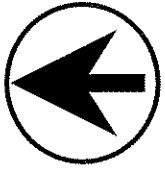


Date : 5/16/01

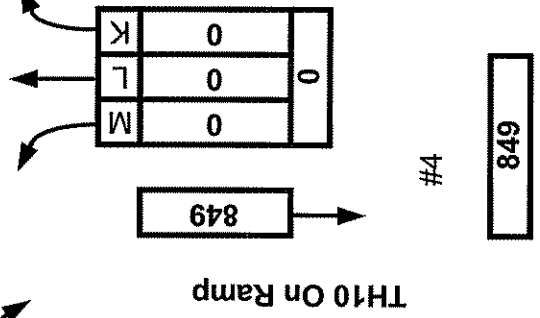
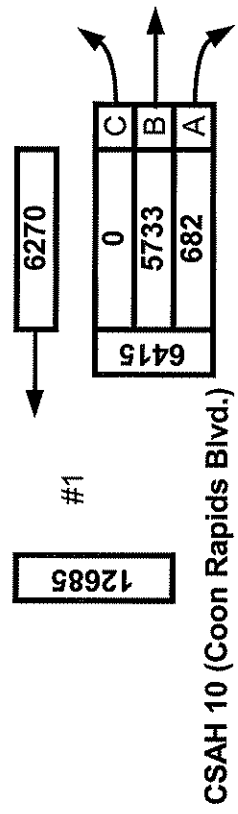
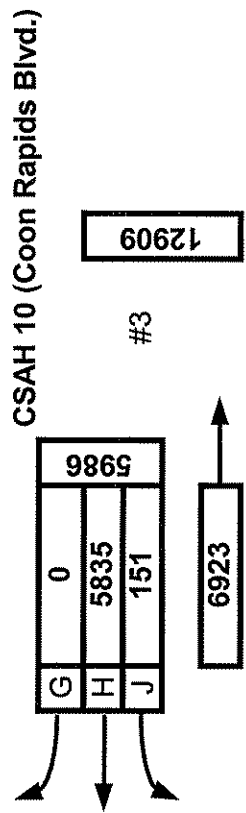
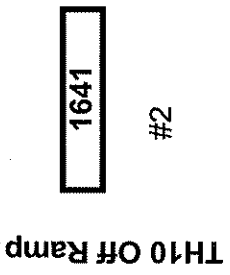
Count Number : TMC0108

Location : CSAH 10 (Coon Rapids Blvd.)

@ TH10/TH47 West Ramps



North



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

Anoka County Highway Department
 Traffic Volume and Turning
 Movement Study

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

Weather: Cloudy
Counter TDC-8
Counted by: Sean/Justin

File Name : TMC0108
Site Code : 01080202
Start Date : 05/16/2001
Page No : 1

Groups Printed- 1 - Unshifted

Start Time	TH10 Off Ramp Southbound					CSAH 10 Westbound					TH10 On Ramp Northbound					CSAH 10 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	1.0	1.0	1.0	1.0			
14:00	37	0	14	0	51	7	160	0	6	167	0	0	0	0	0	0	194	29	5	223	11	441	452
14:15	31	0	19	1	50	7	190	0	15	197	0	0	0	0	0	0	214	25	9	239	25	486	511
14:30	37	0	26	0	63	5	183	0	12	188	0	0	0	0	0	0	202	25	1	227	13	478	491
14:45	48	0	21	1	69	6	168	0	5	174	0	0	0	0	0	0	211	27	3	238	9	481	490
Total	153	0	80	2	233	25	701	0	38	726	0	0	0	0	0	0	821	106	18	927	58	1886	1944
15:00	26	0	5	0	31	3	167	0	1	170	0	0	0	0	0	0	241	25	8	266	9	467	476
15:15	45	0	7	0	52	14	214	0	0	228	0	0	0	0	0	0	221	20	4	241	4	521	525
15:30	41	0	18	0	59	7	183	0	3	190	0	0	0	0	0	0	238	27	5	265	8	514	522
15:45	42	1	20	1	63	9	248	0	1	257	0	0	0	0	0	0	220	32	6	252	8	572	580
Total	154	1	50	1	205	33	812	0	5	845	0	0	0	0	0	0	920	104	23	1024	29	2074	2103
16:00	45	0	17	0	62	5	239	0	1	244	0	0	0	0	0	0	275	20	3	295	4	601	605
16:15	44	2	25	0	71	8	237	0	2	245	0	0	0	0	0	0	264	23	1	287	3	603	606
16:30	36	0	10	0	46	4	275	0	1	279	0	0	0	0	0	0	239	33	4	272	5	597	602
16:45	45	0	23	1	68	5	230	0	0	235	0	0	0	0	0	0	252	24	3	276	4	579	583
Total	170	2	75	1	247	22	981	0	4	1003	0	0	0	0	0	0	1030	100	11	1130	16	2380	2396
17:00	40	0	21	1	61	11	267	0	0	278	0	0	0	0	0	0	279	27	6	306	7	645	652
17:15	38	2	20	0	60	4	279	0	1	283	0	0	0	0	0	0	221	34	4	255	5	598	603
17:30	49	0	15	1	64	3	248	0	0	251	0	0	0	0	0	0	199	30	1	229	2	544	546
17:45	53	1	17	0	71	4	310	0	1	314	0	0	0	0	0	0	198	18	6	216	7	601	608
Total	180	3	73	2	256	22	1104	0	2	1126	0	0	0	0	0	0	897	109	17	1006	21	2388	2409
18:00	36	0	10	0	46	3	202	0	0	205	0	0	0	0	0	0	168	20	1	188	1	439	440
18:15	56	1	19	0	76	8	187	0	0	195	0	0	0	0	0	0	190	16	0	206	0	477	477
18:30	49	0	23	0	72	1	165	0	0	166	0	0	0	0	0	0	146	28	1	174	1	412	413
18:45	58	2	22	0	82	1	195	0	0	196	0	0	0	0	0	0	177	36	1	213	1	491	492
Total	199	3	74	0	276	13	749	0	0	762	0	0	0	0	0	0	681	100	3	781	3	1819	1822
19:00	39	0	4	0	43	3	161	0	1	164	0	0	0	0	0	0	161	20	4	181	5	388	393
19:15	32	0	6	0	38	1	160	0	0	161	0	0	0	0	0	0	138	12	2	150	2	349	351
19:30	39	1	9	0	49	2	136	0	1	138	0	0	0	0	0	0	160	16	2	176	3	363	366
19:45	37	2	12	0	51	2	125	0	1	127	0	0	0	0	0	0	130	23	2	153	3	331	334
Total	147	3	31	0	181	8	582	0	3	590	0	0	0	0	0	0	589	71	10	660	13	1431	1444
20:00	28	1	8	1	37	6	110	0	0	116	0	0	0	0	0	0	147	11	1	158	2	311	313
20:15	40	0	9	0	49	9	150	0	0	159	0	0	0	0	0	0	134	12	2	146	2	354	356
20:30	35	1	4	0	40	5	121	0	1	126	0	0	0	0	0	0	112	22	2	134	3	300	303
20:45	21	0	6	1	27	2	121	0	1	123	0	0	0	0	0	0	81	10	2	91	4	241	245
Total	124	2	27	2	153	22	502	0	2	524	0	0	0	0	0	0	474	55	7	529	11	1206	1217
21:00	19	1	7	0	27	1	121	0	0	122	0	0	0	0	0	0	86	10	1	96	1	245	246
21:15	19	1	8	0	28	1	117	0	1	118	0	0	0	0	0	0	88	9	1	97	2	243	245
21:30	11	0	5	1	16	3	83	0	1	86	0	0	0	0	0	0	63	10	0	73	2	175	177
21:45	14	0	5	0	19	1	83	0	0	84	0	0	0	0	0	0	84	8	0	92	0	195	195
Total	63	2	25	1	90	6	404	0	2	410	0	0	0	0	0	0	321	37	2	358	5	858	863
Grand Total	1190	16	435	9	1641	151	5835	0	56	5986	0	0	0	0	0	0	5733	682	91	6415	156	14042	14198
Approch %	72.5	1.0	26.5			2.5	97.5	0.0			0.0	0.0	0.0			0.0	89.4	10.6					
Total %	8.5	0.1	3.1		11.7	1.1	41.6	0.0		42.6	0.0	0.0	0.0		0.0	0.0	40.8	4.9		45.7	1.1	98.9	

For Street Approaches:

Eastbound:

CSAH 10

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0108.war
 Count Type: IMC. Channel: 0. Count Date: 5/16/ 1
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 6415

Westbound:

CSAH 10

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0108.war
 Count Type: IMC. Channel: 0. Count Date: 5/16/ 1
 Number of Lanes: 2
 Approach Speed: 50
 Total Approach Traffic: 5986

Minor Street Approaches:

Northbound:

TH10 On Ramp

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0108.war
 Count Type: IMC. Channel: 0. Count Date: 5/16/ 1
 Number of Lanes: 1
 Approach Speed: 30
 Total Approach Traffic: 0

Southbound:

TH10 Off Ramp

Data File: C:\Program Files\JAMAR\PETRA\Data Files\TMC0108.war
 Count Type: IMC. Channel: 0. Count Date: 5/16/ 1
 Number of Lanes: 2
 Approach Speed: 30
 Total Approach Traffic: 1641

Analysis of 8-Hour Volume Warrants (Criteria refers to high volume side street for that hour):

Hour	Main	Side	Warrant 1	Warrant 2	Warrant 8
Begin	(Total)	Vol. Dir. Rank	Meets? Criteria	Meets? Criteria	Meets? Criteria
0	0	0 S 9	140	70	112
1	0	0 S 10	140	70	112
2	0	0 S 11	140	70	112
3	0	0 S 12	140	70	112
4	0	0 S 13	140	70	112
5	0	0 S 14	140	70	112
6	0	0 S 15	140	70	112
7	0	0 S 16	140	70	112
8	0	0 S 17	140	70	112
9	0	0 S 18	140	70	112
10	0	0 S 19	140	70	112
11	0	0 S 20	140	70	112
12	0	0 S 21	140	70	112
13	0	0 S 22	140	70	112
14	1653	233 S 4	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
15	1869	205 S 5	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
16	2133	247 S 3	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
17	2132	256 S 2	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
18	1543	276 S 1	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
19	1250	181 S 6	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
20	1053	153 S 7	--BOTH-- 140	--BOTH-- 70	--BOTH-- 112
21	768	90 S 8	MAIN 140	--BOTH-- 70	MAIN 112
22	0	0 S 23	140	70	112
23	0	0 S 24	140	70	112

Warrant Summary:

Rural values apply.

High-volume minor approach is wide enough for two lanes. Re-stripping may be desirable.

Warrant 1 - Minimum Vehicular Volumes

NOT SATISFIED. Required values reached for 7 hours. Criteria--Main St.: 420; Side St.: See Volume Summary.

Warrant 2 - Interruption of Continuous Traffic

SATISFIED for 8 hours. Criteria--Main St.: 630; Side St.: See Volume Summary.

Warrant 3 - Minimum Pedestrian Volumes

NOT SATISFIED. 8th-High Hour--Pedestrians: 0. Criteria--Pedestrians: 105; Vehicles: 700.

Warrant 4 - School Crossing

NOT APPLICABLE. Gap data has not been defined.

Warrant 5 - Progressive Movement

NOT SATISFIED. Adjacent signals closer than 1000 feet and/or not part of coordinated system.

Warrant 6 - Accident Experience

NOT SATISFIED. 0 correctable accidents is fewer than required 5.

Correctable Accidents: 0; Right Angle Accidents: 0; Left Turn Accidents: 0; Other Accidents: 0.

Warrant 7 - Systems Warrant

SATISFIED. Peak hour total entering volume: 2388. Approaches on both streets satisfy one of the following criteria:

NSEW- Approaches which are part of the principal through traffic roadway network.

- Approaches which connect areas of principal traffic generation.
- Approaches which include rural or suburban highways outside, entering or traversing a city.
- Approaches which have surface street freeway or expressway ramp terminals.
- Approaches which appear as a major route in an official transportation plan.

Warrant 8 - Combination of Warrants

NOT SATISFIED. Required values reached for 7 hours. Criteria--Main: 504; Side: See Volume Summary.

Warrant 9 - Four Hour Volumes

SATISFIED for 7 hours.

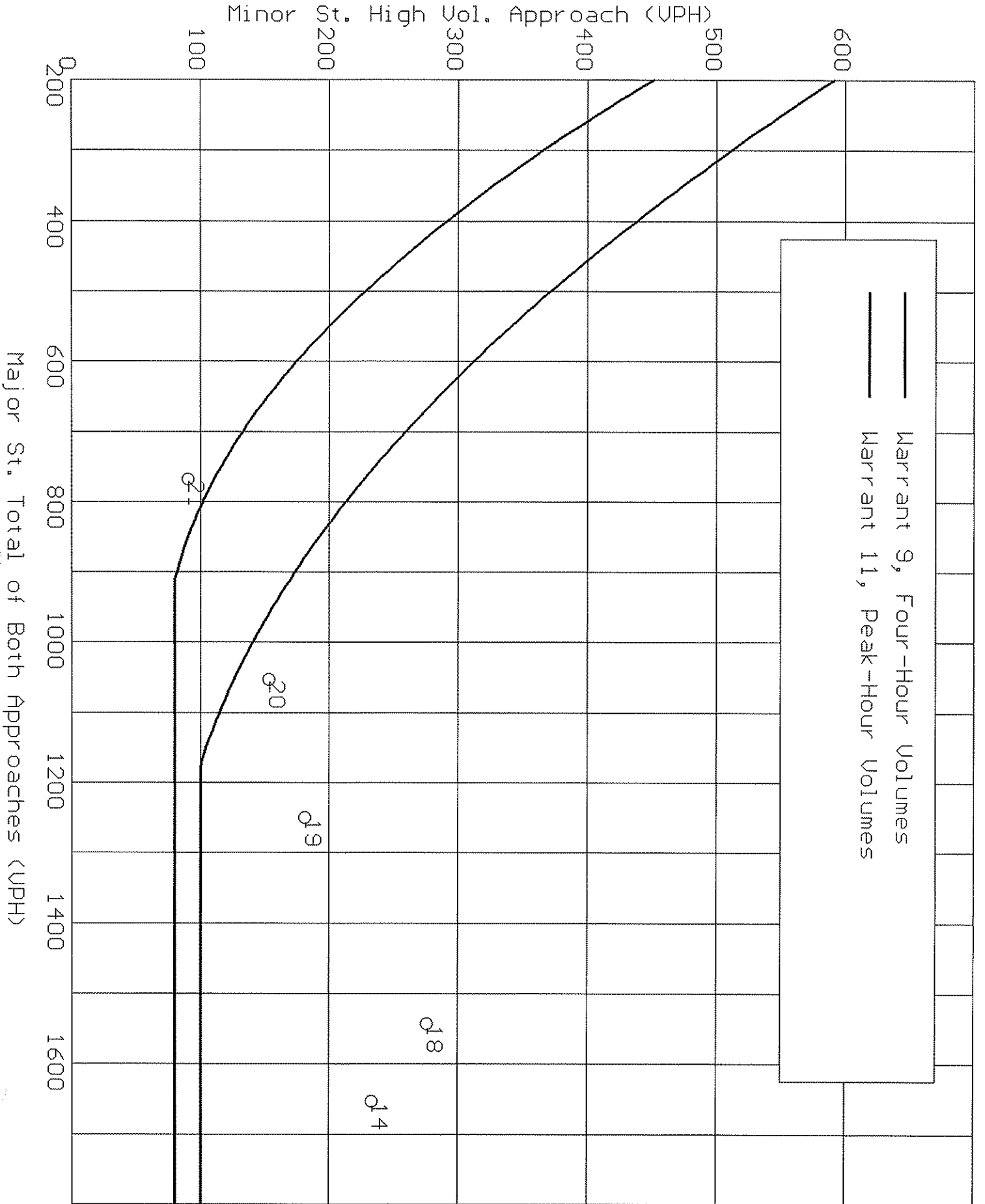
Warrant 10 - Peak Hour Delay

NOT APPLICABLE. Volume requirements satisfied, but side street peak hour delay not defined.

Criteria--Main St.: 800 (4 approaches), 650 (3 approaches); Side St.: 150.

Warrant 11 - Peak Hour Volume

SATISFIED for 7 hours.



Multiway Stop Warrant Analysis
TMC 0108 CSAH 10 (Coon Rapids Blvd.) @ TH10/TH47 West Ramps
Speed Limit of Major Roadway..... 50

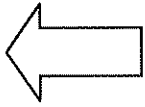
Minimum Traffic Volumes Multiway Stop Warrant Criteria:

- a) The total vehicular volume entering the intersection from all approaches must average at least 500 vehicles per hour (vph) for any 8 hours of an average day, AND:
- b) The combined vehicular and pedestrian volume from the minor street or highway must average at least 200 vph for the same 8 hours, with an average delay to minor street vehicular traffic of at least 30 seconds per vehicle during the maximum hour, BUT:
- c) When the 85-percentile approach speed of the major street traffic exceeds 40 miles per hour, the minimum volume warrant is 70% of the above requirements.

Hour	Total Vehicular Traffic Entering the Intersection	Vehicular Traffic Entering on First Minor Roadway	Vehicular Traffic Entering on Second Minor Roadway	Sum of Minor Approaches	Hours Stop Warrant Met
2 PM - 3 PM	1886	233	0	233	1
3 PM - 4 PM	2074	205	0	205	1
4 PM - 5 PM	2380	247	0	247	1
5 PM - 6 PM	2388	256	0	256	1
6 PM - 7 PM	1819	276	0	276	1
7 PM - 8 PM	1431	181	0	181	0
8 PM - 9 PM	1206	153	0	153	0
9 PM - # PM	858	90	0	90	0

TOTAL HOURS MET: 5

MULTIWAY STOP WARRANT IS NOT MET



COUNT LOCATION:

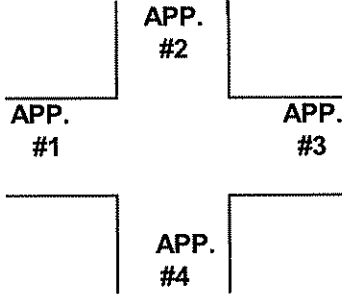
CSAH 10 (Coon Rapids Blvd.)

DATE:

5/16/01

@ TH10/TH47 West Ramps

NORTH
APP. #1= TH 10 Off Ramp
APP. #2 =WB CSAH 10
APP. #3= TH10 On Ramp
APP. #4= EB CSAH 10



- 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						6		5
2:15-2:30						20	1	4
2:30-2:45						12		1
2:45-3:00						8		1
HOURLY TOTAL						HOURLY TOTAL		58
3:00-3:15						8		1
3:15-3:30	1				1	4		
3:30-3:45						6		2
3:45-4:00						8		
HOURLY TOTAL					1	HOURLY TOTAL		29
4:00-4:15						3		1
4:15-4:30						2		1
4:30-4:45						3		2
4:45-5:00						3		1
HOURLY TOTAL						HOURLY TOTAL		16
5:00-5:15						5		2
5:15-5:30						4		1
5:30-5:45			1		1	2		
5:45-6:00	3				3	6		1
HOURLY TOTAL					4	HOURLY TOTAL		21
6:00-6:15			1		1	1		
6:15-6:30			2		2			
6:30-6:45	1				1	1		
6:45-7:00	1				1	1		
HOURLY TOTAL					5	HOURLY TOTAL		3
7:00-7:15		2			2	5		
7:15-7:30						1		1
7:30-7:45			1		1	3		
7:45-8:00	2		2		4	3		
HOURLY TOTAL					7	HOURLY TOTAL		13
8:00-8:15			1		1	2		
8:15-8:30			1		1	2		
8:30-8:45			2		2	3		
8:45-9:00						4		
HOURLY TOTAL					4	HOURLY TOTAL		11
9:00-9:15						1		
9:15-9:30						2		
9:30-9:45						2		
9:45-10:00								
HOURLY TOTAL						HOURLY TOTAL		5