

Date : 06/12/08

Count Number : TMC0812

Location : CSAH 9 (Round Lake)

@ South Coon Creek Drive

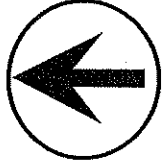
CSAH 9 (Round Lake)

12915

#2

5930	36	T
5892		M
2		D

6985



North

South Coon Creek Drive

50	420
0	
370	

#3

796

376

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

58	6935	340
		7333

CSAH 9 (Round Lake)

6262

#4

13595

Anoka County Highway Department

Traffic Volume and Turning

Movement Study

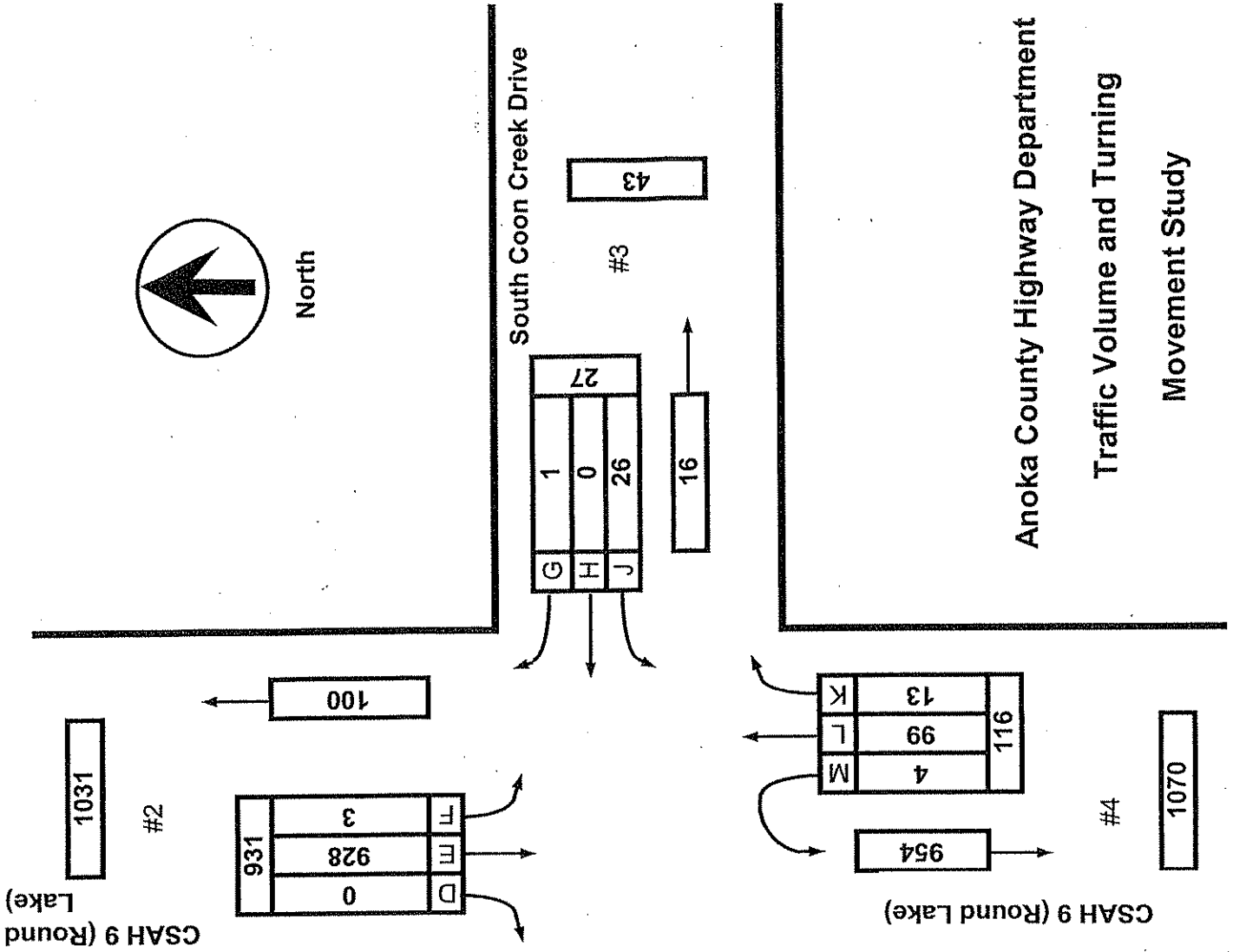
Date : 06/12/08

Count Number : TMC0812

Location : CSAH 9 (Round Lake)

@ South Coon Creek Drive

Am Peak: 6:15 - 7:15



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

Anoka County Highway Department
Traffic Volume and Turning
Movement Study

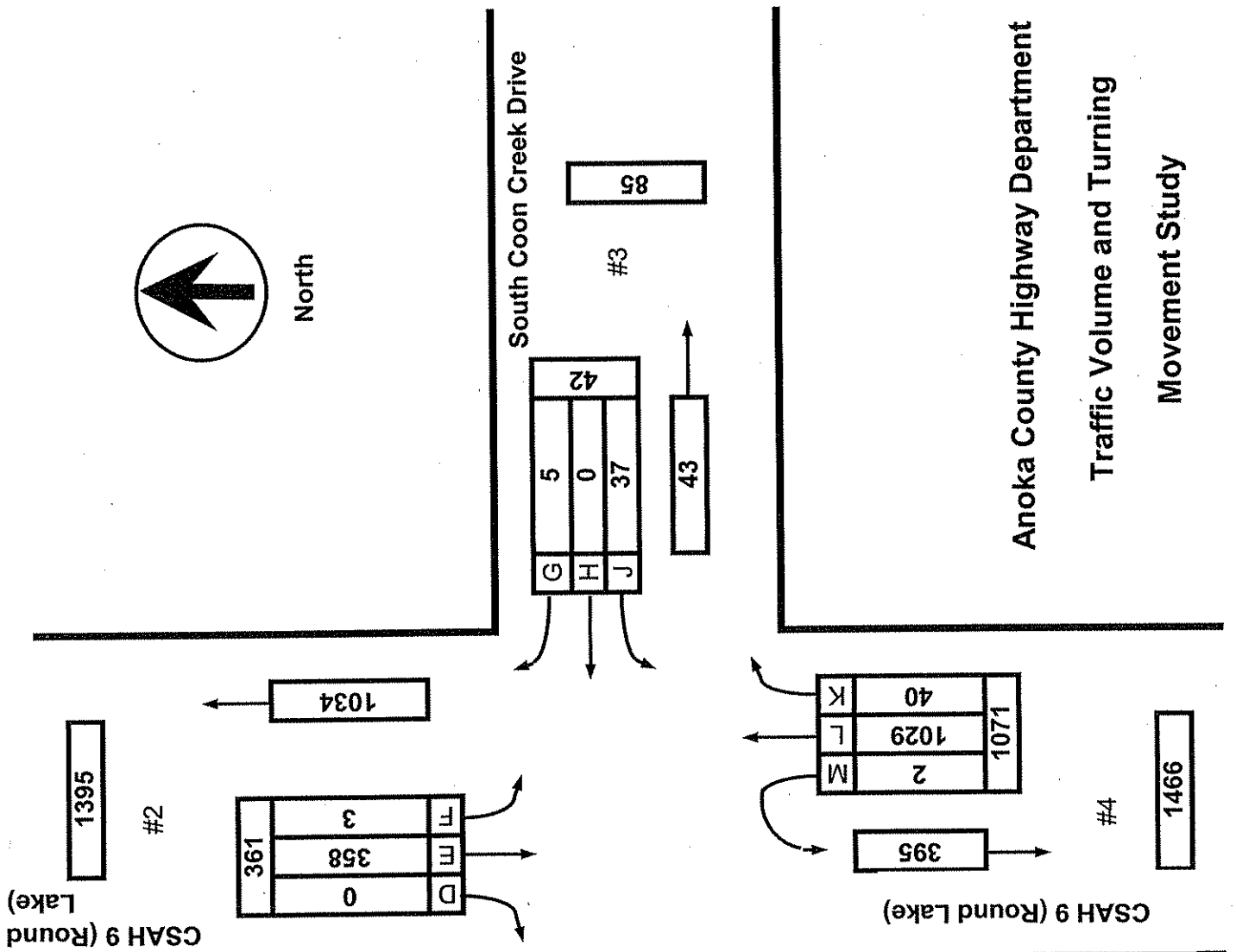
Date : 06/12/08

Count Number : TMC0812

Location : CSAH 9 (Round Lake)

@ South Coon Creek Drive

PM Peak: 4:30 - 5:30



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

Anoka County Highway Department

Traffic Engineering Section

Traffic Volume and Turning Movement Study

File Name : tmc0812
 Site Code : 08140101
 Start Date : 06/12/200
 Page No : 2

Weather: Sunny and Warm
 nter: DB-400
 Counted by: Jake/Mike

Groups Printed- Unshifted - Bank 1

Start Time	CSAH 9 (Round Lake) Southbound					Coon Creek Westbound					CSAH 9 (Round Lake) Northbound					N/A 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	1	40	0	0	41	3	0	0	0	3	0	71	4	2	75	0	0	0	0	0	2	119	121
19:15	0	44	0	0	44	6	0	0	0	6	0	69	7	1	76	0	0	0	0	0	1	126	127
19:30	0	47	0	0	47	1	0	1	0	2	14	65	3	0	82	0	0	0	0	0	0	131	131
19:45	3	65	0	0	68	9	0	0	0	9	3	105	13	2	121	0	0	0	0	0	2	198	200
Total	4	196	0	0	200	19	0	1	0	20	17	310	27	5	354	0	0	0	0	0	5	574	579
20:00	0	70	0	0	70	9	0	1	0	10	0	182	6	1	188	0	0	0	0	0	1	268	269
20:15	3	56	0	0	59	8	0	0	0	8	1	178	16	0	195	0	0	0	0	0	0	262	262
20:30	0	75	0	0	75	17	0	3	1	20	0	188	7	1	195	0	0	0	0	0	2	290	292
20:45	1	84	0	1	85	13	0	1	0	14	0	144	5	0	149	0	0	0	0	0	1	248	249
Total	4	285	0	1	289	47	0	5	1	52	1	692	34	2	727	0	0	0	0	0	4	1068	1072
21:00	1	57	0	0	58	8	0	4	0	12	0	150	6	0	156	0	0	0	0	0	0	226	226
21:15	1	60	0	0	61	15	0	4	0	19	1	134	5	1	140	0	0	0	0	0	1	220	221
21:30	0	41	0	0	41	3	0	0	0	3	0	55	4	1	59	0	0	0	0	0	1	103	104
21:45	1	40	0	0	41	2	0	3	0	5	11	50	6	0	67	0	0	0	0	0	0	113	113
Total	3	198	0	0	201	28	0	11	0	39	12	389	21	2	422	0	0	0	0	0	2	662	664
Grand Total	36	5892	2	112	5930	370	0	50	9	420	58	6935	340	115	7333	0	0	0	0	0	236	13683	13919
Apprch %	0.6	99.4	0			88.1	0	11.9			0.8	94.6	4.6			0	0	0					
Total %	0.3	43.1	0		43.3	2.7	0	0.4		3.1	0.4	50.7	2.5		53.6	0	0	0			1.7	96.3	
Unshifted	36	5892	2		6042	370	0	50		429	58	6935	340		7448	0	0	0			0	0	13919
% Unshifted	100	100	100	100	100	100	0	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0	100
Bank 1	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

Start Time	CSAH 9 (Round Lake) Southbound					Coon Creek Westbound					CSAH 9 (Round Lake) Northbound					N/A 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		
Peak Hour Analysis From 06:00 to 11:45 - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 06:15																						
06:15	0	225	0		225	4	0	0		4	3	19	1		23	0	0	0		0	0	252
06:30	0	242	0		242	11	0	1		12	1	20	2		23	0	0	0		0	0	277
06:45	2	246	0		248	5	0	0		5	0	25	5		30	0	0	0		0	0	283
07:00	1	215	0		216	6	0	0		6	0	35	5		40	0	0	0		0	0	262
Total Volume	3	928	0		931	26	0	1		27	4	99	13		116	0	0	0		0	0	1074
% App. Total	0.3	99.7	0			96.3	0	3.7			3.4	85.3	11.2			0	0	0		0	0	
PHF	.375	.943	.000		.939	.591	.000	.250		.563	.333	.707	.650		.725	.000	.000	.000		.000	.000	.949
Unshifted	3	928	0		931	26	0	1		27	4	99	13		116	0	0	0		0	0	1074
% Unshifted	100	100	0		100	100	0	100	100	100	100	100	100	100	100	0	0	0		0	0	100
Bank 1	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
Peak Hour Analysis From 12:00 to 21:30 - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 16:30																						
16:30	0	68	0		68	13	0	0		13	2	343	8		353	0	0	0		0	0	434
16:45	2	90	0		92	1	0	0		1	0	218	1		219	0	0	0		0	0	312
17:00	1	90	0		91	7	0	3		10	0	206	18		224	0	0	0		0	0	325
17:15	0	110	0		110	16	0	2		18	0	262	13		275	0	0	0		0	0	403
Total Volume	3	358	0		361	37	0	5		42	2	1029	40		1071	0	0	0		0	0	1474
% App. Total	0.8	99.2	0			88.1	0	11.9			0.2	96.1	3.7			0	0	0		0	0	
PHF	.375	.814	.000		.820	.578	.000	.417		.583	.250	.750	.556		.758	.000	.000	.000		.000	.000	.849
Unshifted	3	358	0		361	37	0	5		42	2	1029	40		1071	0	0	0		0	0	1474
% Unshifted	100	100	0		100	100	0	100	100	100	100	100	100	100	100	0	0	0		0	0	100
Bank 1	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

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

Study Name : TMC 0812
Study Date : 06/12/08
Page No. : 1

Signal Warrants - Summary

Major Street Approaches

Northbound: CSAH 9 (Round Lake)
Number of Lanes: 2
Approach Speed: 45
Total Approach Volume: 7,333

Southbound: CSAH 9 (Round Lake)
Number of Lanes: 2
Approach Speed: 45
Total Approach Volume: 5,930

Minor Street Approaches

Eastbound: N/A
Number of Lanes: 2

Total Approach Volume: 0

Westbound: Coon Creek
Number of Lanes: 2

Total Approach Volume: 430

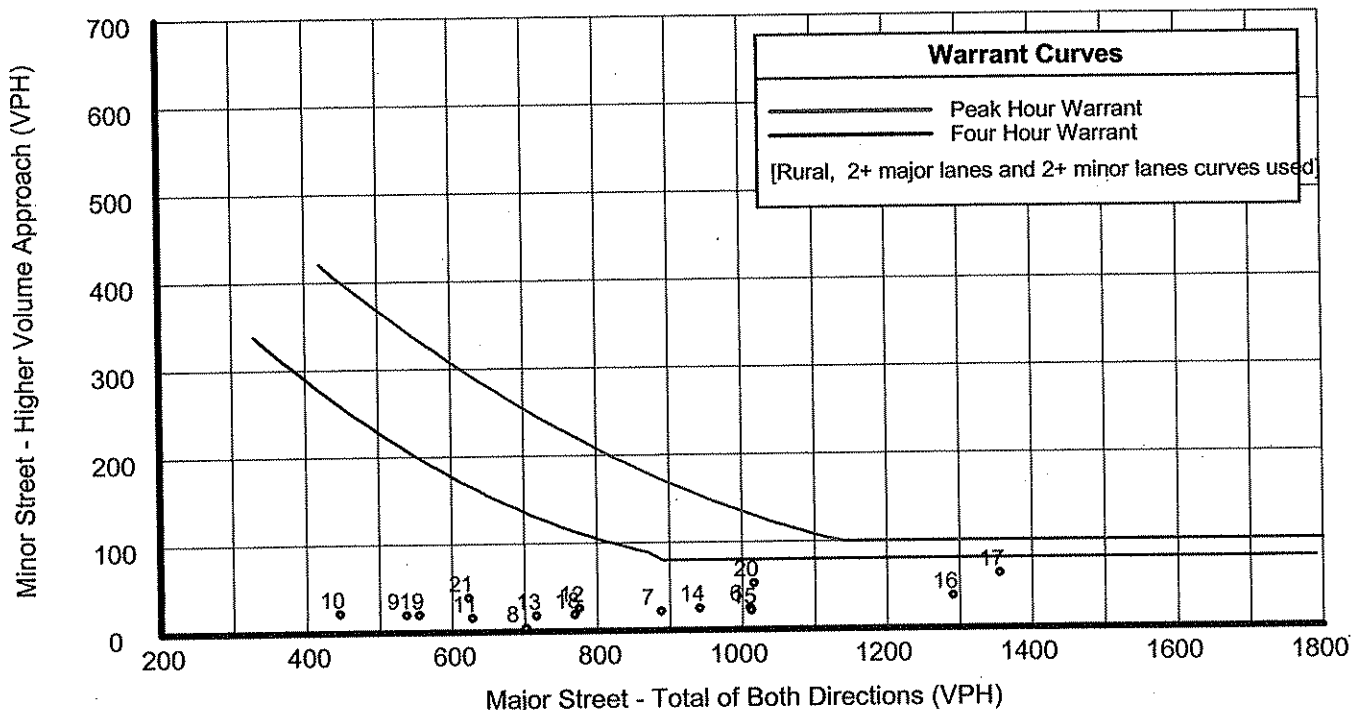
Warrant Summary (Rural values apply.)

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	Not Satisfied
Warrant 3A - Peak Hour Delay	Not Satisfied
Approach volumes on minor street don't exceed minimums for any hour. 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 : 0812
Study Date : 06/12/08
Page No. : 2

Signal Warrants - Summary



Analysis of 8-Hour Volume Warrants:

Hour Begin	Major Total	Higher Minor Vol	Dir	War-1A			War-1B			War-1A&B		
				Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
00:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
01:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
02:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
03:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
04:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
05:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
06:00	1,010	25	WB	420-Yes	140-No	Major	630-Yes	70-No	Major	504-Yes	112-No	Major
07:00	888	22	WB	420-Yes	140-No	Major	630-Yes	70-No	Major	504-Yes	112-No	Major
08:00	702	4	WB	420-Yes	140-No	Major	630-Yes	70-No	Major	504-Yes	112-No	Major
09:00	537	20	WB	420-Yes	140-No	Major	630-No	70-No	---	504-Yes	112-No	Major
10:00	446	22	WB	420-Yes	140-No	Major	630-No	70-No	---	504-No	112-No	---
11:00	628	16	WB	420-Yes	140-No	Major	630-No	70-No	---	504-Yes	112-No	Major
12:00	775	26	WB	420-Yes	140-No	Major	630-Yes	70-No	Major	504-Yes	112-No	Major
13:00	716	18	WB	420-Yes	140-No	Major	630-Yes	70-No	Major	504-Yes	112-No	Major
14:00	941	25	WB	420-Yes	140-No	Major	630-Yes	70-No	Major	504-Yes	112-No	Major
15:00	1,012	22	WB	420-Yes	140-No	Major	630-Yes	70-No	Major	504-Yes	112-No	Major
16:00	1,291	37	WB	420-Yes	140-No	Major	630-Yes	70-No	Major	504-Yes	112-No	Major
17:00	1,355	62	WB	420-Yes	140-No	Major	630-Yes	70-No	Major	504-Yes	112-No	Major
18:00	769	19	WB	420-Yes	140-No	Major	630-Yes	70-No	Major	504-Yes	112-No	Major
19:00	554	20	WB	420-Yes	140-No	Major	630-No	70-No	---	504-Yes	112-No	Major
20:00	1,016	53	WB	420-Yes	140-No	Major	630-Yes	70-No	Major	504-Yes	112-No	Major
21:00	623	39	WB	420-Yes	140-No	Major	630-No	70-No	---	504-Yes	112-No	Major
22:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
23:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---

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

Study Name : 0812
Study Date : 06/12/08
Page No. : 1

Multi-Way Stop Warrant Report

Major Street Approaches

Northbound: CSAH 9 (Round Lake)
Total Approach Volume: 7,333
Approach Speed: 45

Southbound: CSAH 9 (Round Lake)
Total Approach Volume: 5,930
Approach Speed: 45

Minor Street Approaches

Eastbound: N/A
Total Approach Volume: 0

Westbound: Coon Creek
Total Approach Volume: 430

Warrant Summary

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

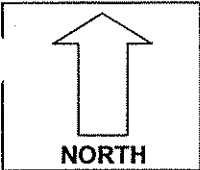
Criteria B - Crash Experience Not Evaluated

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	210-No	140-No	No	240-No	160-No	No
01:00 - 02:00	0	0	210-No	140-No	No	240-No	160-No	No
02:00 - 03:00	0	0	210-No	140-No	No	240-No	160-No	No
03:00 - 04:00	0	0	210-No	140-No	No	240-No	160-No	No
04:00 - 05:00	0	0	210-No	140-No	No	240-No	160-No	No
05:00 - 06:00	0	0	210-No	140-No	No	240-No	160-No	No
06:00 - 07:00	1,010	25	210-Yes	140-No	Major	240-Yes	160-No	Major
07:00 - 08:00	888	22	210-Yes	140-No	Major	240-Yes	160-No	Major
08:00 - 09:00	702	4	210-Yes	140-No	Major	240-Yes	160-No	Major
09:00 - 10:00	537	20	210-Yes	140-No	Major	240-Yes	160-No	Major
10:00 - 11:00	446	22	210-Yes	140-No	Major	240-Yes	160-No	Major
11:00 - 12:00	628	16	210-Yes	140-No	Major	240-Yes	160-No	Major
12:00 - 13:00	775	26	210-Yes	140-No	Major	240-Yes	160-No	Major
13:00 - 14:00	716	18	210-Yes	140-No	Major	240-Yes	160-No	Major
14:00 - 15:00	941	25	210-Yes	140-No	Major	240-Yes	160-No	Major
15:00 - 16:00	1,012	22	210-Yes	140-No	Major	240-Yes	160-No	Major
16:00 - 17:00	1,291	37	210-Yes	140-No	Major	240-Yes	160-No	Major
17:00 - 18:00	1,355	62	210-Yes	140-No	Major	240-Yes	160-No	Major
18:00 - 19:00	769	19	210-Yes	140-No	Major	240-Yes	160-No	Major
19:00 - 20:00	554	20	210-Yes	140-No	Major	240-Yes	160-No	Major
20:00 - 21:00	1,016	53	210-Yes	140-No	Major	240-Yes	160-No	Major
21:00 - 22:00	623	39	210-Yes	140-No	Major	240-Yes	160-No	Major
22:00 - 23:00	0	0	210-No	140-No	No	240-No	160-No	No
23:00 - 00:00	0	0	210-No	140-No	No	240-No	160-No	No



COUNT LOCATION:

CSAH 9 (Round Lake Blvd)

DATE:

06/12/2007

South Coon Creek Drive

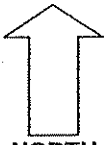
APP. #1 = S. Coon Creek Dr.
APP. #2 = CSAH 9
APP. #3 = S. Coon Creek Dr.
APP. #4 = CSAH 9

APP. #1	APP. #2	APP. #3	APP. #4
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- 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						3		
6:15-6:30						3		
6:30-6:45						4		
6:45-7:00						4		
HOURLY TOTAL						HOURLY TOTAL		14
7:00-7:15						4		
7:15-7:30						5		
7:30-7:45						6		
7:45-8:00						9		
HOURLY TOTAL						HOURLY TOTAL		24
8:00-8:15								
8:15-8:30			1			1		
8:30-8:45						6		1
8:45-9:00			1		1	3	1	
HOURLY TOTAL					1	HOURLY TOTAL		12
9:00-9:15						2		
9:15-9:30						5		
9:30-9:45						4		
9:45-10:00						2		
HOURLY TOTAL						HOURLY TOTAL		13
10:00-10:15						5		
10:15-10:30			1		1	4		
10:30-10:45						7		
10:45-11:00						4	1	
HOURLY TOTAL					1	HOURLY TOTAL		21
11:00-11:15						7		
11:15-11:30						3		
11:30-11:45						5		
11:45-12:00						2		
HOURLY TOTAL						HOURLY TOTAL		17
12:00-12:15			4		4	7		
12:15-12:30						10		
12:30-12:45						4		
12:45-1:00						7		
HOURLY TOTAL					4	HOURLY TOTAL		28
1:00-1:15			5		5	4		
1:15-1:30						5		
1:30-1:45						7		
1:45-2:00			1		1	4		
HOURLY TOTAL					6	HOURLY TOTAL		20
TOTAL					11	TOTAL		149

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32



NORTH

COUNT LOCATION:

CSAH 9 (Round Lake Blvd)

DATE:

06/16/2008

South Coon Creek Drive

APP. #1 = S. Coon Creek Dr.
APP. #2 = CSAH 9
APP. #3 = S. Coon Creek Dr.
APP. #4 = CSAH 9

APP. #2	APP. #3
APP. #1	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						3		1
2:15-2:30						4		1
2:30-2:45						6		
2:45-3:00						9		
HOURLY TOTAL						HOURLY TOTAL		24
3:00-3:15			3		3	4	1	
3:15-3:30			1			5		
3:30-3:45								
3:45-4:00						3	1	
HOURLY TOTAL					3	HOURLY TOTAL		14
4:00-4:15						6		
4:15-4:30						3		
4:30-4:45						3		
4:45-5:00						2		
HOURLY TOTAL						HOURLY TOTAL		14
5:00-5:15			1		1	3		
5:15-5:30						1		
5:30-5:45			1		1	1		
5:45-6:00						3		
HOURLY TOTAL					2	HOURLY TOTAL		8
6:00-6:15			1		1	3		
6:15-6:30						1		
6:30-6:45						1		
6:45-7:00						4		
HOURLY TOTAL					1	HOURLY TOTAL		9
7:00-7:15			2		2	2		
7:15-7:30						1		
7:30-7:45			1		1			
7:45-8:00			3		3	2		
HOURLY TOTAL					6	HOURLY TOTAL		5
8:00-8:15						1		
8:15-8:30								
8:30-8:45						2		
8:45-9:00						1		
HOURLY TOTAL						HOURLY TOTAL		4
9:00-9:15								
9:15-9:30						1		
9:30-9:45						1		
9:45-10:00								
HOURLY TOTAL						HOURLY TOTAL		2
					TOTAL		TOTAL	
					23		229	

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