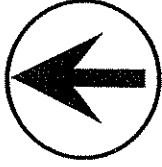


Date : 07/07/2008

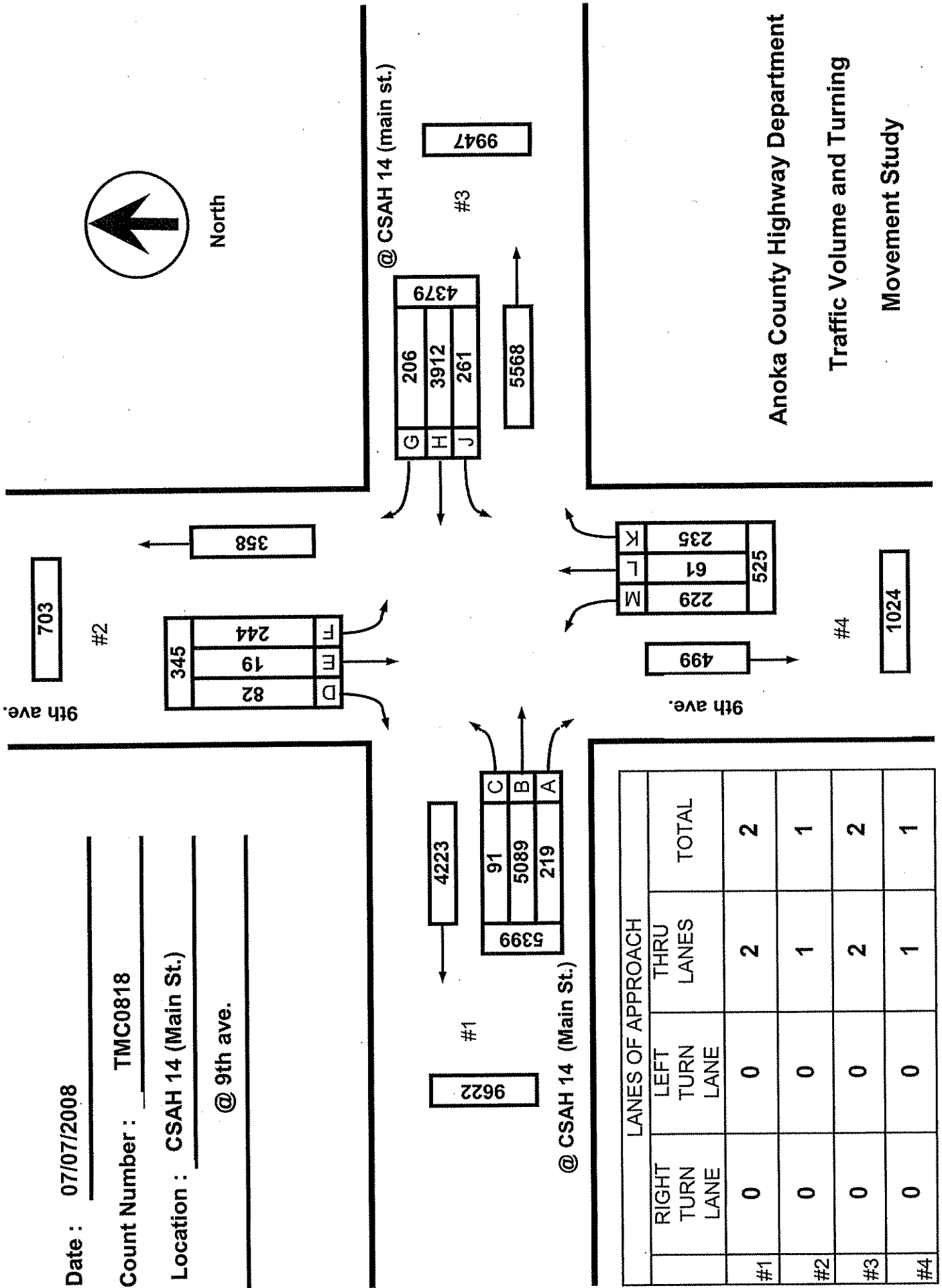
Count Number : TMC0818

Location : CSAH 14 (Main St.)

@ 9th ave.



North



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

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

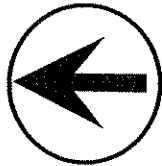
Date : 07/07/2008

Count Number : TMC0818

Location : CSAH 14 (Main St.)

@ 9th ave.

Hour: 11:00 - 12:00 AM

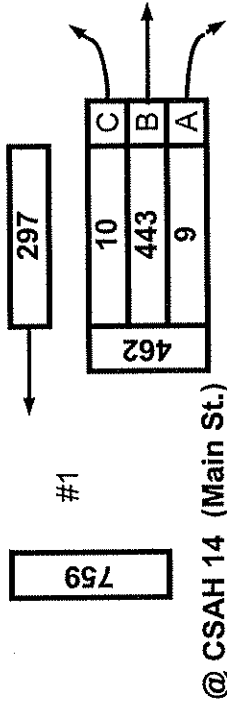
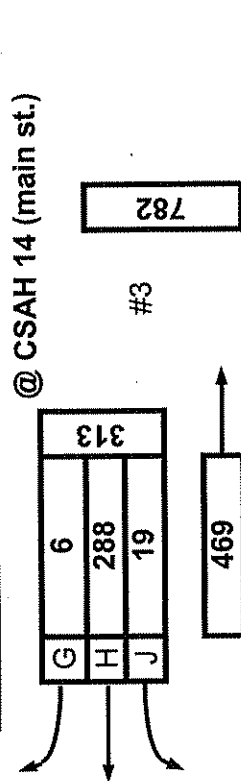


North

9th ave. #2 35

16			
	D	F	T
2		0	14

19



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

7	M		
3	L		
12	K		
22			

28

9th ave.

Anoka County Highway Department
Traffic Volume and Turning
Movement Study

#4 50

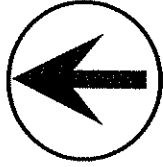
Date : 07/07/2008

Count Number : TMC0818

Location : CSAH 14 (Main St.)

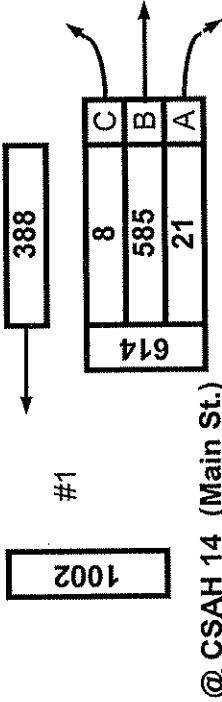
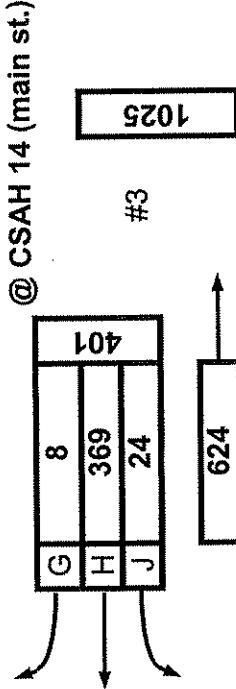
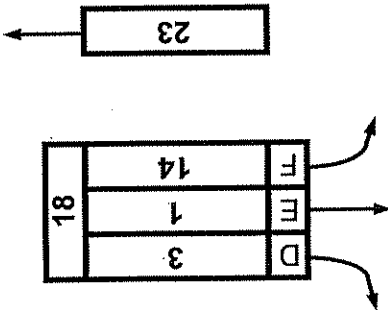
@ 9th ave.

Hour: 3:45 - 4:45 PM

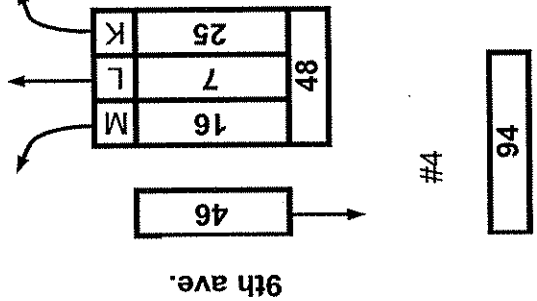


North

9th ave. 41 #2



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



1025

@ CSAH 14 (main st.)

Anoka County Highway Department
Traffic Volume and Turning
Movement Study

94 #4

Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : TMC0818

Site Code : 08180101

Start Date : 07/07/200

Page No : 2

Weather: Warm and Sunny

Counter: DB-400

Counted by: Jake/Mike

Groups Printed- Unshifted - Bank 1

Start Time	9th ave Southbound					CSAH 14 (Main St.) Westbound					9th ave Northbound					CSAH 14 (Main St.) Eastbound					Exclu. Total	Inclu. Total	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			
19:00	2	0	0	0	2	5	38	1	0	44	2	0	3	0	5	0	61	2	1	63	1	114	115
19:15	1	0	1	1	2	4	39	0	0	43	3	0	3	0	6	3	59	4	0	66	1	117	118
19:30	2	0	0	0	2	4	28	4	2	36	3	0	1	0	4	2	37	3	0	42	2	84	86
19:45	2	0	0	1	2	10	53	2	1	65	0	0	1	0	1	0	62	1	0	63	2	131	133
Total	7	0	1	2	8	23	158	7	3	188	8	0	8	0	16	5	219	10	1	234	6	446	452
20:00	1	0	0	1	1	7	47	0	0	54	3	0	1	0	4	0	60	3	0	63	1	122	123
20:15	2	0	0	1	2	5	45	0	1	50	3	0	1	0	4	0	30	1	0	31	2	87	89
20:30	0	0	0	0	0	1	5	1	1	7	3	1	5	0	9	1	40	6	0	47	1	63	64
20:45	0	0	0	0	0	2	23	1	0	26	0	0	2	0	2	0	27	2	0	29	0	57	57
Total	3	0	0	2	3	15	120	2	2	137	9	1	9	0	19	1	157	12	0	170	4	329	333
21:00	3	0	0	0	3	6	12	0	0	18	5	0	3	0	8	0	28	4	0	32	0	61	61
21:15	1	0	0	1	1	5	32	0	0	37	3	0	1	0	4	0	30	1	0	31	1	73	74
21:30	1	0	0	0	1	4	17	2	1	23	1	0	2	0	3	0	30	5	0	35	1	62	63
21:45	1	0	0	0	1	2	44	3	2	49	2	0	1	0	3	0	19	5	0	24	2	77	79
Total	6	0	0	1	6	17	105	5	3	127	11	0	7	0	18	0	107	15	0	122	4	273	277
Grand Total	244	19	82	83	345	261	3912	206	117	4379	229	61	235	16	525	91	5089	219	118	5399	334	10648	10982
Approch %	70.7	5.5	23.8			6	89.3	4.7			43.6	11.8	44.8			1.7	94.3	4.1					
Total %	2.3	0.2	0.8		3.2	2.5	36.7	1.9		41.1	2.2	0.6	2.2		4.9	0.9	47.8	2.1		50.7	3	97	
Unshifted	244	19	82		428	261	3912	206		4496	229	61	235		541	91	5089	219		5517	0	0	10982
% Unshifted	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0	100
Bank 1	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
% Bank 1	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0

Start Time	9th ave Southbound				CSAH 14 (Main St.) Westbound				9th ave Northbound				CSAH 14 (Main St.) Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 to 11:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:00																	
11:00	4	0	0	4	6	83	2	91	1	0	2	3	1	77	1	79	177
11:15	2	0	0	2	2	49	2	53	1	2	3	6	1	107	1	109	170
11:30	4	0	1	5	5	63	1	69	2	0	3	5	1	137	4	142	221
11:45	4	0	1	5	6	93	1	100	3	1	4	8	7	122	3	132	245
Total Volume	14	0	2	16	19	288	6	313	7	3	12	22	10	443	9	462	813
% App. Total	87.5	0	12.5	.800	6.1	92	1.9	.783	31.8	13.6	54.5	.688	2.2	95.9	1.9	.813	.830
PHF	.875	.000	.500	.800	.792	.774	.750	.783	.583	.375	.750	.688	.357	.808	.563	.813	.830
Peak Hour Analysis From 12:00 to 21:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 15:45																	
15:45	5	0	0	5	7	105	1	113	4	1	6	11	2	145	5	152	281
16:00	3	1	1	5	4	119	2	125	2	1	7	10	2	152	7	161	301
16:15	5	0	0	5	5	83	3	91	6	2	5	13	3	148	5	156	265
16:30	1	0	2	3	8	62	2	72	4	3	7	14	1	140	4	145	234
Total Volume	14	1	3	18	24	369	8	401	16	7	25	48	8	585	21	614	1081
% App. Total	77.8	5.6	16.7	.900	6	92	2	.802	33.3	14.6	52.1	.857	1.3	95.3	3.4	.953	.898
PHF	.700	.250	.375	.900	.750	.775	.667	.802	.667	.583	.893	.857	.667	.962	.750	.953	.898

**ANOKA COUNTY HIGHWAY
PC-WARRANTS
TRAFFIC SIGNAL WARRANT ANALYSIS**

Study Name :
Study Date : 07/07/08
Page No. : 1

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 14 (Main St.)

Number of Lanes: 2
Approach Speed: 30
Total Approach Volume: 5,399

Westbound: CSAH 14 (Main St.)

Number of Lanes: 2
Approach Speed: 30
Total Approach Volume: 4,399

Minor Street Approaches

Northbound: 9th ave.

Number of Lanes: 1

Total Approach Volume: 525

Southbound: 9th ave.

Number of Lanes: 1

Total Approach Volume: 345

Warrant Summary (Urban values apply.)

- Warrant 1 - Eight Hour Vehicular Volumes** Not Satisfied

 - Warrant 1A - Minimum Vehicular Volume** Not Satisfied

Required volumes reached for 0 hours, 8 are needed
 - Warrant 1B - Interruption of Continuous Traffic** Not Satisfied

Required volumes reached for 0 hours, 8 are needed
 - Warrant 1 A&B - Combination of Warrants** Not Satisfied

Required volumes reached for 0 hours, 8 are needed

- Warrant 2 - Four Hour Volumes** Not Satisfied

Number of hours (0) volumes exceed minimum < minimum required (4).

- Warrant 3 - Peak Hour** Satisfied

 - Warrant 3A - Peak Hour Delay** Satisfied

Number of hours (3) volumes exceed minimum >= required (1). Delay data not evaluated.
 - Warrant 3B - Peak Hour Volumes** Not Satisfied

Volumes do not exceed minimums for any hour.

- Warrant 4 - Pedestrian Volumes** Not Evaluated

- Warrant 5 - School Crossing** Not Evaluated

- Warrant 6 - Coordinated Signal System** Not Evaluated

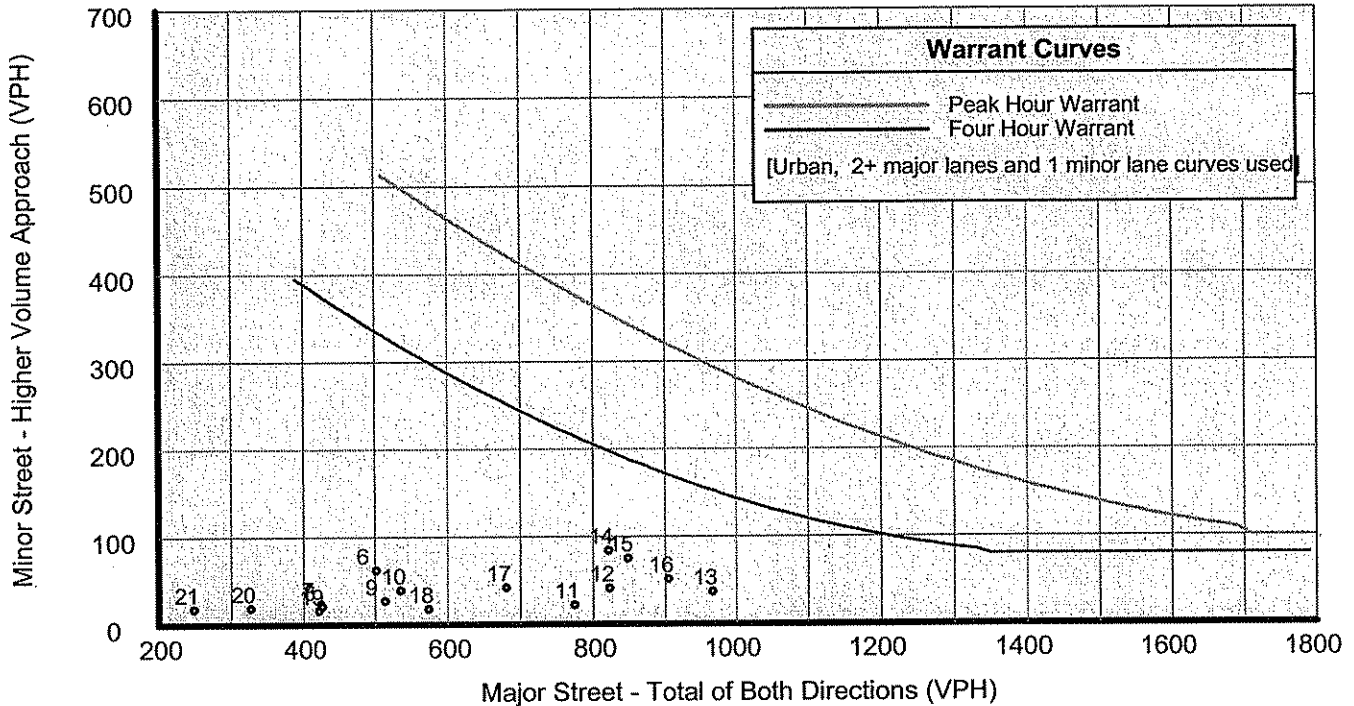
- Warrant 7 - Crash Experience** Not Evaluated

- Warrant 8 - Roadway Network** Not Evaluated

ANOKA COUNTY HIGHWAY PC-WARRANTS TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name :
Study Date : 07/07/08
Page No. : 2

Signal Warrants - Summary



Analysis of 8-Hour Volume Warrants:

Hour Begin	Major Total	Higher Minor		War-1A			War-1B			War-1A&B		
		Vol	Dir	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
00:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
01:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
02:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
03:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
04:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
05:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
06:00	502	62	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
07:00	425	24	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
08:00	427	21	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
09:00	514	27	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
10:00	536	39	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
11:00	775	22	NB	600-Yes	150-No	Major	900-No	75-No	---	720-Yes	120-No	Major
12:00	823	41	NB	600-Yes	150-No	Major	900-No	75-No	---	720-Yes	120-No	Major
13:00	967	37	NB	600-Yes	150-No	Major	900-Yes	75-No	Major	720-Yes	120-No	Major
14:00	822	84	SB	600-Yes	150-No	Major	900-No	75-Yes	Minor	720-Yes	120-No	Major
15:00	849	75	SB	600-Yes	150-No	Major	900-No	75-Yes	Minor	720-Yes	120-No	Major
16:00	905	51	NB	600-Yes	150-No	Major	900-Yes	75-No	Major	720-Yes	120-No	Major
17:00	681	42	NB	600-Yes	150-No	Major	900-No	75-No	---	720-No	120-No	---
18:00	574	18	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
19:00	422	16	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
20:00	327	19	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
21:00	249	18	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
22:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---
23:00	0	0	NB	600-No	150-No	---	900-No	75-No	---	720-No	120-No	---

**ANOKA COUNTY HIGHWAY
PC-WARRANTS
TRAFFIC SIGNAL WARRANT ANALYSIS**

Study Name :
Study Date : 07/07/08
Page No. : 1

Multi-Way Stop Warrant Report

Major Street Approaches

Eastbound: CSAH 14 (Main St.)
Total Approach Volume: 5,399
Approach Speed: 30

Westbound: CSAH 14 (Main St.)
Total Approach Volume: 4,399
Approach Speed: 30

Minor Street Approaches

Northbound: 9th ave.
Total Approach Volume: 525

Southbound: 9th ave.
Total Approach Volume: 345

Warrant Summary

Criteria A - Interim Measure Not Evaluated
If traffic signals are justified, stop signs can be installed as an interim measure.

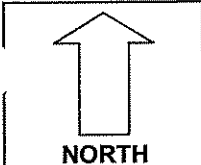
Criteria B - Crash Experience Not Evaluated

Criteria C - Minimum Volumes and Delays Not Satisfied
Delay data not evaluated
Required volumes reached for 0 hours, 8 are needed

Criteria D - 80% of Volumes, Delays, and Crashes Not Evaluated
Delay data not evaluated
Number of crashes (-1) is less than the minimum required (4).
Required volumes reached for 0 hours, 8 are needed

Analysis of 8 Hour Volume Warrants:

Time	Major Total	Minor Total	Crit C			Crit D		
			Major	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
00:00 - 01:00	0	0	300-No	200-No	No	240-No	160-No	No
01:00 - 02:00	0	0	300-No	200-No	No	240-No	160-No	No
02:00 - 03:00	0	0	300-No	200-No	No	240-No	160-No	No
03:00 - 04:00	0	0	300-No	200-No	No	240-No	160-No	No
04:00 - 05:00	0	0	300-No	200-No	No	240-No	160-No	No
05:00 - 06:00	0	0	300-No	200-No	No	240-No	160-No	No
06:00 - 07:00	502	73	300-Yes	200-No	Major	240-Yes	160-No	Major
07:00 - 08:00	425	32	300-Yes	200-No	Major	240-Yes	160-No	Major
08:00 - 09:00	427	26	300-Yes	200-No	Major	240-Yes	160-No	Major
09:00 - 10:00	514	45	300-Yes	200-No	Major	240-Yes	160-No	Major
10:00 - 11:00	536	60	300-Yes	200-No	Major	240-Yes	160-No	Major
11:00 - 12:00	775	38	300-Yes	200-No	Major	240-Yes	160-No	Major
12:00 - 13:00	823	66	300-Yes	200-No	Major	240-Yes	160-No	Major
13:00 - 14:00	967	62	300-Yes	200-No	Major	240-Yes	160-No	Major
14:00 - 15:00	822	131	300-Yes	200-No	Major	240-Yes	160-No	Major
15:00 - 16:00	849	116	300-Yes	200-No	Major	240-Yes	160-No	Major
16:00 - 17:00	905	70	300-Yes	200-No	Major	240-Yes	160-No	Major
17:00 - 18:00	681	58	300-Yes	200-No	Major	240-Yes	160-No	Major
18:00 - 19:00	574	23	300-Yes	200-No	Major	240-Yes	160-No	Major
19:00 - 20:00	422	24	300-Yes	200-No	Major	240-Yes	160-No	Major
20:00 - 21:00	327	22	300-Yes	200-No	Major	240-Yes	160-No	Major
21:00 - 22:00	249	24	300-No	200-No	No	240-Yes	160-No	Major
22:00 - 23:00	0	0	300-No	200-No	No	240-No	160-No	No
23:00 - 00:00	0	0	300-No	200-No	No	240-No	160-No	No



COUNT LOCATION:

CSAH 14 (Main St.)

DATE:

07/07/2008

@ 9th ave.

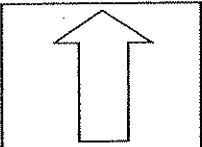
APP.#1= CSAH 14
APP.#2=9th ave
APP.#3= CSAH 14
APP.#4= 9th ave

APP. #2	APP. #3
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
6:00-6:15AM								
6:15-6:30						4		1
6:30-6:45						3		3
6:45-7:00						8		4
HOURLY TOTAL						HOURLY TOTAL		23
7:00-7:15						3		
7:15-7:30						3		2
7:30-7:45						1		1
7:45-8:00						3		
HOURLY TOTAL						HOURLY TOTAL		13
8:00-8:15						2		
8:15-8:30						2		1
8:30-8:45						3		1
8:45-9:00						5		4
HOURLY TOTAL						HOURLY TOTAL		18
9:00-9:15						8		4
9:15-9:30						6		
9:30-9:45						4		
9:45-10:00						5		
HOURLY TOTAL						HOURLY TOTAL		27
10:00-10:15						13		
10:15-10:30						6		
10:30-10:45						11		10
10:45-11:00						5		6
HOURLY TOTAL						HOURLY TOTAL		51
11:00-11:15						2		2
11:15-11:30						4		2
11:30-11:45						4		1
11:45-12:00						6		1
HOURLY TOTAL						HOURLY TOTAL		22
12:00-12:15						4		
12:15-12:30						6		4
12:30-12:45						3		3
12:45-1:00						7		2
HOURLY TOTAL						HOURLY TOTAL		29
1:00-1:15						8		3
1:15-1:30						8		2
1:30-1:45						4		1
1:45-2:00						7		
HOURLY TOTAL						HOURLY TOTAL		33
					TOTAL		TOTAL	216

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32



NORTH

APP.#1= CSAH 14
APP.#2=9th ave
APP.#3= CSAH 14
APP.#4= 9th ave

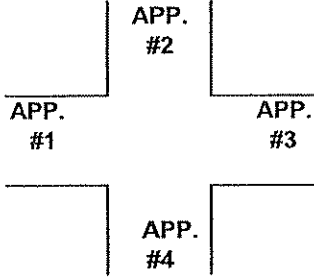
COUNT LOCATION:

CSAH 14 (Main St.)

DATE:

07/09/2008

@ 9th ave.



- 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						8		1
2:15-2:30						6		
2:30-2:45						6	1	
2:45-3:00						6		
HOURLY TOTAL						HOURLY TOTAL		28
3:00-3:15						2		
3:15-3:30						7		
3:30-3:45						3		
3:45-4:00						3		1
HOURLY TOTAL						HOURLY TOTAL		16
4:00-4:15						5		
4:15-4:30						2		
4:30-4:45						6		
4:45-5:00						4		1
HOURLY TOTAL						HOURLY TOTAL		18
5:00-5:15						3		
5:15-5:30						4		
5:30-5:45						3		
5:45-6:00						1		
HOURLY TOTAL						HOURLY TOTAL		11
6:00-6:15						2		
6:15-6:30						1		
6:30-6:45						3		
6:45-7:00								
HOURLY TOTAL						HOURLY TOTAL		6
7:00-7:15								
7:15-7:30						1		
7:30-7:45						2		
7:45-8:00						3		
HOURLY TOTAL						HOURLY TOTAL		6
8:00-8:15								
8:15-8:30						2		
8:30-8:45						1		
8:45-9:00								
HOURLY TOTAL						HOURLY TOTAL		3
9:00-9:15								
9:15-9:30						1		
9:30-9:45						1		
9:45-10:00						2		
HOURLY TOTAL						HOURLY TOTAL		5
TOTAL						TOTAL		309

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