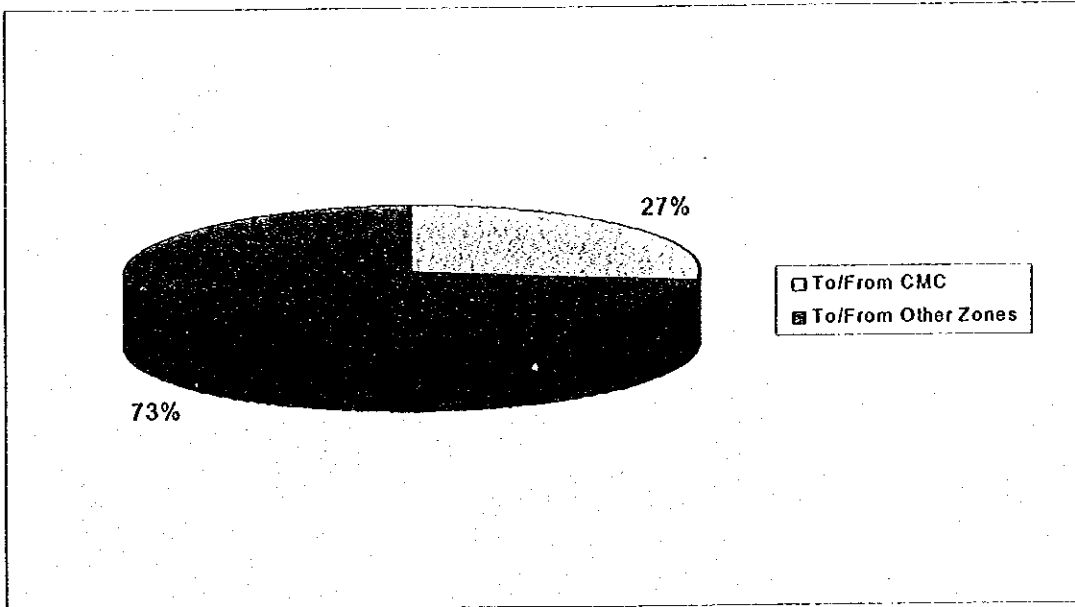


Site # 7

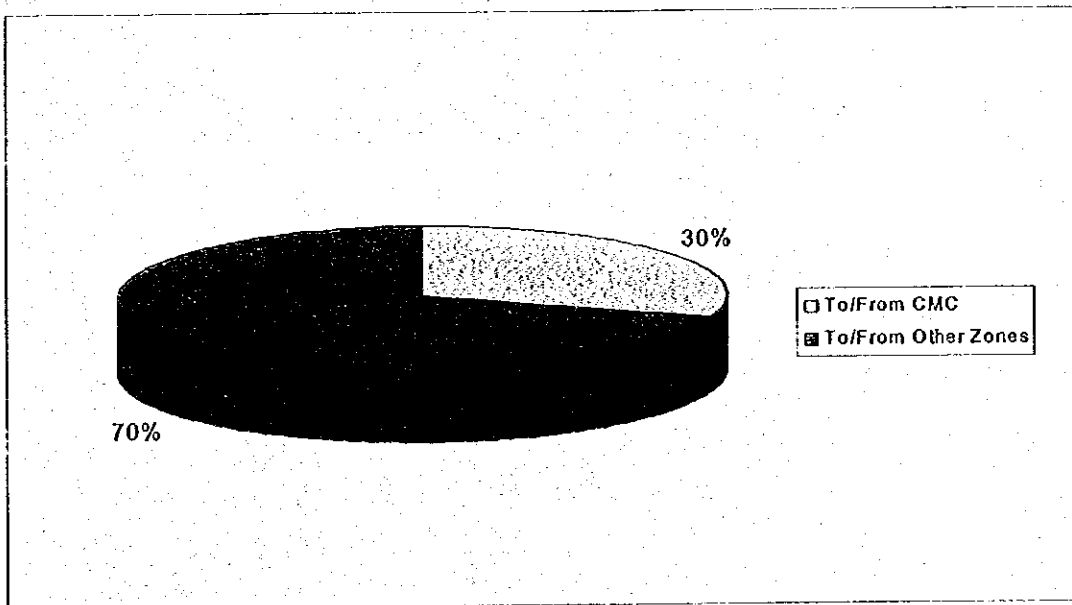
OD Survey Extract

Passenger Vehicle Trip Generation/Attraction



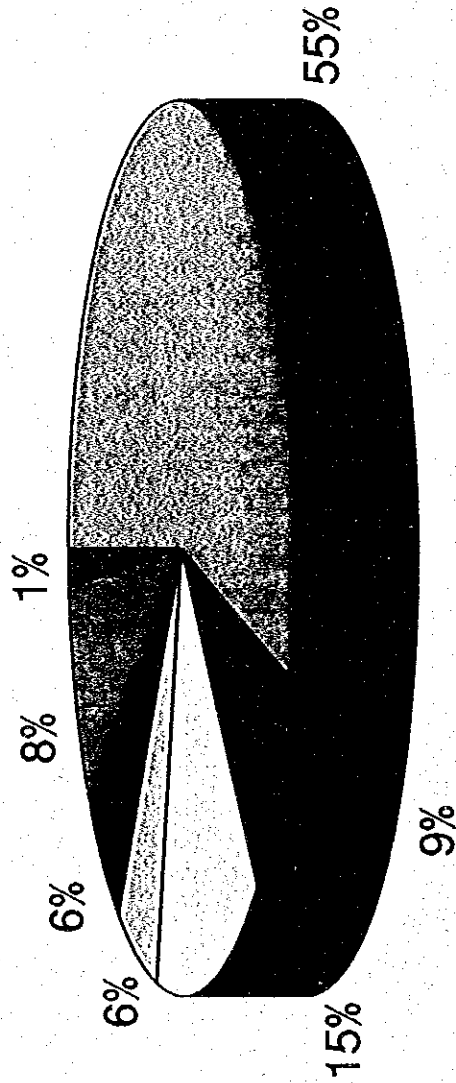
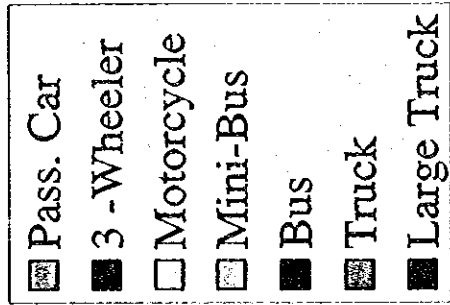
Number of Samples : 830
Sampling Rate : 3.1%
Avg Veh. Occupancy : 2.3

Freight Vehicle Trip Generation/Attraction



Number of Samples : 385
Sampling Rate : 11.7%
Avg Veh. Occupancy : 2.2

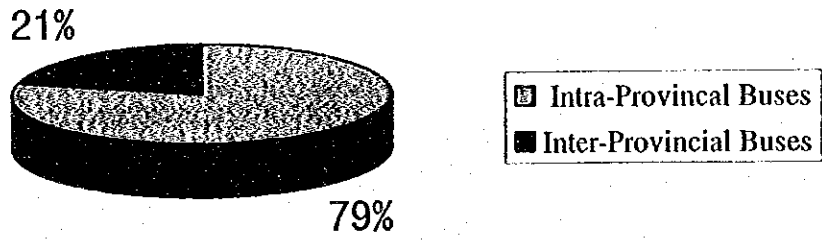
Road Vehicle Composition



12-Hour Traffic Volume = 33,590
(7am to 7pm)

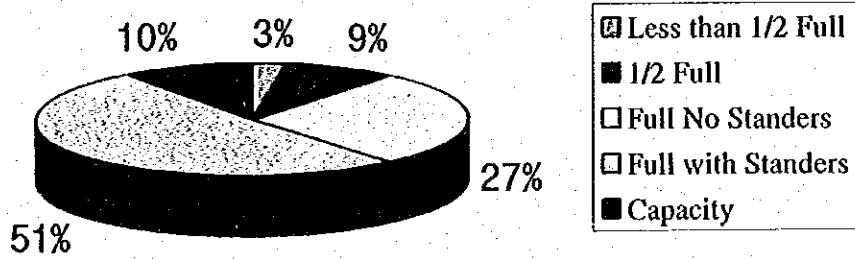
Bus Passenger Volume Survey Extract

Intra-Provincial & Inter-Provincial Bus Travel



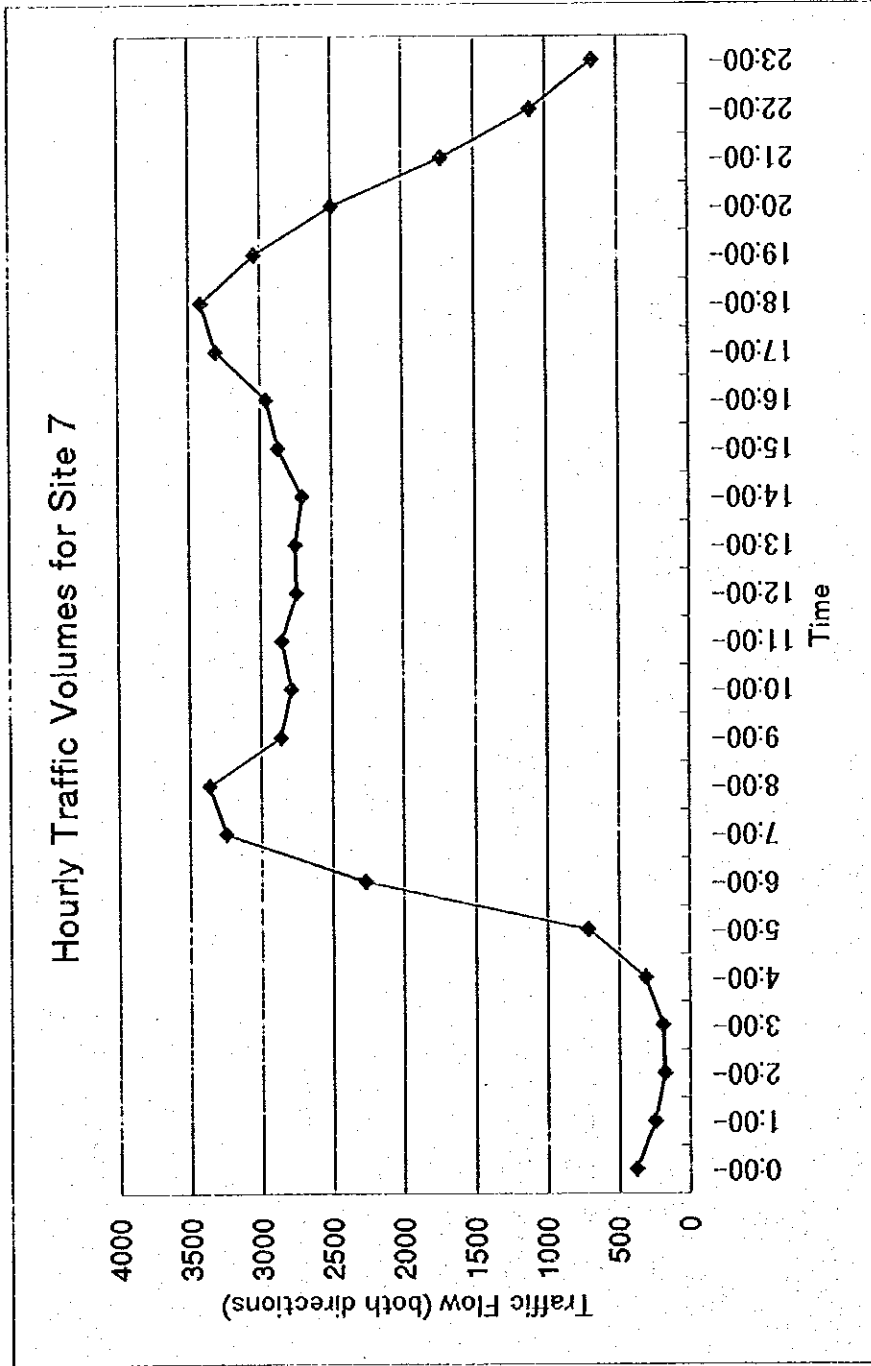
12-Hour (7am to 7pm) Sample

Bus Passenger Load Status



12-Hour (7am to 7pm) Sample

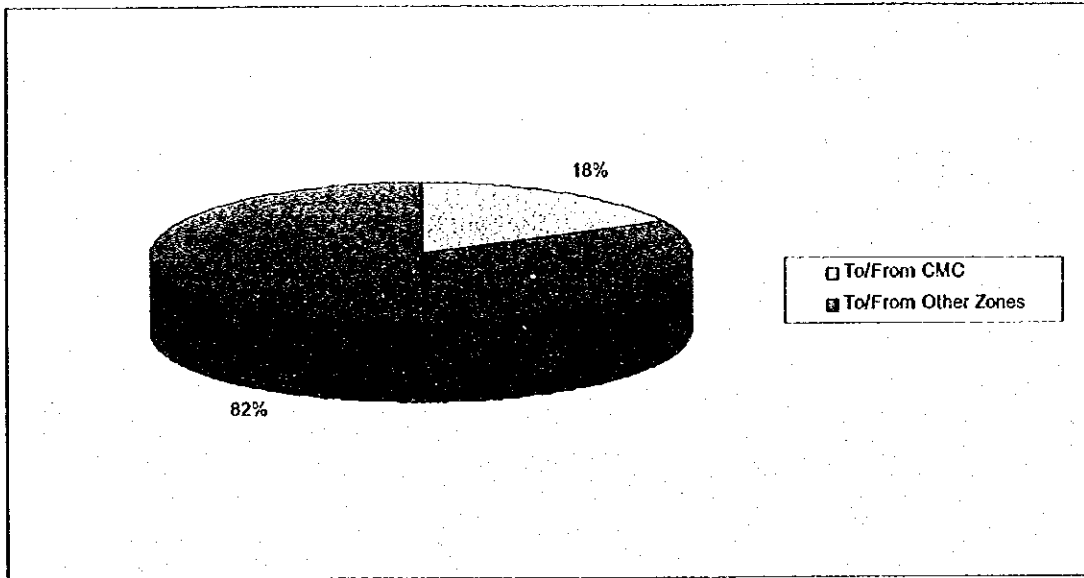
Traffic Volume Survey Extract



Site # 8

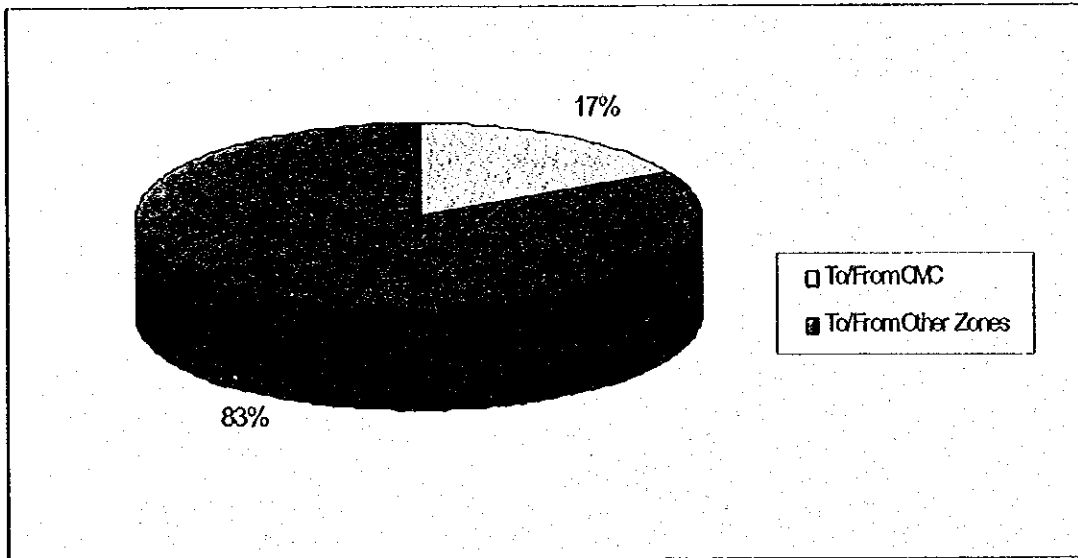
OD Survey Extract

Passenger Vehicle Trip Generation/Attraction



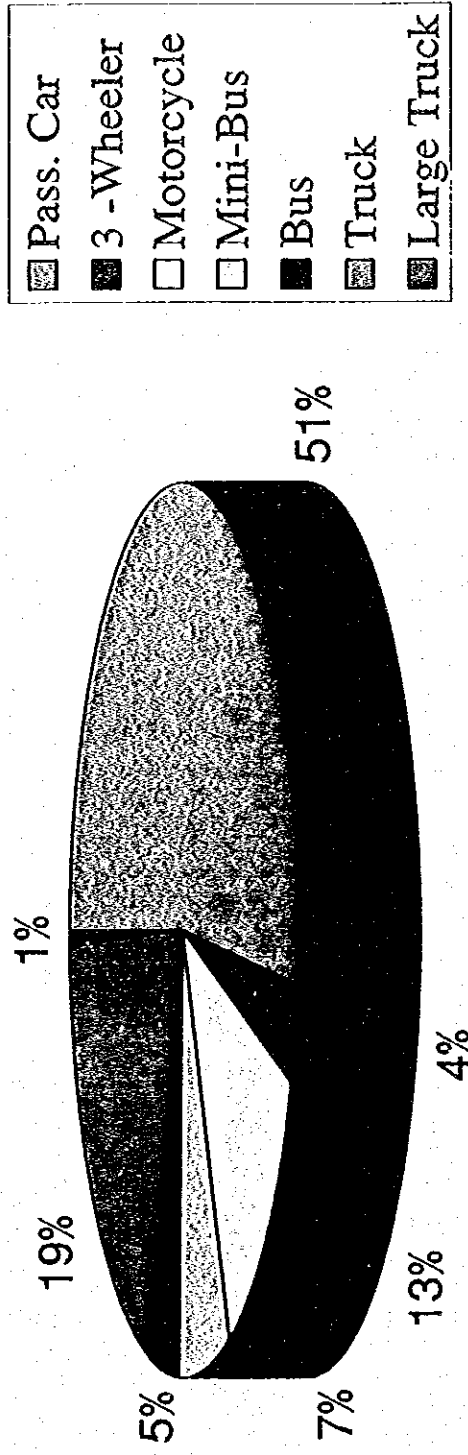
Number Of Samples : 413
Sampling Rate : 7.2 %
Avg. Veh. Occupancy : 2.2

Freight Vehicle Trip Generation/Attraction



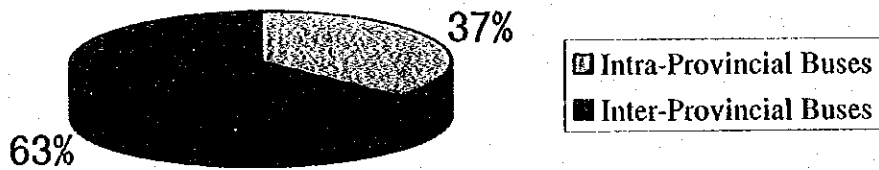
Number Of Samples : 255
Sampling Rate : 15.0%
Avg. Veh. Occupancy : 2.4

Road Vehicle Composition



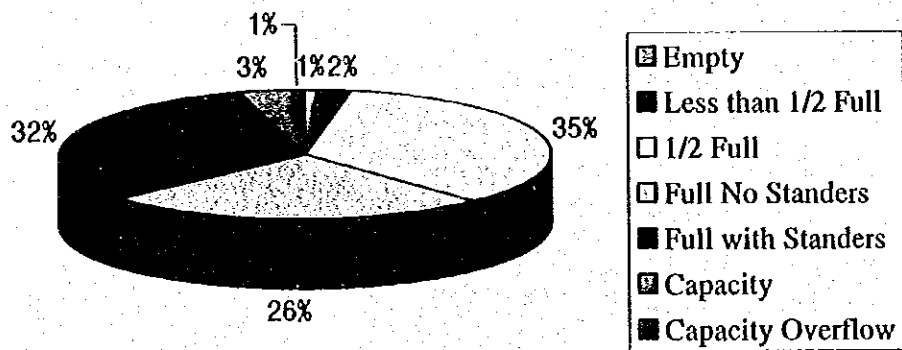
6-Hour (7am to 1pm) Traffic Volume = 8429
Full-day survey to be executed.

Intra-Provincial & Inter-Provincial Bus Travel



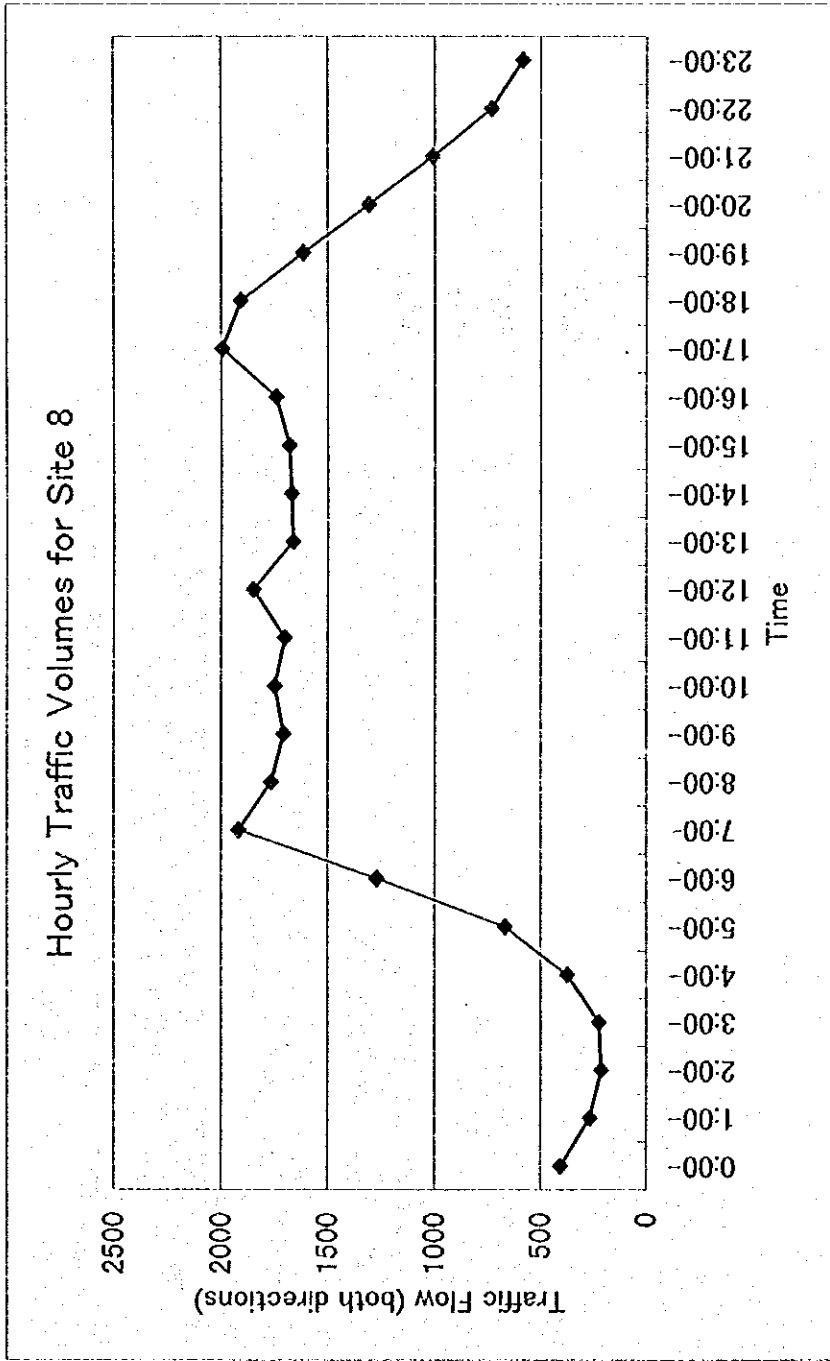
6-Hour (7am to 1pm) Sample
Full-day survey to be executed.

Bus Passenger Load Status



6-Hour (7am to 1pm) Sample
Full-day survey to be executed.

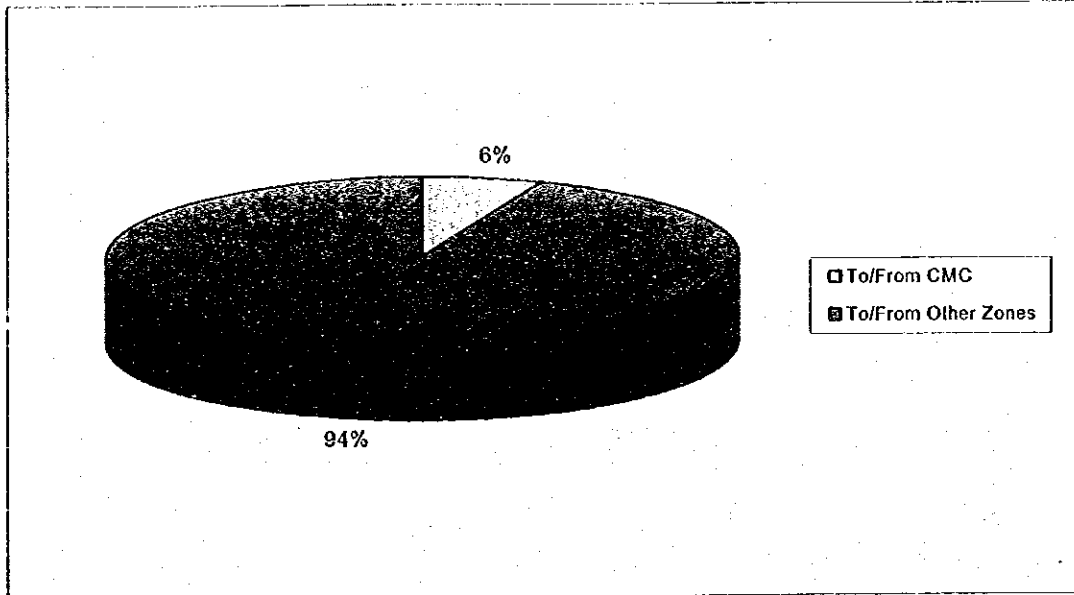
Traffic Volume Survey Extract



Site # 9

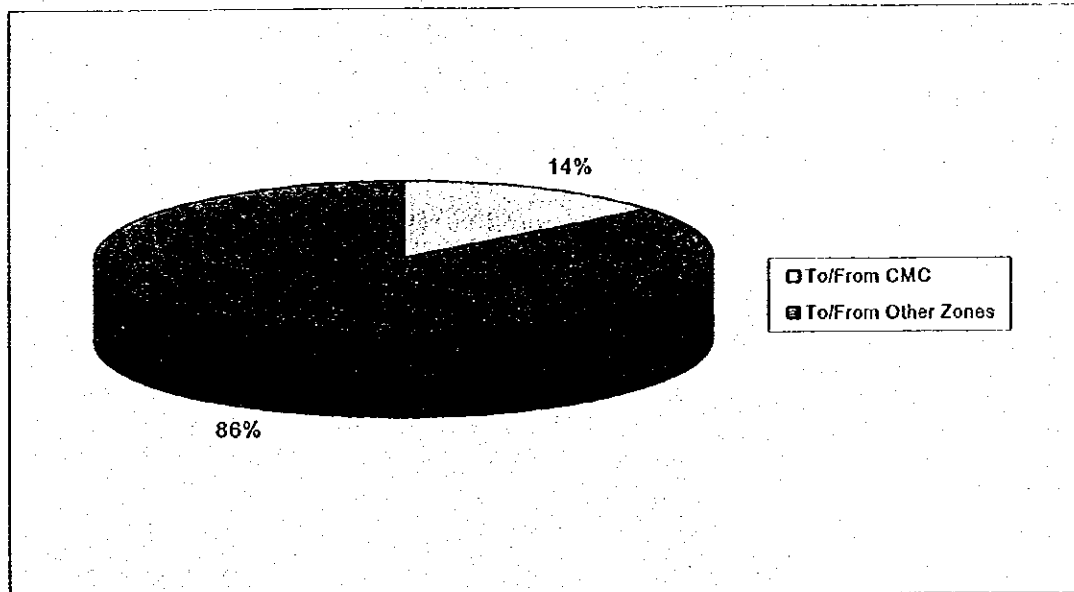
OD Survey Extract

Passenger Vehicle Trip Generation/Attraction



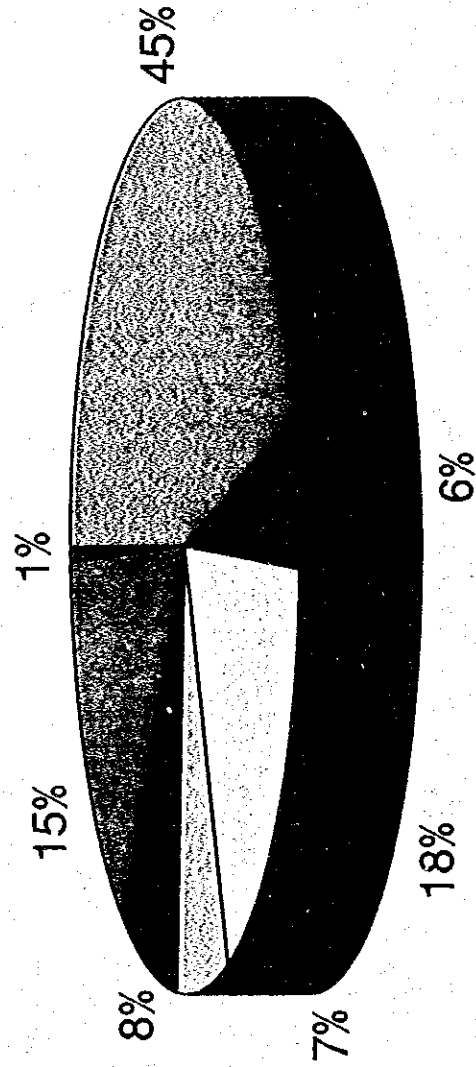
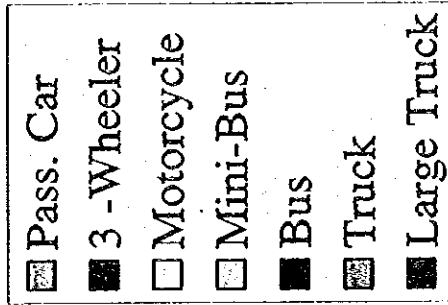
Number Of Samples : 111
Sampling Rate : 4.4 %
Avg. Veh. Occupancy : 2.1

Freight Vehicle Trip Generation/Attraction



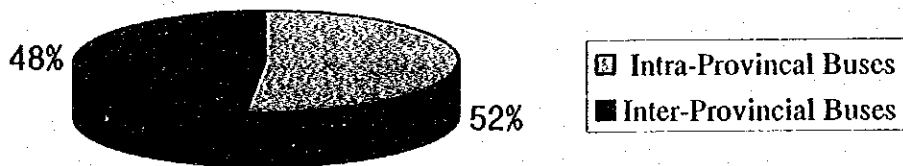
Number Of Samples : 111
Sampling Rate : 4.4%
Avg. Veh. Occupancy : 2.1

Road Vehicle Composition



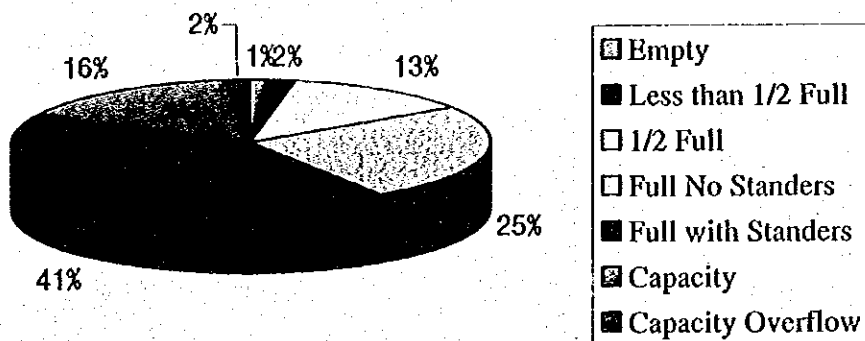
6-Hour (7am to 1pm) Traffic Volume = 6874

Intra-Provincial & Inter-Provincial Bus Travel



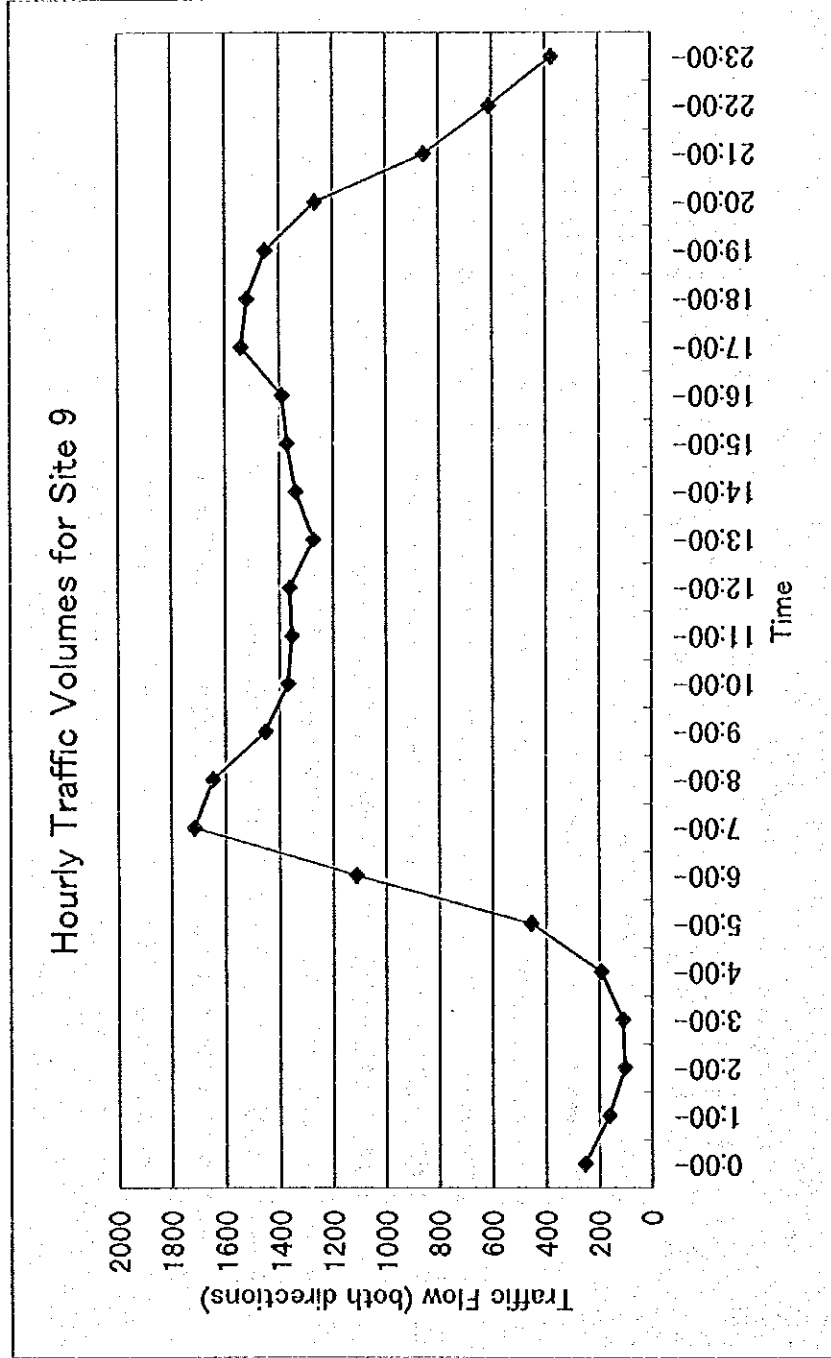
6-Hour (7am to 1pm) Sample
Full-day survey to be executed.

Bus Passenger Load Status



6-Hour (7am to 1pm) Sample
Full-day survey to be executed.

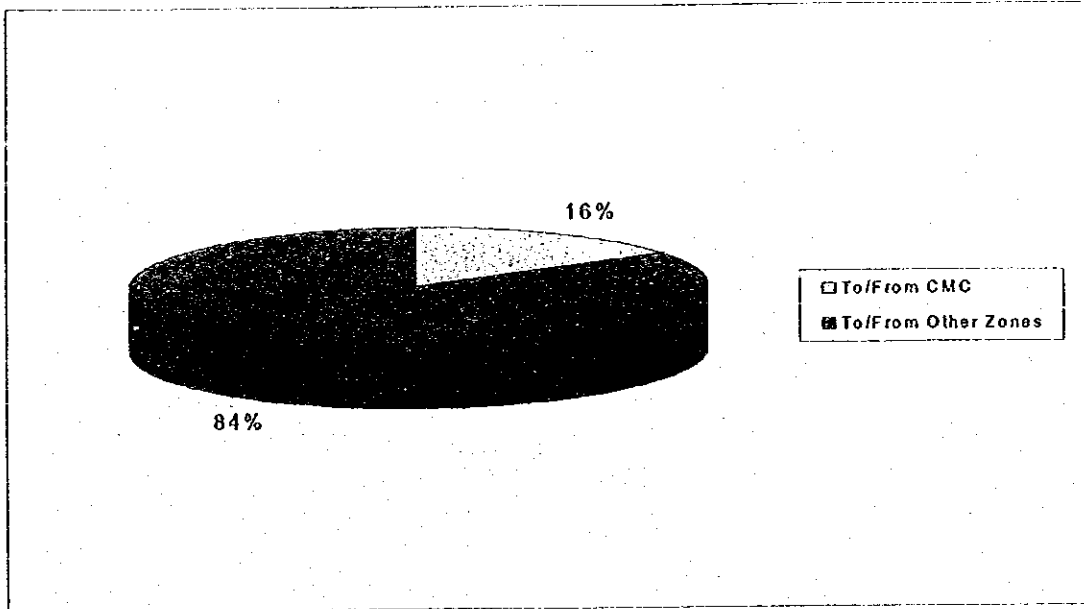
Traffic Volume Survey Extract



Site # 10

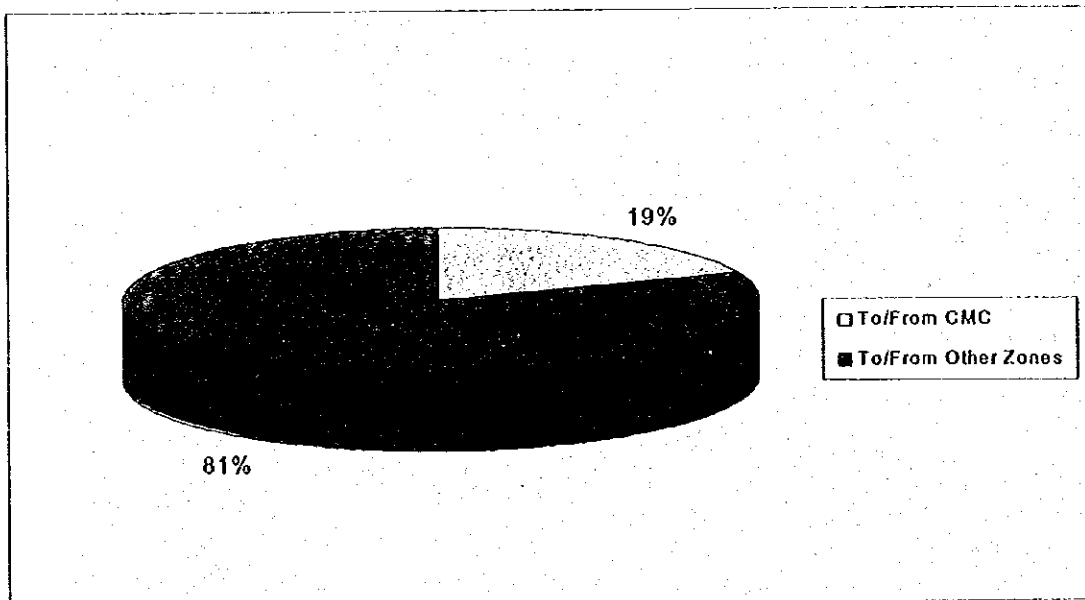
OD Survey Extract

Passenger Vehicle Trip Generation/Attraction



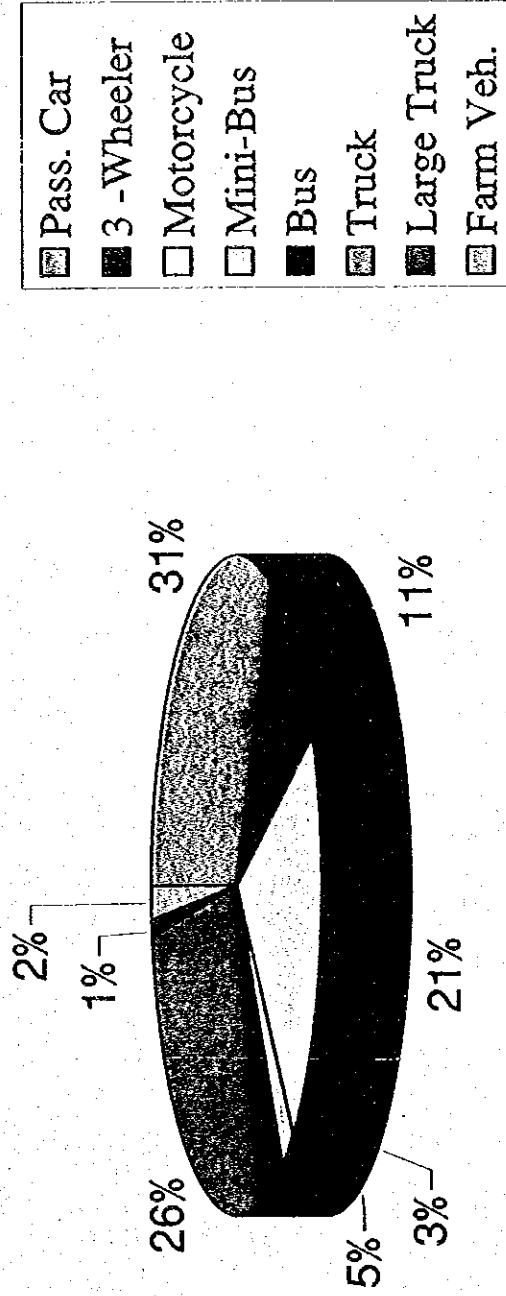
Number of Samples : 496
Sampling Rate : 16.9%
Avg Veh. Occupancy : 2.3

Freight Vehicle Trip Generation/Attraction



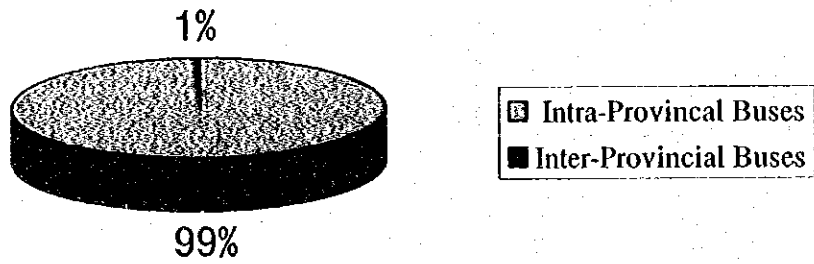
Number of Samples : 428
Sampling Rate : 29.3%
Avg Veh. Occupancy : 2.3

Road Vehicle Composition



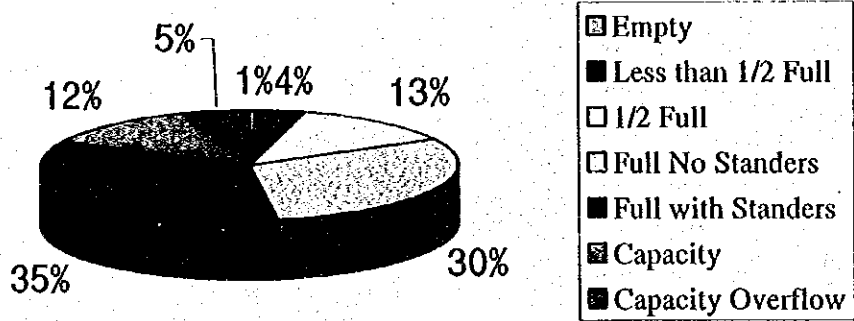
12-Hour Traffic Volume = 4653 veh.
(7am to 7 pm)

Intra-Provincial & Inter-Provincial Bus Travel



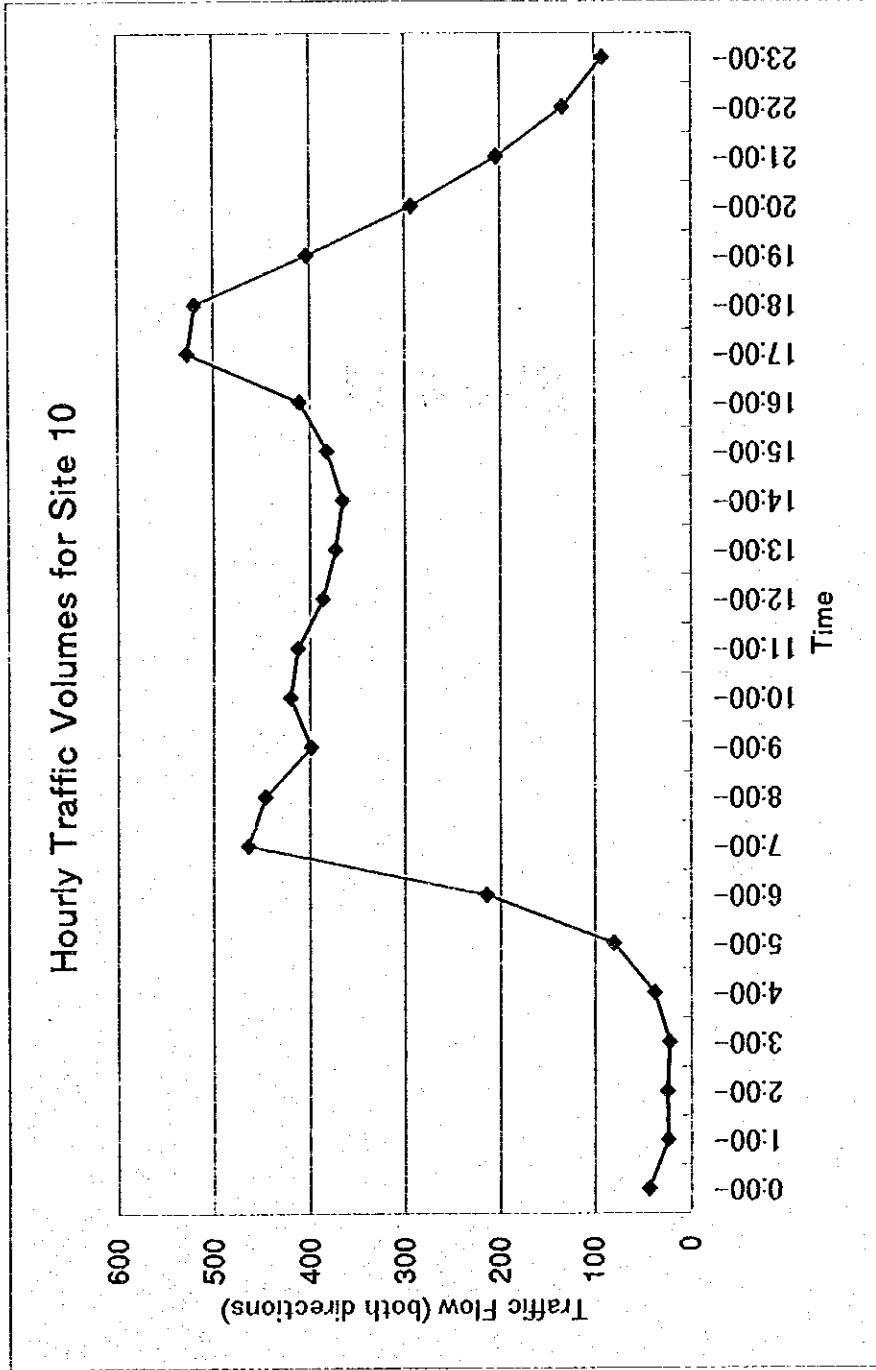
12-Hour (7am to 7pm) Sample

Bus Passenger Load Status



12-Hour (7am to 7pm)

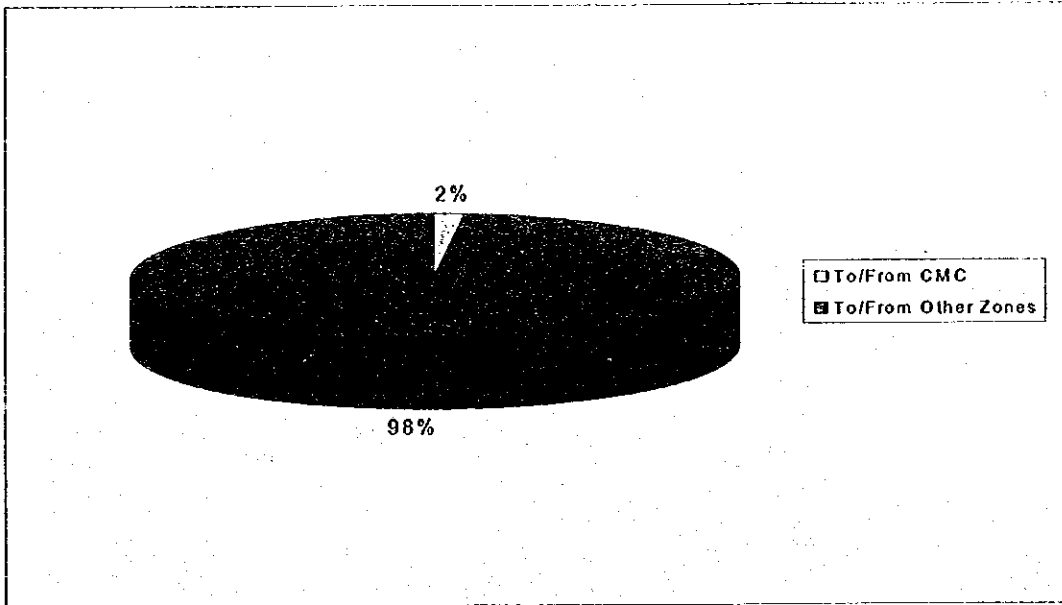
Traffic Volume Survey Extract



Site # 11

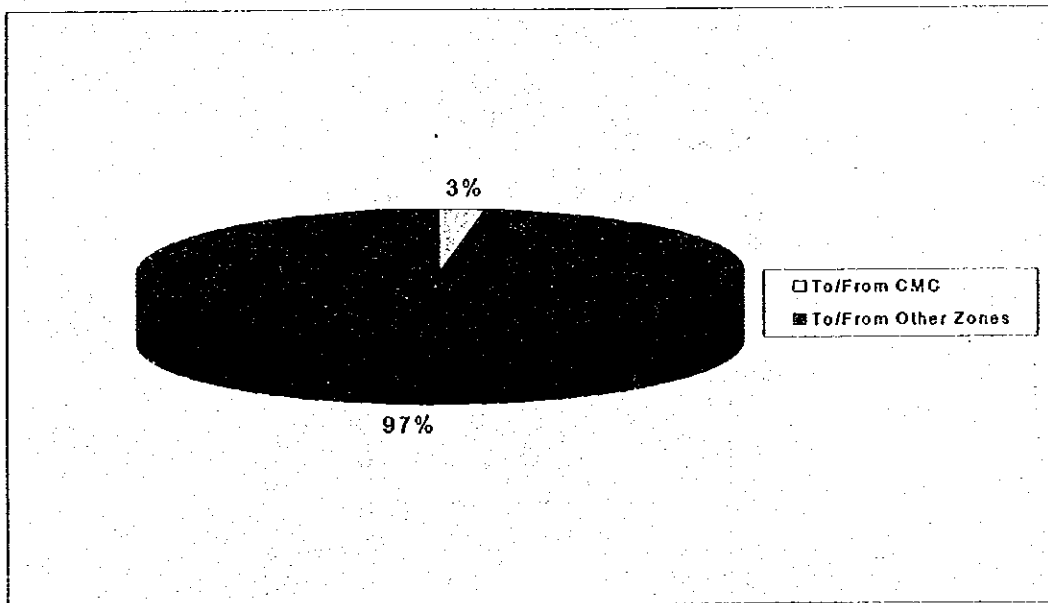
OD Survey Extract

Passenger Vehicle Trip Generation/Attraction



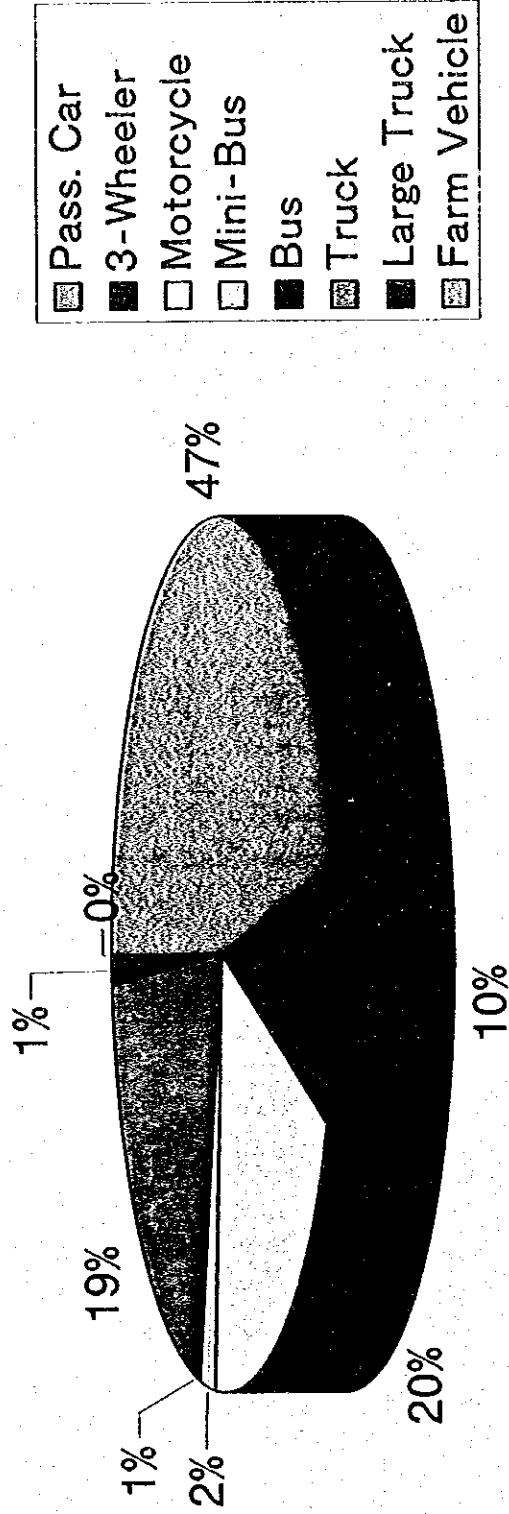
Number of Samples : 520
Sampling Rate : 6.4%
Avg Veh. Occupancy : 2.3

Freight Vehicle Trip Generation/Attraction



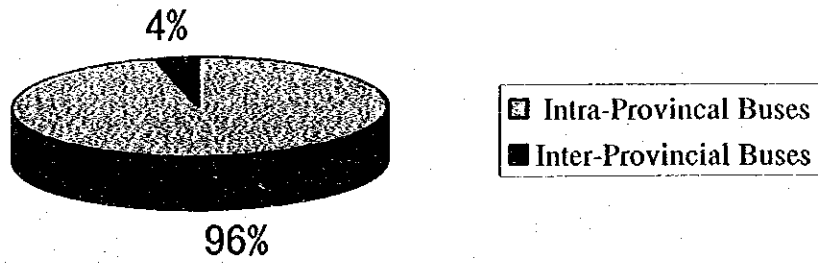
Number of Samples : 423
Sampling Rate : 15.6%
Avg Veh. Occupancy : 2.6

Road Vehicle Composition



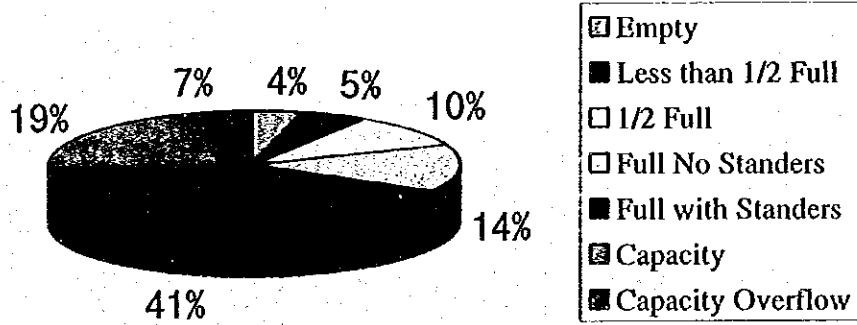
12-Hour Traffic Volume = 13,153
(7am to 7pm)

Intra-Provincial & Inter-Provincial Bus Travel



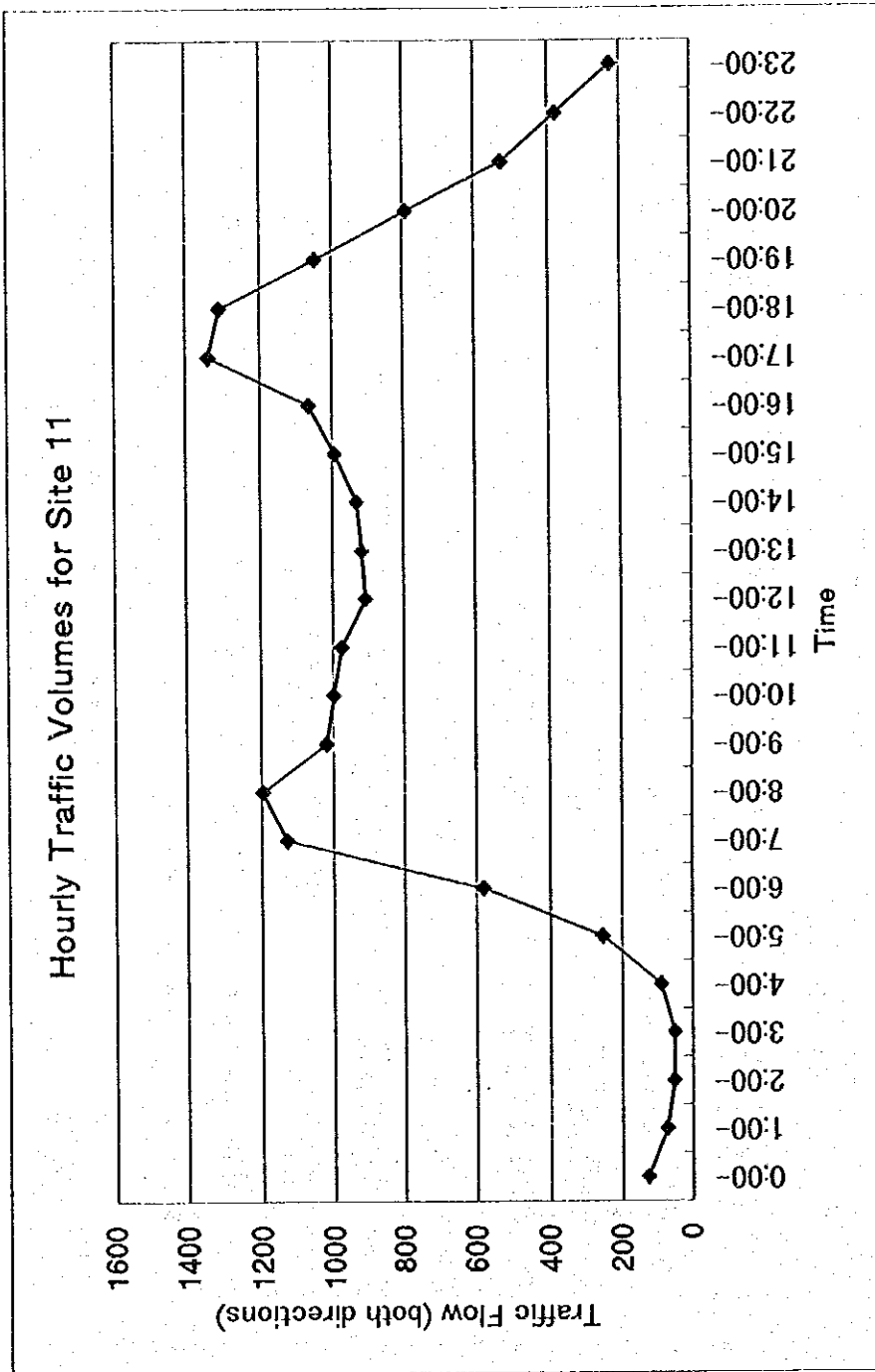
12-Hour (7am to 7pm) Sample

Bus Passenger Load Status



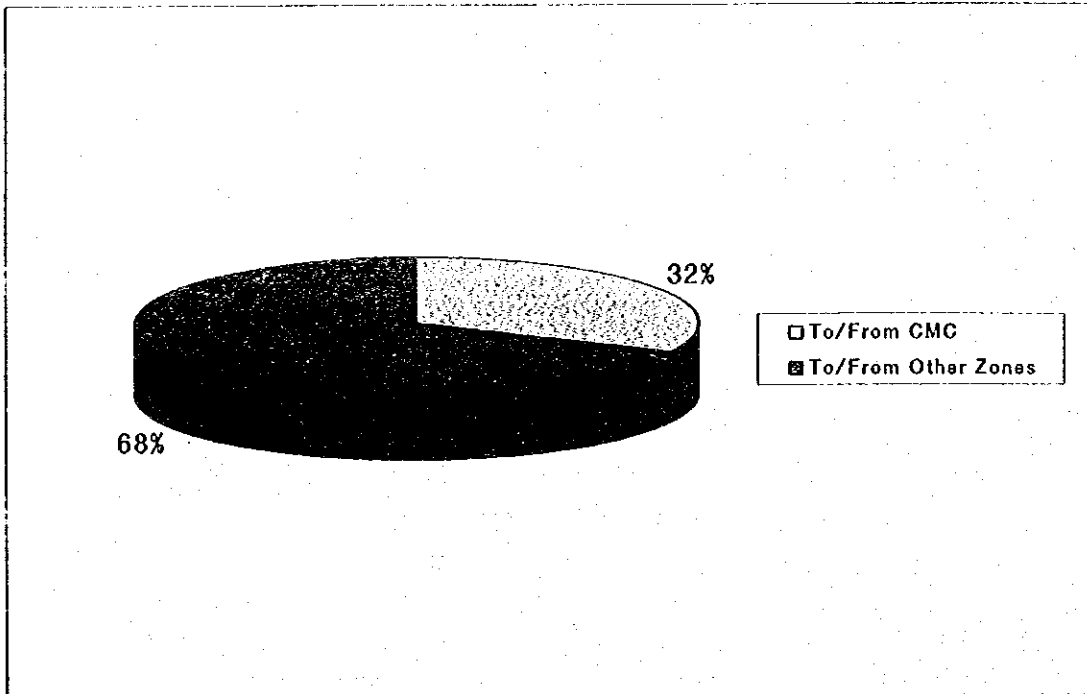
12-Hour (7am to 7pm)

Traffic Volume Survey Extract



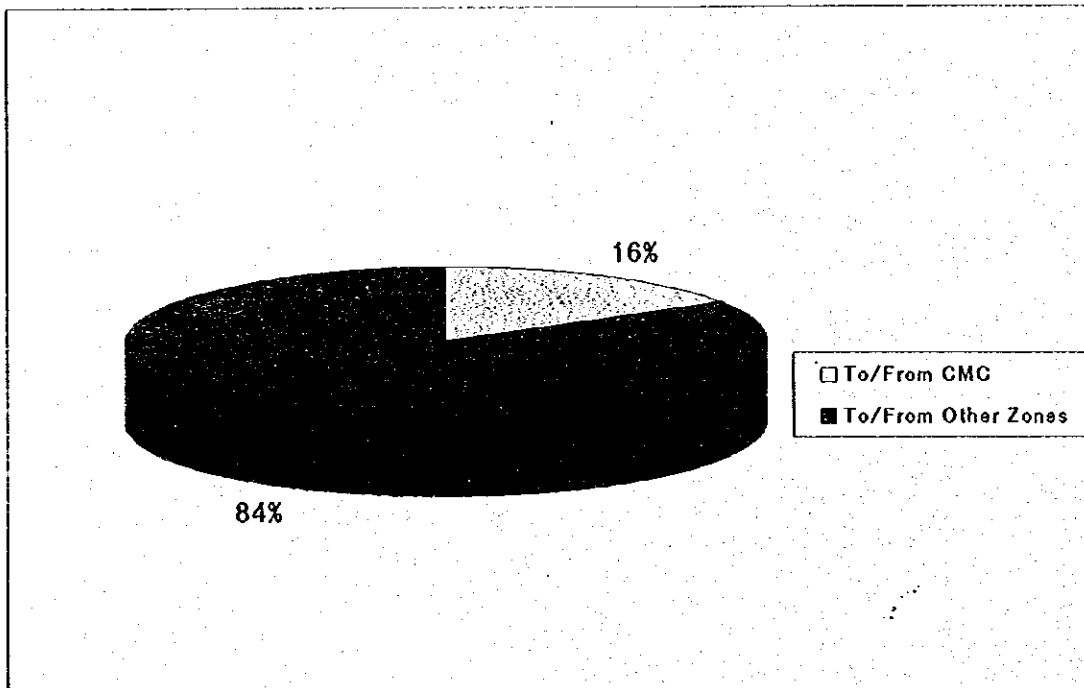
Site # 12

Passenger Vehicle Trip Generation/Attraction



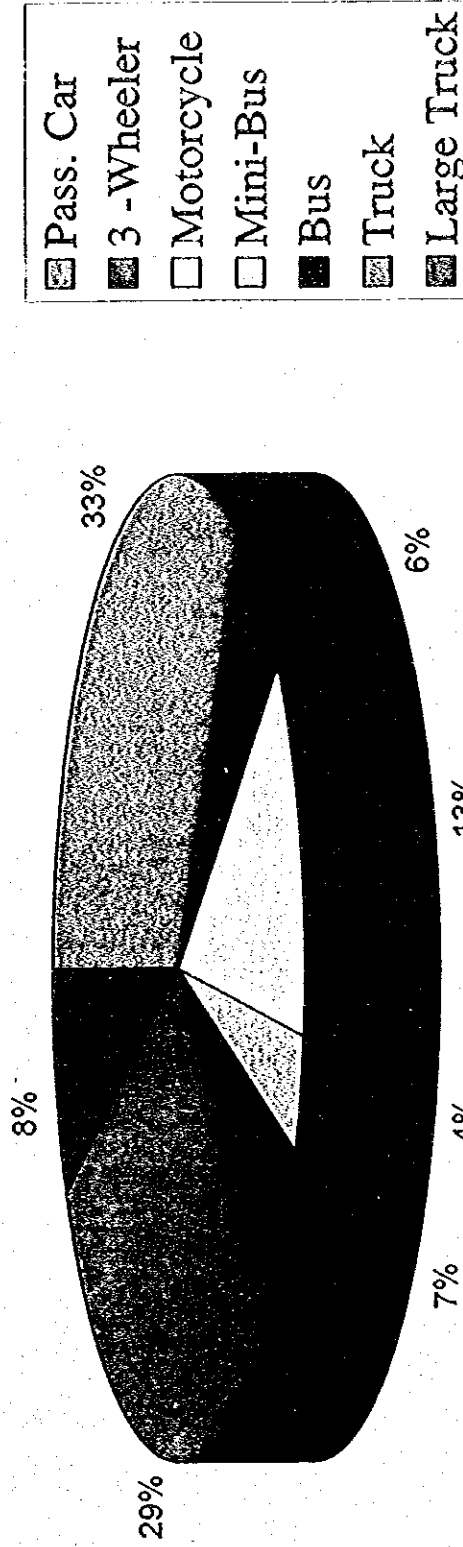
Number Of Samples : 580
Sampling Rate : 19.8 %
Avg Veh. Occupancy : 2.6

Freight Vehicle Trip Generation/Attraction



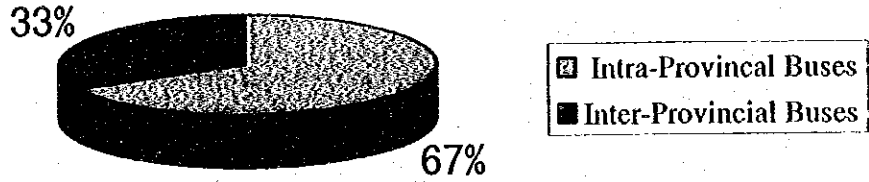
Number Of Samples : 485
Sampling Rate : 21.3%
Avg Veh. Occupancy : 2.4

Road Vehicle Composition



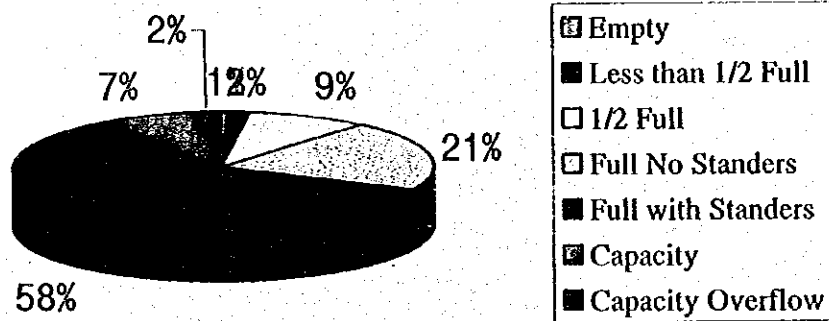
12-Hour Traffic Volume Data = 5624
(7am to 7pm)

Intra-Provincial & Inter-Provincial Bus Travel



12-Hour (7am to 7pm) Sample

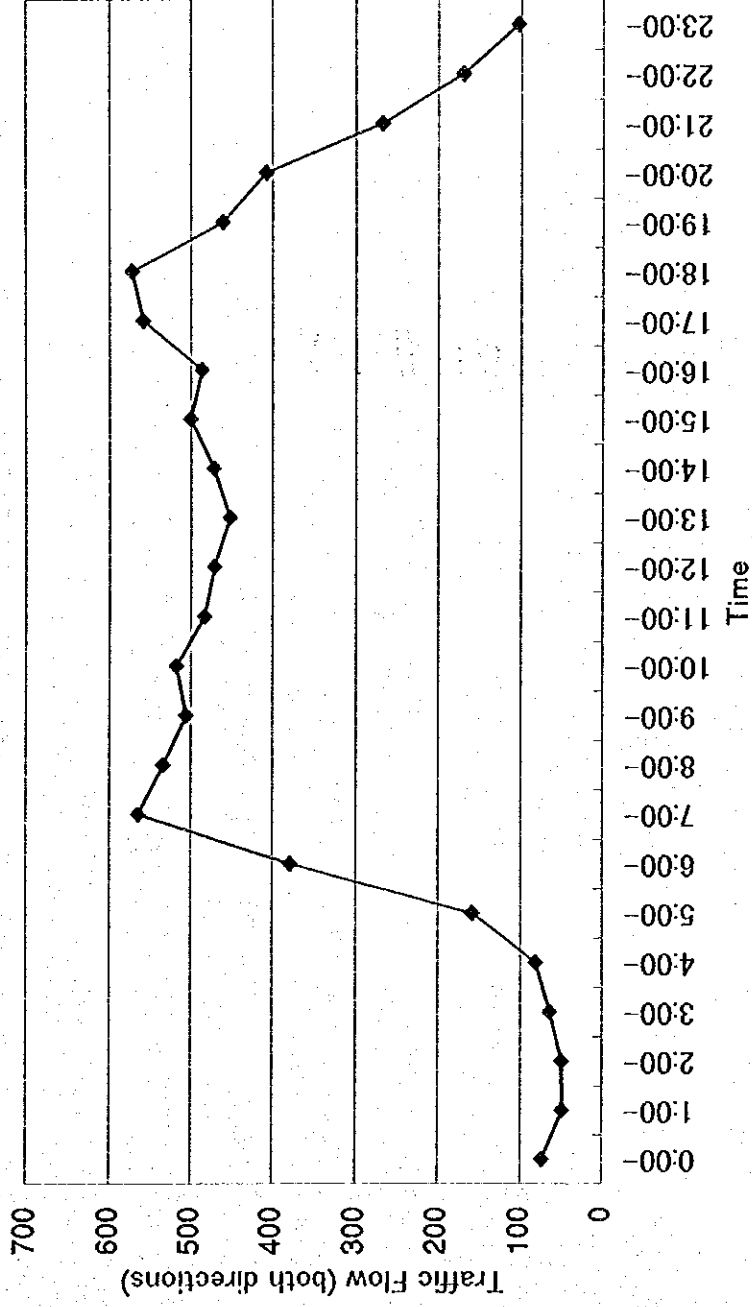
Bus Passenger Load Status



12-Hour (7am to 7pm)

Traffic Volume Survey Extract

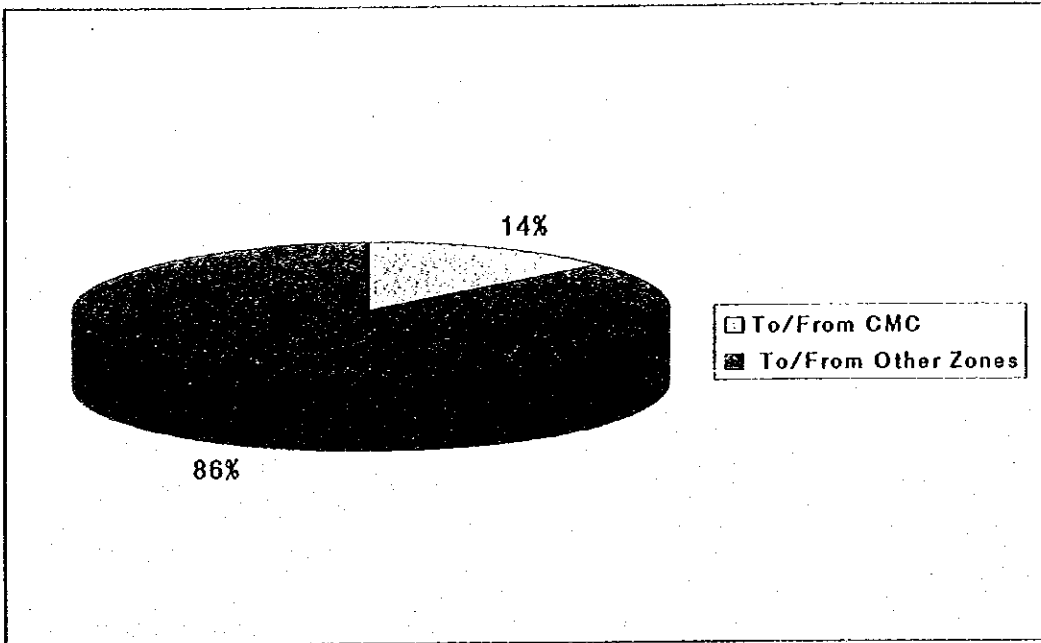
Hourly Traffic Volumes for Site 12



Site # 13

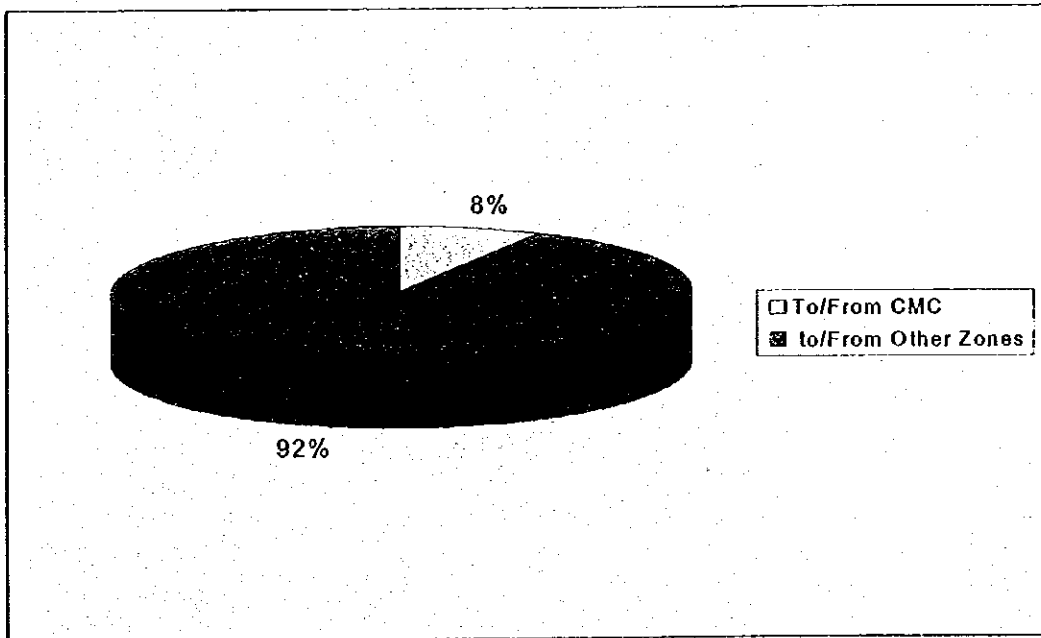
OD Survey Extract

Passenger Vehicle Trip Generation/Attraction



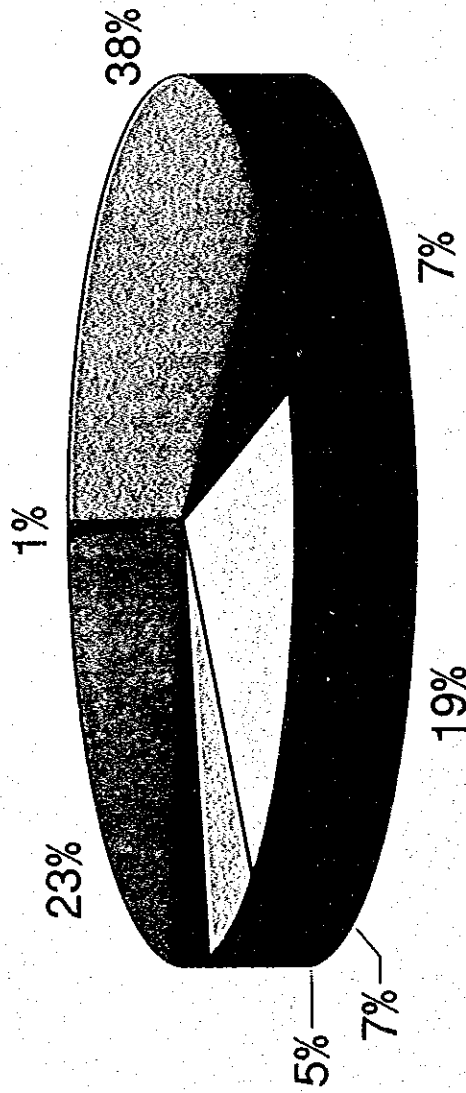
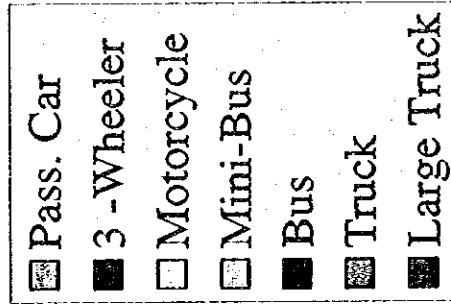
Number Of Samples : 549
Sampling Rate : 34.0%
Avg Veh. Occupancy : 2.5

Freight Vehicle Trip Generation/Attraction



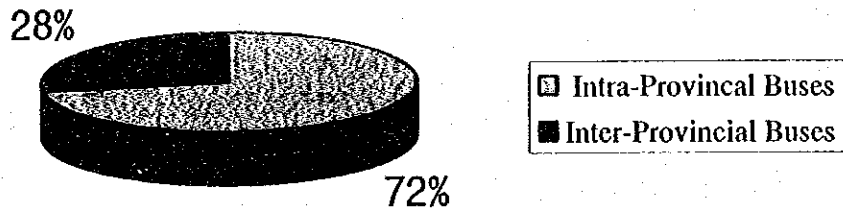
Number Of Samples : 458
Sampling Rate : 25.6%
Avg Veh. Occupancy : 2.4

Road Vehicle Composition



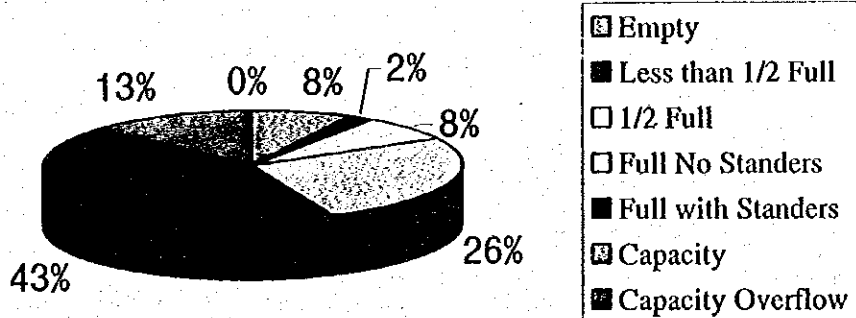
12-Hour Traffic Volume = 7529
(7am to 7pm)

Intra-Provincial & Inter-Provincial Bus Travel



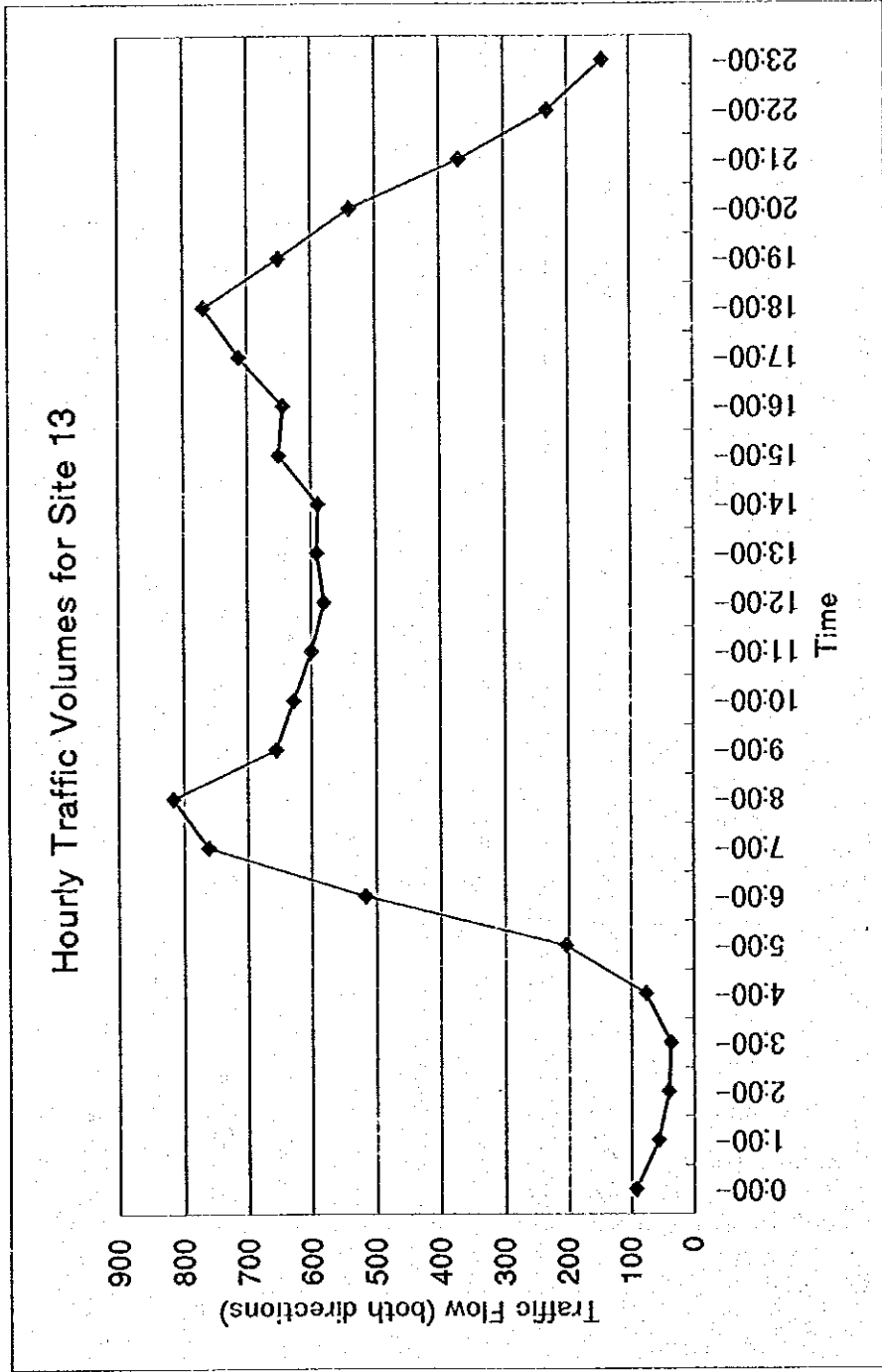
12-Hour (7am to 7pm) Sample

Bus Passenger Load Status



12-Hour (7am to 7pm)

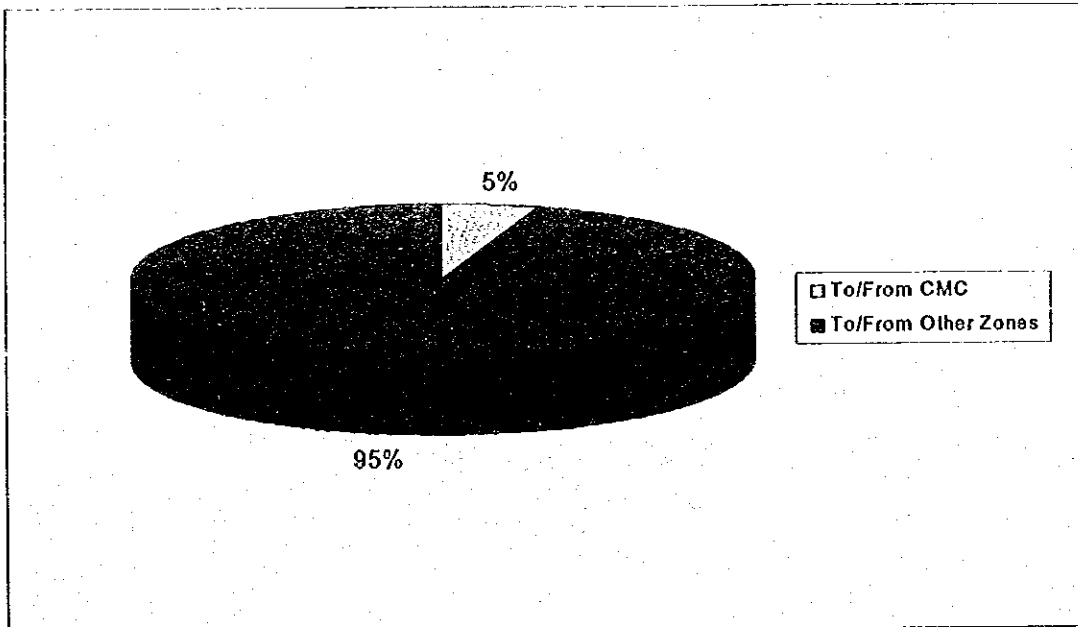
Traffic Volume Survey Extract



Site # 14

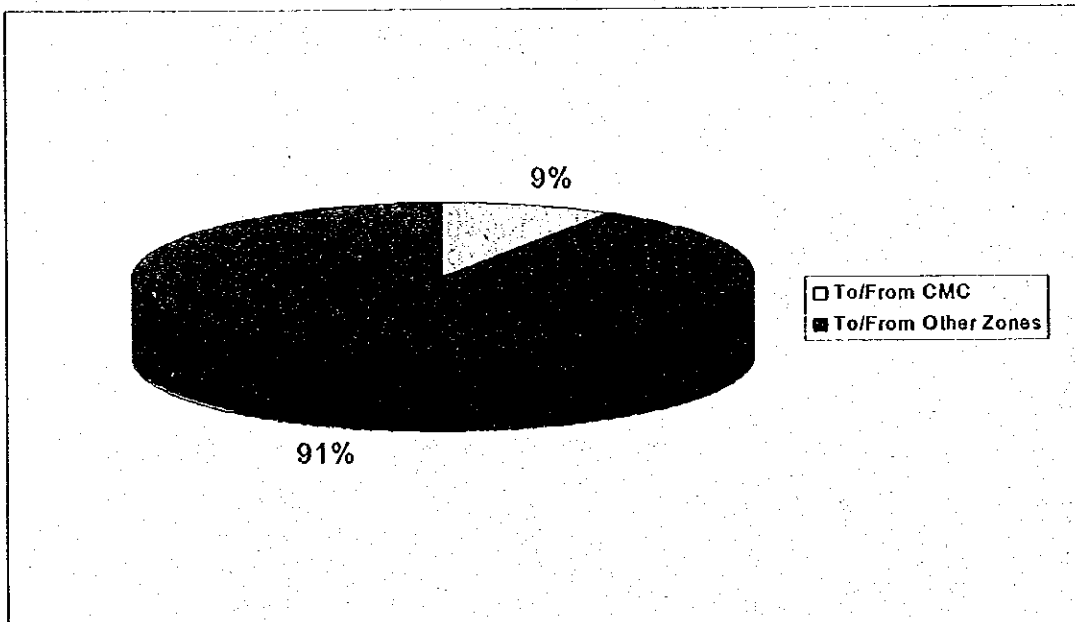
OD Survey Extract

Passenger Vehicle Trip Generation/Attraction



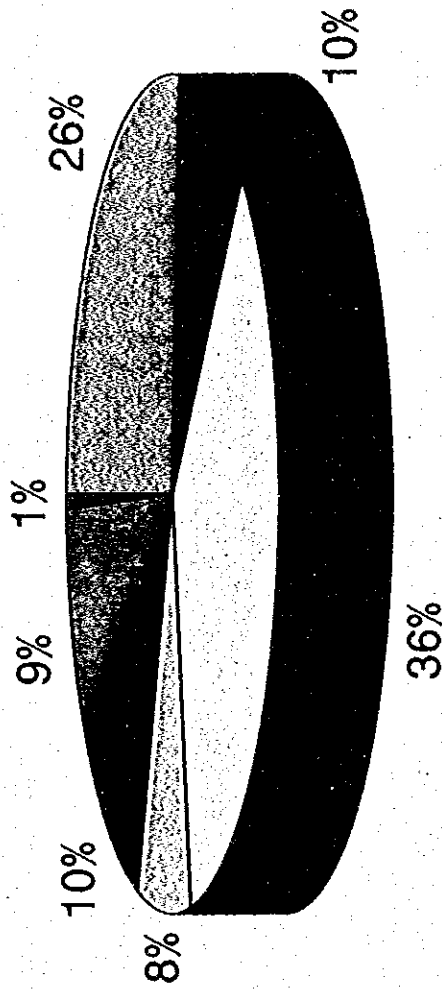
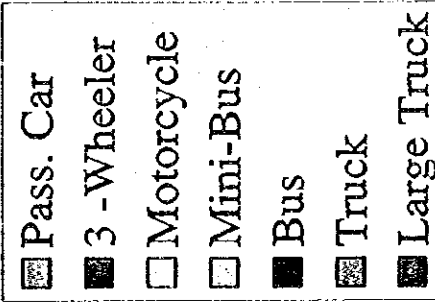
Number of Samples : 554
Sampling Rate : 43.3%
Avg Veh. Occupancy : 2.4

Freight Vehicle Trip Generation/Attraction



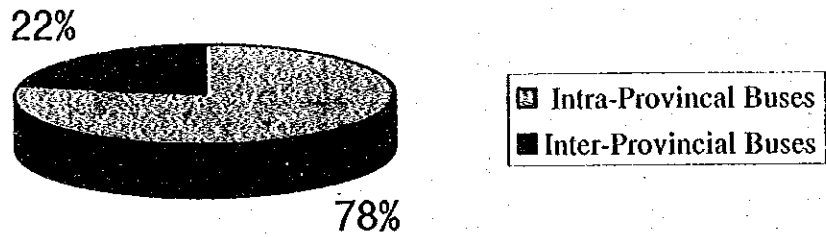
Number of Samples : 156
Sampling Rate : 98.1%
Avg Veh. Occupancy : 2.5

Road Vehicle Composition



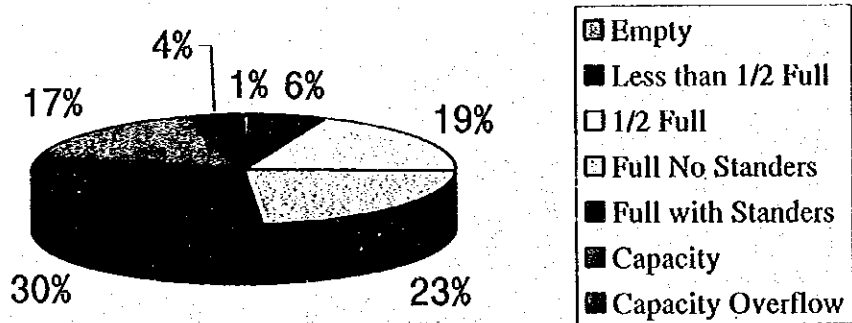
12-Hour Traffic Volume = 1718
(7am to 7pm)

Intra-Provincial & Inter-Provincial Bus Travel



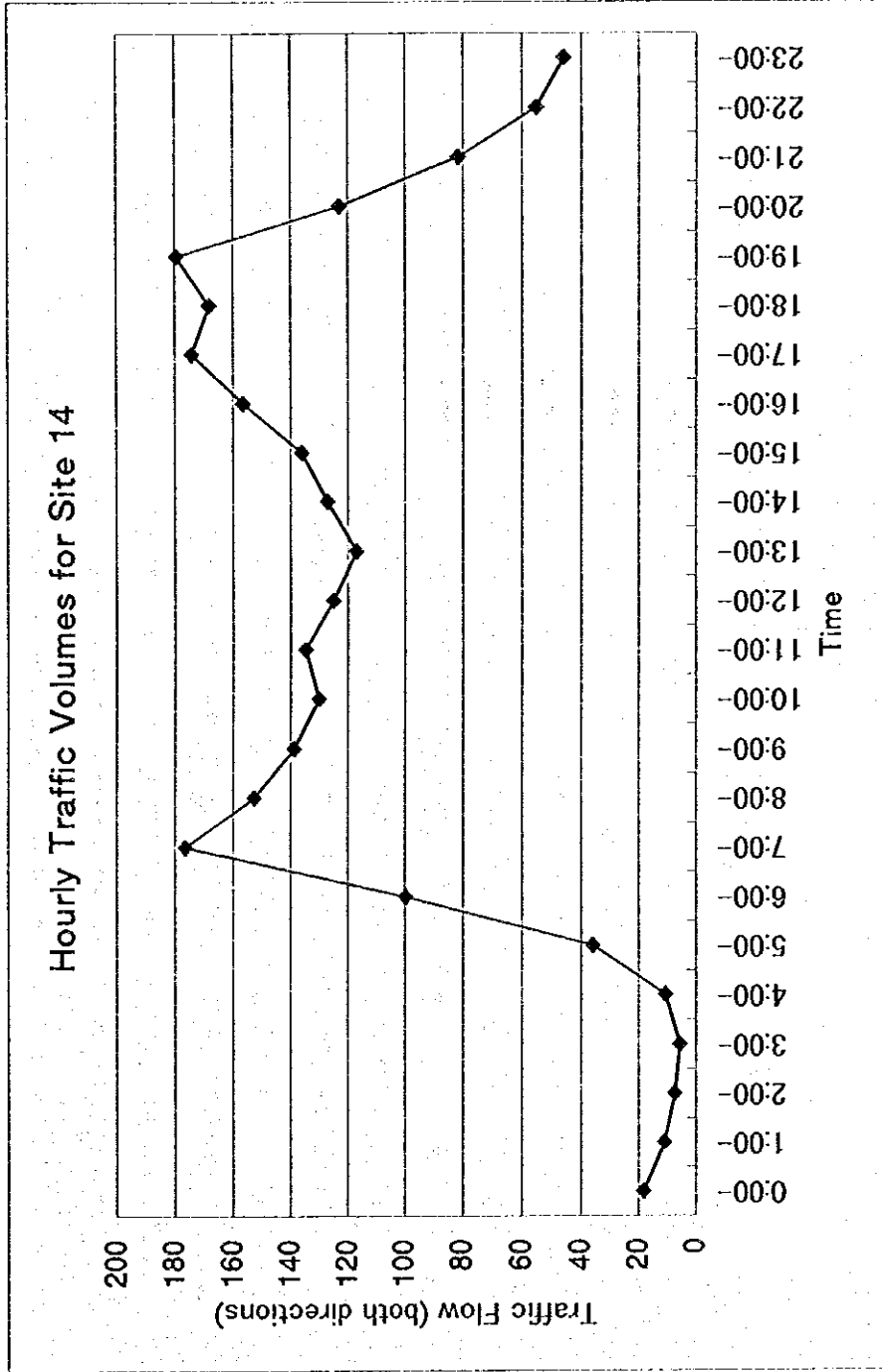
12-Hour (7am to 7pm) Sample

Bus Passenger Load Status



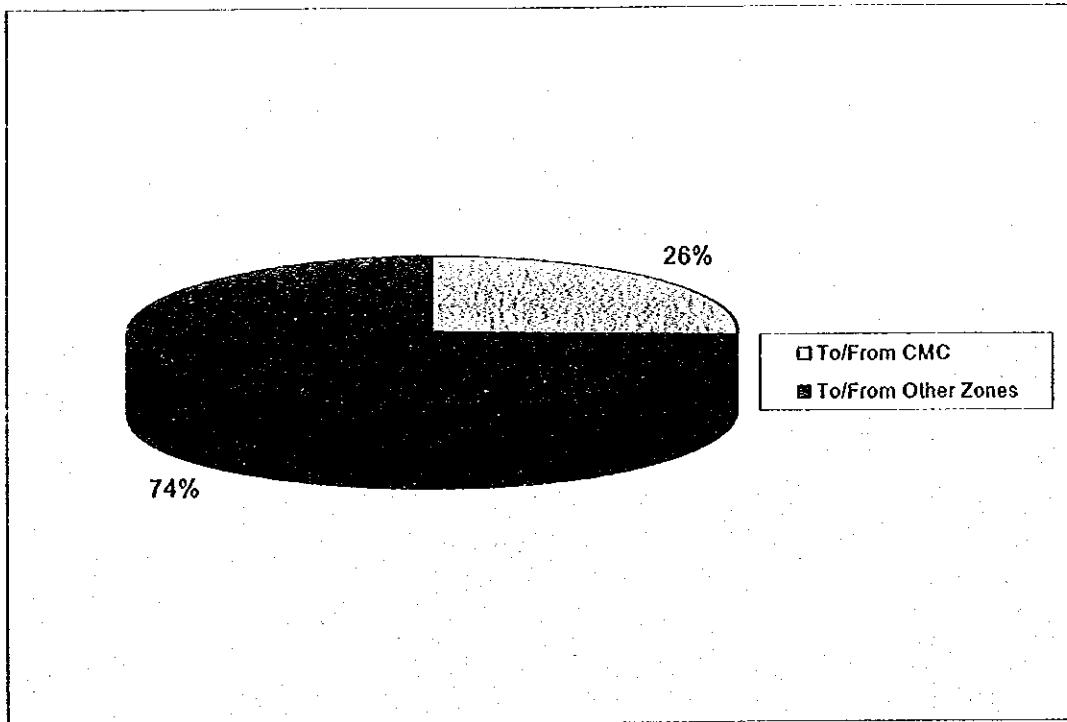
12-Hour (7am to 7pm)

Traffic Volume Survey Extract



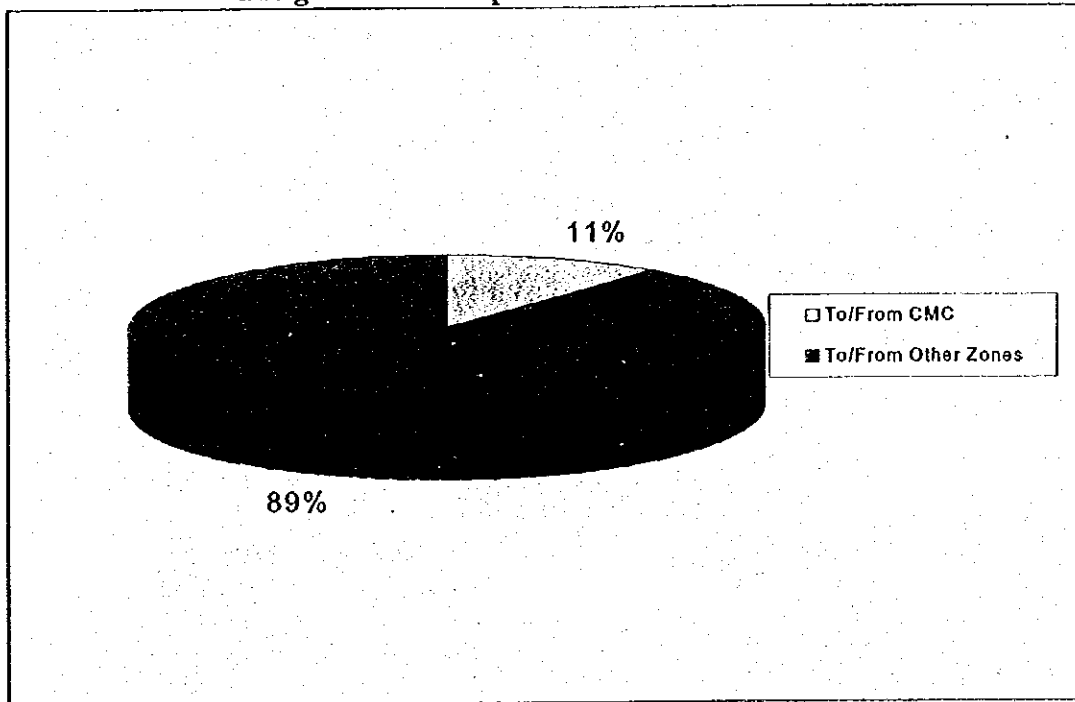
Site # 15

Passenger Vehicle Trip Generation/Attraction



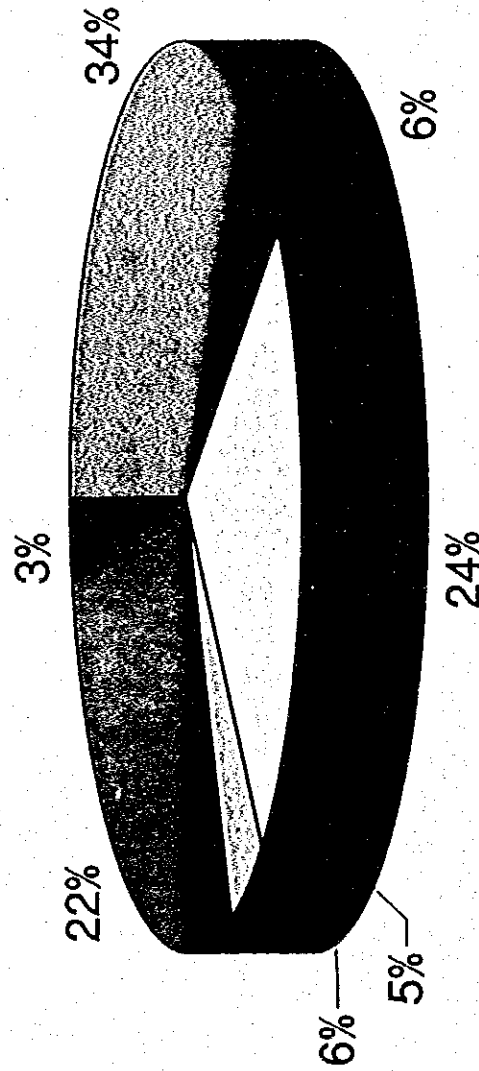
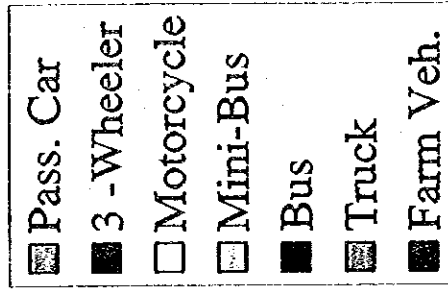
Number Of Samples : 720
Sampling Rate : 33.8%
Avg Veh. Occupancy : 3.0

Freight Vehicle Trip Generation/Attraction



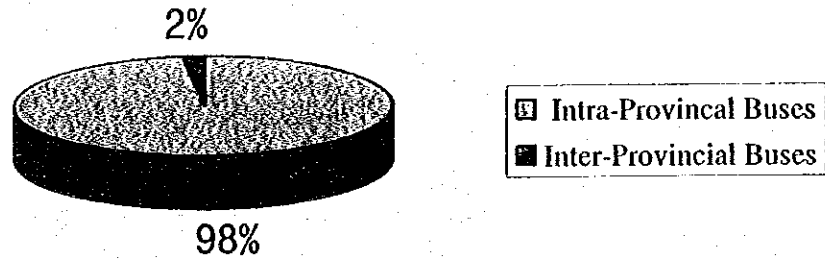
Number Of Samples : 572
Sampling Rate : 68.5%
Avg Veh. Occupancy : 2.3

Road Vehicle Composition



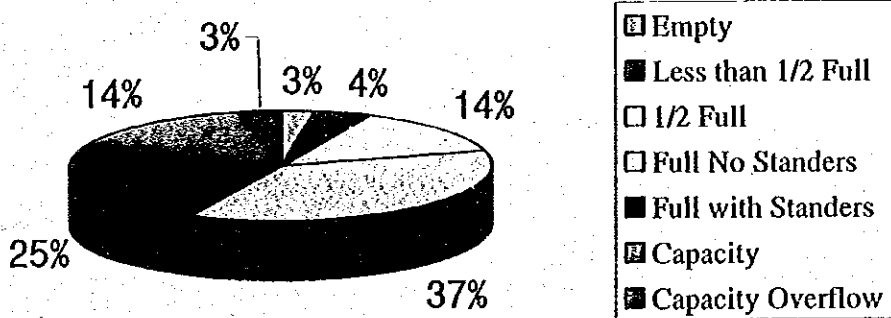
12-Hour Traffic Volume = 3343
(7am to 7pm)

Intra-Provincial & Inter-Provincial Bus Travel



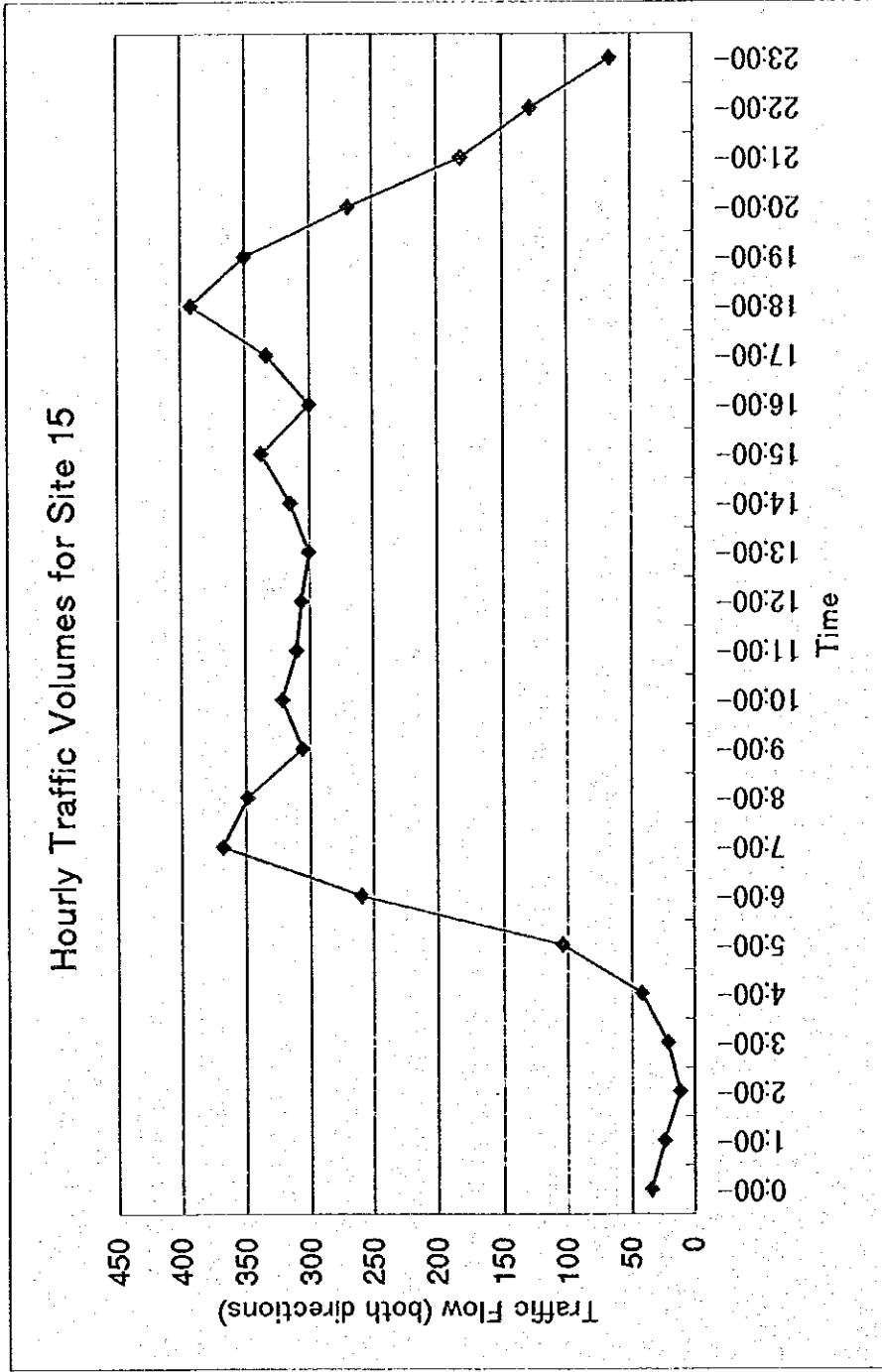
12-Hour (7am to 7pm) Sample

Bus Passenger Load Status



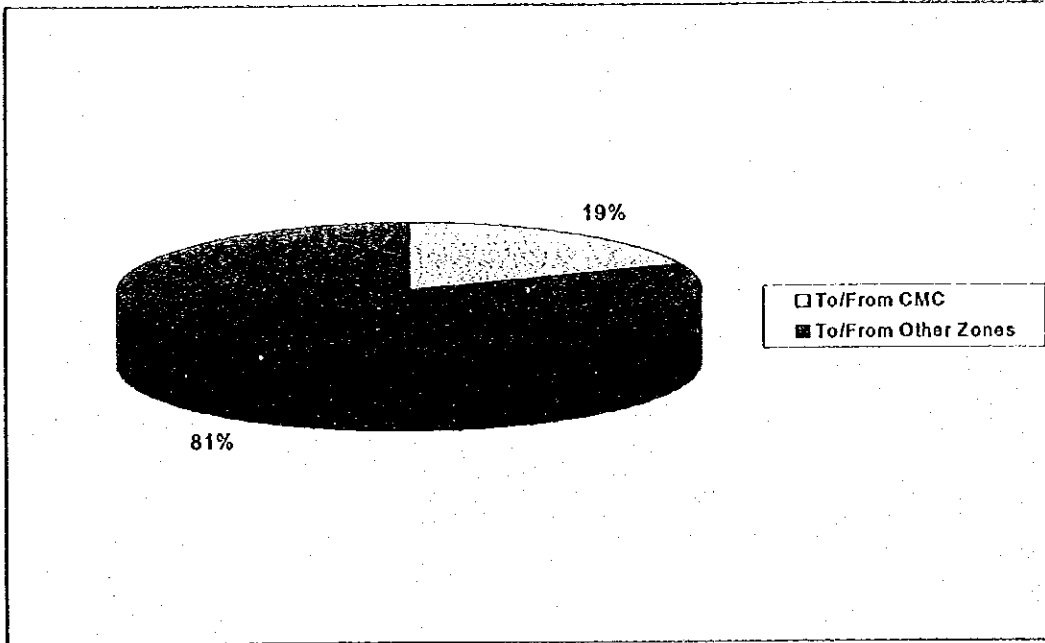
12-Hour (7am to 7pm)

Traffic Volume Survey Extract



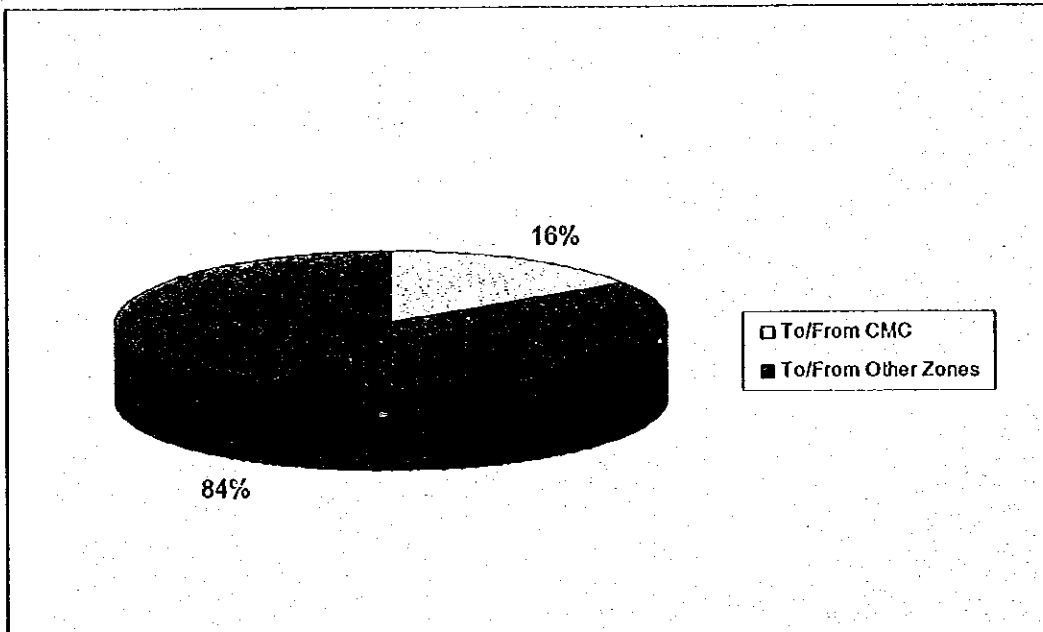
Site # 16

Passenger Vehicle Trip Generation/Attraction



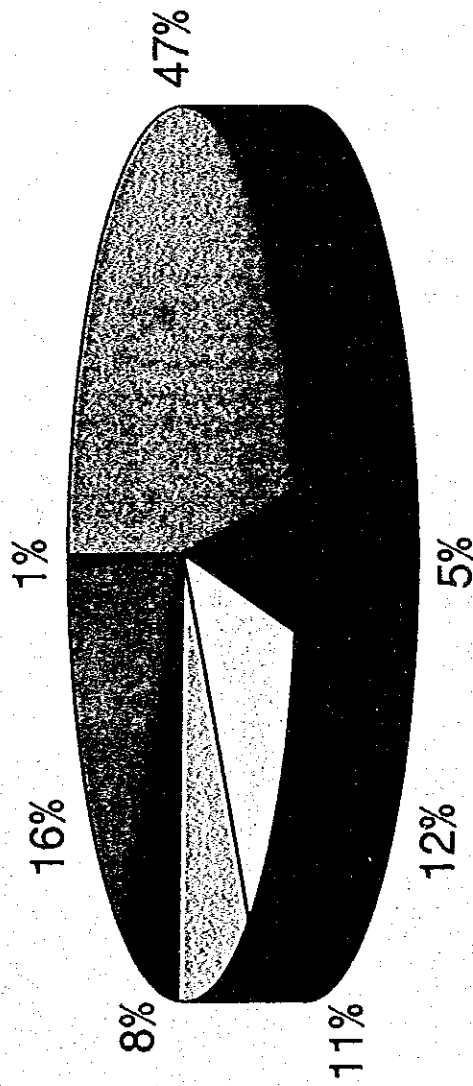
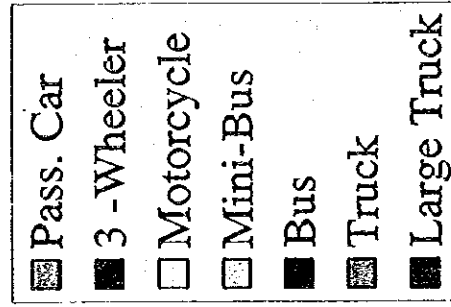
Samples : 905
Sampling Rate : 14.4%
Average Veh. Occupancy : 3.2

Freight Vehicle Trip Generation/Attraction



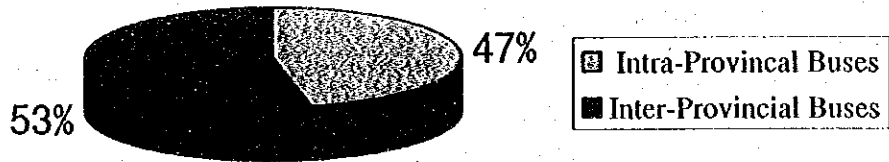
Samples : 549
Sampling Rate : 34.1%
Avg. Veh. Occupancy : 2.5

Road Vehicle Composition



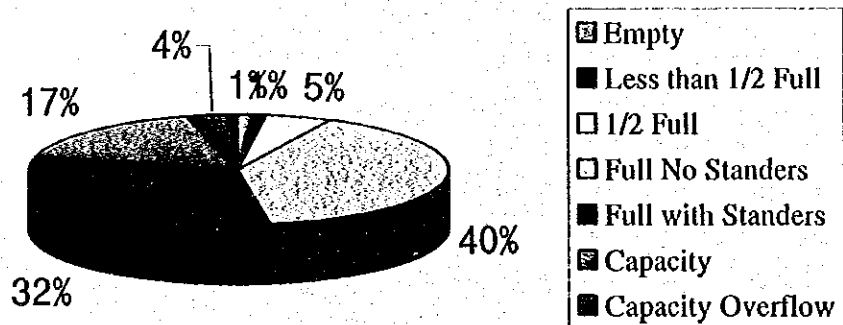
12-Hour Traffic Volume = 9674
(7am to 7pm)

Intra-Provincial & Inter-Provincial Bus Travel



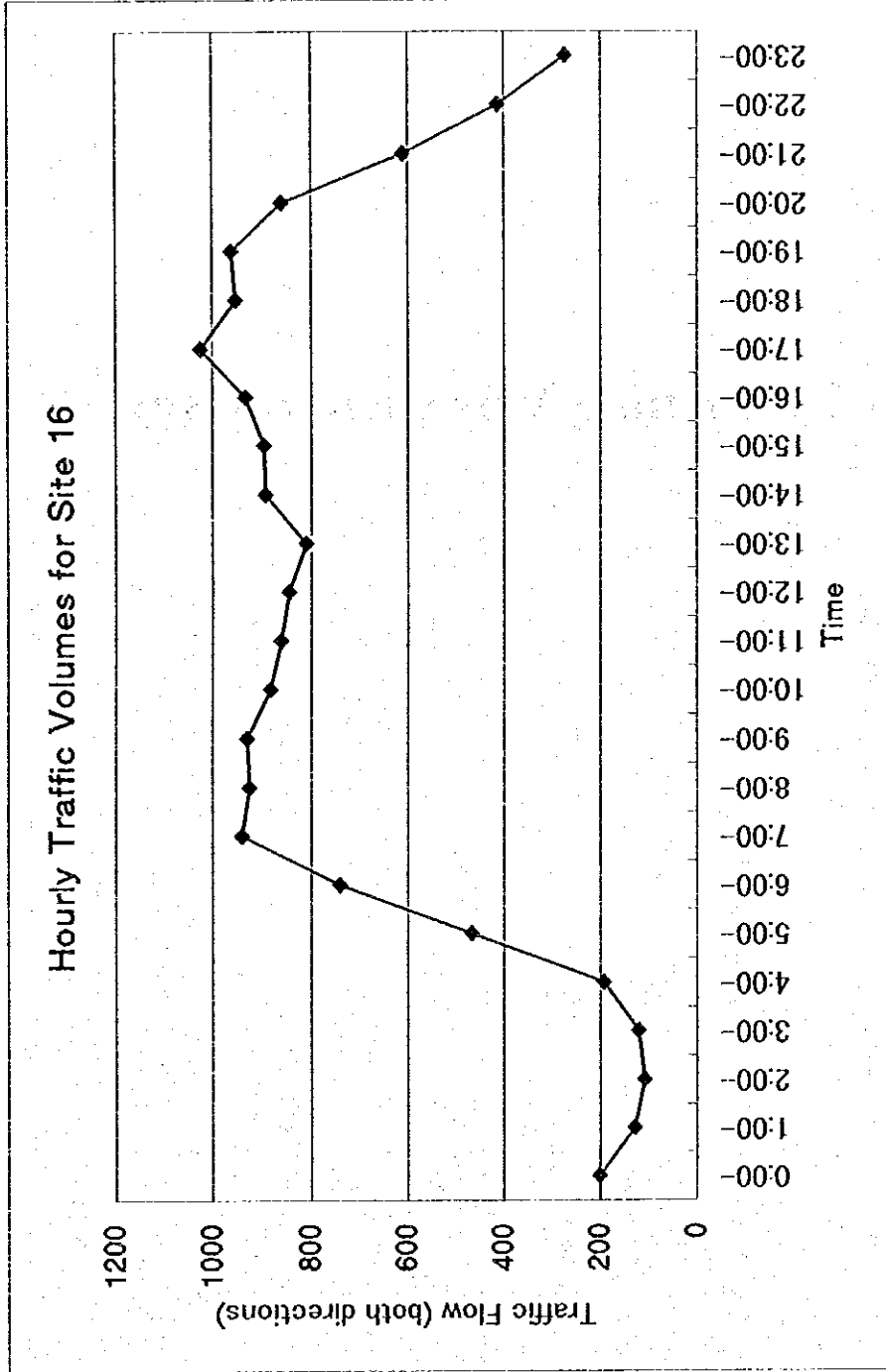
12-Hour (7am to 7pm) Sample

Bus Passenger Load Status



12-Hour (7am to 7pm)

Traffic Volume Survey Extract



1.2 Turning Movement Survey

Turning Movement Survey Extract

Turning Movement Ratios of Major Intersections

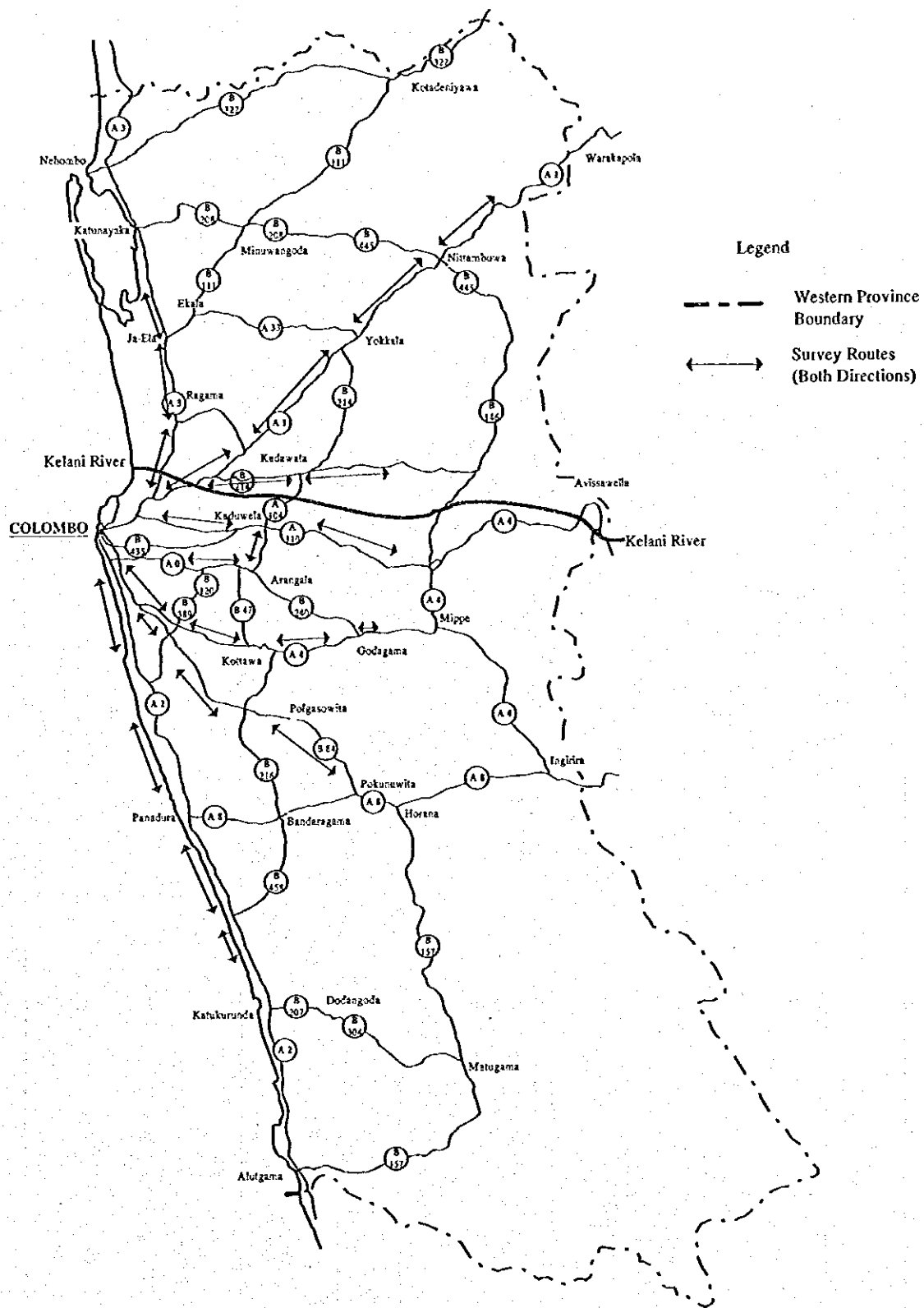
Site	Direction	Turning Movement Ratio (%)		
		Left	Straight	Right
1-1	North	—	—	—
	South	46.1	—	53.9
	West	—	44.9	55.1
	East	33.8	66.2	—
1-2	North	—	—	—
	South	97.7	—	2.3
	West	—	70.1	29.9
	East	0.7	99.3	—
1-3	North	—	—	—
	South	24.8	—	75.2
	West	—	46.2	53.8
	East	84.8	15.2	—
1-4	North	20.0	55.1	24.9
	South	19.5	56.6	23.9
	West	16.9	55.7	27.4
	East	19.1	58.3	22.6
1-5	North	—	—	—
	South	82.3	—	17.7
	West	—	61.2	38.8
	East	12.9	87.1	—
1-6	North	31.1	23.0	45.9
	South	73.6	19.6	6.8
	West	3.9	83.0	13.1
	East	15.7	66.6	17.7
2-1	North	3.1	96.9	—
	South	—	82.1	17.9
	West	—	—	—
	East	95.9	—	4.1
2-2	North	7.1	92.9	—
	South	—	85.3	14.7
	West	—	—	—
	East	77.2	—	22.8
2-3	North	3.1	96.9	—
	South	—	69.4	30.6
	West	—	—	—
	East	96.1	—	3.9
2-4	North	4.5	74.0	21.5
	South	10.9	79.2	9.8
	West	25.8	54.1	20.2
	East	41.4	34.2	24.3
2-5	North	34.8	65.2	—
	South	—	94.1	5.9
	West	—	—	—
	East	8.8	—	91.2

Turning Movement Survey Extract

Turning Movement Ratios of Major Intersections (Continued)

Site	Direction	Turning Movement (%)		
		Left	Straight	Right
3-1	North	6.9	67.9	25.2
	South	8.0	86.3	5.8
	West	39.9	48.2	11.9
	East	11.4	74.7	13.9
3-2	North	3.8	96.2	—
	South	—	79.9	20.1
	West	—	—	—
	East	87.1	—	12.9
3-3	North	—	—	—
	South	75.0	—	25.0
	West	—	58.3	41.7
	East	20.8	79.2	—
3-4	North	—	—	—
	South	83.2	—	16.8
	West	7.7	92.3	—
	East	—	51.8	48.2
3-5	North	10.1	89.9	—
	South	—	89.0	11.0
	West	—	—	—
	East	64.6	—	35.4

1.3 Travel Speed Survey

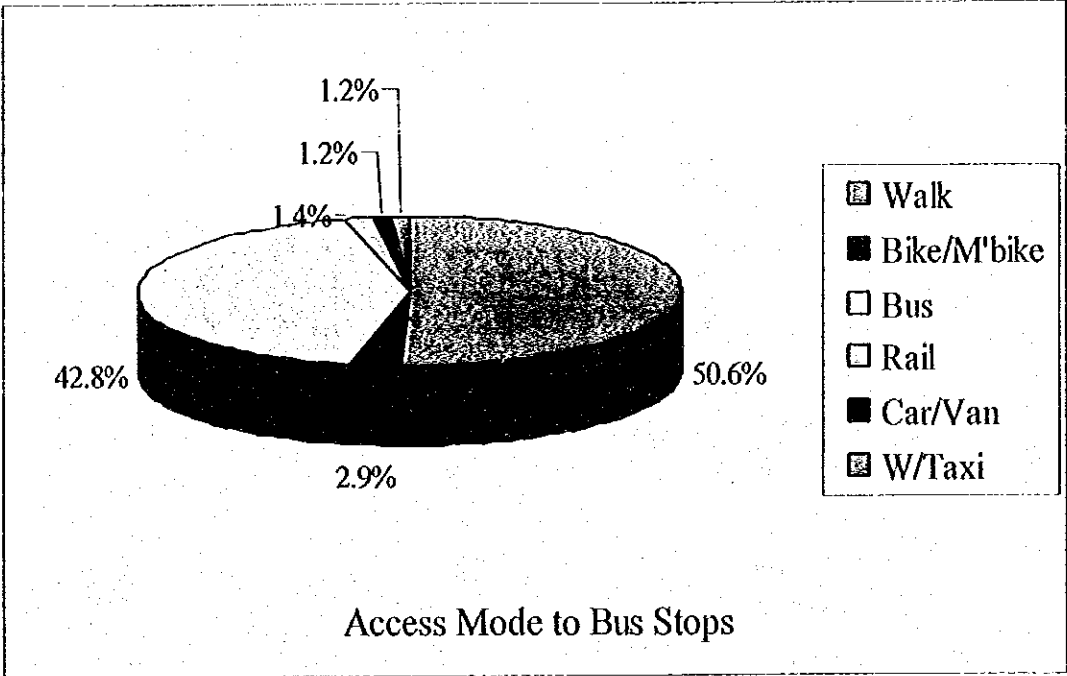


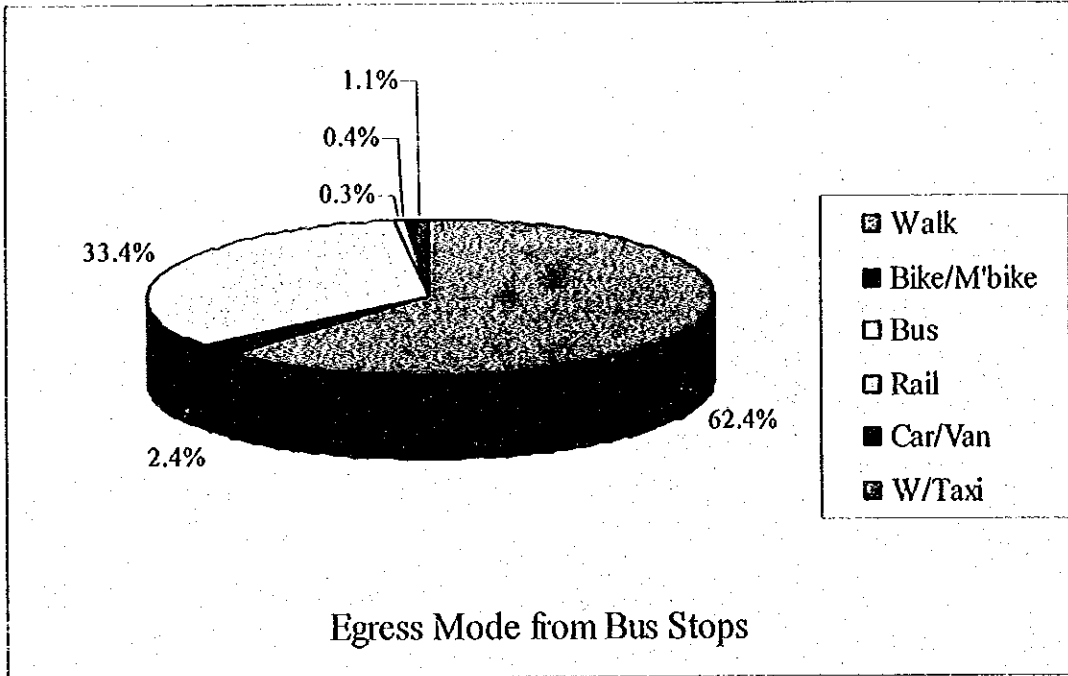
Travel Speed Survey Routes

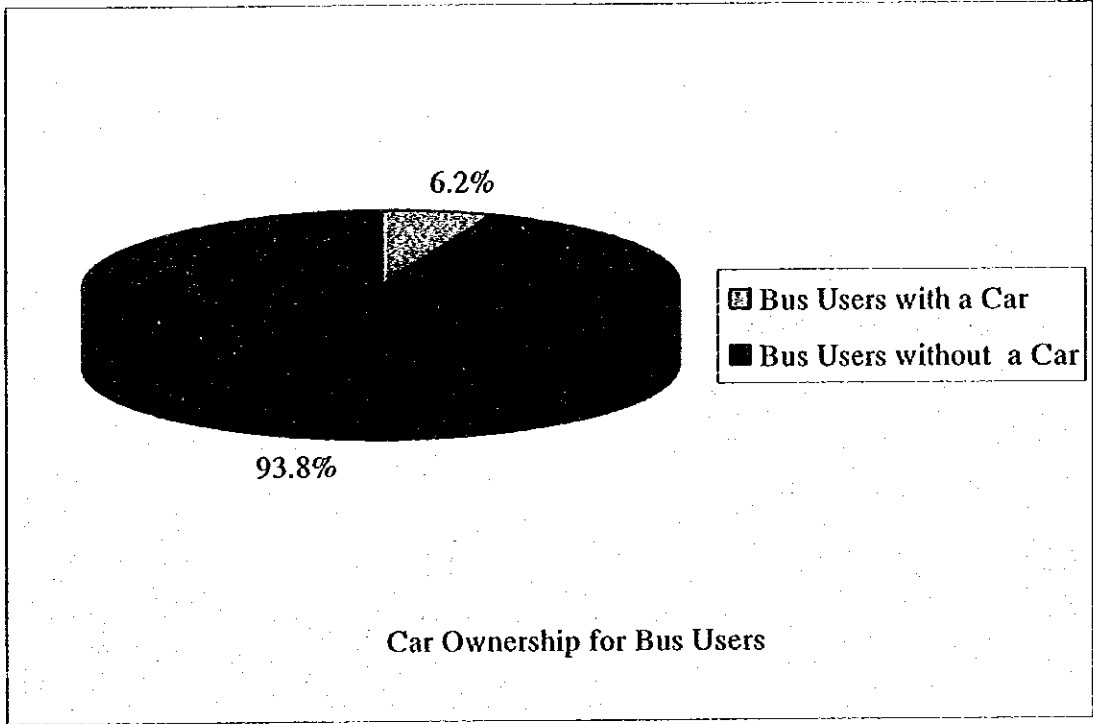
Average Travel Speed on Major Routes in Colombo

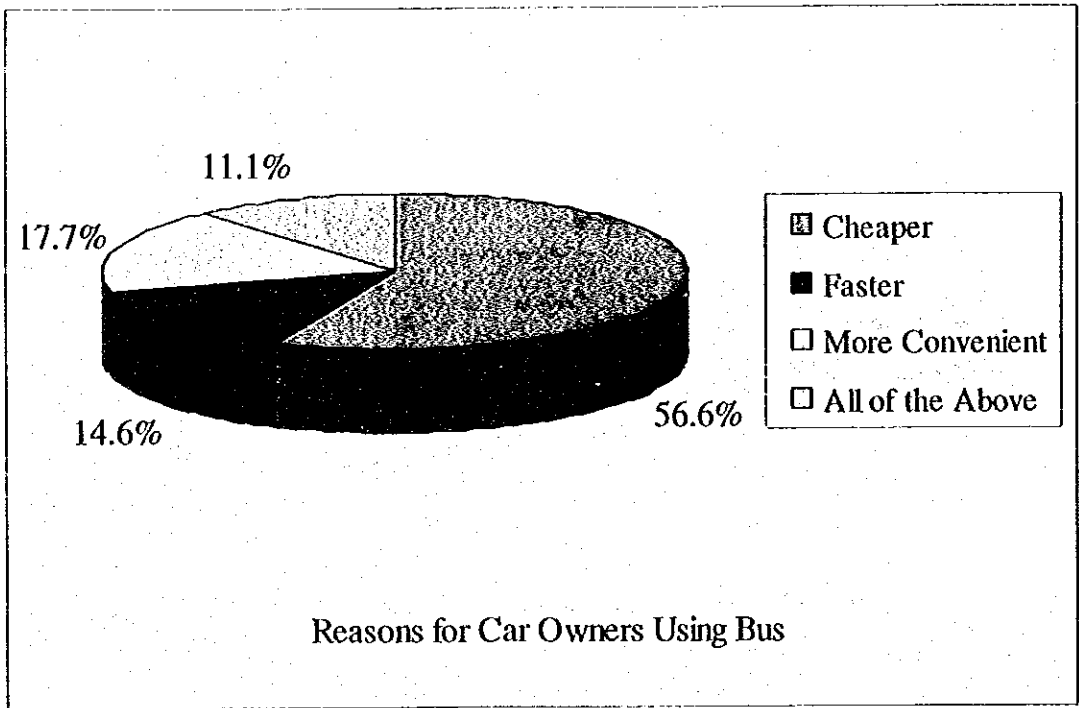
Item No.	Route Line	Directions	Time of Day	Average Travel Speed (km/h)
1	Kandy Road (Nittambuwa - Orugodawatte)	To Colombo	Morning Peak	31.93
			Off Peak	37.58
			Evening Peak	34.03
		From Colombo	Morning Peak	35.84
			Off Peak	34.98
			Evening Peak	32.23
2	Highlevel Road (Meepe - Fort)	To Colombo	Morning Peak	22.06
			Off Peak	29.46
			Evening Peak	28.95
		From Colombo	Morning Peak	28.21
			Off Peak	30.64
			Evening Peak	25.71
3	Sri Jayawardanapura Road (Kaduwela - Kollupitya)	To Colombo	Morning Peak	23.12
			Off Peak	32.20
			Evening Peak	29.56
		From Colombo	Morning Peak	37.30
			Off Peak	32.49
			Evening Peak	29.09
4	Negambo Road (Katunayake - Ingurukade Junction)	To Colombo	Morning Peak	35.37
			Off Peak	37.18
			Evening Peak	37.21
		From Colombo	Morning Peak	42.99
			Off Peak	37.06
			Evening Peak	39.70
5	Galle Road (Kalutara - Kollupitiya)	To Colombo	Morning Peak	28.91
			Off Peak	33.61
			Evening Peak	34.67
		From Colombo	Morning Peak	36.30
			Off Peak	33.97
			Evening Peak	30.86
6	Horana Road (Pokunuwita - Vilasita Niwasa)	To Colombo	Morning Peak	27.08
			Off Peak	33.23
			Evening Peak	26.69
		From Colombo	Morning Peak	29.34
			Off Peak	33.40
			Evening Peak	30.03
7	Parallel to Kelani River (Dompe - Peliyagoda)	To Colombo	Morning Peak	33.40
			Off Peak	32.00
			Evening Peak	32.84
		From Colombo	Morning Peak	33.15
			Off Peak	34.89
			Evening Peak	29.57
8	Old Awissawella Road (Hanwella - Orugodawatte)	To Colombo	Morning Peak	35.64
			Off Peak	33.36
			Evening Peak	35.59
		From Colombo	Morning Peak	37.85
			Off Peak	35.83
			Evening Peak	33.48
Average Morning Peak Travel Speed				32.41
Average Off Peak Travel Speed				33.87
Average Evening Peak Travel Speed				31.89
Average Daily Travel Speed				32.72

1.4 Bus Passenger Interview Survey









2. Traffic Model Results

2.1 Calibration Results

Variables & Calibration Results for Vehicle Trip Generation Models

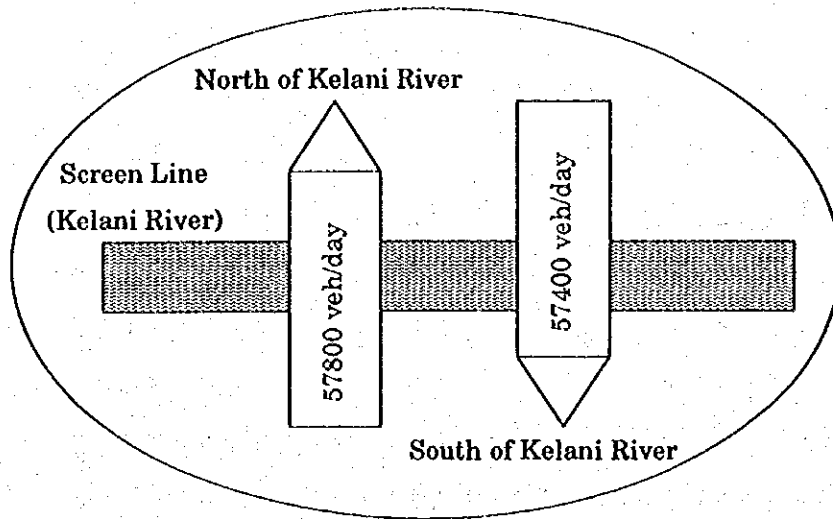
Trip Type	Variable	R ²
1. Car Home-Based Work Trip	Cars/capita	0.82
Car Home-Based Other Trip	Ditto	0.87
Car Non-Home-Based Trip	Ditto	0.85
2. Three-Wheeler Home-Based Work Trip	Cars/capita	0.79
Three-Wheeler Home-Based Other Trip	Ditto	0.88
Three-Wheeler Non-Home-Based Trip	Ditto	0.86
3. Motorcycle Home-Based Work Trip	Cars/capita	0.89
Motorcycle Home-Based Other Trip	Ditto	0.90
Motorcycle Non-Home-Based Trip	Ditto	0.86
4. Bus Trip	Population	0.70
5. Truck Trip	Cars/capita	0.87

Variables & Calibration Results for Vehicle Trip Attraction Models

Trip Type	Variable	R ²
1. Car Home-Based Work Trip	Population	0.55
Car Home-Based Other Trip	Ditto	0.68
Car Non-Home-Based Trip	Ditto	0.58
2. Three-Wheeler Home-Based Work Trip	Population	0.55
Three-Wheeler Home-Based Other Trip	Ditto	0.51
Three-Wheeler Non-Home-Based Trip	Ditto	0.64
3. Motorcycle Home-Based Work Trip	Population	0.53
Motorcycle Home-Based Other Trip	Ditto	0.41
Motorcycle Non-Home-Based Trip	Ditto	0.65
4. Bus Trips	Population	0.64
5. Truck Trips	Population	0.70

Vehicle Trip Distribution Model Parameters & Calibration Results

	Trip Type	Estimated Parameter	Correlation Coefficient
Passenger car	Home-Based Work Trip	-0.8	0.97
	Home-Based Other Trip	-0.6	0.94
	Non-Home-Based Trip	-0.8	0.97
3-Wheelers	Home-Based Work Trip	-0.9	0.76
	Home-Based Other Trip	-1.0	0.95
	Non-Home-Based Trip	-1.1	0.96
Motorcycle	Home-Based Work Trip	-0.7	0.92
	Home-Based Other Trip	-1.1	0.90
	Non-Home-Based Trip	-0.6	0.95
Truck		-1.4	0.80
Bus		-0.6	0.73



Average Daily Traffic Volume at Screen Line (1999)

Observed/Modeled	North of Kelani River : 1.023
	South of Kelani River : 1.076

Vehicle OD Matrix for 1999

Vehicle Type : All

Trip Type : All

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
1 Negombo	0	228	244	252	138	1991	358	143	75	68	27	21	0	4	1	13	11	33	140	100	214	88	51	144	491	116	193	85	220	139	101	5689
2 Katana	479	0	215	416	137	1971	556	143	51	50	16	5	0	1	3	3	6	27	101	94	225	75	70	66	334	27	10	9	62	36	67	5274
3 Ja-Ela	310	196	0	806	185	2417	558	173	58	54	17	9	0	2	3	6	7	30	121	129	240	106	76	127	647	41	29	21	117	82	97	6066
4 Wattala	385	328	568	0	781	7302	1552	383	130	111	33	15	0	3	6	11	14	71	261	266	555	344	266	321	620	35	23	23	112	118	221	14732
5 Kelaniya	281	200	306	851	0	6184	1379	316	111	93	30	12	0	3	4	11	13	65	229	240	552	346	276	300	563	30	16	23	102	111	204	12868
6 Colombo	3098	1901	2539	9679	4100	0	26944	5106	1781	1448	392	235	0	33	59	118	199	678	4343	2946	7755	3695	1095	2009	4142	282	242	241	1104	1088	1856	89101
7 Nugegoda	823	587	686	1793	841	29658	0	2058	555	495	117	56	0	7	22	24	84	234	1939	1213	2809	975	334	380	1044	55	31	36	228	206	531	47581
8 Moratuwa	243	163	191	544	244	6024	2051	0	697	409	76	46	0	7	10	23	58	142	873	394	673	222	115	131	349	22	20	23	87	91	207	14124
9 Panadura	106	51	61	148	67	1846	538	675	0	938	64	50	0	6	5	17	48	77	263	132	228	59	27	56	121	11	12	13	44	43	76	5781
10 Kalutara	87	40	53	104	70	1243	371	357	881	0	55	41	0	5	4	19	87	97	255	120	186	57	33	44	100	10	10	12	38	39	79	4498
11 Beruwela	41	18	22	38	23	492	141	88	70	65	0	49	0	5	2	8	7	18	59	37	69	17	10	18	40	4	4	5	15	15	28	1409
12 Matugama	29	7	12	13	12	267	65	49	50	44	47	0	1	27	2	16	7	25	47	32	49	10	5	13	28	3	4	6	16	16	22	929
13 Waillawa	1	0	0	0	0	6	2	1	0	1	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	18
14 Agniawatte	3	1	1	1	1	28	6	5	5	5	5	27	0	0	0	3	1	3	5	4	5	1	1	1	2	3	0	1	2	2	3	126
15 Dodangoda	2	2	2	4	3	35	12	6	3	3	1	2	0	0	0	0	0	2	3	4	6	2	2	2	1	3	0	0	1	1	3	102
16 Buithainhala	14	3	6	7	10	129	20	23	18	20	8	16	0	3	0	4	4	19	27	20	28	7	5	9	16	2	3	4	10	11	16	467
17 Bandaragama	14	5	8	14	9	207	63	81	48	90	6	6	0	1	0	4	0	27	68	22	33	8	3	7	15	2	2	2	6	7	12	782
18 Horana	51	33	40	86	57	820	275	149	90	109	18	25	0	3	3	20	29	0	144	135	163	45	33	30	75	6	5	8	25	27	72	2575
19 Kesbeva	206	93	125	266	149	4382	1691	795	243	272	48	43	0	6	4	25	66	124	0	470	690	152	55	107	240	21	20	22	78	84	151	10647
20 Homagama	193	101	128	272	147	3231	1200	398	131	130	33	28	0	4	5	18	22	113	491	0	1149	146	79	96	250	14	14	18	72	77	165	8746
21 Kaduwella	305	165	221	547	353	6062	1713	527	168	177	47	39	0	6	7	27	28	133	558	1029	0	346	201	223	456	33	29	34	127	170	368	14117
22 Kolonnawa	115	73	106	325	256	4183	1177	201	67	59	16	10	0	2	2	7	8	35	177	154	368	0	99	95	187	15	9	12	46	58	106	7967
23 Mahara	67	88	119	349	312	1313	427	108	45	38	14	5	0	2	2	7	5	39	68	124	223	164	0	131	220	13	7	11	39	70	128	4136
24 Mahara	163	52	108	289	231	1972	338	115	51	41	14	12	0	2	1	8	7	23	104	95	211	88	89	0	557	39	28	36	191	272	84	5221
25 Gampaha	565	226	546	498	283	3194	674	230	97	86	30	21	0	3	3	14	13	47	190	175	367	141	108	522	0	230	86	78	509	365	158	9476
26 Minuwangoda	199	38	48	40	26	373	77	29	13	12	4	3	0	1	0	2	2	6	26	21	48	14	8	44	283	0	25	19	99	37	18	1433
27 Divulapitiya	190	5	24	17	14	198	23	16	11	10	4	4	0	1	0	3	2	5	19	13	24	10	4	27	81	24	0	42	63	34	15	880
28 Mirigama	88	8	22	21	16	234	35	20	12	12	5	6	0	1	0	4	2	6	21	17	32	11	6	35	79	19	43	0	120	49	22	946
29 Attanagalla	249	65	117	159	107	1144	216	100	46	42	15	16	0	3	1	11	7	27	81	84	142	61	46	222	573	97	88	122	0	291	98	4210
30 Weke	155	35	79	106	87	1137	215	90	46	41	14	17	0	3	1	11	7	25	92	81	186	56	46	283	399	38	34	50	283	0	92	3707
31 Hanwella	188	86	111	243	185	1688	484	174	79	85	28	21	0	4	3	18	13	67	141	185	371	127	117	91	194	18	18	24	83	97	0	4903
	8540	4794	6685	17909	8822	89628	43183	12539	5662	5006	1183	843	5	146	154	449	738	2199	10846	6324	17418	7366	3260	5632	12110	1209	985	980	3900	3534	5042	289083

Vehicle OD Matrix for 1999

Vehicle OD Matrix for 2010

Vehicle Type : All

Trip Type : All

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
1 Negombo	0	1778	666	765	341	4101	1179	491	198	171	91	94	21	45	31	48	102	127	357	292	579	266	199	289	1243	382	326	220	419	272	299	15304
2 Katana	2208	0	487	723	272	2878	1055	321	109	111	61	54	18	36	27	29	76	95	237	208	434	202	174	172	819	309	102	120	204	128	212	11890
3 Ja-Ela	926	572	0	1117	335	3343	1093	329	109	112	59	54	16	34	24	29	75	94	248	225	464	234	192	210	1256	203	82	98	204	158	213	12107
4 Wattala	725	494	629	0	723	5283	1582	411	131	131	68	60	19	39	28	34	92	117	309	289	629	400	298	325	665	135	62	81	150	152	265	14307
5 Kelaniya	486	301	328	965	0	4847	1371	347	114	114	58	52	15	32	23	30	81	104	271	267	604	392	299	330	602	111	44	68	137	144	231	12769
6 Colombo	5441	2994	3010	8029	4528	0	27378	5912	1783	1610	717	685	175	376	303	359	1078	1168	4744	3210	7140	5269	1838	2164	4945	985	476	690	1359	1354	2465	102166
7 Nugegoda	1635	1048	937	2113	1193	26106	0	2748	714	662	279	251	72	156	127	140	499	519	2587	1559	2798	1976	694	586	1525	327	144	225	391	369	890	53282
8 Moratuwa	724	436	377	791	423	7357	3834	0	1044	714	214	192	46	104	91	96	441	370	1512	999	1058	484	270	241	655	142	71	109	183	182	432	226983
9 Panadura	206	105	92	165	96	1663	688	843	0	997	105	100	17	41	38	37	185	138	308	184	308	104	65	71	181	39	22	33	59	61	127	7078
10 Kalutara	241	127	112	203	123	1727	748	640	1060	0	113	107	19	46	42	49	379	210	410	213	357	117	84	80	215	46	24	37	66	68	160	7826
11 Beruwela	249	154	124	238	124	1592	694	375	205	204	0	191	41	83	62	43	112	120	243	183	325	111	88	76	219	50	26	41	64	61	158	6258
12 Matugama	243	141	116	218	116	1459	641	335	186	186	196	0	56	290	257	75	102	169	234	199	307	104	82	72	211	47	25	41	67	64	172	6377
13 Walialawita	246	169	129	257	126	1524	697	309	134	137	136	170	0	144	73	51	85	122	203	181	304	109	91	70	217	51	26	43	61	55	175	6096
14 Agalawatto	235	157	123	242	121	1477	679	315	147	149	130	365	68	0	107	74	90	136	209	185	302	106	87	69	209	48	24	42	62	56	175	6191
15 Dodangoda	206	140	109	214	109	1461	669	339	169	169	118	422	41	125	0	46	89	124	191	165	270	100	79	60	184	43	21	35	51	47	150	5948
16 Bulathsinhala	246	159	128	257	132	1608	748	335	138	162	83	127	31	94	49	0	119	211	257	228	384	117	100	76	221	51	26	46	73	70	214	6464
17 Bandaragama	175	103	89	178	99	1373	681	453	232	424	66	61	13	30	24	37	0	226	389	178	304	95	67	58	161	35	17	27	46	46	122	5807
18 Horana	230	139	119	235	134	1602	766	401	187	251	75	169	21	51	38	75	240	0	358	314	389	124	93	79	215	47	24	40	66	87	193	6681
19 Kesbewa	667	385	340	692	389	6768	3988	1763	434	522	168	162	38	86	64	94	442	389	0	977	1295	475	250	228	598	128	64	98	171	178	427	22282
20 Homagama	656	397	351	744	425	5446	2901	954	313	317	140	150	37	83	62	87	235	381	1085	0	2269	427	290	240	635	132	61	98	170	181	505	19773
21 Kaduwella	1068	651	596	1376	824	9785	4125	1185	445	449	201	186	49	108	79	112	390	400	1201	1935	0	864	576	445	1080	223	101	156	284	333	864	30014
22 Kolonnawa	554	359	346	919	597	8183	3478	807	180	169	81	72	21	45	34	41	121	147	508	398	968	0	304	258	572	120	52	80	144	154	329	19811
23 Biyagama	381	285	254	693	418	2654	1082	291	104	105	54	47	15	31	23	29	74	96	228	239	559	275	0	322	464	95	39	65	125	215	258	9458
24 Mahara	518	307	296	746	477	3374	1075	318	115	116	59	56	16	33	23	31	77	96	255	238	521	281	358	0	1065	151	61	102	289	371	235	11841
25 Gampaha	1302	664	957	742	438	3957	1212	469	156	180	83	83	20	42	29	44	100	125	333	302	621	290	262	700	0	597	144	185	728	536	298	15518
26 Minuwangoda	923	794	428	517	254	2404	903	278	98	101	55	49	15	32	23	27	68	85	207	190	400	176	168	207	1309	0	109	133	328	152	194	10625
27 Divulapitiya	1191	698	372	545	231	2512	949	310	110	114	64	57	19	38	28	32	76	95	226	203	409	173	160	168	670	226	0	206	231	138	229	10381
28 Mirigama	777	510	392	506	245	2604	1010	385	121	125	70	67	22	45	32	39	83	111	243	223	441	185	183	203	674	205	154	0	384	190	292	10408
29 Attanagalla	842	513	395	549	297	2904	1021	340	125	129	69	70	19	41	29	42	83	112	258	237	475	212	217	372	1313	330	125	277	0	437	319	12152
30 Weke	627	381	350	602	331	3167	1159	369	140	143	75	75	20	45	31	46	94	125	299	277	610	247	388	501	1064	175	82	151	469	0	366	12406
31 Henwella	631	523	444	943	504	5493	2253	761	287	310	155	162	46	102	72	104	210	307	614	554	1352	461	415	305	794	176	90	165	289	301	0	19129
24759	15372	13038	28222	14410	128609	69440	22764	9258	9064	4311	1026	2429	1874	1980	5637	6519	18622	14653	28658	14355	8370	8960	24003	5607	2623	3713	7274	6559	10967	513240		

Vehicle OD Matrix for 2010

Vehicle OD Matrix for 2020

Vehicle Type : All

Trip Type : All

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
1 Negombo	0	4244	1045	1019	541	5195	1802	696	258	231	192	148	41	86	88	101	219	239	549	428	816	451	376	488	2165	700	553	368	731	387	573	24645
2 Katana	5143	0	732	855	396	3993	1429	478	169	147	112	88	34	69	54	64	158	170	356	285	562	325	306	320	1407	623	227	230	411	206	372	19117
3 Ja-Ela	1863	1142	0	1372	487	3925	1546	491	167	145	107	85	32	65	51	63	155	169	387	299	600	377	330	373	1994	389	167	177	358	221	375	17892
4 Wattala	1424	922	878	0	906	5807	2075	579	189	161	115	90	34	70	55	68	178	193	438	356	738	590	463	490	1015	249	123	145	271	211	429	19263
5 Kelaniya	1000	600	477	1214	0	5990	2013	538	175	148	103	82	29	61	49	62	164	176	418	332	736	633	510	510	990	222	96	130	259	210	413	18278
6 Colombo	8457	4630	3455	7622	5379	0	30149	8627	2031	1653	992	803	282	552	489	588	1768	1668	5278	3477	7584	6522	2525	2479	6202	1461	743	1013	1886	1436	3379	121258
7 Nugegoda	3024	1813	1243	2379	1851	27920	0	3725	964	807	456	368	125	285	232	276	958	864	3475	1994	3447	2971	1081	811	2200	558	282	430	659	528	1424	96948
8 Moratuwa	1426	817	532	923	607	8927	4927	0	1436	902	363	287	84	188	181	188	890	645	2091	941	1390	737	437	345	999	256	139	208	318	247	722	31450
9 Panadura	501	275	176	285	188	2398	1282	1423	0	1242	200	160	39	91	96	82	430	287	495	285	480	212	147	121	353	90	50	76	118	91	265	11939
10 Kalutara	527	292	184	296	197	2304	1253	1035	1362	0	205	164	40	94	100	100	793	401	616	317	509	214	161	127	384	96	52	81	125	96	315	12446
11 Beruwela	600	357	215	351	213	2226	1166	663	348	311	0	326	92	181	151	102	248	228	418	304	428	211	184	144	437	117	66	98	143	104	331	10851
12 Matugama	567	326	197	319	196	1996	1069	578	297	270	360	0	116	491	585	159	245	344	364	321	488	193	188	130	499	105	58	93	138	99	350	10236
13 Walialawita	577	363	212	349	204	2003	1082	517	228	207	281	308	0	304	168	125	205	253	339	285	465	196	175	131	412	114	64	99	136	93	343	10236
14 Agalawatte	561	347	205	336	201	1991	1063	540	252	228	270	631	149	0	250	179	220	287	355	298	478	195	173	130	405	111	61	98	137	96	353	10620
15 Dodangoda	514	319	189	311	189	2027	1093	599	303	271	256	818	92	282	0	117	225	271	335	275	434	190	158	117	368	100	54	86	120	83	311	10506
16 Bulathsinhala	582	353	215	359	217	2178	1199	563	231	242	167	221	68	198	114	0	285	434	424	357	608	217	191	144	433	118	65	109	156	114	424	10284
17 Bandaragama	491	283	179	301	195	2280	1371	948	467	741	143	129	35	80	72	103	0	567	772	334	531	219	180	124	366	93	49	77	119	89	303	11696
18 Horana	549	318	202	338	217	2246	1292	712	319	385	138	195	47	112	92	172	590	0	509	518	636	227	190	148	426	109	58	97	143	110	398	11593
19 Keabawa	1325	760	502	871	588	7749	5638	2560	613	660	292	243	73	160	131	184	898	690	0	1323	1739	757	449	355	985	248	129	202	312	249	740	31428
20 Homagama	1285	758	497	870	583	6908	4072	1406	425	402	249	233	72	158	127	178	472	688	1545	0	3065	679	509	387	1056	262	132	210	322	257	877	28064
21 Kaduwella	2046	1208	817	1515	1037	11239	5741	1738	601	540	355	290	95	205	161	249	621	719	1719	2628	0	1289	971	692	1764	430	209	342	528	457	1485	41689
22 Kolonnawa	1171	725	530	1187	896	9829	5087	936	281	234	149	118	42	89	73	90	287	266	772	573	1301	0	527	379	907	228	113	175	266	228	587	28027
23 Biyagama	905	600	412	871	681	3658	1697	491	171	154	111	88	32	66	62	68	171	196	400	390	872	473	0	564	1307	243	102	167	298	361	493	15887
24 Mahara	1078	701	517	1017	717	3698	1493	465	166	149	109	88	31	64	50	66	181	183	383	347	740	389	634	0	2267	331	124	177	448	431	413	17638
25 Gampaha	2513	1362	1374	925	682	4599	1674	591	218	218	143	126	37	79	62	89	202	229	487	430	870	426	648	1373	0	965	240	282	1105	670	570	23170
26 Minuwangoda	1894	1597	647	642	392	2865	1244	415	148	134	103	82	32	64	49	60	144	161	316	277	556	277	339	366	2128	0	225	244	595	221	360	16588
27 Divulapitiya	2428	1181	557	665	350	2956	1327	468	167	151	121	94	36	76	59	70	161	178	337	290	561	283	298	283	1096	442	0	372	425	200	418	16051
28 Mirigama	1508	952	468	665	382	3096	1524	528	191	177	136	114	44	91	69	90	189	224	397	351	695	334	370	311	1041	374	288	0	631	373	584	16118
29 Attanagalla	1691	1053	593	716	455	3461	1440	506	185	170	128	110	38	80	81	86	176	208	393	345	677	333	420	525	2078	598	232	440	0	550	565	18311
30 Weke	1217	751	515	782	498	3631	1640	546	198	180	133	112	39	63	63	90	190	222	435	366	815	395	676	654	1624	318	151	351	702	0	624	18045
31 Hanwella	1665	979	621	1083	706	6166	2973	1084	396	398	268	251	96	185	141	210	428	536	874	878	1776	696	659	461	1360	340	192	352	526	422	0	28713
48529	30039	18388	36378	19870	151398	91390	32647	12969	11638	6728	6856	1977	4588	3904	4079	11808	11698	25774	19612	34666	21013	14237	13479	38478	10308	5044	6926	12350	8838	18796	728402	

Vehicle OD Matrix for 2020

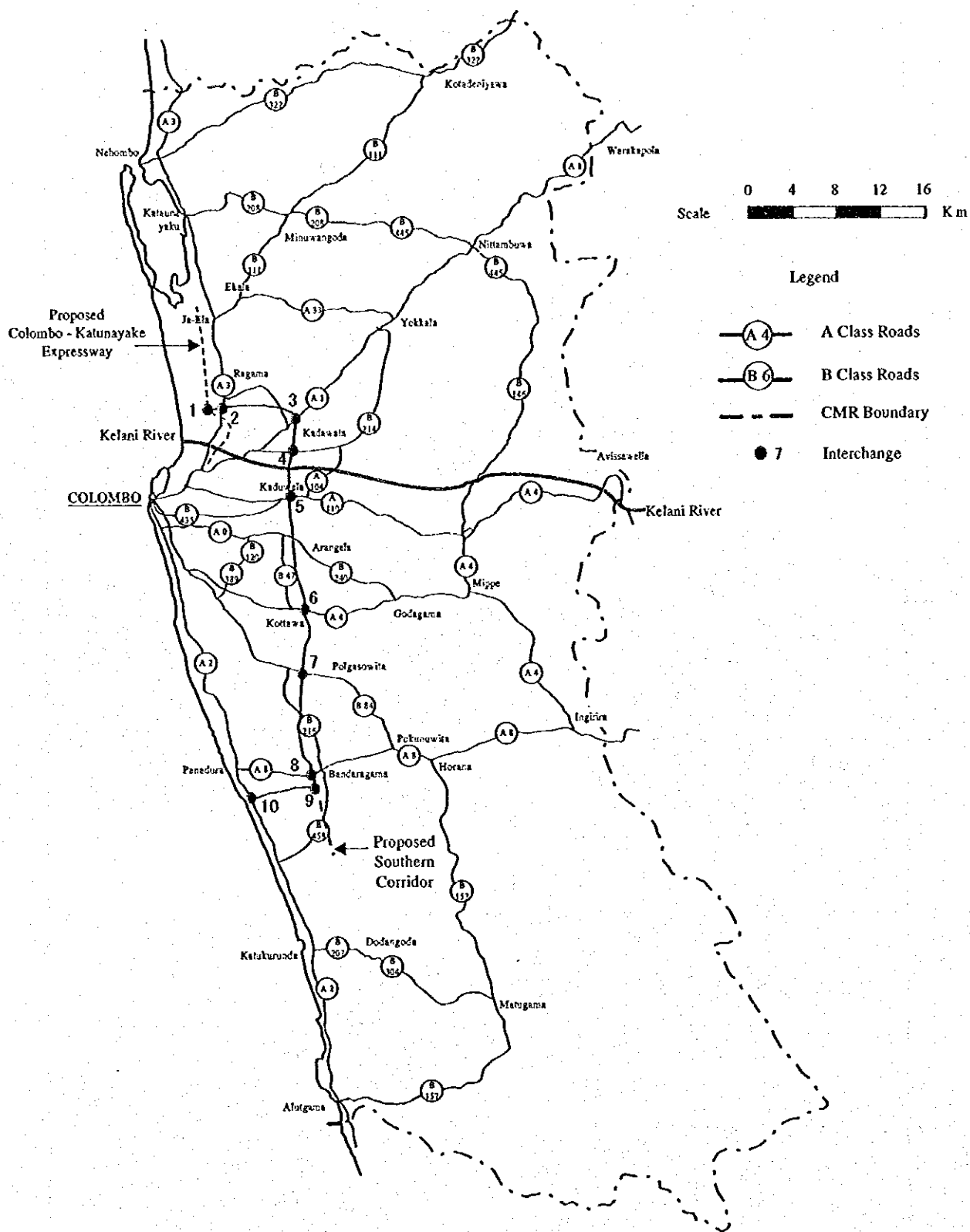
Comparison of Traffic Assignment Model Estimates with Observed Traffic Volumes

Site	Model Total (No. of Vehicle)	Observed (No. of Vehicle)	Model/Observed
1	52200	60000	0.87
2	37900	41800	0.91
3	9700	14900	0.65
4	39200	54500	0.72
5	28500	32200	0.89
6	20300	20600	0.99
7	34700	49200	0.71
8	25500	30000	0.85
9	21500	24300	0.88
11	16100	17000	0.95
13	7100	11000	0.65
16	12300	16000	0.77
17	14100	12900	1.09
19	46800	48100	0.97
20	31500	26400	1.19
21	16800	16300	1.03
23	9000	10200	0.88
26	19900	24000	0.83
27	9200	11700	0.79
28	13400	11500	1.17
29	10100	21000	0.48
30	5400	14100	0.38
31	16200	21300	0.76
34	17600	16800	1.05
Average			0.852

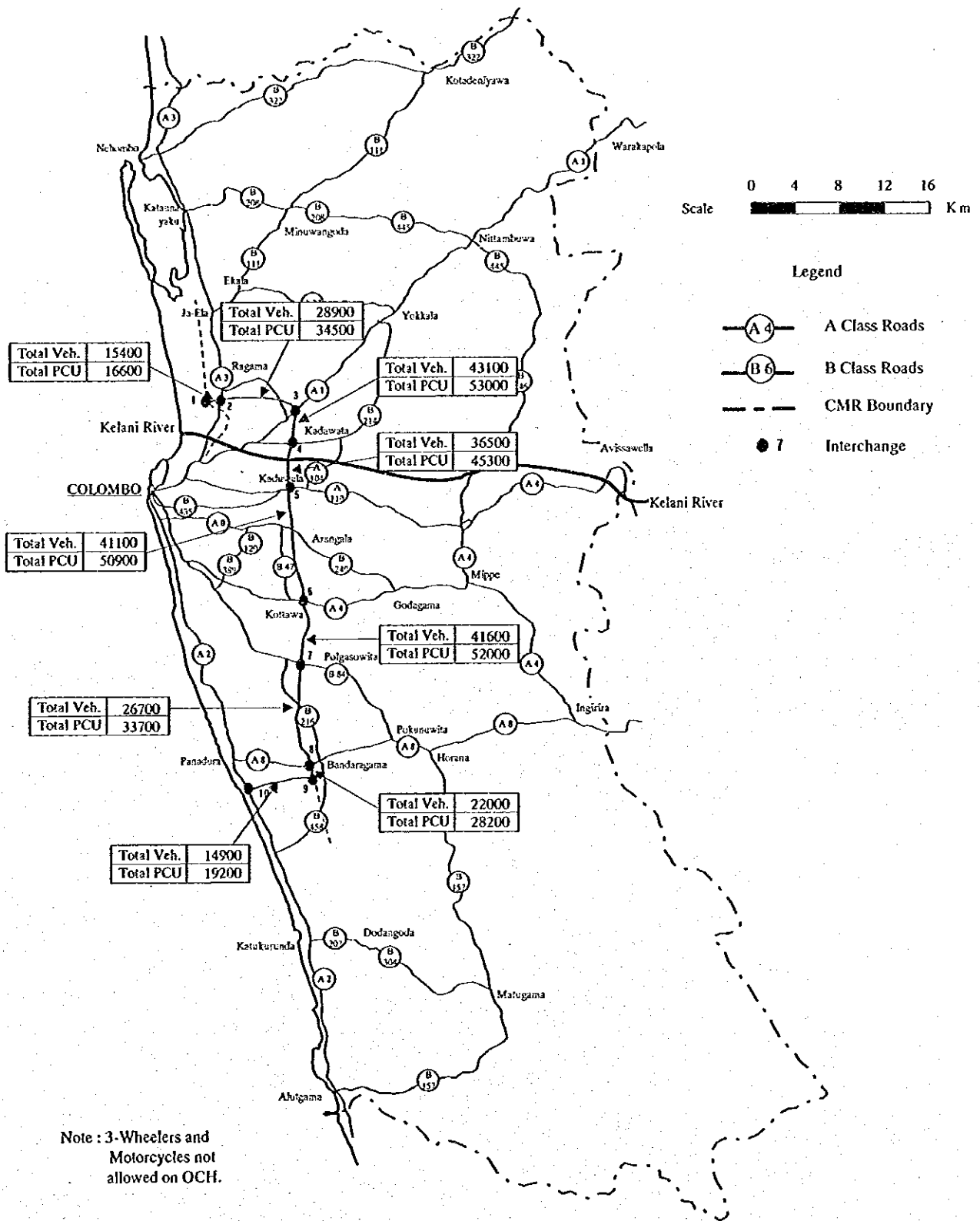
Comparison of Observed Travel Speeds & Modeled Travel Speeds

Route Line	Observed Daily Travel Speed		Modeled Daily Travel Speed
	Range	Average	Average
A1	29.3-39.0	34.4	36.6
A4	18.8-32.9	27.5	32.9
A104, A0	20.3-38.3	30.6	35.0
A3	29.8-46.5	38.3	41.5
A2	27.8-37.2	33.1	37.2
B84	25.4-39.8	30	26.1
B214	28.3-38.5	32.6	31.6
A110	31.5-40.3	35.3	33.1

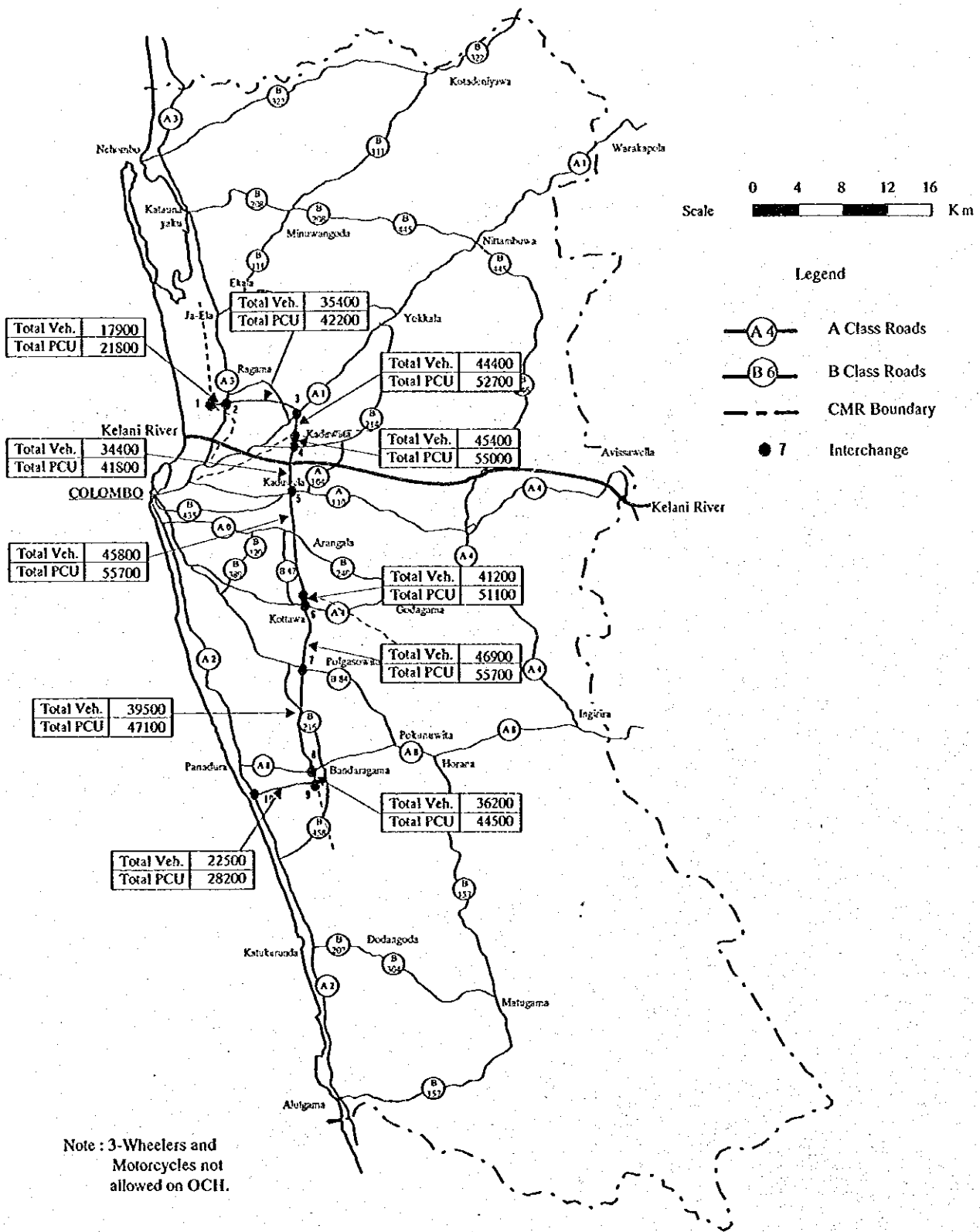
2.2 Forecast Results



Location and Numbering of OCH Interchanges



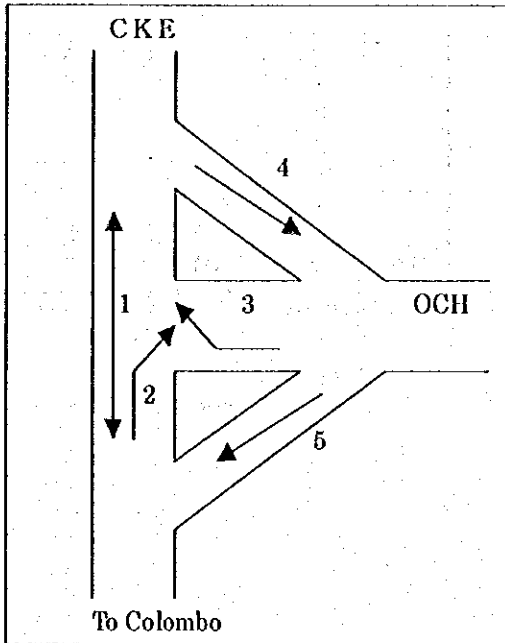
Traffic Volume (both directions) for Road Links of Outer Circular Highway for 2010 for Most Appropriate Alignment



Traffic Volume (both directions) for Road Links of Outer Circular Highway for 2020 for Most Appropriate Alignment

Daily Traffic Volume at Interchanges of Outer Circular Highway for 2010

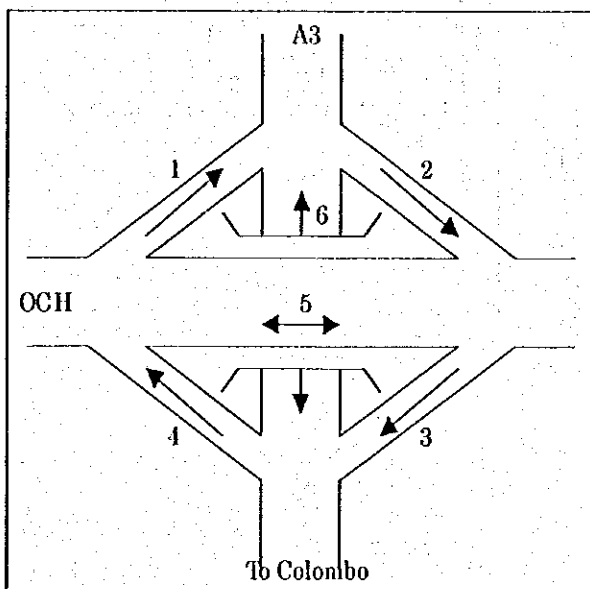
Interchange 1



OCH+CKE

Movement	Traffic Volume
1	6600
2	12700
3	2900
4	6500
5	2500
Total Int.Traffic (Veh)	31200

Interchange 2

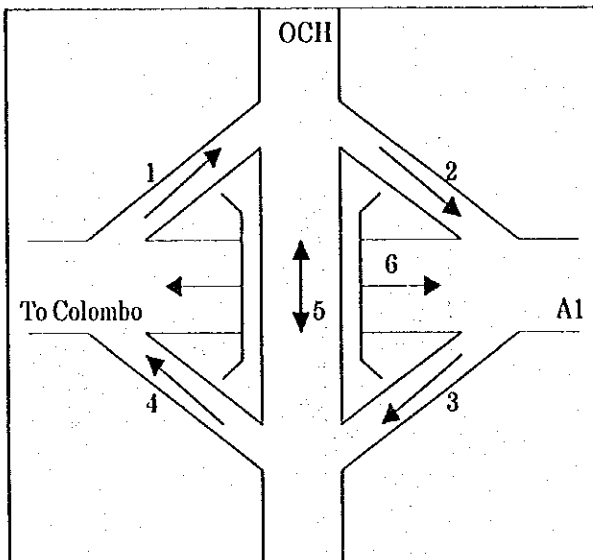


OCH+A3

Movement	Traffic Volume
1	11500
2	9200
3	2900
4	500
5	27400
6	49100
Total Int.Traffic (Veh)*	98000

Note: Total excludes double counting

Interchange 3

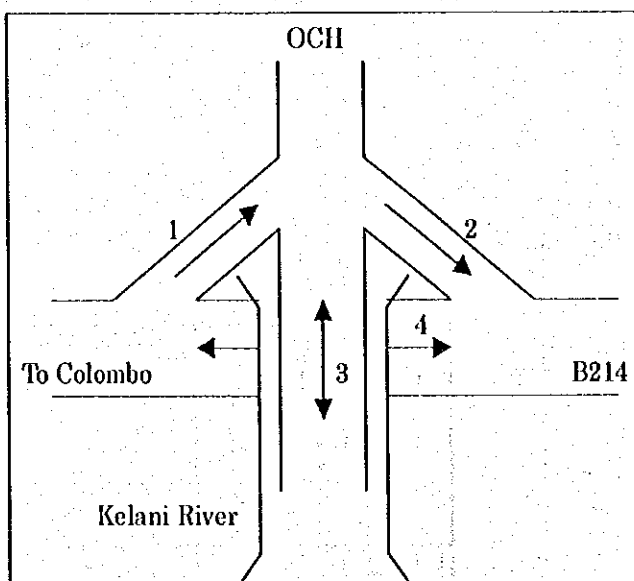


OCH+A1

Movement	Traffic Volume
1	17200
2	16600
3	19800
4	20200
5	18100
6	32800
Total Int.Traffic (Veh)*	87700

Note: Total excludes double counting

Interchange 4

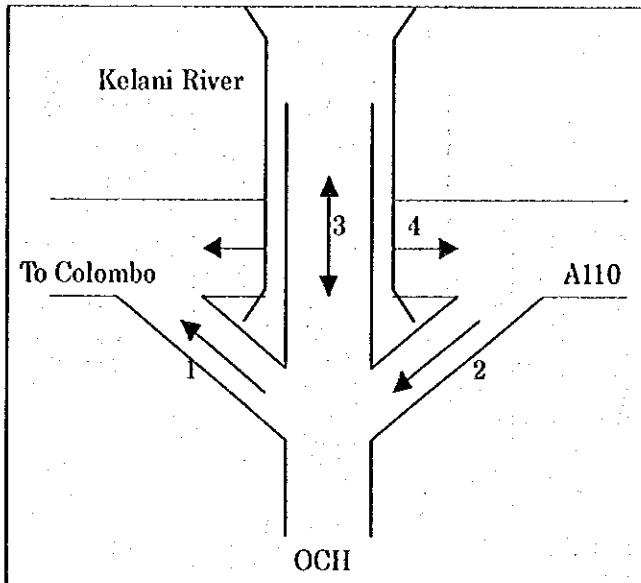


OCH+B214

Movement	Traffic Volume
1	10600
2	11100
3	36600
4	8400
Total Int.Traffic (Veh)*	60800

Note: Total excludes double counting

Interchange 5

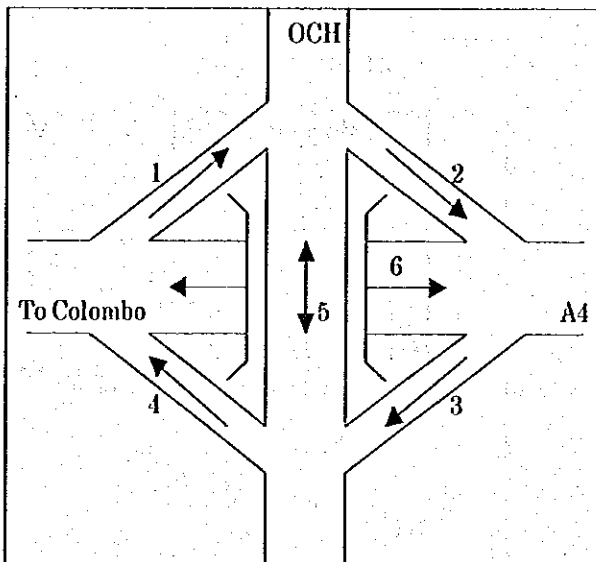


OCH+A110

Movement	Traffic Volume
1	5100
2	4700
3	36600
4	11200
Total Int.Traffic (Veh)*	55500

Note: Total excludes double counting

Interchange 6

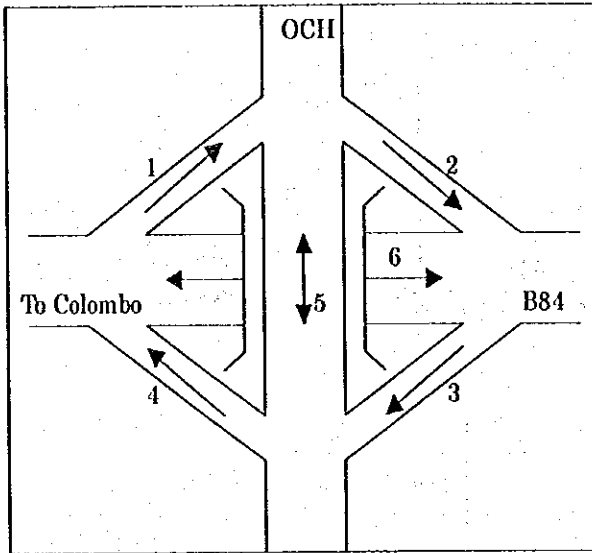


OCH+A4

Movement	Traffic Volume
1	15100
2	16300
3	13700
4	18900
5	24300
6	46900
Total Int.Traffic (Veh)*	103000

Note: Total excludes double counting

Interchange 7

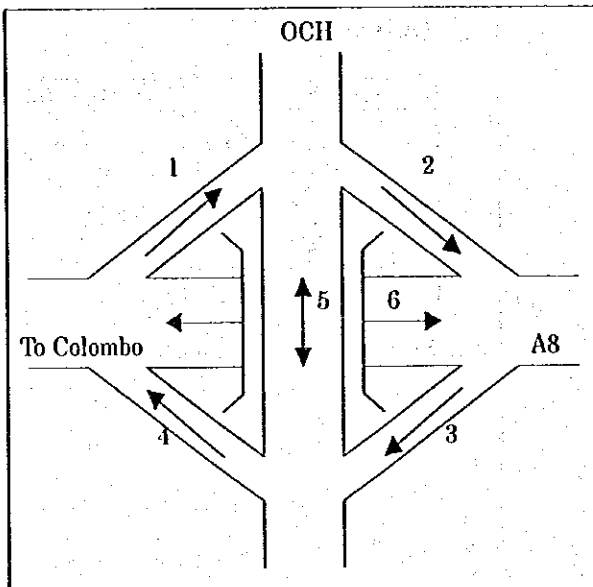


OCH+B84

Movement	Traffic Volume
1	20000
2	14500
3	4000
4	3800
5	22300
6	15600
Total Int.Traffic (Veh)*	67300

Note: Total excludes double counting

Interchange 8

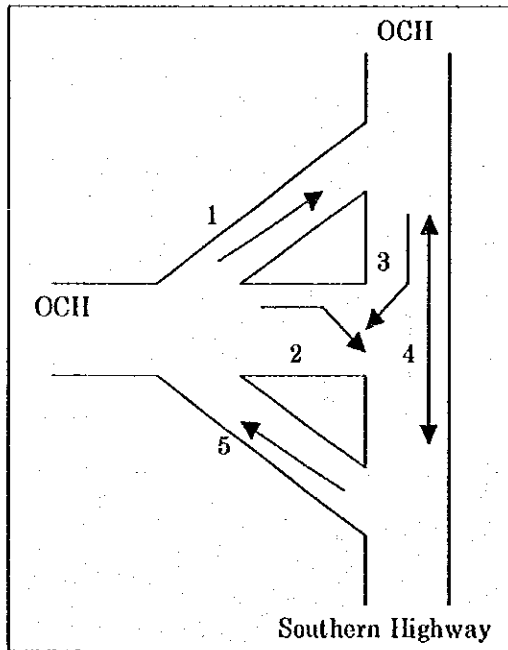


OCH+A8

Movement	Traffic Volume
1	5100
2	5100
3	1500
4	1800
5	16600
6	8500
Total Int.Traffic (Veh)*	30900

Note: Total excludes double counting

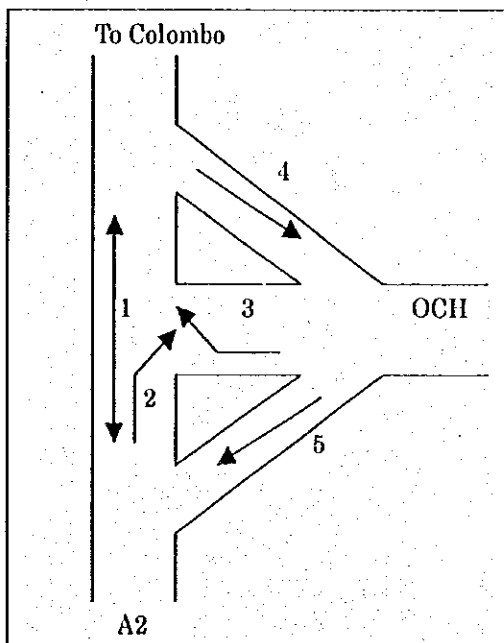
Interchange 9



OCH+Southern Highway

Movement	Traffic Volume
1	4800
2	1800
3	5200
4	12000
5	3100
Total Int.Traffic (Veh)	26900

Interchange 10



OCH+A2

Movement	Traffic Volume
1	17000
2	4100
3	4300
4	2600
5	3900
Total Int.Traffic (Veh)	32000

ANNEX II

GROUND SURVEY DATA

CONTENTS OF GROUND SURVEY DATA

Annex 1: List of GPS's point coordinates and elevations

Annex 2: Control point data form

Annex 3: GPS observation network

Annex 4: List of benchmarks

Annex 5: Benchmark data form

Annex 6: Leveling route map

Annex 7: Table of leveling accuracy

Annex 8: Location map of cross section survey

Annex 9: Observation sheet of cross section survey

Annex 10: Control point residual of aerial triangulation

Annex 1: List of GPS's point coordinates and elevations

LIST OF GPS COORDINATES AND ELEVATION

GPS99 01	name	northing	166,624.753	easting	104,831.076	Elevation	3.591
	latitude	6-41-52.392186	longitude	79-54-38.908931	ell.height	3.8050	
	Latitude (wgs84)	6-41-53.650477	longitude (wgs84)	79-54-46.596251	ell.height	-98.0729	
GPS99 02	name	northing	167,182.670	easting	111,188.890	Elevation	7.270
	latitude	6-42-10.905638	longitude	79-58-05.912078	ell.height	6.8667	
	Latitude (wgs84)	6-42-12.163974	longitude (wgs84)	79-58-13.574719	ell.height	-94.8725	
GPS99 03	name	northing	167,009.596	easting	112,886.912	Elevation	1.489
	latitude	6-42-05.360862	longitude	79-59-01.215802	ell.height	1.0157	
	Latitude (wgs84)	6-42-06.619875	longitude (wgs84)	79-59-08.871915	ell.height	-100.6887	
GPS99 04	name	northing	173,494.538	easting	109,995.752	Elevation	2.626
	latitude	6-45-36.321696	longitude	79-57-26.716234	ell.height	2.1818	
	Latitude (wgs84)	6-45-37.566823	longitude (wgs84)	79-57-34.382325	ell.height	-99.5415	
GPS99 05	name	northing	176,638.354	easting	113,386.355	Elevation	22.164
	latitude	6-47-18.849042	longitude	79-59-16.975990	ell.height	21.8358	
	Latitude (wgs84)	6-47-20.088329	longitude (wgs84)	79-59-24.628377	ell.height	-79.7953	
GPS99 06	name	northing	179,080.070	easting	111,876.995	Elevation	23.289
	latitude	6-48-38.258001	longitude	79-58-27.685205	ell.height	23.0255	
	Latitude (wgs84)	6-48-39.491979	longitude (wgs84)	79-58-35.342979	ell.height	-78.6217	
GPS99 07	name	northing	185,152.111	easting	113,748.329	Elevation	25.853
	latitude	6-51-56.030864	longitude	79-59-28.316414	ell.height	25.8627	
	Latitude (wgs84)	6-51-57.252688	longitude (wgs84)	79-59-35.965832	ell.height	-75.7060	
GPS99 08	name	northing	188,270.158	easting	110,485.900	Elevation	8.508
	latitude	6-53-37.360740	longitude	79-57-41.870497	ell.height	8.4790	
	Latitude (wgs84)	6-53-38.575537	longitude (wgs84)	79-57-49.531976	ell.height	-93.1389	
GPS99 09	name	northing	190,207.989	easting	111,767.696	Elevation	14.692
	latitude	6-54-40.516105	longitude	79-58-23.521729	ell.height	14.6863	
	Latitude (wgs84)	6-54-41.727147	longitude (wgs84)	79-58-31.177891	ell.height	-86.8922	

name	northing	193,513.195	eastng	113,086.674	Elevation	6.078
GPS99	latitude	6-56-28.186964	longitude	79-59-06.313434	ell.height	6.0860
10						
	Latitude	6-56-29.391443	longitude	79-59-13.963895	ell.height	-95.4437
	(wgs84)		(wgs84)			
name	northing	193,414.653	eastng	112,218.582	Elevation	4.610
GPS99	latitude	6-56-24.931855	longitude	79-58-38.036103	ell.height	4.6291
11						
	Latitude	6-56-26.136376	longitude	79-58-45.689942	ell.height	-96.9196
	(wgs84)		(wgs84)			
name	northing	200,613.122	eastng	110,105.076	Elevation	9.361
GPS99	latitude	7-00-19.155856	longitude	79-57-28.773439	ell.height	9.2140
12						
	Latitude	7-00-20.345149	longitude	79-57-36.434145	ell.height	-92.3344
	(wgs84)		(wgs84)			
name	northing	200,444.865	eastng	106,353.722	Elevation	1.263
GPS99	latitude	7-00-13.462495	longitude	79-55-26.547690	ell.height	1.1017
13						
	Latitude	7-00-14.651446	longitude	79-55-34.222950	ell.height	-100.5275
	(wgs84)		(wgs84)			
name	northing	202,187.501	eastng	102,222.887	Elevation	0.796
GPS99	latitude	7-01-09.943576	longitude	79-53-11.841508	ell.height	0.6019
14						
	Latitude	7-01-11.128178	longitude	79-53-19.532440	ell.height	-101.1044
	(wgs84)		(wgs84)			
name	northing	167,317.163	eastng	111,077.888	Elevation	0.864
GPS99	latitude	6-42-15.278093	longitude	79-58-02.290227	ell.height	0.4522
02A						
	Latitude	6-42-16.536133	longitude	79-58-09.953277	ell.height	-101.2884
	(wgs84)		(wgs84)			
name	northing	193,482.272	eastng	112,767.561	Elevation	5.297
GPS99	latitude	6-56-27.163001	longitude	79-58-55.918310	ell.height	5.2841
10A						
	Latitude	6-56-28.367484	longitude	79-59-03.570012	ell.height	-96.2525
	(wgs84)		(wgs84)			

LIST OF COORDINATES AND ELEVATION
(GIVEN POINTS)

name GPS A083	northing	170,455.825	easting	102,932.844	Elevation	3.384
	latitude	6-43-56.999683	longitude	79-53-36.872798	ell.height	3.1973
	Latitude (wgs84)	6-43-58.249740	longitude (wgs84)	79-53-44.566750	ell.height	-98.6960
name GPS A097	northing	195,738.427	easting	113,898.736	Elevation	6.096
	latitude	6-57-40.672027	longitude	79-59-32.651328	ell.height	6.1305
	Latitude (wgs84)	6-57-41.872070	longitude (wgs84)	79-59-40.298240	ell.height	-95.3680
name GPS A098	northing	203,201.152	easting	106,157.996	Elevation	19.669
	latitude	7-01-43.178820	longitude	79-55-20.007453	ell.height	19.5132
	Latitude (wgs84)	7-01-44.362050	longitude (wgs84)	79-55-27.682960	ell.height	-82.1030
name GPS AA01	northing	188,047.272	easting	100,556.372	Elevation	22.8635
	latitude	6-53-29.525985	longitude	79-52-18.414803	ell.height	22.6878
	Latitude (wgs84)	6-53-30.739400	longitude (wgs84)	79-52-26.114720	ell.height	-79.1430