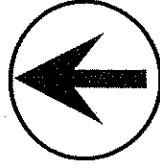


Date : 05/27/08

Count Number : TMC0808

Location : CSAH 9 (Lake George Blvd.)

@ CSAH 24 (Bridge St.)



North

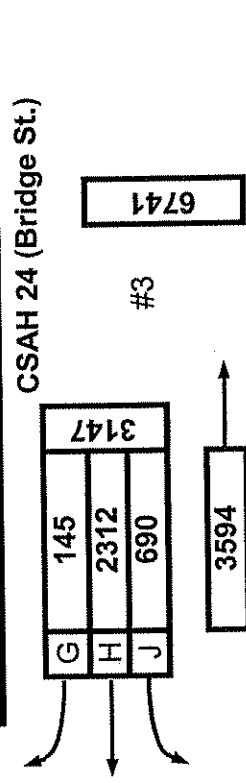
886

#2

St. Francis SH. Entrance

692			
385	D	8	E
299	T		F

194



CSAH 24 (Bridge St.)

8885

#1

4560			
4325	C	41	B
1758	A	2526	

CSAH 24 (Bridge St.)

2640			
1863	M	8	L
769	K		

2456

CSAH 9 (Lake George Blvd.)

#4

5096

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

Anoka County Highway Department
Traffic Volume and Turning
Movement Study

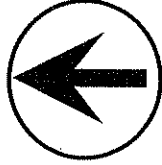
Date : 05/27/08

Count Number : TMC0808

Location : CSAH 9 (Lake George Blvd.)

@ CSAH 24 (Bridge St.)

Hour: 7:00 - 8:00 AM



North

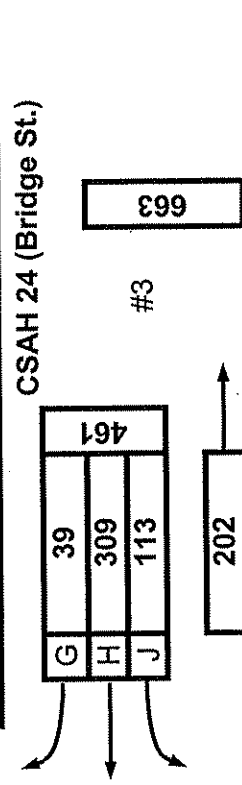
St. Francis SH. Entrance

153

#2

85	D
0	E
24	F
109	T

44



#1

817

324	A
154	B
165	C
5	

493

CSAH 24 (Bridge St.)

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

CSAH 9 (Lake George Blvd.)

267

99	M
0	L
13	K
112	

#4

379

Anoka County Highway Department
Traffic Volume and Turning
Movement Study

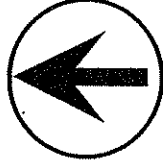
Date : 05/27/08

Count Number : TMC0808

Location : CSAH 9 (Lake George Blvd.)

@ CSAH 24 (Bridge St.)

Hour: 4:00 - 5:00 PM



North

St. Francis SH. Entrance

114

#2

94	55	3	36

20

CSAH 24 (Bridge St.)

12	306
249	
45	

#3

723

417

480

#1

909

429	8	264	157

CSAH 24 (Bridge St.)

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

CSAH 9 (Lake George Blvd.)

205

195	0	98

#4

498

Anoka County Highway Department
Traffic Volume and Turning
Movement Study

Anoka County Highway Department

Traffic Engineering Section Traffic Volume and Turning Movement Study

File Name : 0808TMC
Site Code : 08080201
Start Date : 05/27/2008
Page No : 2

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

Groups Printed- Unshifted - Bank 1

Start Time	St. Francis SH, Entrance Southbound					CSAH 24 (Bridge St.) Westbound					CSAH 9 (Lake George Blvd.) Northbound					CSAH 24 (Bridge 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	3	0	1	0	4	6	28	2	1	36	38	0	32	0	70	0	44	43	0	87	1	197	198
19:15	2	0	4	0	6	7	33	0	1	40	46	0	15	4	61	1	36	20	1	57	6	164	170
19:30	1	0	0	0	1	6	24	0	0	30	22	0	12	0	34	0	40	20	3	60	3	125	128
19:45	1	0	2	0	3	10	29	0	2	39	21	0	19	0	40	0	33	18	1	51	3	133	136
Total	7	0	7	0	14	29	114	2	4	145	127	0	78	4	205	1	153	101	5	255	13	619	632
20:00	2	0	0	0	2	6	29	0	0	35	22	0	18	0	40	0	56	48	0	104	0	181	181
20:15	0	0	0	0	0	15	29	0	1	44	27	0	16	0	43	1	37	26	0	64	1	151	152
20:30	1	0	0	0	1	4	28	0	0	32	48	0	19	1	67	0	36	17	0	53	1	153	154
20:45	8	0	6	0	14	4	20	0	1	24	31	0	18	2	49	0	36	23	1	59	4	146	150
Total	11	0	6	0	17	29	106	0	2	135	128	0	71	3	199	1	165	114	1	280	6	631	637
21:00	5	0	10	0	15	7	25	0	0	32	30	0	10	0	40	1	29	18	2	48	2	135	137
21:15	1	0	11	0	12	9	22	0	0	31	26	0	5	0	31	0	23	9	0	32	0	106	106
21:30	0	0	1	0	1	3	17	0	0	20	14	0	15	0	29	0	23	21	1	44	1	94	95
21:45	2	0	0	0	2	5	12	1	0	18	14	0	11	1	25	0	23	12	0	35	1	80	81
Total	8	0	22	0	30	24	76	1	0	101	84	0	41	1	125	1	98	60	3	159	4	415	419
22:00	0	0	0	0	0	4	9	0	1	13	13	0	16	0	29	0	19	8	0	27	1	69	70
Grand Total	299	8	385	104	692	690	2312	145	149	3147	1863	8	769	81	2640	41	2526	1758	216	4325	550	10804	11354
Apprch %	43.2	1.2	55.6			21.9	73.5	4.6			70.6	0.3	29.1			0.9	58.4	40.6					
Total %	2.8	0.1	3.6		6.4	6.4	21.4	1.3		29.1	17.2	0.1	7.1		24.4	0.4	23.4	16.3		40	4.8	95.2	
Unshifted	299	8	385		796	690	2312	145		3296	1863	8	769		2721	41	2526	1758		4541	0	0	11354
% 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	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	0	0	0	0

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

Study Name :
Study Date : 05/27/08
Page No. : 1

Signal Warrants - Summary

Major Street Approaches

Eastbound: CSAH 24 (Bridge St.)

Number of Lanes: 1
Approach Speed: 40
Total Approach Volume: 4,325

Westbound: CSAH 24 (Bridge St.)

Number of Lanes: 1
Approach Speed: 40
Total Approach Volume: 3,147

Minor Street Approaches

Northbound: CSAH 9 (Lake George Blvd.)

Number of Lanes: 2

Total Approach Volume: 2,640

Southbound: St. Francis SH. Entrance

Number of Lanes: 2

Total Approach Volume: 692

Warrant Summary (Urban values apply.)

- Warrant 1 - Eight Hour Vehicular Volumes** **Not Satisfied**
 - Warrant 1A - Minimum Vehicular Volume** **Not Satisfied**
Required volumes reached for 4 hours, 8 are needed
 - Warrant 1B - Interruption of Continuous Traffic** **Not Satisfied**
Required volumes reached for 1 hours, 8 are needed
 - Warrant 1 A&B - Combination of Warrants** **Not Satisfied**
Required volumes reached for 2 hours, 8 are needed

- Warrant 2 - Four Hour Volumes** **Not Satisfied**
Number of hours (2) volumes exceed minimum < minimum required (4).

- Warrant 3 - Peak Hour** **Satisfied**
 - Warrant 3A - Peak Hour Delay** **Satisfied**
Number of hours (2) 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**

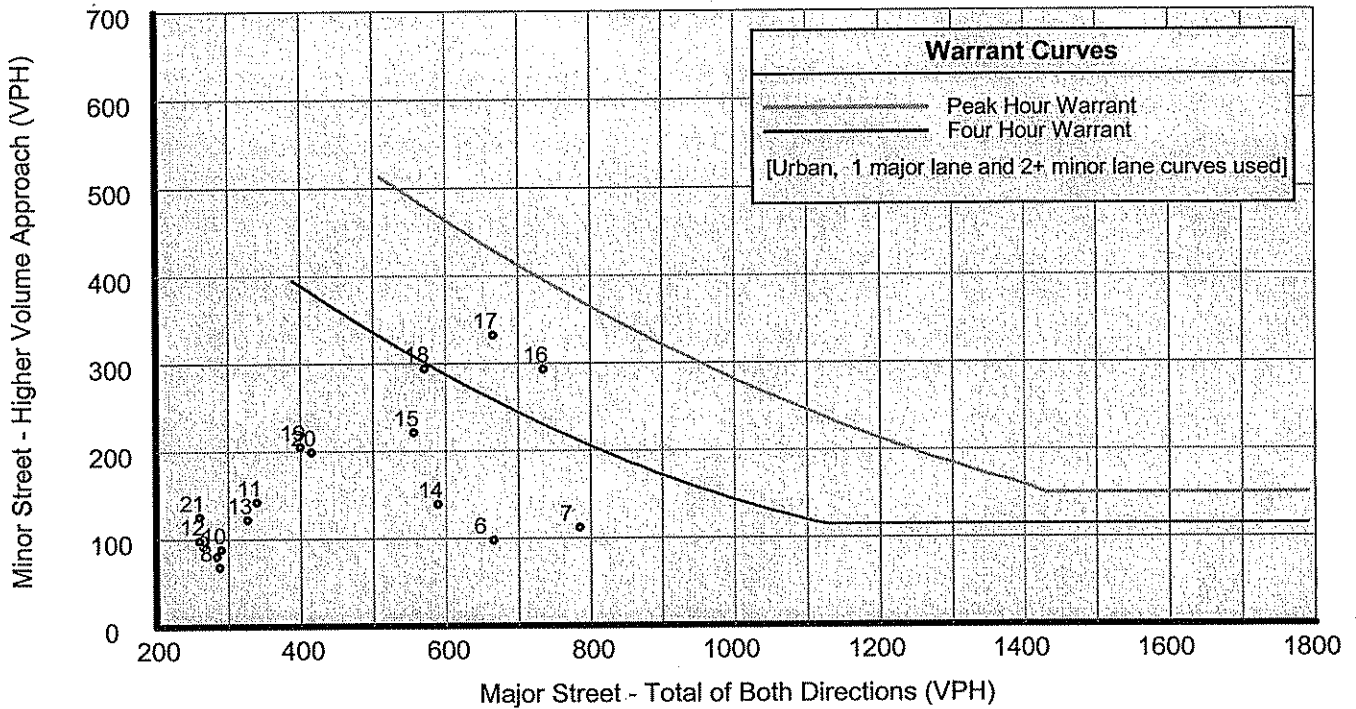
- Warrant 7 - Crash Experience** **Not Evaluated**

- Warrant 8 - Roadway Network** **Not Evaluated**

ANOKA COUNTY HIGHWAY PC-WARRANTS TRAFFIC SIGNAL WARRANT ANALYSIS

Study Name :
Study Date : 05/27/08
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	500-No	200-No	---	750-No	100-No	---	600-No	160-No	---
01:00	0	0	NB	500-No	200-No	---	750-No	100-No	---	600-No	160-No	---
02:00	0	0	NB	500-No	200-No	---	750-No	100-No	---	600-No	160-No	---
03:00	0	0	NB	500-No	200-No	---	750-No	100-No	---	600-No	160-No	---
04:00	0	0	NB	500-No	200-No	---	750-No	100-No	---	600-No	160-No	---
05:00	0	0	NB	500-No	200-No	---	750-No	100-No	---	600-No	160-No	---
06:00	666	98	NB	500-Yes	200-No	Major	750-No	100-No	---	600-Yes	160-No	Major
07:00	785	112	NB	500-Yes	200-No	Major	750-Yes	100-Yes	Both	600-Yes	160-No	Major
08:00	288	68	NB	500-No	200-No	---	750-No	100-No	---	600-No	160-No	---
09:00	284	80	NB	500-No	200-No	---	750-No	100-No	---	600-No	160-No	---
10:00	290	88	NB	500-No	200-No	---	750-No	100-No	---	600-No	160-No	---
11:00	340	142	NB	500-No	200-No	---	750-No	100-Yes	Minor	600-No	160-No	---
12:00	260	98	NB	500-No	200-No	---	750-No	100-No	---	600-No	160-No	---
13:00	327	122	NB	500-No	200-No	---	750-No	100-Yes	Minor	600-No	160-No	---
14:00	589	139	SB	500-Yes	200-No	Major	750-No	100-Yes	Minor	600-No	160-No	---
15:00	556	221	NB	500-Yes	200-Yes	Both	750-No	100-Yes	Minor	600-No	160-Yes	Minor
16:00	735	293	NB	500-Yes	200-Yes	Both	750-No	100-Yes	Minor	600-Yes	160-Yes	Both
17:00	666	332	NB	500-Yes	200-Yes	Both	750-No	100-Yes	Minor	600-Yes	160-Yes	Both
18:00	571	294	NB	500-Yes	200-Yes	Both	750-No	100-Yes	Minor	600-No	160-Yes	Minor
19:00	400	205	NB	500-No	200-Yes	Minor	750-No	100-Yes	Minor	600-No	160-Yes	Minor
20:00	415	199	NB	500-No	200-No	---	750-No	100-Yes	Minor	600-No	160-Yes	Minor
21:00	260	125	NB	500-No	200-No	---	750-No	100-Yes	Minor	600-No	160-No	---
22:00	40	29	NB	500-No	200-No	---	750-No	100-No	---	600-No	160-No	---
23:00	0	0	NB	500-No	200-No	---	750-No	100-No	---	600-No	160-No	---

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

Study Name :
Study Date : 05/30/08
Page No. : 1

Multi-Way Stop Warrant Report

Major Street Approaches

Eastbound: CSAH 24 (Bridge St.)
Total Approach Volume: 4,325
Approach Speed: 40

Westbound: CSAH 24 (Bridge St.)
Total Approach Volume: 3,147
Approach Speed: 40

Minor Street Approaches

Northbound: St. Francis SH. Entrance
Total Approach Volume: 2,640

Southbound: CSAH 9 (Lake George Blvd.)
Total Approach Volume: 692

Warrant Summary

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

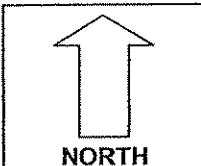
Criteria B - Crash Experience Not Evaluated

Criteria C - Minimum Volumes and Delays Satisfied
Delay data not evaluated
Required volumes reached for 8 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	666	136	300-Yes	200-No	Major	240-Yes	160-No	Major
07:00 - 08:00	785	221	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
08:00 - 09:00	288	75	300-No	200-No	No	240-Yes	160-No	Major
09:00 - 10:00	284	90	300-No	200-No	No	240-Yes	160-No	Major
10:00 - 11:00	290	105	300-No	200-No	No	240-Yes	160-No	Major
11:00 - 12:00	340	157	300-Yes	200-No	Major	240-Yes	160-No	Major
12:00 - 13:00	260	109	300-No	200-No	No	240-Yes	160-No	Major
13:00 - 14:00	327	137	300-Yes	200-No	Major	240-Yes	160-No	Major
14:00 - 15:00	589	273	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
15:00 - 16:00	556	338	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
16:00 - 17:00	735	387	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
17:00 - 18:00	666	365	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
18:00 - 19:00	571	320	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
19:00 - 20:00	400	219	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
20:00 - 21:00	415	216	300-Yes	200-Yes	Both	240-Yes	160-Yes	Both
21:00 - 22:00	260	155	300-No	200-No	No	240-Yes	160-No	Major
22:00 - 23:00	40	29	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 9 (Lake George Blvd.)

DATE:

05/27/2008

@ CSAH 24 (Bridge St.)

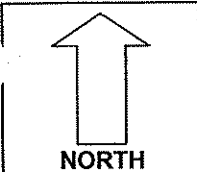
APP. #1 = CSAH 24
APP. #2 = Francis SH. Entrance
APP. #3 = CSAH 24
APP. #4 = CSAH 9.

APP. #1	APP. #2	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						3		11	
6:15-6:30						2		1	
6:30-6:45						4		23	
6:45-7:00						4		3	
HOURLY TOTAL						HOURLY TOTAL		51	
7:00-7:15			1		1	8		43	
7:15-7:30						1		4	
7:30-7:45						2		3	
7:45-8:00						1		6	
HOURLY TOTAL					1	HOURLY TOTAL		68	
8:00-8:15								5	
8:15-8:30						2		7	
8:30-8:45						7			
8:45-9:00						4		1	
HOURLY TOTAL						HOURLY TOTAL		26	
9:00-9:15						6		1	
9:15-9:30						1		18	
9:30-9:45						2		1	
9:45-10:00						1		1	
HOURLY TOTAL						HOURLY TOTAL		31	
10:00-10:15						2		8	
10:15-10:30						6		7	
10:30-10:45						5		2	
10:45-11:00						9	1	2	
HOURLY TOTAL						HOURLY TOTAL		42	
11:00-11:15						4		1	
11:15-11:30						6		1	
11:30-11:45						4		4	
11:45-12:00						7	1	2	
HOURLY TOTAL						HOURLY TOTAL		30	
12:00-12:15						3		2	
12:15-12:30						5		2	
12:30-12:45						6		4	
12:45-1:00						5			
HOURLY TOTAL						HOURLY TOTAL		27	
1:00-1:15						5		3	
1:15-1:30						3		2	
1:30-1:45			1		1	6		5	
1:45-2:00						4		3	
HOURLY TOTAL					1	HOURLY TOTAL		31	
					TOTAL			TOTAL	306

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COUNT LOCATION:

CSAH 9 (Lake George Blvd.)

DATE:

05/28/2008

@ CSAH 24 (Bridge St.)

APP. #1 =
CSAH 24
APP. #2 =
Francis SH. Entrance
APP. #3 =
CSAH 24
APP. #4 =
CSAH 9 (Lake George Blvd.)

APP. #2
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				15 MIN TOT	HEAVY VEHICLES		
	APP. #1	APP. #2	APP. #3	APP. #4		TRUCKS	RV	BUS
2:00-2:15PM			2		2	9		5
2:15-2:30						6		4
2:30-2:45			4	7	11	3	1	65
2:45-3:00						3	1	2
HOURLY TOTAL					13	HOURLY TOTAL		99
3:00-3:15			4	4	8	5		2
3:15-3:30						8		1
3:30-3:45						6		1
3:45-4:00						3		5
HOURLY TOTAL					8	HOURLY TOTAL		31
4:00-4:15						4		2
4:15-4:30						5		3
4:30-4:45						1		11
4:45-5:00			2		2	4		5
HOURLY TOTAL					2	HOURLY TOTAL		35
5:00-5:15						3		
5:15-5:30						2		
5:30-5:45						3	1	
5:45-6:00						4		
HOURLY TOTAL						HOURLY TOTAL		13
6:00-6:15						8		
6:15-6:30						6		
6:30-6:45						1		1
6:45-7:00						2		
HOURLY TOTAL						HOURLY TOTAL		18
7:00-7:15						4		
7:15-7:30						3		
7:30-7:45						3		
7:45-8:00			1		1			
HOURLY TOTAL					1	HOURLY TOTAL		10
8:00-8:15						1		
8:15-8:30						2		
8:30-8:45						4		
8:45-9:00						2		
HOURLY TOTAL						HOURLY TOTAL		9
9:00-9:15								
9:15-9:30						1		
9:30-9:45						1		
9:45-10:00						1		
HOURLY TOTAL						HOURLY TOTAL		3
TOTAL						TOTAL		218

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