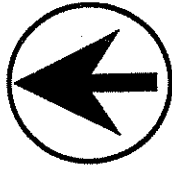


Date : 2/01/01

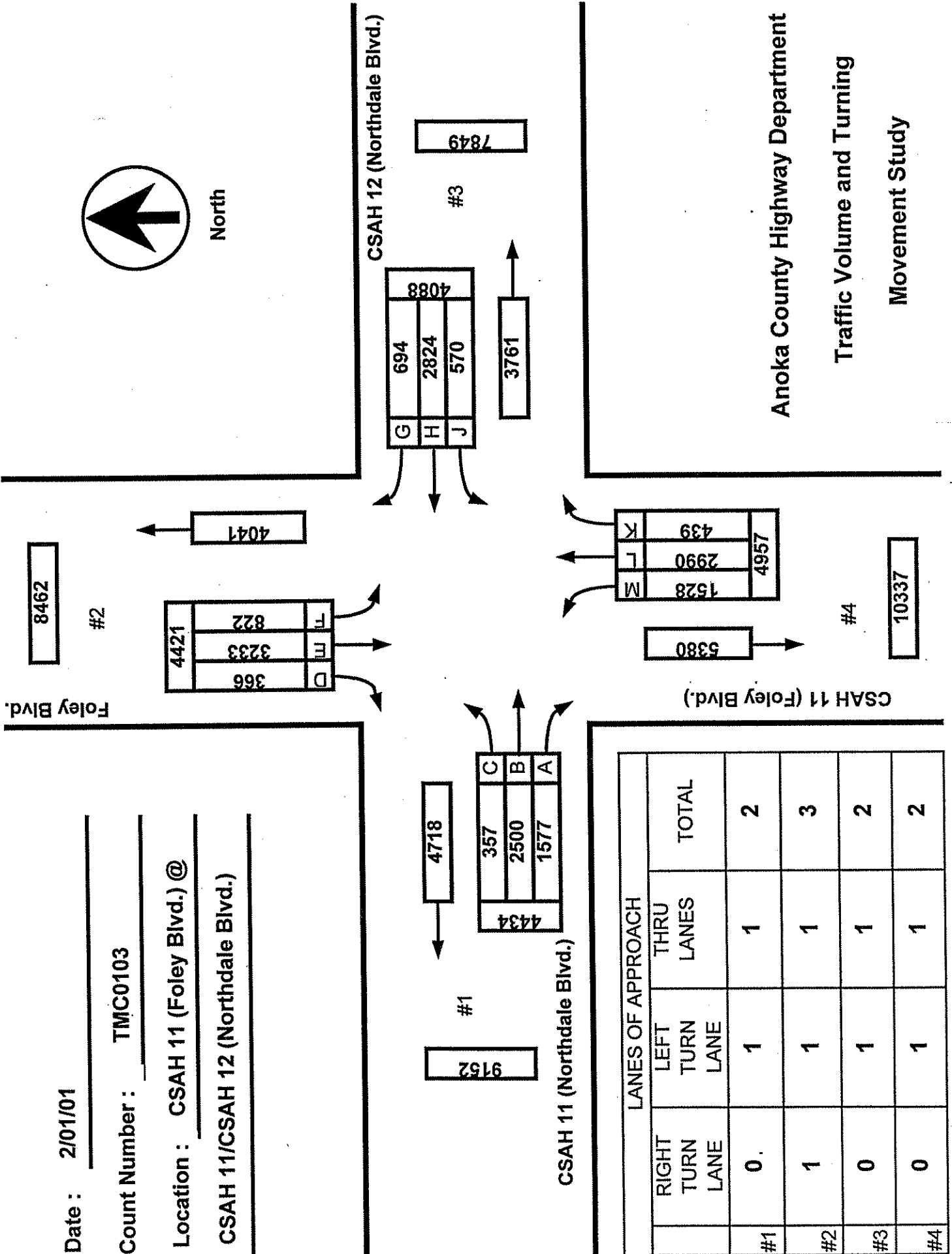
Count Number : TMC0103

Location : CSAH 11 (Foley Blvd.) @

CSAH 11/CSAH 12 (Northdale Blvd.)



North



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

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

Anoka County Highway Department
Traffic Engineering

Weather: Clear and Cold
Counter TDC-8
Counted by: Josie / Sean

Traffic Volume and Turning Movement Stud

File Name : TMC0103
Site Code : 01030202
Start Date : 02/01/2001
Page No : 1

Groups Printed- Unshifted

Start Time	Foley Blvd. Southbound					CSAH 12 (Northdale Blvd.) Westbound					CSAH 11 (Foley Blvd.) Northbound					CSAH 11 (Northdale Blvd.) Eastbound					Int. Total
	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	
	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:00	9	123	1	0	133	3	11	0	0	14	5	11	3	2	21	3	17	40	2	62	230
06:15	9	129	5	5	148	5	23	2	2	32	7	6	6	3	22	0	35	51	3	89	291
06:30	21	129	0	0	150	7	24	3	1	35	9	12	2	0	23	5	46	61	2	114	322
06:45	29	179	3	1	212	9	38	4	2	53	14	16	1	0	31	2	36	64	5	107	403
Total	68	560	9	6	643	24	96	9	5	134	35	45	12	5	97	10	134	216	12	372	1246
07:00	23	152	5	2	182	11	36	6	2	55	15	20	1	2	38	4	40	71	3	118	393
07:15	32	178	5	4	219	15	32	10	3	60	9	14	7	1	31	4	44	59	3	110	420
07:30	27	147	15	4	193	8	24	6	3	41	16	17	8	2	43	3	50	56	2	111	388
07:45	54	138	7	5	204	17	63	8	2	90	20	14	12	1	47	4	92	48	4	148	489
Total	136	615	32	15	798	51	155	30	10	246	60	65	28	6	159	15	226	234	12	487	1690
08:00	42	106	4	6	158	22	56	14	12	104	27	24	6	6	63	6	64	41	4	115	440
08:15	24	87	5	1	117	17	43	11	9	80	18	17	4	4	43	3	44	39	11	97	337
08:30	18	91	5	5	119	6	38	6	6	56	10	20	4	0	34	6	37	29	6	78	287
08:45	15	66	6	2	89	18	39	9	4	70	16	14	14	3	47	3	36	25	4	68	274
Total	99	350	20	14	483	63	176	40	31	310	71	75	28	13	187	18	181	134	25	358	1338
09:00	18	40	4	3	65	9	32	11	9	61	18	13	8	0	39	4	28	26	0	58	223
09:15	9	36	4	1	50	7	33	10	3	53	16	16	4	1	37	2	37	24	6	69	209
09:30	7	49	4	3	63	1	28	5	2	36	7	13	6	0	26	5	37	18	3	63	188
09:45	6	34	7	2	49	3	34	8	1	46	10	16	9	2	37	3	24	16	4	47	179
Total	40	159	19	9	227	20	127	34	15	196	51	58	27	3	139	14	126	84	13	237	799
10:00	9	34	4	2	49	7	27	4	2	40	28	24	3	1	56	2	34	25	3	64	209
10:15	10	32	5	2	49	8	21	7	3	39	20	30	6	4	60	5	39	19	7	70	218
10:30	7	33	10	5	55	6	44	5	4	59	11	23	7	1	42	5	28	30	2	65	221
10:45	5	24	5	1	35	10	32	5	3	50	20	22	7	2	51	2	43	16	4	65	201
Total	31	123	24	10	188	31	124	21	12	188	79	99	23	8	209	14	144	90	16	264	849
11:00	10	30	7	1	48	6	32	8	2	48	20	24	6	1	51	4	47	21	2	74	221
11:15	10	30	3	2	45	7	44	10	6	67	16	20	12	2	50	5	30	25	9	69	231
11:30	7	33	7	2	49	14	42	10	3	69	15	29	3	4	51	3	37	27	5	72	241
11:45	9	42	7	2	60	9	36	9	2	56	21	28	9	3	61	7	35	27	2	71	248
Total	36	135	24	7	202	36	154	37	13	240	72	101	30	10	213	19	149	100	18	286	941
12:00	10	27	4	1	42	6	38	8	3	55	23	33	8	0	64	4	40	30	1	75	236
12:15	17	26	7	5	55	12	35	14	4	65	21	39	15	3	78	7	42	17	1	67	265
12:30	14	34	4	0	52	8	54	13	2	77	20	48	9	2	79	6	42	23	2	73	281
12:45	8	37	7	0	52	10	53	12	3	78	20	35	10	0	65	3	36	21	5	65	260
Total	49	124	22	6	201	36	180	47	12	275	84	155	42	5	286	20	160	91	9	280	1042
13:00	16	42	5	3	66	10	24	7	2	43	19	28	8	0	55	2	33	16	1	52	216
13:15	6	35	6	1	48	6	36	14	6	62	22	38	4	3	67	4	38	20	5	67	244
13:30	5	37	2	2	46	7	35	7	2	51	13	27	11	2	53	4	33	27	8	72	222
13:45	9	42	6	1	58	10	34	13	1	58	19	39	5	3	66	5	38	16	5	64	246
Total	36	156	19	7	218	33	129	41	11	214	73	132	28	8	241	15	142	79	19	255	928
14:00	13	29	5	1	48	6	37	8	3	54	20	40	7	2	69	9	28	18	2	57	228
14:15	14	31	5	0	50	7	43	9	2	61	25	34	6	3	68	5	37	21	11	74	253
14:30	16	38	4	3	61	10	63	5	5	83	26	46	4	0	76	5	47	25	3	80	300
14:45	15	38	13	2	68	4	66	11	3	84	32	50	10	0	92	7	58	16	1	82	326
Total	58	136	27	6	227	27	209	33	13	282	103	170	27	5	305	26	170	80	17	293	1107
15:00	17	36	6	1	60	10	89	18	7	124	32	79	5	3	119	23	63	25	5	116	419
15:15	13	38	11	1	63	17	85	27	5	134	37	94	12	3	146	6	60	33	3	102	445
15:30	17	48	10	0	75	10	63	8	3	84	43	88	9	3	143	10	54	35	5	104	406
15:45	10	53	11	1	75	15	91	21	5	132	54	100	12	4	170	13	69	18	1	101	478
Total	57	175	38	3	273	52	328	74	20	474	166	351	38	13	578	52	246	111	14	423	1748
16:00	16	52	8	3	79	17	87	20	1	125	42	123	20	3	188	11	61	19	3	94	486
16:15	15	48	9	2	74	8	104	19	2	133	55	131	9	4	199	10	58	17	0	85	491
16:30	18	53	7	2	80	16	99	20	4	139	44	160	13	3	220	17	76	34	0	127	566
16:45	15	55	5	1	76	7	99	27	2	135	78	147	16	0	241	11	72	31	3	117	569
Total	64	208	29	8	309	48	389	86	9	532	219	561	58	10	848	49	267	101	6	423	2112

Anoka County Highway Department
Traffic Engineering

Weather: Clear and Cold
Counter TDC-8
Printed by: Josie / Sean

Traffic Volume and Turning Movement Study

File Name : TMC0103
Site Code : 01030202
Start Date : 02/01/2001
Page No : 2

Groups Printed- Unshifted

Start Time	Foley Blvd. Southbound					CSAH 12 (Northdale Blvd.) Westbound					CSAH 11 (Foley Blvd.) Northbound					CSAH 11 (Northdale Blvd.) Eastbound					Int. Total
	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	Left	Thru	Right	Heavy	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
17:00	8	50	13	0	71	26	95	38	4	163	83	142	11	1	217	7	69	28	0	104	555
17:15	11	57	4	0	72	13	89	36	2	140	73	163	10	2	248	9	52	33	3	97	557
17:30	13	39	14	1	67	13	69	38	1	121	59	142	3	2	206	13	50	24	0	87	481
17:45	8	62	9	0	79	12	78	25	0	115	59	125	5	0	189	8	38	20	3	69	452
Total	40	208	40	1	289	64	331	137	7	539	254	572	29	5	860	37	209	105	6	357	2045
18:00	12	42	12	2	68	16	78	17	0	111	55	107	8	4	174	16	64	37	2	119	472
18:15	13	47	12	0	72	14	68	15	1	98	30	98	11	2	141	6	31	13	0	50	361
18:30	18	56	19	0	93	12	62	12	1	87	36	77	11	3	127	6	42	16	0	64	371
18:45	21	44	6	1	72	16	56	12	1	85	31	98	9	0	138	12	51	29	2	94	389
Total	64	189	49	3	305	58	264	56	3	381	152	380	39	9	580	40	188	95	4	327	1593
19:00	14	29	6	0	49	4	47	13	2	66	22	63	8	0	93	12	49	14	2	77	285
19:15	13	28	3	0	44	5	37	12	0	54	29	67	12	0	108	6	48	14	0	68	274
19:30	10	21	4	0	35	10	38	13	0	61	28	41	6	0	75	5	35	15	0	55	226
19:45	7	17	1	0	25	8	40	11	1	60	30	45	4	0	79	5	26	14	0	45	209
Total	44	95	14	0	153	27	162	49	3	241	109	216	30	0	355	28	158	57	2	245	994
Grand Total	822	3233	366	95	4516	570	2824	694	164	4252	1528	2990	439	100	5057	357	2500	1577	173	4607	18432
Approch %	18.2	71.6	8.1	2.1		13.4	66.4	16.3	3.9		30.2	59.1	8.7	2.0		7.7	54.3	34.2	3.8		
Total %	4.5	17.5	2.0	0.5	24.5	3.1	15.3	3.8	0.9	23.1	8.3	16.2	2.4	0.5	27.4	1.9	13.6	8.6	0.9	25.0	

or Street Approaches:

Eastbound:

CSAH 11 (Northdale Blvd.)

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0103.war
 Count Type: IMC. Channel: 0. Count Date: 2/ 1/ 1
 Number of Lanes: 2
 Approach Speed: 35
 Total Approach Traffic: 4434

Westbound:

CSAH 12 (Northdale Blvd.)

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0103.war
 Count Type: IMC. Channel: 0. Count Date: 2/ 1/ 1
 Number of Lanes: 2
 Approach Speed: 35
 Total Approach Traffic: 4088

Minor Street Approaches:

Northbound:

CSAH 11 (Foley Blvd.)

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0103.war
 Count Type: IMC. Channel: 0. Count Date: 2/ 1/ 1
 Number of Lanes: 2
 Approach Speed: 45
 Total Approach Traffic: 4957

Southbound:

Foley Blvd.

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0103.war
 Count Type: IMC. Channel: 0. Count Date: 2/ 1/ 1
 Number of Lanes: 2
 Approach Speed: 40
 Total Approach Traffic: 4421

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.	Rank	Meets?	Criteria	Meets?	Criteria	Meets?	Criteria
0	0	0	S	15		200		100		160
1	0	0	S	16		200		100		160
2	0	0	S	17		200		100		160
3	0	0	S	18		200		100		160
4	0	0	S	19		200		100		160
5	0	0	S	20		200		100		160
6	489	637	S	4	SIDE	200	SIDE	100	SIDE	160
7	711	783	S	3	--BOTH--	200	SIDE	100	SIDE	160
8	612	469	S	7	--BOTH--	200	SIDE	100	SIDE	160
9	405	218	S	12	SIDE	200	SIDE	100	SIDE	160
10	424	201	N	14	SIDE	200	SIDE	100	SIDE	160
11	495	203	N	13	SIDE	200	SIDE	100	SIDE	160
12	534	281	N	10	SIDE	200	SIDE	100	SIDE	160
13	439	233	N	11	SIDE	200	SIDE	100	SIDE	160
14	545	300	N	9	SIDE	200	SIDE	100	SIDE	160
15	863	565	N	6	--BOTH--	200	SIDE	100	--BOTH--	160
16	940	838	N	2	--BOTH--	200	--BOTH--	100	--BOTH--	160
17	883	855	N	1	--BOTH--	200	SIDE	100	--BOTH--	160
18	701	571	N	5	--BOTH--	200	SIDE	100	SIDE	160
19	481	355	N	8	SIDE	200	SIDE	100	SIDE	160
20	0	0	S	21		200		100		160
21	0	0	S	22		200		100		160
22	0	0	S	23		200		100		160
23	0	0	S	24		200		100		160

Warrant Summary:

Urban values apply.

Warrant 1 - Minimum Vehicular Volumes

NOT SATISFIED. Required values reached for 6 hours. Criteria--Main St.: 600; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

NOT SATISFIED. Required values reached for 1 hours. Criteria--Main St.: 900; Side St.: See Volume Summary.

Warrant 3 - Minimum Pedestrian Volumes

NOT SATISFIED. 8th-High Hour--Pedestrians: 0. Criteria--Pedestrians: 150; Vehicles: 600.

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

SATISFIED. Peak hour total entering volume: 2079. Approaches on both streets satisfy one of the following criteria:

NSEW- Approaches which are part of the principal through traffic roadway network.

- Approaches which connect areas of principal traffic generation.
- Approaches which include rural or suburban highways outside, entering or traversing a city.
- Approaches which have surface street freeway or expressway ramp terminals.
- Approaches which appear as a major route in an official transportation plan.

Warrant 8 - Combination of Warrants

NOT SATISFIED. Required values reached for 3 hours. Criteria--Main: 720; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

SATISFIED for 7 hours.

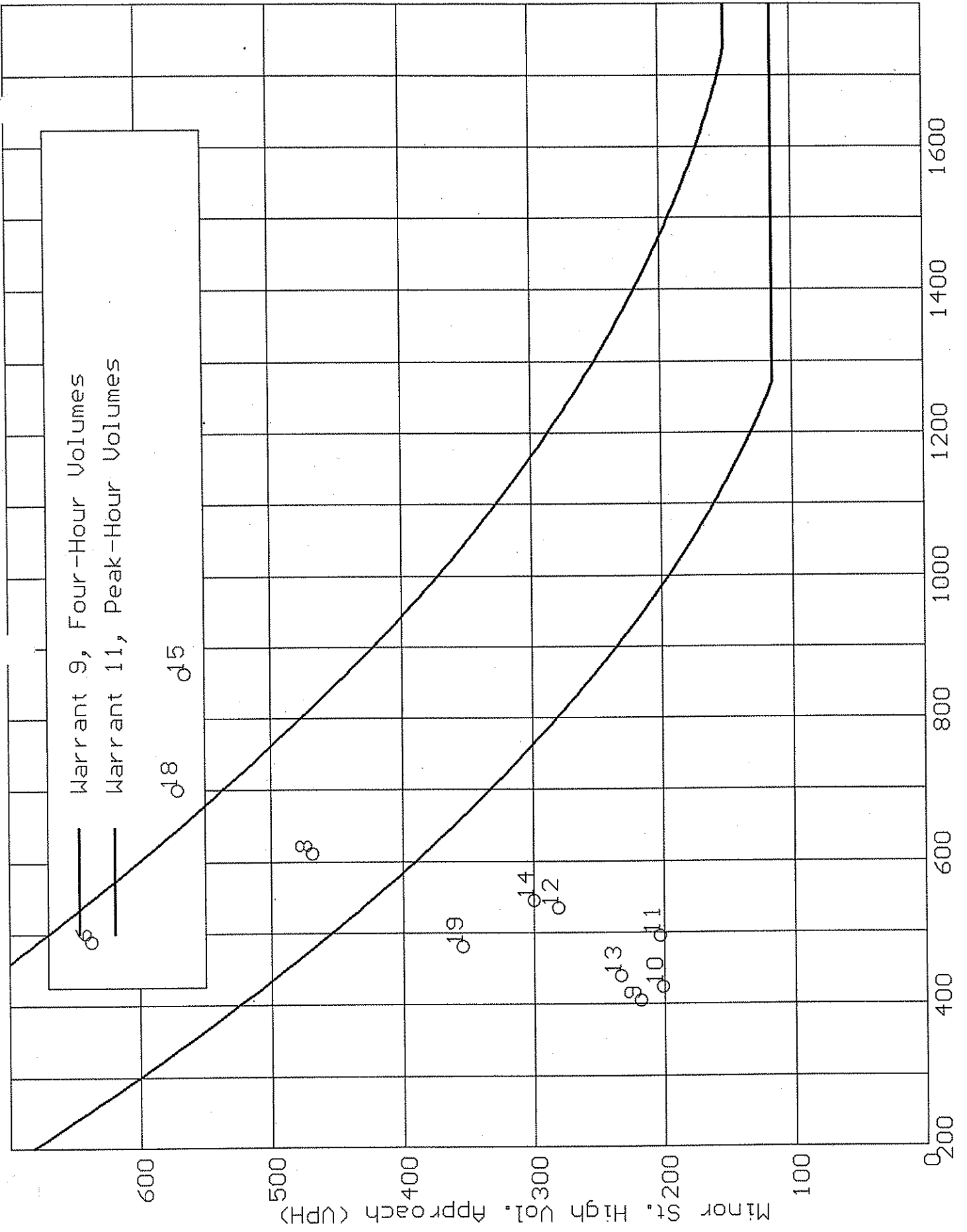
Warrant 10 - Peak Hour Delay

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 5 hours.



Major St. Total of Both Approaches (UPH)

Multiway Stop Warrant Analysis
TMC 0103 CSAH 12(Northdale Blvd.) @ CSAH 11 (Foley Blvd.)
Speed Limit of Major Roadway..... 35

Minimum Traffic Volumes Multiway Stop Warrant Criteria:

- a) The total vehicular volume entering the intersection from all approaches must average at least 500 vehicles per hour (vph) for any 8 hours of an average day, AND:
- b) The combined vehicular and pedestrian volume from the minor street or highway must average at least 200 vph for the same 8 hours, with an average delay to minor street vehicular traffic of at least 30 seconds per vehicle during the maximum hour, BUT:
- c) When the 85-percentile approach speed of the major street traffic exceeds 40 miles per hour, the minimum volume warrant is 70% of the above requirements.

Hour	Total Vehicular Traffic Entering the Intersection	Vehicular Traffic Entering on First Minor Roadway	Vehicular Traffic Entering on Second Minor Roadway	Sum of Minor Approaches	Hours Stop Warrant Met
6 AM - 7 AM	1246	643	97	740	1
7 AM - 8 AM	1690	798	159	957	1
8 AM - 9 AM	1338	483	187	670	1
9 AM - 10 AM	799	227	139	366	1
10 AM - 11 AM	849	188	209	397	1
11 AM - 12 PM	941	202	213	415	1
12 PM - 13 PM	1042	201	286	487	1
1 PM - 2 PM	928	218	241	459	1
2 PM - 3 PM	1107	227	305	532	1
3 PM - 4 PM	1748	273	578	851	1
4 PM - 5 PM	2112	309	848	1157	1
5 PM - 6 PM	2045	289	860	1149	1
6 PM - 7 PM	1593	305	580	885	1
7 PM - 8 PM	994	153	355	508	1

TOTAL HOURS MET: 14

MULTIWAY STOP WARRANT IS MET