

# Light Commercial Vehicle Inventory

1999



Minnesota Department  
of Transportation

Metro Division

**SRF** CONSULTING  
GROUP, INC.

# **1999 LIGHT COMMERCIAL VEHICLE INVENTORY**

**MINNESOTA DEPARTMENT OF TRANSPORTATION**

**November 1999**

**PREPARED BY:  
SRF CONSULTING GROUP, INC.**

**SRF NO. 0993230**

## 1999 LIGHT COMMERCIAL VEHICLE INVENTORY

### Purpose

Very little is known about the extent of light commercial vehicle traffic on our metropolitan area highways. The Light Commercial Vehicle (LCV) Inventory study was undertaken to help fill this information gap. Establishing the light-commercial-vehicle component of the traffic stream is problematic because LCVs cannot be differentiated from personal/passenger vehicles by automatic data collection equipment. (This is the reason why, traditionally, LCVs have been grouped with passenger vehicles.) As a result, visual identification and manual counting has to be relied upon for the LCV inventory. The inventory results show where light commercial vehicles are concentrated geographically, the roads they use, by type, their volume profile by time of day, a comparison with heavy commercial vehicles, and the proportion of LCV in the daily traffic flow.

Light Commercial Vehicles are defined as two-axle, four- or six-tire vehicles (vans, trucks, SUVs, pickups) that display a commercial sign on the door or elsewhere on the vehicle. Autos with a commercial sign (e.g., pizza delivery) and two-axle LCVs with a hitched trailer are also included in the LCV category. Heavy Commercial Trucks are trucks with three or more axles.

### Inventory Station Location

To obtain a representative number of LCV-counting sites, 86 locations were identified throughout the seven-county metropolitan area. These sites, shown in Figure 1, are geographically distributed on freeways (access-controlled) and expressways as follows:

Facility Type	Area Type				Total
	Inside Ring	On Ring	Outside Ring	Regional Cordon Line	
Freeway	17	18	10	4	49
Expressway	10	--	14	13	37
Total	27	18	24	17	86

A breakdown of the stations by area type and facility type can be found in Appendix A.



## **Roadside Site Selection**

Site checks of each of the 90 initial locations initially identified were conducted to find a specific location along the road where the surveyor could be safely placed and not become a distraction to drivers. If a location off the roadway was not feasible, an on-roadway plan was developed. For these sites, "Duck Blinds" were used (i.e., Type III barricades with orange and white stripes and three 8-foot bars placed on the shoulder of the road behind a concrete or steel barrier). This plan kept the distraction element to a minimum, and the barricade and barrier added a safety element. Of the initial 90 sites identified, four were eliminated because of the high level of difficulty and potential safety problems.

Once the specific sites were identified, site maps with major cross streets and landmarks were drawn (see Appendix B) to guide surveyors to the precise location of the survey.

## **Pre-Test**

A pre-test was done to ensure that surveyors could visually and accurately select light commercial vehicles in all lanes from the total vehicular flow. The pretest was also used to determine the degree to which LCV traffic volumes dropped in the late afternoon, early evening. This information was used to determine the mix of 12-hour counts (6:00 a.m. to 6:00 p.m.) and 16-hour counts (6:00 a.m. to 10:00 p.m.). The pretest indicated that the 12-hour count captured about 78 percent of daily LCVs and 16-hour counts about 91 percent.

The pretest also showed that one person was required to survey one direction of traffic. Fifty-one stations were surveyed in both directions and 35 in one direction. This yielded a total of 137 directional counts.

As part of the pretest, a video of traffic was recorded for use in training surveyors in LCV identification and data recording methodology.

## **Light Commercial Vehicle (LCV) Count and Factoring Methodology**

Table 1 summarizes, for each of the count locations, the approximate location of the count, whether one or both directions were counted, the count duration and the raw directional counts.

A methodology was developed to factor the counts to 24 hours for comparison with daily total traffic and daily heavy commercial vehicles. Originally, the plan was to obtain date-specific information for stations from Mn/DOT's Automatic Traffic Recorders (ATR) and the Traffic Management Center (TMC) freeway detection system. Of the stations surveyed, 30 had a location similar to the TMC detectors. When that data was received, only half was reliable for use. As a result, a supplementary factoring method was developed.

TABLE 1

LIGHT COMMERCIAL VEHICLE COUNT <sup>(1)</sup>

STATION	TYPE	ROAD	LOCATION	DIR. <sup>(2)</sup>	HRS.	NB	SB	EB	WB
1	US	10/169	East of TH 101 Interchange	B	16	1102	887		
2	MN	101	South of CR 42	B	16	1217	973		
3	I	94	North of TH 101 Interchange	B	16	1348	1602		
4	I	94	Btwn CSAH 30 & Weaver Lk	B	16	1994	2830		
5	US	169	Btwn 77th Ave. & CSAH 81	B	16	1099	921		
6	I	94/694	Btwn I 494 & CSAH 61	EB	16			2451	
7	I	94/694	Btwn CSAH 81 & Brooklyn Blv	B	16			4246	3810
8	MN	100	South of CSAH 9 & Interchng	SB	12		1699		
9	US	169	South of CSAH 9 & Interchng	SB	12		2021		
10	I	494	North of CSAH 10 Interchng	NB	12	2154			
11	MN	55	East of CSAH 24/CSAH 9	B	12			1036	1096
12	MN	55	East of CSAH 6	B	12			1154	1112
13	I	394	East of Theo. Wirth Parkway	EB	12			2217	
14	US	169	North of CSAH 5/Mtka Blvd.	SB	8		1627		
15	US	12	West of Carlson Parkway	B	12			1542	1509
16	I	494	North of CSAH 5 Interchng	SB	12		2707		
17	MN	7	East of TH 101	B	16			1665	1730
18	I	494	Btwn TH 62 & CSAH 3 Overp	B	16	2759	2050		
19	US	212	North of CSAH 61 Interchng	NB	16	1360			
20	MN	100	South of 50th Ave. Interchng	SB	16		2356		
21	MN	62	East of TH 169/TH 212	B	16			2003	1933
22	MN	5	East of TH 41	B	16			776	735
23	MN	5	West of CSAH 4	EB	12			1354	
24	US	212	North of CSAH 1/Pioneer Trail	NB	16	666			
25	I	494	East of Bush Lake Road	EB	8				2479
26	US	169	North of Bloom. Ferry Bridge	B	16	957	960		
27	US	212	East of TH 41	B	12			685	501
28	US	169	South of TH 41	B	12	652	633		
29	I	35	South of I-35W & I-35E Jct	B	12	1492	1470		
30	I	35W	North of River Crossing	NB	12	3132			
31	MN	77	North of River Crossing	NB	12	1652			
32	I	494	East of France Ave Interchng	B	12			4124	3791
33	I	494	Btwn 24th & 34th Avenue	B	12			2308	2165
34	MN	77	South of Th 62	NB	12	1359			
35	I	35W	South of TH 62 Commons	NB	12				
36	MN	55	North of Minnehaha Pkwy	B	12	619	635		
38	I	94	East of TH 280	B	12			1609	2308
39	I	94	South of 42nd Avenue	NB	16	3516			
40	I	94/694	Btwn TH 100 & TH 252	WB	12				3170
41	I	694	Btwn TH 47 & TH 65	WB	12				3204
42	I	694	East of Silver Lake Road	WB	16				2831
43	I	35W	North of TH 10 Interchng	SB	12		2683		
44	US	10	East of Silver Lake Road	B	12	1207	1042		
45	MN	65	South of 73rd Avenue	B	12	768	1099		
46	MN	252	South of 86th Avenue	NB	12	1679			
47	US	10	South of Hanson Blvd.	B	12	1581	1691		
48	MN	65	Btwn 153rd & Constance	B	12	629	1183		
49	I	35	North of I-35W & 35E Jct	B	12	1247	1165		
51	I	694	Btwn TH 10 & Snelling	B	12			2211	2211
52	I	694	West of Rice St./TH 49	B	12			2698	2698
53	I	35E	South of TH 96	B	12	1353	1426		
54	I	35E	I-694 Commons	B	12			2365	2100
55	I	35W	North of TH 36	B	12	2874	2557		
56	MN	51	South of TH 36	EB	12		572		
57	MN	36	West of Victoria Street	B	12			1482	1072
58	I	35E	South of TH 36	NB	12	3095			
59	MN	36	East of White Bear Avenue	B	12			1003	1156
60	I	694	South of TH 36	NB	11	1681			
61	MN	36	East of CSAH 36	B	12			960	1090
62	I	94	West of TH 61	WB	12				2141
63	I	94	West of TH 95	B	12			656	1738
64	I	494	South of I-94	B	12	1569	1976		
65	US	10 & 61	South of County Road 39	B	12	741	715		
66	US	52	South of Butler Avenue	NB	12	1349			
67	I	35E	Near River Crossing	SB	12		1443		
68	MN	55	Mendota Bridge	EB	16			1418	
69	I	494	East of Pilot Knob Road	WB	12				2536
70	I	35E	South of Lone Oak Road	NB	12	1563			
71	MN	55	East of TH 149	B	12			336	411
72	MN	110	West of I-494 & TH 3	WB	16				1948
74	US	52	North of CSAH 26	B	12	1143	789		
75	US	61	North of County Road 22	NB	12	1137			
76	US	52	South of CSAH 42	B	12	611	559		
77	US	61	South of TH 55	B	12	704	732		
78	US	12	West of CSAH 15	B	12			937	830
79	US	10	East of TH 61	B	12			321	402
80	MN	47	North of I 694	B	16	984	899		
81	US	61	North of I 694	B	16	1196	1214		
82	US	52	West of TH 51	B	12			670	938
84	MN	62	West of TH 55	B	12			905	1796
85	MN	5	Southwest of TH 55	NB	12	770			
86	MN	101	West of TH 13	B	12			1748	2126
87	MN	13	Btwn I 35w and TH 77	EB	6			549	
88	MN	41	River Crossing	B	12	1019	1064		
89	MN	55	West of Penn Ave.	B	12			1350	1103
90	MN	55	Btwn TH 52 and CR 42	B	12			414	368
TOTAL						55978	46180	47193	59038
AVERAGE						1435	1399	1522	1789

(1) Unfactored raw counts.

(2) B: both directions counted; EB, WB, NB, SB: East-, West-, North-, South-bound only.

All usable ATR data was compiled into an hourly total, and the average hourly percent of 24-hour traffic was determined. The average hourly percent was applied to each 1998 ADT Flow Map ADT station. Each hourly percent was then divided into four equal parts to obtain 15-minute intervals. This method yielded, for each station, a 15-minute volume over the 24 hours. An average of all stations that had ATR data was then applied to the corresponding LCV station. This yielded an average percent of LCV to ADT by fifteen-minute intervals from 6:00 a.m. to 6:00 p.m., because almost all stations were counted for that duration. An average was then found for the 6:00 p.m. to 10:00 p.m. time period from the stations that were counted for that duration. The results of the factoring process are shown in Appendix C.

After factoring the LCV to 24 hours, the totals were entered into the Master Station Matrix (Appendix D).

It should be noted that for estimating the LCV percent of daily traffic at stations where only one direction of LCV traffic was counted, the ADT was divided by two before the percent was calculated.

## Results and Analysis

### Light Commercial Vehicle (LCV) Percent of Daily Traffic

Table 2 summarizes for each of the 86 stations surveyed the daily directional LCV volumes. These daily volumes range from a low of 400-500 vehicles per direction on MN 55 south of I-494 (station 71) to over 5,000 daily LCVs on eastbound I-494 east of France Avenue (station 32). The average LCV volume on the 137 segments counted is approximately 1,700 in the northbound and southbound directions and 1,900-2,150 for eastbound and westbound.

The LCV percent of daily volume ranges from a low of 3.2 percent for MN 5 south of Hiawatha Avenue (station 85) to a high of 9.1 percent for US 212 (east of MN 41) (station 27). Of course, the percent LCV is highly affected by the daily traffic: the highest two-way LCV volume recorded, over 9,800 vehicles on I-494 east of France Avenue (station 32), is 6.2 percent of the daily volume whereas the highest LCV percent (13.5 percent) corresponds to an equivalent two-way LCV of under 3,000 vehicles per day.

TABLE 2

## LIGHT COMMERCIAL VEHICLE COUNT FACTORED TO 24 HOURS

STATION	TYPE	ROAD	DIR.	NB	SB	EB	WB	LCVADT	ADT <sup>(1)</sup>	%LCV of ADT
1	US	10/169	B	1180	965	-	-	2145	26700	8.0%
2	MN	101	B	1311	1067	-	-	2378	34300	6.9%
3	I	94	B	1509	1743	-	-	3252	51000	6.4%
4	I	94	B	2208	3261	-	-	5469	83000	6.6%
5	US	169	B	1226	1030	-	-	2256	53000	4.3%
6	I	94/694	EB	-	-	2720	-	2720	43500	6.3%
7	I	94/694	B	-	-	4615	4159	8774	100000	8.8%
8	MN	100	SB	-	2076	-	-	2076	27500	7.5%
9	US	169	SB	-	2567	-	-	2567	46000	5.6%
10	I	494	NB	2599	-	-	-	2599	37500	6.9%
11	MN	55	B	-	-	1207	1270	2477	28000	8.8%
12	MN	55	B	-	-	1348	1304	2652	34000	7.8%
13	I	394	EB	-	-	2634	-	2634	71500	3.7%
14	US	169	SB	-	2575	-	-	2575	45500	5.7%
15	US	12	B	-	-	1975	1942	3917	73000	5.4%
16	I	494	SB	-	3271	-	-	3271	47500	6.9%
17	MN	7	B	-	-	1781	1846	3627	48500	7.5%
18	I	494	B	3017	2311	-	-	5328	81000	6.6%
19	US	212	NB	1487	-	-	-	1487	26500	5.6%
20	MN	100	SB	-	2640	-	-	2640	55500	4.8%
21	MN	62	B	-	-	2141	2075	4216	95000	4.4%
22	MN	5	B	-	-	818	782	1600	28000	5.7%
23	MN	5	EB	-	-	1621	-	1621	22500	7.2%
24	US	212	NB	744	-	-	-	744	12500	6.0%
25	I	494	EB	-	-	-	2479	2479	61500	4.0%
26	US	169	B	1073	1076	-	-	2149	42000	5.1%
27	US	212	B	-	-	777	584	1361	15000	9.1%
28	US	169	B	811	795	-	-	1606	28000	5.7%
29	I	35	B	1967	1945	-	-	3912	80000	4.9%
30	I	35W	NB	3749	-	-	-	3749	52000	7.2%
31	MN	77	NB	2172	-	-	-	2172	48500	4.5%
32	I	494	B	-	-	5068	4735	9803	159000	6.2%
33	I	494	B	-	-	3121	2978	6099	137000	4.5%
34	MN	77	NB	1774	-	-	-	1774	35000	5.1%
35	I	35W	NB	3694	-	-	-	3694	53000	7.0%
36	MN	55	B	785	801	-	-	1586	28000	5.7%
38	I	94	B	-	-	2495	3194	5689	168000	3.4%
39	I	94	NB	3913	-	-	-	3913	60000	6.5%
40	I	94/694	WB	-	-	-	3936	3936	64500	6.1%
41	I	694	WB	-	-	-	3999	3999	67000	6.0%
42	I	694	WB	-	-	-	3142	3142	56500	5.6%
43	I	35W	SB	-	3235	-	-	3235	46500	7.0%
44	US	10	B	1462	1297	-	-	2759	43000	6.4%
45	MN	65	B	982	1313	-	-	2295	36000	6.4%
46	MN	252	NB	1982	-	-	-	1982	25500	7.8%
47	US	10	B	1985	2095	-	-	4080	68000	6.0%
48	MN	65	B	811	1427	-	-	2238	35000	6.4%
49	I	35	B	1633	1578	-	-	3211	65000	4.9%
51	I	694	B	-	-	3661	2864	6525	110000	5.9%
52	I	694	B	-	-	3930	3262	7192	95000	7.6%
53	I	35E	B	1763	1836	-	-	3599	69000	5.2%
54	I	35E	B	-	-	3042	2777	5819	114000	5.1%
55	I	35W	B	3533	3216	-	-	6749	111000	6.1%
56	MN	51	EB	-	716	-	-	716	20500	3.5%
57	MN	36	B	-	-	1831	1421	3252	88000	3.7%
58	I	35E	NB	3843	-	-	-	3843	63000	6.1%
59	MN	36	B	-	-	1193	1364	2557	32000	8.0%
60	I	694	NB	2182	-	-	-	2182	33000	6.6%
61	MN	36	B	-	-	1174	1346	2520	42000	6.0%
62	I	94	WB	-	-	-	2734	2734	53500	5.1%
63	I	94	B	-	-	1018	2104	3122	61000	5.1%
64	I	494	B	1955	2377	-	-	4332	65000	6.7%
65	US	10 & 61	B	900	863	-	-	1763	31500	5.6%
66	US	52	NB	1669	-	-	-	1669	27000	6.2%
67	I	35E	SB	-	1834	-	-	1834	34500	5.3%
68	MN	55	EB	-	-	1485	-	1485	11000	13.5%
69	I	494	WB	-	-	-	3066	3066	47000	6.5%
70	I	35E	NB	2028	-	-	-	2028	41500	4.9%
71	MN	55	B	-	-	420	497	917	15600	5.9%
72	MN	110	WB	-	-	-	2191	2191	45500	4.8%
74	US	52	B	1405	1033	-	-	2438	42000	5.8%
75	US	61	NB	1434	-	-	-	1434	25000	5.7%
76	US	52	B	772	705	-	-	1477	24900	5.9%
77	US	61	B	873	898	-	-	1771	28000	6.3%
78	US	12	B	-	-	1112	984	2096	26000	8.1%
79	US	10	B	-	-	395	476	871	12500	7.0%
80	MN	47	B	1069	984	-	-	2053	35500	5.8%
81	US	61	B	1272	1291	-	-	2563	29000	8.8%
82	US	52	B	-	-	786	1054	1840	20500	9.0%
84	MN	62	B	-	-	1242	2170	3412	61000	5.6%
85	MN	5	NB	1159	-	-	-	1159	36500	3.2%
86	MN	101	B	-	-	1982	2371	4353	39500	11.0%
87	MN	13	EB	-	-	1052	-	1052	12500	8.4%
88	MN	41	B	1146	1191	-	-	2337	18900	12.4%
89	MN	55	B	-	-	1558	1311	2869	35000	8.2%
90	MN	55	B	-	-	451	497	948	14100	6.7%
TOTAL				71077	58012	58653	70914			5.9%
AVERAGE				1777	1697	1892	2149			5.9%

<sup>(1)</sup> ADTs were divided by two at locations where LCVs were counted in only one direction.

## Directional Split

Table 3 displays the percent LCVs per direction for stations where both directions were counted. In general, one would expect a 50-50 directional split on a daily basis. However, this even split is affected by the degree to which drivers use a different route on their return trip, by the amount of through traffic in the LCV stream, and by the fact that the daily LCV estimates are factored from 12-hour and 16-hour counts.

Of the 51 locations where both directions were counted, 41 had splits that were in the 45/55 to 50/50 range. Of the remaining 10, nine ranged from 40/60 to 44/64 and one had a 33/67 directional split (I-94 west of TH 95 in Washington County, station 63).

Overall, north-south routes exhibit an average directional split of 51/49 percent while east-west routes average 47/53 percent. In both cases the overall split is very close to the 50/50 expected split.

TABLE 3

DAILY LIGHT COMMERCIAL VEHICLE DIRECTIONAL SPLIT

STATION	TYPE	ROAD	DIR.	% NB	% SB	% EB	% WB
1	US	10/169	B	55%	45%		
2	MN	101	B	55%	45%		
3	I	94	B	46%	54%		
4	I	94	B	40%	60%		
5	US	169	B	54%	46%		
6	I	94/694	EB				
7	I	94/694	B			53%	47%
8	MN	100	SB				
9	US	169	SB				
10	I	494	NB				
11	MN	55	B			49%	51%
12	MN	55	B			51%	49%
13	I	394	EB				
14	US	169	SB				
15	US	12	B			50%	50%
16	I	494	SB				
17	MN	7	B			49%	51%
18	I	494	B	57%	43%		
19	US	212	NB				
20	MN	100	SB				
21	MN	62	B			51%	49%
22	MN	5	B			51%	49%
23	MN	5	EB				
24	US	212	NB				
25	I	494	EB				
26	US	169	B	50%	50%		
27	US	212	B			57%	43%
28	US	169	B	50%	50%		
29	I	35	B	50%	50%		
30	I	35W	NB				
31	MN	77	NB				
32	I	494	B			52%	48%
33	I	494	B			51%	49%
34	MN	77	NB				
35	I	35W	NB				
36	MN	55	B	49%	51%		
38	I	94	B			44%	56%
39	I	94	NB				
40	I	94/694	WB				
41	I	694	WB				
42	I	694	WB				
43	I	35W	SB				
44	US	10	B	53%	47%		
45	MN	65	B	43%	57%		
46	MN	252	NB				
47	US	10	B	49%	51%		
48	MN	65	B	36%	64%		
49	I	35	B	51%	49%		
51	I	694	B			56%	44%
52	I	694	B			55%	45%
53	I	35E	B	49%	51%		
54	I	35E	B			52%	48%
55	I	35W	B	52%	48%		
56	MN	51	EB				
57	MN	36	B			56%	44%
58	I	35E	NB				
59	MN	36	B			47%	53%
60	I	694	NB				
61	MN	36	B			47%	53%
62	I	94	WB				
63	I	94	B			33%	67%
64	I	494	B	45%	55%		
65	US	10 & 61	B	51%	49%		
66	US	52	NB				
67	I	35E	SB				
68	MN	55	EB				
69	I	494	WB				
70	I	35E	NB				
71	MN	55	B			46%	54%
72	MN	110	WB				
74	US	52	B	58%	42%		
75	US	61	NB				
76	US	52	B	52%	48%		
77	US	61	B	49%	51%		
78	US	12	B			53%	47%
79	US	10	B			45%	55%
80	MN	47	B	52%	48%		
81	US	61	B	50%	50%		
82	US	52	B			43%	57%
84	MN	62	B			36%	64%
85	MN	5	NB				
86	MN	101	B			46%	54%
87	MN	13	EB				
88	MN	41	B	49%	51%		
89	MN	55	B			54%	46%
90	MN	55	B			48%	52%
WEIGHTED AVERAGE				51%	49%	47%	53%

## Light Commercial Vehicle (LCVs) by Facility Type and Area Type

The percent LCV of daily traffic vary substantially by type of facility used and the area type (Table 4). Overall, 6-7 percent of the daily traffic on expressways are LCVs, regardless of location in the metro area. The variation on freeways is large: the I-494/I-694 ring carries the highest percent of LCVs (14 percent) whereas freeways outside the ring only carry an average of 2 percent. Overall freeways carry a lower percent LCV of daily traffic (5.6 percent) than expressways (7 percent) due primarily to the higher daily volumes on freeways.

**TABLE 4**  
**PERCENT LIGHT COMMERCIAL VEHICLES OF DAILY TRAFFIC**  
**BY FACILITY TYPE AND AREA TYPE**

Facility Type	Area Type				Total
	Inside Ring	On Ring	Outside Ring	Regional Cordon Line	
Freeway	5.0%	14.4%	2.4%	5.2%	5.6%
Expressway	6.3%	--	7.4%	7.2%	7.0%
Total	5.3%	14.4%	3.5%	6.3%	5.9%

## Time-of-Day Light Commercial Vehicle (LCV) Traffic Profile

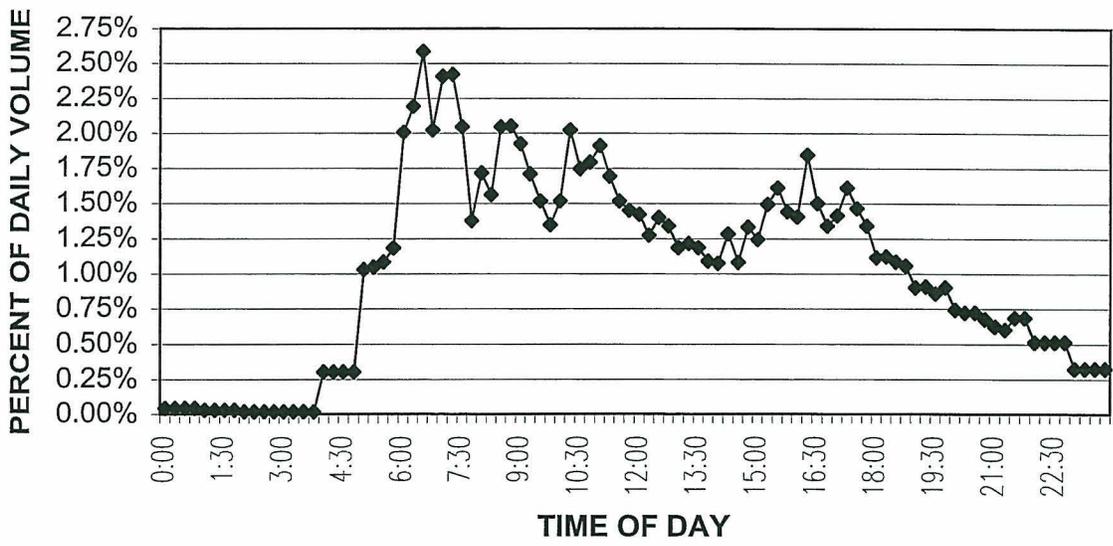
Figures 2 through 5 depict the variation of LCV freeway volumes, as percent of daily LCV traffic, by 15-minute intervals. Several observations can be made:

- The profile of regional cordon line stations (Figure 2) shows a definite early morning peak 6:00 to 7:00 a.m. with an hourly total of approximately 9.5 percent of daily LCV traffic. Several smaller peaks occur until about 10:30 a.m. and an even smaller peak occurs around 4:30 p.m. with about 6 percent of daily traffic. Overall, LCV traffic builds quickly towards the morning peak and declines steadily as the day progresses.
- As traffic approaches the ring (Figure 3), the morning peak shows up distinctly, but the percent of LCVs remains at similar levels throughout the rest of the day, including the afternoon peak. LCV traffic begins to decline thereafter (after about 5:00 p.m.).
- On the freeway ring (Figure 4), there are no peaking “spikes” to speak of. Once LCV volumes reach the 6:00-7:00 peak level (about 6.5 percent of daily) they remain at similar levels till about 4:00 p.m. when they begin to decline steadily.
- Freeway segments inside the ring (Figure 5) show a slightly different pattern. LCVs do not exhibit peaking “spikes.” Instead, the highest volumes occur later in the morning starting around 8:00 a.m., remain steady until 3:00 p.m., and decline steadily thereafter.

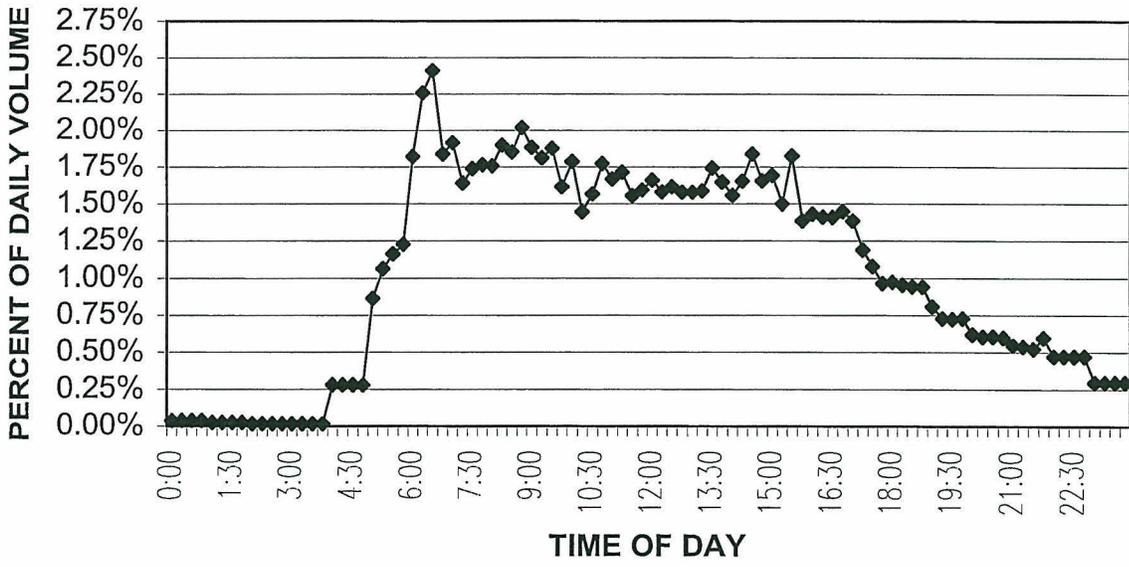
Figures 6 through 8 depict LCV volume profile for expressways at the three area locations as presented previously for freeways (except for the ring, of course). Except for expressway locations just outside the ring, there is less peaking than on freeways. Traffic remains fairly stable between 6:30 a.m. and 4:00 p.m. Expressways just outside the ring, exhibit several spikes, with the highest being around noon.

Figure 9 provides a summary of all LCV counts for all road types and area types: As a whole, the flow of LCVs is fairly constant starting at around 6:15 a.m. until about 4:15 p.m., except for a slight “dip” during the a.m. peak period (possibly in an effort to avoid the commuter peak).

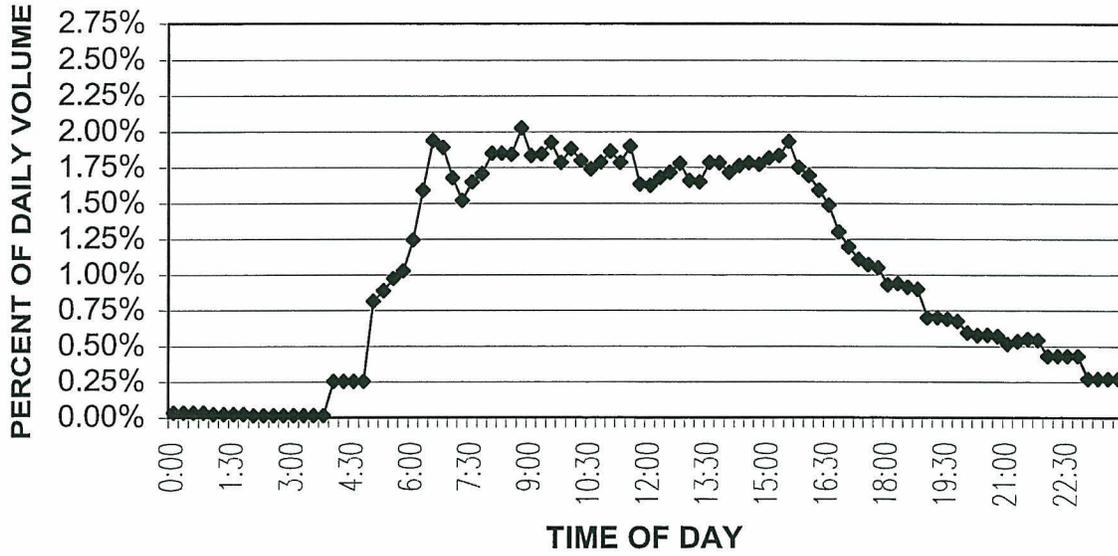
**FIGURE 2  
DAILY FLOW PROFILE  
FREEWAY REGIONAL CORDON LINE**



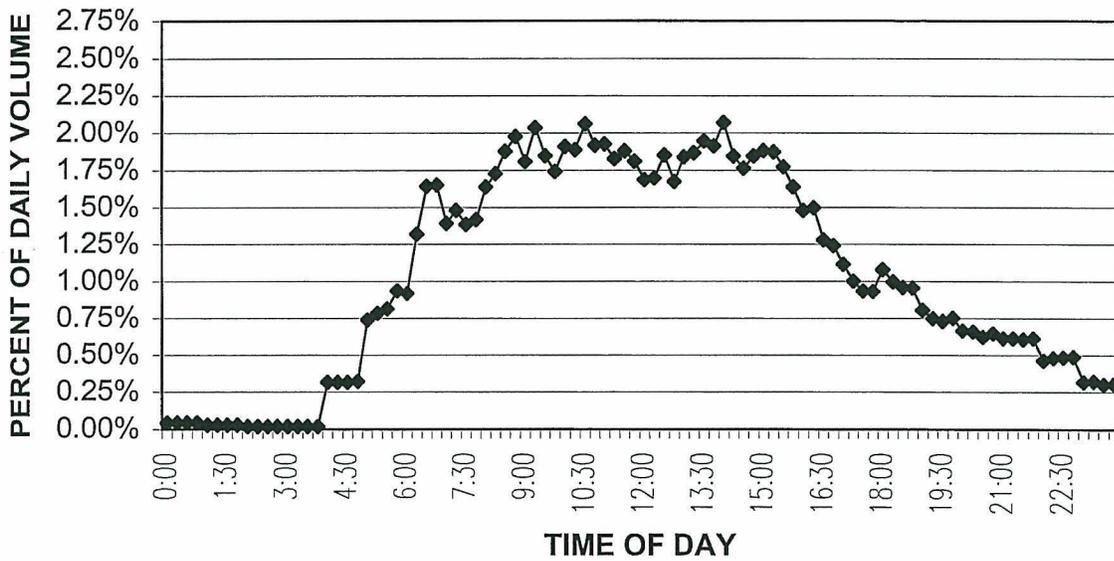
**FIGURE 3  
DAILY FLOW PROFILE  
FREEWAY OUTSIDE RING**



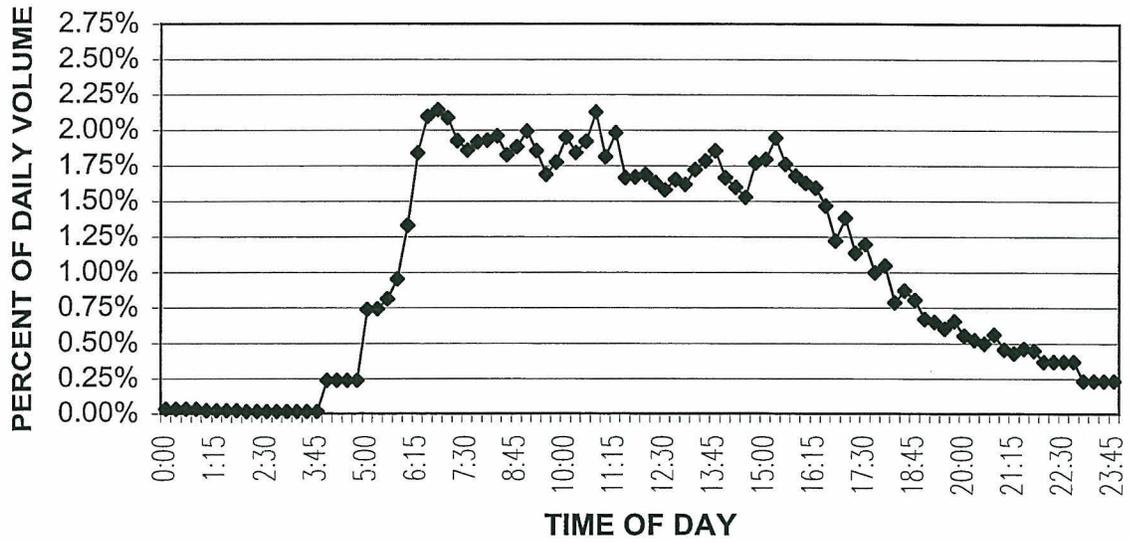
**FIGURE 4  
DAILY FLOW PROFILE  
FREEWAY ON RING**



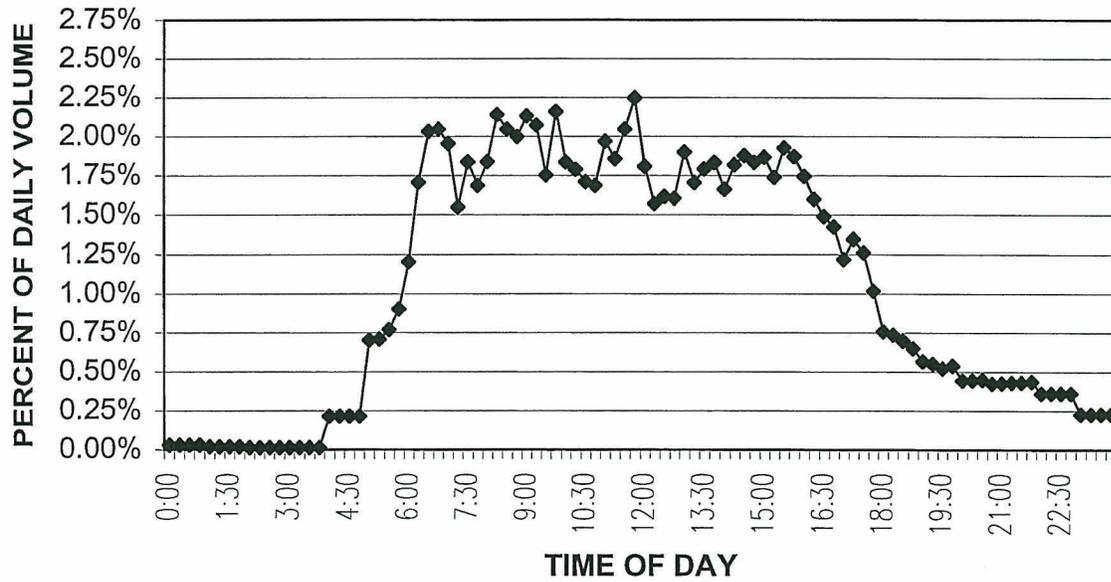
**FIGURE 5  
DAILY FLOW PROFILE  
FREEWAY INSIDE RING**



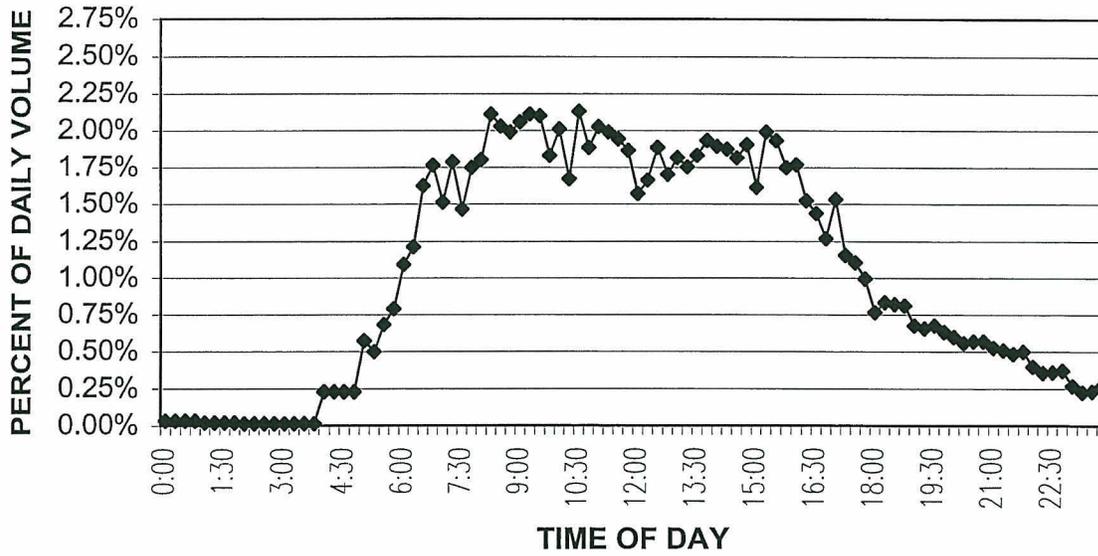
**FIGURE 6  
DAILY FLOW PROFILE  
EXPRESSWAY REGIONAL CORDON LINE**



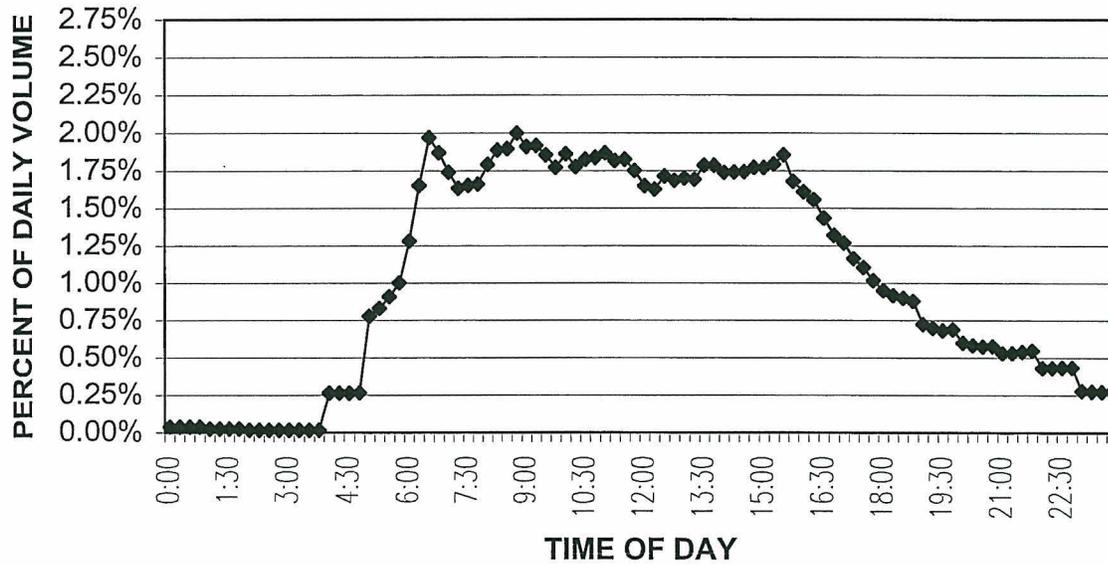
**FIGURE 7  
DAILY FLOW PROFILE  
EXPRESSWAY OUTSIDE RING**



**FIGURE 8  
DAILY FLOW PROFILE  
EXPRESSWAY INSIDE RING**



**FIGURE 9  
DAILY FLOW PROFILE  
ALL ROAD TYPES & ALL AREAS**



## Comparison of Light Commercial Vehicle (LCV) and Heavy Commercial Vehicle (HCV) Volumes

Table 5 and Figure 10 show LCV volumes and compare light and heavy commercial vehicle (HCV) percent of ADT. It will come as a surprise to many that, overall, the percent of LCVs in the traffic stream is higher than the percent of HCVs (5.9 and 5.3 percent, respectively). Some highlights:

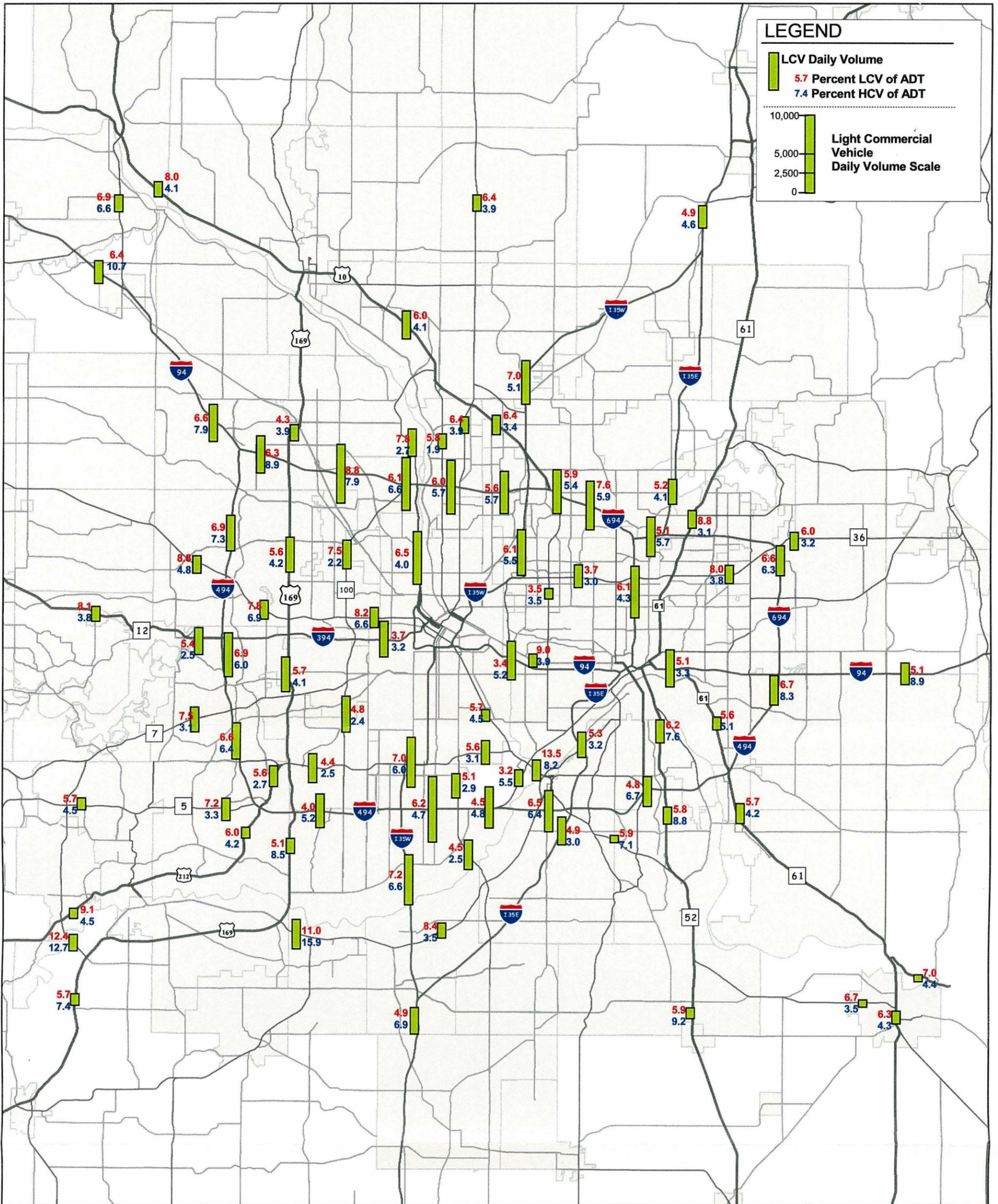
- Maximum daily LCV volume 9,800 (Station 32: I-494 East of France)
- Maximum daily HCV volume 8,700 (Station 38: I-94 East of TH 280)
- Maximum total CV volume 17,300 (Station 32: I-494 East of France)
- Maximum percent LCV of daily traffic: 13.5% (Station 68: MN 55 at Mendota Br.)
- Maximum percent HCV of daily traffic: 15.9% (Station 86: MN 101 West of TH 13)
- Maximum percent CV of daily traffic: 27.0% (Station 86: MN 101 West of TH 13)

TABLE 5

COMPARISON OF DAILY LIGHT COMMERCIAL AND HEAVY COMMERCIAL VEHICLE VOLUMES <sup>(1)</sup>

STATION	TYPE	ROAD	DIR.	ADT <sup>(2)</sup>	LCVADT	%LCV OF ADT	HCADT <sup>(2)</sup>	% HCADT OF ADT	LCV + HCV	% CV OF ADT
1	US	10/169	B	26700	2145	8.0%	1100	4.1%	3245	12.2%
2	MN	101	B	34300	2378	6.9%	2250	6.6%	4628	13.5%
3	I	94	B	51000	3252	6.4%	5450	10.7%	8702	17.1%
4	I	94	B	83000	5469	6.6%	6550	7.9%	12019	14.5%
5	US	169	B	53000	2256	4.3%	2050	3.9%	4306	8.1%
6	I	94/694	EB	43500	2720	6.3%	3850	8.9%	6570	15.1%
7	I	94/694	B	100000	8774	8.8%	7900	7.9%	16674	16.7%
8	MN	100	SB	27500	2076	7.5%	600	2.2%	2676	9.7%
9	US	169	SB	46000	2567	5.6%	1950	4.2%	4517	9.8%
10	I	494	NB	37500	2599	6.9%	2725	7.3%	5324	14.2%
11	MN	55	B	28000	2477	8.8%	1350	4.8%	3827	13.7%
12	MN	55	B	34000	2652	7.8%	2350	6.9%	5002	14.7%
13	I	394	EB	71500	2634	3.7%	2300	3.2%	4934	6.9%
14	US	169	SB	45500	2575	5.7%	1850	4.1%	4425	9.7%
15	US	12	B	73000	3917	5.4%	1800	2.5%	5717	7.8%
16	I	494	SB	47500	3271	6.9%	2850	6.0%	6121	12.9%
17	MN	7	B	48500	3627	7.5%	1500	3.1%	5127	10.6%
18	I	494	B	81000	5328	6.6%	5200	6.4%	10528	13.0%
19	US	212	NB	26500	1487	5.6%	725	2.7%	2212	8.3%
20	MN	100	SB	55500	2640	4.8%	1350	2.4%	3990	7.2%
21	MN	62	B	95000	4216	4.4%	2400	2.5%	6616	7.0%
22	MN	5	B	28000	1800	5.7%	1250	4.5%	2850	10.2%
23	MN	5	EB	22500	1621	7.2%	750	3.3%	2371	10.5%
24	US	212	NB	12500	744	6.0%	525	4.2%	1269	10.2%
25	I	494	EB	61500	2479	4.0%	3200	5.2%	5679	9.2%
26	US	169	B	42000	2149	5.1%	3550	8.5%	5699	13.6%
27	US	212	B	15000	1361	9.1%	675	4.5%	2036	13.6%
28	US	169	B	28000	1806	5.7%	2075	7.4%	3681	13.1%
29	I	35	B	80000	3912	4.9%	5500	6.9%	9412	11.8%
30	I	35W	NB	52000	3749	7.2%	3450	6.6%	7199	13.8%
31	MN	77	NB	48500	2172	4.5%	1200	2.5%	3372	7.0%
32	I	494	B	159000	9803	6.2%	7500	4.7%	17303	10.9%
33	I	494	B	137000	6099	4.5%	6600	4.8%	12699	9.3%
34	MN	77	NB	35000	1774	5.1%	1000	2.9%	2774	7.9%
35	I	35W	NB	53000	3694	7.0%	3200	6.0%	6894	13.0%
36	MN	55	B	28000	1586	5.7%	1250	4.5%	2836	10.1%
38	I	94	B	168000	5689	3.4%	8700	5.2%	14389	8.6%
39	I	94	NB	60000	3913	6.5%	2400	4.0%	6313	10.5%
40	I	94/694	WB	64500	3936	6.1%	4250	6.6%	8186	12.7%
41	I	694	WB	67000	3999	6.0%	3800	5.7%	7799	11.6%
42	I	694	WB	56500	3142	5.6%	3200	5.7%	6342	11.2%
43	I	35W	SB	46500	3235	7.0%	2375	5.1%	5610	12.1%
44	US	10	B	43000	2759	6.4%	1450	3.4%	4209	9.8%
45	MN	65	B	36000	2295	6.4%	1400	3.9%	3695	10.3%
46	MN	252	NB	25500	1982	7.8%	700	2.7%	2682	10.5%
47	US	10	B	68000	4080	6.0%	2800	4.1%	6880	10.1%
48	MN	65	B	35000	2238	6.4%	1350	3.9%	3588	10.3%
49	I	35	B	65000	3211	4.9%	3000	4.6%	6211	9.6%
51	I	694	B	110000	6525	5.9%	5900	5.4%	12425	11.3%
52	I	694	B	95000	7192	7.6%	5600	5.9%	12792	13.5%
53	I	35E	B	69000	3599	5.2%	2800	4.1%	6399	9.3%
54	I	35E	B	114000	5819	5.1%	6500	5.7%	12319	10.8%
55	I	35W	B	111000	6749	6.1%	6100	5.5%	12849	11.6%
56	MN	51	EB	20500	716	3.5%	725	3.5%	1441	7.0%
57	MN	36	B	88000	3252	3.7%	2600	3.0%	5852	6.7%
58	I	35E	NB	63000	3843	6.1%	2700	4.3%	6543	10.4%
59	MN	36	B	32000	2557	8.0%	1200	3.8%	3757	11.7%
60	I	694	NB	33000	2182	6.6%	2075	6.3%	4257	12.9%
61	MN	36	B	42000	2520	6.0%	1350	3.2%	3870	9.2%
62	I	94	WB	53500	2734	5.1%	1750	3.3%	4484	8.4%
63	I	94	B	61000	3122	5.1%	5400	8.9%	8522	14.0%
64	I	494	B	65000	4332	6.7%	5400	8.3%	9732	15.0%
65	US	10 & 61	B	31500	1763	5.6%	1600	5.1%	3363	10.7%
66	US	52	NB	27000	1669	6.2%	2050	7.6%	3719	13.8%
67	I	35E	SB	34500	1834	5.3%	1100	3.2%	2934	8.5%
68	MN	55	EB	11000	1485	13.5%	900	8.2%	2385	21.7%
69	I	494	WB	47000	3086	6.5%	3000	6.4%	6086	12.9%
70	I	35E	NB	41500	2028	4.9%	1225	3.0%	3253	7.8%
71	MN	55	B	15600	917	5.9%	1100	7.1%	2017	12.9%
72	MN	110	WB	45500	2191	4.8%	3050	6.7%	5241	11.5%
74	US	52	B	42000	2438	5.8%	3700	8.8%	6138	14.6%
75	US	61	NB	25000	1434	5.7%	1050	4.2%	2484	9.9%
76	US	52	B	24900	1477	5.9%	2300	9.2%	3777	15.2%
77	US	61	B	28000	1771	6.3%	1200	4.3%	2971	10.6%
78	US	12	B	26000	2096	8.1%	975	3.8%	3071	11.8%
79	US	10	B	12500	871	7.0%	550	4.4%	1421	11.4%
80	MN	47	B	35500	2053	5.8%	675	1.9%	2728	7.7%
81	US	61	B	29000	2563	8.8%	900	3.1%	3463	11.9%
82	US	52	B	20500	1840	9.0%	800	3.9%	2640	12.9%
84	MN	62	B	61000	3412	5.6%	1900	3.1%	5312	8.7%
85	MN	5	NB	36500	1159	3.2%	2000	5.5%	3159	8.7%
86	MN	101	B	39500	4353	11.0%	6300	15.9%	10653	27.0%
87	MN	13	EB	12500	1052	8.4%	438	3.5%	1490	11.9%
88	MN	41	B	18900	2337	12.4%	2400	12.7%	4737	25.1%
89	MN	55	B	35000	2869	8.2%	2300	6.6%	5169	14.8%
90	MN	55	B	14100	948	6.7%	500	3.5%	1448	10.3%
WEIGHTED AVERAGE						5.9%	2644	5.3%	5628	11.2%

<sup>(1)</sup> Source: 1998 Mn/DOT Metro Area Traffic Flow Map<sup>(2)</sup> For purposes of calculating LCV percent, ADTs and HCADTs were divided by two at locations where LCVs were counted in only one direction.



0 1 2 3 4 Miles

November 4, 1999

# 1999 Light Commercial Vehicle Volumes

Minnesota Department of Transportation

## LIGHT COMMERCIAL VEHICLE INVENTORY

FIGURE

10

## Light Commercial Vehicles (LCVs) by Facility Type and Volume Group

The following analysis of the LCV data is an attempt to understand how the LCV component of total vehicular traffic changes as LCV volumes increase. Tables 6 and 7 show the sample size and average LCV volume by volume group and by facility type. Table 8 and Figure 11 show the corresponding percent LCV of ADT. Several points are worth noting:

- The minimum LCV daily volume recorded on expressways was 850, and the maximum was 4,400. In contrast, the minimum LCV volume recorded on freeways was 2,300 and the maximum was 9,800.
- The LCV percent of ADT (Table 8) is higher on expressways than on freeways, and is due primarily to the higher range of ADTs found on freeways. The range of LCV percent on expressways is 6.5 to 9.0, while on freeways it is 5.1 to 7.2 percent.
- Figure 11 shows that, in general, as LCV volumes increase the percent LCV of ADT also increases, regardless of ADT volume or facility type.

**TABLE 6**  
**NUMBER OF STATIONS BY LCV VOLUME GROUP AND FACILITY TYPE**

Facility Type	LCV VOLUME GROUP						Total
	<1,000	1,001-2,000	2,001-4,000	4,001-6,000	6,001-8,000	>8,001	
Freeway	--	--	14	19	14	2	49
Expressway	3	10	22	2	--	--	37
Total	3	10	36	21	14	2	86

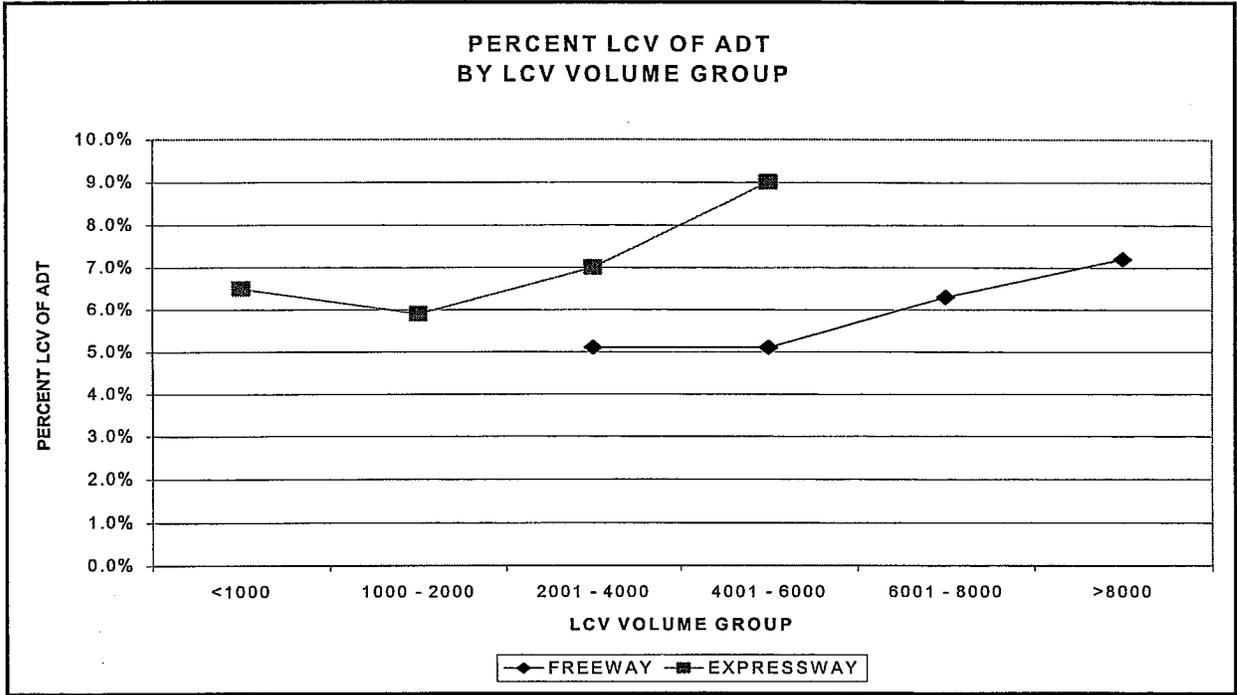
**TABLE 7**  
**AVERAGE LCV VOLUME BY LCV VOLUME GROUP AND FACILITY TYPE**

Facility Type	LCV Volume Group						Average
	<1,000	1,001-2,000	2,001-4,000	4,001-6,000	6,001-8,000	>8,001	
Freeway	--	--	3,211	4,946	7,018	9,288	5,220
Expressway	912	1,592	2,642	4,252	--	--	2,305
Total	912	1,592	2,863	4,880	7,018	9,288	3,965

**TABLE 8**  
**PERCENT LCV OF ADT BY LCV VOLUME GROUP AND FACILITY TYPE**

Facility Type	LCV Volume Group						Average
	<1,000	1,001-2,000	2,001-4,000	4,001-6,000	6,001-8,000	>8,001	
Freeway	--	--	5.1%	5.1%	6.3%	7.2%	5.6%
Expressway	6.5%	5.9%	7.0%	9.0%	--	--	6.9%
Total	6.5%	5.9%	6.1%	5.3%	6.3%	7.2%	5.9%

FIGURE 11



## Light Commercial Vehicle (LCV) Percent of ADT by Daily Traffic Volume Group

This section analyzes how LCV volumes vary with total vehicular traffic. Daily traffic has been divided in groups of 20,000 ADT for purposes of this analysis. Tables 9 and 10 show the number of LCV segments examined and the average LCV volumes by ADT volume group. Table 11 and Figure 12 show the corresponding LCV percent of ADT by ADT volume group and facility type. Some observations follow.

- The LCV percent of daily traffic on expressways declines as ADT increases (from 8.5 percent on roads with ADTs below 20,000 daily trips to 4.4 percent on roads with 80-100,000 daily trips). This inverse relationship is almost linear. Interestingly, the ADT on expressway segments examined carry less than 60,000 trips per day with one exception. TH 36, west of Victoria Street, has an ADT of 88,000 and carries 3,250 LCVs. However, this is in a transition area from expressway to freeway design.
- The LCV percent of daily traffic on freeways, by contrast, is fairly uniform across ADT volume changes. The highest percent is 5.6 and the lowest is 4.4, a range of only 1.2 percent.

These are very interesting findings. The implications are that (1) LCV volumes on expressways can be estimated if the daily traffic is known; and (2) LCV volumes on freeways can be estimated simply by taking a constant percent of the ADT volume.

**TABLE 9**  
**TOTAL STATIONS BY ADT VOLUME GROUP AND FACILITY TYPE**

Facility Type	ADT Volume Group (x1,000)								Total
	<20	20-40	40-60	60-80	80-100	100-120	120-140	>140	
Freeway	0	0	5	13	14	9	5	3	49
Expressway	5	22	9	0	1	0	0	0	37
Total	5	22	14	13	15	9	5	3	86

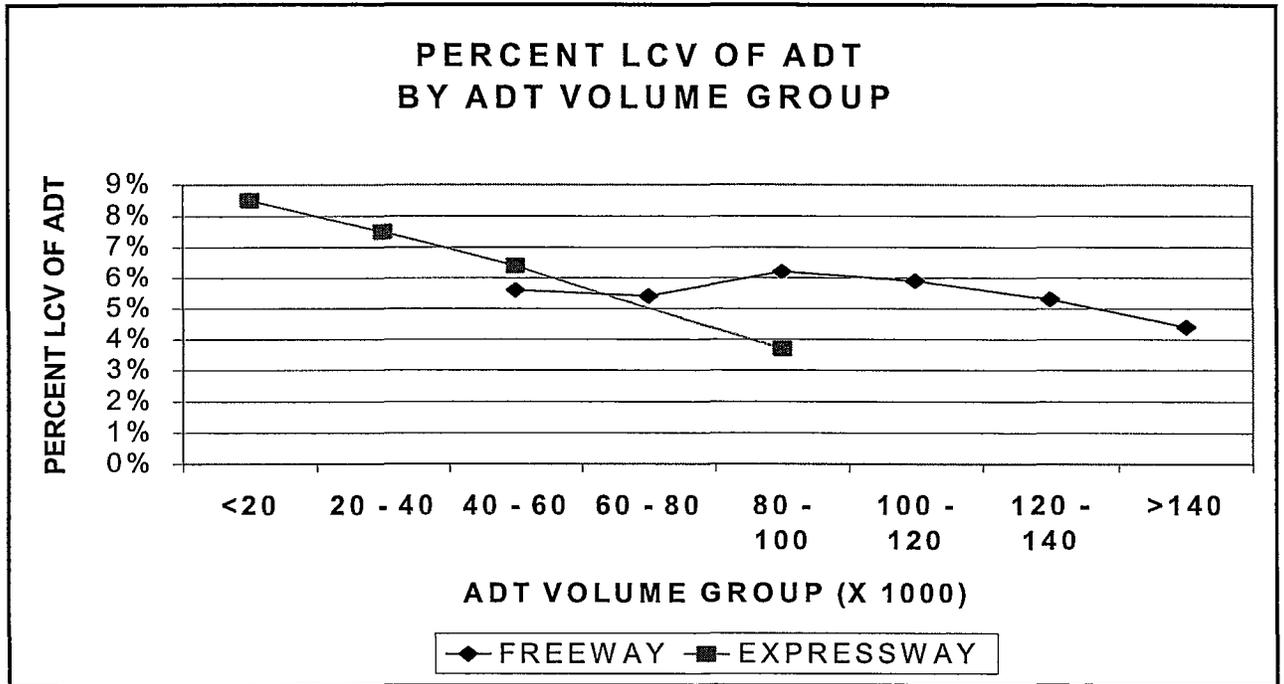
**TABLE 10**  
**AVERAGE LCV VOLUME BY LCV VOLUME GROUP AND FACILITY TYPE**

Facility Type	ADT Volume Group (x1,000)								Total
	<20	20-40	40-60	60-80	80-100	100-120	120-140	>140	
Freeway	--	--	2,851	3,744	5,616	6,537	6,922	6,920	5,220
Expressway	1,286	2,222	2,968	--	3,252	--	--	--	2,305
Total	1,286	2,222	2,926	3,744	5,458	6,537	6,922	6,920	3,965

**TABLE 11**  
**PERCENT LCV OF ADT BY ADT VOLUME GROUP AND FACILITY TYPE**

Facility Type	ADT Volume Group (x1,000)								Total
	<20	20-40	40-60	60-80	80-100	100-120	120-140	>140	
Freeway	--	--	5.6%	5.4%	6.2%	5.9%	5.3%	4.4%	5.9%
Expressway	8.5%	7.5%	6.4%	--	3.7%	--	--	--	6.9%
Total	8.5%	7.5%	6.1%	5.4%	6.0%	5.9%	5.3%	4.4%	5.9%

FIGURE 12



## Heavy Commercial Vehicles (HCVs) by Facility Type and Volume Group

A similar analysis as that done for LCVs was conducted for HCVs. The results are shown in Tables 12, 13 and 14 and in Figure 13. Findings:

- The HCV percent of ADT for expressways ranges from 3.4 to 15.9. Figure 13 shows that, as HCV volumes increase, the percent HCV of ADT increases at an increasing rate. It should be noted that in almost all segments examined, HCV volumes on expressways ranged from 500 to 2,600 vehicles per day. The exception is TH 101 west of TH 13 where the daily volume of HCVs is 6,300 (15.9 percent of the 39,500 ADT at that location).
- For freeways, the HCV percent of ADT ranges from 2.8 to 5.8. Figure 13 shows that as HCV volumes increase up to about 5,000 daily trips the HCV percent of ADT increases at a slight rate. The HCV percent of ADT is constant for HCV volumes in excess of 5,000.

**TABLE 12**  
**NUMBER OF STATIONS BY HCV VOLUME GROUP AND FACILITY TYPE**

Facility Type	HCV VOLUME GROUP						Total
	<1,000	1,001-2,000	2,001-4,000	4,001-6,000	6,001-8,000	>8,001	
Freeway	--	4	14	16	13	2	49
Expressway	8	19	9	--	1	--	37
Total	8	23	23	16	14	2	86

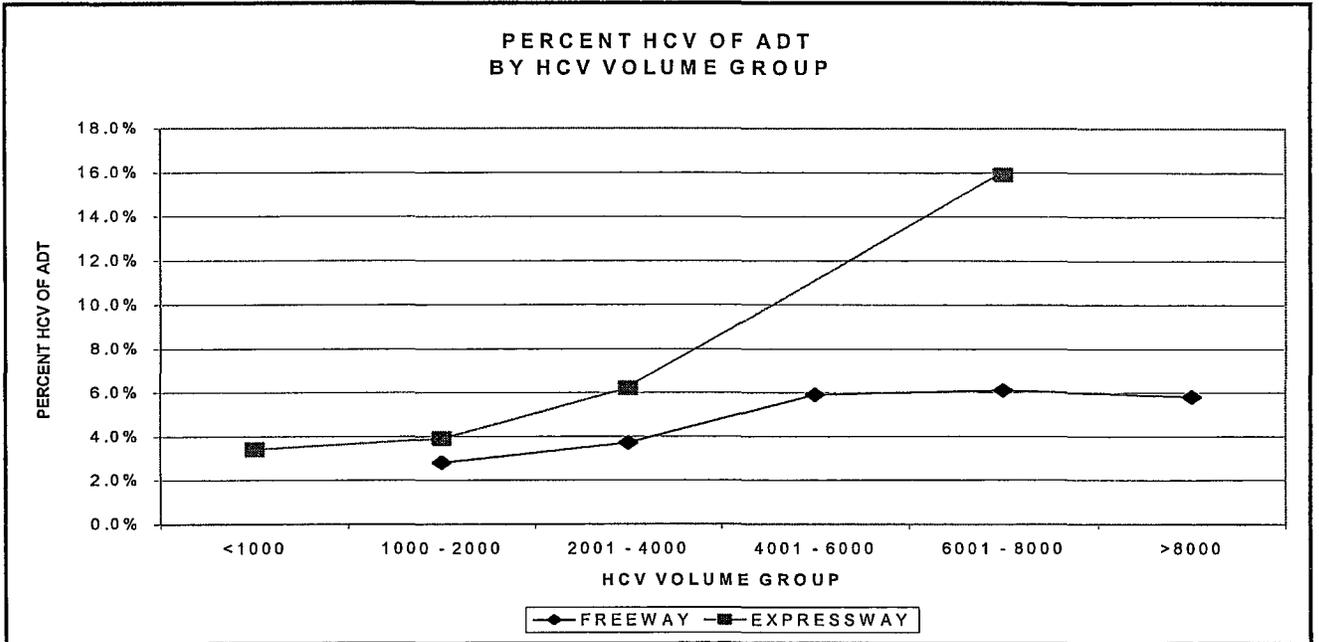
**TABLE 13**  
**AVERAGE HCV VOLUME BY HCV VOLUME GROUP AND FACILITY TYPE**

Facility Type	HCV Volume Group						Average
	<1,000	1,001-2,000	2,001-4,000	4,001-6,000	6,001-8,000	>8,001	
Freeway	--	1,787	2,971	5,212	6,819	8,600	4,857
Expressway	745	1,342	2,436	--	6,300	--	1,612
Average	745	1,419	2,761	5,212	6,782	8,600	3,461

**TABLE 14**  
**PERCENT HCV OF ADT BY HCV VOLUME GROUP AND FACILITY TYPE**

Facility Type	HCV Volume Group						Average
	<1,000	1,001-2,000	2,001-4,000	4,001-6,000	6,001-8,000	>8,001	
Freeway	--	2.8%	3.7%	5.9%	6.1%	5.8%	5.2%
Expressway	3.4%	3.9%	6.2%	--	15.9%	--	4.8%
Total	3.4%	3.6%	4.3%	5.9%	6.3%	5.8%	5.2%

FIGURE 13



## **APPENDIX A**

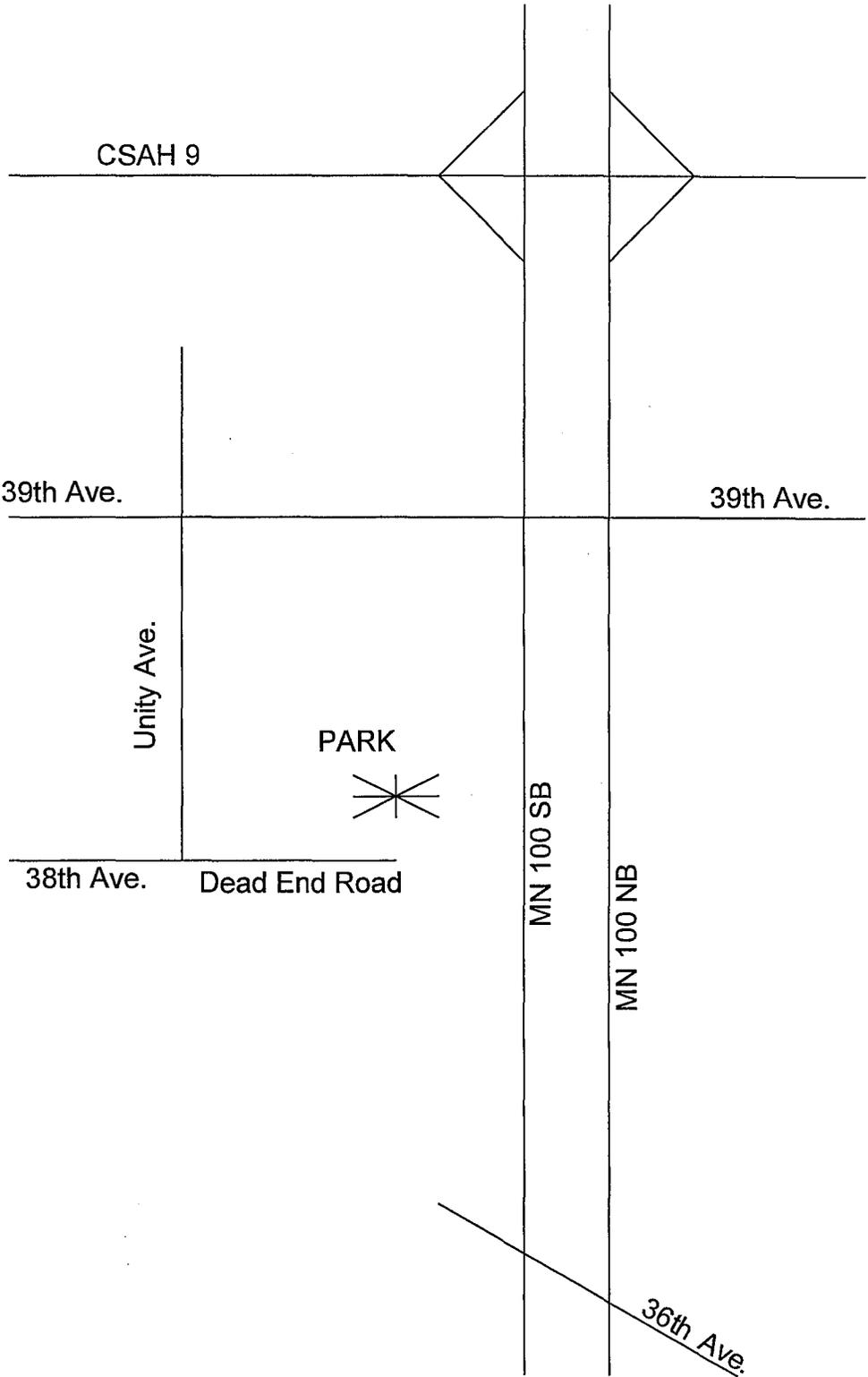
### **STATION BY FACILITY TYPE AND AREA TYPE**

STATION	TYPE	ROAD	FACILITY	AREA
1	US	10/169	EXPRESSWAY	CORDON LINE
2	MN	101	EXPRESSWAY	CORDON LINE
3	I	94	FREEWAY	CORDON LINE
4	I	94	FREEWAY	OUTSIDE
5	US	169	FREEWAY	OUTSIDE
6	I	94/694	FREEWAY	RING
7	I	94/694	FREEWAY	RING
8	MN	100	EXPRESSWAY	INSIDE
9	US	169	FREEWAY	INSIDE
10	I	494	FREEWAY	RING
11	MN	55	EXPRESSWAY	OUTSIDE
12	MN	55	EXPRESSWAY	INSIDE
13	I	394	FREEWAY	INSIDE
14	US	169	FREEWAY	INSIDE
15	US	12	FREEWAY	OUTSIDE
16	I	494	FREEWAY	RING
17	MN	7	EXPRESSWAY	CORDON LINE
18	I	494	FREEWAY	RING
19	US	212	FREEWAY	INSIDE
20	MN	100	FREEWAY	INSIDE
21	MN	62	FREEWAY	INSIDE
22	MN	5	EXPRESSWAY	CORDON LINE
23	MN	5	EXPRESSWAY	OUTSIDE
24	US	212	EXPRESSWAY	OUTSIDE
25	I	494	FREEWAY	RING
26	US	169	EXPRESSWAY	OUTSIDE
27	US	212	EXPRESSWAY	CORDON LINE
28	US	169	EXPRESSWAY	CORDON LINE
29	I	35	FREEWAY	CORDON LINE
30	I	35W	FREEWAY	OUTSIDE
31	MN	77	FREEWAY	OUTSIDE
32	I	494	FREEWAY	RING
33	I	494	FREEWAY	RING
34	MN	77	FREEWAY	INSIDE
35	I	35W	FREEWAY	INSIDE
36	MN	55	EXPRESSWAY	INSIDE
38	I	94	FREEWAY	INSIDE
39	I	94	FREEWAY	INSIDE
40	I	94/694	FREEWAY	RING
41	I	694	FREEWAY	RING
42	I	694	FREEWAY	RING
43	I	35W	FREEWAY	OUTSIDE
44	US	10	EXPRESSWAY	OUTSIDE
45	MN	65	EXPRESSWAY	OUTSIDE
46	MN	252	EXPRESSWAY	OUTSIDE
47	US	10	FREEWAY	OUTSIDE
48	MN	65	EXPRESSWAY	CORDON LINE
49	I	35	FREEWAY	CORDON LINE
51	I	694	FREEWAY	RING
52	I	694	FREEWAY	RING
53	I	35E	FREEWAY	OUTSIDE
54	I	35E	FREEWAY	RING
55	I	35W	FREEWAY	INSIDE
56	MN	51	EXPRESSWAY	INSIDE
57	MN	36	EXPRESSWAY	INSIDE
58	I	35E	FREEWAY	INSIDE
59	MN	36	EXPRESSWAY	INSIDE
60	I	694	FREEWAY	RING
61	MN	36	EXPRESSWAY	CORDON LINE
62	I	94	FREEWAY	INSIDE
63	I	94	FREEWAY	CORDON LINE
64	I	494	FREEWAY	RING
65	US	10 & 61	EXPRESSWAY	INSIDE
66	US	52	FREEWAY	INSIDE
67	I	35E	FREEWAY	INSIDE
68	MN	55	EXPRESSWAY	INSIDE
69	I	494	FREEWAY	RING
70	I	35E	FREEWAY	OUTSIDE
71	MN	55	EXPRESSWAY	OUTSIDE
72	MN	110	FREEWAY	RING
74	US	52	FREEWAY	OUTSIDE
75	US	61	EXPRESSWAY	OUTSIDE
76	US	52	EXPRESSWAY	CORDON LINE
77	US	61	EXPRESSWAY	CORDON LINE
78	US	12	EXPRESSWAY	CORDON LINE
79	US	10	EXPRESSWAY	CORDON LINE
80	MN	47	EXPRESSWAY	OUTSIDE
81	US	61	EXPRESSWAY	OUTSIDE
82	US	52	EXPRESSWAY	INSIDE
84	MN	62	FREEWAY	INSIDE
85	MN	5	FREEWAY	INSIDE
86	MN	101	EXPRESSWAY	OUTSIDE
87	MN	13	EXPRESSWAY	OUTSIDE
88	MN	41	EXPRESSWAY	OUTSIDE
89	MN	55	EXPRESSWAY	INSIDE
90	MN	55	EXPRESSWAY	CORDON LINE

## **APPENDIX B**

### **SAMPLE OF STATION LOCATION LAYOUT**

STATION 8





**STATION**  
**18**

**APPENDIX C**

**FACTORS USED TO EXPAND 12- AND 16-HOUR COUNTS  
TO 24 HOURS**

TIME	ADT %	LCV %	1 NB	1 SB	1 VOL	2 NB	2 SB	2 VOL	3 NB	3 SB	3 VOL	4 NB	4 SB	4 VOL	5 NB	5 SB	5 VOL	6 NB	6 SB	6 VOL	7 NB	7 SB	7 VOL	8 NB	8 SB	8 VOL	9 NB	9 SB	9 VOL	10 NB	10 SB	10 VOL	11 NB	11 SB	11 VOL
0:00	0.002250	0.005000	0	0	60	0	0	77	1	1	115	1	1	187	1	1	119	1	1	196	1	1	225	1	1	124	1	1	207	1	1	169	0	0	63
0:15	0.002250	0.005000	0	0	60	0	0	77	1	1	115	1	1	187	1	1	119	1	1	196	1	1	225	1	1	124	1	1	207	1	1	169	0	0	63
0:30	0.002250	0.005000	0	0	60	0	0	77	1	1	115	1	1	187	1	1	119	1	1	196	1	1	225	1	1	124	1	1	207	1	1	169	0	0	63
0:45	0.002250	0.005000	0	0	60	0	0	77	1	1	115	1	1	187	1	1	119	1	1	196	1	1	225	1	1	124	1	1	207	1	1	169	0	0	63
1:00	0.001500	0.005000	0	0	40	0	0	51	0	0	77	1	1	125	0	0	80	1	1	131	1	1	150	0	83	1	138	1	113	0	0	42			
1:15	0.001500	0.005000	0	0	40	0	0	51	0	0	77	1	1	125	0	0	80	1	1	131	1	1	150	0	83	1	138	1	113	0	0	42			
1:30	0.001500	0.005000	0	0	40	0	0	51	0	0	77	1	1	125	0	0	80	1	1	131	1	1	150	0	83	1	138	1	113	0	0	42			
1:45	0.001500	0.005000	0	0	40	0	0	51	0	0	77	1	1	125	0	0	80	1	1	131	1	1	150	0	83	1	138	1	113	0	0	42			
2:00	0.001000	0.005000	0	0	27	0	0	34	0	0	51	0	0	83	0	0	53	0	87	1	1	100	0	55	0	92	0	75	0	0	28				
2:15	0.001000	0.005000	0	0	27	0	0	34	0	0	51	0	0	83	0	0	53	0	87	1	1	100	0	55	0	92	0	75	0	0	28				
2:30	0.001000	0.005000	0	0	27	0	0	34	0	0	51	0	0	83	0	0	53	0	87	1	1	100	0	55	0	92	0	75	0	0	28				
2:45	0.001000	0.005000	0	0	27	0	0	34	0	0	51	0	0	83	0	0	53	0	87	1	1	100	0	55	0	92	0	75	0	0	28				
3:00	0.001000	0.005000	0	0	27	0	0	34	0	0	51	0	0	83	0	0	53	0	87	1	1	100	0	55	0	92	0	75	0	0	28				
3:15	0.001000	0.005000	0	0	27	0	0	34	0	0	51	0	0	83	0	0	53	0	87	1	1	100	0	55	0	92	0	75	0	0	28				
3:30	0.001000	0.005000	0	0	27	0	0	34	0	0	51	0	0	83	0	0	53	0	87	1	1	100	0	55	0	92	0	75	0	0	28				
3:45	0.001000	0.005000	0	0	27	0	0	34	0	0	51	0	0	83	0	0	53	0	87	1	1	100	0	55	0	92	0	75	0	0	28				
4:00	0.002000	0.040000	2	2	53	3	3	69	4	4	102	7	7	166	4	4	106	7	174	8	8	200	4	110	7	184	6	150	2	2	56				
4:15	0.002000	0.040000	2	2	53	3	3	69	4	4	102	7	7	166	4	4	106	7	174	8	8	200	4	110	7	184	6	150	2	2	56				
4:30	0.002000	0.040000	2	2	53	3	3	69	4	4	102	7	7	166	4	4	106	7	174	8	8	200	4	110	7	184	6	150	2	2	56				
4:45	0.002000	0.040000	2	2	53	3	3	69	4	4	102	7	7	166	4	4	106	7	174	8	8	200	4	110	7	184	6	150	2	2	56				
5:00	0.006750	0.040000	7	7	180	9	9	232	14	14	344	22	22	560	14	14	358	23	587	27	27	675	15	371	25	621	20	506	8	8	189				
5:15	0.006750	0.040000	7	7	180	9	9	232	14	14	344	22	22	560	14	14	358	23	587	27	27	675	15	371	25	621	20	506	8	8	189				
5:30	0.006750	0.040000	7	7	180	9	9	232	14	14	344	22	22	560	14	14	358	23	587	27	27	675	15	371	25	621	20	506	8	8	189				
5:45	0.006750	0.040000	7	7	180	9	9	232	14	14	344	22	22	560	14	14	358	23	587	27	27	675	15	371	25	621	20	506	8	8	189				
6:00	0.014500		19	24	387	5	28	497	15	77	740	34	125	1204	13	6	769	56	1262	106	93	1450	78	798	29	1334	22	1088	21	15	406				
6:15	0.014500		18	13	387	15	36	497	10	62	740	38	140	1204	30	13	769	64	1262	111	112	1450	52	768	32	1334	23	1088	41	29	406				
6:30	0.014500		25	21	387	13	58	497	13	75	740	47	128	1204	16	13	769	68	1262	138	106	1450	69	798	46	1334	23	1088	46	39	406				
6:45	0.014500		19	18	387	24	35	497	26	51	740	49	65	1204	15	17	769	64	1262	139	89	1450	42	798	74	1334	40	1088	20	40	406				
7:00	0.016000		11	23	427	16	44	549	32	44	816	42	76	1328	17	11	848	46	1382	95	78	1800	34	880	51	1472	20	1200	34	39	448				
7:15	0.016000		22	19	427	16	24	549	17	37	816	12	60	1328	14	15	848	37	1382	102	78	1800	29	880	43	1472	48	1200	21	28	448				
7:30	0.016000		22	16	427	11	28	549	29	25	816	39	40	1328	23	5	848	42	1382	91	95	1800	19	880	41	1472	37	1200	26	28	448				
7:45	0.016000		24	9	427	15	35	549	20	25	816	48	91	1328	8	13	848	47	1382	73	76	1800	30	880	41	1472	38	1200	8	16	448				
8:00	0.015000		28	26	401	22	23	515	30	26	765	34	86	1245	10	14	795	41	1305	108	99	1500	44	825	40	1380	41	1125	17	11	420				
8:15	0.015000		34	19	401	15	26	515	14	33	765	34	74	1245	7	15	795	58	1305	113	94	1500	44	825	53	1380	54	1125	22	23	420				
8:30	0.015000		23	19	401	20	23	515	17	67	765	45	81	1245	3	9	795	37	1305	108	120	1500	50	825	53	1380	49	1125	30	36	420				
8:45	0.015000		32	22	401	18	24	515	31	77	765	50	115	1245	12	8	795	36	1305	92	94	1500	34	825	41	1380	46	1125	21	48	420				
9:00	0.013000		13	17	347	21	22	446	26	31	663	45	74	1079	14	7	689	44	1131	78	71	1300	31	715	54	1196	50	975	35	37	364				
9:15	0.013000		19	16	347	31	27	446	24	37	663	42	64	1079	12	5	689	55	1131	89	90	1300	49	715	66	1196	40	975	33	36	364				
9:30	0.013000		16	11	347	18	34	446	16	36	663	51	51	1079	10	9	689	33	1131	103	60	1300	43	715	43	1196	51	975	37	20	364				
9:45	0.013000		11	15	347	30	28	446	19	22	663	43	38	1079	14	10	689	29	1131	86	65	1300	33	715	34	1196	42	975	19	43	364				
10:00	0.012750		24	7	340	37	26	437	16	27	650	59	57	1058	15	4	676	34	1109	69	96	1275	46	701	49	1173	45	956	21	27	357				
10:15	0.012750		19	2	340	22	14	437	14	35	650	23	45	1058	11	9	676	28	1109	102	95	1275	28	701	49	1173	37	956	19	24	357				
10:30	0.012750		18	4	340	28	13	437	25	29	650	40	59	1058	23	6	676	29	1109	79	81	1275	37	701	61	1173	28	956	28	8	357				
10:45	0.012750		16	25	340	17	17	437	30	20	650	55	103	1058	21	18	676	27	1109	89	88	1275	39	701	52	1173	40	956	13	23	357				
11:00	0.013750		10	33	367	17	15	472	27	33	701	35	72	1141	19	16	729	38	1196	81	79	1375	27	756	40	1265	34	1031	9	33	385				
11:15	0.013750		53	33	367	25	13	472	16	33	701	53	59	1141	19	14	729	43	1196	83	80	1375	35	756	38	1265	48	1031	23	25	385				
11:30	0.013750		11	5	367	22	15	472	19	29	701	37	54	1141	26	15	729	35	1196	68	80	1375	38	756	38	1265	49	1031	10	33	385				
11:45	0.013750		11	8	367	23	15	472	11	24	701	24	26	1141	20	13	729	28	1196	71	70	1375	30	756	22	1265	42	1031	37	43	385				
12:00	0.014250		12	15	380	29	17	489	17	23	727	39	57	1183	19	19	755	37	1240	71	66	1425	27	784	29	1311	35	1069	18	22	399				
12:15	0.014250		18	21	380	40	17	489	15	22																									

TIME	ADT %	LCV %	12 EB	12 WB	12 VOL	13 EB	13 VOL	14 SB	14 VOL	15 EB	15 WB	15 VOL	16 SB	16 VOL	17 EB	17 WB	17 VOL	18 NB	18 SB	18 VOL	19 NB	19 VOL	20 VOL	20 VOL	21 EB	21 WB	21 VOL	22	22	22
0:00	0.002250	0.005000	0	0	77	2	322	1	205	1	1	164	1	214	1	1	109	1	1	182	1	119	1	250	1	214	0	0	63	
0:15	0.002250	0.005000	0	0	77	2	322	1	205	1	1	164	1	214	1	1	109	1	1	182	1	119	1	250	1	214	0	0	63	
0:30	0.002250	0.005000	0	0	77	2	322	1	205	1	1	164	1	214	1	1	109	1	1	182	1	119	1	250	1	214	0	0	63	
0:45	0.002250	0.005000	0	0	77	2	322	1	205	1	1	164	1	214	1	1	109	1	1	182	1	119	1	250	1	214	0	0	63	
1:00	0.001500	0.005000	0	0	51	1	215	1	137	1	1	110	1	143	0	0	73	1	1	122	0	80	1	167	1	1	143	0	0	42
1:15	0.001500	0.005000	0	0	51	1	215	1	137	1	1	110	1	143	0	0	73	1	1	122	0	80	1	167	1	1	143	0	0	42
1:30	0.001500	0.005000	0	0	51	1	215	1	137	1	1	110	1	143	0	0	73	1	1	122	0	80	1	167	1	1	143	0	0	42
1:45	0.001500	0.005000	0	0	51	1	215	1	137	1	1	110	1	143	0	0	73	1	1	122	0	80	1	167	1	1	143	0	0	42
2:00	0.001000	0.005000	0	0	34	1	143	0	91	0	0	73	0	95	0	0	49	0	0	81	0	53	1	111	0	0	95	0	0	28
2:15	0.001000	0.005000	0	0	34	1	143	0	91	0	0	73	0	95	0	0	49	0	0	81	0	53	1	111	0	0	95	0	0	28
2:30	0.001000	0.005000	0	0	34	1	143	0	91	0	0	73	0	95	0	0	49	0	0	81	0	53	1	111	0	0	95	0	0	28
2:45	0.001000	0.005000	0	0	34	1	143	0	91	0	0	73	0	95	0	0	49	0	0	81	0	53	1	111	0	0	95	0	0	28
3:00	0.001000	0.005000	0	0	34	1	143	0	91	0	0	73	0	95	0	0	49	0	0	81	0	53	1	111	0	0	95	0	0	28
3:15	0.001000	0.005000	0	0	34	1	143	0	91	0	0	73	0	95	0	0	49	0	0	81	0	53	1	111	0	0	95	0	0	28
3:30	0.001000	0.005000	0	0	34	1	143	0	91	0	0	73	0	95	0	0	49	0	0	81	0	53	1	111	0	0	95	0	0	28
3:45	0.001000	0.005000	0	0	34	1	143	0	91	0	0	73	0	95	0	0	49	0	0	81	0	53	1	111	0	0	95	0	0	28
4:00	0.002000	0.040000	3	3	68	11	286	7	182	6	6	146	8	190	4	4	97	6	6	162	4	106	9	222	8	8	190	2	2	56
4:15	0.002000	0.040000	3	3	68	11	286	7	182	6	6	146	8	190	4	4	97	6	6	162	4	106	9	222	8	8	190	2	2	56
4:30	0.002000	0.040000	3	3	68	11	286	7	182	6	6	146	8	190	4	4	97	6	6	162	4	106	9	222	8	8	190	2	2	56
4:45	0.002000	0.040000	3	3	68	15	286	7	182	6	6	146	8	190	4	4	97	6	6	162	4	106	9	222	8	8	190	2	2	56
5:00	0.006750	0.040000	9	9	230	20	965	25	614	20	20	493	26	641	13	13	327	12	15	547	14	358	12	749	11	15	641	8	8	189
5:15	0.006750	0.040000	9	9	230	22	965	25	614	20	20	493	26	641	13	13	327	12	15	547	14	358	11	749	15	15	641	8	8	189
5:30	0.006750	0.040000	9	9	230	25	965	25	614	20	20	493	26	641	13	13	327	12	15	547	14	358	15	749	12	14	641	8	8	189
5:45	0.006750	0.040000	6	5	230	26	965	25	614	20	20	493	26	641	13	13	327	12	15	547	14	358	20	749	20	26	641	8	8	189
6:00	0.014500		3	4	493	27	2074	34	1320	32	10	1059	27	1378	15	10	703	27	24	1175	3	769	17	1610	15	19	1378	11	5	406
6:15	0.014500		6	8	493	47	2074	44	1320	51	19	1059	34	1378	29	20	703	45	27	1175	18	769	16	1610	31	23	1378	18	6	406
6:30	0.014500		17	13	493	31	2074	44	1320	58	27	1059	70	1378	42	24	703	51	34	1175	19	769	23	1610	38	40	1378	28	10	406
6:45	0.014500		29	8	493	57	2074	48	1320	35	25	1059	73	1378	31	20	703	68	47	1175	29	769	43	1610	33	34	1378	24	13	406
7:00	0.016000		26	8	544	38	2288	55	1456	38	16	1168	60	1520	31	33	776	60	44	1296	22	848	26	1776	26	30	1520	23	7	448
7:15	0.016000		20	16	544	26	2288	52	1456	37	24	1168	58	1520	28	26	776	59	30	1296	20	848	35	1776	26	44	1520	15	11	448
7:30	0.016000		17	9	544	22	2288	34	1456	36	21	1168	54	1520	28	31	776	44	39	1296	17	848	39	1776	28	31	1520	25	12	448
7:45	0.016000		28	15	544	35	2288	37	1456	24	20	1168	43	1520	36	36	776	52	28	1296	23	848	39	1776	27	18	1520	15	4	448
8:00	0.015000		24	20	510	41	2145	45	1365	39	52	1095	75	1425	35	38	728	51	26	1215	32	795	39	1665	29	42	1425	15	8	420
8:15	0.015000		25	26	510	46	2145	64	1365	43	44	1095	97	1425	36	40	728	44	29	1215	42	795	44	1665	39	40	1425	15	9	420
8:30	0.015000		27	19	510	47	2145	54	1365	21	58	1095	72	1425	37	41	728	56	30	1215	27	795	35	1665	52	38	1425	23	8	420
8:45	0.015000		37	29	510	58	2145	84	1365	14	41	1095	72	1425	30	50	728	66	31	1215	44	795	54	1665	48	36	1425	18	10	420
9:00	0.013000		31	29	442	42	1859	55	1183	31	46	949	105	1235	24	48	631	51	33	1053	30	689	60	1443	47	37	1235	33	10	364
9:15	0.013000		24	27	442	49	1859	61	1183	38	33	949	101	1235	33	47	631	49	39	1053	27	689	60	1443	61	73	1235	17	17	364
9:30	0.013000		45	24	442	59	1859	68	1183	42	54	949	87	1235	34	41	631	49	43	1053	23	689	64	1443	54	46	1235	18	15	364
9:45	0.013000		25	22	442	64	1859	55	1183	41	54	949	53	1235	29	34	631	45	52	1053	28	689	56	1443	51	36	1235	14	16	364
10:00	0.012750		32	32	434	79	1823	58	1160	52	32	931	81	1211	33	41	618	60	27	1033	27	676	56	1415	18	8	1211	28	21	357
10:15	0.012750		34	29	434	86	1823	62	1160	36	32	931	65	1211	40	49	618	55	33	1033	33	676	41	1415	23	21	1211	15	20	357
10:30	0.012750		27	34	434	79	1823	49	1160	41	44	931	68	1211	38	34	618	53	29	1033	44	676	41	1415	36	27	1211	14	17	357
10:45	0.012750		33	31	434	80	1823	74	1160	32	34	931	67	1211	37	52	618	46	34	1033	29	676	33	1415	48	39	1211	22	23	357
11:00	0.013750		17	20	468	61	1966	47	1251	34	29	1004	61	1306	31	33	667	46	33	1114	27	729	53	1528	53	44	1306	16	22	385

TIME	ADT %	LCV %	23	23	24	24	25	25	26	26	26	27	27	27	28	28	28	29	29	29	30	30	31	31	32	32	32	33	33	33	
			VOL	VOL	VOL	VOL	NB	NB	SB	SB	VOL	EB	WB	VOL	NB	SB	VOL	NB	SB	VOL	NB	SB	VOL	NB	EB	WB	VOL	EB	WB	VOL	
0:00	0.002250	0.005000	1	101	0	56	1	277	0	0	95	0	0	34	0	0	63	1	1	180	1	1	234	1	218	2	2	358	2	2	308
0:15	0.002250	0.005000	1	101	0	56	1	277	0	0	95	0	0	34	0	0	63	1	1	180	1	1	234	1	218	2	2	358	2	2	308
0:30	0.002250	0.005000	1	101	0	56	1	277	0	0	95	0	0	34	0	0	63	1	1	180	1	1	234	1	218	2	2	358	2	2	308
0:45	0.002250	0.005000	1	101	0	56	1	277	0	0	95	0	0	34	0	0	63	1	1	180	1	1	234	1	218	2	2	358	2	2	308
1:00	0.001500	0.005000	0	88	0	38	1	185	0	0	63	0	0	23	0	0	42	1	1	120	1	1	156	1	146	1	1	239	1	1	206
1:15	0.001500	0.005000	0	88	0	38	1	185	0	0	63	0	0	23	0	0	42	1	1	120	1	1	156	1	146	1	1	239	1	1	206
1:30	0.001500	0.005000	0	88	0	38	1	185	0	0	63	0	0	23	0	0	42	1	1	120	1	1	156	1	146	1	1	239	1	1	206
1:45	0.001500	0.005000	0	88	0	38	1	185	0	0	63	0	0	23	0	0	42	1	1	120	1	1	156	1	146	1	1	239	1	1	206
2:00	0.001000	0.005000	0	45	0	25	1	123	0	0	42	0	0	15	0	0	28	0	0	80	1	1	104	0	97	1	1	159	1	1	137
2:15	0.001000	0.005000	0	45	0	25	1	123	0	0	42	0	0	15	0	0	28	0	0	80	1	1	104	0	97	1	1	159	1	1	137
2:30	0.001000	0.005000	0	45	0	25	1	123	0	0	42	0	0	15	0	0	28	0	0	80	1	1	104	0	97	1	1	159	1	1	137
2:45	0.001000	0.005000	0	45	0	25	1	123	0	0	42	0	0	15	0	0	28	0	0	80	1	1	104	0	97	1	1	159	1	1	137
3:00	0.001000	0.005000	0	45	0	25	1	123	0	0	42	0	0	15	0	0	28	0	0	80	1	1	104	0	97	1	1	159	1	1	137
3:15	0.001000	0.005000	0	45	0	25	1	123	0	0	42	0	0	15	0	0	28	0	0	80	1	1	104	0	97	1	1	159	1	1	137
3:30	0.001000	0.005000	0	45	0	25	1	123	0	0	42	0	0	15	0	0	28	0	0	80	1	1	104	0	97	1	1	159	1	1	137
3:45	0.001000	0.005000	0	45	0	25	1	123	0	0	42	0	0	15	0	0	28	0	0	80	1	1	104	0	97	1	1	159	1	1	137
4:00	0.002000	0.040000	4	90	2	50	10	246	3	3	84	1	1	30	2	2	56	6	6	160	8	208	8	194	13	13	318	11	11	274	
4:15	0.002000	0.040000	4	90	2	50	10	246	3	3	84	1	1	30	2	2	56	6	6	160	8	208	8	194	13	13	318	11	11	274	
4:30	0.002000	0.040000	4	90	2	50	10	246	3	3	84	1	1	30	2	2	56	6	6	160	8	208	8	194	13	13	318	11	11	274	
4:45	0.002000	0.040000	4	90	2	50	10	246	3	3	84	1	1	30	2	2	56	6	6	160	8	208	8	194	13	13	318	11	11	274	
5:00	0.006750	0.040000	12	304	7	169	33	830	11	11	284	4	4	101	8	8	189	22	22	540	28	702	26	655	43	43	1073	37	37	925	
5:15	0.006750	0.040000	12	304	7	169	33	830	11	11	284	4	4	101	8	8	189	22	22	540	28	702	26	655	43	43	1073	37	37	925	
5:30	0.006750	0.040000	12	304	7	169	33	830	11	11	284	4	4	101	8	8	189	22	22	540	28	702	26	655	43	43	1073	37	37	925	
5:45	0.006750	0.040000	12	304	7	169	33	830	11	11	284	4	4	101	8	8	189	22	22	540	28	702	26	655	43	43	1073	37	37	925	
6:00	0.014500		8	653	16	363	67	1784	6	2	609	11	1	218	4	3	406	34	11	1160	27	1508	27	1407	74	57	2306	42	19	1987	
6:15	0.014500		18	653	21	363	75	1784	25	4	609	4	3	218	13	7	406	45	34	1160	40	1508	32	1407	80	80	2306	22	18	1987	
6:30	0.014500		20	653	17	363	75	1784	21	6	609	14	3	218	18	9	406	51	24	1160	51	1508	48	1407	85	90	2306	42	19	1987	
6:45	0.014500		21	653	12	363	51	1784	33	16	609	10	8	218	16	14	406	48	32	1160	38	1508	52	1407	88	74	2306	39	21	1987	
7:00	0.016000		18	720	6	400	53	1968	11	33	672	9	8	240	12	14	448	47	32	1280	47	1664	40	1552	75	65	2544	40	20	2192	
7:15	0.016000		13	720	7	400	40	1968	3	12	672	11	3	240	15	14	448	44	22	1280	52	1664	30	1552	85	60	2544	30	8	2192	
7:30	0.016000		27	720	15	400	33	1968	11	10	672	16	4	240	20	13	448	44	23	1280	78	1664	44	1552	88	78	2544	36	15	2192	
7:45	0.016000		24	720	15	400	45	1968	6	6	672	19	8	240	10	11	448	39	15	1280	47	1664	42	1552	70	45	2544	60	8	2192	
8:00	0.015000		24	675	15	375	42	1845	12	12	630	19	6	225	22	13	420	39	28	1200	68	1560	21	1455	81	107	2385	25	14	2055	
8:15	0.015000		25	675	16	375	56	1845	23	16	630	23	19	225	30	19	420	35	30	1200	68	1560	26	1455	89	58	2385	24	6	2055	
8:30	0.015000		22	675	8	375	64	1845	5	6	630	11	6	225	16	18	420	42	37	1200	65	1560	25	1455	57	58	2385	35	20	2055	
8:45	0.015000		27	675	19	375	69	1845	16	15	630	16	15	225	16	18	420	35	40	1200	62	1560	35	1455	128	91	2385	74	42	2055	
9:00	0.013000		29	585	10	325	94	1599	21	27	546	19	19	195	17	21	364	48	42	1040	69	1352	48	1261	78	87	2067	59	65	1781	
9:15	0.013000		32	585	14	325	98	1599	19	20	546	4	10	195	12	17	364	43	34	1040	73	1352	42	1261	107	80	2067	39	32	1781	
9:30	0.013000		25	585	8	325	87	1599	15	17	546	13	11	195	12	12	364	40	28	1040	106	1352	47	1261	95	105	2067	55	26	1781	
9:45	0.013000		29	585	6	325	89	1599	33	49	546	9	4	195	8	10	364	37	20	1040	53	1352	37	1261	72	119	2067	36	15	1781	
10:00	0.012750		26	574	12	319	91	1568	14	34	536	9	3	191	14	17	357	31	29	1020	76	1326	48	1237	99	138	2027	37	36	1747	
10:15	0.012750		39	574	7	319	77	1568	28	17	536	21	3	191	9	14	357	40	45	1020	42	1326	31	1237	92	75	2027	26	28	1747	
10:30	0.012750		36	574	12	319	47	1568	25	6	536	13	4	191	15	19	357	45	34	1020	52	1326	34	1237	136	100	2027	32	47	1747	
10:45	0.012750		31	574	5	319	47	1568	23	6	536	8	10	191	22	16	357	40	49	1020	42	1326	27	1237	130	109	2027	39			

TIME	ADT %	LCV %	34 NB	34 VOL	35 NB	35 VOL	36 NB	36 SB	36 VOL	38 EB	38 WB	38 VOL	39 VOL	39 WB	40 VOL	40 WB	41 VOL	41 WB	42 VOL	42 WB	43 VOL	43 SB	44 VOL	44 NB	44 SB	45 VOL	45 NB	45 SB	46 VOL	46 NB	46 VOL
0:00	0.002250	0.005000	1	158	1	239	0	0	63	2	2	378	1	270	1	290	2	302	1	254	1	209	0	0	97	0	0	81	1	115	
0:15	0.002250	0.005000	1	158	1	239	0	0	63	2	2	378	1	270	1	290	2	302	1	254	1	209	0	0	97	0	0	81	1	115	
0:30	0.002250	0.005000	1	158	1	239	0	0	63	2	2	378	1	270	1	290	2	302	1	254	1	209	0	0	97	0	0	81	1	115	
0:45	0.002250	0.005000	1	158	1	239	0	0	63	2	2	378	1	270	1	290	2	302	1	254	1	209	0	0	97	0	0	81	1	115	
1:00	0.001500	0.005000	1	105	1	159	0	0	42	1	1	252	1	180	1	194	1	201	1	170	1	140	0	0	65	0	0	54	0	77	
1:15	0.001500	0.005000	1	105	1	159	0	0	42	1	1	252	1	180	1	194	1	201	1	170	1	140	0	0	65	0	0	54	0	77	
1:30	0.001500	0.005000	1	105	1	159	0	0	42	1	1	252	1	180	1	194	1	201	1	170	1	140	0	0	65	0	0	54	0	77	
1:45	0.001500	0.005000	1	105	1	159	0	0	42	1	1	252	1	180	1	194	1	201	1	170	1	140	0	0	65	0	0	54	0	77	
2:00	0.001000	0.005000	0	70	1	106	0	0	28	1	1	168	1	120	1	129	1	134	1	113	0	93	0	0	43	0	0	36	0	51	
2:15	0.001000	0.005000	0	70	1	106	0	0	28	1	1	168	1	120	1	129	1	134	1	113	0	93	0	0	43	0	0	36	0	51	
2:30	0.001000	0.005000	0	70	1	106	0	0	28	1	1	168	1	120	1	129	1	134	1	113	0	93	0	0	43	0	0	36	0	51	
2:45	0.001000	0.005000	0	70	1	106	0	0	28	1	1	168	1	120	1	129	1	134	1	113	0	93	0	0	43	0	0	36	0	51	
3:00	0.001000	0.005000	0	70	1	106	0	0	28	1	1	168	1	120	1	129	1	134	1	113	0	93	0	0	43	0	0	36	0	51	
3:15	0.001000	0.005000	0	70	1	106	0	0	28	1	1	168	1	120	1	129	1	134	1	113	0	93	0	0	43	0	0	36	0	51	
3:30	0.001000	0.005000	0	70	1	106	0	0	28	1	1	168	1	120	1	129	1	134	1	113	0	93	0	0	43	0	0	36	0	51	
3:45	0.001000	0.005000	0	70	1	106	0	0	28	1	1	168	1	120	1	129	1	134	1	113	0	93	0	0	43	0	0	36	0	51	
4:00	0.002000	0.040000	6	140	8	212	2	2	56	13	13	336	10	240	10	258	11	268	9	226	7	186	3	3	86	3	3	72	4	102	
4:15	0.002000	0.040000	6	140	8	212	2	2	56	13	13	336	10	240	10	258	11	268	9	226	7	186	3	3	86	3	3	72	4	102	
4:30	0.002000	0.040000	6	140	8	212	2	2	56	13	13	336	10	240	10	258	11	268	9	226	7	186	3	3	86	3	3	72	4	102	
4:45	0.002000	0.040000	6	140	8	212	2	2	56	13	13	336	10	240	10	258	11	268	9	226	7	186	3	3	86	3	3	72	4	102	
5:00	0.006750	0.040000	19	473	29	716	8	8	189	15	15	1134	32	810	35	871	36	905	31	763	25	628	12	12	290	10	10	243	14	344	
5:15	0.006750	0.040000	19	473	29	716	8	8	189	15	15	1134	32	810	35	871	36	905	31	763	25	628	12	12	290	10	10	243	14	344	
5:30	0.006750	0.040000	19	473	29	716	8	8	189	15	15	1134	32	810	35	871	36	905	31	763	25	628	12	12	290	10	10	243	14	344	
5:45	0.006750	0.040000	19	473	29	716	8	8	189	15	15	1134	32	810	35	871	36	905	31	763	25	628	12	12	290	10	10	243	14	344	
6:00	0.014500		11	1015	48	1537	2	7	406	8	10	2436	42	1740	41	1871	36	1943	23	1639	76	1349	14	30	624	2	25	522	32	740	
6:15	0.014500		18	1015	48	1537	3	11	406	29	29	2436	44	1740	55	1871	59	1943	46	1639	111	1349	19	27	624	4	24	522	25	740	
6:30	0.014500		28	1015	53	1537	8	8	406	31	57	2436	29	1740	60	1871	85	1943	53	1639	102	1349	17	27	624	4	31	522	42	740	
6:45	0.014500		30	1015	49	1537	9	6	406	19	50	2436	40	1740	60	1871	92	1943	64	1639	91	1349	20	38	624	6	20	522	43	740	
7:00	0.016000		25	1120	54	1698	8	5	448	10	38	2888	42	1920	57	2064	76	2144	73	1808	112	1488	18	27	688	8	31	576	35	816	
7:15	0.016000		20	1120	60	1698	9	17	448	33	35	2888	32	1920	59	2064	90	2144	58	1808	51	1488	15	20	688	5	18	576	41	816	
7:30	0.016000		27	1120	72	1698	18	13	448	17	27	2888	37	1920	57	2064	74	2144	52	1808	68	1488	16	31	688	9	23	576	21	816	
7:45	0.016000		26	1120	59	1698	8	16	448	24	30	2888	48	1920	68	2064	99	2144	59	1808	88	1488	35	31	688	13	28	576	36	816	
8:00	0.015000		34	1050	75	1590	15	11	420	23	59	2520	49	1800	70	1935	117	2010	62	1695	65	1395	20	22	645	16	40	540	47	765	
8:15	0.015000		30	1050	77	1590	23	21	420	26	39	2520	48	1800	86	1935	87	2010	59	1695	68	1395	26	25	645	15	22	540	49	765	
8:30	0.015000		17	1050	75	1590	18	11	420	58	52	2520	54	1800	82	1935	91	2010	69	1695	76	1395	25	16	645	21	43	540	51	765	
8:45	0.015000		21	1050	88	1590	19	7	420	31	40	2520	57	1800	91	1935	93	2010	47	1695	67	1395	25	24	645	15	24	540	44	765	
9:00	0.013000		32	910	72	1378	8	15	364	26	46	2184	50	1560	76	1677	61	1742	49	1469	69	1209	25	18	559	20	27	468	58	663	
9:15	0.013000		29	910	84	1378	13	16	364	24	53	2184	70	1560	83	1677	68	1742	55	1469	52	1209	27	20	559	21	18	468	48	663	
9:30	0.013000		43	910	71	1378	11	10	364	31	17	2184	51	1560	60	1677	63	1742	61	1469	60	1209	21	16	559	19	18	468	45	663	
9:45	0.013000		31	910	75	1378	13	6	364	33	29	2184	55	1560	68	1677	58	1742	46	1469	58	1209	22	21	559	26	26	468	30	663	
10:00	0.012750		35	893	112	1352	17	18	357	46	49	2142	76	1530	72	1645	58	1709	40	1441	51	1186	35	16	548	22	19	459	53	650	
10:15	0.012750		27	893	77	1352	16	20	357	46	73	2142	72	1530	72	1645	62	1709	53	1441	73	1186	13	17	548	17	23	459	57	650	
10:30	0.012750		27	893	79	1352	15	6	357	39	59	2142	89	1530	60	1645	55	1709	49	1441	42	1186	14	15	548	14	28	459	35	650	
10:45	0.012750		18	893	75	1352	9	24	357	37	56	2142	61	1530	62	1645	61	1709	43	1441	50	1186	18	8	548	15	18	459	46	650	
11:00	0.013750		23	963	83	1458	17	12	385	45	57	2310	86	1650	72	1774	50	1843	64	1554	56	1279	12	22	591	11	24	495	49	701	
11:15	0.013750		19	963	91	1458	17	13	385	42	46	2310	73	1650	72	1774	58	1843	59	1554	56	1279	21	19	591	21	23	495	52	701	
11:30	0.013750		22	963	89	1458	12	18	385	31	61	2310	73	1650	81	1774	49	1843	48	1554	39	1279	66	25	591	11	19	495	55	701	
11:45	0.013750		22	963	68	1458	7	3	385	37	63	2310	68	1650	56	1774	46	1843	44	1554	49	1279	48	36	591	13	13	495	56	701	
12:00	0.014250		28	998	65	1511	19	15	399	34	60	2394	68	1710	45	1838	45	1910	52	1610	55	1325	22	36	613	12	11	513	41	727	
12:15	0.014250		39	998	76	1511	18	20	399	36	60	2394	66	1710	56	1838	86	1910	45	1610	42	1325	35	17	613	13	15	513	21	727	
12:30	0.014250		39	998	70	1511	17	14	399	37																					

TIME	ADT %	LCV %	47 NB	47 SB	47 VOL	48 NB	48 SB	48 VOL	49 NB	49 SB	49 VOL	51 EB	51 WB	51 VOL	52 EB	52 WB	52 VOL	53 NB	53 SB	53 VOL	54 EB	54 WB	54 VOL	55 NB	55 SB	55 VOL	56 NB	56 SB	56 VOL	57 EB	57 WB	57 VOL
0:00	0.002250	0.005000	1	1	153	0	0	79	1	1	146	1	1	248	1	1	214	1	1	155	1	1	257	1	1	250	0	92	1	1	198	
0:15	0.002250	0.005000	1	1	153	0	0	79	1	1	146	1	1	248	1	1	214	1	1	155	1	1	257	1	1	250	0	92	1	1	198	
0:30	0.002250	0.005000	1	1	153	0	0	79	1	1	146	1	1	248	1	1	214	1	1	155	1	1	257	1	1	250	0	92	1	1	198	
0:45	0.002250	0.005000	1	1	153	0	0	79	1	1	146	1	1	248	1	1	214	1	1	155	1	1	257	1	1	250	0	92	1	1	198	
1:00	0.001500	0.005000	1	1	102	0	0	53	0	0	98	1	1	165	1	1	143	1	1	104	1	1	171	1	1	167	0	62	1	1	132	
1:15	0.001500	0.005000	1	1	102	0	0	53	0	0	98	1	1	165	1	1	143	1	1	104	1	1	171	1	1	167	0	62	1	1	132	
1:30	0.001500	0.005000	1	1	102	0	0	53	0	0	98	1	1	165	1	1	143	1	1	104	1	1	171	1	1	167	0	62	1	1	132	
1:45	0.001500	0.005000	1	1	102	0	0	53	0	0	98	1	1	165	1	1	143	1	1	104	1	1	171	1	1	167	0	62	1	1	132	
2:00	0.001000	0.005000	0	0	68	0	0	35	0	0	65	1	1	110	0	0	95	0	0	69	1	1	114	1	1	111	0	41	0	0	88	
2:15	0.001000	0.005000	0	0	68	0	0	35	0	0	65	1	1	110	0	0	95	0	0	69	1	1	114	1	1	111	0	41	0	0	88	
2:30	0.001000	0.005000	0	0	68	0	0	35	0	0	65	1	1	110	0	0	95	0	0	69	1	1	114	1	1	111	0	41	0	0	88	
2:45	0.001000	0.005000	0	0	68	0	0	35	0	0	65	1	1	110	0	0	95	0	0	69	1	1	114	1	1	111	0	41	0	0	88	
3:00	0.001000	0.005000	0	0	68	0	0	35	0	0	65	1	1	110	0	0	95	0	0	69	1	1	114	1	1	111	0	41	0	0	88	
3:15	0.001000	0.005000	0	0	68	0	0	35	0	0	65	1	1	110	0	0	95	0	0	69	1	1	114	1	1	111	0	41	0	0	88	
3:30	0.001000	0.005000	0	0	68	0	0	35	0	0	65	1	1	110	0	0	95	0	0	69	1	1	114	1	1	111	0	41	0	0	88	
3:45	0.001000	0.005000	0	0	68	0	0	35	0	0	65	1	1	110	0	0	95	0	0	69	1	1	114	1	1	111	0	41	0	0	88	
4:00	0.002000	0.040000	5	5	136	3	3	70	5	5	130	9	9	220	8	8	190	6	6	138	9	9	228	9	9	222	3	82	7	7	176	
4:15	0.002000	0.040000	5	5	136	3	3	70	5	5	130	9	9	220	8	8	190	6	6	138	9	9	228	9	9	222	3	82	7	7	176	
4:30	0.002000	0.040000	5	5	136	3	3	70	5	5	130	9	9	220	8	8	190	6	6	138	9	9	228	9	9	222	3	82	7	7	176	
4:45	0.002000	0.040000	5	5	136	3	3	70	5	5	130	9	9	220	8	8	190	6	6	138	9	9	228	9	9	222	3	82	7	7	176	
5:00	0.006750	0.040000	18	18	459	6	9	236	18	18	439	30	30	743	26	26	641	19	19	466	31	31	770	30	30	749	5	277	8	2	594	
5:15	0.006750	0.040000	18	18	459	6	9	236	18	18	439	30	30	743	26	26	641	19	19	466	31	31	770	30	30	749	2	277	5	5	594	
5:30	0.006750	0.040000	18	18	459	1	20	236	18	25	439	30	30	743	26	26	641	19	19	466	31	31	770	30	30	749	0	277	8	6	594	
5:45	0.006750	0.040000	18	18	459	5	30	236	18	35	439	30	30	743	26	26	641	19	19	466	31	31	770	30	30	749	1	277	2	10	594	
6:00	0.014500		17	115	986	2	53	508	19	64	943	52	38	1595	23	12	1378	13	35	1001	31	55	1653	33	49	1610	2	595	5	15	1276	
6:15	0.014500		18	79	986	5	86	508	17	77	943	68	51	1595	56	40	1378	14	65	1001	34	53	1653	80	59	1610	6	595	7	18	1276	
6:30	0.014500		29	83	986	2	68	508	19	73	943	91	70	1595	78	38	1378	13	71	1001	39	62	1653	59	94	1610	10	595	26	15	1276	
6:45	0.014500		14	44	986	7	51	508	19	45	943	87	54	1595	62	44	1378	15	58	1001	30	51	1653	46	86	1610	16	595	42	13	1276	
7:00	0.016000		31	41	1088	7	79	560	22	39	1040	88	65	1760	63	46	1520	12	36	1104	25	39	1824	47	52	1776	12	656	23	13	1408	
7:15	0.016000		27	51	1088	10	70	560	23	44	1040	79	67	1760	48	37	1520	22	35	1104	25	34	1824	56	52	1776	15	656	25	12	1408	
7:30	0.016000		25	40	1088	1	57	560	22	33	1040	63	47	1760	51	56	1520	16	29	1104	33	40	1824	47	50	1776	14	656	18	13	1408	
7:45	0.016000		32	40	1088	9	15	560	18	18	1040	92	79	1760	113	58	1520	25	28	1104	42	33	1824	36	55	1776	10	656	29	17	1408	
8:00	0.015000		36	49	1020	5	34	525	10	27	975	88	65	1650	111	51	1425	27	35	1035	57	46	1710	45	48	1665	16	615	25	18	1320	
8:15	0.015000		31	32	1020	6	26	525	22	29	975	65	74	1650	68	47	1425	40	36	1035	49	32	1710	43	52	1665	20	615	14	20	1320	
8:30	0.015000		17	46	1020	12	19	525	31	28	975	103	52	1650	103	54	1425	25	29	1035	33	44	1710	63	62	1665	11	615	34	30	1320	
8:45	0.015000		64	38	1020	2	38	525	27	23	975	76	62	1650	85	71	1425	26	26	1035	47	37	1710	85	66	1665	10	615	13	19	1320	
9:00	0.013000		31	45	884	7	27	455	33	19	845	58	45	1430	73	58	1235	31	30	897	45	61	1482	54	75	1443	12	533	37	39	1144	
9:15	0.013000		45	57	884	2	40	455	20	21	845	67	42	1430	77	58	1235	29	29	897	65	62	1482	76	73	1443	13	533	52	39	1144	
9:30	0.013000		25	51	884	6	19	455	19	22	845	59	48	1430	123	76	1235	23	21	897	63	50	1482	65	58	1443	16	533	31	24	1144	
9:45	0.013000		29	35	884	8	15	455	27	22	845	88	58	1430	80	57	1235	17	21	897	75	46	1482	56	59	1443	14	533	22	17	1144	
10:00	0.012750		35	35	867	8	18	446	27	22	829	76	57	1403	71	77	1211	31	18	890	59	65	1454	72	64	1415	10	523	28	15	1122	
10:15	0.012750		27	32	867	12	16	446	48	20	829	70	54	1403	84	77	1211	28	25	890	57	41	1454	47	58	1415	12	523	27	15	1122	
10:30	0.012750		42	25	867	16	38	446	20	23	829	77	63	1403	89	58	1211	22	16	890	41	47	1454	109	68	1415	14	523	47	24	1122	
10:45	0.012750		40	30	867	9	31	446	20	21	829	73	50	1403	117	67	1211	34	26	890	51	58	1454	62	61	1415	6	523	28	15	1122	
11:00	0.013750		41	37	935	14	35	481	23	20	894	67	60	1513	105	46	1308	18	15	949	53	59	1588	62	69	1526	10	584	38	42	1210	
11:15	0.013750		40	31	935	11	24	481	26	21	894	53	47	1513	64	39	1308	24	26	949	52	47	1588	77	47	1526	19	584	31	40	1210	
11:30	0.013750		44	36	935	5	19	481	17	17	894	83	45	1513	82	55	1308	25	20	949	60	45	1588	69	52	1526	12	584	49	35	1210	
11:45	0.013750		83	45	935	9	20	481	17	19	894	67	51	1513	68	52	1308	21	22	949	48	45	1588	69	43	1526	16	584	38	21	1210	
12:00	0.014250		20	21	969	6	15	499	14	16	926	62	47	1568	63	55	1354	24	35	983	46	33	1625	56	48	1582	14	584	39	19	1254	
12:15	0.014250		16	20	969	11	16	499	21	12	926	51	43	1568	56	68	1354	31	29	983	62	44	1625	61	53	1						

TIME	ADT %	LCV %	58	58	59	59	59	60	60	61	61	61	62	62	63	63	63	64	64	64	65	65	65	66	66	67	67	68	68	69	69	
			VOL	EB	WB	VOL	EB	WB	VOL	EB	WB	VOL	EB	WB	VOL	EB	WB	VOL	EB	WB	VOL	EB	WB	VOL	EB	VOL	EB	VOL	EB	VOL	WB	VOL
0:00	0.002250	0.005000	1	284	0	0	72	1	149	0	0	95	1	241	1	1	137	1	1	146	0	0	71	1	122	1	155	0	50	1	212	
0:15	0.002250	0.005000	1	284	0	0	72	1	149	0	0	95	1	241	1	1	137	1	1	146	0	0	71	1	122	1	155	0	50	1	212	
0:30	0.002250	0.005000	1	284	0	0	72	1	149	0	0	95	1	241	1	1	137	1	1	146	0	0	71	1	122	1	155	0	50	1	212	
0:45	0.002250	0.005000	1	284	0	0	72	1	149	0	0	95	1	241	1	1	137	1	1	146	0	0	71	1	122	1	155	0	50	1	212	
1:00	0.001500	0.005000	1	189	0	0	48	0	99	0	0	63	1	161	0	0	92	0	0	98	0	0	47	0	81	1	104	0	33	1	141	
1:15	0.001500	0.005000	1	189	0	0	48	0	99	0	0	63	1	161	0	0	92	0	0	98	0	0	47	0	81	1	104	0	33	1	141	
1:30	0.001500	0.005000	1	189	0	0	48	0	99	0	0	63	1	161	0	0	92	0	0	98	0	0	47	0	81	1	104	0	33	1	141	
1:45	0.001500	0.005000	1	189	0	0	48	0	99	0	0	63	1	161	0	0	92	0	0	98	0	0	47	0	81	1	104	0	33	1	141	
2:00	0.001000	0.005000	1	126	0	0	32	0	66	0	0	42	1	107	0	0	61	0	0	65	0	0	32	0	54	0	69	0	22	0	94	
2:15	0.001000	0.005000	1	126	0	0	32	0	66	0	0	42	1	107	0	0	61	0	0	65	0	0	32	0	54	0	69	0	22	0	94	
2:30	0.001000	0.005000	1	126	0	0	32	0	66	0	0	42	1	107	0	0	61	0	0	65	0	0	32	0	54	0	69	0	22	0	94	
2:45	0.001000	0.005000	1	126	0	0	32	0	66	0	0	42	1	107	0	0	61	0	0	65	0	0	32	0	54	0	69	0	22	0	94	
3:00	0.001000	0.005000	1	126	0	0	32	0	66	0	0	42	1	107	0	0	61	0	0	65	0	0	32	0	54	0	69	0	22	0	94	
3:15	0.001000	0.005000	1	126	0	0	32	0	66	0	0	42	1	107	0	0	61	0	0	65	0	0	32	0	54	0	69	0	22	0	94	
3:30	0.001000	0.005000	1	126	0	0	32	0	66	0	0	42	1	107	0	0	61	0	0	65	0	0	32	0	54	0	69	0	22	0	94	
3:45	0.001000	0.005000	1	126	0	0	32	0	66	0	0	42	1	107	0	0	61	0	0	65	0	0	32	0	54	0	69	0	22	0	94	
4:00	0.002000	0.040000	10	252	3	3	64	5	132	3	3	84	9	214	5	5	122	5	5	130	0	0	63	4	108	6	138	2	44	8	188	
4:15	0.002000	0.040000	10	252	3	3	64	5	132	3	3	84	9	214	5	5	122	5	5	130	0	0	63	4	108	6	138	2	44	8	188	
4:30	0.002000	0.040000	10	252	3	3	64	5	132	3	3	84	9	214	5	5	122	5	5	130	0	0	63	4	108	6	138	2	44	8	188	
4:45	0.002000	0.040000	10	252	3	3	64	5	132	3	3	84	9	214	5	5	122	5	5	130	0	0	63	4	108	6	138	2	44	8	188	
5:00	0.006750	0.040000	34	851	9	9	216	18	446	1	11	284	10	722	16	16	412	18	18	439	1	1	213	15	365	8	466	6	149	15	635	
5:15	0.006750	0.040000	34	851	9	9	216	18	446	0	11	284	12	722	16	16	412	18	18	439	1	1	213	15	365	11	466	6	149	20	635	
5:30	0.006750	0.040000	34	851	9	15	216	18	446	6	13	284	20	722	16	16	412	18	20	439	7	1	213	15	365	19	466	6	149	19	635	
5:45	0.006750	0.040000	34	851	9	20	216	18	446	3	16	284	29	722	16	20	412	18	30	439	8	3	213	15	365	19	466	12	149	20	635	
6:00	0.014500		51	1827	12	34	464	26	957	3	24	609	14	1552	6	45	885	17	56	943	15	6	457	14	783	22	1001	26	319	22	1363	
6:15	0.014500		45	1827	16	28	464	52	957	1	27	609	39	1552	3	48	885	27	69	943	25	4	457	19	783	7	1001	26	319	33	1363	
6:30	0.014500		74	1827	23	39	464	59	957	11	28	609	53	1552	9	85	885	39	73	943	22	4	457	23	783	30	1001	31	319	64	1363	
6:45	0.014500		58	1827	21	39	464	46	957	11	30	609	46	1552	9	43	885	49	84	943	23	11	457	28	783	33	1001	37	319	50	1363	
7:00	0.016000		57	2016	18	37	512	44	1056	17	19	672	40	1712	8	101	976	31	79	1040	20	8	504	38	864	24	1104	33	352	41	1504	
7:15	0.016000		82	2016	31	43	512	39	1056	25	13	672	35	1712	17	103	976	29	16	1040	13	12	504	38	864	21	1104	43	352	52	1504	
7:30	0.016000		86	2016	28	21	512	47	1056	20	24	672	27	1712	19	81	976	37	87	1040	9	11	504	35	864	30	1104	31	352	69	1504	
7:45	0.016000		85	2016	34	24	512	43	1056	28	25	672	28	1712	12	39	976	38	71	1040	19	7	504	18	864	29	1104	34	352	40	1504	
8:00	0.015000		74	1890	13	22	480	42	990	19	25	630	34	1605	14	58	915	31	63	975	31	17	473	29	810	40	1035	32	330	29	1410	
8:15	0.015000		92	1890	34	35	480	49	990	28	31	630	37	1605	14	34	915	53	94	975	9	19	473	49	810	31	1035	38	330	55	1410	
8:30	0.015000		94	1890	24	31	480	42	990	27	22	630	40	1605	17	37	915	28	38	975	12	17	473	36	810	38	1035	32	330	102	1410	
8:45	0.015000		77	1890	27	37	480	44	990	13	23	630	35	1605	5	39	915	45	55	975	25	11	473	57	810	27	1035	39	330	70	1410	
9:00	0.013000		69	1638	28	27	416	53	858	29	21	548	38	1391	14	49	793	26	37	845	13	14	410	28	702	38	897	37	286	70	1222	
9:15	0.013000		105	1638	17	28	416	45	858	25	15	548	54	1391	11	41	793	33	33	845	20	13	410	27	702	25	897	30	286	44	1222	
9:30	0.013000		79	1638	23	41	416	54	858	21	29	548	50	1391	7	37	793	38	50	845	21	21	410	34	702	36	897	35	286	56	1222	
9:45	0.013000		70	1638	25	30	416	53	858	23	31	548	40	1391	8	27	793	34	49	845	15	20	410	34	702	34	897	41	286	68	1222	
10:00	0.012750		76	1607	39	24	408	50	842	17	24	536	57	1364	12	41	778	31	49	829	18	19	402	27	689	28	880	42	281	68	1199	
10:15	0.012750		77	1607	20	16	408	52	842	23	14	536	58	1364	6	65	778	43	50	829	11	18	402	32	689	21	880	35	281	78	1199	
10:30	0.012750		55	1607	29	36	408	61	842	17	21	536	52	1364	8	52	778	36	59	829	17	17	402	45	689	36	880	44	281	36	1199	
10:45	0.012750</																															

TIME	ADT %	LCV %	70 NB	70 VOL	71 EB	71 WB	71 VOL	72 WB	72 VOL	74 NB	74 SB	74 VOL	75 NB	75 VOL	76	76	76 VOL	77 NB	77 SB	77 VOL	78 EB	78 WB	78 VOL	79 EB	79 WB	79 VOL	80 NB	80 SB	80 VOL	81 NB	81 SB	81 VOL
0:00	0.002250	0.005000	1	187	0	0	35	1	205	0	0	95	1	113	0	0	56	0	0	63	0	0	59	0	0	28	0	0	80	0	0	65
0:15	0.002250	0.005000	1	187	0	0	35	1	205	0	0	95	1	113	0	0	56	0	0	63	0	0	59	0	0	28	0	0	80	0	0	65
0:30	0.002250	0.005000	1	187	0	0	35	1	205	0	0	95	1	113	0	0	56	0	0	63	0	0	59	0	0	28	0	0	80	0	0	65
0:45	0.002250	0.005000	1	187	0	0	35	1	205	0	0	95	1	113	0	0	56	0	0	63	0	0	59	0	0	28	0	0	80	0	0	65
1:00	0.001500	0.005000	1	125	0	0	23	1	137	0	0	63	0	75	0	0	37	0	0	42	0	0	39	0	0	19	0	0	53	0	0	44
1:15	0.001500	0.005000	1	125	0	0	23	1	137	0	0	63	0	75	0	0	37	0	0	42	0	0	39	0	0	19	0	0	53	0	0	44
1:30	0.001500	0.005000	1	125	0	0	23	1	137	0	0	63	0	75	0	0	37	0	0	42	0	0	39	0	0	19	0	0	53	0	0	44
1:45	0.001500	0.005000	1	125	0	0	23	1	137	0	0	63	0	75	0	0	37	0	0	42	0	0	39	0	0	19	0	0	53	0	0	44
2:00	0.001000	0.005000	0	83	0	0	16	0	91	0	0	42	0	50	0	0	25	0	0	28	0	0	26	0	0	13	0	0	36	0	0	29
2:15	0.001000	0.005000	0	83	0	0	16	0	91	0	0	42	0	50	0	0	25	0	0	28	0	0	26	0	0	13	0	0	36	0	0	29
2:30	0.001000	0.005000	0	83	0	0	16	0	91	0	0	42	0	50	0	0	25	0	0	28	0	0	26	0	0	13	0	0	36	0	0	29
2:45	0.001000	0.005000	0	83	0	0	16	0	91	0	0	42	0	50	0	0	25	0	0	28	0	0	26	0	0	13	0	0	36	0	0	29
3:00	0.001000	0.005000	0	83	0	0	16	0	91	0	0	42	0	50	0	0	25	0	0	28	0	0	26	0	0	13	0	0	36	0	0	29
3:15	0.001000	0.005000	0	83	0	0	16	0	91	0	0	42	0	50	0	0	25	0	0	28	0	0	26	0	0	13	0	0	36	0	0	29
3:30	0.001000	0.005000	0	83	0	0	16	0	91	0	0	42	0	50	0	0	25	0	0	28	0	0	26	0	0	13	0	0	36	0	0	29
3:45	0.001000	0.005000	0	83	0	0	16	0	91	0	0	42	0	50	0	0	25	0	0	28	0	0	26	0	0	13	0	0	36	0	0	29
4:00	0.002000	0.040000	7	166	1	1	31	7	182	3	3	84	4	100	2	2	50	2	2	56	2	2	52	1	1	25	3	3	71	2	2	58
4:15	0.002000	0.040000	7	166	1	1	31	7	182	3	3	84	4	100	2	2	50	2	2	56	2	2	52	1	1	25	3	3	71	2	2	58
4:30	0.002000	0.040000	7	166	1	1	31	7	182	3	3	84	4	100	2	2	50	2	2	56	2	2	52	1	1	25	3	3	71	2	2	58
4:45	0.002000	0.040000	7	166	1	1	31	7	182	3	3	84	4	100	2	2	50	2	2	56	2	2	52	1	1	25	3	3	71	2	2	58
5:00	0.006750	0.040000	9	560	1	1	105	10	614	11	5	284	14	338	7	5	168	8	8	189	7	7	176	3	3	84	10	10	240	8	8	196
5:15	0.006750	0.040000	15	560	2	2	105	15	614	11	8	284	14	338	7	7	168	8	8	189	10	7	176	3	3	84	10	10	240	8	8	196
5:30	0.006750	0.040000	18	560	2	3	105	25	614	15	11	284	14	338	12	7	168	8	8	189	12	7	176	3	3	84	10	10	240	10	8	196
5:45	0.006750	0.040000	20	560	3	4	105	25	614	20	16	284	14	338	15	7	168	10	8	189	20	7	176	3	3	84	10	10	240	12	15	196
6:00	0.014500		16	1204	2	4	226	16	1320	36	18	609	18	725	20	8	361	13	9	406	25	3	377	7	8	181	12	8	515	16	20	421
6:15	0.014500		26	1204	2	7	226	23	1320	40	28	609	24	725	39	7	361	13	8	406	44	5	377	8	15	181	7	18	515	18	26	421
6:30	0.014500		17	1204	6	14	226	43	1320	55	38	609	26	725	21	7	361	13	11	406	33	11	377	3	18	181	11	21	515	19	52	421
6:45	0.014500		25	1204	7	7	226	48	1320	37	27	609	25	725	23	9	361	14	13	406	59	7	377	11	32	181	8	21	515	19	38	421
7:00	0.016000		42	1328	6	5	250	48	1456	42	28	672	18	800	32	17	398	18	9	448	22	6	416	7	19	200	8	27	568	21	45	464
7:15	0.016000		34	1328	12	6	250	52	1456	39	38	672	17	800	18	6	398	16	16	448	13	10	416	11	25	200	11	20	568	26	29	464
7:30	0.016000		47	1328	3	10	250	42	1456	24	28	672	11	800	22	7	398	14	13	448	19	13	416	4	9	200	13	27	568	30	37	464
7:45	0.016000		43	1328	6	12	250	36	1456	15	17	672	13	800	25	8	398	23	13	448	35	11	416	14	20	200	14	22	568	23	16	464
8:00	0.015000		28	1245	4	10	234	36	1365	15	22	630	22	750	9	5	374	23	19	420	26	12	390	9	10	188	24	20	533	31	25	435
8:15	0.015000		40	1245	7	7	234	38	1365	39	28	630	17	750	5	10	374	15	18	420	27	19	390	3	5	188	28	34	533	32	28	435
8:30	0.015000		29	1245	6	7	234	44	1365	60	21	630	22	750	11	16	374	10	21	420	14	11	390	7	6	188	23	24	533	28	24	435
8:45	0.015000		29	1245	12	7	234	63	1365	52	26	630	20	750	7	13	374	9	23	420	9	18	390	10	15	188	23	14	533	24	24	435
9:00	0.013000		28	1079	4	8	203	36	1183	25	27	546	15	650	10	14	324	15	24	364	22	19	338	6	22	168	28	24	462	27	43	377
9:15	0.013000		26	1079	6	14	203	22	1183	24	26	546	26	650	8	15	324	8	11	364	19	17	338	7	5	163	15	20	462	23	28	377
9:30	0.013000		27	1079	9	6	203	46	1183	27	14	546	17	650	18	7	324	15	15	364	10	5	338	10	9	163	28	15	462	30	30	377
9:45	0.013000		44	1079	7	7	203	40	1183	29	11	546	32	650	27	8	324	13	14	364	19	14	338	12	11	163	24	19	462	33	29	377
10:00	0.012750		39	1058	10	12	199	39	1160	19	19	536	16	638	14	7	317	16	16	357	23	20	332	16	6	159	16	19	453	26	26	370
10:15	0.012750		33	1058	10	10	199	28	1160	20	9	536	14	638	12	17	317	20	17	357	19	25	332	15	10	159	24	14	453	20	24	370
10:30	0.012750		30	1058	0	7	199	26	1160	19	21	536	20	638	13	18	317	12	9	357	32	38	332	11	6	159	21	13	453	35	21	370
10:45	0.012750		24	1058	9	13	199	23	1160	31	17	536	23	638	14	13	317	17	20	357	32	20	332	14	11	159	17	27	453	32	24	370
11:00	0.013750		34	1141	6	12	215	17	1251	20	26	578	20	888	7	8	342	11	16	385	16	15	358	12	12	172	53	18	488	27	17	399
11:15	0.013750		35	1141	4	7	215	44	1251	25	10	578	15	888	9	9	342	6	15	385	19	29	358	14	10	172	31	16	488	28	23	399
11:30	0.013750		37	1141	8	10	215	36	1251	23	18	578	21	888	12	9	342	15	17	385	21	19	358	3	5	172	23	19	488	20	27	399
11:45	0.013750		28	1141	10	13	215	35	1251	16	12	578	21	888	9	10	342	15	23	385	14	14	358	4	4	172	27	8	488	26	46	399
12:00	0.014250		46	1183	7	8	222	33	1297	9	14	599	24	713	8	9	355	15	18	399	18	16	371	8	6	178	5	20	506	29	24	413
12:15	0.014250		29	1183	9	9	222	31	1297	7	9	599	22	713	16	14																

TIME	ADT %	LCV %	82	82	82	84	84	84	85	85	86	86	86	87	87	88	88	88	89	89	89	90	90	90
			EB	WB	VOL	EB	WB	VOL	NB	VOL	EB	WB	VOL	VOL	NB	SB	VOL	EB	WB	VOL	EB	WB	VOL	
0:00	0.002250	0.005000	0	0	46	1	1	137	1	164	0	0	89	0	56	0	0	43	0	0	79	0	0	32
0:15	0.002250	0.005000	0	0	46	1	1	137	1	164	0	0	89	0	56	0	0	43	0	0	79	0	0	32
0:30	0.002250	0.005000	0	0	46	1	1	137	1	164	0	0	89	0	56	0	0	43	0	0	79	0	0	32
0:45	0.002250	0.005000	0	0	46	1	1	137	1	164	0	0	89	0	56	0	0	43	0	0	79	0	0	32
1:00	0.001500	0.005000	0	0	31	0	0	92	1	110	0	0	59	0	38	0	0	28	0	0	53	0	0	21
1:15	0.001500	0.005000	0	0	31	0	0	92	1	110	0	0	59	0	38	0	0	28	0	0	53	0	0	21
1:30	0.001500	0.005000	0	0	31	0	0	92	1	110	0	0	59	0	38	0	0	28	0	0	53	0	0	21
1:45	0.001500	0.005000	0	0	31	0	0	92	1	110	0	0	59	0	38	0	0	28	0	0	53	0	0	21
2:00	0.001000	0.005000	0	0	21	0	0	61	0	73	0	0	40	0	25	0	0	19	0	0	35	0	0	14
2:15	0.001000	0.005000	0	0	21	0	0	61	0	73	0	0	40	0	25	0	0	19	0	0	35	0	0	14
2:30	0.001000	0.005000	0	0	21	0	0	61	0	73	0	0	40	0	25	0	0	19	0	0	35	0	0	14
2:45	0.001000	0.005000	0	0	21	0	0	61	0	73	0	0	40	0	25	0	0	19	0	0	35	0	0	14
3:00	0.001000	0.005000	0	0	21	0	0	61	0	73	0	0	40	0	25	0	0	19	0	0	35	0	0	14
3:15	0.001000	0.005000	0	0	21	0	0	61	0	73	0	0	40	0	25	0	0	19	0	0	35	0	0	14
3:30	0.001000	0.005000	0	0	21	0	0	61	0	73	0	0	40	0	25	0	0	19	0	0	35	0	0	14
3:45	0.001000	0.005000	0	0	21	0	0	61	0	73	0	0	40	0	25	0	0	19	0	0	35	0	0	14
4:00	0.002000	0.040000	2	2	41	5	5	122	6	146	3	3	79	2	50	2	2	38	3	3	70	1	1	28
4:15	0.002000	0.040000	2	2	41	5	5	122	6	146	3	3	79	2	50	2	2	38	3	3	70	1	1	28
4:30	0.002000	0.040000	2	2	41	5	5	122	6	146	3	3	79	2	50	2	2	38	3	3	70	1	1	28
4:45	0.002000	0.040000	2	2	41	5	5	122	6	146	3	3	79	2	50	2	2	38	3	3	70	1	1	28
5:00	0.006750	0.040000	6	6	138	6	16	412	8	493	11	11	267	7	169	5	5	128	9	9	236	4	4	95
5:15	0.006750	0.040000	2	2	138	8	16	412	10	493	11	11	267	7	169	5	5	128	9	9	236	4	4	95
5:30	0.006750	0.040000	6	6	138	10	20	412	12	493	11	15	267	7	169	10	10	128	9	9	236	4	4	95
5:45	0.006750	0.040000	3	3	138	18	25	412	20	493	11	20	267	7	169	15	15	128	9	9	236	4	4	95
6:00	0.014500		1	3	297	7	16	885	14	1059	19	26	573	5	363	21	21	274	5	9	508	5	6	204
6:15	0.014500		4	4	297	5	58	885	11	1059	19	29	573	19	363	30	51	274	25	9	508	4	11	204
6:30	0.014500		5	9	297	10	59	885	23	1059	52	43	573	14	363	28	28	274	18	21	508	5	9	204
6:45	0.014500		9	10	297	14	52	885	19	1059	49	59	573	20	363	37	29	274	31	21	508	3	15	204
7:00	0.016000		7	13	328	11	32	976	14	1168	47	44	632	20	400	32	29	302	28	22	560	6	14	226
7:15	0.016000		6	16	328	14	45	976	9	1168	44	31	632	19	400	19	28	302	32	33	560	7	4	226
7:30	0.016000		6	20	328	16	36	976	10	1168	43	66	632	16	400	27	28	302	33	25	560	14	10	226
7:45	0.016000		5	28	328	18	46	976	24	1168	38	54	632	20	400	28	21	302	36	24	560	6	15	226
8:00	0.015000		8	22	308	24	27	915	32	1095	32	59	593	25	375	22	19	284	40	17	525	11	12	212
8:15	0.015000		15	22	308	14	37	915	16	1095	43	66	593	29	375	31	31	284	38	36	525	9	11	212
8:30	0.015000		17	30	308	19	46	915	27	1095	39	74	593	32	375	23	26	284	37	22	525	12	9	212
8:45	0.015000		19	24	308	18	55	915	17	1095	35	65	593	29	375	25	21	284	37	27	525	9	13	212
9:00	0.013000		12	31	267	29	38	793	31	949	33	61	514	35	325	17	11	246	34	30	455	12	10	183
9:15	0.013000		19	23	267	16	36	793	21	949	54	61	514	22	325	28	11	246	27	29	455	9	10	183
9:30	0.013000		19	24	267	21	43	793	18	949	29	37	514	18	325	25	19	246	21	28	455	8	10	183
9:45	0.013000		18	28	267	19	45	793	12	949	39	58	514	22	325	28	19	246	27	25	455	11	12	183
10:00	0.012750		12	24	261	18	31	778	18	931	19	47	504	20	319	22	16	241	19	23	448	9	12	180
10:15	0.012750		7	24	261	24	38	778	28	931	37	41	504	31	319	15	14	241	14	22	448	12	13	180
10:30	0.012750		24	27	261	25	40	778	24	931	42	49	504	29	319	18	16	241	19	26	448	6	12	180
10:45	0.012750		16	14	261	26	43	778	20	931	25	47	504	25	319	15	22	241	23	17	448	10	13	180
11:00	0.013750		22	34	282	19	43	839	20	1004	34	50	543	26	344	23	26	260	20	25	481	7	9	194
11:15	0.013750		22	26	282	21	39	839	11	1004	28	36	543	21	344	28	28	260	16	16	481	13	11	194
11:30	0.013750		17	27	282	14	53	839	14	1004	43	37	543	23	344	23	19	260	18	12	481	9	9	194
11:45	0.013750		12	21	282	17	37	839	19	1004	46	44	543	29	344	18	29	260	19	23	481	9	12	194
12:00	0.014250		11	19	292	15	34	869	25	1040	46	44	563	18	356	28	30	269	20	17	499	10	8	201
12:15	0.014250		14	19	292	12	38	869	14	1040	33	30	563	18	356	17	27	269	20	22	499	13	10	201
12:30	0.014250		19	22	292	23	19	869	8	1040	30	35	563	18	356	15	23	269	22	16	499	15	10	201
12:45	0.014250		26	15	292	25	34	869	9	1040	36	45	563	18	356	16	20	269	24	18	499	5	7	201
13:00	0.014500		20	18	297	25	39	885	13	1059	36	32	573	18	363	18	21	274	21	19	508	2	4	204
13:15	0.014500		10	21	297	21	40	885	13	1059	42	25	573	18	363	18	22	274	19	19	508	7	8	204
13:30	0.014500		17	23	297	18	40	885	17	1059	37	47	573	18	363	17	26	274	18	20	508	13	10	204
13:45	0.014500		18	21	297	24	27	885	15	1059	33	36	573	18	363	23	27	274	22	31	508	8	4	204
14:00	0.015750		21	22	323	19	46	961	19	1150	29	35	622	20	394	15	29	298	37	31	551	5	9	222
14:15	0.015750		10	28	323	15	44	961	16	1150	38	41	622	20	394	17	26	298	18	22	551	11	14	222
14:30	0.015750		10	23	323	23	33	961	17	1150	44	38	622	20	394	13	25	298	37	19	551	8	5	222
14:45	0.015750		13	19	323	21	37	961	10	1150	35	45	622	20	394	20	16	298	27	28	551	7	5	222
15:00	0.017250		19	22	354	27	49	1052	24	1259	39	41	681	13	431	12	20	328	40	30	604	2	11	243
15:15	0.017250		24	17	354	24	31	1052	6	1259	28	35	681	13	431	15	14	328	45	31	604	6	6	243
15:30	0.017250		21	23	354	25	26	1052	19	1259	42	47	681	13	431	25	27	328	37	25	604	8	8	243
15:45	0.017250		20	23	354	2																		

## **APPENDIX D**

### **MASTER STATION MATRIX**

STATION	TYPE	ROAD	LOCATION	COUNTY	CITY	DUCK BLIND	DIR.	FACILITY	AREA	HRS.	LCV NB	LCV SB	LCV EB	LCV WB	LCV NB 24 HR	LCV SB 24 HR	LCV EB 24 HR	LCV WB 24 HR	LCV % NB 24 HR	LCV % SB 24 HR	LCV % EB 24 HR	LCV % WB 24 HR	LCV ADT	ADT	ADJUSTED ADT	% LCV OF ADT	HCADT	% HCADT OF ADT	ADJUSTED HCADT	LCV + HCV	% CV OF ADT
1	US	10/169	East of TH 101 Interchange	Sherburne	Elk River	B	B	EXPRESSWAY	CORDON LINE	16	1102	897			1180	965	-	-	55%	45%			2145	26700	26700	8.0%	1100	4.1%	1100	3245	12.2%
2	MN	101	South of CR 42	Wright	Olsego	B	B	EXPRESSWAY	CORDON LINE	16	1217	973			1311	1067	-	-	55%	45%			2378	34300	34300	6.9%	2250	6.6%	2250	4628	13.5%
3	I	94	North of TH 101 Interchange	Hennepin	Rogers	B	B	FREEWAY	CORDON LINE	16	1348	1602			1509	1743	-	-	46%	54%			3252	51000	51000	6.4%	5450	10.7%	5450	8702	17.1%
4	I	94	Btwn CSAH 30 & Weaver Lk	Hennepin	Maple Gr.	B	B	FREEWAY	OUTSIDE	16	1994	2830			2208	3281	-	-	40%	60%			5469	83000	83000	6.8%	3550	7.9%	3550	12019	14.6%
5	US	169	Btwn 77th Ave & CSAH 81	Hennepin	Brooklyn Pk	B	B	FREEWAY	OUTSIDE	16	1099	921			1226	1030	-	-	54%	46%			2256	53000	53000	4.3%	2050	3.9%	2050	4306	8.1%
6	I	94/694	Btwn 1494 & CSAH 61	Hennepin	Brooklyn Pk	EB	B	FREEWAY	RING	16		2451			-	-	2720	N/A					2720	87000	43500	8.3%	7700	8.8%	3850	5570	15.1%
7	I	94/694	Btwn CSAH 81 & Brooklyn Blv	Hennepin	Brooklyn Pk	B	B	FREEWAY	RING	16		4246	3810		-	-	4815	4159					8774	100000	100000	8.8%	7900	7.9%	7900	16874	18.7%
8	MN	100	South of CSAH 9 & Interchng	Hennepin	Robbinsdale	SB	B	EXPRESSWAY	INSIDE	12	1699				N/A	2076	-	-					2076	55000	27500	7.5%	1200	2.2%	1650	4517	9.8%
9	US	169	South of CSAH 9 & Interchng	Hennepin	Plymouth	SB	B	FREEWAY	INSIDE	12	2021				N/A	2567	-	-					2569	75000	37500	6.9%	5450	7.3%	2725	5324	14.2%
10	I	494	North of CSAH 10 Interchng	Hennepin	Plymouth	NB	B	FREEWAY	RING	12	2154				2599	N/A	-	-					2599	75000	37500	6.9%	5450	7.3%	2725	5324	14.2%
11	MN	55	East of CSAH 24/CSAH 9	Hennepin	Plymouth	B	B	EXPRESSWAY	OUTSIDE	12		1036	1096		-	-	1207	1270					2477	28000	28000	8.8%	1350	4.8%	1350	3827	13.7%
12	MN	55	East of CSAH 6	Hennepin	Plymouth	B	B	EXPRESSWAY	INSIDE	12		1154	1112		-	-	1348	1304					2652	34000	34000	7.8%	2350	6.9%	2350	5002	14.7%
13	I	394	East of Theo. Wirth Parkway	Hennepin	Mpls.	X	EB	FREEWAY	INSIDE	12		2217			-	-	2634	N/A					2634	143000	71500	3.7%	4800	3.2%	2300	4934	6.9%
14	US	169	North of CSAH 5/Mika Blvd.	Hennepin	St. Louis Pk	B	SB	FREEWAY	INSIDE	8	1627				N/A	2575	-	-					2575	91000	45500	5.7%	3700	4.1%	1850	4425	9.7%
15	US	12	West of Carlson Parkway	Hennepin	Mika	B	B	FREEWAY	OUTSIDE	12		1542	1509		-	-	1975	1942					3917	73000	73000	5.4%	1800	2.5%	1800	5717	7.8%
16	I	494	North of CSAH 5 Interchng	Hennepin	Mika	SB	B	FREEWAY	RING	12	2707				N/A	3271	-	-					3271	95000	47500	6.9%	5700	6.0%	2850	6121	12.9%
17	MN	7	East of TH 101	Hennepin	Mika	B	B	EXPRESSWAY	CORDON LINE	16			1665	1730	-	-	1781	1846					3627	48500	48500	7.5%	1500	3.1%	1500	5127	10.6%
18	I	494	Btwn TH 82 & CSAH 3 Overp	Hennepin	Mika	B	B	FREEWAY	RING	16	2759	2050			3017	2311	-	-	57%	43%			5328	81000	81000	6.8%	5200	6.4%	5200	10528	13.0%
19	US	212	North of CSAH 61 Interchng	Hennepin	Eden Prairie	NB	B	FREEWAY	INSIDE	16	1360				1487	N/A	-	-					1487	53000	26500	5.8%	1450	2.7%	725	2212	8.3%
20	MN	100	South of 50th Ave. Interchng	Hennepin	Edina	SB	B	FREEWAY	INSIDE	16		2356			N/A	2640	-	-					2640	111000	55500	4.8%	2700	2.4%	1350	3990	7.2%
21	MN	62	East of TH 169/TH 212	Hennepin	Edina	B	B	FREEWAY	INSIDE	16		2003	1933		-	-	2141	2075					4216	95000	95000	4.4%	2400	2.5%	2400	6816	7.0%
22	MN	5	East of TH 41	Carver	Chanhausen	B	B	EXPRESSWAY	CORDON LINE	16		778	735		-	-	818	782					1600	28000	28000	5.7%	1250	4.5%	1250	2650	10.2%
23	MN	5	West of CSAH 4	Hennepin	Eden Prairie	EB	B	EXPRESSWAY	OUTSIDE	12		1354			-	-	1621	N/A					1621	45000	22500	7.2%	1800	3.3%	750	2371	10.5%
24	US	212	North of CSAH 11/Pioneer Trail	Hennepin	Eden Prairie	NB	B	EXPRESSWAY	OUTSIDE	16	868				744	N/A	-	-					744	25000	12500	8.0%	1050	4.2%	525	1269	10.2%
25	US	494	East of Bush Lake Road	Hennepin	Bloomington	EB	B	EXPRESSWAY	RING	8			2479		-	-	N/A	2479					2479	123000	61500	4.0%	6400	5.2%	3200	5819	9.2%
26	US	169	North of Bloom. Ferry Bridge	Hennepin	Eden Prairie	B	B	EXPRESSWAY	OUTSIDE	16	957	960			1073	1076	-	-	50%	50%			2149	42000	42000	5.1%	3550	8.5%	3550	5669	13.6%
27	US	212	East of TH 41	Carver	Chaska	B	B	EXPRESSWAY	CORDON LINE	12		665	501		-	-	777	584					1361	15000	15000	8.1%	875	4.5%	875	2038	13.6%
28	US	169	South of TH 41	Scott	Shakopee	B	B	EXPRESSWAY	CORDON LINE	12	652	633			811	795	-	-	50%	50%			1606	28000	28000	5.7%	2075	7.4%	2075	3681	13.1%
29	I	35	South of I-35W & I-35E Jct	Dakota	Burnsville	B	B	FREEWAY	CORDON LINE	12	1492	1470			1967	1945	-	-	50%	50%			3912	80000	80000	4.9%	5500	6.9%	5500	9412	11.8%
30	I	35W	North of River Crossing	Hennepin	Bloomington	NB	B	FREEWAY	OUTSIDE	12	1312				3749	N/A	-	-					3749	104000	52000	7.2%	8900	6.8%	3450	7199	13.8%
31	MN	77	North of River Crossing	Hennepin	Bloomington	X	NB	FREEWAY	OUTSIDE	12	1652				2172	N/A	-	-					2172	97000	48500	4.5%	2400	2.5%	1200	3792	7.0%
32	I	494	East of France Ave Interchng	Hennepin	Bloomington	B	B	FREEWAY	RING	12		4124	3791		-	-	5068	4735					8803	159000	159000	6.2%	7500	4.7%	7500	17303	10.9%
33	I	494	Btwn 24th & 34th Avenue	Hennepin	Bloomington	B	B	FREEWAY	RING	12		2308	2185		-	-	3121	2978					6099	137000	137000	4.5%	6600	4.8%	6600	12699	9.3%
34	MN	77	South of TH 82	Hennepin	Richfield	NB	B	FREEWAY	INSIDE	12	1359				1774	N/A	-	-					1774	70000	35000	5.1%	3000	2.9%	1000	2774	7.9%
35	I	35W	South of TH 82 Commons	Hennepin	Mpls.	X	NB	FREEWAY	INSIDE	12					3694	N/A	-	-					3694	108000	53000	7.0%	6400	6.0%	3200	6864	13.0%
36	MN	55	North of Minnehaha Pkwy	Hennepin	Mpls.	B	B	EXPRESSWAY	INSIDE	12	819	635			785	801	-	-	49%	51%			1586	28000	28000	5.7%	1250	4.5%	1250	2636	10.1%
38	I	94	East of TH 280	Ramsey	St. Paul	B	B	FREEWAY	INSIDE	12		1609	2308		-	-	2485	3194					5689	188000	188000	3.4%	8700	5.2%	8700	14389	8.6%
39	I	94	South of 42nd Avenue	Hennepin	Mpls.	X	NB	FREEWAY	INSIDE	16	3516				3913	N/A	-	-					3913	120000	80000	6.5%	4800	4.0%	2400	6313	10.5%
40	I	94/694	Btwn TH 100 & TH 252	Hennepin	Brooklyn Pk	WB	B	FREEWAY	RING	12			3170		-	-	N/A	3936					3936	129000	84500	6.1%	6500	6.8%	4250	8188	12.7%
41	I	694	Btwn TH 47 & TH 55	Anoka	Fridley	X	WB	FREEWAY	RING	12			3204		-	-	N/A	3969					3969	134000	67000	8.0%	7800	5.7%	3900	7799	11.6%
42	I	694	East of Silver Lake Road	Ramsey	New Brighton	WB	B	FREEWAY	RING	16			2831		-	-	N/A	3142					3142	113000	56500	5.8%	6400	5.7%	3200	6342	11.2%
43	I	35W	North of TH 10 Interchng	Ramsey	Mounds View	SB	B	FREEWAY	OUTSIDE	12	2883				N/A	3236	-	-					3236	83000	41500	7.0%	4760	5.1%	2375	5810	12.1%
44	US	10	East of Silver Lake Road	Ramsey	Mounds View	B	B	EXPRESSWAY	OUTSIDE	12	1207	1042			1462	1297	-	-	53%	47%			2759	43000	43000	6.4%	1450	3.4%	1450	4209	9.8%
45	MN	65	South of 73rd Avenue	Anoka	Fridley	B	B	EXPRESSWAY	OUTSIDE	12	768	1099			982	1313	-	-	43%	57%			2295	36000	36000	6.4%	1400	3.9%	1400	3895	10.3%
46	MN	252	South of 85th Avenue	Hennepin	Brooklyn Pk	X	NB	EXPRESSWAY	OUTSIDE	12	1679				1982	N/A	-	-					1982	510							