GOVERNMENT OF MALAYSIA

THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY

FINAL REPORT

HIGHWAY PROJECT

APPENDIX

JUNE 1989

JAPAN INTERNATIONAL COOPERATION AGENCY

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APPENDIX TO CHAPTER 2

Future Traffic Demand Forcasting

Table 2.1: Traffic Zone Plan

A Zone	B Zone	Master Plan (C Zone) For Model Calibration	Master Plan (C Zone) For Planning	Feasibility Study For Traffic Assignment (C Zone)	Zone Name
1 KUALA LUMPUR	1 CPA	1	1	1	Dewan Bandaraya
		2	2	2	Bukit Nanas
			3		Bukit Bintang
		3	4	3	Pasar Besar
			5		Jalan Sultan
			6	8	Stadium Merdeka
			7	9	Selangor Club
		4	8	4	Jalan Raja Laut
			9		General Hospital
			10		Jalan Raja Uda
		5	11	5	Ampang Complex
			12		Padang Race Track
		6	13	6	Pudu
		7	14	7	Jalan Loke Yew
			15		Choo Cheng•Khay
		8	16	8	Jalan Dato Onn
			17	9	Lake Garden
	2 KEPONG	9	18	10	Sentul
		10	19		Taman Segambut
		11	20	11	Kg. Chubadak
			21		Kg. Batu Muda
			22		Kg. Batu
		12	23		Taman Kok Lian
		13	24	12	Taman Kok Doh
			25		Kg. Batu Delima
		14	26	13	Jinjang Utara
			27		Kepong North
			28		Kg. Kepong
			29		Kepong

(Cont.d)

A Zone	B Zone	Master Plan (C Zone) For Model Calibration	Master Plan (C Zone) For Planning	Feasibility Study For Traffic Assignment (C Zone)	Zone Name
1 (Cont.)	2 (Cont.)	15	30	12	Kepong Bahru
			31		Taman Kepong
		16	32	14	Bt. Tunku
			33		Kg. Segambut
		17	34	15	Taman Bt. Maluri
			35		South of Taman Bt. Maluri
	3	18	36	16	Taman Tasik Titiwangsa
		19	37	17	Kg. Puah
			38		Taman Ibu Kota
		20	39		Taman Bunga Raya
		21	40	18	Taman Air Panas
			41		Setapak Jaya
			42		Wangsa Maju
			43		South of Wangsa Maju
		22	44	19	U.T.M.
			45		Kg. Datuk Keramat
	4 AMPANG	23	46	20	Taman U-Thant
			47		Padang Polo Kelab
			48		Padang Golf Kelab
			49	21	Taman Maluri
			50		South of Taman Maluri
	5 CHERAS	24	51	22	Pudu Hulu
			52		Kg. Cheras Baru
			53	23	Taman Cheras
		25	54	24	Taman Ikan Emas
				25	
			55	26	Bandar Tun Razak
				27	
			56	28	Taman Mutiara Barat

(Cont.d)

A Zone	B Zone	Master Plan (C Zone) For Model Calibration	Master Plan (C Zone) For Planning	Feasibility Study For Traffic Assignment (C Zone)	Zone Name
1 (Cont.)	5 (Cont.)	26	57	29	Taman Batu Cheras
		27	58	30	Sungei Besi
			59	31	East of Sungei Besi
	6 OUG	28	62	32	Bt. Seputih
		29	60	33	Salak South
			61		T.U.D.M.
		30	64	34	Kg. Pantai
		31	63	35	Taman Desa
		32	65	36	Kg. Melayu
			66	37	
		33	67	38	Taman Sri Petaling
				39	
			68	40	Taman Gembira
				41	
			69	42	Taman O.U.G.
				43	
			70	44	Bt. Jalil East
			71	45	
				46	Bt. Jalil West
	7 DAMANSARA	34	72	47	Taman Duta
			73		
		35	78	48	Taman Tun Dr. Ismail
		36	74	49	Taman Bandaraya
			75		Taman Bangsar
			76		Taman Bt. Pantai
		36	79	50	University Malaya
		37	77	49	Brickfield

(Cont.d)

A Zone	B Zone	Master Plan (C Zone) For Model Calibration	Master Plan (C Zone) For Planning	Feasibility Study For Traffic Assignment (C Zone)	Zone Name
2 GOMBAK	8 GOMBAK WEST	38	80	51	Batu Arang
		39	81	52	Rawang
		40	82	53	Kg. Kundang
			83		Kuang
		41	84	54	Kg. Sg. Tua
			85		Sri Gombak
			86		Hulu Gombak
		42	87	55	Batu
			88		Taman Desa Jaya
			89		Bandar Baru Selayang
	9 GOMBAK EAST	43	90	56	Taman Melewar
			91		Setapak
		44	92	57	Kg. Hulu Klang Dalam
		45	93		Kg. Hulu Klang
			94		Taman Keramat
3 HULU LANGAT	10 HULU LANGAT NORTH	46	95	58	Ampang
			96	59	Ampang
		47	97	60	Hulu Langat
		48	98	61	Cheras
	11 HULU LANGAT SOUTH	49	99	62	Bandar Baru Bangi
			100	63	Bandar Baru Bangi
			101	64	Kajang
		50	102	65	Bangi
		51	103	66	Hulu Semenyih
		52	104	67	Kg. Sg. Purun
			105	68	Semenyih
			106	69	Beranang

A Zone	B Zone	Master Plan (C Zone) For Model Calibration	Master Plan (C Zone) For Planning	Feasibility Study For Traffic Assignment (C Zone)	Zone Name
4 PETALING	12 PETALING JAYA	53	107	70	S 11, 12, 52
		54	108	71	S 13
		55	109		S 16, 17
		56	110	72	S 14, 20, 21, 22
			111		S 51 A
		57	112	73	S 52, 7, 8
		58	113		S 5, 6, 9, 10
		59	114	74	S 51
			115		S 1, 2, 3, 4, 18
			116	75	Jalan Klang Lama
		60	117	76	SS 20, SS 21
		61	118	77	S 19, SS 2
		62	119		SS 22, 23, 24, 25
		63	120	78	SS 1, 3
		64	121		SS 9, 8
		65	122	79	SS 4, 5, 6, 7
			123		SS 11
	13 SHAH ALAM	66	124	80	Batu Tiga North
			125	81	Government
			126	82	I.T.M.
		67	127	83	Shah Alam New Town
			128	84	Shah Alam New Town
			129	85	Shah Alam New Town
			130	86	Batu Tiga South
			131	87	HICOM
		68	132	88	Shah Alam New Town
			133	89	Shah Alam New Town
			134	90	Shah Alam New Town
			135	91	Shah Alam New Town
			136	92	Shah Alam New Town

Cont.d

A Zone	B Zone	Master Plan (C Zone) For Model Calibration	Master Plan (C Zone) For Planning	Feasibility Study For Traffic Assignment (C Zone)	Zone Name
4 (Cont.)	14 PETALING SOUTH	69	137	93	SS 12, 13, 14
				94	SS 16, 17, 18, 19
			138	95	Damansara
		70	139	96	Puchong
				97	
				98	
				99	
		71	140	100	Serdang
	15 PETALING NORTH	72	141	101	Bt. Raja
		73	142	102	Sungai Buloh
			143		Kg. Bt. Lanjan
			144	103	Kg. Subang
		74	145	104	Subang Airport
		75	146	105	South of Subang Airport
5 KLANG	16 KLANG CENTRAL	76	147	106	Klang North Town Centre
			148	107	Klang North Town Centre
			149	108	Klang North Town Centre
		77	150	109	Klang South Town Centre
			151	110	Klang South Town Centre
				111	
		78	152	112	Kg. Telok Gadong Besar
				113	
				114	
			153	116	Port Klang Town Centre
		79	154	115	Kg. Tk. Pulai
		80	155	117	South Port
	17 KLANG SOUTH	81	156	118	Kg. Jawa
				119	
			157	120	Kg. Bahru Batu Lima
			158	121	Kg. Tk. Gong
			159	122	Pulau Lumut

Cont.d

A Zone	B Zone	Master Plan (C Zone) For Model Calibration	Master Plan (C Zone) For Planning	Feasibility Study For Traffic Assignment (C Zone)	Zone Name
5 (Cont.)	18 KLANG NORTH	82	160	123	Kapar
		83	161	124	Meru
		84	162	125	Kg. Batu Empat
			163	126	Kg. Batu Belah
				127	
			164	128	Klang North Port
		85	165	129	North Port
6 BUKIT TINGGI	19 BUKIT TINGGI	86	167	130	Bukit Tinggi, Pahang
7 & 8 EXTERNAL AREA	20 SEPANG	87	167	131	Sepang, Selangor
	21	88	168	133	Kuala Selangor, Selangor
		89	169	134	Sabak Bernam, Selangor
	21	90	170	135	Ulu Selangor, Selangor
	20	91	171	132	Kuala Langat, Selangor
	21	92	172	136	Perak and North
	22	93	173	137	Pahang and East Coast excluding Bukit Tinggi
	20	94	174	138	Negeri Sembilan and South

TABLE 2.2 : POPULATION BY TRAFFIC ZONE , 1985

ZONE	I	WORKER	STUDENT	H.WIFE	JOBLESS	SUB T.	BELOW 6	TOTAL
1	I	5080	2930	1040	760	9810	1690	11500
2	I	5680	3710	1110	720	11220	1890	13110
3	I	3750	2300	790	270	7110	1190	8300
4	I	32520	20140	7300	5450	65410	11490	76900
5	I	6210	4630	1760	1960	14560	2530	17090
6	I	15650	11110	3570	2020	32350	5560	37910
7	I	20130	12250	5970	3600	41950	8660	50610
8	I	1335	1475	155	60	3025	920	3945
9	I	1505	1665	175	70	3415	1050	4465
10	I	26200	16660	7730	4500	55090	9710	64800
11	I	24380	14630	5960	4610	49580	8410	57990
12	I	33720	20000	7960	5630	67310	11210	78520
13	I	23770	14380	6380	3420	47950	8260	56210
14	I	2920	1900	990	630	6440	1160	7600
15	I	3360	2390	990	760	7500	1310	8810
16	I	8590	6180	2540	1530	18840	3260	22100
17	I	24250	17930	6790	4300	53270	9340	62610
18	I	12090	8800	3960	1930	26780	4520	31300
19	I	18620	12090	6490	2690	39890	6910	46800
20	I	15420	9140	4140	2750	31450	5460	36910
21	I	17650	10440	4720	3140	35950	6250	42200
22	I	8677	5668	2496	1410	18251	3204	21455
23	I	4672	3052	1344	759	9827	1725	11552
24	I	6360	4560	1718	1054	13692	2390	16082
25	I	3975	2850	1074	658	8557	1494	10051
26	I	4770	3420	1289	790	10269	1793	12062
27	I	4770	3420	1289	790	10269	1793	12062
28	I	6625	4750	1790	1098	14263	2490	16753
29	I	4260	3200	1310	520	9290	1600	10890
30	I	5138	3878	2653	1029	12698	2212	14910
31	I	2202	1662	1137	441	5442	948	6390
32	I	6990	4050	1530	990	13560	2350	15910
33	I	12220	7270	2780	1530	23800	4100	27900
34	I	18270	10600	5010	2590	36470	5640	42110
35	I	11360	7540	3580	1740	24220	4090	28310
36	I	7930	5200	2040	1180	16350	2750	19100
37	I	2820	1850	720	420	5810	980	6790
38	I	6430	4314	1804	958	13506	2410	15916
39	I	4822	3235	1353	718	10128	1807	11935
40	I	5787	3883	1624	862	12156	2169	14325
41	I	3215	2157	902	479	6753	1205	7958
42	I	6108	4098	1714	910	12830	2289	15119
43	I	5787	3983	1624	862	12156	2169	14325
44	I	910	609	255	136	1910	339	2249
45	I	1040	696	292	156	2184	388	2572
46	I	650	435	183	98	1366	243	1609
47	I	6870	5790	1770	1160	15590	2710	18300
48	I	6930	4340	1060	2220	14550	2450	17000
49	I	31040	22060	6660	5260	65020	9790	74810
50	I	2920	2040	590	510	6060	1040	7100

TABLE 2.2 (Cont.)

ZONE	I	WORKER	STUDENT	H.WIFE	JOBLESS	SUB T.	BELOW 6	TOTAL
51	I	2980	1700	750	390	5720	1370	7090
52	I	9060	6500	3450	2040	21050	4350	25400
53	I	3930	2960	1690	850	9430	1870	11300
54	I	34590	24080	11240	7300	77210	15990	93200
55	I	13260	8700	4040	2910	28910	6080	34990
56	I	10320	7740	3880	2250	24190	5000	29190
57	I	16570	11720	3850	2550	34690	7110	41800
58	I	23592	16764	5568	5022	50946	10020	60966
59	I	15728	11176	3712	3348	33964	6680	40644
60	I	5390	4990	2690	2560	15620	2980	18600
61	I	5510	4710	1900	1420	13540	2660	16200
62	I	8100	6560	1970	2180	18810	3700	22510
63	I	11760	9530	2860	3190	27340	5370	32710
64	I	3590	2910	870	970	8340	1640	9980
65	I	2330	2920	400	1040	6690	1500	8190
66	I	500	480	300	220	1500	300	1800
67	I	1590	1450	520	370	3930	780	4710
68	I	4930	4490	1630	1140	12190	2410	14600
69	I	3100	2830	1030	710	7670	1520	9190
70	I	2860	2100	480	610	6050	1150	7200
71	I	8840	6750	1710	1010	18310	3290	21600
72	I	18940	11620	2840	1990	35390	6110	41500
73	I	9130	6520	1490	1290	18430	3270	21700
74	I	11880	6780	2280	2030	22970	4130	27100
75	I	16130	9200	3100	2750	31180	5620	36800
76	I	7940	4260	930	1220	14350	2450	16800
77	I	22660	13200	4570	4790	45220	7970	53190
78	I	22040	12720	4230	3460	42450	7650	50100
79	I	6460	3790	870	880	12000	2110	14110
80	I	510	340	70	180	1100	200	1300
81	I	5990	4080	940	2050	13060	2340	15400
82	I	510	350	80	170	1110	190	1300
83	I	1960	910	460	390	3720	680	4400
84	I	3290	1530	770	660	6250	1140	7390
85	I	440	210	110	90	850	150	1000
86	I	2260	1060	540	450	4310	790	5100
87	I	660	310	160	140	1270	230	1500
88	I	670	430	230	200	1530	270	1800
89	I	1930	1160	630	540	4160	750	4910
90	I	330	210	110	100	750	140	890
91	I	1130	710	380	330	2550	460	3010
92	I	1540	970	530	440	3480	620	4100
93	I	9265	4520	1430	1275	16490	2960	19450
94	I	9265	4520	1430	1275	16490	2960	19450
95	I	470	230	80	70	850	150	1000
96	I	2873	1468	813	555	5709	1018	6727
97	I	4021	2054	1137	777	7989	1424	9413
98	I	3447	1761	975	666	6849	1221	8070
99	I	1149	587	325	222	2283	407	2690
100	I	20950	9780	3220	2100	36050	6450	42500

TABLE 2.2 (Cont.)

ZONE	I	WORKER	STUDENT	H.WIFE	JOBLESS	SUB T.	BELOW 6	TOTAL
101	I	1540	900	370	210	3020	480	3500
102	I	8960	5000	3500	1440	18900	3390	22290
103	I	3610	2020	1420	580	7630	1370	9000
104	I	0	0	0	0	0	0	0
105	I	2150	830	350	660	3990	710	4700
106	I	8980	6530	2110	1670	19290	4560	23850
107	I	10690	7770	2520	1980	22960	5430	28390
108	I	6850	4970	1610	1270	14700	3470	18170
109	I	12920	10880	3740	2640	30180	6160	36340
110	I	5814	4896	1680	1194	13584	2772	16356
111	I	3876	3264	1120	796	9056	1848	10904
112	I	4535	3763	1625	1038	10961	2235	13196
113	I	6349	5267	2275	1452	15343	3129	18472
114	I	7256	6020	2600	1660	17536	3576	21112
115	I	7600	6370	3770	2370	20110	4200	24310
116	I	13520	11220	4840	3090	32670	6660	39330
117	I	0	0	0	0	0	0	0
118	I	3262	2611	1316	966	8155	1638	9793
119	I	1398	1119	564	414	3495	702	4197
120	I	1080	870	440	330	2720	550	3270
121	I	1710	1370	690	510	4280	860	5140
122	I	4060	3260	1640	1210	10170	2040	12210
123	I	6670	5200	2090	1760	15720	3280	19000
124	I	5740	4920	2060	1300	14020	2780	16800
125	I	3670	3270	1450	640	9030	980	10010
126	I	1500	1335	593	263	3691	405	4096
127	I	500	445	198	88	1231	135	1366
128	I	3190	2850	1270	570	7880	860	8740
129	I	0	0	0	0	0	0	0
130	I	0	0	0	0	0	0	0
TOTAL	I	1009978	678540	267222	185399	2141139	393198	2534337

TABLE 2.3 : POPULATION BY TRAFFIC ZONE, 1995

ZONE	WORKER	STUDENT	H.WIFE	JOBLESS	SUB T.	BELOW 6	TOTAL
1	4980	2960	910	700	9550	1550	11100
2	6510	4380	1150	770	12810	1990	14800
3	4220	2650	810	270	7950	1220	9170
4	44710	28500	8970	7010	89190	14810	104000
5	8720	6660	2190	2540	20110	3390	23500
6	20460	14910	4170	2450	41990	6700	48690
7	30620	19170	8090	5090	62970	12630	75600
8	1740	1965	180	85	3970	1090	5060
9	1910	2165	190	85	4350	1200	5550
10	26540	17360	6980	4250	55130	9370	64500
11	36020	22100	7800	6390	72310	11790	84100
12	36410	22230	7680	5680	72000	11410	83410
13	28060	17460	6720	3760	56000	9210	65210
14	8000	5350	2390	1600	17340	3060	20400
15	28110	20460	7340	5880	61790	10420	72210
16	9150	6750	2410	1500	19810	3290	23100
17	30700	24110	8050	5250	68110	11390	79500
18	23220	17330	6780	3440	50770	8230	59000
19	22560	15060	7030	3020	47670	8030	55700
20	23120	14100	5540	3830	46590	7810	54400
21	17770	10830	4260	2950	35810	5990	41800
22	14124	9490	3633	2132	29379	4946	34325
23	7605	5110	1956	1148	15819	2663	18482
24	8330	6127	2009	1284	17750	2938	20688
25	5206	3829	1255	802	11092	1836	12928
26	6248	4595	1507	963	13313	2203	15516
27	6248	4595	1507	963	13313	2203	15516
28	8678	6383	2093	1338	18492	3060	21552
29	17210	13250	4720	1950	37130	6070	43200
30	16996	13146	7819	3143	41104	7203	48307
31	7284	5634	3351	1347	17616	3087	20703
32	12820	7650	2500	1700	24670	4040	28710
33	12640	7740	2580	1490	24450	3960	28410
34	24790	14810	6090	3270	48960	7240	56200
35	12830	8740	3610	1830	27010	4390	31400
36	10350	6970	2370	1450	21140	3360	24500
37	7770	5240	1780	1080	15870	2530	18400
38	9862	6812	2478	1372	20544	3496	24040
39	7411	5109	1855	1029	15407	2622	18029
40	8894	6131	2230	1235	18490	3146	21636
41	4941	3406	1239	686	10272	1748	12020
42	9388	6471	2354	1303	19516	3321	22837
43	8894	6131	2230	1235	18490	3146	21636
44	10055	6933	2523	1396	20907	3556	24463
45	11492	7924	2884	1596	23896	4064	27960
46	7183	4953	1803	998	14937	2540	17477
47	8650	7450	1980	1360	19440	3160	22600
48	15050	9690	2050	4530	31320	4990	36310
49	30750	22430	5890	4860	63930	8960	72890
50	3560	2550	650	530	7340	1170	8510

TABLE 2.3 (Cont.)

ZONE	I	WORKER	STUDENT	H.WIFE	JOBLESS	SUB T.	BELOW 6	TOTAL
51	I	3800	2310	880	480	7470	1740	9210
52	I	9510	7010	3220	1980	21720	4470	26190
53	I	3850	2990	1480	780	9100	1800	10900
54	I	73620	52740	21300	14420	162080	33020	195100
55	I	28460	19230	7740	5790	61220	12680	73900
56	I	14650	11280	4910	2940	33780	6920	40700
57	I	35300	26130	6990	5310	73730	14280	88010
58	I	29004	21198	6078	5742	62022	11718	73740
59	I	19336	14132	4052	3823	41348	7812	49160
60	I	6100	5770	2680	2670	17220	3380	20600
61	I	11300	9900	3450	2680	27330	5260	32590
62	I	13060	10860	2820	3280	30020	5680	35700
63	I	36930	30700	7950	9280	84860	16040	100900
64	I	7650	6360	1650	1920	17580	3320	20900
65	I	3990	5080	600	1640	11310	2390	13700
66	I	620	620	340	260	1840	370	2210
67	I	1920	1800	560	410	4690	900	5590
68	I	6700	6260	1970	1430	16360	3140	19500
69	I	3920	3650	1150	840	9560	1840	11400
70	I	2870	2170	420	570	6030	1080	7110
71	I	10960	8600	1900	1170	22630	3760	26390
72	I	21450	13570	2900	2120	40040	6370	46410
73	I	15790	12080	2260	2380	32510	5290	37800
74	I	12050	7090	2070	1930	23140	3980	27120
75	I	21160	12460	3620	3370	40610	6970	47580
76	I	15900	8320	1670	2290	28680	4530	33210
77	I	27090	16290	5010	5450	53840	9060	62900
78	I	25430	15280	4320	3720	48750	8350	57100
79	I	8450	5110	1000	1100	15660	2540	18200
80	I	3360	2360	470	1070	7260	1240	8500
81	I	16960	11900	2350	5420	36630	6260	42890
82	I	5110	3580	710	1630	11030	1880	12910
83	I	3910	1890	830	730	7360	1330	8690
84	I	6620	3200	1400	1240	12460	2240	14700
85	I	18510	8950	3910	3470	34840	6270	41110
86	I	2840	1370	600	530	5340	960	6300
87	I	10180	4930	2140	1910	19160	3440	22600
88	I	12640	8220	3840	3420	28120	5070	33190
89	I	11120	7230	3380	3010	24740	4460	29200
90	I	8180	5330	2490	2210	18210	3290	21500
91	I	4640	3020	1410	1260	10330	1860	12190
92	I	2130	1390	650	580	4750	860	5610
93	I	13430	6780	1860	1735	23805	4040	27845
94	I	13430	6780	1860	1735	23805	4040	27845
95	I	870	440	120	120	1550	260	1810
96	I	4603	2430	1168	828	9029	1598	10627
97	I	6443	3402	1634	1158	12637	2236	14873
98	I	5523	2916	1401	993	10833	1917	12750
99	I	1841	972	467	331	3611	639	4250
100	I	30960	14980	4290	2920	53150	8950	62100

TABLE 2.3 (Cont.)

ZONE	I	WORKER	STUDENT	H.WIFE	JOBLESS	SUB T.	BELOW 6	TOTAL
101	I	2270	1370	500	280	4420	680	5100
102	I	16520	9530	5790	2470	34310	6200	40510
103	I	4860	2800	1700	720	10080	1820	11900
104	I	0	0	0	0	0	0	0
105	I	3340	1330	480	960	6110	1080	7190
106	I	8660	6460	1810	1490	18420	4180	22600
107	I	10500	7840	2190	1810	22340	5070	27410
108	I	6660	4980	1390	1150	14180	3210	17390
109	I	14330	12370	3670	2720	33090	6510	39600
110	I	6426	5550	1650	1224	14850	2916	17766
111	I	4284	3700	1100	816	9900	1944	11844
112	I	5248	4470	1673	1110	12501	2500	15001
113	I	7346	6258	2341	1554	17499	3500	20999
114	I	8396	7152	2676	1776	20000	4000	24000
115	I	14800	12720	6510	4250	38280	8120	46400
116	I	15510	13200	4930	3270	36910	7390	44300
117	I	0	0	0	0	0	0	0
118	I	6909	5684	2471	1897	16961	3409	20370
119	I	2961	2436	1059	813	7269	1461	8730
120	I	1420	1170	510	390	3490	700	4190
121	I	2810	2320	1010	770	6910	1390	8300
122	I	4890	4010	1750	1340	11990	2420	14410
123	I	8040	6440	2230	1970	18680	3820	22500
124	I	21660	19020	6870	4540	52090	10110	62200
125	I	16420	15010	5790	2670	39890	4210	44100
126	I	2040	1860	720	330	4950	525	5475
127	I	680	620	240	110	1650	175	1825
128	I	3940	3610	1400	640	9590	1010	10600
129	I	0	0	0	0	0	0	0
130	I	0	0	0	0	0	0	0
TOTAL	I	1583899	1099269	383019	281770	3347957	592108	3940065

TABLE 2.4 : POPULATION BY TRAFFIC ZONE, 2005

ZONE	WORKER	STUDENT	H.WIFE	JOBLESS	SUB T.	BELOW 6	TOTAL
1	4810	2850	850	710	9220	1470	10690
2	7140	4800	1220	900	14060	2150	16210
3	4660	2920	870	320	8770	1340	10110
4	54720	34770	10480	9020	108990	17910	126900
5	10770	8190	2540	3250	24750	4160	28910
6	24400	17730	4770	3100	50000	7900	57900
7	39400	24580	9860	6820	80660	16240	96900
8	2070	2335	220	110	4735	1265	6000
9	2210	2495	230	110	5045	1355	6400
10	26480	17250	6610	4410	54750	9360	64110
11	45630	27810	9330	8510	91280	14820	106100
12	38340	23340	7720	6300	75700	11910	87610
13	31370	19460	7180	4410	62420	10280	72700
14	12240	8150	3460	2530	26380	4720	31100
15	49190	35650	12110	10690	107640	18170	125810
16	9500	6980	2380	1630	20490	3410	23900
17	35960	28670	9160	6530	80320	13500	93820
18	32570	24200	9000	5030	70800	11610	82410
19	25740	17110	7600	3590	54040	9260	63300
20	29480	17910	6700	5110	59200	9910	69110
21	17690	10750	4040	3060	35540	5950	41490
22	18687	12506	4556	2944	38693	6539	45232
23	10062	6734	2453	1585	20834	3521	24355
24	9924	7272	2275	1598	21069	3482	24551
25	6202	4545	1422	999	13168	2176	15344
26	7443	5454	1706	1199	15802	2612	18414
27	7443	5454	1706	1199	15802	2612	18414
28	10338	7575	2370	1665	21948	3628	25576
29	28210	21620	7370	3330	60530	9970	70500
30	27097	20846	11676	5138	64757	11816	76573
31	11613	8934	5004	2202	27753	5064	32817
32	17720	10560	3330	2480	34090	5520	39610
33	12850	7850	2530	1590	24820	3990	28810
34	30150	17970	7080	4170	59370	8830	68200
35	13940	9470	3720	2070	29200	4800	34000
36	12340	8280	2700	1800	25120	3980	29100
37	11990	8060	2620	1750	24420	3880	28300
38	12822	8808	3060	1364	26554	4528	31082
39	9616	6606	2295	1398	19915	3396	23311
40	11540	7927	2754	1678	23899	4075	27974
41	6411	4404	1530	932	13277	2264	15541
42	12181	8368	2907	1771	25227	4302	29529
43	11540	7927	2754	1678	23899	4075	27974
44	17850	12257	4259	2590	36956	6300	43256
45	20400	14008	4868	2960	42236	7200	49436
46	12750	8755	3043	1850	26398	4500	30898
47	10040	8600	2180	1660	22480	3620	26100
48	21880	14040	2810	6860	45590	7010	52600
49	30220	21960	5510	5040	62730	8680	71410
50	4060	2910	710	700	8380	1310	9690

TABLE 2.4 (Cont.)

ZONE I	WORKER	STUDENT	H.WIFE	JOBLESS	SUB T.	BELOW 6	TOTAL
51 I	5230	3160	1140	670	10200	2390	12590
52 I	30230	22130	9530	6440	68330	14370	82700
53 I	25600	19750	9160	5280	59790	12210	72000
54 I	98040	69770	26480	19690	213980	44120	258100
55 I	48480	32550	12320	10130	103480	21630	125110
56 I	19100	14610	5960	3930	43600	9110	52710
57 I	57590	42480	10690	9050	119810	23000	142810
58 I	37578	27300	7392	7686	79956	15024	94980
59 I	25052	18200	4928	5124	53304	10016	63320
60 I	7170	6720	2910	3170	19970	4030	24000
61 I	20970	18230	5950	5070	50220	9770	59990
62 I	21380	17650	4300	5510	48840	9170	58010
63 I	79270	65440	15930	20460	181100	33990	215090
64 I	14410	11890	2900	3720	32920	6180	39100
65 I	6760	8530	940	2840	19070	3940	23010
66 I	850	840	430	360	2480	530	3010
67 I	2430	2250	660	520	5860	1140	7000
68 I	9540	8820	2600	2070	23030	4470	27500
69 I	5200	4810	1430	1130	12570	2430	15000
70 I	2880	2170	400	600	6050	1050	7100
71 I	12740	9940	2100	1430	26210	4300	30510
72 I	23510	14830	3050	2480	43870	6830	50700
73 I	21450	16570	2900	3540	44460	7040	51500
74 I	12100	7090	1970	2020	23180	3930	27110
75 I	25340	14870	4120	4220	48550	3240	56790
76 I	22700	12560	2300	3480	41040	6260	47300
77 I	30730	18400	5440	6500	61070	10130	71200
78 I	28170	16970	4530	4310	53980	9120	63100
79 I	10110	6100	1160	1390	18760	2960	21720
80 I	5840	4080	760	1930	12610	2090	14700
81 I	26410	18420	3420	8710	56960	9440	66400
82 I	9110	6350	1130	3000	19640	3260	22900
83 I	5610	2700	1120	1090	10520	1890	12410
84 I	9440	4550	1380	1940	17710	3190	20900
85 I	34020	16400	6770	6630	63820	11480	75300
86 I	3340	1610	670	650	6270	1130	7400
87 I	18400	8860	3650	3570	34480	6210	40690
88 I	23020	14890	6520	6370	50800	9310	60110
89 I	19160	12390	5420	5300	42270	7740	50010
90 I	15020	9710	4250	4150	33130	6070	39200
91 I	7660	4950	2170	2120	16900	3100	20000
92 I	2600	1680	730	720	5730	1050	6730
93 I	16915	8525	2245	2315	30000	4995	34995
94 I	16915	8525	2245	2315	30000	4995	34995
95 I	1210	610	170	160	2150	360	2510
96 I	6078	3198	1443	1130	11854	2123	13977
97 I	8508	4476	2026	1582	16592	2971	19563
98 I	7293	3837	1737	1356	14223	2547	16770
99 I	2431	1279	579	452	4741	849	5590
100 I	39260	18970	5270	3940	67440	11180	78620

TABLE 2.4 (Cont.)

ZONE I	WORKER	STUDENT	H.WIFE	JOBLESS	SUB T.	BELOW 6	TOTAL
101 I	2910	1750	600	380	5640	870	6510
102 I	23010	13200	7550	3520	47280	8830	56110
103 I	5860	3360	1930	900	12050	2250	14300
104 I	0	0	0	0	0	0	0
105 I	4330	1720	590	1290	7930	1370	9300
106 I	9480	7040	1860	1690	20070	4530	24600
107 I	11760	8730	2310	2090	24890	5620	30510
108 I	7400	5490	1450	1330	15670	3530	19200
109 I	17090	14650	4090	3330	39160	7730	46890
110 I	7614	6522	1824	1482	17442	3438	20880
111 I	5076	4348	1216	988	11628	2292	13920
112 I	6323	5343	1870	1365	14901	3028	17929
113 I	8851	7479	2618	1911	20859	4238	25097
114 I	10116	8548	2992	2184	23840	4844	28684
115 I	23420	19960	9530	6820	59730	13080	72810
116 I	18520	15640	5470	4000	43630	8870	52500
117 I	0	0	0	0	0	0	0
118 I	11326	9233	3752	3157	27468	5642	33110
119 I	4854	3957	1608	1353	11772	2418	14190
120 I	1710	1390	570	470	4140	850	4990
121 I	4110	3350	1350	1150	9960	2050	12010
122 I	5460	4460	1820	1530	13270	2730	16000
123 I	9680	7700	2510	2420	22310	4600	26910
124 I	38250	33330	11290	8190	91060	17940	109000
125 I	32530	29530	10720	5400	78180	8610	86790
126 I	2528	2295	840	420	6083	668	6751
127 I	843	765	280	140	2028	223	2251
128 I	4500	4090	1480	750	10820	1190	12010
129 I	0	0	0	0	0	0	0
130 I	41710	27990	9430	6730	85860	14150	100010
TOTAL I	2223800	1550160	516958	419980	4710898	839321	5550219

TABLE 2.5 : EMPLOYMENT AND STUDENT BY TRAFFIC ZONE, 1985

ZONE	DAY TIME WORKER 1_ST	2_ND	3_RD	STUDENT TOTAL	PRIMARY	UNIV.	TOTAL
1	940	6180	32720	39840	6790	0	6790
2	2450	9840	45650	57940	21130	0	21130
3	2250	3060	22330	27640	14540	0	14540
4	750	2690	20650	24090	16670	0	16670
5	1790	8310	31340	41440	12690	0	12690
6	0	2240	8070	10310	10370	0	10370
7	0	3540	12150	15690	11510	0	11510
8	1325	1095	16305	18725	2055	0	2055
9	1225	925	8615	10765	2055	6580	8635
10	1140	7460	25730	34330	28420	0	28420
11	1230	2450	5360	9040	6980	0	6980
12	850	11720	8790	21360	15620	0	15620
13	1230	9400	5870	16500	17310	0	17310
14	0	2070	4260	6330	30	0	30
15	0	870	750	1620	170	0	170
16	0	2130	9480	11610	11270	730	12000
17	280	3070	5450	8900	8960	2840	11800
18	280	3260	3150	6690	9370	0	9370
19	2740	1810	14130	18680	10930	5910	16840
20	190	2750	6010	8950	18690	0	18690
21	90	3010	7680	10780	13860	0	13860
22	0	3646	4140	7786	2977	0	2977
23	0	1963	2229	4192	1603	0	1603
24	46	1080	1481	2607	2066	322	2388
25	28	675	925	1628	1291	201	1492
26	34	810	1111	1955	1550	241	1791
27	34	810	1111	1955	1550	241	1791
28	48	1125	1543	2716	2153	335	2488
29	0	920	250	1170	0	0	0
30	728	3135	5138	9002	2149	0	2149
31	312	1344	2202	3858	921	0	921
32	0	260	1660	1920	3070	0	3070
33	470	6460	9160	16090	7590	0	7590
34	90	530	3020	3640	5080	0	5080
35	0	7930	5420	13350	11380	0	11380
36	0	2390	2300	4690	40	0	40
37	1230	1960	860	4050	0	0	0
38	208	1768	2322	4298	2140	0	2140
39	156	1326	1741	3223	1605	0	1605
40	187	1591	2090	3868	1926	0	1926
41	104	884	1161	2149	1070	0	1070
42	198	1680	2206	4084	2033	0	2033
43	187	1591	2090	3868	1926	0	1926
44	560	1193	360	2113	234	0	234
45	640	1364	412	2416	268	0	268
46	400	853	253	1511	168	0	168
47	2080	2520	8910	13510	2930	0	2930
48	280	3200	4040	7520	3200	0	3200
49	0	4880	23650	28530	22430	0	22430
50	0	0	4940	4940	1020	10890	11910

TABLE 2.5 (Cont.)

ZONE	DAY TIME I	WORKER 1_ST	2_ND	3_RD	STUDENT TOTAL	PRIMARY	UNIV.	TOTAL
51	I	1560	1000	730	3290	850	0	850
52	I	690	3450	3670	7810	7330	0	7330
53	I	40	100	690	830	2080	0	2080
54	I	330	2890	11930	15150	16360	0	16360
55	I	3810	3070	7200	14080	7960	0	7960
56	I	610	600	4950	6160	10430	0	10430
57	I	260	5990	10120	16370	10790	0	10790
58	I	0	1620	2148	3768	6336	0	6336
59	I	0	1080	1432	2512	4224	0	4224
60	I	2700	420	1290	4410	4400	0	4400
61	I	1440	2350	1650	5440	3070	0	3070
62	I	220	1290	620	2130	1190	0	1190
63	I	90	1990	3920	6000	220	0	220
64	I	450	430	4780	5660	21520	0	21520
65	I	490	1210	3690	5390	660	2790	3450
66	I	1840	480	580	2900	300	0	300
67	I	580	80	230	890	1290	0	1290
68	I	670	250	1000	1920	2590	0	2590
69	I	900	580	560	2040	2700	0	2700
70	I	0	450	2010	2460	9620	0	9620
71	I	250	3900	6550	10700	1800	530	2330
72	I	120	8500	13450	22070	6330	0	6330
73	I	620	2580	19650	22850	21250	2140	23390
74	I	0	10890	9820	20710	7580	0	7580
75	I	0	530	1130	1660	5790	0	5790
76	I	120	1330	5140	6590	3400	0	3400
77	I	430	4420	12150	17000	10470	0	10470
78	I	190	16270	8280	24740	8830	0	8830
79	I	180	580	1630	2390	3070	0	3070
80	I	370	90	0	460	660	0	660
81	I	0	4010	8340	12350	2130	3780	5910
82	I	370	80	2430	2880	110	0	110
83	I	60	90	0	150	1740	0	1740
84	I	0	3510	1830	5340	0	0	0
85	I	0	6210	3570	9780	290	0	290
86	I	60	2610	0	2670	430	0	430
87	I	250	1970	1840	4060	0	0	0
88	I	190	1160	460	1810	910	0	910
89	I	680	90	0	770	760	0	760
90	I	310	90	0	400	300	0	300
91	I	990	90	0	1080	0	0	0
92	I	800	0	0	800	10	0	10
93	I	30	1600	4000	5630	2810	0	2810
94	I	30	1600	4000	5630	2810	0	2810
95	I	310	0	120	430	220	0	220
96	I	805	748	428	1981	1473	0	1473
97	I	1127	1046	598	2771	2061	0	2061
98	I	966	897	513	2376	1767	0	1767
99	I	322	299	171	792	589	0	589
100	I	3340	7430	7550	18320	5180	4310	9490

TABLE 2.5 (Cont.)

ZONE	DAY TIME	WORKER 1_ST	WORKER 2_ND	WORKER 3_RD	STUDENT TOTAL	STUDENT PRIMARY	STUDENT UNIV.	TOTAL
101	I	680	360	730	1770	1230	0	1230
102	I	5940	1650	3040	10630	5070	0	5070
103	I	2040	700	590	3330	310	0	310
104	I	2850	750	8620	12220	0	50	50
105	I	250	130	500	880	50	0	50
106	I	530	5990	1890	8410	4760	0	4760
107	I	0	2440	8420	10860	2270	0	2270
108	I	470	730	1890	3090	15510	0	15510
109	I	0	1690	5270	6960	7780	0	7780
110	I	108	726	2274	3108	13134	0	13134
111	I	72	484	1516	2072	8756	0	8756
112	I	268	1053	1148	2469	3780	0	3780
113	I	374	1473	1606	3453	5292	0	5292
114	I	428	1684	1836	3948	6048	0	6048
115	I	0	390	580	970	2930	0	2930
116	I	0	3150	10660	13810	10420	0	10420
117	I	0	430	2110	2540	0	0	0
118	I	287	511	350	1148	1477	0	1477
119	I	123	219	150	492	633	0	633
120	I	2310	240	200	2750	1140	0	1140
121	I	830	360	400	1590	660	0	660
122	I	2660	1070	390	4120	1450	0	1450
123	I	4910	2710	1860	9480	4300	0	4300
124	I	1360	2400	1220	4980	4470	0	4470
125	I	1010	110	770	1890	3720	0	3720
126	I	270	863	578	1711	323	0	323
127	I	90	288	193	571	108	0	108
128	I	0	3830	770	4600	570	0	570
129	I	0	160	3610	3770	0	0	0
130	I	0	0	0	0	0	0	0
TOTAL	I	84240	294310	631241	1009791	636671	41890	678561

TABLE 2.6 : EMPLOYMENT AND STUDENT BY TRAFFIC ZONE, 1995

ZONE	DAY TIME I	WORKER 1_ST	2_ND	3_RD	STUDENT TOTAL	PRIMARY	UNIV.	TOTAL
1	I	0	2250	39350	41600	10400	0	10400
2	I	0	3440	50030	53470	36700	0	36700
3	I	0	890	25660	26550	24210	0	24210
4	I	0	2610	53140	55750	22800	0	22800
5	I	0	3560	44830	48390	22800	0	22800
6	I	0	1780	38070	39850	14500	0	14500
7	I	0	2380	14700	17080	15900	0	15900
8	I	0	600	16685	17285	9195	0	9195
9	I	0	530	13165	13695	9195	0	9195
10	I	0	12920	24380	37300	39000	0	39000
11	I	2650	4740	9220	16610	10000	0	10000
12	I	0	15780	7030	22810	21800	0	21800
13	I	2660	10430	7850	20940	25200	0	25200
14	I	1330	2250	13330	16910	100	0	100
15	I	2650	9010	5660	17320	900	0	900
16	I	0	2250	6210	8460	15570	1730	17300
17	I	1330	9250	6940	17520	14190	3910	18100
18	I	2650	14350	18990	35990	19600	0	19600
19	I	0	2130	16430	18560	12360	9640	22000
20	I	0	3250	10620	13870	29100	0	29100
21	I	0	6120	10380	16500	19200	0	19200
22	I	0	3854	5401	9255	4485	0	4485
23	I	0	2075	2908	4983	2415	0	2415
24	I	0	1793	4558	6351	3091	581	3672
25	I	0	1120	2848	3968	1932	363	2295
26	I	0	1345	3418	4763	2318	436	2754
27	I	0	1345	3418	4763	2319	436	2754
28	I	0	1868	4748	6616	3220	605	3825
29	I	1330	1420	6660	9410	0	0	0
30	I	931	4480	7861	13272	4550	0	4550
31	I	399	1920	3369	5688	1950	0	1950
32	I	0	950	1830	2780	5500	0	5500
33	I	0	19690	5200	24890	8700	0	8700
34	I	0	590	3470	4060	7300	0	7300
35	I	0	4740	9040	13780	17600	0	17600
36	I	0	6860	4020	10880	0	0	0
37	I	0	1680	1550	3230	0	0	0
38	I	610	1254	1580	3444	2228	0	2228
39	I	457	940	1185	2582	1671	0	1671
40	I	549	1129	1422	3100	2005	0	2005
41	I	305	627	790	1722	1114	0	1114
42	I	579	1191	1501	3271	2117	0	2117
43	I	549	1129	1422	3100	2005	0	2005
44	I	1715	2369	2478	6562	2576	0	2576
45	I	1960	2708	2832	7500	2944	0	2944
46	I	1225	1693	1770	4688	1840	0	1840
47	I	0	2140	33690	35830	5000	0	5000
48	I	2650	830	12330	15810	6100	0	6100
49	I	0	4720	27490	32210	31140	0	31140
50	I	0	380	5730	6110	300	23160	23460

TABLE 2.6 (Cont.)

ZONE	DAY TIME I	WORKER 1_ST	WORKER 2_ND	WORKER 3_RD	STUDENT TOTAL	STUDENT PRIMARY	STUDENT UNIV.	STUDENT TOTAL
51	I	1360	1240	1170	3770	1400	0	1400
52	I	2520	9080	11950	23550	14300	0	14300
53	I	2530	1830	1960	6320	3600	0	3600
54	I	780	5600	37010	43390	30000	0	30000
55	I	1360	4070	12730	18160	17600	0	17600
56	I	970	710	6260	7940	21100	0	21100
57	I	580	8370	13320	22270	29500	0	29500
58	I	210	2100	8670	10980	8700	0	8700
59	I	140	1400	5780	7320	5800	0	5800
60	I	5380	430	2090	7900	5700	0	5700
61	I	1390	2360	7840	11590	5300	0	5300
62	I	310	4310	5330	9950	3950	0	3950
63	I	310	9870	19190	29370	12750	0	12750
64	I	590	1460	8040	10090	29900	0	29900
65	I	520	1210	5400	7130	1620	7980	9600
66	I	2080	500	350	2930	500	0	500
67	I	1090	1140	540	2770	1750	0	1750
68	I	1320	1370	4180	6870	4040	0	4040
69	I	1750	3560	1200	6510	3810	0	3810
70	I	0	400	2440	2840	16300	0	16300
71	I	0	7340	11020	18360	2340	860	3200
72	I	0	11650	16280	27930	11600	0	11600
73	I	0	1840	37560	39400	40270	4530	44800
74	I	0	13680	12700	26380	2180	0	2180
75	I	0	4840	6410	11250	2120	0	2120
76	I	0	1440	5770	7210	4600	0	4600
77	I	0	5030	16280	21310	16000	0	16000
78	I	0	13090	11290	24380	11600	0	11600
79	I	0	710	2440	3150	4400	0	4400
80	I	360	180	830	1370	2380	0	2380
81	I	0	2590	38680	41270	7700	15480	23180
82	I	360	180	4330	4870	1540	0	1540
83	I	180	140	730	1050	2340	0	2340
84	I	0	9900	4730	14630	1280	0	1280
85	I	0	14650	10560	25210	7130	0	7130
86	I	360	6920	970	8250	640	0	640
87	I	900	14520	6080	21500	3610	0	3610
88	I	250	580	1080	1910	2480	0	2480
89	I	1040	190	1220	2450	1960	0	1960
90	I	500	140	1040	1680	1570	0	1570
91	I	1550	1310	2560	5420	650	0	650
92	I	1330	10	0	1340	140	0	140
93	I	200	4270	7710	12180	5310	0	5310
94	I	200	4270	7710	12180	5310	0	5310
95	I	1400	0	220	1620	480	0	480
96	I	1258	938	673	2869	2275	0	2275
97	I	1760	1312	941	4013	3185	0	3185
98	I	1509	1125	807	3441	2730	0	2730
99	I	503	375	269	1147	910	0	910
100	I	1440	8460	9100	19000	7180	7420	14600

TABLE 2.6 (Cont.)

ZONE	I	DAY TIME WORKER 1_ST	2_ND	3_RD	STUDENT TOTAL	PRIMARY	UNIV.	TOTAL
101	I	5030	400	640	6070	8300	0	8300
102	I	6220	2900	5090	14210	8180	0	8180
103	I	2410	1330	810	4550	920	0	920
104	I	0	800	14620	15420	0	0	0
105	I	1440	400	510	2350	0	0	0
106	I	0	4120	2720	6840	6260	0	6260
107	I	0	1740	9600	11340	3750	0	3750
108	I	0	550	2590	3140	19390	0	19390
109	I	0	1230	4780	6010	11460	0	11460
110	I	0	528	3300	3828	18144	0	18144
111	I	0	352	2200	2552	12096	0	12096
112	I	50	1398	1178	2626	5208	0	5208
113	I	70	1956	1648	3674	7290	0	7290
114	I	80	2236	1884	4200	3332	0	8332
115	I	0	350	2980	3330	6000	0	6000
116	I	0	2240	13400	15640	14470	0	14470
117	I	0	350	1860	2210	0	0	0
118	I	287	371	1148	1806	2590	0	2590
119	I	123	159	492	774	1110	0	1110
120	I	2280	180	450	2910	1780	0	1780
121	I	840	1150	670	2660	1330	0	1330
122	I	2710	970	820	4500	2290	0	2290
123	I	4880	2260	1710	8850	5900	0	5900
124	I	3910	4370	4470	12750	12500	0	12500
125	I	1620	180	2930	4730	8140	0	8140
126	I	413	2918	518	3849	435	0	435
127	I	138	973	173	1284	145	0	145
128	I	0	7780	1000	8780	680	0	680
129	I	0	140	3280	3420	0	0	0
130	I	0	0	0	0	0	0	0
TOTAL	I	99320	424381	1060100	1583801	1039369	77131	1116500

TABLE 2.7 : EMPLOYMENT AND STUDENT BY TRAFFIC ZONE, 2005

		DAY TIME WORKER				STUDENT		
ZONE	I	1_ST	2_ND	3_RD	TOTAL	PRIMARY	UNIV.	TOTAL
1	I	0	570	40690	41260	13700	0	13700
2	I	0	910	51640	52550	50900	0	50900
3	I	0	380	26150	26530	32980	0	32980
4	I	0	2610	64640	67250	28100	0	28100
5	I	0	1590	49860	51450	34000	0	34000
6	I	0	1700	46030	47730	18000	0	18000
7	I	0	1710	15670	17380	19400	0	19400
8	I	0	435	15730	16165	14050	0	14050
9	I	0	435	15800	16235	11670	0	11670
10	I	0	13740	25110	38850	48000	0	48000
11	I	0	6240	10770	17010	12100	0	12100
12	I	0	17030	7300	24330	26400	0	26400
13	I	0	10780	8720	19500	29500	0	29500
14	I	0	2500	16560	19060	300	0	300
15	I	0	12940	25550	38490	1600	0	1600
16	I	0	2380	6410	8790	18770	2430	21200
17	I	0	12260	7390	19650	18100	5600	23700
18	I	0	22140	40870	63010	27900	0	27900
19	I	0	2380	17010	19390	13430	11970	25400
20	I	0	3530	12940	16470	37250	0	37250
21	I	0	7940	10210	18150	22650	0	22650
22	I	0	3913	5960	9873	5555	0	5655
23	I	0	2107	3209	5316	3045	0	3045
24	I	0	2071	10022	12093	3859	773	4632
25	I	0	1294	6264	7558	2412	483	2895
26	I	0	1553	7517	9070	2894	580	3474
27	I	0	1553	7517	9070	2894	580	3474
28	I	0	2158	10440	12598	4020	805	4825
29	I	0	1820	9170	10990	0	0	0
30	I	0	5005	8848	13853	6510	0	6510
31	I	0	2145	3792	5937	2790	0	2790
32	I	0	1250	1870	3120	7500	0	7500
33	I	0	22700	5520	28220	9900	0	9900
34	I	0	570	3650	4220	9000	0	9000
35	I	0	4770	10680	15450	23000	0	23000
36	I	0	9100	4590	13690	0	0	0
37	I	0	1570	1820	3390	0	0	0
38	I	0	2280	3574	5854	3094	0	3094
39	I	0	1710	2680	4390	2320	0	2320
40	I	0	2052	3217	5269	2785	0	2785
41	I	0	1140	1787	2927	1547	0	1547
42	I	0	2166	3395	5561	2939	0	2939
43	I	0	2052	3217	5269	2785	0	2785
44	I	0	4791	9047	13838	4770	0	4770
45	I	0	5476	10340	15816	5452	0	5452
46	I	0	3423	6463	9886	3408	0	3408
47	I	0	2940	52800	54840	6700	0	6700
48	I	0	790	16470	17260	8900	0	8900
49	I	0	5190	28630	33820	38070	0	38070
50	I	0	480	6190	6670	540	32290	32830

TABLE 2.7 (Cont.)

ZONE	DAY TIME WORKER 1_ST	2_ND	3_RD	STUDENT TOTAL	PRIMARY	UNIV.	TOTAL
51 I	1850	1480	1890	5220	2200	0	2200
52 I	3090	22340	36380	61810	34600	0	34600
53 I	4020	3500	3390	10910	6400	0	6400
54 I	930	8770	69750	79450	47500	0	47500
55 I	1550	5090	20170	26810	30600	0	30600
56 I	1540	950	7920	10410	34600	0	34600
57 I	930	11260	18100	30290	49200	0	49200
58 I	192	2442	16920	19554	11340	0	11340
59 I	128	1628	11280	13036	7560	0	7560
60 I	9270	460	2520	12250	8200	0	8200
61 I	2240	2500	13660	18400	11200	0	11200
62 I	130	7670	10940	18740	9580	0	9580
63 I	610	19300	37640	57550	40480	0	40480
64 I	220	2530	11240	13990	40240	0	40240
65 I	960	1380	5490	7830	2910	12490	15400
66 I	3840	660	300	4800	600	0	600
67 I	1690	2140	700	4530	2390	0	2390
68 I	2110	2490	6710	11310	6700	0	6700
69 I	2910	6600	1500	11010	5510	0	5510
70 I	0	460	2590	3050	22200	0	22200
71 I	0	9630	13090	22720	2520	980	3500
72 I	0	13640	17360	31000	16900	0	16900
73 I	0	930	49370	50300	58280	7020	65300
74 I	0	12900	14000	26900	10500	0	10500
75 I	0	9820	10480	20300	12200	0	12200
76 I	0	1620	5960	7580	5600	0	5600
77 I	0	5390	19430	24820	22000	0	22000
78 I	0	11560	13340	24900	14000	0	14000
79 I	0	850	3110	3960	11900	0	11900
80 I	460	350	1180	1990	2240	0	2240
81 I	0	1270	45700	46970	7920	13240	21160
82 I	460	460	3780	4700	1900	0	1900
83 I	0	240	1180	1420	2220	0	2220
84 I	0	13550	5330	18880	1790	0	1790
85 I	0	18310	12460	30770	9940	0	9940
86 I	500	9150	1530	11180	640	0	640
87 I	1320	24850	7490	33660	5210	0	5210
88 I	0	1190	8410	9600	8350	0	8350
89 I	500	950	9860	11310	6460	0	6460
90 I	500	710	8410	9620	5300	0	5300
91 I	770	6860	20890	28520	2250	0	2250
92 I	1870	0	0	1870	440	0	440
93 I	0	5950	10165	16115	7505	0	7505
94 I	0	5950	10165	16115	7505	0	7505
95 I	910	120	270	1300	590	0	590
96 I	1483	1118	1005	3606	3125	0	3125
97 I	2075	1564	1407	5046	4375	0	4375
98 I	1779	1341	1206	4326	3750	0	3750
99 I	593	447	402	1442	1250	0	1250
100 I	1370	8860	14250	24480	9070	10030	19100

TABLE 2.7 (Cont.)

ZONE	I	DAY TIME WORKER 1_ST	2_ND	3_RD	STUDENT TOTAL	PRIMARY	UNIV.	TOTAL
101	I	5930	460	650	7040	12600	0	12600
102	I	7110	3540	7020	17670	9830	0	9830
103	I	2010	1770	1010	4790	1170	0	1170
104	I	0	850	16840	17690	0	0	0
105	I	1370	540	650	2560	100	0	100
106	I	0	4180	4970	9150	8500	0	8500
107	I	0	1980	15670	17650	5820	0	5820
108	I	0	660	4540	5200	24380	0	24380
109	I	0	1430	9070	10500	16410	0	16410
110	I	0	588	7440	8028	24774	0	24774
111	I	0	392	4960	5352	16516	0	16516
112	I	0	2368	1753	4121	6763	0	6763
113	I	0	3314	2453	5767	9467	0	9467
114	I	0	3788	2804	6592	10820	0	10820
115	I	0	470	8260	8730	8600	0	8600
116	I	0	2310	22380	24690	18950	0	18950
117	I	0	400	2480	2880	0	0	0
118	I	175	448	2338	2961	4263	0	4263
119	I	75	192	1002	1269	1827	0	1827
120	I	2530	210	860	3600	1990	0	1990
121	I	1270	2460	1200	4930	1850	0	1850
122	I	3290	1500	1630	6420	2670	0	2670
123	I	5820	3010	2230	11060	7600	0	7600
124	I	3800	9770	17590	31160	23600	0	23600
125	I	2030	330	5790	8150	15770	0	15770
126	I	383	6555	638	7576	615	0	615
127	I	128	2185	213	2526	205	0	205
128	I	0	16160	1620	17780	910	0	910
129	I	0	200	4130	4330	0	0	0
130	I	26000	7830	28310	62140	21300	2000	23300
TOTAL	I	114721	574489	1534550	2223760	1522629	101271	1623900

TABLE 2.8 : TRIP GENERATION AND ATTRACTION BY VEHICLE TYPE, 1985

ZONE	TRIP GENERATION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU	TRIP ATTRACTION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU
1	15880	38165	7548	1690	63283	69396	15533	37727	7391	1624	62275	68219
2	17773	50358	5805	1904	75840	80058	17927	48950	5695	1823	74395	78343
3	10684	26590	6641	1442	45357	51490	10605	26728	6435	1433	45201	51135
4	17750	33208	4257	2266	57481	60700	17777	33049	4281	2365	57472	60857
5	11370	29588	11199	1264	53421	63674	11527	28264	10503	1276	51570	61105
6	0460	13456	2768	818	23502	25882	6724	13928	2596	824	24072	26223
7	12344	17082	3851	999	34276	36540	11818	17130	3904	1009	33861	36325
8	5789	14952	1375	535	22651	23382	5796	14533	1321	520	22170	22822
9	3827	9809	1215	320	15171	15909	3828	9601	1164	313	14906	15583
10	19076	33965	16779	1993	71813	86813	19272	33526	16732	1937	71467	86287
11	6927	13870	1675	1125	23597	25228	6811	14761	1863	1136	24571	26435
12	13841	27189	3010	1040	45080	46190	13659	27043	2949	1060	44711	45835
13	12247	16250	6836	818	36151	41152	12198	16194	7064	810	36266	41496
14	2767	5081	3064	181	11093	13737	2742	5414	3127	172	11455	14155
15	663	3808	119	173	4763	4976	746	3791	96	176	4809	4983
16	5289	15863	2367	770	24289	26489	5213	15146	2249	746	23354	25419
17	10244	14248	1943	1066	27501	28482	10054	14265	1955	1090	27364	28441
18	6137	6110	2599	651	15497	17539	6196	6351	2522	650	15719	17667
19	16936	16354	3185	885	37360	37639	16417	15920	2963	880	36180	36359
20	7088	13663	5804	1200	27755	33587	7125	13741	5614	1179	27659	33261
21	7288	14053	5956	928	28225	33751	7324	14132	5780	910	28146	33460
22	5540	8180	3176	482	17378	19892	5339	8147	3282	486	17254	19930
23	2983	4404	1706	283	9376	10761	2873	4393	1773	283	9322	10802
24	2440	4644	917	283	8284	9016	2475	4640	918	298	8331	9077
25	1524	2896	570	192	5182	5659	1545	2899	573	202	5219	5709
26	1834	3484	689	223	6230	6796	1857	3480	695	235	6267	6851
27	1834	3484	689	223	6230	6796	1857	3480	695	235	6267	6851
28	2548	4846	956	292	8642	9399	2582	4849	964	307	8702	9482
29	273	3919	505	128	4825	5454	295	4208	522	132	5157	5803
30	8093	6364	336	350	15143	13981	8057	6143	367	349	14916	13793
31	3463	2724	143	171	6501	6035	3453	2633	157	169	6412	5960
32	2069	5941	230	342	8582	8808	2054	6158	248	341	8801	9048
33	8425	13562	7252	635	29874	35973	8939	13363	7014	632	29948	35675
34	6277	6490	660	686	14113	14233	6463	6573	548	684	14268	14226
35	7270	10917	7302	945	26434	33337	7288	11310	7250	943	26791	33634
36	4971	5196	295	373	10835	10447	4994	5014	287	383	10678	10292
37	1406	1471	85	118	3080	2991	1420	1424	77	120	3041	2943
38	3302	6302	1418	285	11307	12328	3244	6304	1455	291	11294	12375
39	2471	4721	1062	223	8477	9256	2425	4725	1079	227	8456	9270
40	2970	5664	1273	260	10167	11088	2923	5668	1304	265	10160	11131
41	1649	3143	701	167	5660	6200	1617	3147	724	165	5653	6221
42	3135	5986	1351	271	10743	11717	3084	5985	1378	279	10726	11752
43	2970	5664	1273	260	10167	11088	2923	5668	1304	265	10160	11131
44	464	878	196	54	1592	1753	454	876	202	55	1587	1759
45	526	1002	229	57	1814	1998	519	1006	232	57	1814	2002
46	334	644	149	51	1178	1321	333	638	154	50	1175	1321
47	5601	18114	2108	387	26210	27499	5846	19203	1881	395	27325	28338
48	2562	11207	2799	299	16867	19475	2534	10668	2618	311	16131	18583
49	14385	45380	5654	1929	67348	72300	14316	44221	5578	1992	66007	70844
50	3307	11259	1008	280	15854	16455	3305	11024	954	281	15564	16114

TABLE 2.8 (Cont.)

ZONE	I	TRIP GENERATION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU	TRIP ATTRACTION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU
51	I	2436	604	500	83	3623	3639	2467	660	587	80	3794	3884
52	I	6373	4523	3154	543	14593	16969	6363	4838	3006	554	14761	17007
53	I	2038	1313	300	231	3882	4020	2010	1341	269	229	3848	3957
54	I	14269	26000	14559	1594	56422	69805	14064	25889	14291	1639	55883	69117
55	I	11676	11397	3776	502	27351	28961	11743	11544	3661	510	27458	28948
56	I	4923	6375	975	697	12970	13760	4976	6621	919	699	13215	13939
57	I	7553	14124	5910	1275	28862	34797	7721	14312	5950	1281	29264	35206
58	I	8330	6352	2945	1044	18671	21100	8544	6436	2914	1045	18939	21285
59	I	5551	4232	1963	701	12447	14074	5693	4289	1949	700	12631	14207
60	I	6194	2516	505	253	9468	8805	6216	2654	518	256	9644	8992
61	I	3825	4719	3011	241	11796	14213	3758	4640	3171	240	11809	14401
62	I	3248	8509	2983	0	14740	16911	3246	8615	3057	0	14918	17164
63	I	4863	12742	4431	1026	23112	27916	4856	12890	4583	1022	23351	28253
64	I	4555	11933	4191	0	20679	23731	4549	12080	4294	0	20923	24080
65	I	3200	7827	2298	134	13459	15158	3026	7839	2021	131	13017	14479
66	I	1614	611	11	16	2252	1884	1689	632	5	14	2340	1944
67	I	1946	1534	209	0	3689	3412	1904	1644	206	0	3754	3484
68	I	5709	4506	613	187	11015	10482	5584	4809	602	209	11204	10724
69	I	3892	3065	417	0	7374	6818	3806	3283	410	0	7499	6958
70	I	1888	9269	1503	329	12989	14514	1861	9348	1593	317	13119	14723
71	I	5403	15327	3980	416	25126	28379	5437	15679	4322	415	25853	29439
72	I	11524	35073	10275	831	57703	66344	11736	36241	10894	817	59688	68874
73	I	11289	36394	4981	1231	53895	57901	11185	35942	5132	1190	53449	57570
74	I	8547	14902	4769	0	28218	30850	8547	15345	4971	0	28863	31697
75	I	8640	15046	4820	1525	30031	34979	8626	15476	5036	1521	30659	35821
76	I	4533	12211	4380	291	21415	25099	4350	12589	4221	289	21449	25017
77	I	10008	39616	10227	702	60553	69331	10101	39429	10259	701	60490	69276
78	I	11055	25527	7469	1207	45258	51774	10733	25743	7739	1210	45425	52296
79	I	1690	8256	1385	258	11589	12939	1705	8587	1376	271	11939	13296
80	I	472	1559	708	0	2739	3329	468	1523	682	0	2673	3238
81	I	5830	19240	8744	422	34236	42156	5764	18845	8517	402	33528	41207
82	I	544	1799	820	0	3163	3847	538	1765	798	0	3101	3765
83	I	1702	1891	1068	0	4661	5304	1756	1810	1104	0	4670	5335
84	I	2885	3213	1818	0	7916	9013	2974	3068	1870	0	7912	9039
85	I	1610	1791	1014	0	4415	5027	1664	1720	1045	0	4429	5058
86	I	1642	1828	1034	0	4504	5128	1693	1750	1063	0	4506	5146
87	I	1094	1214	689	502	3499	4663	1123	1164	707	514	3508	4705
88	I	1104	233	22	0	1359	1105	1098	204	21	0	1323	1070
89	I	2136	455	46	191	2928	2627	2134	398	45	186	2763	2554
90	I	434	91	5	0	530	427	430	83	6	0	519	418
91	I	1186	251	23	0	1460	1187	1180	224	22	0	1426	1153
92	I	1620	344	33	0	1997	1625	1610	306	29	0	1945	1572
93	I	4565	10305	3577	426	18873	21948	4714	9785	3588	431	18518	21575
94	I	4565	10305	3577	426	18873	21948	4714	9785	3588	431	18518	21575
95	I	229	522	172	0	923	1038	231	490	178	0	899	1019
96	I	2053	990	982	203	4228	5002	2078	965	1027	208	4278	5098
97	I	2860	1375	1375	262	5872	6925	2898	1346	1428	274	5946	7061
98	I	2453	1173	1173	234	5033	5944	2483	1149	1223	239	5094	6055
99	I	814	392	385	107	1698	2041	828	380	402	109	1719	2078
100	I	20196	5963	1570	346	28075	25115	20024	5919	1716	351	23010	25247

TABLE 2.8 (Cont.)

ZONE I	TRIP GENERATION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU	TRIP ATTRACTION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU
101 I	1347	639	35	123	2144	2027	1310	766	45	126	2248	2156
102 I	6568	2398	2150	266	11382	12289	6674	2597	2383	266	11920	13034
103 I	2260	831	740	0	3831	4006	2296	898	824	0	4018	4268
104 I	2723	5087	3286	133	11229	14034	2678	4912	3408	121	11119	14040
105 I	1062	892	5	73	2032	1882	1099	902	17	71	2089	1938
106 I	4347	10997	2931	0	18275	20119	4407	11122	2983	0	18512	20393
107 I	6007	15222	4047	0	25276	27821	6089	15397	4128	0	25614	28220
108 I	4371	11090	2955	1358	19774	23673	4437	11222	3008	1367	20034	23984
109 I	6470	13465	3497	0	23432	25312	6564	13409	3375	0	23348	25082
110 I	4391	9141	2375	677	16584	18877	4453	9106	2288	687	16534	18740
111 I	2933	6093	1575	465	11066	12606	2974	6067	1522	472	11035	12522
112 I	4052	3408	942	307	8709	9099	4044	3456	948	301	8749	9138
113 I	5665	4753	1302	412	12132	12636	5654	4829	1321	408	12212	12732
114 I	6475	5435	1487	465	13862	14428	6463	5518	1505	463	13949	14533
115 I	5984	2313	1605	232	10134	10591	5703	2237	1536	230	9706	10161
116 I	13539	11351	3108	0	27998	27721	13507	11530	3153	0	28190	27966
117 I	1761	884	2120	16	4781	6485	1873	795	2394	16	5078	7028
118 I	2233	924	391	296	3844	4121	2211	907	408	296	3822	4121
119 I	955	405	167	142	1669	1810	947	390	171	138	1646	1787
120 I	946	392	159	0	1497	1420	934	386	171	0	1491	1429
121 I	1179	488	203	0	1870	1778	1165	479	214	0	1858	1781
122 I	2673	1110	467	0	4250	4049	2647	1094	489	0	4230	4057
123 I	6365	2444	1126	240	10175	10070	6325	2415	1032	238	10010	9818
124 I	4886	2791	1719	131	9527	10222	4800	2747	1919	133	9599	10518
125 I	2890	1872	951	203	5916	6450	2863	1810	913	203	5789	6291
126 I	1073	700	357	0	2130	2219	1061	675	334	0	2070	2139
127 I	358	235	119	0	712	742	356	227	112	0	695	718
128 I	2170	1407	710	0	4287	4455	2149	1358	670	0	4177	4310
129 I	3189	1982	4612	49	9832	13721	3403	1923	4326	56	9708	13267
130 I	0	0	0	0	0	0	0	0	0	0	0	0
131 I	65	115	96	0	276	356	65	87	122	0	274	380
132 I	1433	1681	989	0	4103	4734	1375	1814	1063	0	4252	4971
133 I	222	349	193	0	764	902	206	389	198	0	793	940
134 I	1258	1860	932	0	3950	4468	1375	1243	809	0	3427	3892
135 I	2158	3235	1283	0	6676	7420	2181	3425	1256	0	6862	7573
136 I	282	2552	1455	0	4289	5674	280	3407	1791	0	5478	7199
137 I	189	2968	1402	0	4559	5914	155	3282	1365	0	4802	6128
138 I	1139	5577	3811	0	10527	14053	1463	5735	3701	0	10899	14234
TOTAL I	667390	1168671	333355	56341	2225757	2476823	667390	1168671	333355	56341	2225757	2476821

TABLE 2.9 : TRIP GENERATION AND ATTRACTION BY VEHICLE TYPE, 1995

ZONE		TRIP GENERATION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU	TRIP ATTRACTION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU
1	I	16922	41292	7874	2160	68248	75132	18911	46675	7635	2067	75288	81296
2	I	23084	59099	10902	3157	96242	106109	25730	66897	10509	2932	106068	114543
3	I	11110	29594	4967	1517	47188	51654	12477	33779	4760	1580	52596	56607
4	I	34977	79629	11155	4253	130014	138805	35477	83014	10750	4285	133526	141835
5	I	23088	55026	9625	2970	90709	99017	25419	61456	9289	2663	98827	105756
6	I	22419	52856	7369	2830	85474	91483	23600	55213	6892	2675	88380	93385
7	I	15868	31362	2166	1689	51085	51818	15225	31015	1983	2050	50273	51525
8	I	7339	18674	2408	1016	29437	31534	8181	21013	2306	961	32461	34164
9	I	5907	14830	1997	812	23546	25284	6573	16743	1914	817	26047	27544
10	I	22861	46937	14321	2531	86650	99053	23193	49064	14014	2811	89082	101515
11	I	15614	33074	5928	1837	56453	61234	14604	30265	5956	1977	52802	58073
12	I	18719	36712	11060	2026	68517	77936	18042	34183	11239	2245	65709	75806
13	I	16563	33923	8044	1919	60449	67231	16025	32415	8444	1939	58823	66170
14	I	8240	19156	5027	1052	33475	38020	8399	20121	5145	958	34623	39105
15	I	12716	30222	6268	1750	50956	56670	12123	27099	6442	1656	47320	53215
16	I	6882	13716	3290	792	24680	27438	6874	14247	3314	944	25379	28391
17	I	14966	30918	7658	1723	55265	61767	14187	28272	7661	1992	52112	59214
18	I	20055	44053	11817	2485	78410	88941	20373	45680	12031	2289	80373	90745
19	I	16512	35662	5710	2019	59903	64514	16328	36315	5563	1945	60151	64550
20	I	15855	31214	4809	1783	53661	57181	15350	31454	4834	1778	53416	57060
21	I	13208	26415	5704	1477	46804	51422	13096	26898	5726	1501	47221	51925
22	I	8344	16186	3840	892	29262	32354	7939	15624	3843	947	28353	31632
23	I	4489	8716	2068	506	15779	17484	4271	8410	2067	536	15284	17087
24	I	5178	11411	2080	693	19362	21188	5057	11144	2096	678	18975	20824
25	I	3233	7131	1301	462	12127	13313	3161	6963	1307	450	11881	13073
26	I	3883	8559	1562	542	14546	15950	3795	8362	1567	526	14250	15657
27	I	3883	8559	1562	542	14546	15950	3795	8362	1567	526	14250	15657
28	I	5407	11907	2177	721	20212	22119	5280	11623	2191	700	19794	21715
29	I	8083	20407	2999	1184	32673	35427	7807	18247	3006	1098	30158	32859
30	I	9920	20741	4714	1146	36521	40474	9452	19972	4810	1260	35494	39831
31	I	4245	8879	2017	524	15665	17407	4048	8560	2061	574	15243	17153
32	I	5312	9231	1657	540	16740	17879	4940	8278	1657	667	15442	16890
33	I	11636	20450	11046	1179	44311	54217	11777	20940	11468	1200	45385	55709
34	I	9425	16165	1845	907	28342	29192	8509	14753	1856	1192	26310	27827
35	I	9977	19659	5180	1118	35934	40297	10048	20293	5179	1249	36769	41310
36	I	7154	13459	4728	788	26129	30251	6962	12899	4833	741	25435	29640
37	I	3588	7007	1403	441	12439	13607	3285	6241	1430	439	11395	12663
38	I	4680	9251	1032	590	15553	16300	4321	8378	1035	580	14314	15139
39	I	3505	6935	769	456	11665	12242	3233	6286	772	451	10742	11383
40	I	4214	8323	929	538	14004	14687	3888	7542	929	530	12889	13641
41	I	2334	4619	511	324	7788	8202	2157	4185	513	319	7174	7627
42	I	4447	8790	983	566	14786	15506	4108	7960	985	554	13607	14396
43	I	4214	8323	929	538	14004	14687	3888	7542	929	530	12889	13641
44	I	5487	11187	1954	689	19317	20933	5180	10408	1961	654	18203	19850
45	I	6271	12787	2231	776	22065	23892	5921	11905	2242	731	20799	22658
46	I	3927	8007	1407	515	13856	15054	3707	7455	1415	488	13065	14285
47	I	17188	44973	9775	2452	74388	83544	18764	48187	9609	1937	78497	86321
48	I	8571	25226	4058	1428	39283	43340	8842	23848	3967	1304	37961	41674
49	I	22591	55436	10038	3090	91155	100180	23125	55996	9866	2948	91935	100442
50	I	4670	11369	1823	706	18568	20283	5075	12484	1805	762	20126	21805

TABLE 2.9 (Cont.)

ZONE		TRIP GENERATION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU	TRIP ATTRACTION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU
51	I	1996	3984	1623	286	7889	9442	1873	3720	1622	294	7509	9104
52	I	10408	25932	8319	1426	46085	53941	11001	27147	8622	1308	48078	55912
53	I	2770	5829	2161	375	11135	13167	2682	5671	2121	371	10845	12853
54	I	36549	86945	12977	4667	141138	151979	35325	83311	12228	4970	135834	146686
55	I	16757	36625	5654	2111	61147	65779	16168	36043	5617	2009	59837	64426
56	I	8602	18965	2591	1117	31275	33392	8249	18741	2566	1200	30756	33060
57	I	19403	41431	8520	2303	71657	78781	18927	39290	8579	2542	69338	76998
58	I	14515	28854	3437	1640	48446	50714	13606	27061	3404	1710	45781	48349
59	I	9665	19228	2293	1112	32298	33843	9074	18038	2264	1157	30533	32265
60	I	3168	8385	1551	510	13614	15138	2945	7935	1493	536	12909	14470
61	I	7479	16833	3668	964	28944	32188	7374	16613	3639	1010	28636	31947
62	I	7988	19787	3176	1190	32141	35105	7783	18616	3224	999	30622	33399
63	I	21958	56563	9367	3228	91116	99836	21634	53959	9522	2864	87979	96389
64	I	6929	18701	3219	1126	29975	33151	7272	19745	3263	1176	31456	34665
65	I	4445	11542	2588	711	19286	21830	4659	12128	2561	652	20000	22374
66	I	526	1363	1083	117	3089	4217	535	1399	1045	113	3092	4173
67	I	1334	2881	890	188	5293	6132	1272	2610	893	180	4955	5800
68	I	4844	11062	2239	664	18809	20833	4743	10524	2239	632	18138	20139
69	I	2759	6962	2120	444	12285	14381	2703	6522	2120	407	11752	13807
70	I	2614	6218	1521	400	10753	12221	2810	6573	1474	478	11335	12824
71	I	9130	19381	7482	1087	37080	43911	9396	19530	7533	1122	37581	44448
72	I	14389	31315	10006	1716	57426	66409	14870	31873	10140	1893	58776	68039
73	I	21064	51849	11182	2847	86942	97129	22752	55785	10843	2907	92287	101803
74	I	12064	25742	9670	1454	48930	57765	12565	26341	9907	1267	50100	58797
75	I	10346	21939	4120	1250	37655	41064	9986	20348	4224	1197	35755	39279
76	I	6318	16542	2836	988	26684	29423	6142	14843	2795	982	24762	27495
77	I	14518	35149	7742	1936	59345	66362	14625	33774	7664	2073	58136	65254
78	I	14964	31610	10252	1776	58602	67777	14898	30513	10489	1861	57761	67318
79	I	3975	8929	1668	575	15147	16684	3748	7891	1627	550	13816	15331
80	I	1465	4219	368	314	6366	6839	1375	3720	362	267	5724	6143
81	I	19982	61280	11223	3378	95763	107083	21626	64571	10879	2754	99830	109434
82	I	3275	9904	1323	624	15126	16566	3341	9546	1284	478	14649	15815
83	I	1574	3026	406	195	5201	5507	1405	2796	417	212	4830	5214
84	I	5815	12471	5641	720	24647	29914	6049	12924	5836	645	25454	30746
85	I	12862	27115	9729	1534	51240	60055	13082	27945	10054	1485	52566	61578
86	I	3024	5079	3183	313	11599	14496	3084	5172	3291	293	11840	14800
87	I	9860	19547	8294	1165	38866	46443	10160	20237	8579	973	39949	47448
88	I	5331	9430	471	605	15837	15883	4706	8508	469	648	14331	14596
89	I	4544	8076	604	516	13740	13982	4032	7312	599	581	12524	12987
90	I	3471	6404	415	439	10729	10935	3078	5794	412	451	9735	10055
91	I	2959	6535	1336	434	11263	12511	2872	6437	1330	395	11034	12239
92	I	864	1553	0	135	2552	2539	681	1314	0	140	2135	2175
93	I	8042	19650	4493	1091	33276	37396	8225	18976	4459	1017	32677	36606
94	I	8042	19650	4493	1091	33276	37396	8225	18976	4459	1017	32677	36606
95	I	512	1120	531	86	2249	2781	449	1078	530	79	2136	2673
96	I	2103	3836	825	291	7055	7791	1937	3628	814	330	6709	7534
97	I	2918	5355	1143	373	9789	10763	2683	5056	1119	415	9273	10344
98	I	2504	4591	978	333	8406	9258	2306	4335	961	372	7974	8917
99	I	830	1526	319	162	2837	3192	763	1440	319	175	2697	3088
100	I	15304	30187	6775	1719	53985	59513	14617	29367	6962	1825	52771	58817

TABLE 2.9 (Cont.)

ZONE	I	TRIP GENERATION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU	TRIP ATTRACTION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU
101	I	1578	3587	1095	245	6505	7574	1519	3342	1087	298	6246	7400
102	I	8697	19419	3160	1115	32391	35050	8247	18702	3222	1066	31237	33996
103	I	2470	4737	1011	296	8514	9352	2239	4320	1021	289	7869	8764
104	I	5549	16784	5435	946	28714	34181	6272	19070	5370	699	31411	36262
105	I	1489	2566	1072	183	5310	6285	1308	2207	1238	179	4932	6112
106	I	5174	10350	2302	605	18431	20348	5182	10067	2302	629	18180	20131
107	I	8806	19231	3813	1112	32962	36242	9044	19365	3822	933	33164	36125
108	I	4487	9520	1058	587	15652	16469	4580	9858	1057	661	16156	17060
109	I	9152	19051	3067	942	32212	34404	9041	18265	2974	1012	31292	33524
110	I	5616	11985	1969	621	20191	21688	5779	12338	1910	692	20719	22222
111	I	3744	7982	1311	414	13451	14447	3855	8219	1269	471	13814	14826
112	I	2859	5776	869	351	9855	10536	2803	5626	876	395	9700	10468
113	I	3991	8062	1200	477	13730	14648	3906	7859	1216	541	13522	14574
114	I	4560	9215	1377	540	15692	16739	4466	8985	1384	615	15450	16641
115	I	7016	12716	1644	749	22125	23139	6434	11808	1605	923	20770	22152
116	I	11416	26730	5127	1492	44765	49276	11693	27437	5175	1472	45777	50237
117	I	1590	2208	3315	96	7209	10271	1712	2366	3606	84	7768	11072
118	I	3139	5615	473	359	9586	9813	2885	5236	459	436	9016	9408
119	I	1344	2394	204	185	4127	4273	1235	2232	197	217	3881	4095
120	I	995	1911	691	151	3748	4417	888	1821	687	149	3545	4234
121	I	2011	3225	680	227	6143	6661	1910	3038	667	221	5836	6358
122	I	2944	5146	1101	334	9525	10391	2743	4805	1091	336	8975	9884
123	I	4094	9018	2203	553	15868	17878	3894	8460	2222	613	15189	17358
124	I	9887	20048	3843	1142	34920	38004	9247	19406	3924	1437	34014	37782
125	I	7847	14939	1846	896	25528	26756	7238	13891	1907	1023	24059	25692
126	I	1763	2982	1504	223	6472	7870	1725	2868	1557	219	6369	7824
127	I	590	998	505	109	2202	2724	580	960	520	117	2177	2728
128	I	3673	6646	3426	438	14187	17351	3725	6588	3546	418	14277	17519
129	I	2097	3779	2692	224	8792	11296	2358	4206	2610	176	9350	11635
130	I	0	0	0	0	0	0	0	0	0	0	0	0
131	I	135	235	196	0	566	728	137	178	248	0	563	777
132	I	2853	3314	1953	0	8120	9360	2750	3610	2075	0	8435	9823
133	I	509	811	450	0	1770	2093	483	870	499	0	1852	2230
134	I	2554	3797	1710	0	8061	9133	2900	2539	1648	0	6987	7935
135	I	4380	6571	2605	0	13556	15066	4431	6957	2566	0	13954	15412
136	I	582	5193	2966	0	8741	11562	574	6922	3641	0	11137	14635
137	I	386	6038	2868	0	9292	12064	313	6663	2785	0	9761	12468
138	I	2311	11333	7762	0	21406	28590	2979	11644	7516	0	22139	28910
TOTAL	I	1087710	2423069	519725	135989	4166493	4618318	1087710	2423069	519725	135989	4166493	4618325

TABLE 2.10 : TRIP GENERATION AND ATTRACTION BY VEHICLE TYPE , 2005

ZONE	TRIP GENERATION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU	TRIP ATTRACTION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU
1	16349	44440	8825	2303	71917	80110	18167	50504	8508	2189	79368	86618
2	22351	64224	12034	3417	102026	113598	24816	72765	11468	3247	112296	122431
3	10575	32159	5833	1615	50182	55794	11754	36674	5560	1752	55740	60990
4	38528	98318	16417	5166	158429	172963	38907	102021	15841	5391	162160	176361
5	24026	63646	11753	3408	102833	113692	26148	71101	11248	3156	111653	121098
6	26222	66939	10934	3554	107649	117359	27535	69852	10258	3315	110960	119307
7	18638	39242	2507	2106	62493	63500	17515	38098	2258	2524	60395	62060
8	6713	19128	2776	1033	29650	32298	7433	21581	2658	1015	32687	35010
9	6546	18448	2788	986	28768	31399	7251	20798	2670	999	31718	34074
10	22294	50731	17838	2700	93563	109878	22567	53156	17418	3065	96206	112580
11	18717	43387	8287	2404	72795	80009	17513	39276	8365	2547	67701	75509
12	19058	41204	13985	2248	76495	89088	18421	38323	14249	2497	73490	86880
13	16470	38414	10083	2136	67103	76273	15984	36580	10621	2221	65406	75363
14	10840	26428	7012	1433	45713	52165	10961	27527	7161	1301	46950	53323
15	26394	70548	15071	3933	115946	130319	26204	66342	15152	3564	111262	125209
16	6589	14680	4037	839	26145	29794	6541	15316	4078	1047	26982	30996
17	16620	37433	10885	2062	67000	76823	15792	34175	10953	2449	63369	74048
18	31100	79739	24287	4394	139520	162623	32145	84067	24572	3942	144726	167175
19	17264	40921	7095	2306	67586	73824	16976	41228	6904	2214	67322	73303
20	17559	39065	6828	2174	65626	71325	16912	39041	6859	2294	65106	71178
21	13052	28437	7467	1578	50534	57105	12939	29050	7513	1615	51117	57818
22	9642	20225	4793	1086	35746	39758	9078	19150	4784	1192	34204	38507
23	5194	10891	2584	607	19276	21473	4884	10314	2574	664	18436	20785
24	7313	19151	4129	1097	31690	35637	7414	19348	4114	1008	31884	35657
25	4570	11967	2581	710	19828	22332	4630	12083	2565	656	19934	22326
26	5487	14356	3105	838	23786	26776	5553	14515	3085	775	23928	26788
27	5487	14356	3105	838	23786	26776	5553	14515	3085	775	23928	26788
28	7619	19962	4316	1146	33043	37173	7732	20162	4296	1051	33241	37181
29	11521	31857	4471	1802	49651	53945	11091	28004	4481	1719	45295	49582
30	12277	27898	6198	1479	47852	53200	11470	26056	6325	1772	45623	51739
31	5257	11955	2651	665	20528	22863	4916	11161	2712	794	19583	22257
32	6780	12965	2148	731	22624	24174	6115	11437	2162	902	20616	22602
33	12542	23955	14826	1371	52594	66342	12754	24625	15413	1316	54108	68307
34	11340	20617	2229	1138	35324	36425	10131	18484	2242	1437	32294	34159
35	10633	23237	6637	1298	41805	47731	10709	24113	6616	1473	42911	49060
36	7574	16140	6957	892	31563	37965	7407	15498	7125	866	30896	37468
37	4097	9482	1725	534	15838	17340	3721	8310	1766	601	14398	16136
38	6098	14103	2326	846	23373	25444	5784	13103	2336	827	22050	24181
39	4574	10579	1744	651	17548	19126	4326	9825	1747	637	16535	18157
40	5490	12696	2089	768	21043	22912	5203	11792	2101	751	19847	21774
41	3041	7045	1153	454	11693	12767	2884	6541	1160	448	11033	12144
42	5789	13393	2206	808	22196	24167	5485	12443	2217	791	20936	22969
43	5490	12696	2089	768	21043	22912	5203	11792	2101	751	19847	21774
44	10022	24386	5496	1379	41283	46343	9839	23570	5516	1323	40246	45289
45	11455	27873	6274	1566	47168	52927	11245	26943	6310	1509	46007	51770
46	7168	17422	3929	1001	29520	33159	7037	16853	3946	969	28805	32446
47	23974	69571	16854	3745	114144	130623	26395	75631	16472	2921	121419	135674
48	11093	35907	5937	1998	54935	61096	11429	33721	5790	1842	52782	58478
49	21499	59212	12497	3260	96468	108480	21937	60007	12282	3162	97388	108929
50	5085	13779	2368	844	22076	24439	5479	15296	2344	934	24053	26428

TABLE 2.10 (Cont.)

ZONE I	TRIP GENERATION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU	TRIP ATTRACTION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU
51 I	2692	5960	2254	379	11285	13435	2571	5674	2255	394	10894	13097
52 I	24000	69450	23919	3609	120978	144311	25278	72610	24499	3696	126083	149807
53 I	9852	20362	3882	1123	35219	38323	9006	18407	3864	1407	32684	36408
54 I	53083	146453	26384	7829	233749	258606	52566	143125	25155	7867	228713	252528
55 I	26631	60918	9327	3453	100329	108178	25505	59298	9237	3418	97458	105446
56 I	10606	26324	3671	1524	42125	45431	10178	26181	3635	1674	41668	45270
57 I	28029	66328	13001	3655	111013	122490	27135	61855	13112	4087	106189	118648
58 I	20003	45246	6542	2541	74332	79685	19109	43431	6434	2546	71520	76996
59 I	13334	30165	4364	1716	49579	53184	12737	28944	4291	1720	47692	51379
60 I	3868	11297	1998	667	17830	19862	3570	10768	1923	691	16952	19020
61 I	12839	31089	6036	1733	51697	57123	12590	30570	5952	1825	50937	56480
62 I	12935	35642	7009	2070	57656	64536	12856	34131	7117	1781	55885	62460
63 I	40942	115573	21514	6425	184454	205371	40562	110021	21873	6229	178685	199762
64 I	10386	29179	5232	1656	46453	51573	10793	30178	5311	1746	48028	53260
65 I	4617	13731	3188	803	22339	25578	4698	13933	3164	910	22705	26060
66 I	645	1817	1360	140	3962	5371	662	1940	1319	132	4053	5405
67 I	1653	3851	1661	215	7380	8951	1570	3600	1687	220	7077	8702
68 I	7348	18114	4179	1052	30693	34613	7283	17551	4234	954	30022	33866
69 I	4096	10424	4066	636	19222	23218	4035	10016	4117	580	18748	22726
70 I	2767	7193	1878	457	12295	14167	2986	7873	1822	579	13260	15205
71 I	10496	24662	10689	1369	47216	57335	10811	25060	10808	1375	48054	58222
72 I	15206	36187	13265	1963	66621	79030	15710	37091	13452	2190	68443	81253
73 I	26350	72161	16042	3925	118478	133821	28376	77669	15510	4018	125573	140016
74 I	12492	29056	11467	1640	54655	65459	13135	30177	11741	1477	56530	67203
75 I	14104	32645	8654	1830	57233	65106	14002	31507	8861	1800	56170	64231
76 I	7689	22157	3525	1284	34655	38184	7362	19359	3485	1301	31507	35104
77 I	16085	42851	10270	2331	71537	81283	16245	41469	10146	2532	70392	80275
78 I	15541	36792	11921	2045	66299	77403	15463	35526	12171	2130	65290	76790
79 I	4846	12301	2245	768	20160	22346	4711	11248	2188	762	18909	21062
80 I	2247	7184	617	480	10528	11303	2094	6237	592	398	9321	9987
81 I	24037	79244	14755	4338	122374	137627	25560	81541	14264	3537	124902	138082
82 I	4295	13561	1471	837	20164	21817	4188	12371	1419	659	18637	19998
83 I	2332	4801	661	291	8085	8600	2106	4455	683	294	7538	8136
84 I	7129	16702	8754	933	33518	41890	7284	17223	9079	854	34440	42979
85 I	19114	40668	14259	2256	76297	89162	18710	40716	14792	2280	76498	90033
86 I	3848	7181	5183	431	16643	21511	3944	7906	5375	389	17214	22187
87 I	15006	31776	15599	1849	64230	78852	15201	32536	16163	1593	65493	80246
88 I	11936	26099	3044	1510	42589	44914	11260	25497	3007	1512	41276	43736
89 I	11151	25406	3587	1472	41616	44623	10651	25293	3547	1400	40891	43875
90 I	8081	20384	3049	1186	32700	35508	7768	20353	3017	1142	32280	35068
91 I	11311	32455	9039	1818	54623	63561	12063	35012	8928	1456	57459	65555
92 I	1021	1952	0	153	3126	3101	815	1664	0	166	2645	2690
93 I	10381	27666	7120	1520	46687	53492	10638	26900	7097	1353	45988	52456
94 I	10381	27666	7120	1520	46687	53492	10638	26900	7097	1353	45988	52456
95 I	659	1529	528	110	2826	3354	612	1396	526	102	2636	3162
96 I	2682	5428	1180	376	9666	10740	2455	5134	1158	419	9166	10339
97 I	3735	7586	1634	493	13448	14883	3426	7160	1599	556	12741	14318
98 I	3210	6499	1401	434	11544	12794	2938	6131	1373	490	10932	12306
99 I	1067	2167	462	189	3885	4364	969	2043	458	209	3679	4209
100 I	17194	38998	9680	2099	67971	76502	16615	38371	9872	2356	67214	76466

TABLE 2.10 (Cont.)

ZONE I	TRIP GENERATION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU	TRIP ATTRACTION M/CY	P.CAR	LORRY	BUS	TOTAL	PCU
101 I	1850	4585	1335	308	8078	9413	1849	4468	1335	397	8049	9518
102 I	11548	26867	4828	1540	44783	49034	10877	25762	4905	1503	43047	47488
103 I	2927	5892	1307	364	10490	11611	2676	5435	1330	361	9802	11005
104 I	6192	19860	7163	1098	34313	41575	6976	22684	7063	811	37534	44070
105 I	1747	3448	1389	241	6825	8139	1541	2903	1615	233	6292	7872
106 I	6177	14177	3305	803	24462	27428	6230	14131	3285	833	24479	27457
107 I	11628	28541	6380	1618	48167	54067	12116	29382	6317	1357	49172	54496
108 I	5548	13311	1880	799	21538	23230	5706	13969	1867	887	22429	24201
109 I	11952	27875	4944	1383	46154	50185	11957	27311	4790	1464	45522	49519
110 I	8227	19626	3795	990	32638	35861	8592	20532	3681	1058	33863	36983
111 I	5482	13072	2530	666	21750	23909	5724	13680	2447	710	22561	24642
112 I	3555	7991	1553	474	13573	14948	3491	7854	1560	526	13431	14907
113 I	4972	11168	2156	651	18947	20837	4873	10975	2172	729	18749	20797
114 I	5682	12767	2470	739	21658	23817	5569	12533	2486	827	21415	23750
115 I	11968	25245	3485	1424	42122	44751	11110	24031	3380	1650	40171	43249
116 I	15002	40557	9240	2230	67029	75864	15501	42081	9307	2157	69046	77714
117 I	1991	3069	4435	123	9618	13740	2117	3278	4848	115	10358	14850
118 I	5391	10506	928	628	17453	17975	4929	9861	914	729	16433	17209
119 I	2308	4503	398	293	7502	7763	2111	4229	386	340	7066	7434
120 I	1433	2842	1058	196	5529	6523	1336	2747	1060	188	5331	6339
121 I	2853	5469	1506	346	10174	11486	2734	5287	1491	353	9865	11203
122 I	2864	7565	1921	469	12819	14728	2723	7215	1913	440	12291	14183
123 I	4937	11884	3167	717	20705	23714	4691	11199	3197	780	19867	23061
124 I	20263	48732	11108	2670	82773	92820	19519	48724	11213	3094	82550	93524
125 I	14673	30759	3816	1763	51011	53804	13456	28373	3963	2065	47857	51554
126 I	2911	5155	3549	351	11966	15314	2938	5220	3690	329	12177	15627
127 I	968	1720	1185	154	4027	5201	981	1750	1233	149	4113	5325
128 I	5816	11482	8320	705	26323	34247	6090	11866	8642	645	27243	35331
129 I	2687	5128	3582	275	11672	14995	2992	5705	3466	221	12384	15434
130 I	22271	73307	13253	4034	112865	126601	22040	72500	13152	3580	111272	124284
131 I	189	332	274	0	795	1022	188	247	347	0	782	1082
132 I	4014	4657	2753	0	11424	13174	3858	5073	2913	0	11844	13793
133 I	707	1138	636	0	2481	2940	674	1220	706	0	2600	3138
134 I	3589	5304	2382	0	11275	12760	3931	3558	2314	0	9803	11134
135 I	6152	9222	3645	0	19019	21126	6213	9767	3591	0	19571	21609
136 I	811	7273	4160	0	12244	16201	805	9711	5120	0	15636	20555
137 I	551	8464	4008	0	13023	16893	445	9359	3904	0	13708	17501
138 I	3249	15893	10873	0	30015	40076	4169	16335	10569	0	31073	40600
TOTAL I	1443053	3597373	837562	197300	6075288	6848084	1443053	3597373	837562	197300	6075288	6848089

TABLE 2.11 : VEHICULAR OD TRAFFIC VOLUME, 1985

(UNIT:PCU)

I	1	2	3	4	5	6	7	8	9	10	11	12	13
1 I	141680	44362	27467	18566	21728	32375	26608	15804	11088	14982	5090	44393	4496
2 I	42934	88140	11211	3627	4519	7579	8660	16427	3418	2606	1337	13123	2160
3 I	29275	11554	36074	2130	2529	3164	3590	4209	5596	2213	671	4416	756
4 I	18645	4142	2625	13786	6886	4736	2154	1330	833	1662	1118	5110	766
5 I	21386	4871	2394	6360	28772	8150	3105	1476	974	2081	1981	5237	789
6 I	32505	8114	3310	5149	7941	54853	11430	4398	1423	1763	1445	24544	3585
7 I	26149	9078	3388	2484	3733	12164	39709	2044	1718	1168	733	23620	1736
8 I	15114	16783	3910	1345	1623	4180	1988	57259	4352	1398	455	5040	1908
9 I	9931	3479	5339	935	1336	1634	1766	4639	12121	2864	492	1935	334
10 I	14006	2147	2160	2119	2135	1632	1008	1372	3399	16593	5661	2459	1202
11 I	4610	1221	543	1165	1569	1422	865	712	414	5409	80833	2931	747
12 I	41252	11535	4981	4361	4959	25532	23151	4619	1945	2768	2253	220150	9864
13 I	4128	2456	700	919	794	2918	1421	1657	482	770	1134	10814	35351
14 I	7076	1691	1112	883	2342	7748	3949	1048	286	850	1640	18493	2618
15 I	1952	2224	798	412	289	754	775	1371	333	128	343	5331	1041
16 I	4257	1420	385	790	434	1597	1740	756	189	240	489	6647	11997
17 I	192	64	166	84	22	70	150	61	19	11	0	238	1237
18 I	1046	647	136	252	306	384	424	525	60	996	174	2185	2619
19 I	0	0	0	0	0	0	0	0	0	0	0	0	0
INTER I	416138	214128	106699	65367	91917	170892	132493	119707	48650	58702	105849	396666	83206
20 I	2069	2116	543	724	1221	927	786	426	199	90	1071	770	529
21 I	1396	1975	425	357	658	648	450	2472	127	74	74	384	477
22 I	1013	977	223	282	464	311	154	314	173	24	96	191	53
EXTER I	4478	5068	1191	1363	2343	1886	1390	3212	499	188	1241	1345	1059
<TOTAL> I	420616	219196	107890	66730	94260	172778	133883	122919	49149	58890	107090	398011	84265

I	14	15	16	17	18	19	INTER	20	21	22	EXTER	<TOTAL>
1 I	6631	2074	4260	152	902	0	422658	2121	1324	934	4379	427037
2 I	2527	2373	1528	42	586	0	212797	1724	2298	1283	5305	218102
3 I	1068	764	487	166	129	0	108791	583	483	295	1361	110152
4 I	817	425	459	68	188	0	65950	750	340	304	1394	67344
5 I	2370	462	747	33	185	0	91373	1472	550	399	2421	93794
6 I	7281	713	1574	125	375	0	170528	1018	694	294	2006	172534
7 I	3255	1005	1822	111	461	0	134378	730	410	213	1353	135731
8 I	1057	1828	834	64	479	0	119617	539	2815	429	3783	123400
9 I	418	529	183	19	70	0	48024	236	166	138	540	48564
10 I	926	10	212	18	886	0	57945	162	32	54	248	58193
11 I	1650	227	396	0	197	0	104911	1301	74	31	1406	106317
12 I	19102	5214	6850	211	1975	0	390722	919	462	112	1393	392115
13 I	2952	694	13466	1125	2262	0	84043	547	782	74	1403	85446
14 I	32615	2370	1460	218	637	0	87236	1591	828	309	2728	89964
15 I	2296	14162	792	67	408	0	33476	424	252	93	769	34245
16 I	1510	1077	144523	5743	17456	0	201250	2538	5143	441	8122	209372
17 I	241	92	5298	3998	708	0	12651	101	417	13	531	13182
18 I	536	474	17320	600	17806	0	46490	885	505	0	1390	47880
19 I	0	0	0	0	0	0	0	0	0	0	0	0
INTER I	87252	34493	202211	12760	45710	0	2392840	17541	17575	5416	40532	2433372
20 I	1253	534	2740	89	907	0	16994	345	1493	315	2153	19147
21 I	928	306	5000	331	444	0	16526	1297	244	399	1940	18466
22 I	277	109	553	0	4	0	5218	404	294	0	698	5916
EXTER I	2458	949	8293	420	1355	0	38738	2046	2031	714	4791	43529
<TOTAL> I	89710	35442	210504	13180	47065	0	2431578	19587	19606	6130	45323	2476901

TABLE 2.12 : VEHICULAR OD TRAFFIC VOLUME, 1995

(UNIT:PCU)

	I	1	2	3	4	5	6	7	8	9	10	11	12	13
1	I	392356	43599	30669	25564	20499	25663	24775	15396	9892	14633	9523	22960	11317
2	I	43775	206525	28932	2736	2030	5814	19584	47195	3552	1837	1586	9411	7518
3	I	34595	26923	102857	5249	2603	2717	8845	18786	11742	8218	3045	5127	3567
4	I	29101	3481	5422	40969	7469	4935	1629	1070	1006	5060	1307	2322	1024
5	I	24783	2314	3021	7962	120939	14414	6738	2395	2343	7254	7997	6158	2710
6	I	29621	4896	4040	6318	13957	156781	23129	4362	1001	3753	3886	49243	8264
7	I	28003	18443	6225	2587	6460	21472	82542	9018	2238	2151	3322	39709	9900
8	I	18319	47860	18928	1205	3568	3969	9675	141708	10713	1934	2221	5916	6394
9	I	11031	2810	12918	1401	2103	1246	2568	10058	51927	8090	1678	1296	1676
10	I	18674	1886	8648	6204	6809	2956	2174	1876	8352	50848	15588	2125	1376
11	I	11904	1581	3426	1493	6939	4004	3871	3679	1528	15655	154928	4831	5936
12	I	24875	7344	4882	2149	7621	48730	40432	6477	1253	1746	4434	285889	27323
13	I	11283	6979	4670	1008	4203	7156	8486	6530	1225	1358	6029	28577	178322
14	I	12514	2709	2622	852	10851	10360	6823	2294	542	1704	8977	19300	27373
15	I	2276	4118	1502	119	228	884	2117	6978	1313	244	1493	5504	7647
16	I	1680	867	602	297	3901	750	1874	2885	130	292	1040	3703	19307
17	I	243	179	385	0	27	147	175	138	7	0	159	360	5282
18	I	2532	1080	724	113	523	795	1977	1612	281	1876	1012	5383	16154
19	I	0	0	0	0	0	0	0	0	0	0	0	0	0
INTER	I	697565	383594	240473	106226	220730	312793	247414	282447	109045	126653	228225	497814	341090
20	I	4117	4113	1071	1447	2443	1845	1594	889	382	157	2172	1565	1030
21	I	2927	4200	907	758	1366	1378	929	5003	281	176	157	810	1004
22	I	2051	1982	453	578	955	642	314	646	355	49	195	399	107
EXTER	I	9095	10295	2431	2783	4764	3865	2837	6538	1018	382	2524	2774	2141
<TOTAL>	I	706660	393889	242904	109009	225494	316658	250251	288985	110063	127035	230749	500588	343231

	I	14	15	16	17	18	19	INTER	20	21	22	EXTER	<TOTAL>
1	I	9214	1683	1846	154	2180	0	661923	4181	2839	1897	8917	670840
2	I	2689	3966	1032	153	1032	0	389367	3452	4726	2604	10782	400149
3	I	2377	1198	698	422	930	0	239899	1144	1022	598	2764	242663
4	I	787	44	69	0	90	0	105785	1517	692	616	2825	108610
5	I	13473	1512	2279	18	439	0	226749	2984	1122	816	4922	231671
6	I	10479	1217	699	271	922	0	322839	2053	1452	606	4111	326950
7	I	5932	2061	2397	121	2025	0	244606	1476	836	434	2746	247352
8	I	2037	8194	2283	117	1592	0	286633	1121	5687	869	7677	294310
9	I	448	1356	157	26	295	0	111084	460	354	283	1097	112181
10	I	1419	98	262	66	2020	0	131381	328	67	111	506	131887
11	I	9235	1432	877	137	1163	0	232619	2655	152	63	2870	235489
12	I	19120	4931	4063	387	4241	0	495897	1644	975	231	2850	498747
13	I	27231	6273	21664	4267	14646	0	339907	1094	1601	153	2848	342755
14	I	49606	1933	1447	446	2218	0	162561	3253	1654	625	5532	168093
15	I	2070	52975	568	36	795	0	90867	881	504	191	1576	92443
16	I	1497	746	173371	11374	27392	0	251703	5097	10508	394	16499	268207
17	I	407	76	11614	13949	1309	0	34457	222	852	27	1101	35558
18	I	1575	905	26855	1182	54478	0	119057	1988	838	0	2826	121883
19	I	0	0	0	0	0	0	0	0	0	0	0	0
INTER	I	159596	90600	252181	33126	117767	0	4447339	35550	35881	11018	82449	4529788
20	I	2535	1138	5646	197	2065	0	34407	554	3124	594	4272	38679
21	I	1897	572	10080	660	695	0	33800	2638	560	858	4056	37856
22	I	558	227	1125	0	10	0	10646	772	650	0	1422	12068
EXTER	I	4990	1937	16851	857	2771	0	78853	3964	4334	1452	9750	88603
<TOTAL>	I	164586	92537	269032	33983	120538	0	4526192	39514	40215	12470	92199	4618391

TABLE 2.13 : VEHICULAR OD TRAFFIC VOLUME , 2005

(UNIT:PCU)

I	1	2	3	4	5	6	7	8	9	10	11	12	13
1 I	446638	46033	35065	27918	25240	31190	29082	18345	10744	18155	13326	25369	16815
2 I	45841	265238	36199	3134	2928	7996	28390	79359	4704	2909	2610	12488	13152
3 I	38881	33167	138329	6198	4205	4194	12989	28202	16901	11239	5530	6477	5251
4 I	31870	4305	6610	44972	10525	5870	2055	1638	1234	6724	2118	2766	1376
5 I	30610	3390	5207	11056	177706	21867	9641	4468	3701	11691	15551	8917	4265
6 I	34605	6762	6012	7366	20297	241461	29825	9088	1670	6650	7659	74588	14355
7 I	32099	27046	8854	3481	8904	28182	101904	14444	3326	3776	5471	47372	15040
8 I	22031	82242	27934	1940	5790	7341	15108	292920	15848	4435	5002	10726	13363
9 I	11774	3617	19200	1689	3188	2032	3789	15193	75831	14073	2993	1817	2419
10 I	22796	3082	11993	8397	10960	5618	3887	4230	14000	78432	30289	3362	2345
11 I	16072	2609	6261	2377	13595	8054	6354	8217	2707	30018	275775	7905	10705
12 I	27994	9163	6513	2652	10266	73880	47670	12142	1719	2758	7235	341600	40236
13 I	14222	10187	6829	1268	9948	12432	12042	13551	1653	2445	11011	43695	329705
14 I	11984	3504	3793	942	12953	16275	7632	4016	745	2510	13868	24344	39925
15 I	2846	5843	2292	161	379	1289	2591	11065	1804	437	2068	6390	8908
16 I	1939	1330	961	404	5299	1482	2770	5049	234	536	1931	4802	33024
17 I	242	234	510	0	62	243	245	358	19	16	324	457	13004
18 I	3554	1979	1422	162	1116	1652	3317	3770	468	4247	2258	9834	31636
19 I	9560	5078	18212	1128	1828	1896	5854	22067	5190	2291	3685	2613	4043
INTER I	805558	514809	342195	125245	325089	472954	325645	548122	162498	203342	408704	635522	599567
20 I	5608	5606	1482	1956	3343	2523	2160	1254	542	221	3044	2184	1443
21 I	3989	5747	1226	1025	1886	1881	1278	7019	391	249	224	1115	1417
22 I	2799	2707	626	776	1296	879	432	896	494	69	275	541	152
EXTER I	12396	14060	3334	3757	6525	5283	3870	9169	1427	539	3543	3840	3012
<TOTAL> I	817954	528869	345529	129002	331614	478237	329515	557291	163925	203881	412247	639362	602579

I	14	15	16	17	18	19	INTER	20	21	22	EXTER	<TOTAL>
1 I	8852	1745	2364	171	3417	8123	768592	5693	3860	2573	12126	780718
2 I	3557	5532	1592	257	2040	4705	523030	4705	6448	3552	14705	537735
3 I	3358	1716	1149	653	1849	18978	339266	1570	1409	825	3804	343070
4 I	1008	66	100	0	128	1217	124582	2061	956	838	3855	128437
5 I	17182	2073	3013	50	951	1886	333225	4059	1545	1107	6711	339936
6 I	16121	1666	1482	537	1890	2082	484116	2802	1996	820	5618	489734
7 I	6455	2617	4164	193	3635	3913	320876	2024	1158	589	3771	324647
8 I	3626	13299	4073	314	3871	22203	552066	1583	7985	1226	10794	562860
9 I	629	1851	269	50	529	5437	166360	657	497	394	1548	167928
10 I	2221	207	511	123	4496	2201	209150	463	92	154	709	209859
11 I	13918	2026	1876	308	2654	3772	415203	3716	206	90	4012	419215
12 I	24488	5667	5643	511	7152	2868	630157	2299	1363	319	3981	634138
13 I	39892	7338	38476	10106	29645	4029	598474	1533	2252	213	3998	602472
14 I	67751	2400	2255	751	4446	1759	221853	4563	2338	880	7781	229634
15 I	2664	63450	796	70	1258	1264	117575	1234	705	266	2205	119780
16 I	2149	969	250881	18174	52476	1080	385490	7155	14738	1258	23151	408641
17 I	585	88	17582	20327	2509	147	56952	299	1189	38	1526	58478
18 I	2528	1424	51535	2443	111021	1762	236128	2792	1178	0	3970	240098
19 I	1729	1115	1170	136	2020	35493	125108	713	459	327	1499	126607
INTER I	218713	117249	388931	55174	235987	122919	6608223	49921	50374	15469	115764	6723987
20 I	3560	1591	7918	267	2896	684	48282	779	4379	832	5990	54272
21 I	2657	804	14139	933	965	413	47358	3693	779	1202	5674	53032
22 I	784	313	1579	0	12	274	14904	1084	906	0	1990	16894
EXTER I	7001	2708	23636	1200	3873	1371	110544	5556	6064	2034	13654	124198
<TOTAL> I	225714	119957	412567	56374	239860	124290	6718767	55477	56438	17503	129418	6848185

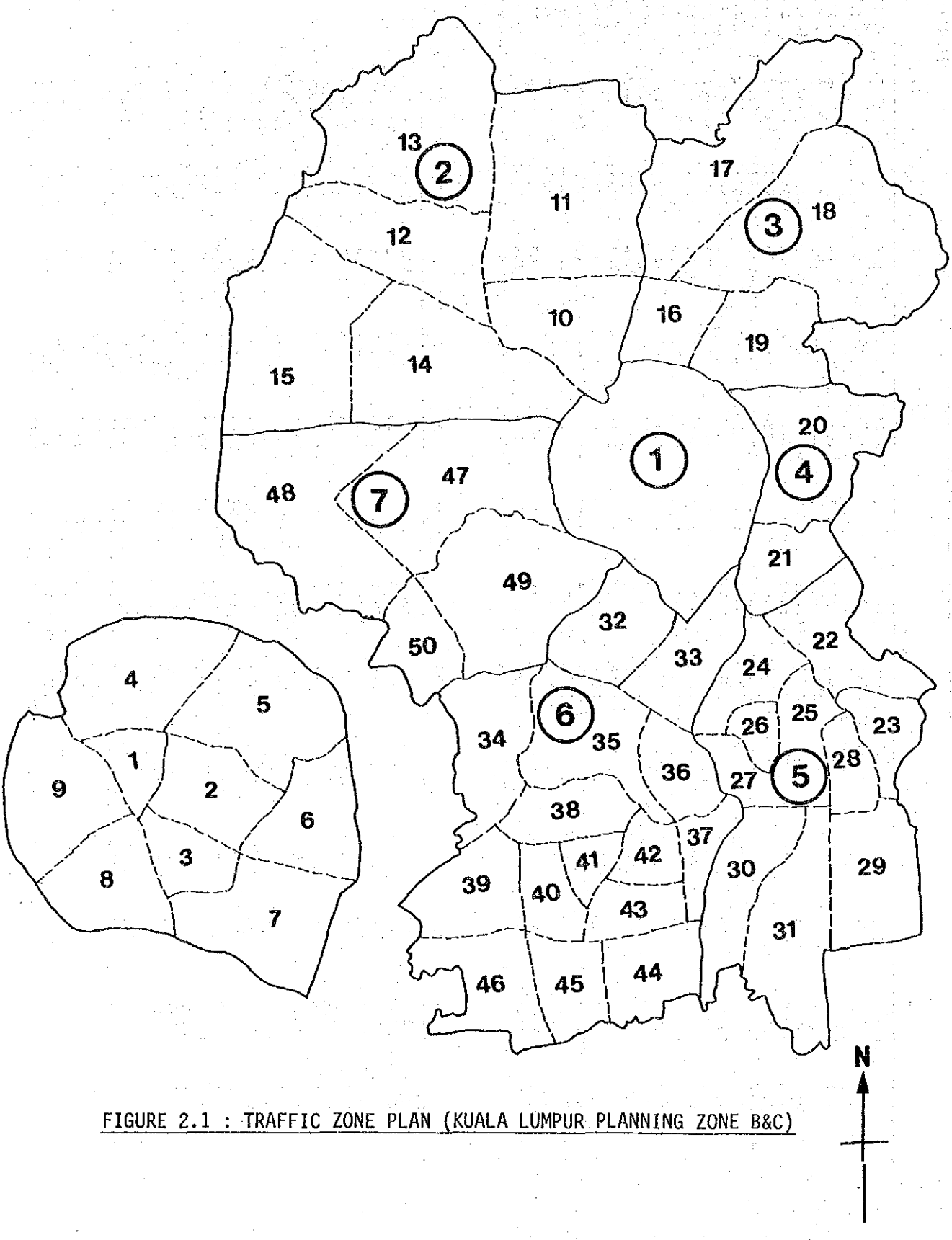

FIGURE 2.1 : TRAFFIC ZONE PLAN (KUALA LUMPUR PLANNING ZONE B&C)

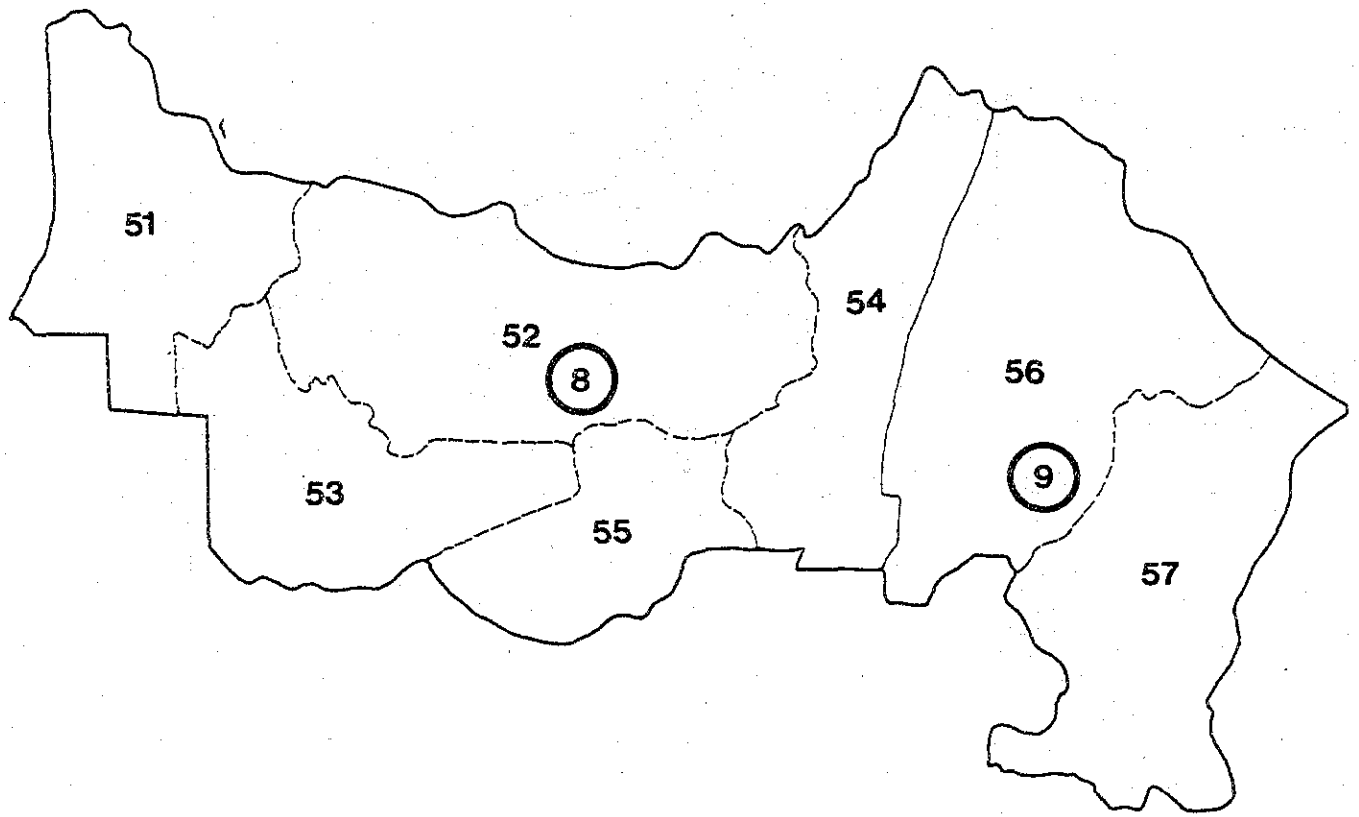

FIGURE 2.2 : TRAFFIC ZONE PLAN (GOMBAK DISTRICT PLANNING ZONE B&C)

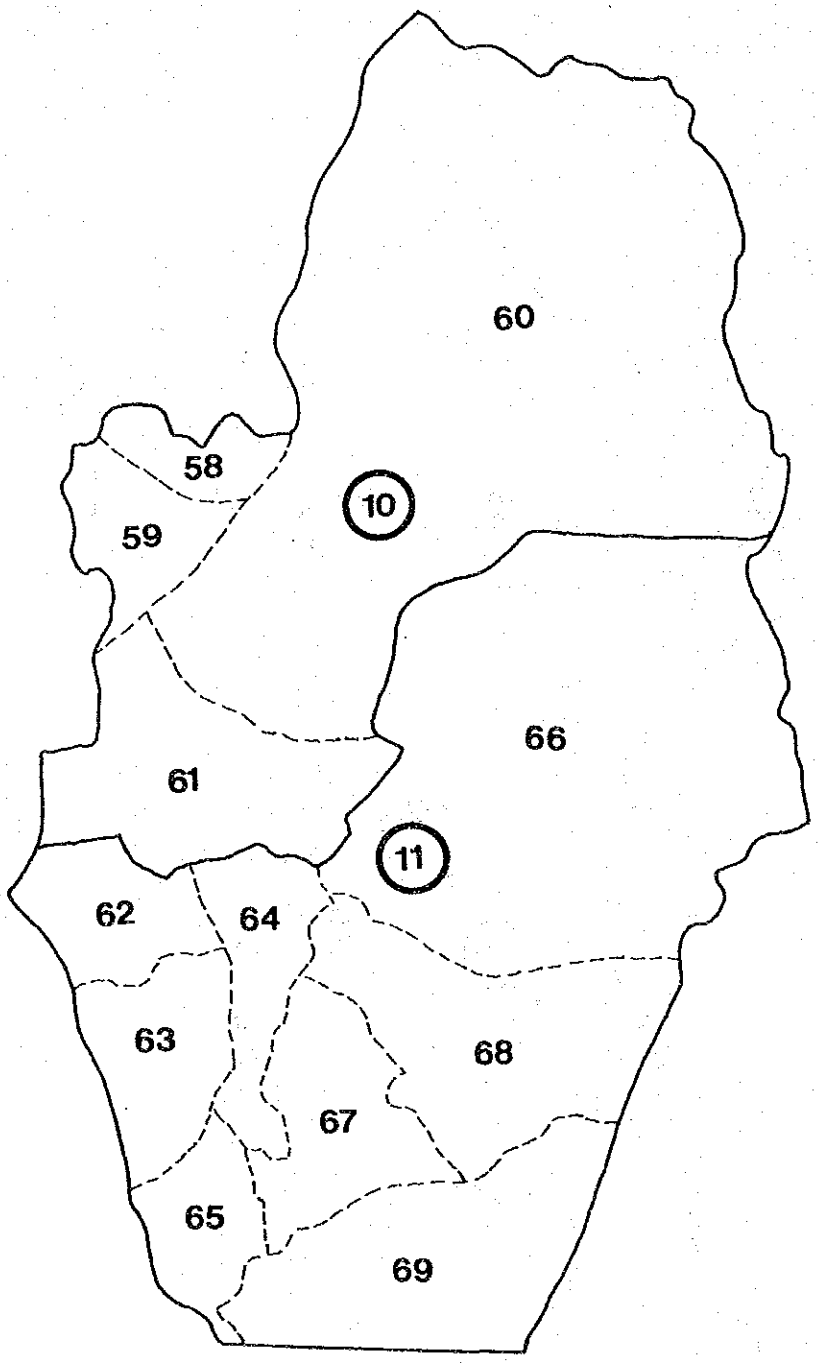

FIGURE 2.3 : TRAFFIC ZONE PLAN (HULU LANGAT DISTRICT PLANNING ZONE B&C)

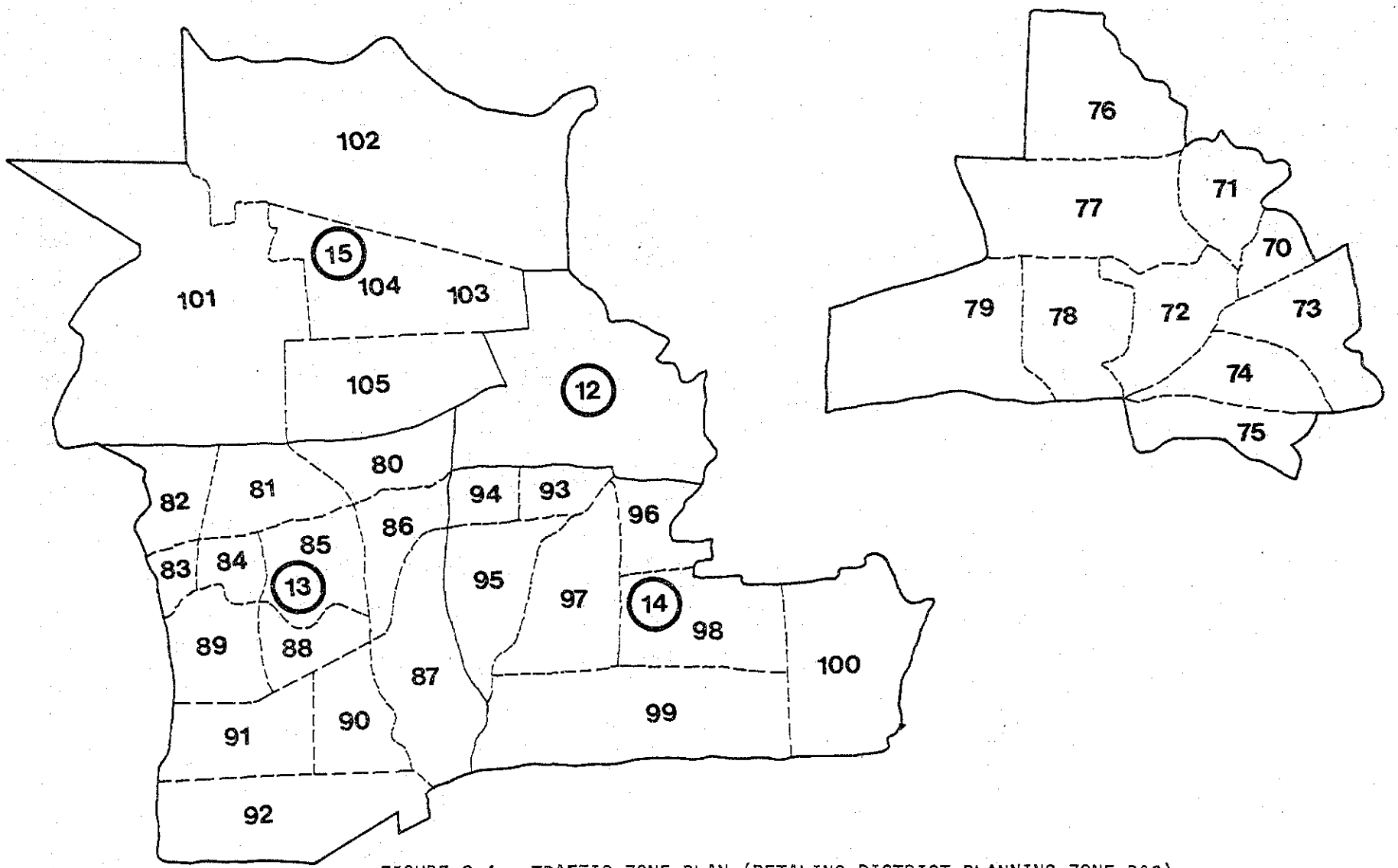

FIGURE 2.4 : TRAFFIC ZONE PLAN (PETALING DISTRICT PLANNING ZONE B&C)

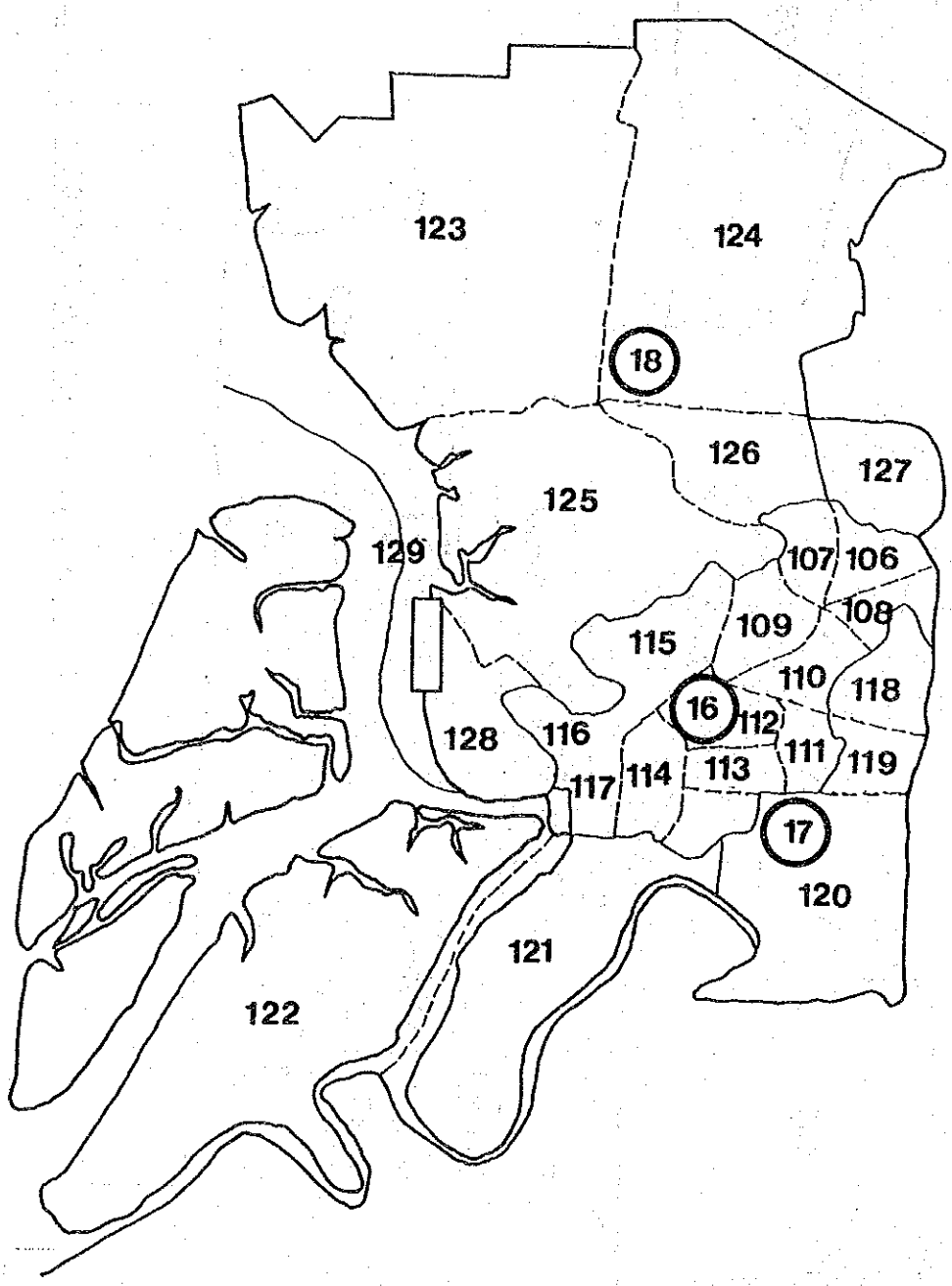

FIGURE 2.5 : TRAFFIC ZONE PLAN (KLANG DISTRICT PLANNING ZONE B&C)

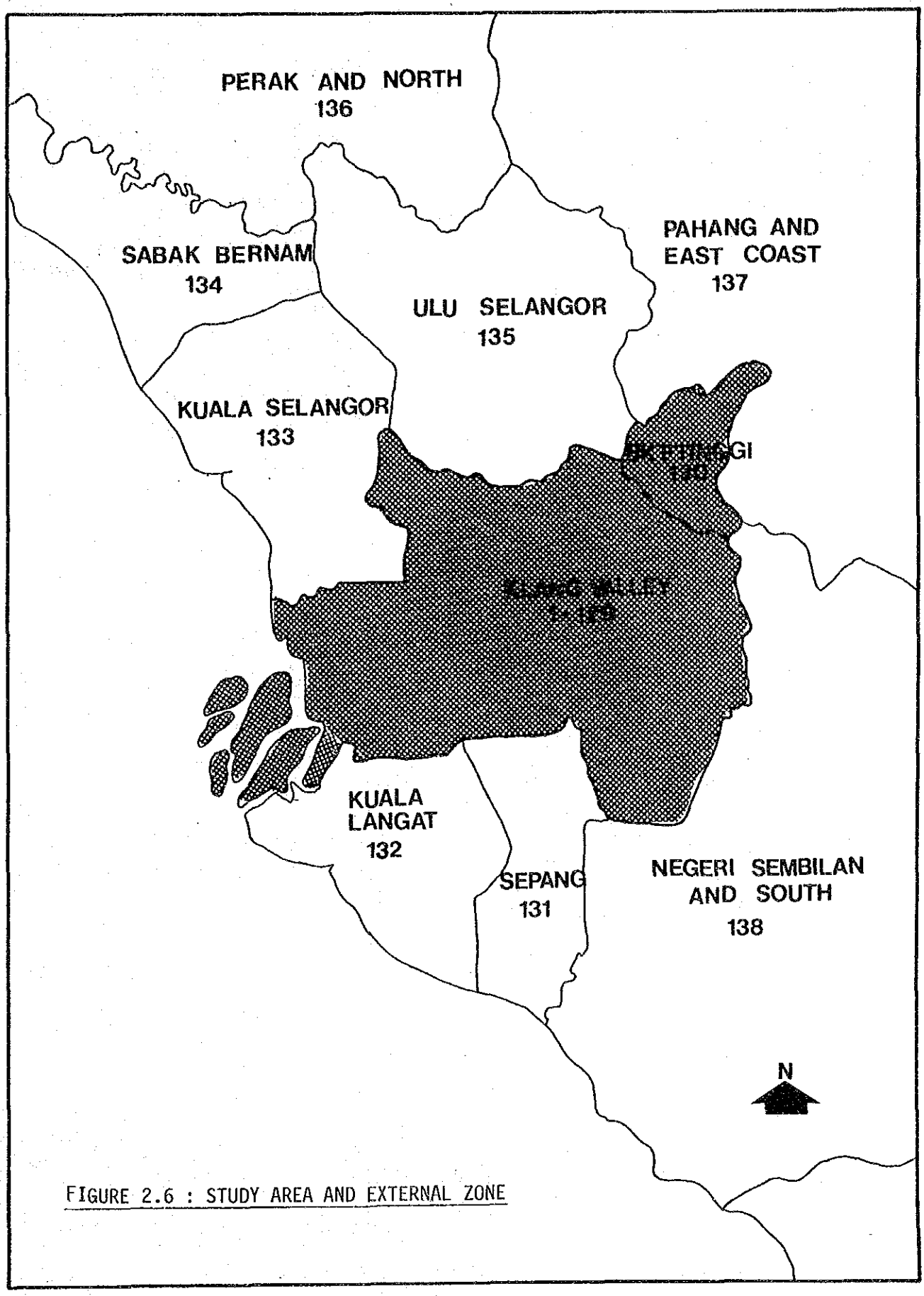

FIGURE 2.6 : STUDY AREA AND EXTERNAL ZONE

APPENDIX TO CHAPTER 3

Alternative Route Study

3.1 Route Location and its Alternatives

(1) Southern part of Middle Ring Road II (MRR-II)

Based on the existing road network in the southern sector of Kuala Lumpur and Petaling Jaya and the corridor landuse, alternative routes for southern part of MRR-II are formulated as shown in Figure 3.1 and described as below :-

(a) Segment A-B (Sungai Midah Area)

The southern part of MRR-II starts at the 8km roundabout on Jalan Cheras which is a 4-lane divided arterial road.

A four-leg, four-way interchange with three-level structure and roundabout was proposed at the Jalan Cheras 8km roundabout by the previous MRR-II Feasibility Study (Northern Part) in 1986.

Three alternative routes are set up in Sungai Midah area to avoid such physical constraints as Taman Midah, Taman Hijau, Taman Taynton, Chinese Cemetery, Taman Connaught and committed on-going industrial development (HAR Holding and Rumah Tulin).

The salient features of each alternative are summarized in Table 3.1.

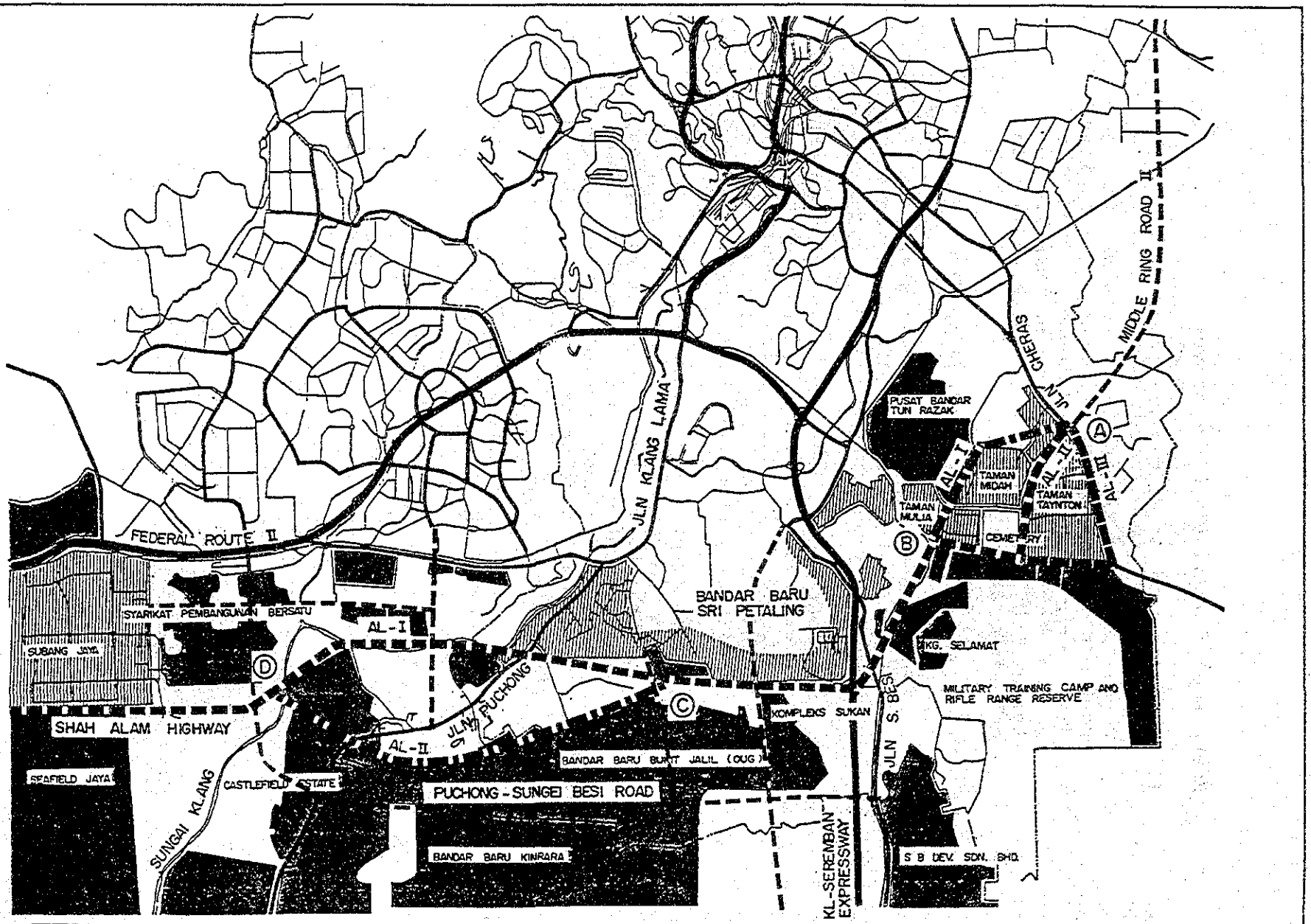

FIG.3.1: SOUTHERN PART OF MIDDLE RING ROAD II

THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY

LEGEND:

- PRIMARY / SECONDARY ROAD
- EXPRESSWAY / HIGHWAY (EXISTING)
- PROJECT ROAD
- OTHER PLANNED ROAD
- NEW DEVELOPMENTS
- COMMITTED PROJECTS

SCALE: 0 0.1 0.5 1km

N

Table 3.1 Alternative Routes In Sungai Midah Area (Segment A-B)

Item		Alternative	AL-I	AL-IIa	AL-IIb	AL-III
Background			The idea presented by the previous study by KEMAS	Original Route : Running in different landuse and providing at-grade intersection	New Idea : The same route as AL-IIa but adopting viaduct scheme	New Idea : Running on the existing Jalan Cheras and Jalan Cendekiawan
Salient Features	Terrain		Rolling	Rolling	Rolling	Flat
	Road Length (m)	Throughway	5750	5180	5240	6150
		Frontage Road	2000	2000	2000	2650
		Interchange Ramp	800	800	900	2500
	Proposed Right-of-Way		40m (65%) : 60m (35%)	40m (59%) : 60m (41%)	40m (22%) : 60m (78%)	40m (53%) : 60m (47%)
	Land Acquisition Area (ha)		28	30	32	19
	Cost Index		2.81	0.42	1.00	0.76
	Physical Constraint/Landuse/ Environment/Road Network/ Traffic Demand, etc.		- to overpass the built-up housing complex of Taman Midah near 8km roundabout on Jalan Cheras and the southern part of Taman Midah to accomodate the consistent geometric design standard coping with anticipated heavy traffic demand - to provide an elevated road on viaduct in entire stretch to avoid excessive land acquisition and barrier effect of access-controlled road	- to overpass Jalan Cherar and run southward among many physical constraints such as Taman Midah, Taman Taynton, Taman Connaught, Chinese Cemetery, military complex and some committed development - to provide at-grade intersection with Jalan Cendekiawan to minimize the violation of abovementioned constraints - to abandon applying consistent standard of Middle Ring Road II as well as distributing predicted enormous traffic	- to adopt almost the same alignment as that of AL-IIa but apply viaduct scheme to accomodate the consistent standard of Middle Ring Road II and meet anticipated heavy traffic demand - to provide ramp to connect with Jalan Cendekiawan - to violate limited land of on-going development in the south by the construction of piers and its foundation	- to connect with the existing arterial road of Jalan Cheras at 8km roundabout and run southward on the existing Jalan Cheras to utilize the existing right-of-way - to mix traffic of both Middle Ring Road II and Jalan Cheras eventually to cope with complicated traffic movements - to form an interchange with Jalan Cendekiawan to turn westward to use the existing right-of-way - to provide frontage road on Jalan Cendekiawan to secure the existing function - to abandon applying consistent standard as well as distributing predicted enormous traffic

(b) Segment B-C (Sungei Besi Area)

In Sungei Besi Area, the available road space is limited and there exists several rigid physical constraints such as military camps, PETRONAS LPG depot, SOBENA development, railway track, Asrama Sarawak, Jalan Sungei Besi, Kuala Lumpur-Seremban Expressway and an existing diamond type interchange. Therefore, alignment may be fairly fixed.

The route for MRR-II continues westward between the northern bank of the Sungai Kuyoh and south of housing development (Bandar Baru Sri Petaling, Taman Overseas Union and Taman Yarl, etc.). Access to these housing development can be maintained via frontage roads.

Further south of Sungai Kuyoh, Puchong-Sungei Besi road is planned to run parallel to MRR-II ,forming a vital feeder system to National Sports Complex, Bukit Jalil/Kinrara/Castlefield/ Sunway development and the surrounding area.

(c) Segment C-D (Kampung Kuchai Area)

In Kampung Kuchai area, two alternative routes are to be examined in avoiding built-up areas and on-going Kinrara Development. The two alternatives are termed riverside and hillside scheme.

The salient features of each scheme are summarized in Table 3.2.

After MRR-II crosses Sungai Klang,it is proposed to connect with Shah Alam Highway at Sunway Interchange where Puchong-Sungei Besi road and the extension of Jalan SS 8 will lead to the western part of MRR-II.

Table 3.2: Alternative Routes In Kampung Kuchai Area (Segment C-D)

Item		Alternative	AL-I (Riverside Scheme)	AL-II (Hillside Scheme)
Background			Original Route : Running along the river-side of Sungai Klang and Sungai Kuyoh	New Idea : Running in different landuse
Salient Features	Terrain		Flat	Rolling
	Road Length (m)	Throughway	7550	8100
		Frontage Road	0	0
		Interchange Ramp	2520	3020
	Proposed Right-of-Way		40m (38%) : 60m (50%) : 80m (12%)	40m (22%) : 60m (62%) : 80m (15%)
	Land Acquisition Area (ha)		65	70
	Cost Index		1.00	1.03
	Physical Constraint/Landuse/ Environment/Road Network/ Traffic Demand, etc.		- to overpass the existing industrial and residential area along Jalan Puchong by an elevated road on viaduct to avoid barrier effect of access-controlled road	- to pass in the south of Jalan Puchong and in between the existing developed area and undeveloped rolling hills to mitigate the disturbance of the existing developed area
			- to pass in between on-going Taman Kinrara housing development and Sungai Klang	- to avoid adverse subsurface soil and hydrological conditions encountered in the scheme of AL-I.
			- to form an interchange with a planned Petaling Jaya-Puchong road in the south of Sungai Klang to provide access to Petaling Jaya and Puchong	- to form eventually an interchange with Jalan Puchong in hilly area near Bukit Tandang

(2) Shah Alam Highway

Based on the existing road network and corridor landuse along Shah Alam Highway, alternative routes are formulated as shown in Figures 3.2 and 3.3 and described as below:-

(a) Segment E-F (Port Klang Area)

Shah Alam Highway starts from Klang West Interchange on North Klang Straits Bypass which is now an undivided two-lane tollway but will duly be improved to a 4-lane divided and access controlled tollway in the future.

The proposed route will be adjacent to the planned PKNS North Port Town Centre boundary and may inevitably violate the eastern portion. Nevertheless, the eastern portion can hardly be considered to be used for the construction of town centre buildings because it exists on the river basin and deep soft soil.

Between Klang West Interchange and Kim Chuan Interchange the proposed route passes along the north of the existing bund on Sungai Klang bank, crosses the railway track, runs along Jalan 2-Kaw.6/Jalan Petola to intersect with Persiaran Raja Muda Musa and continue eastward on the existing Jalan Kim Chuan.

(b) Segment F-G (Kampung Teluk Gadong Besar Area)

Here, two alternative routes are set up for exploring how to pass both the residential areas of Taman Sri Andalas and Taman Klang Jaya.

The Sri Andalas Route (AL-I) adopts the original corridor of Shah Alam Highway which was selected by the Klang Valley Transportation Study, while the Klang Jaya Route (AL-II) bypasses in the south of Taman Klang Jaya.

The salient features of each alternative are summarized in Table 3.3.

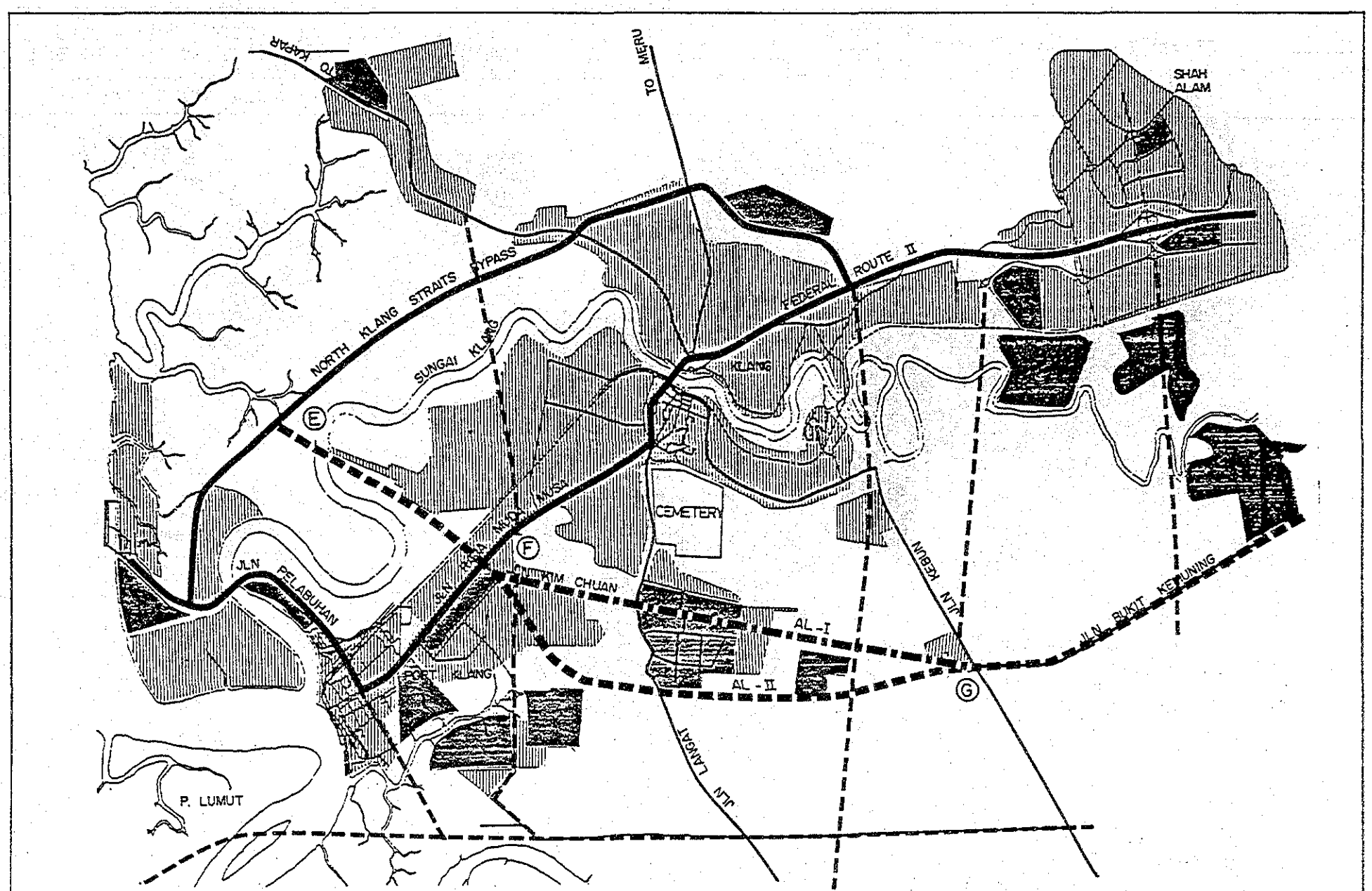

FIG. 3.2: SHAH ALAM HIGHWAY (I)

THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY

LEGEND:

- PRIMARY / SECONDARY ROAD
- EXPRESSWAY / HIGHWAY
- PROJECT ROAD
- OTHER PLANNED ROAD
- URBAN AREA (EXISTING)
- COMMITTED PROJECTS

SCALE: 0 0.1 0.5 1km

N

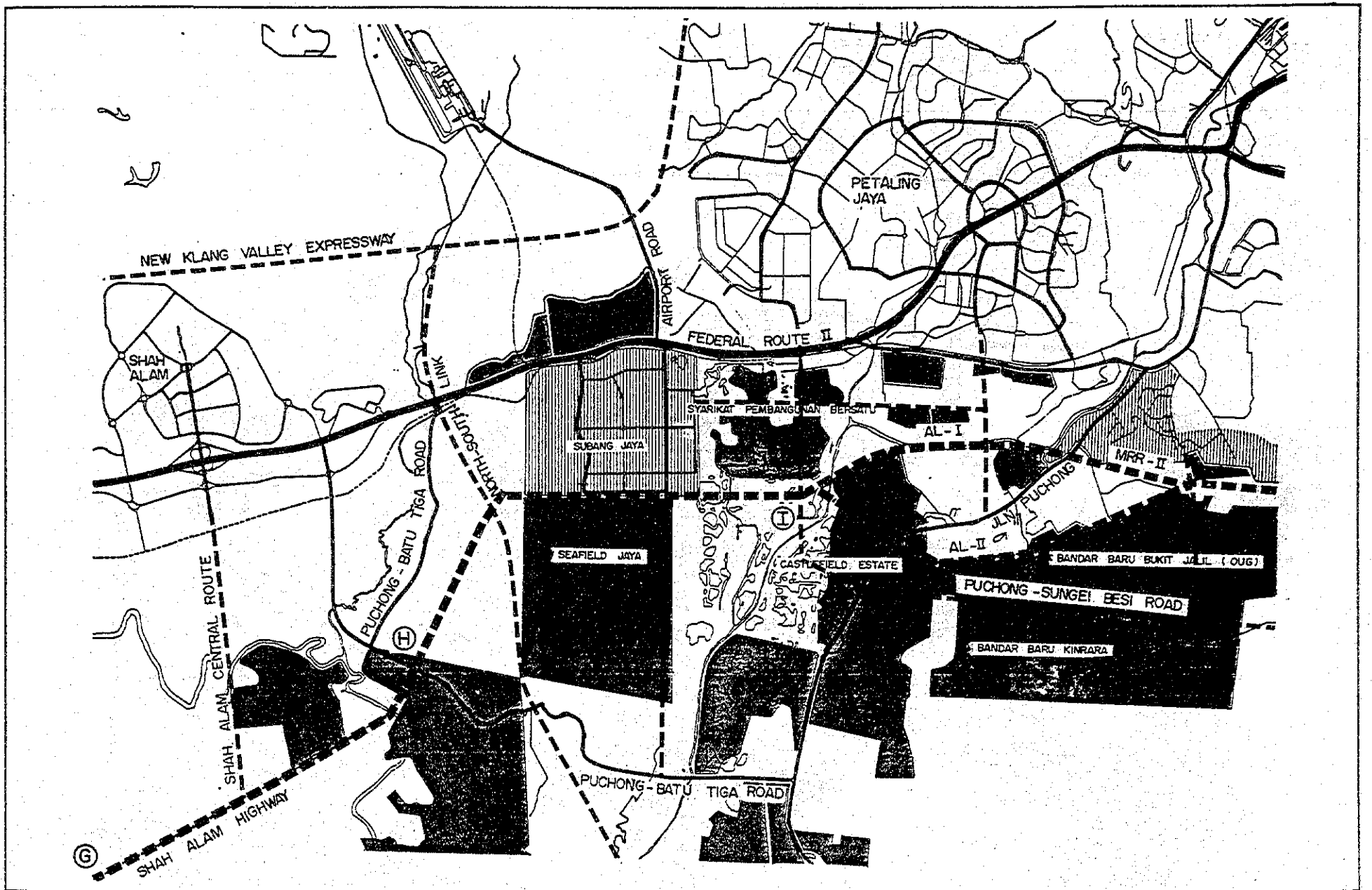

FIG. 3.3: SHAH ALAM HIGHWAY (2)

THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY

Table 3.3: Alternative Routes In Kampung Teluk Gong Besar Area (Segment F-G)

Item		Alternative	AL-I (Sri Andalas Route)	AL-II (Klang Jaya Route)
Background			Original Route : Running on the boundary road of Jalan 1 Kaw 3 between Taman Sri Andalas and Taman Klang Jaya	New Idea : Running in different landuse
Salient Features	Terrain		Flat	Flat
	Road Length (m)	Throughway	8050	9300
		Frontage Road	3000	700
		Interchange Ramp	3780	3220
	Proposed Right-of-Way		40m (33%) : 60m (19%) : 80m (48%)	60m (94%) : 80m (6%)
	Land Acquisition Area (ha)		43	53
	Cost Index		2.30	1.00
	Physical Constraint/Landuse/ Environment/Road Network/ Traffic Demand, etc.		- to run eastward on the existing Jalan Kim Chuan and Jalan 1 Kaw 3 to utilize the existing right-of-way - to form an interchange with Jalan Langat at the existing at-grade intersection - to overpass the residential area by an elevated road viaduct to avoid excessive land acquisition and barrier effect - to provide frontage roads to secure the function of existing roads	- to run south-eastward from Jalan Kim Chuan in between the existing residential area and agricultural area to mitigate the disturbance of the existing developed area - to bypass in the south of Taman Klang Jaya to avoid disturbing the built-up housing complex and its future expansion - to form an interchange with Jalan Langat at 2km far from the existing Kim Chuan Intersection

(c) Segment G-H (South Shah Alam Area)

From Jalan Kebun to Jalan Puchong - Batu Tiga road, the alignment of Shah Alam Highway is fairly fixed on existing Jalan Bukit Kemuning where Shah Alam Highway will play an important role to form a grid pattern road network for Shah Alam. To maintain the existing situation of traffic along Jalan Bukit Kemuning as well as to provide accesses to Shah Alam Highway, frontage roads on both sides of Shah Alam Highway can be provided.

(d) Segment H-I (South Subang Jaya Area)

In this segment, Shah Alam Highway is proposed to run north-eastward to intersect with N-S Link. Seafield Development, planned at the south of Subang Jaya has secured enough space for Shah Alam Highway to pass between the present Subang Jaya and future Seafield Development.

Accordingly, no alternative route is set along this stretch, but some alternatives relating to the location and types of interchanges will be studied.

Finally, Shah Alam Highway crosses the existing Sungei Way tin mining field and extends eastward to join MRR-II.

The Sungei Way tin mining field is scheduled to stop operating in the near future and later to be developed into a residential area. Therefore, Shah Alam Highway and Sunway Interchange will be designed to meet the future needs.

(3) North-South Expressway Link (N-S Link)

Based on the existing road network along the corridor of N-S Link and corridor landuse shown in Figures 3.4 and 3.5 , alternative routes are studied and described as below:-

(a) Segment J-K (Subang Area)

N-S Link which starts from New Klang Valley Expressway in Subang area to form a three-leg junction with semi-directional ramps, runs southward to cross Federal Route II and and the railway track.

At the starting point and at the intersection with Federal Route II near Batu Tiga, Selangor State JKR plans on widening the existing Jalan Subang-Batu Tiga (new Jalan TUDM-Shah Alam). To meet the scheme of the State JKR's road , two alternatives are prepared, namely, Batu Tiga Route (AL-I) and Subang Route (AL-II).

Batu Tiga Route aims to follow the alignment of the planned road to make N-S Link functional and economical if the design standard of the new road can satisfy or adjust to that of N-S Link, while Subang route remains independant of this new road to keep its own alignment.

The salient features of each alternative are summarized in Table 3.4.

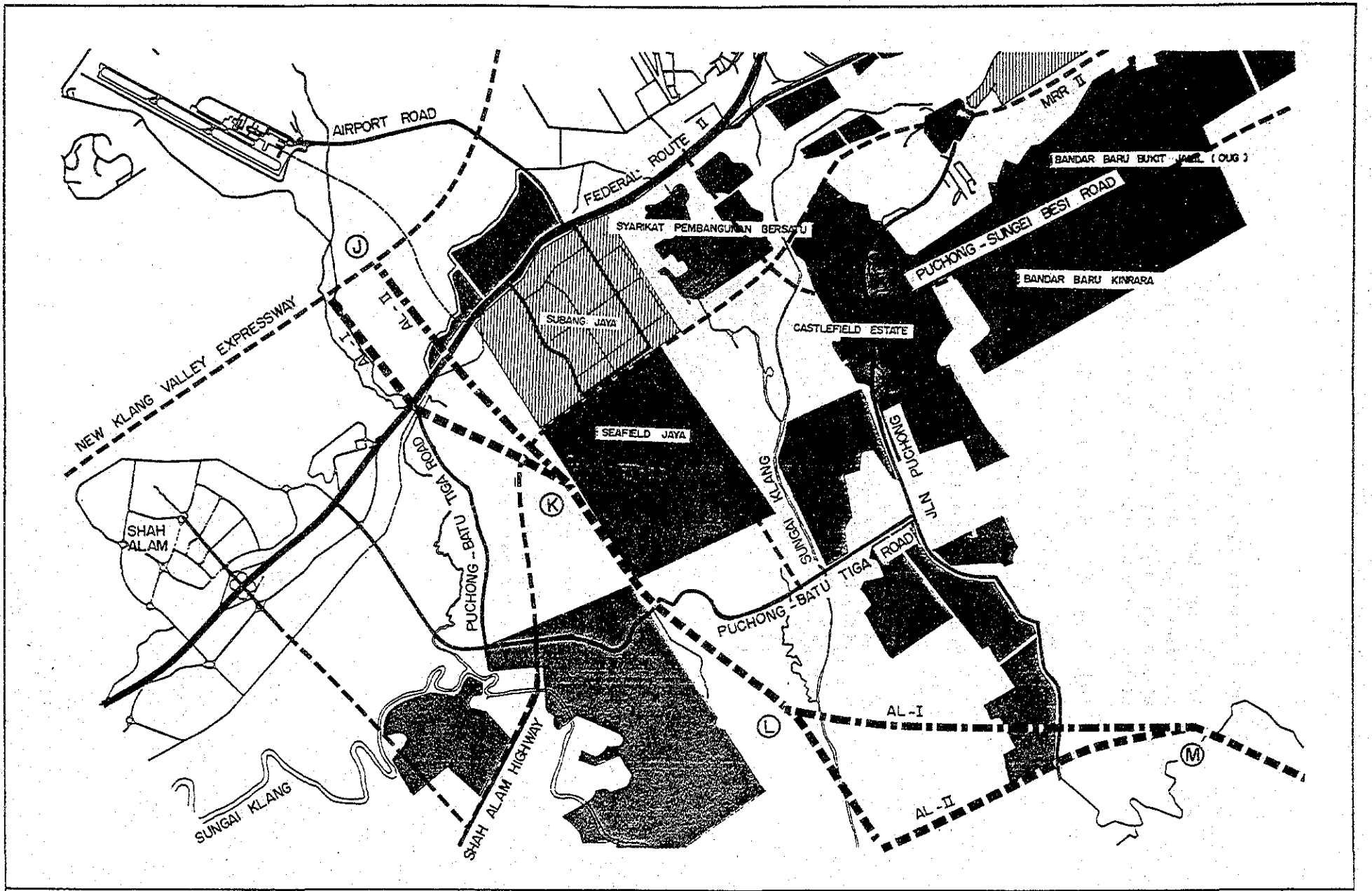

FIG. 3.4: NORTH - SOUTH LINK (1)

THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY

LEGEND:

- PRIMARY / SECONDARY ROAD
- EXPRESSWAY / HIGHWAY
- PROJECT ROAD
- OTHER PLANNED ROAD
- NEW DEVELOPMENTS (EXISTING)
- COMMITTED PROJECTS

SCALE: 0 0.1 0.5 1km

FIG. 3.5: NORTH - SOUTH LINK (2)

THE FEASIBILITY STUDY ON TRANSPORTATION FACILITIES PROJECTS IN KLANG VALLEY

LEGEND:

- PRIMARY / SECONDARY ROAD
- EXPRESSWAY / HIGHWAY
- PROJECT ROAD
- OTHER PLANNED ROAD
- NEW DEVELOPMENTS (EXISTING)
- COMMITTED PROJECTS

SCALE: 0 0.1 0.5 1 km

N

Table 3.4: Alternative Routes In Subang Area (Segment J-K)

Item		Alternative	AL-I (Batu Tiga Route)	AL-II (Subang Route)
Background			New Idea : Running on the new Jalan TUDM-Shah Alam	Original Route : Running along the western end of Subang Jaya and Seafield Development
Salient Features	Terrain		Flat	Rolling
	Road Length (m)	Throughway	6850	6500
		Frontage Road	3200	0
		Interchange Ramp	9800	9800
	Proposed Right-of-Way		(60m (56%) : 80m (44%)	60m (100%)
	Land Acquisition Area (ha)		89	102
	Cost Index		1.00	1.45
	Physical Constraint/Landuse/ Environment/Road Network/ Traffic Demand, etc.		- to utilize the existing right-of-way of new Jalan TUDM-Shah Alam from New Klang Valley Expressway to Federal Route II to minimize land acquisition area - to utilize a planned interchange with Federal Route II with necessary modification - to provide frontage road to keep the original functions of new Jalan TUDM-Shah Alam	- to run in the buffer zone between Shah Alam and Subang to avoid barrier effect of access-controlled road - to keep the own alignment and interchanges to provide high mobility and high serviceability

(b) Segment K-L (HICOM Area)

The westward expansion of Subang Jaya and planned Seafield Development will have their western end facing N-S Link corridor. Jalan Puchong-Batu Tiga, which has two interchanges with both Shah Alam Highway and N-S Link, will provide access to these two developments.

N-S Link manages to pass the very narrow strip between the south-west corner of Seafield Development and the north-east corner of HICOM development.

Along Jalan Puchong-Batu Tiga, some squatter settlements are reported. The route of N-S Link, therefore, runs southward to avoid disturbance of the existing social environment.

(c) Segment L-M (Kampung Bahru Puchong Area)

Along the eastern bank of Sungai Klang, N-S Link is proposed to connect with South Klang Valley Expressway to form a three-legged system interchange.

Two alternative routes are set up to accomodate a desirable route on the linkage of one of either Shah Alam Highway or South Klang Valley Expressway with Kuala Lumpur-Seremban Expressway, namely, Northern Route (AL-I) and Southern Route (AL-II). The northern route runs on the boundary between urbanized area and agricultural/forest area to provide a shorter route and more desirable alignment on the linkage between Kuala Lumpur-Seremban Expressway and Shah Alam Highway. While, the southern route aims to run in the south of urbanized area and to accomodate a desirable route and location of the junction connecting with South Klang Valley Expressway. The salient features of each alternative are summarized in Table 3.5.

Table 3.5: Alternative Routes In Kampung Bahru Puchong Area (Segment L-M)

Item		Alternative	AL-i (Northern Route)	AL-II (Southern Route)
Background			Original Idea : Running on the boundary between urbanized and agricultural/forest area	New Idea : Bypassing wide mining field in the south
Salient Features	Terrain		Flat	Flat
	Road Length (m)	Throughway	11,570	12,720
		Frontage Road	0	0
		Interchange Ramp	1,000	2,750
	Proposed Right-of-Way		60m (100%)	60m (100%)
	Land Acquisition Area (ha)		73	91
	Cost Index		1.09	1.00
	Physical Constraint/Landuse/ Environment/Road Network/ Traffic Demand, etc.		- to accomodate desirable route focussing on the linkage between Kuala Lumpur-Seremban and Shah Alam Highway	- to accomodate preferable route focussing on the linkage between Kuala Lumpur-Seremban Expressway and South Klang Valley Expressway
			- to run south-eastward to cross the Klang river and wide mining field (no operation) on the boundary of a future urbanised area	- to run southward to cross the Klang river and narrow mining field (no operation) to avoid adverse subsurface soil condition
			- to form a junction with South Klang Valley Expressway on the old mining field in the east of Sungai Klang	- to form a junction with South Klang Valley Expressway in the south of Sungai Klang
			- to form an interchange with Jalan Puchong to provide access to the road network in this district	- to need an additional access road and improvement to Jalan Puchong at an interchange

(d) Segment M-N

Many oil palm and rubber estates are located between Jalan Puchong and Kuala Lumpur-Seremban Expressway where mountainous and rolling hills are the predominent landform. Thus, the alignment of N-S Link is selected to traverse gentle slope to meet the design criteria so as to be functional yet economical.

(e) Segment N-O (Kampung Abu Bakar Area)

In this segment, N-S Link passes in the south of Bukit Bisa and runs toward Kuala Lumpur-Seremban Expressway. In Kampung Abu Bakar area, two alternative routes are set up to connect with Kuala Lumpur-Seremban Expressway, namely, Kajang Route (AL-I) and Bangi Newtown Route (AL-II).

These alternatives are based on two schemes, combination of system interchange and service interchange scheme and separation of both interchanges scheme.

The salient features of each alternative are summarized in Table 3.6.

Table 3.6: Alternative Routes In Kampung Abu Bakar Area (Segment N-O)

Item		Alternative	AL-I (Combination of Junction and Interchange Scheme-Kajang Route)	AL-II (Separation of Junction and Interchange Scheme - Bangi Newtown Route)
Background			New Idea : Connecting with Kuala Lumpur-Seremban Expressway at an existing interchange so that all traffic will be distributed at a single place	Original Idea : Connecting with Kuala Lumpur-Seremban Expressway in between Kajang and Bangi Interchanges in order to distribute traffic to Bangi Newtown at two places
Salient Features	Terrain		Rolling	Rolling
	Road Length (m)	Throughway	6220	5500
		Frontage Road	2000	0
		Interchange Ramp	5900	4900
	Proposed Right-of-Way		60m (68%) : 80m (32%)	60m (100%)
	Land Acquisition Area (ha)		41	47
	Cost Index		1.31	1.00
	Physical Constraint/Landuse/ Environment/Road Network/ Traffic Demand, etc.		- to utilize the existing right-of-way at Kajang Interchange to form a junction with Kuala Lumpur-Seremban Expressway - to use the existing right-of-way of improved road in the west of Kajang Interchange and provide frontage road to secure the existing function - to mitigate land acquisition area to use these right-of-ways - to connect with arterial road network in Bangi Newtown directly	- to distribute traffic to Bangi Newtown and its arterial road network efficiently by existing two interchanges, Kajang Interchange and Bangi Interchange (i.e. no provision of direct ramp to the Newtown centre - to form a functional yet economical junction