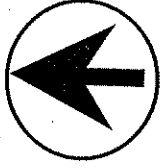


Date : 7/12/04

Count Number : TMC0423

Location : CSAH 3 (University Ave.)

@ Service Dr.



North

CSAH 3

1061

#2

805	0	0	805
D	E	F	T

256

2470

#1

1443	256	0	1187
C	B	A	

Service Dr.

1027

CSAH 3

222	222	0	0
M	L	K	

1187

#4

1409

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

Anoka County Highway Department

Traffic Volume and Turning

Movement Study

Anoka County Highway Department
 Traffic Engineering
 Traffic Volume and Turning Movement Study

File Name : TMC0423
 Site Code : 04230101
 Start Date : 07/12/2004
 Page No : 1

Weather: Sunny & Warm
 Counter: TDC-8
 Counted by: Katelyn/Kyle

Groups Printed- Unshifted

Start Time	CSAH 3 Southbound					Westbound					CSAH 3 Northbound					Service Dr. 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			
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	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	1	1	0	3	0	5	5
06:15	0	0	5	0	5	0	0	0	0	0	1	0	0	0	1	2	0	0	1	2	1	8	9
06:30	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	2	0	3	0	5	0	8	8
06:45	0	0	7	0	7	0	0	0	0	0	1	0	0	0	1	1	0	2	0	3	0	11	11
Total	0	0	17	0	17	0	0	0	0	0	2	0	0	0	2	6	1	6	1	13	1	32	33
07:00	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	2	0	1	0	3	0	7	7
07:15	0	0	6	0	6	0	0	0	0	0	2	0	0	0	2	1	0	6	0	7	0	15	15
07:30	0	0	8	0	8	0	0	0	0	0	3	0	0	0	3	0	0	3	0	3	0	14	14
07:45	0	0	13	0	13	0	0	0	0	0	2	0	0	1	2	2	0	7	0	9	1	24	25
Total	0	0	31	0	31	0	0	0	0	0	7	0	0	1	7	5	0	17	0	22	1	60	61
08:00	0	0	11	0	11	0	0	0	0	0	3	0	0	0	3	2	0	9	0	11	0	25	25
08:15	0	0	7	1	7	0	0	0	0	0	6	0	0	0	6	4	0	8	0	12	1	25	26
08:30	0	0	12	0	12	0	0	0	0	0	2	0	0	0	2	5	0	9	1	14	1	28	29
08:45	0	0	17	0	17	0	0	0	0	0	1	0	0	0	1	4	0	6	0	10	0	28	28
Total	0	0	47	1	47	0	0	0	0	0	12	0	0	0	12	15	0	32	1	47	2	106	108
09:00	0	0	13	0	13	0	0	0	0	0	11	0	0	0	11	2	0	5	0	7	0	31	31
09:15	0	0	16	0	16	0	0	0	0	0	1	0	0	0	1	15	0	24	0	39	0	56	56
09:30	0	0	18	2	18	0	0	0	0	0	5	0	0	0	5	9	0	15	0	24	2	47	49
09:45	0	0	13	1	13	0	0	0	0	0	2	0	0	0	2	7	0	16	1	23	2	38	40
Total	0	0	60	3	60	0	0	0	0	0	19	0	0	0	19	33	0	60	1	93	4	172	176
10:00	0	0	21	0	21	0	0	0	0	0	2	0	0	0	2	9	0	22	4	31	4	54	58
10:15	0	0	18	1	18	0	0	0	0	0	1	0	0	0	1	5	0	18	1	23	2	42	44
10:30	0	0	19	0	19	0	0	0	0	0	4	0	0	0	4	0	0	29	1	29	1	52	53
10:45	0	0	22	0	22	0	0	0	0	0	1	0	0	0	1	5	0	25	0	30	0	53	53
Total	0	0	80	1	80	0	0	0	0	0	8	0	0	0	8	19	0	94	6	113	7	201	208
11:00	0	0	14	0	14	0	0	0	0	0	5	0	0	0	5	2	0	29	0	31	0	50	50
11:15	0	0	11	1	11	0	0	0	0	0	2	0	0	0	2	5	0	23	1	28	2	41	43
11:30	0	0	22	0	22	0	0	0	0	0	3	0	0	1	3	8	0	26	1	34	2	59	61
11:45	1	0	10	0	11	0	0	0	0	0	3	0	0	0	3	7	0	27	1	34	1	48	49
Total	1	0	57	1	58	0	0	0	0	0	13	0	0	1	13	22	0	105	3	127	5	198	203
12:00	0	0	19	1	19	0	0	0	0	0	10	0	0	0	10	8	0	36	1	44	2	73	75
12:15	0	0	17	0	17	0	0	0	0	0	3	0	0	0	3	5	0	31	0	36	0	56	56
12:30	0	0	17	0	17	0	0	0	0	0	7	0	0	1	7	2	0	28	0	30	1	54	55
12:45	0	0	19	1	19	0	0	0	0	0	7	0	0	0	7	11	0	36	3	47	4	73	77
Total	0	0	72	2	72	0	0	0	0	0	27	0	0	1	27	26	0	131	4	157	7	256	263
13:00	0	0	7	0	7	0	0	0	0	0	6	0	0	0	6	6	0	24	0	30	0	43	43
13:15	0	0	13	0	13	0	0	0	0	0	6	0	0	0	6	2	1	21	1	24	1	43	44
13:30	0	0	13	0	13	0	0	0	0	0	6	0	0	0	6	7	0	26	1	33	1	52	53
13:45	0	0	11	0	11	0	0	0	0	0	3	0	0	0	3	6	0	23	0	29	0	43	43
Total	0	0	44	0	44	0	0	0	0	0	21	0	0	0	21	21	1	94	2	116	2	181	183
14:00	0	0	25	0	25	0	0	0	0	0	3	0	0	0	3	7	0	19	0	26	0	54	54
14:15	0	0	13	0	13	0	0	0	0	0	6	0	0	0	6	6	0	30	0	36	0	55	55
14:30	0	0	19	0	19	0	0	0	0	0	6	0	0	0	6	6	0	34	2	40	2	65	67
14:45	0	0	9	0	9	0	0	0	0	0	3	0	0	0	3	1	0	22	0	23	0	35	35
Total	0	0	66	0	66	0	0	0	0	0	18	0	0	0	18	20	0	105	2	125	2	209	211
15:00	0	0	15	0	15	0	0	0	0	0	1	0	0	0	1	1	0	31	1	32	1	48	49
15:15	0	0	8	0	8	0	0	0	0	0	2	0	0	0	2	3	0	37	0	40	0	50	50
15:30	0	0	12	1	12	0	0	0	0	0	2	0	0	0	2	3	0	23	0	26	1	40	41
15:45	0	0	18	1	18	0	0	0	0	0	6	0	0	0	6	2	0	33	0	35	1	59	60
Total	0	0	53	2	53	0	0	0	0	0	11	0	0	0	11	9	0	124	1	133	3	197	200
16:00	0	0	13	0	13	0	0	0	0	0	5	0	0	0	5	2	0	26	0	28	0	46	46
16:15	0	0	16	0	16	0	0	0	0	0	6	0	0	0	6	3	0	25	0	28	0	50	50
16:30	0	0	18	1	18	0	0	0	0	0	5	0	0	0	5	1	0	26	1	27	2	50	52
16:45	0	0	14	0	14	0	0	0	0	0	1	0	0	0	1	2	0	37	1	39	1	54	55
Total	0	0	61	1	61	0	0	0	0	0	17	0	0	0	17	8	0	114	2	122	3	200	203
17:00	0	0	15	0	15	0	0	0	0	0	3	0	0	0	3	4	0	28	0	32	0	50	50
17:15	0	0	22	0	22	0	0	0	0	0	8	0	0	0	8	3	0	23	0	26	0	56	56
17:30	0	0	17	0	17	0	0	0	0	0	4	0	0	0	4	2	0	28	0	30	0	51	51
17:45	0	0	20	0	20	0	0	0	0	0	4	0	0	0	4	4	0	33	0	37	0	61	61
Total	0	0	74	0	74	0	0	0	0	0	19	0	0	0	19	13	0	112	0	125	0	218	218

Anoka County Highway Department
 Traffic Engineering
 Traffic Volume and Turning Movement Stud

File Name : TMC0423
 Site Code : 04230101
 Start Date : 07/12/2004
 Page No : 2

Weather: Sunny & Warm
 Inter: TDC-8
 Counted by: Katelyn/Kyle

Groups Printed- Unshifted

Start Time	CSAH 3 Southbound					Westbound					CSAH 3 Northbound					Service Dr. 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			
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				
18:00	0	0	24	1	24	0	0	0	0	0	1	0	0	0	1	1	0	15	0	16	1	41	42
18:15	0	0	7	0	7	0	0	0	0	0	5	0	0	0	5	7	0	19	0	26	0	38	38
18:30	0	0	17	0	17	0	0	0	0	0	3	0	0	0	3	3	0	21	0	24	0	44	44
18:45	0	0	10	0	10	0	0	0	0	0	1	0	0	0	1	1	0	12	0	13	0	24	24
Total	0	0	58	1	58	0	0	0	0	0	10	0	0	0	10	12	0	67	0	79	1	147	148
19:00	0	0	16	0	16	0	0	0	0	0	2	0	0	0	2	2	0	13	0	15	0	33	33
19:15	0	0	11	0	11	0	0	0	0	0	4	0	0	1	4	2	0	17	0	19	1	34	35
19:30	0	0	9	0	9	0	0	0	0	0	1	0	0	0	1	3	0	7	0	10	0	20	20
19:45	0	0	9	0	9	0	0	0	0	0	2	0	0	0	2	3	0	13	0	16	0	27	27
Total	0	0	45	0	45	0	0	0	0	0	9	0	0	1	9	10	0	50	0	60	1	114	115
20:00	0	0	7	0	7	0	0	0	0	0	1	0	0	0	1	6	0	10	0	16	0	24	24
20:15	0	0	8	0	8	0	0	0	0	0	3	0	0	0	3	4	0	11	0	15	0	26	26
20:30	0	0	8	0	8	0	0	0	0	0	2	0	0	0	2	4	0	8	0	12	0	22	22
20:45	0	0	2	0	2	0	0	0	0	0	2	0	0	0	2	11	0	26	0	37	0	41	41
Total	0	0	25	0	25	0	0	0	0	0	8	0	0	0	8	25	0	55	0	80	0	113	113
21:00	0	0	5	0	5	0	0	0	0	0	7	0	0	0	7	5	0	10	0	15	0	27	27
21:15	0	0	3	0	3	0	0	0	0	0	7	0	0	0	7	5	0	6	0	11	0	21	21
21:30	0	0	3	1	3	0	0	0	0	0	5	0	0	0	5	1	0	1	0	2	1	10	11
21:45	0	0	4	0	4	0	0	0	0	0	2	0	0	0	2	1	0	4	0	5	0	11	11
Total	0	0	15	1	15	0	0	0	0	0	21	0	0	0	21	12	0	21	0	33	1	69	70
Grand Total	1	0	805	13	806	0	0	0	0	0	222	0	0	4	222	256	2	1187	23	1445	40	2473	2513
Apprch %	0.1	0.0	99.9			0.0	0.0	0.0			100.0	0.0	0.0			17.7	0.1	82.1					
Total %	0.0	0.0	32.6		32.6	0.0	0.0	0.0		0.0	9.0	0.0	0.0		9.0	10.4	0.1	48.0		58.4	1.6	98.4	

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

Study Name : TMC0423
Study Date : 07/14/04
Page No. : 1

Signal Warrants - Summary

Major Street Approaches

Eastbound: Service Dr.
Number of Lanes: 1
Approach Speed: 40
Total Approach Volume: 1,445

Minor Street Approaches

Northbound: CSAH 3
Number of Lanes: 2

Total Approach Volume: 222

Southbound: CSAH 3
Number of Lanes: 2

Total Approach Volume: 806

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 Not Satisfied
 - Warrant 3A - Peak Hour Volumes Not Satisfied
Volumes do not exceed minimums for any hour.
 - Warrant 3B - Peak Hour Delay Not Satisfied
Approach volumes on minor street don't exceed minimums for any hour. Delay data not evaluated.

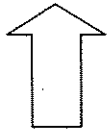
- Warrant 4 - Pedestrian Volumes Not Evaluated

- 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



NORTH

COUNT LOCATION:

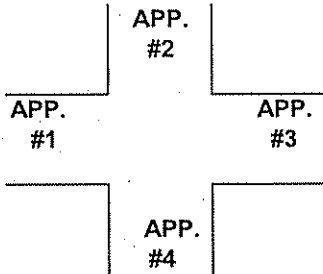
CSAH 3 (University Ave.) @

DATE:

07/12/2004

Service Dr.

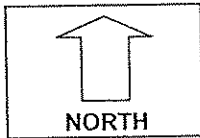
APP. #1 = Service Dr.
APP. #2 = CSAH 3
APP. #3 = N/A
APP. #4 = CSAH 3



- 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						1		
6:30-6:45								
6:45-7:00								
HOURLY TOTAL								1
7:00-7:15								
7:15-7:30								
7:30-7:45								
7:45-8:00						1		
HOURLY TOTAL								1
8:00-8:15								
8:15-8:30						1		
8:30-8:45						1		
8:45-9:00								
HOURLY TOTAL								2
9:00-9:15								
9:15-9:30								
9:30-9:45								
9:45-10:00						2		
HOURLY TOTAL								2
10:00-10:15						4		
10:15-10:30						2		
10:30-10:45						1		
10:45-11:00								
HOURLY TOTAL								7
11:00-11:15								
11:15-11:30						2		
11:30-11:45						2		
11:45-12:00						1		
HOURLY TOTAL								5
12:00-12:15						2		
12:15-12:30								
12:30-12:45						1		
12:45-1:00						4		
HOURLY TOTAL								7
1:00-1:15								
1:15-1:30						1		
1:30-1:45	1				1	1		
1:45-2:00	1				1			
HOURLY TOTAL					2			2
TOTAL					2	TOTAL	TOTAL	27

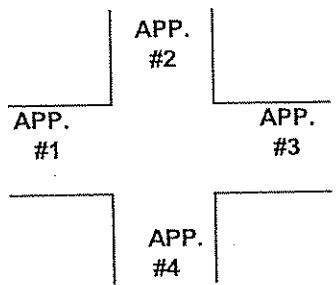
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COUNT LOCATION: CSAH 3 (University Ave.) @ Service Dr.

DATE: 07/13/2004

- APP. #1 = Service Dr.
- APP. #2 = CSAH 3
- APP. #3 = N/A
- APP. #4 = CSAH 3



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								
2:15-2:30								
2:30-2:45						2		
2:45-3:00								
HOURLY TOTAL						HOURLY TOTAL		2
3:00-3:15						1		
3:15-3:30								
3:30-3:45						1		
3:45-4:00	1				1	1		
HOURLY TOTAL					1	HOURLY TOTAL		3
4:00-4:15								
4:15-4:30								
4:30-4:45						1		
4:45-5:00						1		
HOURLY TOTAL						HOURLY TOTAL		2
5:00-5:15								
5:15-5:30								
5:30-5:45								
5:45-6:00							1	
HOURLY TOTAL						HOURLY TOTAL		1
6:00-6:15						1		
6:15-6:30								
6:30-6:45								
6:45-7:00								
HOURLY TOTAL						HOURLY TOTAL		1
7:00-7:15								
7:15-7:30								
7:30-7:45								
7:45-8:00								
HOURLY TOTAL						HOURLY TOTAL		
8:00-8:15								
8:15-8:30								
8:30-8:45								
8:45-9:00								
HOURLY TOTAL						HOURLY TOTAL		
9:00-9:15								
9:15-9:30								
9:30-9:45								
9:45-10:00								
HOURLY TOTAL						HOURLY TOTAL		
TOTAL					1	TOTAL		9

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