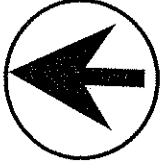


Date : 10/24/06

Count Number : TMC0620

Location : CR 56 (Ramsey Blvd.)

@ Alpine Dr.



North

CR 56

2128

#2

1048			
119	D	868	F
61	T		

1080

Alpine Dr.

65	G	583
426	H	
92	J	

1132

#3

549

CR 56

438	M	1405
866	L	
101	K	

1464

#4

2869

983

#1

2023

1040			
149	C		
387	B		
504	A		

Alpine Dr.

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

Anoka County Highway Department

Traffic Volume and Turning

Movement Study

Anoka County Highway Department

Traffic Engineering

Traffic Volume and Turning Movement Study

Weather: Mild and Cloudy
 Counter: DB-400
 Counted by: Josie/Terri

File Name : TMC0620
 Site Code : 06370201
 Start Date : 10/24/2006
 Page No : 1

Groups Printed- Unshifted

Start Time	CR 56 Southbound					Alpine Dr. Westbound					CR 56 Northbound					Alpine 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			
06:00	1	26	0	0	27	0	3	0	0	3	1	2	0	0	3	1	5	20	2	26	2	59	61
06:15	0	23	6	1	29	1	5	0	0	6	2	4	1	0	7	1	4	20	0	25	1	67	68
06:30	2	36	3	0	41	2	5	2	0	9	4	5	6	2	15	0	14	13	0	27	2	92	94
06:45	1	31	4	2	36	2	9	1	2	12	3	4	0	4	7	0	9	11	1	20	9	75	84
Total	4	116	13	3	133	5	22	3	2	30	10	15	7	6	32	2	32	64	3	98	14	293	307
07:00	3	30	2	2	35	0	6	0	0	6	1	8	1	2	10	3	11	19	2	33	6	84	90
07:15	1	29	2	4	32	1	8	1	1	10	2	7	1	1	10	0	7	18	1	25	7	77	84
07:30	2	23	3	2	28	1	7	3	0	11	2	6	4	0	12	4	12	15	2	31	4	82	86
07:45	3	35	3	0	41	1	4	1	1	6	2	17	1	10	20	2	13	19	2	34	13	101	114
Total	9	117	10	8	136	3	25	5	2	33	7	38	7	13	52	9	43	71	7	123	30	344	374
08:00	3	20	2	4	25	2	8	1	3	11	1	6	3	2	10	3	10	13	1	26	10	72	82
08:15	1	34	5	4	40	1	2	0	1	3	2	16	3	4	21	2	8	9	1	19	10	83	93
08:30	1	19	2	7	22	0	7	0	1	7	6	17	1	9	24	4	4	19	0	27	17	80	97
08:45	1	16	1	5	18	3	3	0	0	6	3	14	2	8	19	3	13	11	5	27	18	70	88
Total	6	89	10	20	105	6	20	1	5	27	12	53	9	23	74	12	35	52	7	99	55	305	360
09:00	1	11	2	7	14	0	9	1	2	10	2	5	2	2	9	1	9	10	3	20	14	53	67
09:15	1	14	5	3	20	1	9	1	1	11	1	15	2	7	18	4	5	13	1	22	12	71	83
09:30	1	22	4	4	27	1	2	1	0	4	3	8	1	3	12	1	2	6	0	9	7	52	59
09:45	0	13	2	2	15	2	3	0	0	5	5	11	2	3	18	2	6	7	1	15	6	53	59
Total	3	60	13	16	76	4	23	3	3	30	11	39	7	15	57	8	22	36	5	66	39	229	268
10:00	0	10	2	0	12	2	4	0	0	6	3	12	1	2	16	0	7	13	1	20	3	54	57
10:15	0	15	1	1	16	2	3	0	0	5	4	9	2	5	15	1	6	6	0	13	6	49	55
10:30	1	10	0	0	11	1	4	2	0	7	5	11	1	3	17	2	6	8	1	16	4	51	55
10:45	0	9	0	1	9	2	6	0	0	8	6	7	3	2	16	0	5	3	0	8	3	41	44
Total	1	44	3	2	48	7	17	2	0	26	18	39	7	12	64	3	24	30	2	57	16	195	211
11:00	2	11	0	2	13	1	7	0	2	8	3	15	0	1	18	2	6	6	1	14	6	53	59
11:15	1	15	3	2	19	2	7	0	1	9	8	7	1	1	16	2	6	10	1	18	5	62	67
11:30	0	10	2	0	12	0	7	0	1	7	5	14	1	2	20	3	6	16	1	25	4	64	68
11:45	1	12	0	1	13	1	13	1	1	15	6	15	1	2	22	3	1	6	1	10	5	60	65
Total	4	48	5	5	57	4	34	1	5	39	22	51	3	6	76	10	18	38	4	67	20	239	259
12:00	0	11	2	1	13	4	12	1	1	17	6	10	1	0	17	2	5	10	0	17	2	64	66
12:15	0	10	1	0	11	3	2	1	2	6	10	13	4	2	27	1	10	11	3	22	7	66	73
12:30	1	17	2	0	20	1	6	3	0	10	6	13	1	1	20	1	10	8	1	19	2	69	71
12:45	2	11	1	3	14	1	7	1	2	9	7	18	3	2	28	1	6	4	0	11	7	62	69
Total	3	49	6	4	58	9	27	6	5	42	29	54	9	5	92	5	31	33	4	69	18	261	279
13:00	2	12	0	1	14	2	7	0	0	9	11	13	3	0	27	4	6	6	3	16	4	66	70
13:15	0	10	3	1	13	2	5	2	2	9	7	13	2	1	22	1	5	6	0	12	4	56	60
13:30	0	12	3	1	15	0	7	0	0	7	13	11	1	1	25	4	10	11	2	25	4	72	76
13:45	0	14	0	1	14	2	8	0	2	10	9	15	0	3	24	2	6	9	0	17	6	65	71
Total	2	48	6	4	56	6	27	2	4	35	40	52	6	5	98	11	27	32	5	70	18	259	277
14:00	3	21	2	1	26	1	4	2	2	7	11	18	2	5	31	2	8	3	1	13	9	77	86
14:15	3	6	1	3	10	0	11	4	0	15	11	12	2	1	25	4	12	2	2	18	6	68	74
14:30	0	13	0	1	13	2	10	2	4	14	12	21	0	1	33	2	8	8	0	18	6	78	84
14:45	0	16	4	5	20	1	14	2	2	17	21	21	3	2	45	4	6	5	3	15	12	97	109
Total	6	56	7	10	69	4	39	10	8	53	55	72	7	9	134	12	34	18	6	64	33	320	353
15:00	3	17	1	4	21	2	9	3	1	14	11	18	5	0	34	1	6	7	2	14	7	83	90
15:15	1	19	2	3	22	1	12	1	0	14	5	18	2	1	25	6	4	8	1	18	5	79	84
15:30	0	11	3	2	14	2	9	5	1	16	24	56	7	5	87	6	6	5	1	17	9	134	143
15:45	2	18	4	2	24	1	11	0	0	12	15	34	1	3	50	2	8	9	2	19	7	105	112
Total	6	65	10	11	81	6	41	9	2	56	55	126	15	9	196	15	24	29	6	68	28	401	429
16:00	3	13	4	1	20	2	13	2	0	17	22	32	1	1	55	3	6	5	1	14	3	106	109
16:15	2	15	2	4	19	4	11	1	0	16	13	32	3	3	48	3	10	4	1	17	8	100	108
16:30	2	11	2	0	15	4	10	3	1	17	11	40	1	1	52	10	6	11	1	27	3	111	114
16:45	1	14	2	0	17	2	12	2	0	16	19	27	4	0	50	3	5	13	0	21	0	104	104
Total	8	53	10	5	71	12	46	8	1	66	65	131	9	5	205	19	27	33	3	79	14	421	435
17:00	3	18	3	0	24	9	17	0	1	26	14	25	1	0	40	9	13	9	1	31	2	121	123
17:15	3	15	0	1	18	3	13	1	0	17	13	27	3	3	43	6	12	8	1	26	5	104	109
17:30	0	14	5	0	19	2	11	4	0	17	22	25	1	0	48	9	7	6	0	22	0	106	106
17:45	0	15	5	0	20	1	12	4	1	17	15	28	3	1	46	6	10	14	0	30	2	113	115
Total	6	62	13	1	81	15	53	9	2	77	64	105	8	4	177	30	42	37	2	109	9	444	453

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

Weather: Mild and Cloudy
 Counter: DB-400
 Counted by: Josie/Terri

File Name : TMC0620
 Site Code : 06370201
 Start Date : 10/24/2006
 Page No : 2

Groups Printed- Unshifted

Start Time	CR 56 Southbound					Alpine Dr. Westbound					CR 56 Northbound					Alpine 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	3	21	1	2	25	3	22	0	0	25	20	30	2	2	52	4	9	10	0	23	4	125	129
18:15	0	15	2	0	17	2	13	2	0	17	15	16	1	0	32	0	13	3	1	16	1	82	83
18:30	0	15	4	1	19	4	6	0	0	10	8	21	2	1	31	8	2	13	0	23	2	83	85
18:45	0	10	6	0	16	2	11	4	0	17	7	24	2	0	33	1	3	5	0	9	0	75	75
Total	3	61	13	3	77	11	52	6	0	69	50	91	7	3	148	13	27	31	1	71	7	365	372
Grand Total	61	868	119	92	1048	92	426	65	39	583	438	866	101	115	1405	149	387	504	55	1040	301	4076	4377
Apprch %	5.8	82.8	11.4			15.8	73.1	11.1			31.2	61.6	7.2			14.3	37.2	48.5					
Total %	1.5	21.3	2.9		25.7	2.3	10.5	1.6		14.3	10.7	21.2	2.5		34.5	3.7	9.5	12.4		25.5	6.9	93.1	

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

Signal Warrants - Summary

Major Street Approaches

Northbound: CR 56
 Number of Lanes: 1
 Approach Speed: 50
 Total Approach Volume: 1,405

Southbound: CR 56
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Volume: 1,048

Minor Street Approaches

Eastbound: Alpine Dr.
 Number of Lanes: 2
 Total Approach Volume: 1,040

Westbound: Alpine Dr.
 Number of Lanes: 2
 Total Approach Volume: 583

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

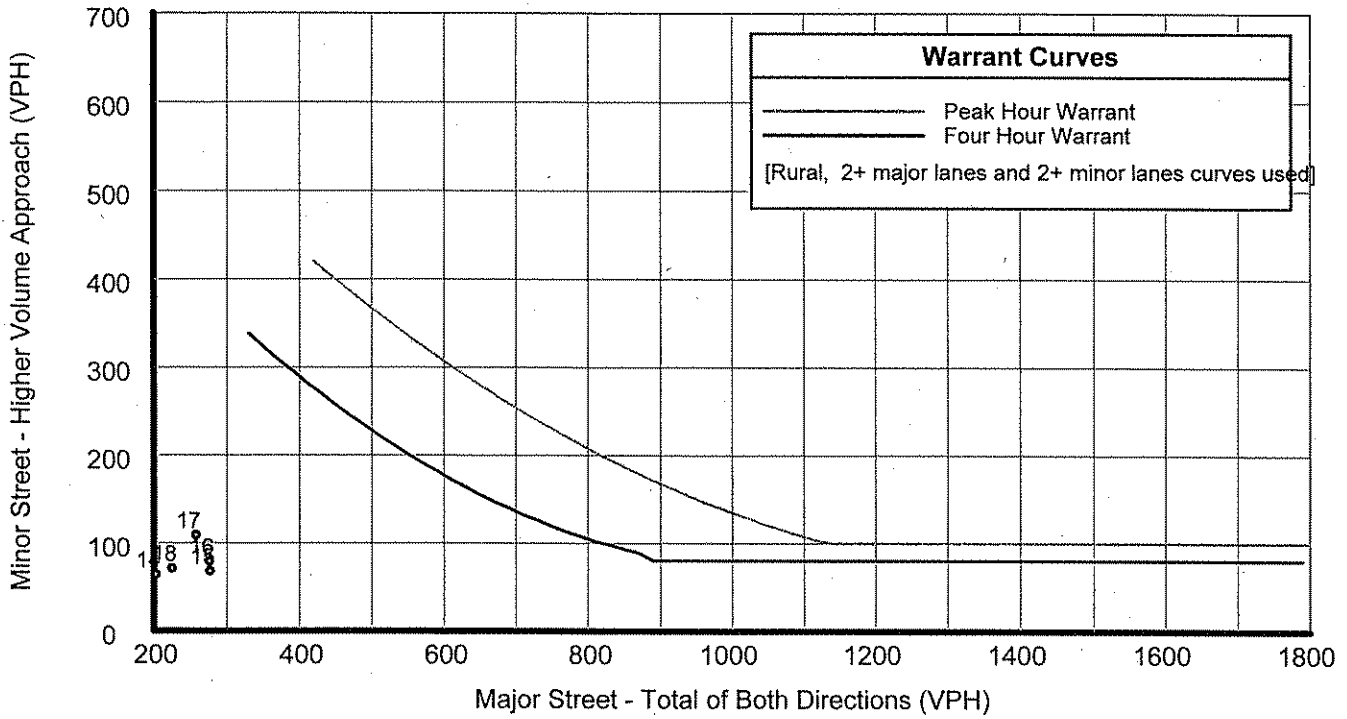
- Warrant 6 - Coordinated Signal System** Not Evaluated

- Warrant 7 - Crash Experience** Not Evaluated

- Warrant 8 - Roadway Network** Not Evaluated

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

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	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	165	98	EB	420-No	140-No	---	630-No	70-Yes	Minor	504-No	112-No	---
07:00	188	123	EB	420-No	140-No	---	630-No	70-Yes	Minor	504-No	112-Yes	Minor
08:00	179	99	EB	420-No	140-No	---	630-No	70-Yes	Minor	504-No	112-No	---
09:00	133	66	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
10:00	112	57	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
11:00	133	67	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
12:00	150	69	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
13:00	154	70	EB	420-No	140-No	---	630-No	70-Yes	Minor	504-No	112-No	---
14:00	203	64	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
15:00	277	68	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
16:00	276	79	EB	420-No	140-No	---	630-No	70-Yes	Minor	504-No	112-No	---
17:00	258	109	EB	420-No	140-No	---	630-No	70-Yes	Minor	504-No	112-No	---
18:00	225	71	EB	420-No	140-No	---	630-No	70-Yes	Minor	504-No	112-No	---
19:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
20:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
21:00	0	0	EB	420-No	140-No	---	630-No	70-No	---	504-No	112-No	---
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**

Multi-Way Stop Warrant Report

Major Street Approaches

Northbound: CR 56
Total Approach Volume: 1,405
Approach Speed: 50

Southbound: CR 56
Total Approach Volume: 1,048
Approach Speed: 50

Minor Street Approaches

Eastbound: Alpine Dr.
Total Approach Volume: 1,040

Westbound: Alpine Dr.
Total Approach Volume: 583

Warrant Summary

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

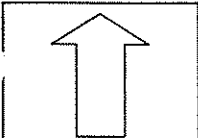
Criteria B - Crash Experience Not Evaluated

Criteria C - Minimum Volumes and Delays Not Satisfied
Delay data not evaluated
Required volumes reached for 3 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		Crit C			Crit D		
	Total	Minor Total	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	165	128	210-No	140-No	No	240-No	160-No	No
07:00 - 08:00	188	156	210-No	140-Yes	Minor	240-No	160-No	No
08:00 - 09:00	179	126	210-No	140-No	No	240-No	160-No	No
09:00 - 10:00	133	96	210-No	140-No	No	240-No	160-No	No
10:00 - 11:00	112	83	210-No	140-No	No	240-No	160-No	No
11:00 - 12:00	133	106	210-No	140-No	No	240-No	160-No	No
12:00 - 13:00	150	111	210-No	140-No	No	240-No	160-No	No
13:00 - 14:00	154	105	210-No	140-No	No	240-No	160-No	No
14:00 - 15:00	203	117	210-No	140-No	No	240-No	160-No	No
15:00 - 16:00	277	124	210-Yes	140-No	Major	240-Yes	160-No	Major
16:00 - 17:00	276	145	210-Yes	140-Yes	Both	240-Yes	160-No	Major
17:00 - 18:00	258	186	210-Yes	140-Yes	Both	240-Yes	160-Yes	Both
18:00 - 19:00	225	140	210-Yes	140-Yes	Both	240-No	160-No	No
19:00 - 20:00	0	0	210-No	140-No	No	240-No	160-No	No
20:00 - 21:00	0	0	210-No	140-No	No	240-No	160-No	No
21:00 - 22:00	0	0	210-No	140-No	No	240-No	160-No	No
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:

CR 56 (Ramsey Blvd.) @

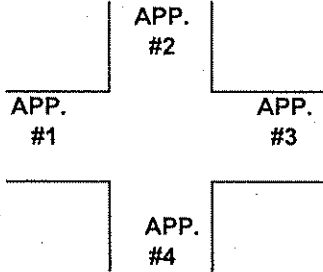
DATE:

10/26/2006

Alpine Dr.

NORTH

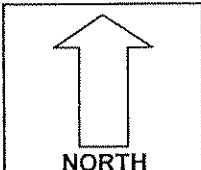
APP. #1 = Alpine Dr.
APP. #2 = CR 56
APP. #3 = Alpine Dr.
APP. #4 = CR 56



- 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.

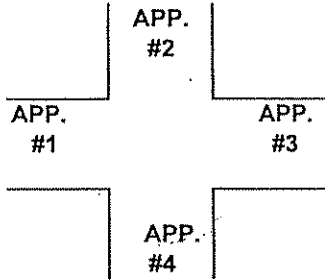
TIME	PEDESTRIANS					HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4	15 MIN TOT	TRUCKS	RV	BUS
6:00-6:15AM						2		
6:15-6:30						1		
6:30-6:45						1		1
6:45-7:00						4		4
HOURLY TOTAL						HOURLY TOTAL		13
7:00-7:15						1		5
7:15-7:30						4		3
7:30-7:45						1		3
7:45-8:00						11		2
HOURLY TOTAL						HOURLY TOTAL		30
8:00-8:15						11		
8:15-8:30	1	1			2	9		1
8:30-8:45						15		2
8:45-9:00						14		4
HOURLY TOTAL					2	HOURLY TOTAL		56
9:00-9:15						12		2
9:15-9:30						12		
9:30-9:45						7		
9:45-10:00						6		
HOURLY TOTAL						HOURLY TOTAL		39
10:00-10:15						3		
10:15-10:30						6		
10:30-10:45						5		
10:45-11:00						3		
HOURLY TOTAL						HOURLY TOTAL		17
11:00-11:15						5	1	
11:15-11:30						4		
11:30-11:45						4		
11:45-12:00						5		
HOURLY TOTAL						HOURLY TOTAL		19
12:00-12:15						1		1
12:15-12:30						6		1
12:30-12:45						1		1
12:45-1:00						6		1
HOURLY TOTAL						HOURLY TOTAL		18
1:00-1:15						4		
1:15-1:30						3	1	
1:30-1:45						4		
1:45-2:00						6		
HOURLY TOTAL						HOURLY TOTAL		18
TOTAL					2	TOTAL		210

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COUNT LOCATION: CR 56 (Ramsey Blvd.) @ Alpine Dr. DATE: 10/24/2006

APP. #1 = Alpine Dr.
APP. #2 = CR 56
APP. #3 = Alpine Dr.
APP. #4 = CR 56



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			1		1	6	1	2
2:15-2:30						5		1
2:30-2:45						5		1
2:45-3:00						6		6
HOURLY TOTAL					1	HOURLY TOTAL		33
3:00-3:15						3	1	4
3:15-3:30	1				1	2	1	1
3:30-3:45						5		4
3:45-4:00						5		2
HOURLY TOTAL					1	HOURLY TOTAL		28
4:00-4:15						2		1
4:15-4:30						7		
4:30-4:45						4		
4:45-5:00								
HOURLY TOTAL						HOURLY TOTAL		14
5:00-5:15						2		
5:15-5:30						3		2
5:30-5:45								
5:45-6:00		1			1	1		1
HOURLY TOTAL					1	HOURLY TOTAL		9
6:00-6:15						2		2
6:15-6:30						1		
6:30-6:45						2		
6:45-7:00								
HOURLY TOTAL						HOURLY TOTAL		7
					TOTAL	5	TOTAL	301

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