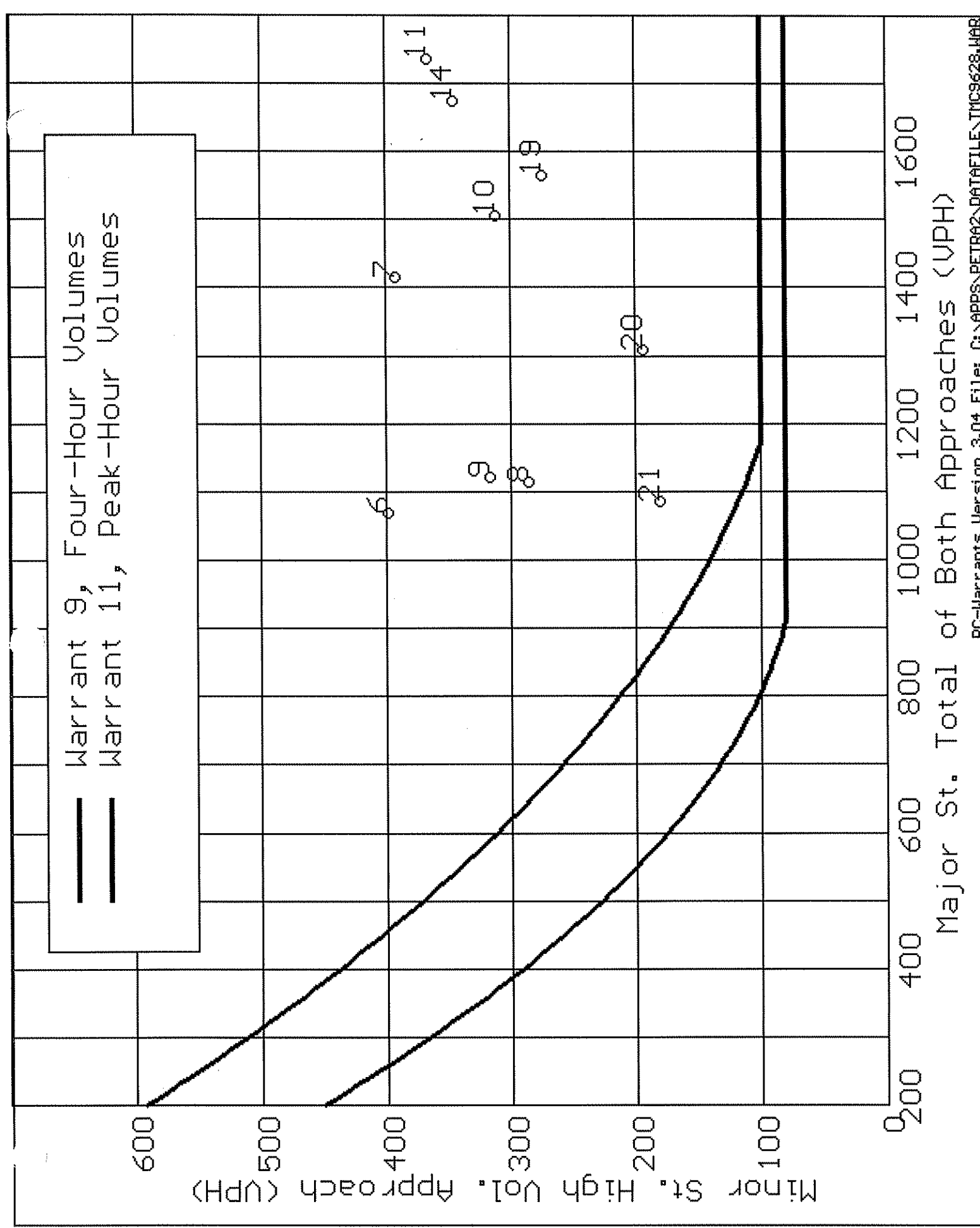
Warrant 10 - Peak Hour Delay

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 16 hours.



Major St. Total of Both Approaches (VPH)



NORTH

APP. #1=NB CSAH 78
(EAST RIVER ROAD)

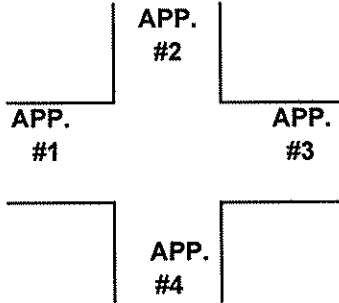
APP. #2 =EB CSAH 78
(HANSON BLVD)

APP. #3=SB CSAH 78
(EAST RIVER ROAD)

APP. #4=WB CSAH 1
(HANSON BLVD)

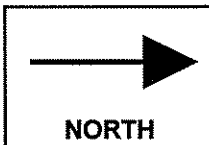
COUNT LOCATION: CSAH 1 (EAST RIVER ROAD) @
CSAH 78 (HANSON BLVD)

DATE: 12/3196



- 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						7		3
6:15-6:30						2		1
6:30-6:45	1				1	3		7
6:45-7:00						5		6
HOURLY TOTAL					1	HOURLY TOTAL		34
7:00-7:15						4		5
7:15-7:30						6		4
7:30-7:45						6		3
7:45-8:00						4		5
HOURLY TOTAL						HOURLY TOTAL		37
8:00-8:15						6		2
8:15-8:30						10		1
8:30-8:45						16		4
8:45-9:00						9		2
HOURLY TOTAL						HOURLY TOTAL		50
9:00-9:15						19		2
9:15-9:30						11		3
9:30-9:45						13		5
9:45-10:00						15		6
HOURLY TOTAL						HOURLY TOTAL		74
10:00-10:15						17		2
10:15-10:30						19		2
10:30-10:45						20		2
10:45-11:00						20		1
HOURLY TOTAL						HOURLY TOTAL		83
11:00-11:15						19		
11:15-11:30						14		1
11:30-11:45						10		1
11:45-12:00				1	1	22		
HOURLY TOTAL					1	HOURLY TOTAL		67
12:00-12:15						9		1
12:15-12:30						8		2
12:30-12:45				1	1	8		1
12:45-1:00						10		2
HOURLY TOTAL					1	HOURLY TOTAL		41
1:00-1:15						19		
1:15-1:30	1	1			2	17		2
1:30-1:45						9	1	
1:45-2:00				1	1	3		3
HOURLY TOTAL					3	HOURLY TOTAL		54



COUNT LOCATION:

CSAH 1 (EAST RIVER ROAD) @
CSAH 78 (HANSON BLVD)

DATE:

12/30/96

APP. #1=NB CSAH 78
(EAST RIVER ROAD)
APP. #2 =EB CSAH 78
(HANSON BLVD)
APP. #3=SB CSAH 78
(EAST RIVER ROAD)
APP. #4=WB CSAH 1
(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						12		1
2:15-2:30						12		1
2:30-2:45	1	1			2	13		3
2:45-3:00				1	1	13		
HOURLY TOTAL					3	HOURLY TOTAL		55
3:00-3:15				2	2	17		3
3:15-3:30						12		3
3:30-3:45						10		1
3:45-4:00						13	1	5
HOURLY TOTAL					2	HOURLY TOTAL		65
4:00-4:15						15		3
4:15-4:30						8	1	2
4:30-4:45						12		3
4:45-5:00						6		4
HOURLY TOTAL						HOURLY TOTAL		54
5:00-5:15						7		4
5:15-5:30						5	1	3
5:30-5:45						9		5
5:45-6:00						8		5
HOURLY TOTAL						HOURLY TOTAL		47
6:00-6:15						12		7
6:15-6:30						11		
6:30-6:45						6		5
6:45-7:00						7		2
HOURLY TOTAL						HOURLY TOTAL		50
7:00-7:15						6		4
7:15-7:30						7		2
7:30-7:45						3		2
7:45-8:00						2		2
HOURLY TOTAL						HOURLY TOTAL		28
8:00-8:15						4		
8:15-8:30						3		1
8:30-8:45						3		
8:45-9:00						3		2
HOURLY TOTAL						HOURLY TOTAL		16
9:00-9:15						1		
9:15-9:30						2		
9:30-9:45						1		1
9:45-10:00								
HOURLY TOTAL						HOURLY TOTAL		5