

A4.3 CORDON LINE SURVEY

A4.3.1 Design of the Survey

a. Survey Stations

Cordon line survey was carried out to check inbound and outbound traffic into and from the Study Area, and determine the traffic demand between the traffic zones within the Study Area (inner zone) and those of out of the Study Area (outer zone). Eight (8) stations were selected on the border of the Study Area along National Road No.1, 2, 3, 4, 5, 6A, & 21 and Street No.369 (at east bank of the Bassac River). The locations of the stations for the cordon line survey are shown in Figure A4.1.2 (a).

b. Survey Item and Time Duration

The actual survey consisted of roadside OD interview and classified vehicle counting.

Roadside OD interview surveys were conducted for fourteen (14) hours from 06:00 in the morning to 20:00 in the evening at all stations. The vehicles of the entire traffic were stopped at random basis, and drivers and passengers were interviewed. The minimum target-sampling rate was set at 20%.

Table A4.3.1 Outline of the Cordon Line Survey

No.	Survey Item	Contents
(1)	Roadside OD Interview	<ul style="list-style-type: none"> - Time of Interview - Type of Vehicle - Number Plate (if possible) - Origin & Destination - Trip Purpose - Number of Passengers (including Driver & Co-Driver) - Loading Rate (by quarters: Empty, 1/4, 1/2, 3/4, Full) - Loading Items
(2)	Classified Vehicle Counting	<ul style="list-style-type: none"> - Number of Through Traffic by 15 Minutes Intervals, By Type of Vehicles (10 categories) & Walker, And by Directions

Classified vehicle counting (11 transport modes, including walking) were conducted for twenty-four (24) hours from 06:00 in the morning to 06:00 in the morning of the following day at six (6) stations along the National Road No.1, 2, 3, 4, 5, and 6A (24-hr station). These stations were selected for observing 24-hour's traffic volume to the daytime traffic volume (24/12-hrs ratio), and expanding the results of traffic demand estimation from the output of the roadside OD interviews. In addition, same counting was conducted for fifteen (15) hours from 06:00 in the morning to 21:00 in the evening at two (2) stations along the National Road No.21 and Street No.369 in the Kandal Province (15-hr station). These stations were considered that relatively low rate of nighttime traffic volume would be expected. Table A4.3.1 shows outline of the cordon line survey.

A4.3.2 Survey Output

Table A4.3.2 & A4.3.3 and Figure A4.3.1 shows the brief summary of the cordon line survey carried out on May 30 (Tuesday) and June 6 (Tuesday) of 2000 with a supplement survey on June 8 (Thursday) along National Road No.5 due to insufficient interviews caused by mishap at first day of implementation (May 30).

The total number of vehicles crossing the cordon line at 24-hr stations was counted to be 73,282 units (in-bound: 37,920 & out-bound: 35,362) in total, of which 43,747 units (59.7%) were motorbikes. In addition, at 15-hr stations, 11,721 units were counted (in-bound: 5,725 & out-bound: 5,996) in total, of which 7,949 units (67.8%) were also motorbikes.

Table A4.3.2 Sampling Rate of the Cordon Line OD Survey (Daytime)

Station	Location	Daytime Traffic (units)	Sample (people)	Sampling Rate (%)	Remarks
CL-01	National Road No.1	11,671	2,057	17.6	June 6 / 24-hr
CL-02	National Road No.2	6,199	2,077	33.5	June 6 / 24-hr
CL-03	National Road No.3	4,961	1,809	36.5	June 6 / 24-hr
CL-04	National Road No.4	18,880	3,843	20.4	May 30 / 24-hr
CL-05	National Road No.5	(11,570) 11,690	(N/A) 1,988	(N/A) 17.0	(May 30 / 24-hr) June 8 / 12-hr
CL-06	National Road No.6	8,677	1,511	17.4	May 30 / 24-hr
CL-11	Street No.369	4,387	849	19.4	May 30 / 15-hr
CL-21	National Road No.21	6,479	1,585	24.5	June 6 / 15-hr
Grand Total		71,864	15,719	21.8	

Table A4.3.3 Vehicle Occupancy of the Cordon Line OD Survey (Daytime)

No.	Mode	Sample	Passenger	Occupancy
1.	Passenger Car (including Station Wagon & 4WD)	1,121	4,489	4.00
2.	Taxi (Sedan Type Taxi with Yellow Line)	543	2,528	4.66
3.	Light Bus / Passenger Van (Mini Bus)	1,125	14,371	12.77
4.	Pick-up / Cargo Van	1,497	15,061	9.63
5.	Standard and Large Bus	289	5,345	18.56
6.	Large Truck, Semi & Full Trailer	774	3,438	4.86
7.	Motorumo (Motorbike Trailer)	1,551	12,577	8.11
8.	Motorbike (including "Motodop" -Motorbike Taxi)	8,139	15,020	1.85
9.	Cyclo (Tricycle Taxi)	13	19	1.46
10.	Bicycle	488	589	1.21
11.	Others (Tractor, Bicycle & Horse Trailer, etc.)	179	393	2.28
Total & Average		15,719	73,830	4.70

Note: Number of passenger is including driver/co-driver

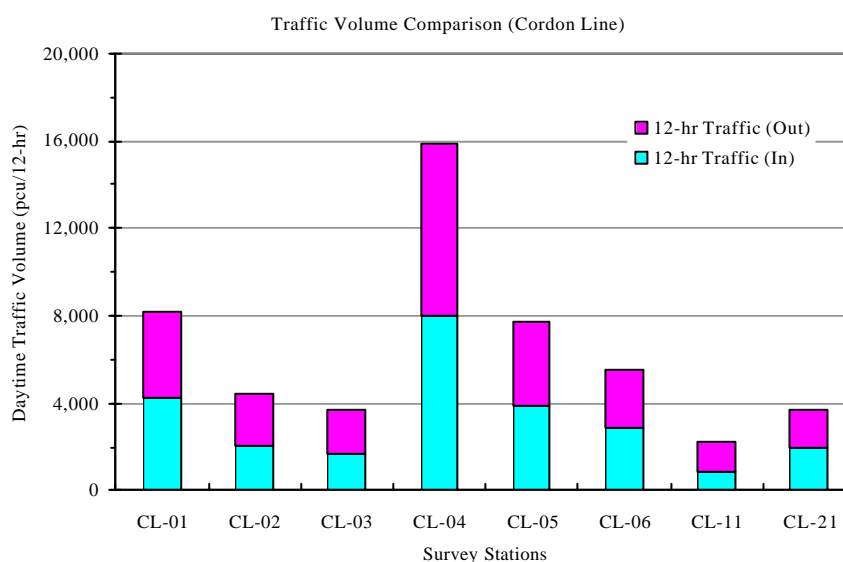


Figure 4.3.1 Daytime Traffic Volumes at Cordon Line Survey Stations

Daytime 12-hours (06:00~18:00) traffic at the all stations of the cordon line survey was counted 71,864 units and interviewed people were counted 15,719 in total. Therefore, sampling ratio of OD interviews during daytime reached 21.9 % in total.

The largest traffic volume was counted at the station along the National Road No.4 (CL-04) with a

total count of 22,360 units, followed by 14,780 units and 13,600 units along the National Road No.5 (CL-05) and No.1 (CL-01) respectively.

The relatively high share of heavy vehicles (7.0%) was observed at the station along the National Road No.4 (CL-04). The figures observed at the other stations were showing relatively low ratios of 2.5% at National Road No.6 (CL-06) to 4.5% at National Road No.1 (CL-01) for 24-hr stations, and 1.3% in average at 15-hr stations (see Figure A4.3.3).

Figure A4.3.2 showed the traffic flow characteristics of the cordon lines after the expansion of sampled OD to the traffic counts. In generally, more than 95% of the entire traffic flow crossing these cordon lines had either trip end (origin or destination; OD) in the inner zones, of which almost half had OD in the central area, and the other half had OD in the suburban area. By route, at National Road No.6 (CL-06), almost three-quarters (3/4) of the entire traffic had this OD in the central area. At National Road No.3 (CL-03) and No.4 (CL-04), this central area based share was around three-fifths (3/5). On the other hand, at National Road No.1 (including St.369), No.2 (including N.R.No.21), and National Road No.5, around three-fifths (3/5) of the entire traffic flow had OD in the suburban area.

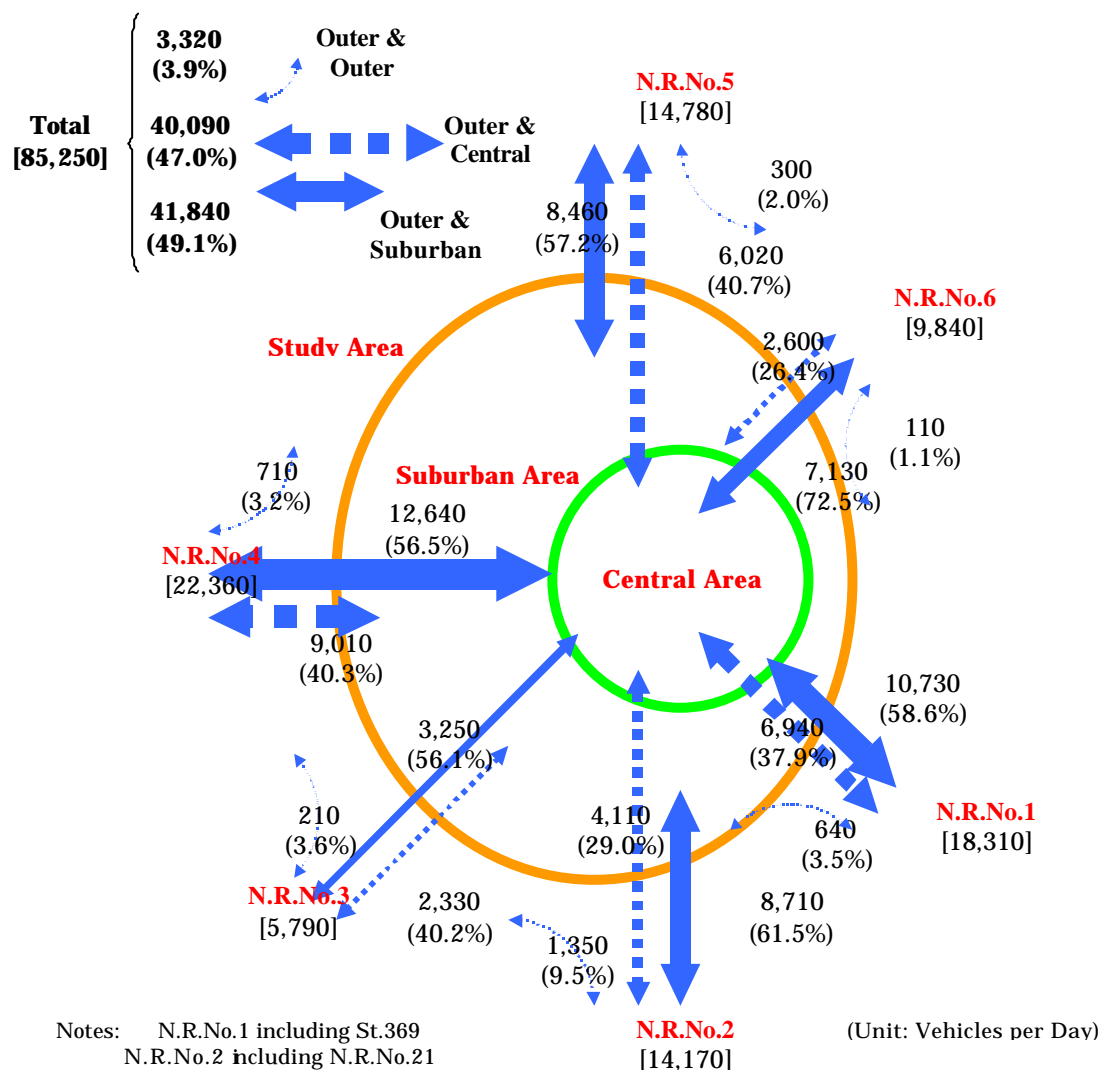


Figure A4.3.2 Traffic Flow Characteristics of Cordon Lines

Figure A4.3.3 showed OD share characteristics by mode. Around sixty-five (65) to seventy (70) percent of light vehicles had OD trip-end in the central area. For large bus, this share became around eighty (80) percent.

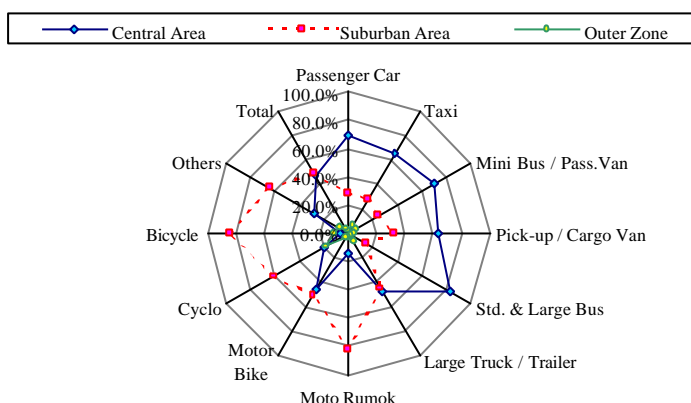


Figure A4.3.3 OD Share by Mode

For large truck and trailer truck, OD share of central base and suburban base became almost even with average share of forty-six (46) percent and share of outer to outer traffic reached around seven (7) percent.

For motorbike, OD share of central base and suburban base were almost even. More than eighty (80) percent of motorbike trailer (Motorumok) and bicycle had OD trip-end in the suburban area, and about two-thirds (2/3) of the other mode's OD trip-end was also in the nearest suburban area.

Table A4.3.4 (a) Sectional Summary of 24/12-Hr. Ratio & Peak Hr. Ratio at 24-hrs Stations

24-hrs Stations	Daytime Traffic	24/12 hr. Ratio	24 hr. Traffic	Peak Hour Ratio	Peak hr. Traffic	Peak Hour
CL-01	8,194	1.17	9,601	0.14	1,127	06:30~07:30
CL-02	4,474	1.16	5,180	0.12	526	07:30~08:30
CL-03	3,705	1.18	4,373	0.12	450	06:00~07:00
CL-04	15,891	1.22	19,412	0.12	1,842	06:15~07:15
CL-05	7,708	1.24	9,527	0.14	1,046	06:15~07:15
CL-06	5,530	1.15	6,339	0.11	615	06:30~07:30
Average	7,584	1.20	9,076	0.12	934	---

Table A4.3.4 (b) Sectional Summary of 15/12-Hr. Ratio & Peak Hr. Ratio at 15-hrs Stations

15-hrs Stations	Daytime Traffic	15/12 hr. Ratio	15 hr. Traffic	Peak Hour Ratio	Peak hr. Traffic	Peak Hour
CL-11	2,250	1.08	2,427	0.22	492	08:15~09:15
CL-21	3,700	1.09	4,024	0.17	624	06:30~07:30
Average	2,975	1.08	3,233	0.19	558	---

Traffic Unit: Passenger Car Units (PCU's)

Table A4.3.4 (a) and (b) shows average ratio of 24-hrs or 15-hrs total traffic to daytime traffic (24/12-hrs or 15/12-hrs ratio) and peak hours ratio to daytime traffic of each station in passenger car unit (pcu) by section. 24/12-hrs ratios were ranged from 1.15 at National Road No.6 (CL-06) to 1.24 at National Road No.5 (CL-05) with an average ratio of 1.20. 15/12-hrs ratios were 1.08 at Street 369 (CL-11) and 1.09 at National Road No.21 (CL-21).

At 24-hrs stations, peak hour's ratios were ranged from 0.11 at National Road No.4 (CL-04) to 0.14 at National Road No.5 (CL-05) with an average ratio of 0.12. Peak hours were observed in the morning between 06:00 and 07:30 at all stations except National Road No.2. At National Road No.2, peak hour was 60 to 90 minutes later than other stations. At 15-hrs stations, peak hour's ratios were 0.22 at Street 369 (CL-11) with peak time between 08:15 and 09:15, and 0.17 at National Road No.21 (CL-21) with peak time between 06:30 and 07:30.

Figure A4.3.4 shows hourly fluctuation of vehicles by direction and type. At 24-hr stations, in-bound traffic, especially motorcycles, showed very steep peak around 06:00~07:00 in the morning and continued flat flow until 17:00 with a small off-peak around 11:00~12:00 and a small peak around 17:00~18:00, then declined gradually after 18:00. The other type of vehicles showed almost flat flow from 06:00 to 18:00. On the other out-bound traffic, motorcycles showed peak flow around

07:00~09:00 in the morning and around 17:00~18:00 in the evening. Within the other vehicles, peak flow was observed in light vehicles only around 08:00~09:00.

In addition, at 15-hr stations, only motorcycles showed remarkable fluctuations with steep peak around 06:00~07:00 on in-bound side and around 08:00~09:00 on out-bound side. Off-peak occurred around 10:00~11:00, then small peak occurred around 13:00~15:00 on both directions.

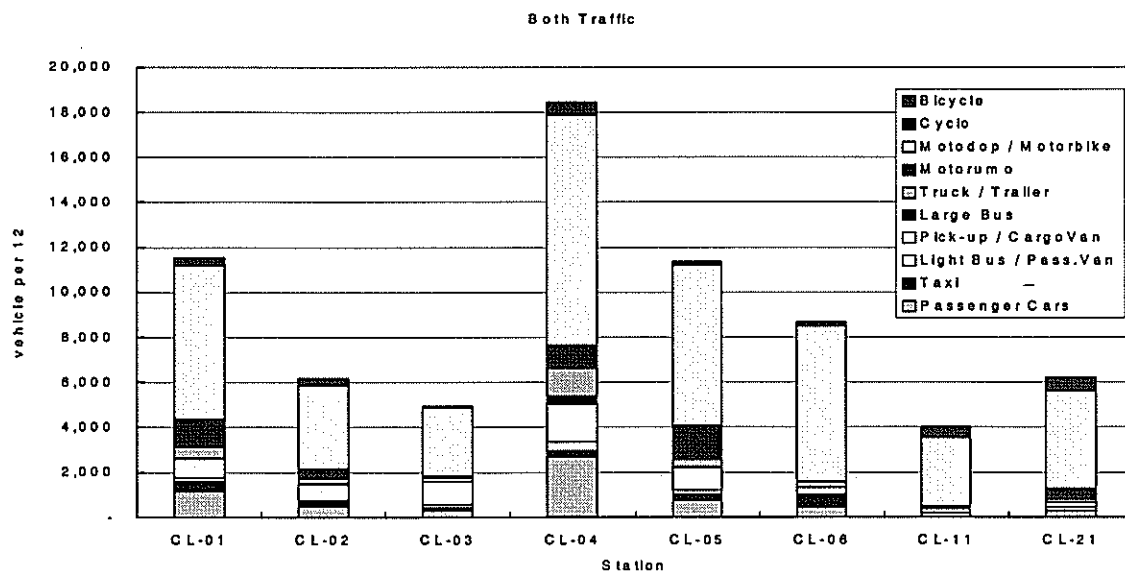
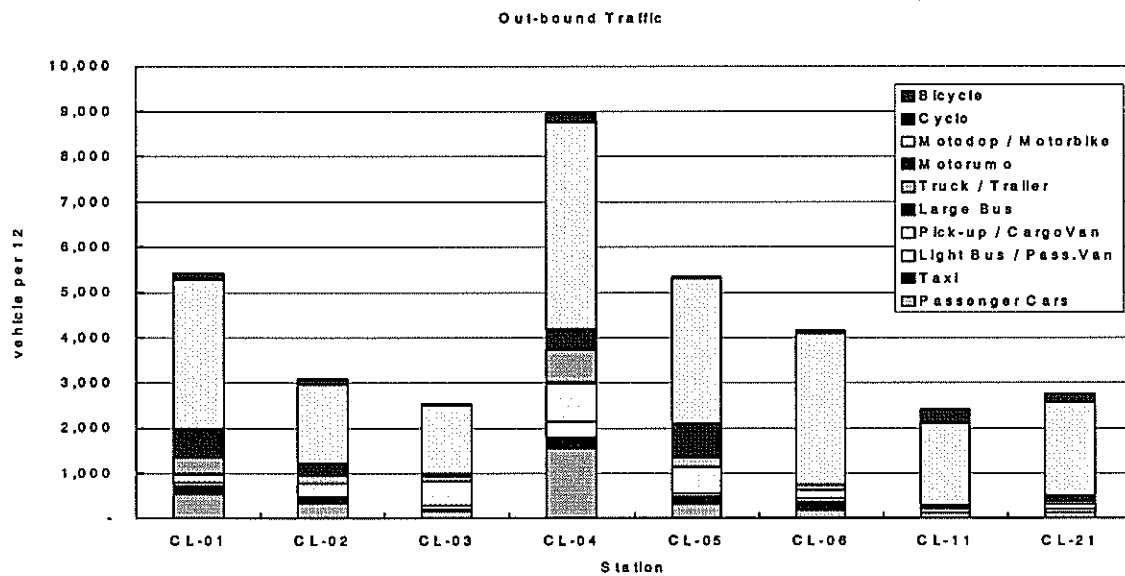
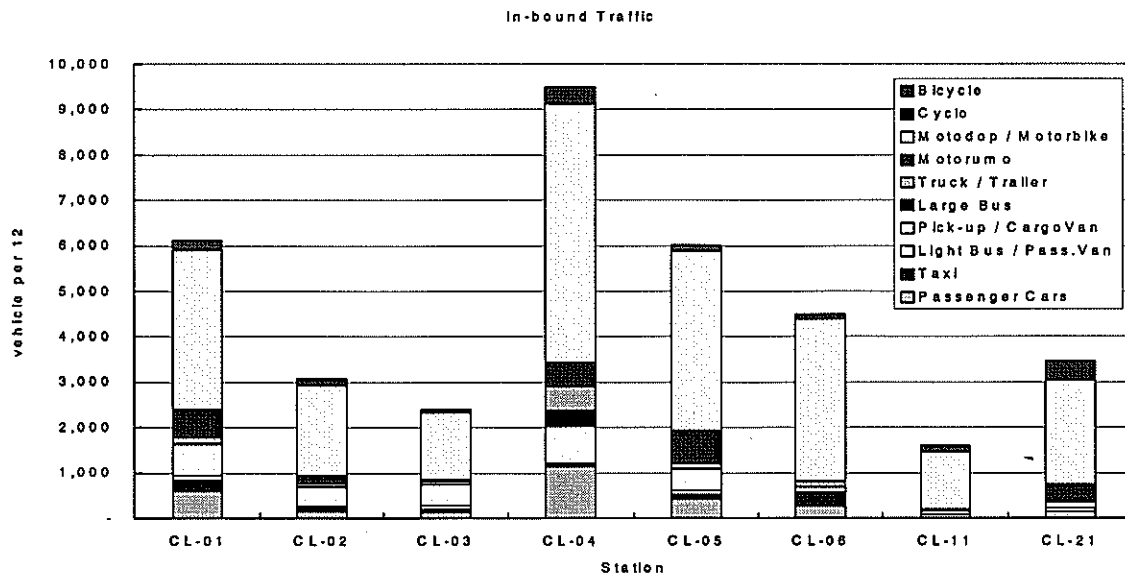


Figure A4.3.3 Vehicle Type Share & Directional Volume of Cordon Line Survey Stations

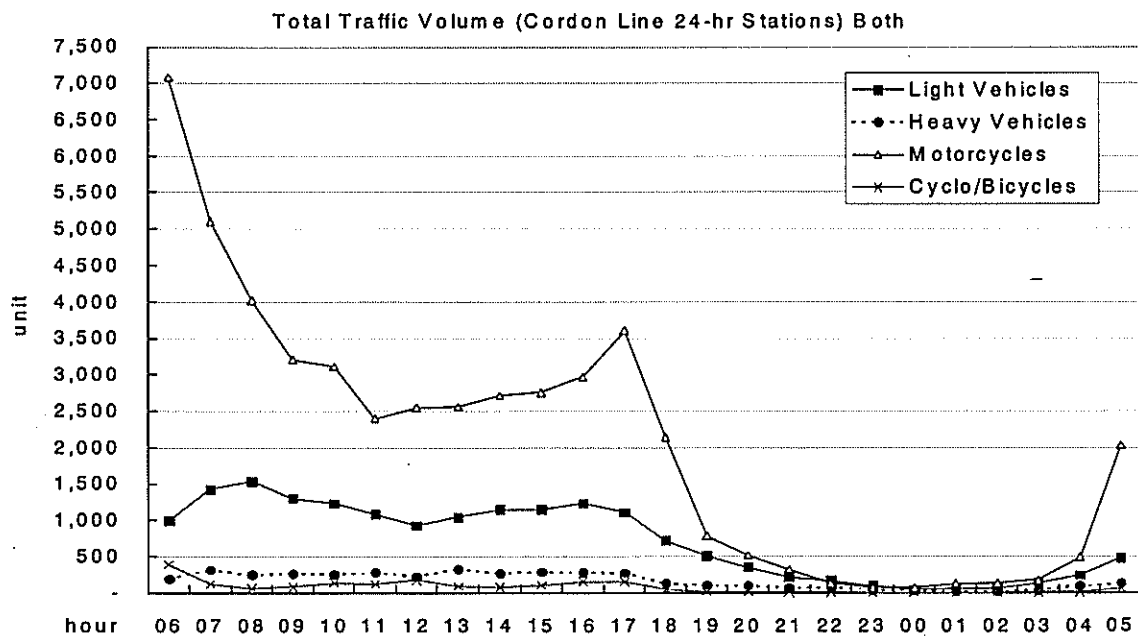
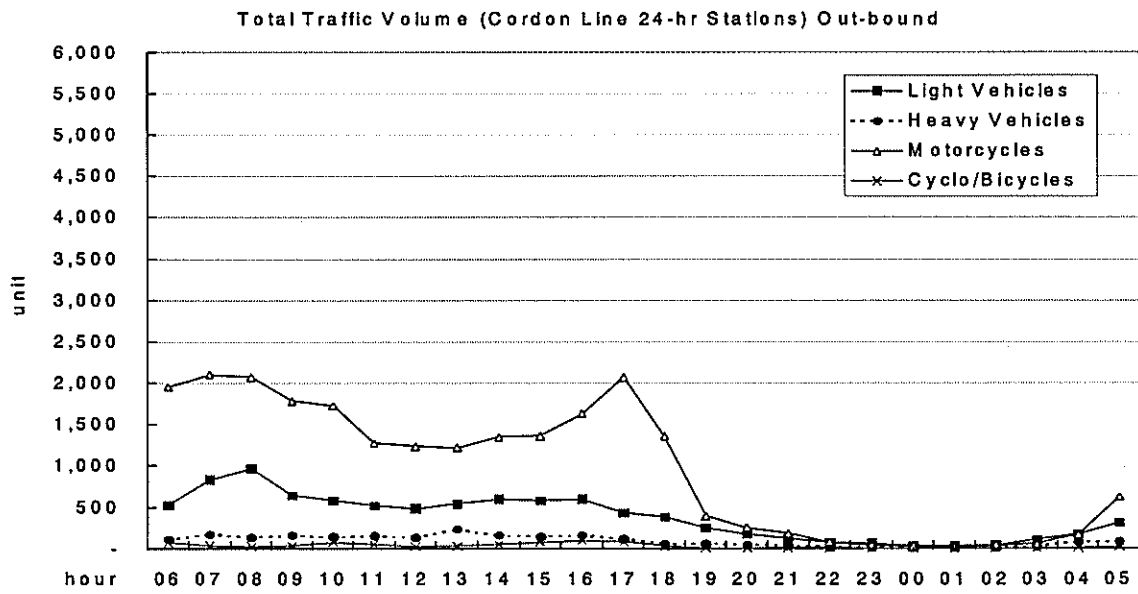
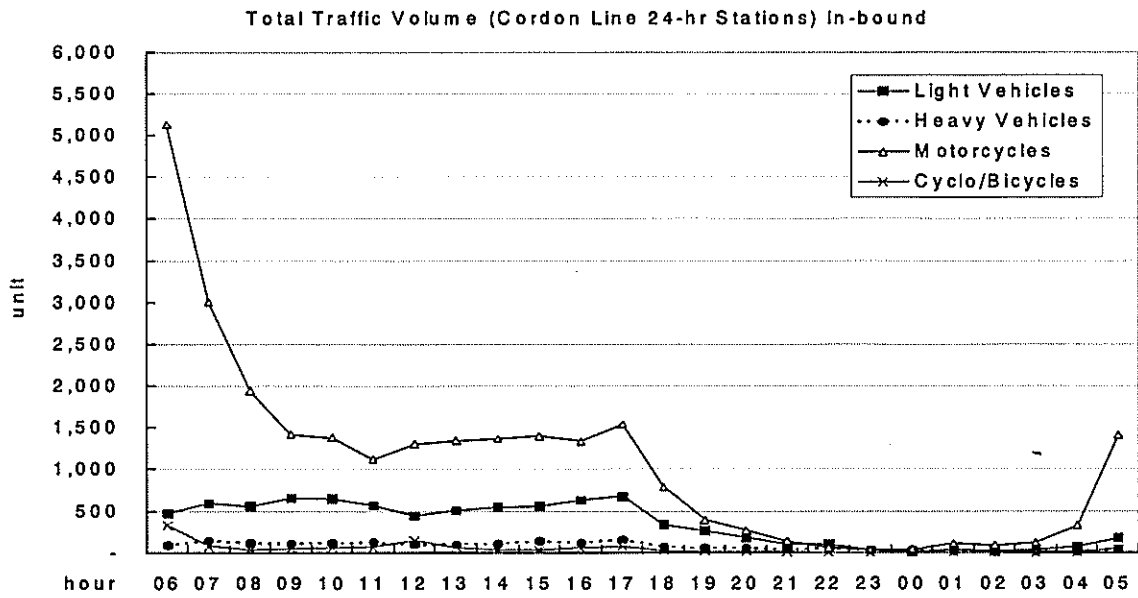
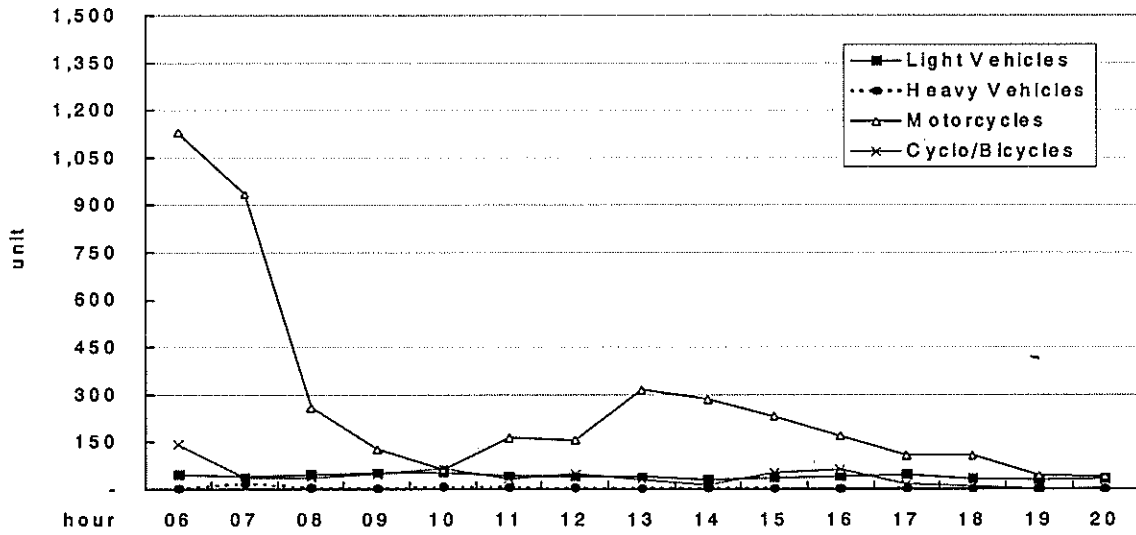
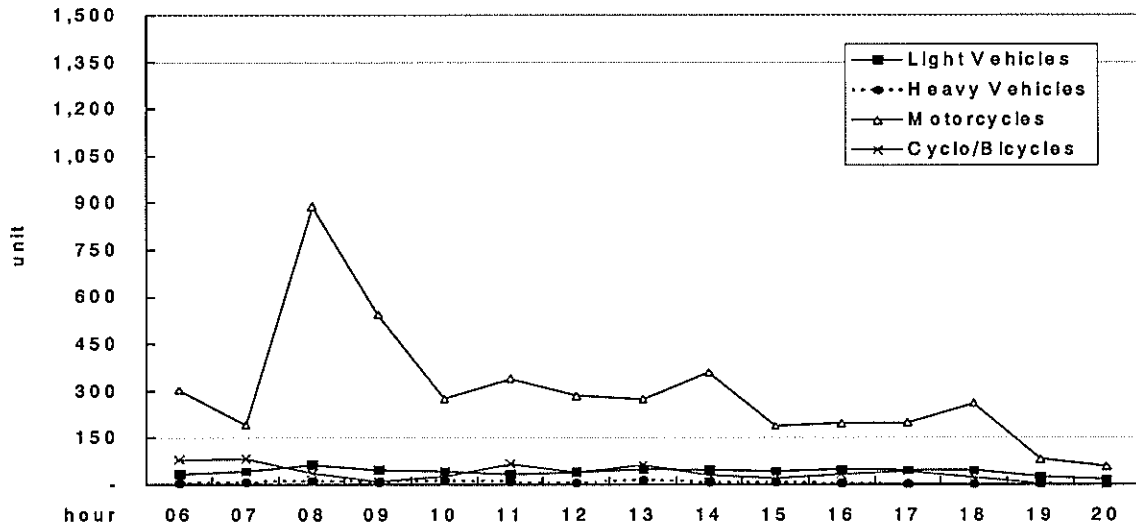


Figure A4.3.4 (a) Hourly Fluctuation of Cordon Line Survey Stations (24-hrs)

Total Traffic Volume (Cordon Line 15-hr Stations) In-bound



Total Traffic Volume (Cordon Line 15-hr Stations) Out-bound



Total Traffic Volume (Cordon Line 15-hr Stations) Both

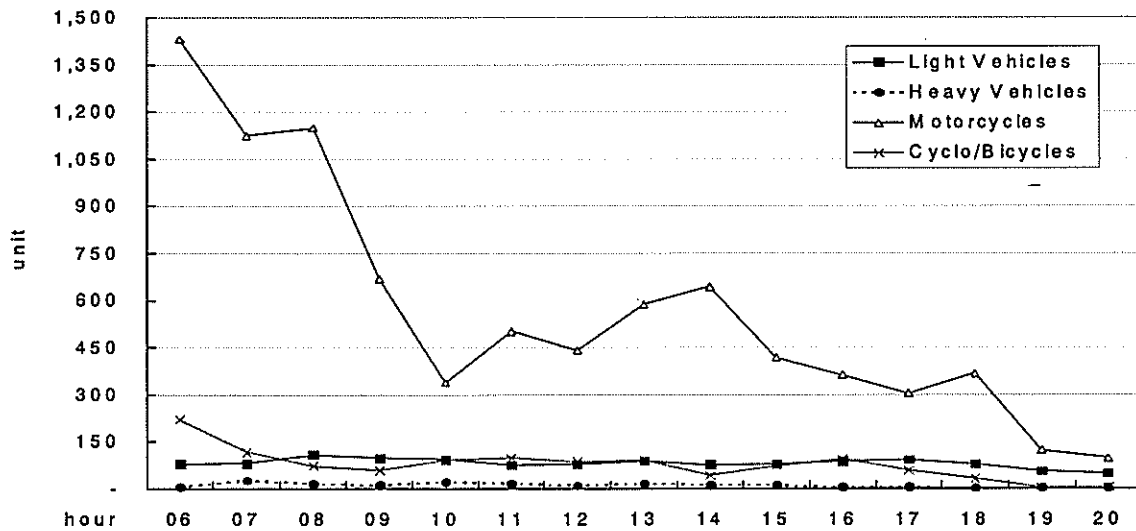


Figure A4.3.4 (b) Hourly Fluctuation of Cordon Line Survey Stations (15-hrs)

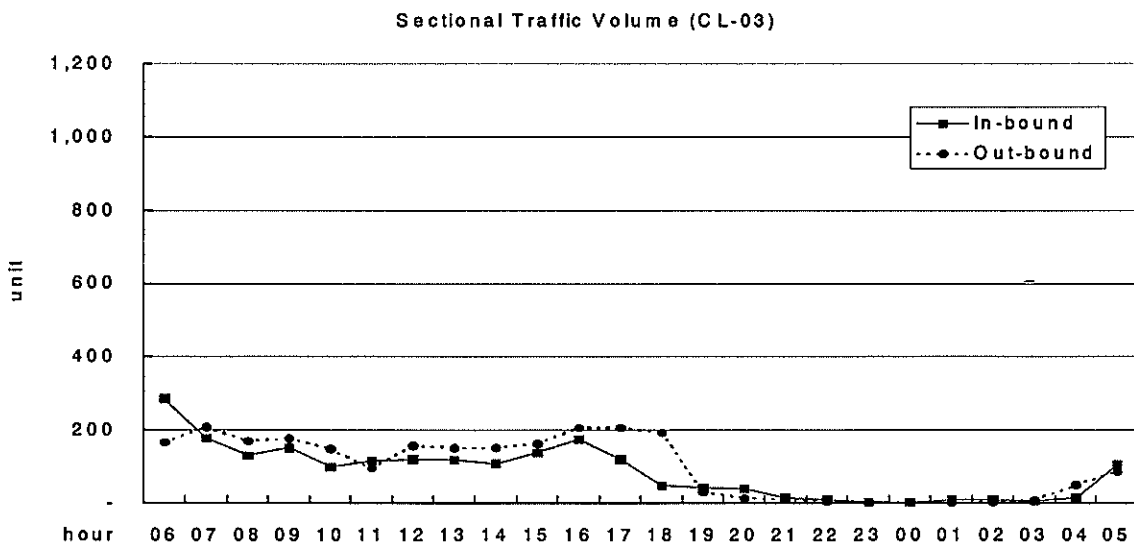
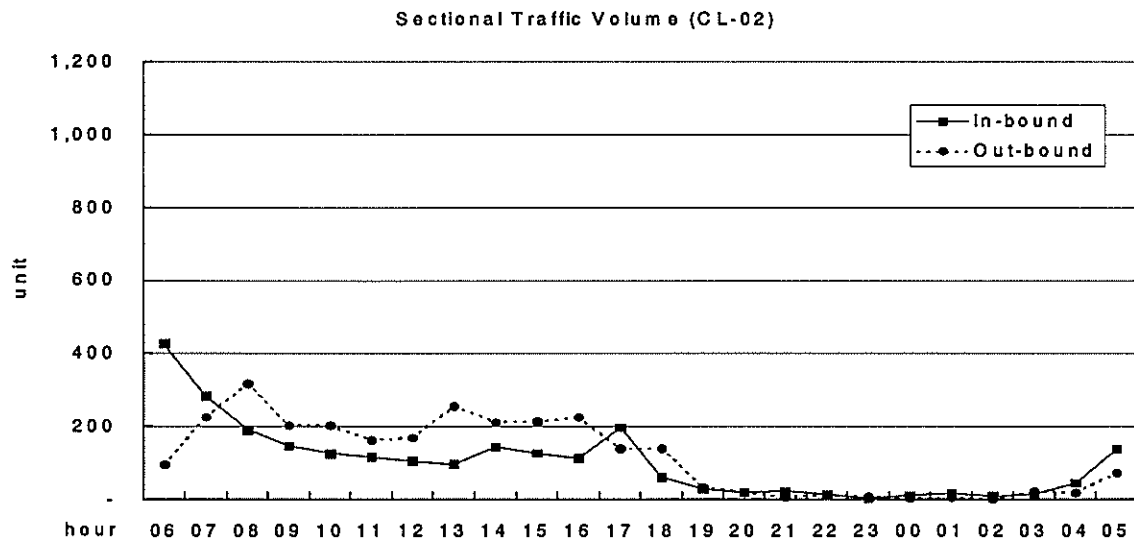
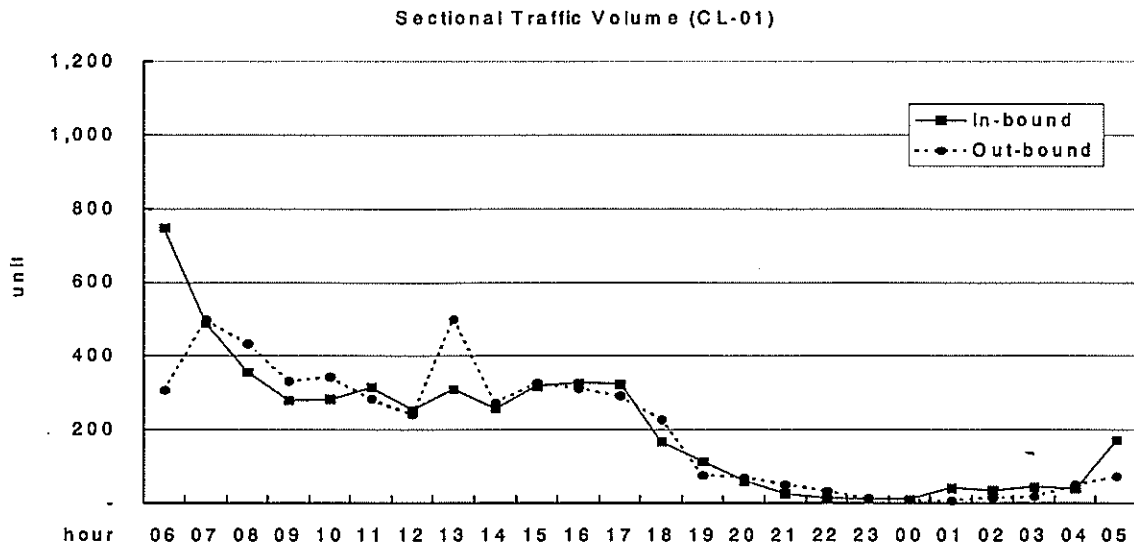


Figure A4.3.5 (a) Directional & Hourly Fluctuation of Cordon Line Survey Stations (1)

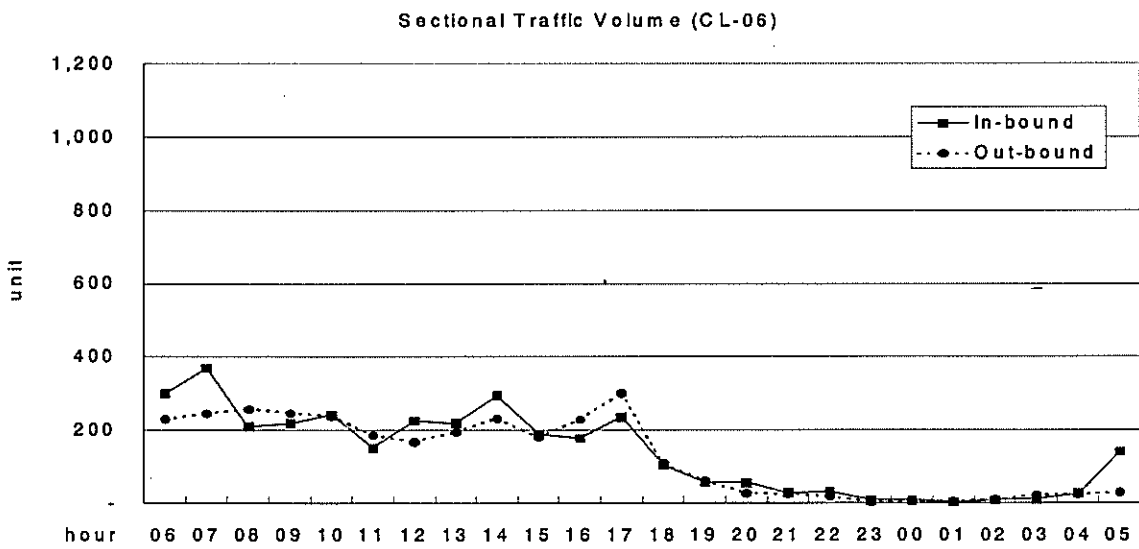
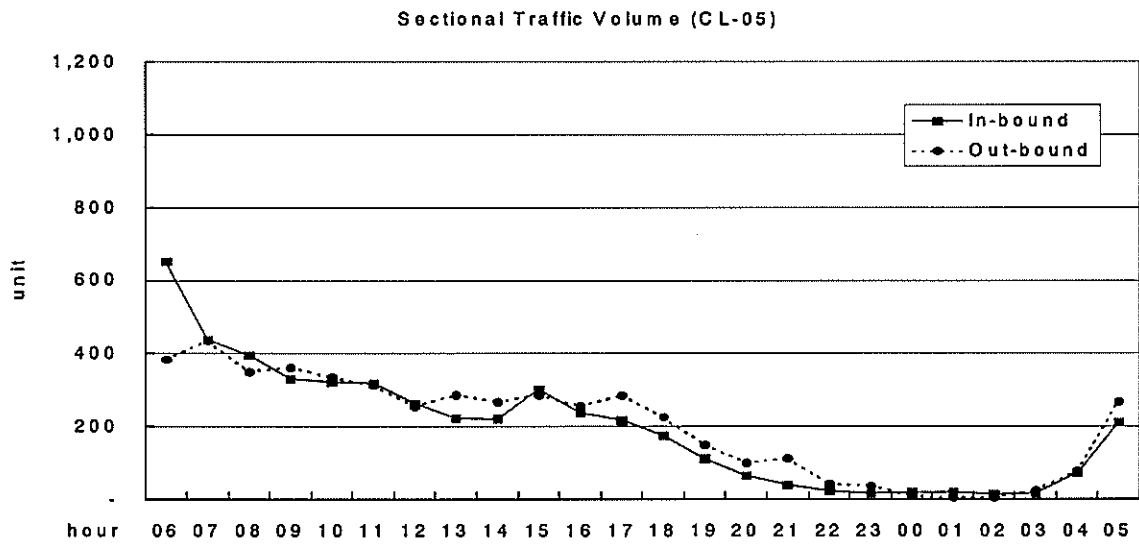
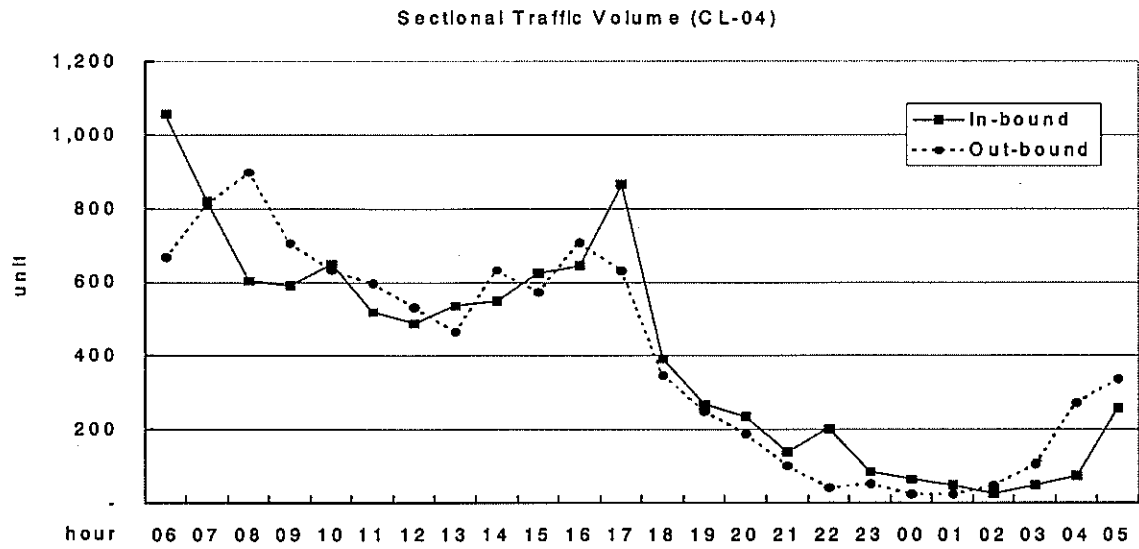


Figure A4.3.5 (b) Directional & Hourly Fluctuation of Cordon Line Survey Stations (2)

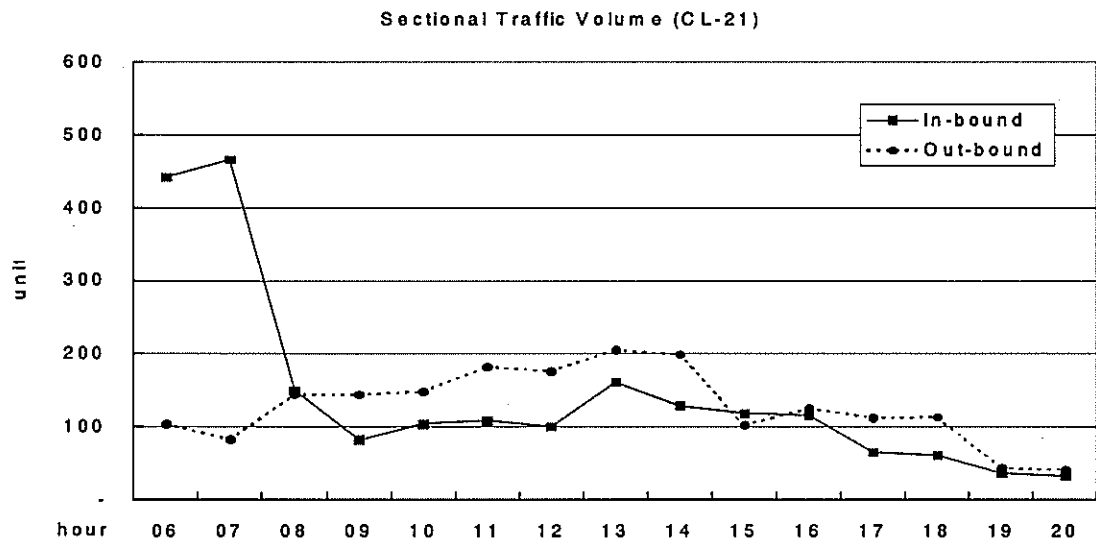
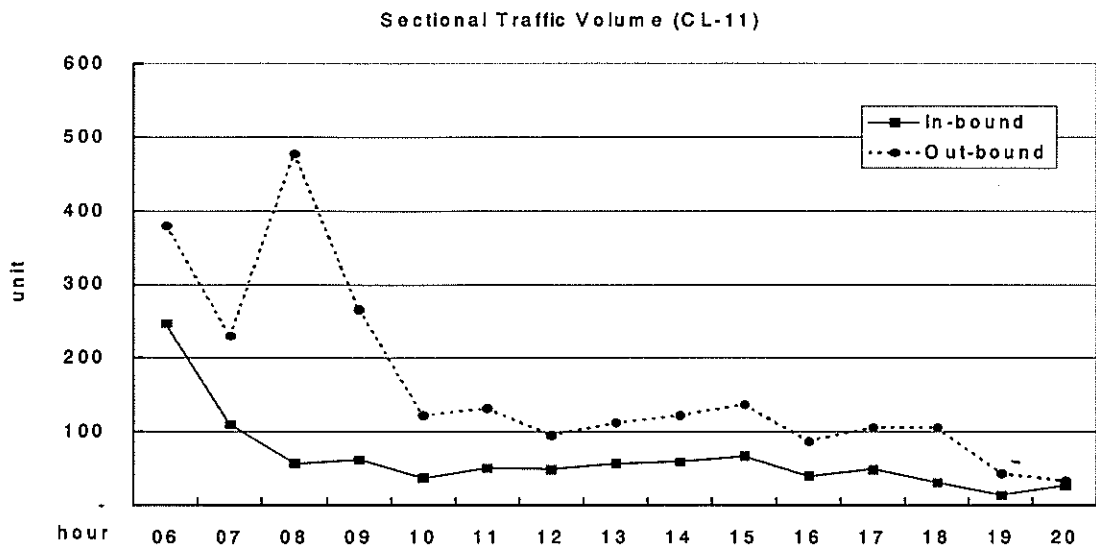


Figure A4.3.5 (c) Directional & Hourly Fluctuation of Cordon Line Survey Stations (3)

Table A4.3.2 Summary of the Cordon Line Survey Results

Appendix 4.3

Station	Item	unit	Vehicle Type										Total	
			1.	2.	3.	4.	5.	6.	7.	8.	9.	10.		
No.	Location		Passenger Cars	Taxi	Light Bus / Pass. Van	Pick-up / Cargo Van	Large Bus	Truck / Trailer	Motorumo	Motorpod / Motorbike	Cyclo	Bicycle		
CL-01	National Road No.1	12 hrs Traffic	vehicle	586	88	223	683	19	131	619	3,514	4	202	6,112
		Share by Vehicle Type	(%)	(9.6)	(4.2)	(1.7)	(11.2)	(0.3)	(2.1)	(10.1)	(57.4)	(0.1)	(3.3)	(100.0)
		24/12 Ratio	-	1.22	1.07	1.13	1.08	1.05	1.33	1.41	1.14	1.00	1.05	1.17
		Number of Sampling	sample	99	53	153	36	12	45	110	684	4	0	1,196
		Sampling Ratio 12 hrs Base	(%)	(16.9)	(60.2)	(56.0)	(5.3)	(63.2)	(34.4)	(17.8)	(19.5)	(100.0)	(0.0)	(19.5)
		12 hrs Traffic	vehicle	545	55	200	387	17	154	628	3,287	2	150	5,425
	Share by Vehicle Type	(%)	(10.0)	(3.6)	(1.1)	(3.4)	(0.3)	(6.5)	(11.6)	(60.6)	(0.0)	(2.8)	(100.0)	
	24/12 Ratio	-	1.19	1.09	1.30	1.25	1.06	1.10	1.26	1.15	1.00	1.07	1.17	
	Number of Sampling	sample	156	9	69	55	3	30	141	386	4	0	853	
	Sampling Ratio 12 hrs Base	(%)	(28.6)	(16.4)	(34.5)	(14.2)	(17.6)	(19.5)	(22.5)	(11.7)	(200.0)	(0.0)	(15.7)	
	12 hrs Traffic	vehicle	1,131	143	473	1,070	36	285	1,247	6,801	6	352	11,544	
	Share by Vehicle Type	(%)	(9.8)	(3.9)	(1.4)	(7.5)	(0.3)	(4.2)	(10.8)	(58.9)	(0.1)	(3.0)	(100.0)	
24/12 Ratio	-	1.21	1.08	1.19	1.12	1.06	1.16	1.33	1.15	1.00	1.06	1.17		
Number of Sampling	sample	255	62	222	91	15	75	251	1,070	8	0	2,049		
Sampling Ratio 12 hrs Base	(%)	(22.5)	(43.4)	(46.9)	(8.5)	(41.7)	(26.3)	(20.1)	(15.7)	(133.3)	(0.0)	(17.7)		
CL-02	National Road No.2	12 hrs Traffic	vehicle	143	73	47	426	11	62	187	1,970	4	152	3,075
		Share by Vehicle Type	(%)	(4.7)	(2.4)	(1.5)	(13.9)	(0.4)	(2.0)	(6.1)	(64.1)	(0.1)	(4.9)	(100.0)
		24/12 Ratio	-	1.30	1.19	1.21	1.17	1.09	1.21	1.27	1.15	1.25	1.16	1.17
		Number of Sampling	sample	61	34	114	113	23	52	155	618	1	0	1,171
		Sampling Ratio 12 hrs Base	(%)	(42.7)	(46.6)	(242.6)	(26.5)	(209.1)	(83.9)	(82.9)	(31.4)	(25.0)	(0.0)	(38.1)
		12 hrs Traffic	vehicle	348	93	45	383	13	82	263	1,740	0	121	3,082
	Share by Vehicle Type	(%)	(10.0)	(3.6)	(1.1)	(3.4)	(0.3)	(6.5)	(11.6)	(60.6)	(0.0)	(2.8)	(100.0)	
	24/12 Ratio	-	1.10	1.06	1.04	1.13	1.08	1.18	1.14	1.15	#DIV/0!	1.04	1.14	
	Number of Sampling	sample	86	25	76	51	26	35	210	397	0	0	906	
	Sampling Ratio 12 hrs Base	(%)	(24.7)	(26.9)	(168.9)	(13.3)	(200.0)	(42.7)	(79.5)	(22.8)	#DIV/0!	(0.0)	(29.3)	
	12 hrs Traffic	vehicle	491	166	92	802	24	144	451	3,710	4	273	6,164	
	Share by Vehicle Type	(%)	(9.8)	(3.9)	(1.4)	(7.5)	(0.3)	(4.2)	(10.8)	(58.9)	(0.1)	(3.0)	(100.0)	
24/12 Ratio	-	1.16	1.12	1.13	1.16	1.08	1.19	1.20	1.15	1.25	1.11	1.15		
Number of Sampling	sample	147	59	190	164	49	87	365	1,015	1	0	2,077		
Sampling Ratio 12 hrs Base	(%)	(29.9)	(35.5)	(206.5)	(20.3)	(204.2)	(60.4)	(80.9)	(27.4)	(25.0)	(0.0)	(33.7)		
CL-03	National Road No.3	12 hrs Traffic	vehicle	141	54	88	466	2	60	44	1,478	0	64	2,397
		Share by Vehicle Type	(%)	(5.9)	(2.3)	(3.7)	(19.4)	(0.1)	(2.5)	(1.8)	(61.7)	(0.0)	(2.7)	(100.0)
		24/12 Ratio	-	1.18	1.22	1.27	1.22	1.00	1.15	1.41	1.12	#DIV/0!	1.28	1.16
		Number of Sampling	sample	86	5	27	216	0	40	23	643	0	0	1,040
		Sampling Ratio 12 hrs Base	(%)	(61.0)	(9.3)	(30.7)	(46.4)	(0.0)	(66.7)	(52.3)	(43.5)	#DIV/0!	(0.0)	(43.4)
		12 hrs Traffic	vehicle	156	63	72	526	2	121	51	1,512	0	39	2,542
	Share by Vehicle Type	(%)	(10.0)	(3.6)	(1.1)	(3.4)	(0.3)	(6.5)	(11.6)	(60.6)	(0.0)	(2.8)	(100.0)	
	24/12 Ratio	-	1.16	1.00	1.15	1.32	1.00	1.25	1.06	1.13	#DIV/0!	1.08	1.17	
	Number of Sampling	sample	21	6	54	288	4	43	32	321	0	0	769	
	Sampling Ratio 12 hrs Base	(%)	(13.5)	(9.5)	(75.0)	(54.8)	(200.0)	(35.5)	(62.7)	(21.2)	#DIV/0!	(0.0)	(30.3)	
	12 hrs Traffic	vehicle	297	117	160	992	4	181	95	2,990	0	103	4,939	
	Share by Vehicle Type	(%)	(6.0)	(2.4)	(3.2)	(20.1)	(0.1)	(3.7)	(1.9)	(60.5)	(0.0)	(2.1)	(100.0)	
24/12 Ratio	-	1.17	1.10	1.22	1.27	1.00	1.22	1.22	1.12	#DIV/0!	1.20	1.17		
Number of Sampling	sample	107	11	81	504	4	83	55	964	0	0	1,809		
Sampling Ratio 12 hrs Base	(%)	(36.0)	(9.4)	(50.6)	(50.8)	(100.0)	(45.9)	(57.9)	(32.2)	#DIV/0!	(0.0)	(36.6)		
CL-04	National Road No.4	12 hrs Traffic	vehicle	1,142	99	331	756	51	519	528	5,688	2	367	9,483
		Share by Vehicle Type	(%)	(12.0)	(0.3)	(0.5)	(8.5)	(3.8)	(5.5)	(5.6)	(60.0)	(0.0)	(3.9)	(100.0)
		24/12 Ratio	-	1.21	1.00	1.25	1.29	1.22	1.41	1.24	1.14	1.50	1.07	1.18
		Number of Sampling	sample	277	45	133	189	77	159	142	947	0	74	2,043
		Sampling Ratio 12 hrs Base	(%)	(24.3)	(45.5)	(40.2)	(25.0)	(151.0)	(30.6)	(26.9)	(16.6)	(0.0)	(20.2)	(21.5)
		12 hrs Traffic	vehicle	1,544	122	480	847	29	718	462	4,550	2	201	8,955
	Share by Vehicle Type	(%)	(17.2)	(2.8)	(4.0)	(9.5)	(0.3)	(8.0)	(5.2)	(50.8)	(0.0)	(2.2)	(100.0)	
	24/12 Ratio	-	1.24	1.47	1.39	1.28	1.10	1.28	1.10	1.12	1.00	1.08	1.19	
	Number of Sampling	sample	283	21	213	112	65	83	197	759	0	50	1,783	
	Sampling Ratio 12 hrs Base	(%)	(18.3)	(17.2)	(44.4)	(13.2)	(224.1)	(11.6)	(42.6)	(16.7)	(0.0)	(24.9)	(19.9)	
	12 hrs Traffic	vehicle	2,686	221	811	1,603	80	1,237	990	10,238	4	568	18,438	
	Share by Vehicle Type	(%)	(14.6)	(1.5)	(2.2)	(9.0)	(2.1)	(6.7)	(5.4)	(55.5)	(0.0)	(3.1)	(100.0)	
24/12 Ratio	-	1.22	1.43	1.38	1.28	1.21	1.33	1.18	1.13	1.25	1.07	1.19		
Number of Sampling	sample	560	66	346	301	142	242	339	1,706	0	124	3,826		
Sampling Ratio 12 hrs Base	(%)	(20.8)	(29.9)	(42.7)	(18.8)	(177.5)	(19.6)	(34.2)	(16.7)	(0.0)	(21.8)	(20.8)		
CL-05	National Road No.5	12 hrs Traffic	vehicle	414	65	126	470	22	122	723	3,946	5	124	6,017
		Share by Vehicle Type	(%)	(6.9)	(1.9)	(1.3)	(7.8)	(0.4)	(2.0)	(12.0)	(65.6)	(0.1)	(2.1)	(100.0)
		24/12 Ratio	-	1.27	1.02	1.21	1.23	1.00	1.16	1.21	1.00	1.08	1.20	
		Number of Sampling	sample	77	52	59	160	9	50	105	513	0	0	1,025
		Sampling Ratio 12 hrs Base	(%)	(18.6)	(80.0)	(46.8)	(34.0)	(40.9)	(41.0)	(14.5)	(13.0)	(0.0)	(0.0)	(17.0)
		12 hrs Traffic	vehicle	321	79	163	562	39	190	752	3,184	0	46	5,336
	Share by Vehicle Type	(%)	(6.0)	(3.4)	(1.2)	(10.5)	(0.7)	(3.6)	(14.1)	(59.7)	(0.0)	(0.9)	(100.0)	
	24/12 Ratio	-	1.37	1.22	1.37	1.23	1.03	1.30	1.20	1.31	#DIV/0!	1.00	1.28	
	Number of Sampling	sample	51	23	86	135	29	31	117	491	0	0	963	
	Sampling Ratio 12 hrs Base	(%)	(15.9)	(29.1)	(52.8)	(24.0)	(74.4)	(16.3)	(15.6)	(15.4)	#DIV/0!	(0.0)	(18.0)	
	12 hrs Traffic	vehicle	735	144	289	1,032	61	312	1,475	7,130	5	170	11,353	
	Share by Vehicle Type	(%)	(6.5)	(2.6)	(1.2)	(9.1)	(0.5)	(2.7)	(13.0)	(62.8)	(0.0)	(1.5)	(100.0)	
24/12 Ratio	-	1.32	1.14	1.28	1.23	1.02	1.25	1.18	1.25	1.00	1.06	1.24		
Number of Sampling	sample	128	75	145	295	38	81	222	1,004	0	0	1,988		
Sampling Ratio 12 hrs Base	(%)	(17.4)	(52.1)	(50.2)	(28.6)	(62.3)	(26.0)	(15.1)	(14.1)	(0.0)	(0.0)	(17.5)		

Table A4.3.2 Summary of the Cordon Line Survey Results

Station No.	Location	Item	unit	Vehicle Type										Total
				1. Passenger Cars	2. Taxi	3. Light Bus / Pass. Van	4. Pick-up / Cargo Van	5. Large Bus	6. Truck / Trailer	7. Motorumo	8. Motodop / Motorbike	9. Cyclo	10. Bicycle	
CL-06	National Road No.6	12 hrs Traffic	vehicle	257	109	205	120	13	82	33	3,559	2	106	4,486
		Share by Vehicle Type	(%)	(5.7)	(6.4)	(0.6)	(2.7)	(0.3)	(1.8)	(0.7)	(79.3)	(0.0)	(2.4)	(100.0)
		24/12 Ratio	-	1.26	1.04	1.16	1.15	1.00	1.28	1.18	1.16	1.00	1.09	1.16
		Number of Sampling	sample	81	28	77	62	9	47	22	319	2	0	647
		Sampling Ratio 12 hrs Base	(%)	(31.5)	(25.7)	(37.6)	(51.7)	(69.2)	(57.3)	(66.7)	(9.0)	(100.0)	(0.0)	(14.4)
		12 hrs Traffic	vehicle	190	100	163	166	14	110	22	3,329	2	68	4,164
	Share by Vehicle Type	(%)	(4.6)	(4.8)	(1.5)	(4.0)	(0.3)	(2.6)	(0.5)	(79.9)	(0.0)	(1.6)	(100.0)	
	24/12 Ratio	-	1.16	1.03	1.06	1.30	1.00	1.26	1.14	1.09	1.00	1.31	1.10	
	Number of Sampling	sample	129	43	132	70	19	39	8	422	2	0	864	
	Sampling Ratio 12 hrs Base	(%)	(67.9)	(43.0)	(81.0)	(42.2)	(135.7)	(35.5)	(36.4)	(12.7)	(100.0)	(0.0)	(20.7)	
	12 hrs Traffic	vehicle	447	209	368	286	27	192	55	6,888	4	174	8,650	
	Share by Vehicle Type	(%)	(5.2)	(5.7)	(1.0)	(3.3)	(0.3)	(2.2)	(0.6)	(79.6)	(0.0)	(2.0)	(100.0)	
24/12 Ratio	-	1.22	1.04	1.09	1.23	1.00	1.27	1.16	1.13	1.00	1.18	1.13		
Number of Sampling	sample	210	71	209	132	28	86	30	741	4	0	1,511		
Sampling Ratio 12 hrs Base	(%)	(47.0)	(34.0)	(56.8)	(46.2)	(103.7)	(44.8)	(54.5)	(10.8)	(100.0)	(0.0)	(17.5)		
24-hr Stations	Total	12 hrs Traffic	vehicle	2,683	813	390	2,971	423	976	2,124	20,155	17	1,015	31,577
		Share by Vehicle Type	(%)	(8.5)	(2.6)	(1.2)	(9.4)	(1.3)	(3.1)	(6.8)	(63.8)	(0.1)	(3.2)	(100.0)
		24/12 Ratio	-	1.23	1.07	1.21	1.20	1.19	1.33	1.27	1.16	1.12	1.10	1.18
		Number of Sampling	sample	681	217	563	776	130	393	557	3,724	7	74	7,122
		Sampling Ratio 12 hrs Base	(%)	(25.4)	(26.7)	(144.4)	(26.1)	(30.7)	(40.3)	(26.1)	(18.5)	(41.2)	(7.3)	(22.6)
		12 hrs Traffic	vehicle	3,104	977	658	2,571	114	1,675	2,179	17,602	60	625	29,511
	Share by Vehicle Type	(%)	(10.5)	(3.3)	(2.2)	(8.7)	(0.4)	(5.7)	(7.4)	(59.6)	(0.0)	(2.1)	(100.0)	
	24/12 Ratio	-	1.22	1.19	1.30	1.26	1.05	1.23	1.18	1.16	1.00	1.09	1.18	
	Number of Sampling	sample	726	127	630	711	146	261	705	2,776	6	50	6,138	
	Sampling Ratio 12 hrs Base	(%)	(23.4)	(13.0)	(95.7)	(27.7)	(128.1)	(15.6)	(32.4)	(15.8)	(100.0)	(8.0)	(20.8)	
	12 hrs Traffic	vehicle	5,787	1,790	1,048	5,542	537	2,651	4,313	37,757	23	1,640	61,088	
	Share by Vehicle Type	(%)	(9.5)	(2.9)	(1.7)	(9.1)	(0.9)	(4.3)	(7.1)	(61.8)	(0.0)	(2.7)	(100.0)	
24/12 Ratio	-	1.22	1.13	1.27	1.23	1.16	1.27	1.23	1.16	1.09	1.09	1.18		
Number of Sampling	sample	1,407	344	1,193	1,487	276	654	1,262	6,500	13	124	13,260		
Sampling Ratio 12 hrs Base	(%)	(24.3)	(19.2)	(113.8)	(26.8)	(51.4)	(24.7)	(29.3)	(17.2)	(56.5)	(7.6)	(21.7)		
CL-11	Street No.369	12 hrs Traffic	vehicle	77	0	11	62	1	0	46	1,258	0	146	1,601
		Share by Vehicle Type	(%)	(4.8)	(0.0)	(0.7)	(3.9)	(0.1)	(0.0)	(2.9)	(78.6)	(0.0)	(9.1)	(100.0)
		15/12 Ratio	-	1.30	#DIV/0!	1.00	1.13	1.00	#DIV/0!	1.04	1.06	#DIV/0!	1.01	1.07
		Number of Sampling	sample	41	1	2	25	0	0	17	240	0	0	326
		Sampling Ratio 12 hrs Base	(%)	(53.2)	#DIV/0!	(18.2)	(40.3)	(0.0)	#DIV/0!	(37.0)	(19.1)	#DIV/0!	(0.0)	(20.4)
		12 hrs Traffic	vehicle	111	5	18	78	0	23	57	1,804	0	320	2,416
	Share by Vehicle Type	(%)	(4.6)	(0.2)	(0.7)	(3.2)	(0.0)	(1.0)	(2.4)	(74.7)	(0.0)	(13.2)	(100.0)	
	15/12 Ratio	-	1.14	1.00	1.11	1.18	#DIV/0!	1.00	1.05	1.07	#DIV/0!	1.08	1.08	
	Number of Sampling	sample	42	0	5	15	0	25	39	397	0	0	523	
	Sampling Ratio 12 hrs Base	(%)	(37.8)	(0.0)	(27.8)	(19.2)	#DIV/0!	(108.7)	(68.4)	(22.0)	#DIV/0!	(0.0)	(21.6)	
	12 hrs Traffic	vehicle	188	5	29	140	1	23	103	3,062	0	466	4,017	
	Share by Vehicle Type	(%)	(4.7)	(0.1)	(0.7)	(3.5)	(0.0)	(0.6)	(2.6)	(76.2)	(0.0)	(11.6)	(100.0)	
15/12 Ratio	-	1.20	1.00	1.07	1.16	1.00	1.00	1.05	1.07	#DIV/0!	1.06	1.07		
Number of Sampling	sample	83	1	7	40	0	25	56	637	0	0	849		
Sampling Ratio 12 hrs Base	(%)	(44.1)	(20.0)	(24.1)	(28.6)	(0.0)	(108.7)	(54.4)	(20.8)	#DIV/0!	(0.0)	(21.1)		
CL-21	National Road No.21	12 hrs Traffic	vehicle	161	1	66	124	0	50	343	2,286	2	429	3,462
		Share by Vehicle Type	(%)	(4.7)	(0.0)	(1.9)	(3.6)	(0.0)	(1.4)	(9.9)	(66.0)	(0.1)	(12.4)	(100.0)
		15/12 Ratio	-	1.25	1.00	1.05	1.18	#DIV/0!	1.02	1.04	1.04	1.00	1.02	1.05
		Number of Sampling	sample	238	0	4	30	0	3	53	564	0	0	892
		Sampling Ratio 12 hrs Base	(%)	(147.8)	(0.0)	(6.1)	(24.2)	#DIV/0!	(6.0)	(15.5)	(24.7)	(0.0)	(0.0)	(25.8)
		12 hrs Traffic	vehicle	151	0	50	115	0	70	128	2,048	0	200	2,762
	Share by Vehicle Type	(%)	(5.5)	(0.0)	(1.8)	(4.2)	(0.0)	(2.5)	(4.6)	(74.1)	(0.0)	(7.2)	(100.0)	
	15/12 Ratio	-	1.21	#DIV/0!	1.06	1.16	#DIV/0!	1.04	1.10	1.12	#DIV/0!	1.00	1.12	
	Number of Sampling	sample	55	0	8	28	0	4	82	516	0	0	693	
	Sampling Ratio 12 hrs Base	(%)	(36.4)	#DIV/0!	(16.0)	(24.3)	#DIV/0!	(5.7)	(64.1)	(25.2)	#DIV/0!	(0.0)	(25.1)	
	12 hrs Traffic	vehicle	312	1	116	239	0	120	471	4,334	2	629	6,224	
	Share by Vehicle Type	(%)	(5.0)	(0.0)	(1.9)	(3.8)	(0.0)	(1.9)	(7.6)	(69.6)	(0.0)	(10.1)	(100.0)	
15/12 Ratio	-	1.23	1.00	1.05	1.17	#DIV/0!	1.03	1.06	1.08	1.00	1.02	1.08		
Number of Sampling	sample	293	0	12	58	0	7	135	1,080	0	0	1,585		
Sampling Ratio 12 hrs Base	(%)	(93.9)	(0.0)	(10.3)	(24.3)	#DIV/0!	(5.8)	(28.7)	(24.9)	(0.0)	(0.0)	(25.5)		
15-hr Stations	Total	12 hrs Traffic	vehicle	238	1	77	186	1	50	389	3,544	2	575	5,063
		Share by Vehicle Type	(%)	(4.7)	(0.0)	(1.5)	(3.7)	(0.0)	(1.0)	(7.7)	(70.0)	(0.0)	(11.4)	(100.0)
		15/12 Ratio	-	1.26	1.00	1.04	1.16	1.00	1.02	1.04	1.05	1.00	1.02	1.06
		Number of Sampling	sample	279	1	6	55	0	3	70	804	0	0	1,218
		Sampling Ratio 12 hrs Base	(%)	(117.2)	(100.0)	(7.8)	(29.6)	(0.0)	(6.0)	(18.0)	(22.7)	(0.0)	(0.0)	(24.1)
		12 hrs Traffic	vehicle	262	5	68	193	0	93	185	3,852	0	520	5,178
	Share by Vehicle Type	(%)	(5.1)	(0.1)	(1.3)	(3.7)	(0.0)	(1.8)	(3.6)	(74.4)	(0.0)	(10.0)	(100.0)	
	15/12 Ratio	-	1.18	1.00	1.07	1.17	#DIV/0!	1.03	1.09	1.10	#DIV/0!	1.05	1.10	
	Number of Sampling	sample	97	0	13	43	0	29	121	913	0	0	1,216	
	Sampling Ratio 12 hrs Base	(%)	(37.0)	(0.0)	(19.1)	(22.3)	#DIV/0!	(31.2)	(65.4)	(23.7)	#DIV/0!	(0.0)	(23.5)	
	12 hrs Traffic	vehicle	500	6	145	379	1	143	574	7,396	2	1,095	10,241	
	Share by Vehicle Type	(%)	(4.9)	(0.1)	(1.4)	(3.7)	(0.0)	(1.4)	(5.6)	(72.2)	(0.0)	(10.7)	(100.0)	
15/12 Ratio	-	1.22	1.00	1.06	1.16	1.00	1.03	1.06	1.07	1.00	1.03	1.08		
Number of Sampling	sample	376	1	19	98	0	32	191	1,717	0	0	2,434		
Sampling Ratio 12 hrs Base	(%)	(75.2)	(16.7)	(13.1)	(25.9)	(0.0)	(22.4)	(33.3)	(23.2)	(0.0)	(0.0)	(23.8)		