

タイ国

運輸通信省、道路局

## 有料高速道路計画調査

報告書

(資料編)

平成3年7月

国際協力事業団

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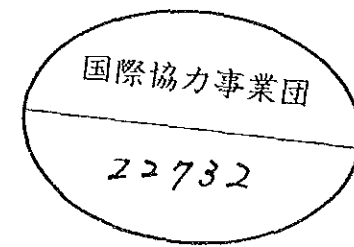
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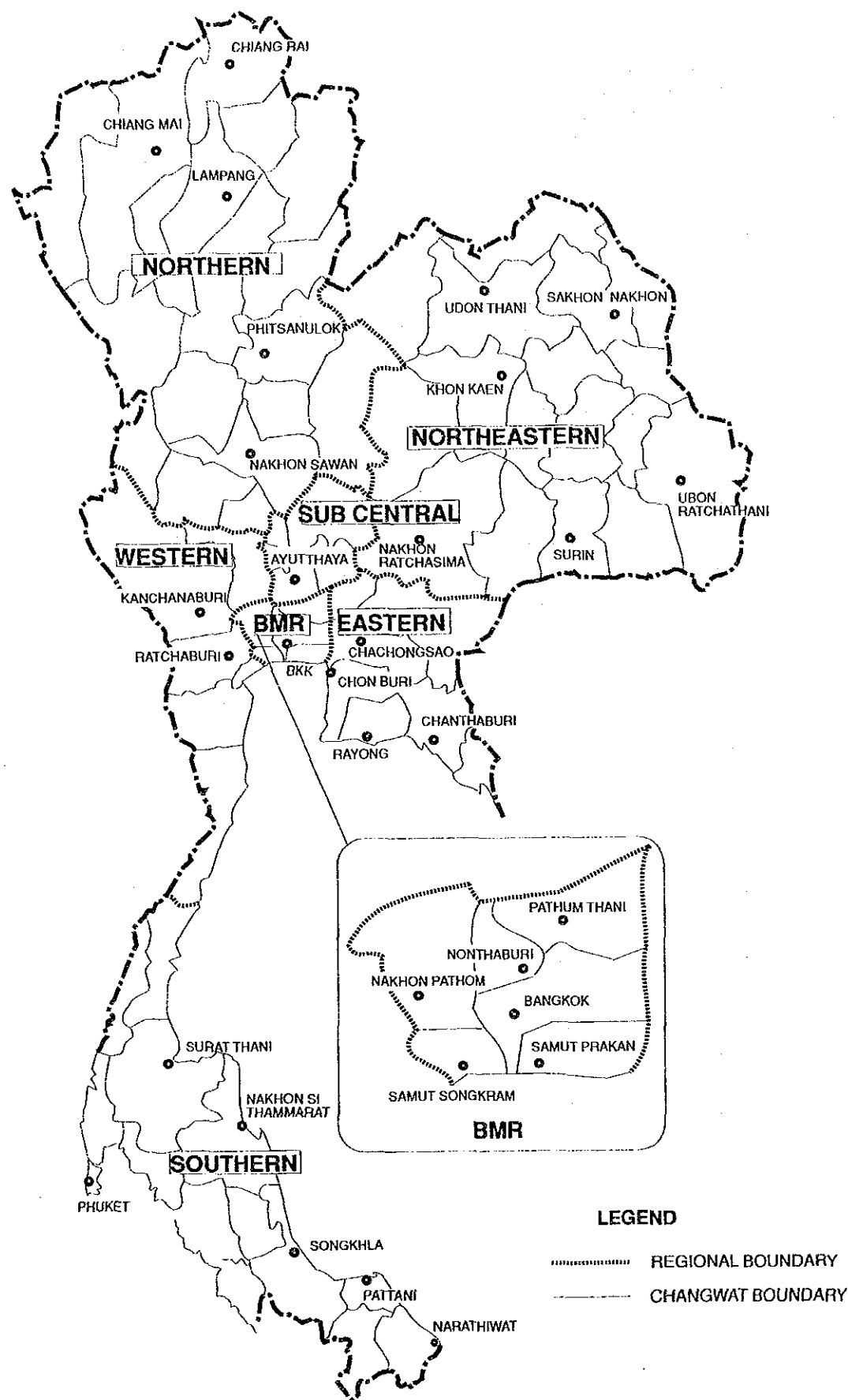
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Appendix 3.1 ADMINISTRATION BOUNDARY BY REGION AND CHANGWAT



REGION	CHANGWAT
Northeastern	Buriram, Chaiyaphum, Kalasin, Khon Kaen, Loei, Maha Sarakham, Mukdahan, Nakhon Phanom, Nakhon Ratchasima, Nong Khai, Roi Et, Sakhon Nakhon, Si Sa Ket, Surin, Ubon Ratchathani, Udon Thani, Yasothon.
Northern	Kamphaeng Phet, Chiang Rai, Chiang Mai, Tak, Nakhon Sawan, Nan, Phichit, Phitsanulok, Phetchabun, Phrae, Mae Hong Son, Lampang, Lamphun, Sukhothai, Uttaradit, Phayao, Uthai Thani.
Southern	Chumphon, Krabi, Nakhon Si Thammarat, Narathiwat, Pattani, Phang Nga, Phatthalung, Phuket, Ranong, Satun, Songkhla, Surat Thani, Trang, Yala.
Eastern	Chachoengsao, Chon Buri, Trat, Nakhon Nayok, Prachin Buri, Rayong, Chanthaburi.
Western	Kanchanaburi, Prachuap Khiri Khan, Phetchaburi, Ratchaburi, Samut Songkhrum, Suphan Buri.
Sub-Central	Chai Nat, Phra Nakhon Si Ayutthaya, Saraburi, Lop Buri, Sing Buri, Ang Thong.
Bangkok Metropolitan and Vicinities (BMR)	Bangkok Metropolitan, Nonthaburi, Pathum Thani, Samut Prakan, Samut Sakhon, Nakhon Pathom.

## Appendix 3.2 POPULATION BY CHANGWAT

(unit : thousand persons)

REGION	1975	1980	1985	1988	Annual Growth Rate (%)			Density in 1988 (persons per sq km)
					1975-1980	1980-1985	1985-1988	
NORTHEASTERN	14,533.7	16,088.1	18,061.1	19,254.2	2.1	2.3	2.2	114.0
MAHA SARAKHAM	700.6	764.5	845.7	880.2	1.8	2.0	1.3	166.3
SURIN	957.5	1,035.6	1,175.6	1,258.1	1.6	2.6	2.3	154.9
KHON KAEN	1,263.2	1,354.9	1,543.0	1,649.5	1.4	2.6	2.2	151.5
SI SA KET	957.3	1,082.1	1,205.4	1,282.3	2.5	2.2	2.1	145.1
ROI ET	988.7	1,061.1	1,147.3	1,202.6	1.4	1.6	1.6	144.9
BURIRAM	1,030.2	1,133.0	1,285.1	1,403.4	1.9	2.6	3.0	136.0
KALASIN	699.1	755.3	820.7	870.3	1.6	1.7	2.0	125.3
YASOTHON	420.0	458.5	487.8	512.2	1.8	1.2	1.6	123.1
NONG KHAI	595.2	673.9	764.9	850.6	2.5	2.6	3.6	116.0
NAKHON RATCHASIMA	1,690.9	1,916.7	2,187.2	2,325.1	2.5	2.7	2.1	113.5
UDON THANI	1,302.2	1,448.2	1,667.8	1,768.2	2.1	2.9	2.0	113.4
NAKHON PHANOM	694.7	760.3	587.5	616.7	1.8	2.8	1.6	111.9
UBON RATCHATHANI	1,393.0	1,560.3	1,736.1	1,862.4	2.3	2.2	2.4	98.5
SAKHON NAKHON	689.1	776.5	885.9	938.1	2.4	2.7	1.9	97.6
CHAIYAPHUM	755.7	857.7	945.3	1,016.0	2.6	2.0	2.4	79.5
MUKDAHAN	-	-	264.5	282.4	-	2.9	2.2	65.1
LOEI	396.3	449.5	511.3	536.1	2.6	2.6	1.6	46.9
NORTHERN	8,912.9	9,587.4	10,391.1	10,731.6	1.5	1.6	1.1	63.3
PHICHIT	515.8	534.5	553.9	547.9	0.7	0.7	0.5	120.9
NAKHON SAWAN	965.8	976.9	1,042.9	1,072.9	0.2	1.3	0.9	111.8
LAMPHUN	338.5	353.6	398.3	409.4	0.9	2.4	0.9	90.9
SUKHOTHAI	497.8	531.6	566.9	582.8	1.3	1.3	0.9	88.4
CHAING RAI	1,294.2	922.9	981.1	1,009.6	1.2	1.2	1.0	86.5
PHAYAO	-	461.6	480.4	492.8	0.8	0.8	0.9	77.8
PHRAE	417.4	446.4	475.2	489.4	1.4	1.3	1.0	74.8
KAM PHAENG PHET	497.8	559.2	621.2	643.8	2.1	2.1	1.2	74.8
PHETCHABUN	680.1	785.2	905.3	931.0	2.9	2.9	0.9	73.5
PHITSANULOK	655.2	709.1	735.1	767.4	1.6	0.7	1.4	71.0
CHIANG MAI	1,096.2	1,166.1	1,277.8	1,345.7	1.2	1.8	1.7	66.9
LAMPANG	643.0	659.4	737.1	756.1	0.5	2.3	0.9	60.3
UTTARADIT	394.7	433.0	441.7	452.3	1.9	0.4	0.8	57.7
UTHAI THANI	217.7	259.5	283.1	295.2	3.6	1.8	1.5	44.0
NAN	343.8	379.0	417.3	432.2	2.0	1.9	1.2	37.7
TAK	248.4	277.0	318.8	336.7	2.2	2.9	1.8	20.5
MAE HONG SON	106.5	132.4	155.0	165.8	4.4	3.2	2.3	13.1



## Appendix 3.2 POPULATION BY CHANGWAT

(unit : thousand persons)

REGION	1975	1980	1985	1988	Annual Growth Rate (%)			Density in 1988 (persons per sq km)
					1975-1980	1980-1985	1985-1988	
SOUTHERN	5,225.5	5,823.4	6,441.4	6,861.1	2.2	2.0	2.1	97.0
PHUKET	118.6	133.7	147.5	155.4	2.4	2.0	1.8	286.2
PATTANI	413.3	457.8	483.8	518.1	2.1	1.1	2.3	267.0
SONGKHLA	748.2	849.6	981.7	1,060.0	2.6	2.9	2.6	143.4
NAKHON SI. THAMMARAT	1,193.6	1,261.4	1,352.2	1,396.2	1.1	1.4	1.1	140.4
PHATTHALUNG	364.1	412.3	430.4	448.6	2.5	0.9	1.4	131.0
NARATHIWAT	394.1	441.8	493.1	536.8	2.3	2.2	2.9	119.9
TRANG	389.3	427.1	469.3	503.0	1.9	1.9	2.3	102.3
SATUN	137.5	164.7	192.4	212.4	3.7	3.2	3.4	85.7
YALA	228.5	273.9	306.4	339.2	3.7	2.3	3.4	75.0
CHUMPHON	290.5	330.5	355.8	383.3	2.6	1.5	2.5	63.8
KRABI	180.3	218.8	257.6	280.8	3.9	3.3	2.9	59.6
SURAT THANI	543.3	593.1	677.6	713.5	1.8	2.7	1.7	55.3
PHANG NGA	153.1	175.0	195.4	206.0	2.7	2.2	1.8	49.4
RANONG	71.1	83.7	98.2	107.8	3.3	3.2	3.2	32.7
EASTERN	2,544.9	2,883.7	3,300.4	3,595.2	2.5	2.7	2.9	98.5
CHON BURI	644.1	725.4	806.4	897.2	2.4	2.1	3.6	205.6
RAYONG	312.8	358.9	418.8	440.3	2.8	3.1	1.7	124.0
CHACHOENGSAO	449.1	498.1	525.7	569.4	2.1	1.1	2.7	106.4
NAKHON NAYOK	196.7	201.2	211.4	223.2	0.5	1.0	1.8	105.2
PRACHIN BURI	553.3	631.3	779.8	854.2	2.7	4.3	3.1	71.4
TRAT	116.1	138.2	168.0	188.4	3.5	4.0	3.9	66.8
CHANTHABURI	272.8	330.6	390.3	422.5	3.9	3.4	2.7	66.7
WESTERN	2,577.7	2,813.5	3,098.4	3,217.4	1.8	1.9	1.3	74.7
SAMUT SONGKHRAM	194.3	196.7	203.4	204.8	0.2	0.7	0.2	491.5
SUPHAN BURI	703.4	709.4	779.7	811.3	0.2	1.9	1.3	151.4
RATCHABURI	583.0	644.7	684.0	705.1	2.0	1.2	1.0	135.7
PHETCHABURI	343.6	366.6	410.6	418.8	1.3	2.3	0.7	67.3
PRACHUAP KHIRI KHAN	328.1	377.2	400.7	413.9	2.8	1.2	1.1	65.0
KANCHANABURI	425.3	518.9	620.0	663.5	4.1	3.6	2.3	34.1

## Appendix 3.2 POPULATION BY CHANGWAT

(unit : thousand persons)

REGION	1975	1980	1985	1988	Annual Growth Rate (%)			Density in 1988 (persons per sq km)
					1975-1980	1980-1985	1985-1988	
SUB CENTRAL	2,428.3	2,537.6	2,663.5	2,791.9	0.9	1.0	1.6	168.3
ANG THONG	245.4	255.2	270.9	277.8	0.8	1.2	0.8	286.9
SING BURI	201.5	202.6	215.0	226.9	0.1	1.2	1.8	275.9
PHRA NAKHON SI AYUTTHAYA	608.5	623.2	653.0	677.6	0.5	0.9	1.2	265.0
SARABURI	445.5	470.7	489.1	521.0	1.1	0.8	2.1	145.7
CHAI NAT	317.1	330.4	339.5	353.1	0.8	0.5	1.3	143.0
LOP BURI	610.3	655.5	696.0	735.5	1.4	1.2	1.9	118.6
BMR	6,167.5	7,227.3	7,821.8	8,509.5	3.2	1.6	2.8	1096.8
BMA	4,349.1	5,153.5	5,345.4	5,716.8	3.5	0.7	2.3	3652.4
NONTHABURI	343.7	386.7	504.4	596.4	2.4	5.5	5.7	958.4
SAMUT PRAKAN	429.8	535.8	662.6	789.1	4.5	4.3	6.0	785.9
SAMUT SAKHON	243.0	265.5	315.4	341.0	1.8	3.5	2.6	390.9
NAKHON PATHOM	507.8	561.3	609.3	630.8	2.0	1.7	1.2	290.9
PATHUM THANI	294.1	324.5	384.7	435.4	2.0	3.5	4.2	285.3
WHOLE KINGDOM	42,390.5	46,961.0	51,777.7	54,960.9	2.1	2.0	2.0	107.1

Source: Registration Division,  
Department of Local Administration,

## Appendix 3.3 URBAN POPULATION BY MUNICIPALITY

(Unit: Thousand Persons)						(Unit: Thousand Persons)					
MUNICIPALITY	CHANGWAT	REGION	1986	1987	1988	MUNICIPALITY	CHANGWAT	REGION	1986	1987	1988
BANGKOK METROPOLITAN	BANGKOK METROPOLITAN	BMR	5,468.9	5,609.4	5,716.8	BAN PHAI	KHON KAEN	NE	36.4	36.2	36.7
NONTHABURI	NONTHABURI	BMR	40.5	41.1	218.4	CHAING RAI	CHAING RAI	N	37.8	37.7	35.7
NAKHON RATCHASIMA	NAKHON RATCHASIMA	NE	206.8	207.5	205.0	KANCHANABURI	KANCHANABURI	W	33.6	34.3	34.9
CHIANG MAI	CHIANG MAI	N	157.8	160.7	164.0	SAMUT SONGKHRAM	SAMUT SONGKHRAM	W	35.5	34.3	34.6
HAT YAI	SONGKHLA	S	131.3	135.1	138.0	NAKHON PHANOM	NAKHON PHANOM	NE	32.7	34.0	34.1
KHON KAEN	KHON KAEN	NE	130.8	132.0	131.3	ROI ET	ROI ET	NE	34.0	34.6	33.9
NAKHON SAWAN	NAKHON SAWAN	N	101.5	103.7	105.2	KALASIN	KALASIN	NE	32.4	33.5	33.8
UBON RATCHATHANI	UBON RATCHATHANI	NE	100.1	100.6	100.4	UTTARADIT	UTTARADIT	N	32.9	33.1	33.7
SONGKHLA	SONGKHLA	S	84.7	85.2	84.4	PHATTHALUNG	PHATTHALUNG	S	33.1	33.4	33.6
UDON THANI	UDON THANI	NE	82.7	82.2	81.2	PHETCHABURI	PHETCHABURI	W	34.3	34.2	33.4
PHITSANULOK	PHITSANULOK	N	75.8	78.0	77.7	HUA HIN	PRACHUAP KHIRI KHAN	W	31.9	32.4	33.2
SAMUT PRAKAN	SAMUT PRAKAN	BMR	69.2	71.3	73.3	PHRA PHUTTHABAT	SARABURI	E	-	-	32.9
NAKHON SI THAMMARAT	NAKHON SI THAMMARAT	S	72.6	72.4	72.4	CHUMPAE	KHON KAEN	NE	30.9	31.3	31.7
YALA	YALA	S	64.7	66.3	67.4	WARIN CHAMRAP	UBON RATCHATHANI	NE	30.7	30.6	30.0
SARABURI	SARABURI	C	57.4	58.7	61.2	NANG RONG	BURIRAM	NE	-	29.5	29.8
PHRA NAKHON SI AYUTTHAYA	AYUTTHAYA	C	60.5	61.1	60.8	SUNGAI KOLOK	NARATHIWAT	S	27.9	28.6	29.8
PATTAYA	CHON BURI	E	49.5	52.6	56.4	BURIRAM	BURIRAM	NE	29.4	29.6	29.5
SAMUT SAKHON	SAMUT SAKHON	BMR	53.3	53.9	54.0	PHETCHABUN	PHETCHABUN	N	28.0	28.3	28.2
TRANG	TRANG	S	47.1	47.4	48.0	BAN PONG	RATCHABURI	W	24.7	25.3	25.8
CHON BURI	CHON BURI	E	48.2	48.0	47.3	SUPHAN BURI	SUPHAN BURI	W	25.6	25.4	25.7
PHUKET	PHUKET	S	47.5	46.9	46.7	SAKHON NAKHON	SAKHON NAKHON	NE	23.5	23.4	25.1
RATCHABURI	RATCHABURI	W	43.2	45.2	46.4	MUKDAHAN	MUKDAHAN	NE	23.4	24.0	24.8
LAMPANG	LAMPANG	N	47.5	43.8	45.0	PHAYAO	PHAYAO	N	24.5	24.5	24.4
RAYONG	RAYONG	E	42.6	43.3	44.3	KAMPHAENG PHET	KAMPHAENG PHET	N	23.4	23.7	24.1
CHACHOENGSAO	CHACHOENGSAO	E	43.1	43.2	44.2	CHAIYAPHUM	CHAIYAPHUM	NE	24.3	24.6	24.0
PAK CHONG	NAKHON RATCHASIMA	NE	43.9	44.8	43.9	NONG KHAI	NONG KHAI	NE	24.0	23.9	23.9
NAKHON PATHOM	NAKHON PATHOM	BMR	45.3	43.2	43.0	NAN	NAN	N	23.6	23.7	23.5
SURATTHANI	SURATTHANI	S	41.5	41.6	41.6	PRACHIN BURI	PRACHIN BURI	E	23.3	23.3	22.9
SURIN	SURIN	NE	40.0	40.5	41.0	SUKHOTHAI	SUKHOTHAI	N	23.1	23.1	22.9
LOP BURI	LOP BURI	C	39.4	39.9	40.5	SI SA KET	SI SA KET	NE	21.6	21.9	22.6
PATTANI	PATTANI	S	38.8	39.3	39.6	PHICHIT	PHICHIT	N	22.5	23.2	22.6
CHANTHABURI	CHANTHABURI	E	37.9	38.0	39.3	TAPAHAN HIN	PHICHIT	N	21.9	22.3	22.0
NARATHIWAT	NARATHIWAT	S	38.1	38.5	38.8	SING BURI	SING BURI	C	21.0	21.1	21.7
MAHA SARAKHAM	MAHA SARAKHAM	NE	37.5	37.9	37.9	YASOTHON	YASOTHON	NE	21.0	21.3	21.4
TAKHLI	NAKHON SAWAN	N	42.2	37.6	36.7	THA KHAM	SURATTHANI	S	20.3	21.1	21.4

## Appendix 3.3 URBAN POPULATION BY MUNICIPALITY

(Unit: Thousand Persons)

MUNICIPALITY	CHANGWAT	REGION	1986	1987	1988
SATUN	SATUN	S	20.6	20.9	21.3
CHA-AM	PHETCHABURI	W	20.0	20.3	21.0
TAK	TAK	N	21.7	21.1	20.9
BETONG	YALA	S	19.8	20.1	20.7
SAWANKHALOK	SUKHOTHAI	N	20.8	20.7	20.7
PAK PHRAEK	NAKHON SI THAMMARAT	S	21.3	21.1	20.6
LOEI	LOEI	NE	20.1	20.4	20.5
MAE SOT	TAK	N	20.1	19.8	20.0
PHRAE	PHRAE	N	20.2	20.1	19.5
SI RACHA	CHON BURI	E	20.7	20.6	19.1
UTHAI THANI	UTHAI THANI	N	18.5	18.6	18.4
NA SAN	SURATTHANI	S	18.2	18.3	18.3
KRABI	KRABI	S	16.6	16.9	17.0
RANONG	RANONG	S	17.0	16.8	16.6
PAK PHANANG	NAKHON SI THAMMARAT	S	17.0	16.9	16.3
PHRA TAEN	KANCHANABURI	W	15.8	15.8	16.0
BUA YAI	NAKHON RATCHASIMA	NE	15.6	16.0	15.9
ARANYAPRATHET	PRACHIN BURI	E	16.0	16.1	15.9
PATHUM THANI	PATHUM THANI	BMR	12.9	14.3	15.7
TANG KHUIAN	RAYONG	E	14.9	15.7	15.7
LOM SAK	PHETCHABUN	N	15.4	15.4	15.4
CHAI NAT	CHAI NAT	C	15.6	15.6	15.1
LAMPHUN	LAMPHUN	N	14.3	14.3	14.7
PRACHUAP KHIRI KHAN	PRACHUAP KHIRI KHAN	W	14.5	14.5	14.7
CHUMPHON	CHUMPHON	S	14.5	14.4	14.4
MUANG PHON	KHON KAEN	NE	14.1	14.4	14.3
TRAT	TRAT	E	13.5	13.2	13.9
KRATHUM BAEN	SAMUT SAKHON	BMR	13.6	13.6	13.8
SADAO	SONGKHLA	S	13.2	13.5	13.8
PHIBUN MANGSAHAN	UBON RATCHATHANI	NE	14.2	14.3	13.5
NONG KHAE	SARABURI	C	12.9	13.0	13.4
CHUMSAENG	NAKHON SAWAN	N	13.5	13.4	13.3
PHANAT NIKOM	CHON BURI	E	13.6	13.5	13.2
KANTANG	TRANG	S	12.6	12.7	12.7
KAENG KHOI	SARABURI	C	12.1	12.3	12.6

(Unit: Thousand Persons)

MUNICIPALITY	CHANGWAT	REGION	1986	1987	1988
PHOTHARAM	RATCHABURI	W	11.5	11.6	12.6
SONG PHI NONG	SUPHAN BURI	W	12.0	12.1	11.4
PA MOK	ANG THONG	C	11.1	11.2	11.3
NAKHON NAYOK	NAKHON NAYOK	E	10.8	10.8	10.9
BANG MUN NAK	PHICHIT	N	10.9	11.1	10.8
TALUBUN	PATTANI	S	10.5	10.6	10.8
PHRA PRADAENG	SAMUT PRAKAN	BMR	10.3	10.3	10.4
BAN BUNG	CHON BURI	E	-	-	10.3
KHLUNG	CHANTHABURI	E	9.9	10.0	10.1
THA MAI	CHANTHABURI	E	9.8	9.9	10.0
BANG BUA THONG	NONTHABURI	BMR	9.2	9.4	9.9
ANG THONG	ANG THONG	C	9.5	9.3	9.7
KHOK SAMRONG	LOP BURI	C	9.5	9.6	9.6
HUAI YOT	TRANG	S	-	-	9.5
TAKUA PA	PHANG NGA	S	9.4	9.3	9.1
NON SUNG	NAKHON RATCHASIMA	NE	9.0	9.0	9.0
PHANG NGA	PHANG NGA	S	8.9	9.0	8.6
THA RUA	AYUTTHAYA	C	8.3	8.3	8.2
BANG KHLA	CHACHOENGSAO	E	7.8	7.9	7.8
AMPHAWA	SAMUT SONGKHRAM	W	7.8	7.7	7.5
MAE HONG SON	MAE HONG SON	N	6.7	6.8	6.8
BAN MI	LOP BURI	C	5.8	6.2	6.1
SENA	AYUTTHAYA	C	5.1	4.9	5.0
LANG SUAN	CHUMPHON	S	5.0	4.9	4.9
KABIN BURI	PRACHIN BURI	E	4.7	4.7	4.6
WAT SING	CHAI NAT	C	4.5	4.4	4.3
SRI PHANOM MAT	UTTARADIT	N	4.0	4.0	4.0

Source: Registration Division  
 Department of Local Administration  
 Ministry of Interior

## Appendix 3.4 GROSS PROVINCIAL PRODUCTS AT CURRENT MARKET PRICES

(Unit : Million Baht)					(Unit : Million Baht)						
NO.	CHNGWAT	REGION	1981	1986	1987	NO.	CHNGWAT	REGION	1981	1986	1987
1	BANGKOK METROPOLITAN	BMR	277,515	411,742	489,344	41	PHETCHABURI	W	5,045	6,720	6,892
2	SAMUT PRAKAN	BMR	30,893	45,741	57,986	42	SAKON NAKHON	NE	4,572	6,257	6,718
3	CHON BURI	E	28,773	52,897	47,687	43	SUKHOTHAI	N	5,654	6,244	6,699
4	NAKHON RATCHASIMA	NE	16,168	23,195	23,900	44	PHANGNGA	S	9,032	6,045	6,659
5	CHIANG MAI	N	14,825	20,695	23,466	45	TAK	N	3,213	5,439	6,496
6	PATHUM THANI	BMR	12,428	19,655	23,270	46	CHANTHABURI	E	4,626	5,775	6,473
7	SONGKHLA	S	12,279	20,301	21,829	47	KALASIN	NE	4,405	5,750	6,350
8	SARABURI	C	11,987	17,232	18,708	48	UTTARADIT	N	4,571	5,649	6,208
9	KANCHANABURI	W	13,456	17,819	18,482	49	PATTANI	S	3,757	5,926	6,151
10	KHON KAEN	NE	11,241	16,159	18,148	50	YALA	S	3,641	5,183	6,134
11	NAKHON SI THAMMARAT	S	10,344	15,205	16,789	51	KRABI	S	2,342	4,624	6,049
12	CHACHOENGSAO	E	7,106	14,220	16,097	52	MAHA SARRAKHAM	NE	4,145	5,336	5,706
13	RAYONG	E	7,171	14,482	15,235	53	LOEI	NE	4,074	5,193	5,656
14	SURAT THANI	S	8,520	13,776	15,123	54	CHAI NAT	C	4,352	5,060	5,572
15	NAKHON SAWAN	N	10,667	13,288	14,764	55	PHUKET	S	5,534	5,146	5,549
16	UBON RATCHATHANI	NE	8,354	12,232	14,272	56	PHICHIT	N	5,111	5,275	5,496
17	UDON THAHI	NE	10,367	13,013	13,698	57	PHATTHALUNG	S	3,589	4,710	5,318
18	SAMUT SAKHON	BMR	7,036	11,780	13,379	58	LANPHUN	N	3,234	3,920	4,878
19	RATCHABURI	W	10,530	12,228	13,280	59	PHRAE	N	3,276	4,305	4,667
20	LAMPANG	N	7,072	10,453	11,778	60	NAKHON PHANOM	NE	4,055	4,151	4,613
21	NAKHON PATHOM	BMR	7,883	9,981	11,353	61	SATUN	S	2,266	4,230	4,590
22	CHIANG RAI	N	8,395	10,532	11,329	62	PHAYAO	N	3,379	4,096	4,426
23	SUPHAN BURI	W	8,502	9,558	10,590	63	UTHAI THANI	N	3,222	3,660	4,233
24	PHACHUAP KHIRI KHAN	W	6,601	9,974	10,529	64	RANONG	S	4,542	4,508	4,025
25	KAM PHAENG PHET	N	5,256	9,672	9,902	65	NAN	N	2,836	3,689	3,904
26	NONTHABURI	BMR	4,855	8,590	9,834	66	TRAT	E	2,148	3,480	3,901
27	BURI RAM	NE	6,388	9,163	9,461	67	SINGBURI	C	3,113	2,998	3,451
28	PHRA NAKHON SRI AYUTHAYA	C	6,824	8,327	9,336	68	ANG THONG	C	3,177	3,175	3,428
29	SURIN	NE	6,047	8,585	9,308	69	YASOTHON	NE	2,399	3,056	3,381
30	LOP BURI	C	7,601	8,244	9,021	70	SAMUT SONGKHRAM	W	1,750	2,862	2,958
31	PHITSANULOK	N	6,887	8,267	8,948	71	NAKHON NAYOK	E	1,887	2,348	2,639
32	PHETCHABUN	N	7,536	8,945	8,904	72	MAE HONG SON	N	1,609	2,042	2,187
33	PRACHIN BURI	E	5,450	7,760	8,465	73	MUKDAHAN	NE	-	1,941	2,054
34	TRANG	S	6,074	7,212	8,350						
35	SI SA KET	NE	5,489	7,583	8,257		TOTAL		762,176	1,096,665	1,236,017
36	CHAIYAPHUM	NE	4,457	7,949	8,195						
37	CHUMPHON	S	4,762	8,020	8,115						
38	ROI ET	NE	5,381	7,675	8,042						
39	NARATHIWAT	S	4,346	6,565	7,789						
40	NONG KHAI	NE	4,171	7,177	7,605						

Source : NESDB

## Appendix 3.5 GROSS PROVINCIAL PRODUCTS AT 1972 CONSTANT PRICES

(Unit: Million Baht)							(Unit: Million Baht)						
NO. CHANGWAT	REGION	GPP			ANNUAL GROWTH RATE (%)		NO. CHANGWAT	REGION	GPP			ANNUAL GROWTH RATE (%)	
		1981	1986	1987	1981-1986	1986-1987			1981	1986	1987	1981-1986	1986-1987
1 BANGKOK METROPOLITAN	BMR	121,939	153,631	177,140	4.7	15.3	41 PHETCHABURI	W	2,030	2,593	2,601	5.0	0.3
2 SAMUT PRAKAN	BMR	12,467	15,902	19,050	5.0	19.8	42 TAK	N	1,284	2,337	2,598	12.7	11.2
3 CHON BURI	E	10,389	14,914	15,019	7.5	0.7	43 SAKON NAKHON	NE	1,922	2,542	2,593	5.7	2.0
4 NAKHON RATCHASIMA	NE	7,968	9,677	9,610	4.0	-0.7	44 SUKHOTHAI	N	2,274	2,540	2,522	2.2	-0.7
5 CHIANG MAI	N	6,559	8,459	8,969	5.2	6.0	45 KALASIN	NE	1,939	2,338	2,456	3.8	5.1
6 PATHUM THANI	BMR	5,149	7,147	8,230	6.8	15.2	46 UTTARADIT	N	1,842	2,366	2,412	5.1	1.9
7 SONGKHLA	S	4,848	6,898	7,162	7.3	3.8	47 CHANTHABURI	E	1,828	2,162	2,282	3.4	5.5
8 SARABURI	C	4,988	6,776	7,120	6.3	5.1	48 MAHA SARRAKHAM	NE	1,831	2,195	2,261	3.7	3.0
9 KHON KAEN	NE	4,882	6,430	6,850	5.7	6.5	49 PHANGNGA	S	2,779	2,150	2,240	-5.0	4.2
10 KANCHANABURI	W	4,823	6,930	6,796	7.5	-1.9	50 PHICHIT	N	2,028	2,208	2,184	1.7	-1.1
11 NAKHON SI THAMMARAT	S	4,243	5,676	6,088	6.0	7.3	51 LOEI	NE	1,804	2,225	2,176	4.3	-2.2
12 NAKHON SAWAN	N	4,300	5,491	5,710	5.0	4.0	52 CHAI NAT	C	1,751	2,088	2,104	3.6	0.8
13 UBON RATCHATHANI	NE	3,730	5,081	5,555	6.4	9.3	53 YALA	S	1,481	1,858	2,055	4.6	10.6
14 UDON THANI	NE	4,398	5,339	5,311	4.0	-0.5	54 PHUKET	S	1,951	2,000	2,054	0.5	2.7
15 SURAT THANI	S	3,378	5,013	5,311	8.2	5.9	55 PATTANI	S	1,454	2,035	2,054	7.0	0.9
16 RATCHABURI	W	4,219	4,988	5,232	3.4	4.9	56 KRABI	S	984	1,737	1,992	12.0	14.7
17 CHACHOENGSAO	E	2,809	4,474	4,688	9.8	4.8	57 PHATTHALUNG	S	1,484	1,828	1,916	4.3	4.9
18 CHIANG RAI	N	3,454	4,580	4,611	5.8	0.7	58 LANPHUN	N	1,558	1,680	1,862	1.5	10.9
19 RAYONG	E	2,733	4,462	4,572	10.3	2.5	59 PHRAE	N	1,437	1,792	1,844	4.5	2.9
20 SAMUT SAKHON	BMR	2,589	4,006	4,450	9.1	11.1	60 NAKHON PHANOM	NE	1,799	1,695	1,792	-1.2	5.7
21 NAKHON PATHOM	BMR	3,315	4,079	4,365	4.2	7.0	61 PHAYAO	N	1,367	1,737	1,751	4.9	0.8
22 SUPHAN BURI	W	3,198	3,995	4,072	4.6	1.9	62 UTHAI THANI	N	1,319	1,507	1,569	2.7	4.1
23 LAMPANG	N	3,060	3,477	3,747	2.6	7.7	63 NAN	N	1,221	1,570	1,566	5.2	-0.3
24 PHACHUAP KHIRI KHAN	W	2,402	3,659	3,744	8.8	2.3	64 SATUN	S	836	1,346	1,387	10.0	3.0
25 BURI RAM	NE	2,723	3,850	3,709	7.2	-3.7	65 SINGBURI	C	1,286	1,267	1,351	-0.3	6.6
26 PHRA NAKHON SRI AYUTHAYA	C	2,967	3,500	3,641	3.4	4.0	66 YASOTHON	NE	1,026	1,264	1,318	4.3	4.2
27 PHETCHABUN	N	3,089	3,922	3,531	4.9	-10.0	67 ANG THONG	C	1,282	1,289	1,295	0.1	0.5
28 SURIN	NE	2,624	3,480	3,516	5.8	1.0	68 TRAT	E	848	1,172	1,266	6.7	8.0
29 LOP BURI	C	3,238	3,492	3,516	1.5	0.7	69 RANONG	S	1,365	1,340	1,195	-0.4	-10.9
30 NONTHABURI	BMR	2,065	3,157	3,477	8.9	10.1	70 NAKHON NAYOK	E	779	963	1,011	4.3	5.0
31 PHITSANULOK	N	2,815	3,435	3,475	4.1	1.2	71 SAMUT SONGKHRAM	W	683	970	989	7.3	2.0
32 PRACHIN BURI	E	2,393	3,414	3,428	7.4	0.4	72 MUKDAHAN	NE		781	786	9.7	0.7
33 SI SA KET	NE	2,418	3,324	3,367	6.6	1.3	73 MAE HONG SON	N	613	774	769	4.8	-0.6
34 CHAIYAPHUM	NE	2,071	3,313	3,211	9.9	-3.1							
35 KAM PHAENG PHET	N	2,060	3,316	3,205	10.0	-3.4							
36 ROI ET	NE	2,254	3,143	3,120	6.9	-0.7							
37 NONG KHAI	NE	1,797	3,063	3,101	11.3	1.2							
38 CHUMPHON	S	1,972	3,009	3,025	8.8	0.5							
39 TRANG	S	2,185	2,512	2,700	2.8	7.5							
40 NARATHIWAT	S	1,843	2,453	2,686	5.9	9.5							
							TOTAL		318,439	411,814	446,361	5.3	8.4

Source: NESDB



## Appendix 3.7 PER CAPITA GPP AT 1972 CONSTANT PRICES

(Unit : Baht)

NO. CHANGWAT	REGION	PER CAPITA GPP			Annual Growth Rate (%)	
		1981	1986	1987	1981-1986	1986-1987
1 SAMUT PRAKAN	BMR	22,959	24,240	28,098	1.1	15.9
2 PATHUM THANI	BMR	15,793	18,708	21,266	3.4	13.7
3 BMA	BMR	24,204	26,370	29,662	1.7	12.5
4 KRABI	S	4,335	6,338	7,037	7.9	11.0
5 SAMUT SAKHON	BMR	9,734	12,841	14,218	5.7	10.7
6 LANPHUN	N	4,427	4,241	4,644	-0.9	9.5
7 TAK	N	4,600	7,302	7,946	9.7	8.8
8 NAKHON PATHOM	BMR	5,899	6,855	7,448	3.0	8.7
9 TRAT	E	6,146	7,019	7,582	2.7	8.0
10 UBON RATCHATHANI	NE	2,294	2,890	3,114	4.7	7.7
11 NAKHON NAYOK	E	3,895	4,654	4,981	3.6	7.0
12 LAMPANG	N	4,657	4,744	5,056	0.4	6.6
13 CHANTHABURI	E	5,490	5,615	5,973	0.5	6.4
14 YALA	S	5,216	5,664	6,007	1.7	6.1
15 CHACHOENGSAO	E	5,675	8,654	9,175	8.8	6.0
16 NAKHON SI THAMMARAT	S	3,259	3,991	4,228	4.1	5.9
17 NONTHABURI	BMR	5,255	6,314	6,686	3.7	5.9
18 NARATHIWAT	S	4,025	4,671	4,946	3.0	5.9
19 SINGBURI	C	6,366	6,032	6,371	-1.1	5.6
20 TRANG	S	4,954	5,075	5,346	0.5	5.3
21 NAKHON PHANOM	NE	2,277	2,858	2,997	4.7	4.9
22 KHON KAEN	NE	3,453	4,065	4,229	3.3	4.0
23 CHIANG MAI	N	5,630	6,635	6,900	3.3	4.0
24 RAYONG	E	7,467	10,831	11,262	7.7	4.0
25 KALASIN	NE	2,461	2,820	2,927	2.8	3.8
26 SURAT THANI	S	5,502	7,030	7,295	5.0	3.8
27 SARABURI	C	10,658	14,059	14,530	5.7	3.3
28 PHATTHALUNG	S	3,499	4,034	4,166	2.9	3.3
29 YASOTHON	NE	2,156	2,564	2,646	3.5	3.2
30 PHRA NAKHON SRI AYUTHAYA	C	4,778	5,477	5,645	2.8	3.1
31 NAKHON SAWAN	N	4,410	5,295	5,428	3.7	2.5
32 MAHA SARAKHAM	NE	2,309	2,577	2,638	2.2	2.4
33 UTHAI THANI	N	5,054	5,326	5,428	1.1	1.9
34 PHANGNGA	S	15,351	10,437	10,615	-7.4	1.7
35 PHRAE	N	3,229	3,797	3,858	3.3	1.6
36 CHON BURI	E	14,310	18,736	19,012	5.5	1.5
37 PHUKET	S	14,140	12,820	12,918	-1.9	0.8
38 SAKON NAKHON	NE	2,379	2,834	2,849	3.6	0.6
39 PRACHIN BURI	E	3,762	4,410	4,434	3.2	0.5
40 UTTARADIT	N	4,264	5,390	5,419	4.8	0.5

(Unit : Baht)

NO. CHANGWAT	REGION	PER CAPITA GPP			Annual Growth Rate (%)	
		1981	1986	1987	1981-1986	1986-1987
41 NONG KHAI	NE	2,553	3,973	3,992	9.3	0.5
42 RATCHABURI	W	6,542	7,478	7,507	2.7	0.4
43 SONGKHLA	S	5,516	6,582	6,595	3.6	0.2
44 CHAI NAT	C	5,323	6,307	6,319	3.5	0.2
45 ANG THONG	C	5,049	4,882	4,887	-0.7	0.1
46 SI SA KET	NE	2,143	2,720	2,709	4.9	-0.4
47 PHICHIT	N	3,820	4,066	4,038	1.3	-0.7
48 PHAYAO	N	2,964	3,635	3,609	4.2	-0.7
49 CHIANG RAI	N	3,742	4,702	4,667	4.7	-0.7
50 LOP BURI	C	4,944	5,083	5,045	0.6	-0.8
51 PHITSANULOK	N	3,987	4,686	4,646	3.3	-0.9
52 SURIN	NE	2,420	2,905	2,880	3.7	-0.9
53 MUKDAHAN	NE		2,914	2,879	-	-1.2
54 SATUN	S	4,891	6,535	6,449	6.0	-1.3
55 SAMUT SONGKHRAM	W	3,484	4,898	4,826	7.1	-1.5
56 ROI ET	NE	2,043	2,712	2,666	5.8	-1.7
57 PATTANI	S	3,080	3,967	3,897	5.2	-1.8
58 NAN	N	3,221	3,773	3,702	3.2	-1.9
59 UDON THANI	NE	2,914	3,157	3,093	1.6	-2.0
60 SUKHOTHAI	N	4,283	4,504	4,410	1.0	-2.1
61 PHACHUAP KHIRI KHAN	W	6,370	9,359	9,154	8.0	-2.2
62 CHUMPHON	S	5,766	7,981	7,797	6.7	-2.3
63 NAKHON RATCHASIMA	NE	3,994	4,342	4,233	1.7	-2.5
64 SUPHAN BURI	W	4,517	5,222	5,071	2.9	-2.9
65 MAE HONG SON	N	4,608	4,961	4,807	1.5	-3.1
66 LOEI	NE	3,831	4,312	4,177	2.4	-3.1
67 PHETCHABURI	W	5,530	6,498	6,268	3.3	-3.5
68 CHAIYAPHUM	NE	2,322	3,451	3,296	8.2	-4.5
69 KAM PHAENG PHET	N	3,665	5,366	5,104	7.9	-4.9
70 BURI RAM	NE	2,300	2,939	2,748	5.0	-6.5
71 KANCHANABURI	W	9,135	11,397	10,618	4.5	-6.6
72 PHETCHABUN	N	3,930	4,367	3,881	2.1	-11.1
73 RANONG	S	15,684	12,764	10,961	-4.0	-14.1
WHOLE KINGDOM		6,671	7,821	8,327	3.2	6.5

Source: NESDB



## Appendix 3.8 NUMBER OF FACTORIES BY CHANGWAT

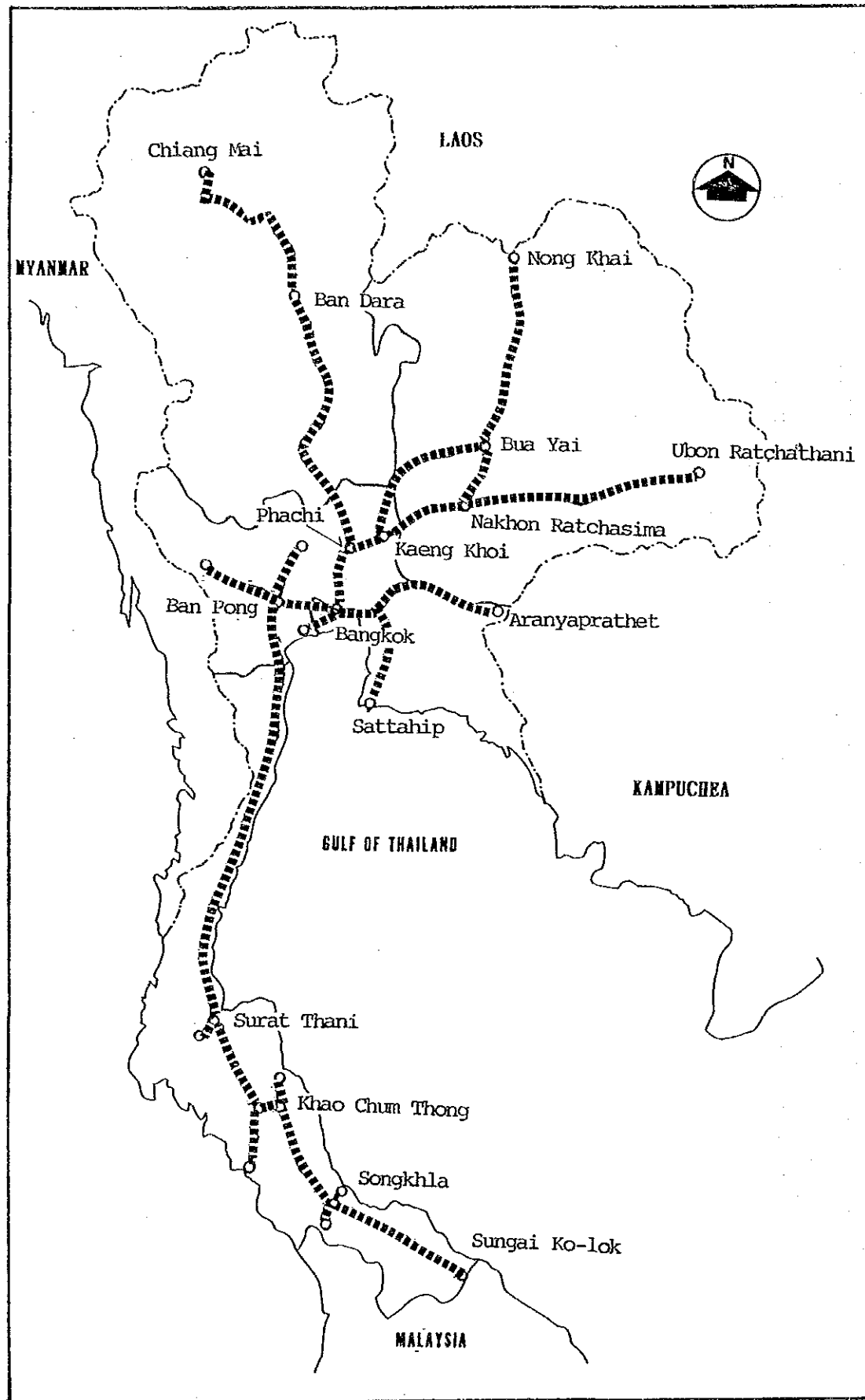
REGION	1986			1987		
	Rice Mills	Others	Total	Rice Mills	Others	Total
NORTHEASTERN	25,907	4,611	30,718	25,774	5,230	31,004
MAHA SARAKHAM	1,006	227	1,833	1,595	242	1,837
SURIN	1,713	180	1,893	1,699	202	1,901
KHON KAEN	1,467	695	2,162	1,450	766	2,216
SI SA KET	2,441	111	2,552	2,452	115	2,567
ROI ET	1,742	314	2,056	1,724	318	2,042
BURIRAM	2,308	161	2,469	2,302	193	2,495
KALASIN	1,032	186	1,220	1,027	210	1,237
YASOTHON	563	28	591	565	31	596
NONG KHAI	603	119	822	802	182	984
NAKHON RATCHASIMA	2,344	1,081	3,425	2,332	1,160	3,492
UDON THANI	2,072	765	2,837	2,043	778	2,821
NAKHON PHANOM	2,261	241	2,502	2,259	257	2,516
UBON RATCHATHANI	1,883	330	2,213	1,876	348	2,224
SAKHON NAKHON	1,593	174	1,767	1,561	187	1,748
CHAIYAPHUM	1,305	109	1,414	1,305	139	1,444
HUKDAHAN	37	48	85	37	57	94
LOBI	737	40	777	745	45	790
NORTHERN	10,970	3,475	14,445	10,834	3,818	14,652
PHICHIT	818	190	1,008	799	217	1,016
NAKHON SAMAN	654	445	1,099	649	461	1,110
LANPHUN	260	123	383	249	136	385
SUKHOTHAI	606	201	809	602	210	812
CHAIANG RAI	1,971	170	2,141	1,964	177	2,141
PHAYAO	112	41	153	124	48	172
PHRAE	582	200	782	581	183	764
KAM PHAENG PHET	339	160	499	331	202	533
PHETCHABUN	815	443	1,258	740	481	1,221
PHITSANULOK	822	379	1,201	814	426	1,240
CHIANG MAI	899	414	1,313	899	447	1,346
LANPANG	1,132	379	1,511	1,125	404	1,529
UTTARADIT	779	130	909	774	175	949
UTHAI THANI	285	17	302	290	23	313
NAN	497	113	610	496	135	631
TAK	260	59	319	260	74	334
MAE HONG SON	137	11	148	137	19	156

REGION	1986			1987		
	Rice Mills	Others	Total	Rice Mills	Others	Total
SOUTHERN	4,538	2,742	7,280	4,513	3,007	7,520
PHUKET	8	211	219	8	215	223
PATTANI	240	191	434	240	209	449
SONGKHLA	542	512	1,054	535	533	1,068
NAKHON SI THAMMARAT	1,323	370	1,693	1,311	452	1,763
PHATTHALUNG	661	79	740	659	84	743
NARATHIWAT	283	226	509	282	246	528
TRANG	125	177	302	125	178	303
SATUN	194	23	217	194	26	222
YALA	149	118	267	148	137	285
CHUMPHON	160	214	374	158	235	393
KRABI	237	40	277	237	44	281
SURATTHANI	434	344	778	433	379	812
PHANG NGA	135	156	291	135	169	304
RANONG	47	78	125	48	98	146
EASTERN	1,865	3,097	4,962	1,884	3,189	5,073
CHON BURI	305	1,053	1,358	304	1,030	1,334
RAYONG	237	616	853	237	627	864
CHACHOENGSAO	358	303	661	358	331	689
NAKHON NAYOK	96	38	134	96	48	144
PRACHIN BURI	432	488	930	433	516	949
TRAT	219	193	412	219	234	453
CHANTHABURI	238	396	634	237	403	640
WESTERN	1,475	2,325	3,800	1,458	2,377	3,835
SAMUT SONCKHRAH	12	94	106	12	93	105
SUPHAN BURI	400	573	973	397	584	981
RATCHABURI	302	639	941	295	624	919
PHETCHABURI	464	247	711	461	253	714
PRACHUAP KHIRI KHAN	74	206	280	72	249	321
KANCHANABURI	223	566	789	221	574	795

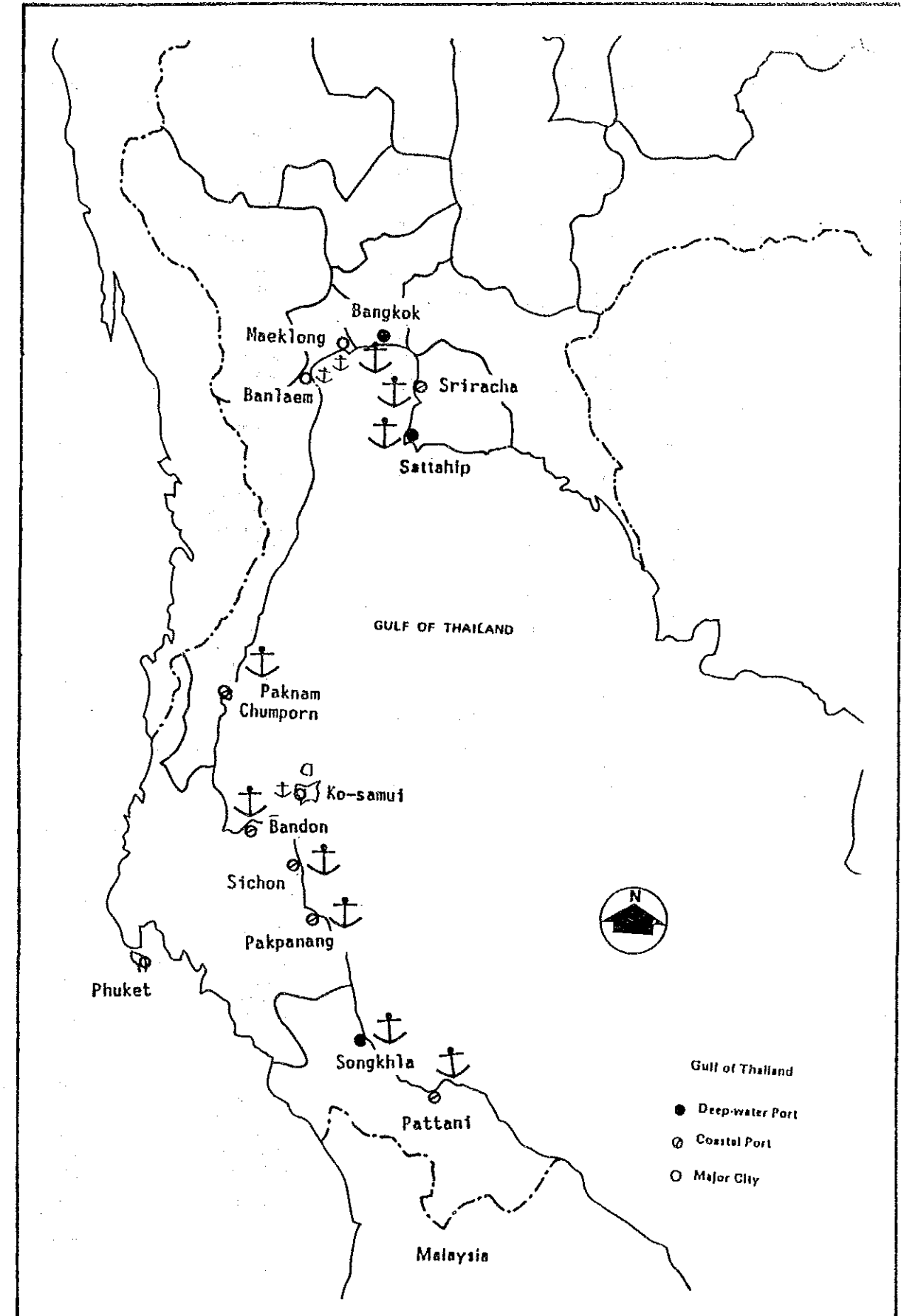
REGION	1986			1987		
	Rice Mills	Others	Total	Rice Mills	Others	Total
SUB CENTRAL	1,398	1,013	2,411	1,393	1,069	2,467
ANG THONG	118	64	182	122	76	198
SING BURI	130	50	180	132	48	180
PHGA NAKHON SI AYUTTHAYA	272	268	540	265	300	565
SARABURI	223	318	541	223	325	548
CHAI NAT	374	62	436	382	64	446
LOP BURI	281	251	532	274	256	530
BMR	772	21,072	21,844	776	21,894	22,670
BMA	141	16,520	16,661	136	16,920	17,056
NONTHABURI	73	550	623	77	609	686
SAMUT PRAKAN	104	2,295	2,399	105	2,526	2,631
SAMUT SAKHON	46	733	779	46	767	813
NAKHON PATHOM	276	575	851	277	610	887
PATRUM THANI	132	399	531	135	462	597
WHOLE KINGDOM	46,945	38,535	85,480	46,637	40,584	87,221

Source: Ministry of Industry

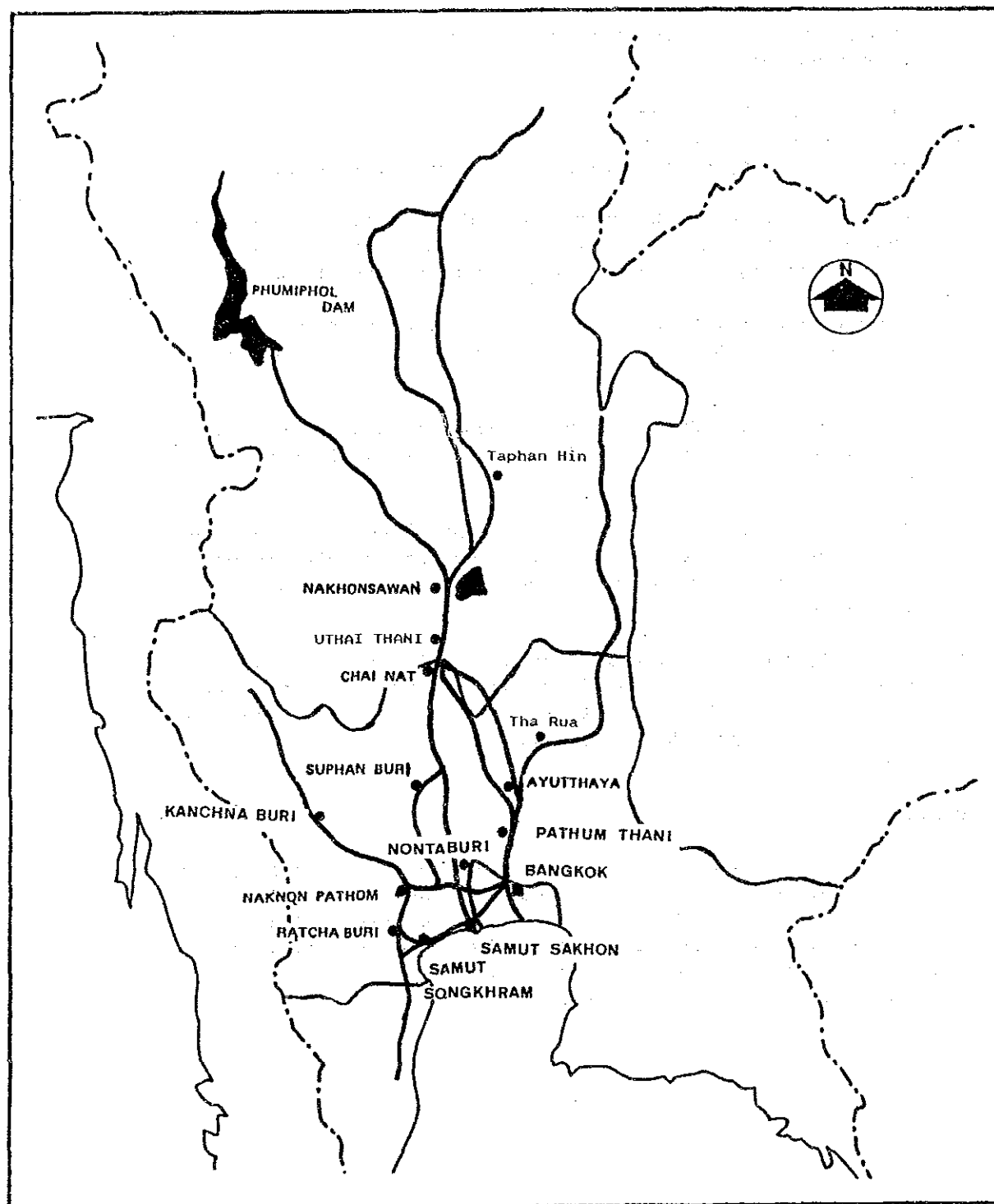
Appendix 3.9 RAILWAY NETWORK



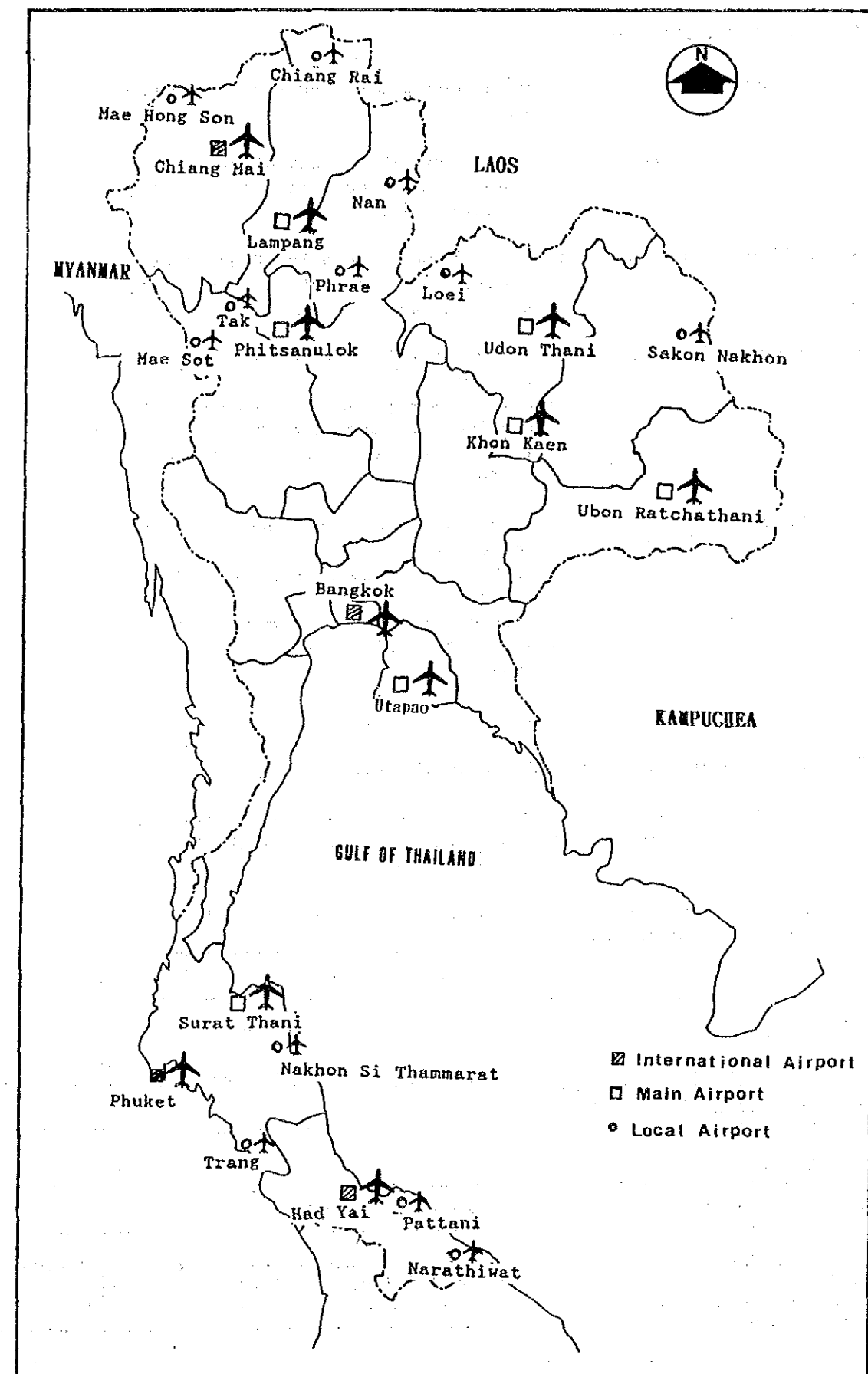
Appendix 3.10 MAIN COASTAL PORTS



Appendix 3.11 MAIN INLAND WATER PORTS



Appendix 3.12 AIRPORTS



Appendix 3.13 DESIGN STANDARDS FOR PRIMARY HIGHWAY

**Controlling Factors**

1. Access control : When designated under the Highway Law.
2. Highway crossing : Grade separation only after proven viable by economic feasibility calculations.
3. Railroad crossing : Grade separation only after proven viable by economic feasibility calculations.
4. Bridge width (1) : Bridge width shall be one of the following
  - a) Full roadway width (shoulder to shoulder or curb to curb)
  - b) 1.50 m greater than carriageway width
5. Sidewalk (2) : Sidewalk shall be one of the following
  - a) 1.50 m for bridges in urban and suburban areas
  - b) 1.00 m for bridges in rural areas
  - c) 05.0 m for bridges with no pedestrian
6. Vertical clearance = 4.90 m (16 ft.)
7. Design bridge loading= HS 20-44 (MS 18)
8. Pavement design shall e based on the accumulated number of equivalent axle loads predicted during the first 7-year after construction.
9. Follow AASHTO recommendation for any design details not separately specified.

**Explanatory Notes**

1. Bridge shall be to the full roadway width except as specified below
  - a) Bridges in urban areas
  - b) Bridges in short curves
  - c) Bridges with special conditions such as crossing large river
2. Where required by the number of pedestrians, a minimum of one meter of sidewalk shall be provided on both sides of 2-lane 2-way highway and on left side of divided highway.
3. Design speed may be relaxed in exceptional circumstances on account of right of way difficulties or mountainous terrain.
4. Refer to the AASHTO policy on Geometric Design of Rural Highways to related desirable grade lengths, climbing lane, etc.
5. May be reduced in urban or semi-urban conditions at the discretion of the Department provided that a suitable cross section including service roads, where necessary, is obtainable.
6. Class P<sub>D</sub> roads are required on the basis of a 7-year ADT projection or be justified by economic feasibility calculations. Class P<sub>1</sub> to P<sub>3</sub> roads are required on the basis of a 15-year ADT projection.

**Remark**

In special case the Department may reduce the carriageway width to 3.5, 4, 4.5 or 5 m on various roadbed widths, i.e., 5 m on 8 m roadbed width. Such the case the class of the road will be defined as class P<sub>3</sub>(5/8) if the geometric standard of the road section in the said case below than P<sub>3</sub> then the road class will be defined as P<sub>3</sub>(5/8).

	P <sub>D</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>
Average Daily Traffic	Above 8,000	4,000-8,000	2,000-4,000	Below 2,000
Design Speed k.p.h.				
Flat and moderately rolling	←————— 80 - 100 —————→			
Rolling and hilly	←————— 60 - 80 —————→			
Mountainous	←————— 50 - 60 —————→			
Maximum Gradient %				
Flat and moderately rolling	←————— 4 —————→			
Rolling and hilly	←————— 6 —————→			
Mountainous	←————— 8 —————→			
Suggested Surface Type				
Width of carriageway m.	Divided 2@7.00	7.00	6.50	6.00
Width of carriageway m.	2.50, 1.50*	2.50	2.25	2.00
Right of Way m.	←————— High Intermediate —————→			
	←————— 60 - 80 —————→			

\* on right side

## Appendix 4.1 FUTURE POPULATION BY CHANGWAT

(Unit:Thousand Persons)						(Unit:Thousand Persons)					
REGION	1990	2000	2010	ANNUAL GROWTH RATE (%)		REGION	1990	2000	2010	ANNUAL GROWTH RATE (%)	
				1990-2000	2000-2010					1990-2000	2000-2010
NORTHEASTERN	20,036.9	23,477.8	26,015.0	1.6	1.0	SOUTHERN	7,196.3	8,727.4	9,863.7	1.9	1.2
BURIRAM	1,455.4	1,736.1	1,948.4	1.8	1.2	CHUMPHON	397.5	475.4	531.9	1.8	1.1
CHAIYAPHUM	1,048.3	1,220.3	1,345.7	1.5	1.0	KRABI	300.9	389.5	460.8	2.6	1.7
KALASIN	895.0	1,014.3	1,096.0	1.3	0.8	NAKHON SI THAMMARAT	1,459.6	1,693.1	1,849.3	1.5	0.9
KHON KAEN	1,726.6	2,042.2	2,278.3	1.7	1.1	NARATHIWAT	559.9	688.6	786.2	2.1	1.3
LOEI	568.6	675.1	755.4	1.7	1.1	PATTANI	537.8	636.2	705.6	1.7	1.0
MAHA SARAKHAM	915.7	1,047.2	1,139.5	1.4	0.8	PHANG NGA	218.9	268.8	306.4	2.1	1.3
MUKDAHAN	299.6	362.8	411.6	1.9	1.3	PHATTHALUNG	467.2	539.2	586.5	1.4	0.8
NAKHON PHANOM	647.2	755.1	834.0	1.6	1.0	PHUKET	164.2	199.2	225.2	2.0	1.2
NAKHON RATCHASIMA	2,434.2	2,883.4	3,220.2	1.7	1.1	RANONG	114.3	147.2	173.6	2.6	1.7
NONG KHAI	868.7	1,044.4	1,178.6	1.9	1.2	SATUN	224.7	288.8	340.0	2.5	1.6
ROI ET	1,239.0	1,387.7	1,485.9	1.1	0.7	SONGKHLA	1,122.5	1,408.9	1,632.1	2.3	1.5
SAKHON NAKHON	979.1	1,153.2	1,282.7	1.7	1.1	SURATTHANI	750.6	916.0	1,040.1	2.0	1.3
SI SA KET	1,333.7	1,554.5	1,715.9	1.5	1.0	TRANG	521.4	627.2	704.5	1.9	1.2
SURIN	1,313.1	1,555.0	1,736.3	1.7	1.1	YALA	356.8	449.1	521.4	2.3	1.5
UBON RATCHATHANI	1,932.6	2,260.3	2,501.3	1.6	1.0	EASTERN	3,748.7	4,479.8	5,063.1	1.8	1.2
UDON THANI	1,852.6	2,198.7	2,458.9	1.7	1.1	CHACHOENGSAO	578.9	649.7	700.9	1.2	0.8
YASOTHON	527.3	587.4	626.3	1.1	0.6	CHON BURI	914.0	1,074.2	1,199.7	1.6	1.1
NORTHERN	11,080.3	12,480.1	13,357.0	1.2	0.7	TRAT	197.5	248.7	291.0	2.3	1.6
KAMPHAENG PHET	683.3	804.8	891.4	1.7	1.0	NAKHON NAYOK	225.6	242.8	253.2	0.7	0.4
CHAING RAI	1,035.1	1,141.8	1,201.5	1.0	0.5	PRACHIN BURI	911.0	1,143.4	1,335.7	2.3	1.6
CHIANG MAI	1,373.4	1,564.4	1,689.1	1.3	0.8	RAYONG	470.4	562.8	636.6	1.8	1.2
TAK	352.6	422.6	473.9	1.8	1.2	CHANTHABURI	451.4	558.3	646.1	2.1	1.5
NAKHON SAWAN	1,090.4	1,190.7	1,242.4	0.9	0.4	WESTERN	3,321.9	3,778.8	4,105.0	1.3	0.8
NAN	447.6	511.8	554.4	1.3	0.8	KANCHANABURI	707.0	878.2	1,015.4	2.2	1.5
PHICHIT	570.5	594.3	595.2	0.4	0.0	PRACHUAP KHIRI KHAN	429.1	481.7	518.0	1.2	0.7
PHITSANULOK	777.9	849.4	886.3	0.9	0.4	PHETCHABURI	434.0	491.4	531.9	1.3	0.8
PHETCHABUN	991.8	1,188.1	1,332.0	1.8	1.1	RATCHABURI	724.9	803.4	855.0	1.0	0.6
PHRAE	503.3	558.9	591.3	1.1	0.6	SAMUT SONGKHRAM	206.8	214.6	216.1	0.4	0.1
MAE HONG SON	174.8	215.9	247.3	2.1	1.4	SUPHAN BURI	820.2	909.5	968.6	1.0	0.6
LAMPANG	776.7	874.5	935.9	1.2	0.7						
LAMPHUN	424.6	487.1	528.8	1.4	0.8						
SUKHOTHAI	599.3	663.2	699.7	1.0	0.5						
UTTARADIT	464.1	502.4	520.3	0.8	0.4						
PHAYAO	502.1	542.2	560.5	0.8	0.3						
UTHAI THANI	312.9	368.0	407.0	1.6	1.0						

## Appendix 4.1 FUTURE POPULATION BY CHANGWAT

## Appendix 4.2 REGRESSION FORMULA AND PARAMETERS BY REGION

(Unit:Thousand Persons)

REGION	1990	2000	2010	ANNUAL GROWTH RATE (%)	
				1990-2000	2000-2010
SUB CENTRAL	2,854.3	3,120.7	3,306.9	0.9	0.6
CHAI NAT	357.3	378.5	390.3	0.6	0.3
PHRA NAKHON SI AYUTTHAYA	690.4	741.2	773.2	0.7	0.4
SARABURI	530.5	582.9	620.2	0.9	0.6
LOP BURI	761.1	859.6	935.3	1.2	0.8
SING BURI	228.3	247.5	260.3	0.8	0.5
ANG THONG	286.6	311.0	327.7	0.8	0.5
BMR	8,942.7	10,952.5	12,317.2	2.0	1.2
BANGKOK METROPOLITAN	6,012.0	7,136.0	7,838.9	1.7	0.9
NONTHABURI	620.7	850.8	1,031.1	3.2	1.9
PATHUM THANI	451.0	580.5	675.9	2.6	1.5
SAMUT PRAKAN	827.9	1,135.1	1,375.9	3.2	1.9
SAMUT SAKHON	361.9	459.6	530.3	2.4	1.4
NAKHON PATHOM	669.1	790.4	865.1	1.7	0.9
TOTAL	57,181.0	67,017.0	74,028.0	1.6	1.0

Region	Model Type	Parameter			R <sup>2</sup>
		a1	a2	a0	
Northeastern	A	2678.1 (11.7)	-	41986.2 (20.3)	0.869
Northern	A	2170.8 (9.6)	-	37131.0 (19.7)	0.930
Southern	B	33.01 (3.2)	573.2 (2.7)	29232.8 (10.1)	0.999
Eastern	A	1788.0 (6.9)	-	18750.8 (5.7)	0.988
Western	A	955.73 (7.1)	-	16744.3 (12.5)	0.846
Sub Central	C	0.037760 (2.1)	-	9.5893 (6.6)	0.925
BMR	C	0.068452 (5.1)	-	11.8175 (12.7)	0.900

Note: ( ) indicate T-value to correspond with parameter.

Model Type A :  $GRP = a1 \times Year + a0$

B :  $GRP = a1 \times Year^2 + a2 \times Year + a0$

C :  $GRP = e^{a1 \times Year} + a0$

## Appendix 4.3 FUTURE GPP BY CHANGWAT AT 1972 CONSTANT PRICES

REGION	(Unit:Million Baht)				
	1990	2000	2010	ANNUAL GROWTH RATE (%)	
				1990-2000	2000-2010
NORTHEASTERN REGION	74,634	113,274	139,288	4.3	2.1
BURIRAM	4,924	7,915	10,044	4.9	2.4
CHAIYAPHUM	4,088	6,616	8,426	4.9	2.5
KALASIN	2,970	4,508	5,544	4.3	2.1
KHON KAEN	8,173	12,435	15,311	4.3	2.1
LOEI	2,651	3,877	4,664	3.9	1.9
MAHA SARAKHAM	2,628	3,510	3,979	2.9	1.3
MUKDAHAN	1,047	1,704	2,176	5.0	2.5
NAKHON PHANOM	2,112	3,206	3,943	4.3	2.1
NAKHON RATCHASIMA	11,494	15,963	18,584	3.3	1.5
NONG KHAI	4,115	6,777	8,708	5.1	2.5
ROI ET	3,972	6,254	7,848	4.6	2.3
SAKHON NAKHON	3,179	4,944	6,164	4.5	2.2
SI SA KET	4,222	6,730	8,502	4.8	2.4
SURIN	4,295	6,382	7,751	4.0	2.0
UBON RATCHATHANI	6,757	11,150	14,343	5.1	2.6
UDON THANI	6,383	8,860	10,310	3.3	1.5
YASOTHON	1,623	2,443	2,988	4.2	2.0
NORTHERN REGION	63,858	95,490	116,430	4.1	2.0
KAMPHAENG PHET	4,411	7,434	9,657	5.4	2.7
CHAIANG RAI	10,707	16,341	20,159	4.3	2.1
CHIANG MAI	5,507	8,104	9,788	3.9	1.9
TAK	3,458	6,567	8,997	6.6	3.2
NAKHON SAHAN	7,091	10,830	13,366	4.3	2.1
NAN	1,925	2,792	3,342	3.8	1.8
PHICHIT	2,429	2,868	2,955	1.7	0.3
PHITSANULOK	4,261	6,070	7,187	3.6	1.7
PHETCHABUN	4,714	6,783	8,082	3.7	1.8
PHRAE	2,176	3,153	3,773	3.8	1.8
MAE HONG SON	955	1,367	1,624	3.7	1.7
LAMPANG	4,331	6,357	7,666	3.9	1.9
LAMPHUN	2,033	2,667	2,988	2.8	1.1
SUKHOTHAI	2,999	4,099	4,725	3.2	1.4
UTTARADIT	2,930	4,483	5,537	4.3	2.1
PHAYAO	2,074	3,063	3,708	4.0	1.9
UTHAI THANI	1,857	2,513	2,876	3.1	1.4

REGION	(Unit:Million Baht)				
	1990	2000	2010	ANNUAL GROWTH RATE (%)	
				1990-2000	2000-2010
SOUTHERN REGION	52,383	87,610	120,850	5.3	3.3
CHUMPHON	3,967	7,044	10,023	5.9	3.6
KRABI	2,570	4,606	6,584	6.0	3.6
NAKHON SI THAMMARAT	7,606	12,899	17,927	5.4	3.4
NARATHIWAT	3,251	5,702	8,064	5.8	3.5
PATTANI	2,682	4,604	6,440	5.6	3.4
PHANG NGA	3,013	4,683	6,193	4.5	2.8
PHATTHALUNG	2,349	3,655	4,838	4.5	2.8
PHUKET	2,267	2,969	3,481	2.7	1.6
RANONG	1,384	1,751	1,993	2.4	1.3
SATUN	1,879	3,444	4,977	6.3	3.8
SONGKHLA	8,913	15,163	21,108	5.5	3.4
SURATTHANI	6,871	12,220	17,399	5.9	3.6
TRANG	3,189	4,939	6,519	4.5	2.8
YALA	2,441	3,930	5,306	4.9	3.1
EASTERN REGION	40,841	65,809	83,565	4.9	2.4
CHACHOENGSAO	6,152	10,654	14,015	5.7	2.8
CHON BURI	18,914	29,999	37,779	4.7	2.3
TRAT	1,520	2,381	2,980	4.6	2.3
NAKHON NAYOK	1,198	1,791	2,183	4.1	2.0
PRACHIN BURI	4,396	7,023	8,879	4.8	2.4
RAYONG	6,017	10,230	13,340	5.5	2.7
CHANTHABURI	2,645	3,730	4,388	3.5	1.6
WESTERN REGION	28,545	42,511	51,712	4.1	2.0
KANCHANABURI	8,560	13,132	16,248	4.4	2.2
PRACHUAP KHIRI KHAN	4,620	7,158	8,905	4.5	2.2
PHETCHABURI	3,198	4,696	5,666	3.9	1.9
RATCHABURI	6,021	8,400	9,815	3.4	1.6
SAMUT SONGKHRAM	1,295	2,149	2,771	5.2	2.6
SUPHAN BURI	4,851	6,975	8,308	3.7	1.8

REGION	(Unit:Million Baht)				
	1990	2000	2010	ANNUAL GROWTH RATE (%)	
				1990-2000	2000-2010
CENTRAL REGION	23,127	36,853	51,633	4.8	3.4
CHAI NAT	2,567	4,113	5,782	4.8	3.5
PHRA NAKHON SI AYUTTHAYA	4,400	6,953	9,691	4.7	3.4
SARABURI	9,039	15,977	23,768	5.9	4.1
LOP BURI	4,251	6,141	8,048	3.8	2.7
SING BURI	1,445	1,839	2,170	2.4	1.7
ANG THONG	1,426	1,829	2,174	2.5	1.7
BMR	291,716	631,828	1,203,251	8.0	6.7
BANGKOK METROPOLITAN	237,110	509,274	965,591	7.9	6.6
NONTHABURI	5,122	12,041	23,877	8.9	7.1
PATHUM THANI	11,456	25,896	50,397	8.5	6.9
SAMUT PRAKAN	25,654	56,581	108,767	8.2	6.8
SAMUT SAKHON	6,300	15,499	31,365	9.4	7.3
NAKHON PATHOM	6,075	12,537	23,256	7.5	6.4
TOTAL	575,104	1,073,374	1,766,730	6.4	5.1

Appendix 6.1 TRAFFIC SURVEY FORMS

THE TOLL HIGHWAYS DEVELOPMENT STUDY - THAILAND 1990  
OD ROADSIDE INTERVIEW

INTERVIEWER'S NAME: \_\_\_\_\_ Page \_\_\_\_ / \_\_\_\_

STATION No. \_\_\_\_\_ HIGHWAY No. \_\_\_\_\_ CHANGWAT: \_\_\_\_\_ From: \_\_\_\_\_ To: \_\_\_\_\_ DATE \_\_\_\_\_ Mo. Day \_\_\_\_\_ BEGINNING \_\_\_\_\_  
R-O-C \_\_\_\_\_

ชนิดของยานพาหนะ	ข้อมูลของยานพาหนะ			ข้อมูลการเดินทาง					ชนิดของสินค้า
	ชนิดของรถ	การจ้าง	คน	จุดต้นทาง	จุดปลายทาง	วัตถุประสงค์	จำนวนตู้คอนเทนเนอร์	จำนวนรถบรรทุก	
1. รถยนต์ทั่วไป				จังหวัด	จังหวัด	① งาน หรือธุรกิจ		① รถ	1 ข้าว
2. รถยนต์ขนาดใหญ่				อำเภอ	อำเภอ	② ส่วนตัว		② 1/4 F	2 หิน
3. รถยนต์ขนาดใหญ่						③ พักผ่อน		③ 1/2 F	3 ไม้
4. รถยนต์ขนาดใหญ่						④ อื่น ๆ		④ 3/4 F	4 เหล็ก
5. รถยนต์ขนาดใหญ่								⑤ Full	5 วัสดุก่อสร้าง
6. รถยนต์ขนาดใหญ่				จังหวัด	จังหวัด	① งาน หรือธุรกิจ		① รถ	6 ไม้
7. รถบรรทุก 4 ล้อ				อำเภอ	อำเภอ	② ส่วนตัว		② 1/4 F	7 ถั่ว
8. รถบรรทุก 6 ล้อ						③ พักผ่อน		③ 1/2 F	8 ผลิตภัณฑ์ปิโตรเลียม (น้ำมัน)
9. รถบรรทุก 10 ล้อ						④ อื่น ๆ		④ 3/4 F	9 อื่น ๆ
10. รถบรรทุก 10 ล้อ				จังหวัด	จังหวัด	① งาน หรือธุรกิจ		① รถ	10 ไม้
				อำเภอ	อำเภอ	② ส่วนตัว		② 1/4 F	11 ไม้
						③ พักผ่อน		③ 1/2 F	12 ข้าว
						④ อื่น ๆ		④ 3/4 F	13 ถั่ว
				จังหวัด	จังหวัด	① งาน หรือธุรกิจ		① รถ	14 ไม้
				อำเภอ	อำเภอ	② ส่วนตัว		② 1/4 F	15 อื่น ๆ
						③ พักผ่อน		③ 1/2 F	16 เครื่องใช้ในบ้าน
						④ อื่น ๆ		④ 3/4 F	17 อื่น ๆ
				จังหวัด	จังหวัด	① งาน หรือธุรกิจ		① รถ	18 อื่น ๆ
				อำเภอ	อำเภอ	② ส่วนตัว		② 1/4 F	19 อื่น ๆ
						③ พักผ่อน		③ 1/2 F	20 อื่น ๆ
						④ อื่น ๆ		④ 3/4 F	21 อื่น ๆ
				จังหวัด	จังหวัด	① งาน หรือธุรกิจ		① รถ	22 อื่น ๆ
				อำเภอ	อำเภอ	② ส่วนตัว		② 1/4 F	23 อื่น ๆ
						③ พักผ่อน		③ 1/2 F	
						④ อื่น ๆ		④ 3/4 F	
								⑤ Full	

OD Survey Form

OD Survey Form (Thai Version)

THE TOLL HIGHWAYS DEVELOPMENT STUDY - THAILAND 1990  
OD ROADSIDE INTERVIEW

INTERVIEWER'S NAME: \_\_\_\_\_ Page \_\_\_\_ / \_\_\_\_

STATION No. \_\_\_\_\_ HIGHWAY No. \_\_\_\_\_ CHANGWAT: \_\_\_\_\_ From: \_\_\_\_\_ To: \_\_\_\_\_ DATE \_\_\_\_\_ Mo. Day \_\_\_\_\_ BEGINNING \_\_\_\_\_

VEHICLE TYPE	VEH. DATA		ORIGIN	DESTINATION	PURPOSE	No OF PRSN	TRUCK		COMMODITY TYPE
	TYPE	CAPACITY TON PRSN					ASST	COMMODITY WT TYPE	
1 Car			Changwat	Changwat	① Work or Business		① Empty		1 Rice
2 Light bus			Amphoe	Amphoe	② Private		② 1/4 F		2 Sand, Gravel
3 Med. bus					③ Tour		③ 1/2 F		3 Cement and products
4 Heavy bus					④ Other		④ 3/4 F		4 Steel
5 Pickup prsn			Changwat	Changwat	① Work or Business		① Empty		5 Construction materials
6 Pickup cargo			Amphoe	Amphoe	② Private		② 1/4 F		6 Timber
7 4-w truck					③ Tour		③ 1/2 F		7 Firewood
8 6-w truck					④ Other		④ 3/4 F		8 Petroleum products
9 10-w truck			Changwat	Changwat	① Work or Business		① Empty		9 Minerals
			Amphoe	Amphoe	② Private		② 1/4 F		10 Vegetable and fruit
					③ Tour		③ 1/2 F		11 Cassava
					④ Other		④ 3/4 F		12 Maize
							⑤ Full		13 Sugar
									14 Bean
									15 Jute and products
									16 Beverages
									17 Grocery
									18 Animal
									19 Fish
									20 Fertilizer & animal feed
									21 Household appliances
									22 other manufactures
									23 All others



Appendix 6.1 TRAFFIC SURVEY FORMS

Classified Counting Survey Form

THE TOLL HIGHWAYS DEVELOPMENT STUDY - THAILAND 1990												
CLASSIFIED TRAFFIC COUNT SUMMARY SHEET												
STATION NUMBER	HIGHWAY NUMBER		CHANGWAT FROM: TO:		DATE		Mo. Day					SHEET 1.
Hours	Tricycle	Motor-Cycle	Passenger Car & Taxi	Light Bus	Medium Bus	Heavy Bus	Pickup Truck	4 Wheel Truck	6 Wheel Truck	10 Wheel Truck	Other Vehicles (With engine)	
06:00-06:15												
06:15-06:30												
06:30-06:45												
06:45-07:00												
07:00-07:15												
07:15-07:30												
07:30-07:45												
07:45-08:00												
08:00-08:15												
08:15-08:30												
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16:15-16:30												
16:30-16:45												
16:45-17:00												
17:00-17:15												
17:15-17:30												
17:30-17:45												
17:45-18:00												

Speed Survey Form

THE TOLL HIGHWAYS DEVELOPMENT STUDY  
TRAFFIC SPEED SURVEY

SECTION NO. .... HIGHWAY No. .... KILO POST ..... to .....

ROAD TYPE ..... No. OF LANES .....

MONTH ..... DATE ..... WEATHER .....

SURFACE CONDITION  Good  Fair  Poor TERRAIN  Flat  Rolling  Mountainous

START TIME ..... FINISH TIME .....

DIRECTION A: From ..... To .....

TRAFFIC VOLUME (excl. motorcycle/15 minutes) :  
before ..... vehicles/after ..... vehicles

SPEED : RUN No. 1 ..... Minute/5 km. / SPEED ..... KPH

RUN No. 2 ..... Minute/5 km. / SPEED ..... KPH

RUN No. 3 ..... Minute/5 km. / SPEED ..... KPH

RUN No. 4 ..... Minute/5 km. / SPEED ..... KPH

AVERAGE SPEED ..... KPH

DIRECTION B: From ..... To .....

TRAFFIC VOLUME (excl. motorcycle/15 minutes) :  
before ..... vehicles/after ..... vehicles

SPEED : RUN No. 1 ..... Minute/5 km. / SPEED ..... KPH

RUN No. 2 ..... Minute/5 km. / SPEED ..... KPH

RUN No. 3 ..... Minute/5 km. / SPEED ..... KPH

RUN No. 4 ..... Minute/5 km. / SPEED ..... KPH

AVERAGE SPEED ..... KPH

## Appendix 6.2 LIST OF TRAFFIC SURVEY STATIONS

SEQ	SURVEY POINT CODE	KILO POST	ROUTE NO	SECTION CODE	TRAFFIC VOLUME (1989)	SECTION NAME	SEQ	SURVEY POINT CODE	KILO POST	ROUTE NO	SECTION CODE	TRAFFIC VOLUME	SECTION NAME
1	101030	12	340	201	22485	JCT R.NO 338- PATHUM THANI DIST	42	2072090	23	113	202	1322	KM.42+ 899 - JCT KHAO SAI
2	101071	10	303	100	32416	DAO KHANONG - POM PHRA CHUN	43	2072111	41	117	200	4016	NAKHONSAWAN DIST - PHITSANULOK DIST
3	101072	20	3	200	49547	JCT.BANG NA - KHLONG DANBRIDGE	44	2072112	116	11	201	1239	TAK FA - PHICHIT DIST
4	103020	57	304	202	7589	KM.17+800(BANGKOK DIST) - JCT.BANG PAKONG	45	2082150	38	12	400	713	KONGKRAILAT- PHITSANULOKDIST
5	105071	20	4	100	37729	KM 21+375 - JCT TO: SAMUTSAKHON	46	2082170	45	11	700	2165	PHITSANULOK - HUAI NAM CHAM
6	105072	14	35	100	16190	JCT.R.NO303(DAOKHANONG)-MAENAM THACHIN BRIDGE	47	2094020	95	12	1000	543	NAMNAO NATIONAL PARK - CHUM PHAE DIST
7*	1021050	170	32	700	7381	JCT.TO SINGBURI - JCT.TO CHAINAT	48	2094030	65	225	600	840	KIU KHAO(PHETCHABUN DIST)-WANG KATA
8	1022111	262	1	900	3535	MUNI OF TAKHLI - JCT TO CHAI NAT	49	2094120	118	203	202	493	DAN KU - KHOK NGAM
9	1022112	203	1	1101	11011	UTHAITHAQNIDIST. - BYPASS NAKHONSAWAN	50	2102131	22	103	200	1901	HUAI BO THONG(PHRAE DIST-R.NO.1(NGAO))
10	1025060	60	340	600	3336	SI PRACHAN - PAK NAM	51	2102132	44	11	1200	5576	PHRAE DIST - LAMPANG
11	1031040	26	346	300	10013	JCT.TO PATHUMTHANI - R.NO.340	52	2102150	100	101	1100	1121	RONG KWANG - NAN DIST.
12*	1035020	28	340	300	25251	BANG BUA THONG - KHLONG BANLU BRIDGE	53	2122130	48	11	1300	5199	JCT.BYPASS LAMPANG - LAMPANG LAMPHUN BORDER
13*	1041090	45	1	201	46300	RANG SIT - BANG PA-IN	54	2152170	16	102	100	1224	SISUTCHA NALAI - MUNI OF UTTARADIT
14	1043050	35	305	102	7345	THANYABURI - ONGKHARAK	55	3013040	375	3	1300	5117	JCT.TO KHLUNG - TRAT
15	1051080	179	311	100	4077	THEP SATRI MONUMENT - SING BURI	56	3013060	88	317	302	3166	CHANTHABURI DIST - KHLONG TA LANG BRIDGE
16	1051101	76	309	302	986	KM.56+756 - JCT.TO LOPBURI	57*	3013070	290	3	1000	9411	JCT.NOEN DIN DAENG - KHLONG NAYAIARM BRIDGE
17	1051102	121	32	500	11886	JCT.R.NO.309-JCT.TO ANG THONG	58	3023031	80	3	402	34596	R.NO.34 - JCT CHONBURI
18	1052110	9	11	101	1626	IN BURI - KM 37+000	59	3023032	16	315	200	3703	MUNI OF PHANAT NIKHOM - JCT. TO CHACHOENG SAO
19	1061081	145	1	500	5709	SARABURI DIST. - THEPSATRI LOPBURI MONUMENT	60	3023033	25	331	400	3281	KM.40+000 - R. NO. 304
20	1061082	21	21	200	3491	HUAI PHU KHAE BRIDGE - PHATTHANANIKHOM	61	3023061	126	319	200	2642	KM.132+873(PRACHINBURI)-PHANOMSARAKHAM
21	1061090	74	1	301	30721	JCT.WANG NOI - KM.80+000(SARABURI DIST.)	62	3023062	69	304	400	3972	JCT.PRACHINBURI - KHLONG RANG
22	1063050	113	33	101	3848	HIN KONG - BAN NA	63	3033071	193	3	800	13731	KM.186+000(CHONBURI DIST- JCT.TO BAN KHAH
23	1064060	141	2	101	10791	SARABURI - MUAK LEK	64	3033072	20	36	200	4002	KM.16+700(CHONBURI DIST)- R.NO.3138
24	1073021	50	34	100	39643	BANG NA - BANG PAKONG	65	3033073	50	344	300	8286	KHLONG PHLU - KLAENG
25	1073022	63	3	301	4818	KHLONG DAN BRIDGE KM.74+000	66*	3053060	150	33	202	4210	SARABURI DIST) - JCT.TO PRACHINBURI
26	1082090	105	21	501	3039	KHLONG MANAO - JCT.TO WICHIAN BURI	67	3064060	56	304	700	1827	KM.93+745 BRIDGE - NAKHONRATCHASIMA 2 DIST
27	1082110	220	1	700	2571	KHOK SAMRONG - KASET CHAI	68	4014090	26	213	102	4901	KM. 14+200 - KALASIN
28	1084030	283	205	501	1080	LAM SONTHI BRIDGE - KHAM PING	69	4014110	28	214	200	2113	LAM CHI - ROI ET
29	2012040	388	1	1600	3482	JCT.TO KHAMPHAENGPHEP - JCT TO TALAT KOSAMPHI	70	4014130	3	213	303	823	KM.109+470 - JCT.NAM PHUNG DAM
30	2012070	57	115	200	823	KM.53+000-SAMNGAM	71	4024030	95	201	702	2291	KM.87+000-JCT.CHUM PHAE
31	2012110	283	1	1301	6082	JCT.LATYAO - KAMPHAENGPHEP DIST	72	4024060	339	2	702	5133	KM.339+470 - PHON
32	2012150	395	101	301	1229	KHIRIMAT - SUKHOTHAI	73	4024091	14	208	102	1842	KHON KAEN DIST. - KOSUM PHISAI
33	2022030	65	1019	200	1810	KM 20 + 000 - PANG NAMTHU	74	4024092	28	23	103	5189	BYPASS BAN PHAI(E) - BYPASS BORABU
34	2022060	769	1	2903	3497	BYPASS MEE CHAI(E)- BYPASS PHAN(B)	75	4024120	271	201	800	2021	JCT NON HAN - HUAI YAE
35	2032120	170	106	602	5229	PA HEO - CHIANGMAI	76	4024160	49	2	1100	4758	JCT TO KRANUAN - KM 33+476
36	2032140	102	108	500	627	HUAI BONG BRIDGE - MAE HONG DIST	77	4034061	340	205	702	2725	CHAI YAPHUM DIST - NON THAI
37	2042130	475	1	1901	3001	JCT TO KHUAN PHUMIPHON -BYPASS DONCHAI(S)	78	4034062	26	202	301	1878	JCT.TO BUA YAI - KM.66+361
38	2052100	200	101	700	450	HUAI MAE HTOEN BRIDGE - HUAI BO KAE0 BRIDGE	79	4044080	210	212	1302	1162	KM 210+000- DON SAWAN
39	2062130	725	1	2603	2251	BYPASS NGAO - HUAI MAE POI BRIDGE	80	4044130	189	22	502	1134	KM 171+000(SAKONNAKHON DIST)- KM 189+590
40	2072081	102	117	400	2285	KM.101+479 - PHITSANULOK	81	4054160	149	2	1303	4836	KM 130+850(UDONTHANIDIST- JCT TO PHEN
41	2072082	34	11	502	1618	KM.37+500(PHICHIT DIST)-WANG THONG	82	4064071	35	24	300	3046	JCT.TO LAMPLAIMAT - JCT.TO BURIRAM

Appendix 6.2 LIST OF TRAFFIC SURVEY STATIONS

Appendix 6.3 SREED SURVEY STATIONS

SEQ	SURVEY POINT CODE	KILO POST	ROUTE NO	SECTION CODE	TRAFFIC VOLUME	SECTION NAME	SEQ	HIGH- WAY CLASS	ROUTE NO	SECTION CODE	ADT IN 1989	SERVICE LEVEL	SECTION NAME
83	4064072	79	226	400	1169	BYPASS BURIRAM(E) - JCT.R.NO.218	1	P1	35	201	24044	D	THA CHIN BRIDGE - KM 53 +875
84	4074141	162	226	600	1993	JCT TO KRASANG - MUNI OF SURIN	2	P1	32	401	14806	C	JCT.R.NO.1 -JCT.AYUTTHAYA KM.68+000
85	4074142	95	219	400	1092	PHAYAKKHA PHUM PHISAI - BURIRAM	3	P1	32	500	11886	C	JCT.R.NO.309-JCT.TO ANG THONG
86	4084100	133	212	1400	2184	MUKDAHAN - JCT.LOENG NOKTHA (NEW)	4	P1	32	700	7381	B	JCT.TO SINGBURI - JCT.TO CHAINAT
87	4094111	102	23	303	3222	BYPASS MAHASARAKHAM(E)- KM.117+083(ROI-ET)	5	P1	1	500	5709	B	SARABURI DIST. - THEPSATRI LOPBURI MONUMENT
88	4094112	50	202	700	2134	KM 70+000 - KASET WISAI	6	P1	1	600	2629	A	THEPSATRI LOPBURI MONUMENT-KHOKSAMRONG
89	4104110	166	23	501	2174	JCT.TO PHON THONG - JCT.AMNAT CHAROEN	7	P2	21	200	3491	A	HUAI PHU KHAE BRIDGE - PHATTHANANIKHOM
90	4104170	226	23	600	1897	JCT.TO AMNAT CHAROEN - JCT.TO MAHA CHANACHAI	8	P2	11	102	1510	A	KM.37+000 - TAK FA
91	4114140	32	214	500	932	SUWANNAPHUM - JCT.TO TALAT THA THUM	9	P3	33	101	3848	A	HIN KONG - BAN NA
92	4124160	21	210	302	1059	KM.32+000 - R.NO.210	10	P3	1	700	2571	A	KHOK SAMRONG - KASET CHAI
93	4134160	52	22	301	2055	JCT.TALAT SAWANGDAENDIN-BY PASS NONG HAN	11	P3	11	101	1626	A	IN BURI - KM 37+000
94	4144150	64	226	800	1166	SRIKHORAPHUM - SAMRONG THAP	12	PD4	1	202	52981	C	BANG PAIN - JCT.WANG NOI
95	4154170	146	226	1200	1875	KANTHAROM - SMALL MUNI WARIN CHAMRAP	13	PD4	1	302	39403	B	KM 80+000(AYUTTHAYA DIST)- SARABURI
96	5015050	87	323	101	21344	JCT.KRACHAP - BYPASS BAN PONG(B)	14	PD4	1	202	28179	A	BANG PAIN - JCT.WANG NOI
97	5015060	44	324	202	2015	KM.30+000 - JCT.UTHONG	15	PD4	1	400	11600	A	SARABURI - PHUKHAE
98	5025050	67	4	302	33710	KM.60+426 - BYPASS DON KRABUANG(B)	16	PD6	1	100	26924	A	KM.16+441 - RANG SIT(PHATHUMTHANI DIST)
99	5025060	100	321	202	4597	KM.88+000 - JCT.UTHONG	17	S1	340	300	25251	D	BANG BUA THONG - KHLONG BANLU BRIDGE
100	5035040	226	4	800	9602	JCT.CHA AM - JCT.TO NONG KAE	18	S1	307	100	18401	C	JCT. R. NO. 306 - JCT.TO PATHUMTHANI
101	5036020	437	4	1400	4881	BANG SAPHAN - KM.423+600 BRIDGE	19	S1	314	102	8542	B	KM.51+000(CHONBURI DIST)-JCT.TO MINBURI
102*	5045050	130	4	601	14027	KHLONG MANAO BRIDGE - KM.49+447(HUAHIN DIST)	20	S1	340	402	6049	B	KM.74+500(PATHUM THANI DIST)-SUPHANBURI
103	5055081	83	35	300	11762	SAMUT SONGKHAM - R.NO.4(PAK THO)	21	S1	311	100	4077	A	THEP SATRI MONUMENT - SING BURI
104	5055082	28	325	200	5824	KLONG DAMNOENSADUAK-MUNI.OF SAMUTSONGKHAM	22	S2	311	200	1168	A	SINGBURI (LOPBURI DIST)- R.NO.1(CHAINAT)
105	5075080	50	35	201	24044	THA CHIN BRIDGE - KM 53 +875	23	S3	346	300	10013	B	JCT.TO PATHUMTHANI - R.NO.340
106	6016030	38	4	3500	1643	JCT.TO LAM THAP - TRANG DIST.	24	S3	308	100	5749	B	JCT.R.NO.32 - BANG PAIN
107	6016070	165	4	3200	1535	PHUKET DIST. - JCT.TO AO LUK	25	S3	340	600	3336	A	SI PRACHAN - PAK NAM
108	6016140	67	4035	200	3264	PLAI PHAYA - THUNG SONG DIST.	26	S3	205	100	1130	A	BAN MI - MUNI OF KHOKSAMLONG
109	6026100	525	4	1800	2213	JCT.PATHOM PHON - RANONG DIST	27	S4	303	100	32416	D	DAO KHANONG - POM PHRA CHUN
110	6026140	87	41	300	4174	JCT.TO LANG SUAN - SURATTHANI DIST	28	S4	346	500	9769	B	KM 52+112 - R.NO.323 (THAMUANG)
111	6036040	19	403	302	1957	THUNG SONG DIST. - JCT.TO KRA BI	29	S4	324	100	2677	A	MUNI.OF KHANCHANABURI-KM.23+072
112	6036060	51	4	3800	3024	MUNI.OF TRANG - PHATTHALUNG DIST.	30	SD4	302	100	45645	C	JCT KASET - JCT KHAE RAI
113	6046060	54	41	1100	3140	THA PRACHA - R.NO.4	31	SD4	338	200	38820	B	BANG BAM RU - NAKHONCHASI
114	6046120	72	408	302	2516	PAK RAWA - JCT.TO RANOD	32	SD4	304	102	28596	A	BANGKOK - JCT.TO MINBURI
115	6046141	182	41	800	3544	WIANG SA - CHAWANG	33	SD4	306	102	17260	A	NONTHABURI - KHAE RAI
116	6046142	73	401	801	4749	KANCHANADIT - NAKHONSITHAMMARAT DIST	34	SD4	309	100	8653	A	JCT.WANG NOI - MUNI.OF AYUTTHAYA
117	6056080	61	42	701	2516	JCT.TO SAIBURI - JCT.NARATHIWAT	35	SD6	341	100	17396	A	CHARALSANITWONG - R.NO. 338 (BANG BAM RU)
118	6066120	10	4	4100	4130	JCT.TO PAK PHAYUN - JCT KHU HA							
119	6076100	703	4	2300	1335	JCT.TO PHA TO - KA POE							
120	6076110	42	402	101	3545	JCT. KHOK KLOI - JCT. SARASIN BRIDGE							
121	6086090	29	410	102	3823	JCT.TO MAYO(PATTANI DIST.) - MUNI.OF YALA							
122	6086120	43	4086	300	3993	PAKNAM THEPHA - PATTANI							
123	6126130	44	406	200	1635	JCT.THA CHAMUANG-JCT.TO NIKHOM KHUAN KALONG							

Note \*: OD data is available from "The Road Development Study in The Central Region"

Appendix 6.4 EXPANSION FACTORS

STATION	PC	LB	MB	HB	PP	PT	LT	MT	HT
001-I-OD	16.536	1.531	2.273	1.684	17.199	17.199	6.367	6.605	5.544
001-O-OD	50.087	6.375	9.000	3.227	19.254	19.254	7.900	4.920	4.739
002-I-OD	22.452	51.600	1.499	1.499	7.480	7.480	6.351	15.656	18.294
002-O-OD	13.640	1.674	15.744	1.475	5.828	5.828	4.474	6.651	3.777
003-I-OD	10.815	7.593	10.560	15.597	8.410	8.410	7.542	12.489	5.510
003-O-OD	16.060	10.488	17.556	13.322	5.149	5.149	2.077	10.282	5.942
004-I-OD	2.317	8.482	4.000	1.058	1.047	1.047	22.368	3.098	6.667
004-O-OD	2.568	4.596	1.000	1.088	1.667	1.667	11.250	2.816	2.737
005-I-OD	13.724	14.302	4.333	1.883	8.229	8.229	20.286	15.743	18.416
005-O-OD	11.780	8.108	11.263	1.650	5.453	5.453	12.133	13.324	11.371
006-I-OD	4.859	1.667	3.273	1.809	4.320	4.320	8.182	4.811	5.776
006-O-OD	3.644	2.250	3.250	1.955	3.157	3.157	3.063	3.142	3.104
007-I-OD	9.123	58.476	2.477	2.477	1.358	1.358	1.358	2.529	3.219
007-O-OD	32.445	24.205	2.477	8.454	2.786	2.786	2.786	7.116	5.691
008-I-OD	1.702	4.286	15.500	1.114	1.969	1.969	2.615	3.765	1.991
008-O-OD	1.481	1.371	1.935	1.935	1.769	1.769	3.600	3.268	1.421
009-I-OD	2.727	2.000	21.000	3.384	2.764	2.764	3.385	4.400	4.122
009-O-OD	3.518	1.357	2.800	2.824	2.927	2.927	2.533	3.784	2.405
010-I-OD	1.552	2.500	1.000	2.278	1.446	1.446	3.000	2.548	1.191
010-O-OD	1.589	1.000	4.000	1.656	1.589	1.589	1.846	1.864	1.521
011-I-OD	1.662	9.682	-	1.000	1.012	1.012	33.000	2.396	2.155
011-O-OD	1.739	36.000	3.667	1.044	1.015	1.015	9.833	3.155	2.022
012-I-OD	19.354	66.115	4.152	4.152	3.942	3.942	3.942	6.666	6.620
012-O-OD	78.712	309.920	25.841	25.841	6.758	6.758	6.758	70.267	31.320
013-I-OD	21.736	63.142	21.744	25.368	4.772	4.772	4.772	6.078	6.398
013-O-OD	21.257	341.320	48.661	48.661	23.778	23.778	23.778	32.089	4.006
014-I-OD	2.536	1.060	1.400	1.400	3.217	3.217	22.267	3.648	8.727
014-O-OD	2.213	3.659	1.630	1.630	3.673	3.673	1.952	4.554	8.830
015-I-OD	2.163	1.913	52.000	1.286	2.133	2.133	5.000	2.140	1.310
015-O-OD	2.338	8.600	38.000	1.582	2.243	2.243	4.500	2.743	2.127
016-I-OD	1.440	2.857	1.857	1.240	1.500	1.500	9.667	2.263	2.458
016-O-OD	1.412	3.000	7.000	1.226	1.318	1.318	1.429	2.500	2.609
017-I-OD	3.161	1.288	4.500	2.625	4.558	4.558	3.000	5.104	7.559
017-O-OD	3.276	3.469	13.200	5.596	5.684	5.684	3.750	6.597	4.423
018-I-OD	1.395	1.000	4.333	2.800	1.733	1.733	2.000	1.958	1.569
018-O-OD	1.289	1.333	9.000	2.720	1.859	1.859	2.500	1.563	1.969

STATION	PC	LB	MB	HB	PP	PT	LT	MT	HT
019-I-OD	3.396	2.441	7.000	3.219	5.042	5.042	5.875	3.983	1.764
019-O-OD	2.717	1.156	21.000	2.008	4.353	4.353	10.667	3.912	2.708
020-I-OD	1.959	7.875	12.500	1.910	1.797	1.797	8.167	2.881	1.995
020-O-OD	1.713	1.158	4.500	1.500	2.159	2.159	1.581	2.986	1.967
021-I-OD	36.220	1.857	7.600	1.686	34.237	34.237	8.273	9.464	9.925
021-O-OD	36.000	4.400	16.750	2.029	22.897	22.897	10.000	6.958	7.485
022-I-OD	1.492	16.583	1.723	1.723	2.184	2.184	1.115	2.211	2.300
022-O-OD	1.774	1.368	5.500	1.269	2.541	2.541	3.267	2.558	2.265
023-I-OD	2.629	1.546	3.889	4.210	4.962	4.962	5.546	10.681	6.281
023-O-OD	2.431	1.227	4.500	3.105	5.482	5.482	4.467	3.871	4.900
024-I-OD	14.632	5.307	9.313	3.411	17.223	17.223	14.909	14.000	5.835
024-O-OD	7.988	7.296	3.500	3.175	12.583	12.583	24.857	12.890	5.458
025-I-OD	1.198	61.000	1.065	1.962	2.798	2.798	2.167	4.519	4.146
025-O-OD	1.229	7.727	1.000	1.000	4.120	4.120	5.500	3.914	2.919
026-I-OD	1.372	4.133	1.556	1.838	1.635	1.635	3.000	1.431	1.903
026-O-OD	1.485	1.235	2.250	2.109	1.955	1.955	3.250	3.056	2.143
027-I-OD	1.518	1.000	14.000	1.818	1.269	1.269	1.381	2.038	1.298
027-O-OD	1.290	-	2.421	2.464	1.487	1.487	1.929	1.448	1.781
028-I-OD	1.317	1.000	2.000	1.094	1.532	1.532	2.125	1.706	1.683
028-O-OD	1.815	1.000	1.000	1.280	1.667	1.667	2.000	2.000	3.088
029-I-OD	1.526	1.156	2.444	4.737	3.486	3.486	11.000	4.000	1.411
029-O-OD	1.941	1.013	2.500	3.148	2.670	2.670	1.833	5.308	2.076
030-I-OD	1.456	1.167	2.000	1.238	1.540	1.540	2.000	1.231	1.118
030-O-OD	1.511	8.000	2.000	1.278	1.608	1.608	1.000	2.429	1.375
031-I-OD	2.344	4.000	3.500	2.065	2.333	2.333	5.800	3.302	2.509
031-O-OD	2.627	34.000	9.000	3.790	3.166	3.166	3.400	5.475	2.373
032-I-OD	1.571	1.000	2.200	2.200	1.528	1.528	1.400	2.091	1.984
032-O-OD	1.667	1.484	1.036	1.036	1.503	1.503	1.000	1.457	1.369
033-I-OD	1.709	2.030	-	1.256	1.767	1.767	2.000	1.552	1.214
033-O-OD	1.519	1.969	2.500	1.194	1.863	1.863	3.500	1.971	1.417
034-I-OD	1.523	1.170	4.000	3.205	2.109	2.109	2.375	2.921	1.903
034-O-OD	1.510	1.196	6.000	1.602	2.222	2.222	1.333	2.559	1.456
035-I-OD	1.491	1.520	1.621	5.000	2.010	2.010	2.750	1.691	1.333
035-O-OD	1.597	1.264	1.158	5.000	1.973	1.973	7.000	1.820	2.429
036-I-OD	1.483	1.250	-	1.625	1.265	1.265	1.500	1.287	1.287
036-O-OD	1.396	1.429	-	1.625	1.514	1.514	4.000	2.852	3.500

## Appendix 6.4 EXPANSION FACTORS

STATION	PC	LB	MB	HB	PP	PT	LT	MT	HT	STATION	PC	LB	MB	HB	PP	PT	LT	MT	HT
037-I-OD	2.222	3.400	3.500	4.610	2.394	2.394	3.500	3.304	1.241	055-I-OD	2.262	12.088	2.000	2.356	2.438	2.438	2.800	4.034	2.646
037-O-OD	1.665	2.375	1.405	3.659	1.980	1.980	2.500	4.167	1.529	055-O-OD	2.852	8.349	1.667	1.529	2.220	2.220	8.667	3.831	4.627
038-I-OD	1.064	1.000	5.000	1.967	2.005	2.005	1.643	1.654	3.000	056-I-OD	1.379	1.600	2.429	1.137	1.848	1.848	6.429	2.073	2.346
038-O-OD	2.463	1.056	3.333	3.250	3.185	3.185	3.200	2.280	2.565	056-O-OD	1.350	1.539	1.125	1.439	1.922	1.922	36.000	3.091	1.548
039-I-OD	2.066	4.400	1.500	3.489	1.958	1.958	2.909	1.845	2.592	057-I-OD	16.695	24.205	9.628	9.628	1.977	1.977	1.977	5.493	2.951
039-O-OD	1.967	2.828	-	1.702	1.958	1.958	1.714	1.972	1.609	057-O-OD	14.027	154.269	3.460	3.460	2.671	2.671	2.671	7.554	8.459
040-I-OD	1.887	1.118	8.000	3.672	2.471	2.471	24.000	3.267	3.265	058-I-OD	374.818	0.500	3.164	3.162	0.970	0.970	25.667	0.700	47.649
040-O-OD	2.562	1.333	16.000	4.048	3.342	3.342	28.000	5.300	12.020	058-O-OD	21.812	12.233	25.800	2.901	59.280	59.280	66.600	17.268	12.931
041-I-OD	1.568	4.600	3.000	1.873	1.504	1.504	2.333	2.000	1.709	059-I-OD	1.615	2.295	1.188	1.452	1.735	1.735	2.909	2.340	1.295
041-O-OD	1.401	9.000	4.000	2.681	1.605	1.605	1.909	1.718	1.638	059-O-OD	1.564	2.076	3.000	2.000	2.103	2.103	7.333	2.303	1.657
042-I-OD	2.055	1.800	3.000	1.484	1.736	1.736	5.500	2.842	1.411	060-I-OD	1.559	5.056	6.500	1.778	1.238	1.238	4.000	2.194	1.308
042-O-OD	3.064	1.412	1.667	1.705	1.493	1.493	7.750	1.833	1.280	060-O-OD	1.367	3.938	6.500	1.656	1.610	1.610	4.250	1.640	2.698
043-I-OD	1.862	1.947	4.000	2.532	1.953	1.953	4.167	2.758	3.536	061-I-OD	1.515	1.250	1.750	2.222	2.039	2.039	7.667	2.032	2.000
043-O-OD	2.241	1.778	1.333	4.404	2.437	2.437	4.000	2.271	2.641	061-O-OD	2.149	2.400	38.000	2.636	1.677	1.677	4.250	1.864	1.294
044-I-OD	1.586	22.000	1.500	2.313	1.602	1.602	1.333	3.044	1.786	062-I-OD	2.133	1.838	1.800	1.533	2.195	2.195	2.364	2.615	1.802
044-O-OD	1.274	18.000	1.500	2.324	1.477	1.477	6.250	1.541	1.404	062-O-OD	1.829	2.784	10.000	1.667	2.261	2.261	6.000	2.315	1.749
045-I-OD	2.037	1.000	2.318	2.256	2.779	2.779	5.250	4.516	3.889	063-I-OD	2.524	3.705	-	1.653	2.528	2.528	2.273	3.400	2.136
045-O-OD	2.124	1.000	2.185	2.140	2.367	2.367	3.875	4.514	6.714	063-O-OD	3.015	7.647	15.000	1.577	3.091	3.091	4.500	2.375	2.387
046-I-OD	2.119	3.333	9.000	2.326	1.936	1.936	2.857	3.267	1.574	064-I-OD	2.516	2.188	9.500	2.094	3.120	3.120	2.700	3.200	2.987
046-O-OD	2.152	1.833	10.000	5.114	2.250	2.250	3.800	3.222	4.052	064-O-OD	2.788	2.639	2.000	1.879	3.078	3.078	9.333	2.771	3.437
047-I-OD	1.902	2.667	4.000	2.235	1.604	1.604	1.800	1.771	1.922	065-I-OD	1.814	1.829	1.077	1.852	2.662	2.662	1.222	3.186	3.007
047-O-OD	1.451	1.500	7.667	1.571	1.564	1.564	1.500	1.492	1.942	065-O-OD	3.521	3.556	1.250	1.909	3.160	3.160	4.000	5.417	4.637
048-I-OD	1.308	1.125	18.000	5.333	1.825	1.825	1.111	2.615	1.708	066-I-OD	10.179	767.970	45.756	45.756	19.338	19.338	19.338	30.855	3.762
048-O-OD	1.263	1.500	1.200	1.286	1.657	1.657	5.000	2.429	2.167	066-O-OD	9.911	11.695	3.424	3.424	1.580	1.580	1.580	1.993	4.714
049-I-OD	2.600	-	2.125	1.286	1.423	1.423	2.000	1.600	1.286	067-I-OD	2.230	3.185	1.667	1.897	2.337	2.337	3.556	3.122	2.890
049-O-OD	3.769	1.263	-	1.000	1.367	1.367	1.500	1.471	1.889	067-O-OD	1.482	3.200	1.053	2.118	2.131	2.131	6.167	2.857	3.103
050-I-OD	1.600	1.091	1.000	4.188	2.256	2.256	2.500	2.200	1.114	068-I-OD	2.527	2.607	-	1.658	1.478	1.478	3.444	1.788	2.642
050-O-OD	1.204	1.917	1.000	4.625	2.186	2.186	4.625	3.550	3.833	068-O-OD	3.409	2.517	4.667	2.056	1.536	1.536	8.800	2.109	1.738
051-I-OD	1.444	2.500	1.500	2.160	1.793	1.793	1.875	2.107	2.583	069-I-OD	2.042	1.333	1.429	1.512	1.392	1.392	1.875	1.477	2.015
051-O-OD	1.427	9.750	2.500	1.643	1.516	1.516	2.143	1.800	1.783	069-O-OD	1.940	1.833	1.667	1.781	1.300	1.300	1.364	1.606	1.416
052-I-OD	1.216	1.682	1.000	1.000	1.329	1.329	1.333	1.615	1.778	070-I-OD	2.197	-	4.778	3.824	1.531	1.531	1.333	1.846	2.081
052-O-OD	1.556	1.148	1.556	1.333	1.624	1.624	-	1.462	4.000	070-O-OD	1.489	-	1.028	2.304	1.440	1.440	2.200	2.323	2.091
053-I-OD	1.299	1.133	1.529	1.529	2.461	2.461	3.333	3.122	2.006	071-I-OD	1.915	11.500	5.727	2.121	1.867	1.867	2.132	2.076	3.086
053-O-OD	1.598	1.051	2.333	1.833	2.242	2.242	2.556	2.735	1.341	071-O-OD	3.019	17.000	6.214	5.714	2.558	2.558	4.160	2.250	2.543
054-I-OD	1.939	1.000	1.143	1.167	1.561	1.561	2.250	2.235	1.700	072-I-OD	2.606	5.000	9.000	2.590	1.358	1.358	6.400	2.243	4.010
054-O-OD	1.109	3.000	1.600	2.177	1.621	1.621	1.333	2.857	1.000	072-O-OD	2.553	3.500	10.000	3.577	1.838	1.838	5.800	3.047	2.260

Appendix 6.4 EXPANSION FACTORS

STATION	PC	LB	MB	HB	PP	PT	LT	MT	HT
073-I-OD	2.758	2.625	1.375	1.215	1.436	1.436	3.125	2.220	2.143
073-O-OD	4.520	2.381	3.500	1.100	1.460	1.460	1.923	1.891	2.125
074-I-OD	2.663	3.000	3.773	3.833	1.809	1.809	1.842	2.253	5.424
074-O-OD	1.874	24.500	5.933	3.833	1.858	1.858	1.480	2.202	7.511
075-I-OD	1.450	5.000	8.000	1.677	1.547	1.547	1.750	1.315	1.960
075-O-OD	1.597	1.500	1.714	1.677	1.388	1.388	2.100	1.800	3.781
076-I-OD	3.016	3.800	15.000	2.173	1.858	1.858	2.625	2.531	1.835
076-O-OD	2.669	3.314	2.667	2.697	1.608	1.608	2.375	3.269	4.212
077-I-OD	1.736	7.333	2.000	1.259	1.642	1.642	4.182	1.933	2.097
077-O-OD	3.588	1.417	1.200	1.294	0.995	0.995	1.000	1.490	2.800
078-I-OD	2.548	2.000	4.250	1.786	1.574	1.574	1.667	1.825	2.050
078-O-OD	2.400	1.500	2.400	1.800	1.297	1.297	2.375	1.432	2.226
079-I-OD	1.920	5.177	2.333	1.233	1.512	1.512	1.235	1.645	1.556
079-O-OD	1.577	3.944	2.500	1.269	1.478	1.478	1.615	1.931	1.800
080-I-OD	2.289	2.000	1.667	1.294	1.113	1.113	1.714	1.367	1.243
080-O-OD	2.500	1.357	1.333	1.731	1.104	1.104	3.333	1.552	1.769
081-I-OD	2.210	1.923	2.000	1.508	1.278	1.278	2.429	1.819	1.959
081-O-OD	2.104	1.510	2.000	1.352	1.193	1.193	2.250	1.480	1.507
082-I-OD	1.660	8.176	5.000	1.742	1.608	1.608	11.333	3.000	2.522
082-O-OD	1.438	11.182	4.000	1.713	1.364	1.364	12.750	1.944	3.500
083-I-OD	1.326	1.667	2.000	4.177	1.129	1.129	2.000	1.652	3.429
083-O-OD	1.657	3.364	1.500	2.714	1.389	1.389	1.667	1.774	1.796
084-I-OD	1.214	-	-	1.875	1.262	1.262	2.500	1.737	2.229
084-O-OD	1.603	4.800	-	1.182	1.313	1.313	1.667	2.237	1.711
085-I-OD	3.105	2.000	5.000	1.324	1.299	1.299	1.191	2.231	1.651
085-O-OD	4.000	1.000	3.750	1.611	1.419	1.419	1.909	1.386	1.767
086-I-OD	1.400	7.400	2.333	1.370	1.563	1.563	1.778	2.069	3.222
086-O-OD	2.056	6.800	1.696	1.696	1.644	1.644	2.000	1.794	2.230
087-I-OD	2.350	22.000	7.667	1.758	1.822	1.822	4.917	2.113	2.113
087-O-OD	1.685	-	13.000	2.444	1.382	1.382	3.235	1.832	2.932
088-I-OD	2.143	1.600	2.364	3.000	1.858	1.858	1.750	1.821	2.317
088-O-OD	2.182	1.333	1.467	2.378	1.477	1.477	2.750	1.435	6.515
089-I-OD	1.625	6.000	2.733	1.455	1.635	1.635	1.682	1.967	1.486
089-O-OD	1.750	3.000	13.000	1.471	1.466	1.466	1.680	1.684	2.207
090-I-OD	1.350	6.667	2.167	1.605	1.332	1.332	2.250	1.462	1.456
090-O-OD	1.533	7.444	1.000	1.857	1.297	1.297	1.435	1.881	1.881

STATION	PC	LB	MB	HB	PP	PT	LT	MT	HT
091-I-OD	2.371	1.455	3.750	1.714	1.589	1.589	2.071	1.459	2.150
091-O-OD	2.500	2.333	2.000	2.083	1.745	1.745	1.500	1.597	2.861
092-I-OD	2.727	3.455	-	1.162	1.399	1.399	2.278	1.813	3.588
092-O-OD	2.395	1.750	1.143	1.114	1.533	1.533	2.182	1.742	2.391
093-I-OD	1.617	-	15.000	1.588	1.446	1.446	2.583	1.603	1.795
093-O-OD	1.292	9.000	1.429	1.482	1.536	1.536	2.067	1.578	1.600
094-I-OD	1.444	3.188	-	1.957	1.624	1.624	2.647	2.457	1.512
094-O-OD	1.493	3.111	2.000	2.044	1.750	1.750	3.833	1.509	2.258
095-I-OD	2.436	1.417	1.400	1.281	1.262	1.262	2.150	1.481	2.076
095-O-OD	1.380	4.846	2.400	1.375	1.449	1.449	1.696	1.692	1.536
096-I-OD	2.687	12.500	13.923	1.630	3.539	3.539	13.100	4.462	3.810
096-O-OD	2.648	11.542	17.182	1.333	3.175	3.175	4.417	4.986	5.067
097-I-OD	1.638	1.000	1.000	1.056	1.522	1.522	5.889	1.704	1.864
097-O-OD	1.807	-	2.500	1.469	1.422	1.422	26.250	2.575	2.211
098-I-OD	66.657	27.000	16.000	2.661	29.463	29.463	19.500	7.894	9.062
098-O-OD	58.500	-	24.667	1.330	17.082	17.082	9.704	5.687	7.359
099-I-OD	2.214	3.105	1.875	2.717	2.512	2.512	2.667	2.714	2.966
099-O-OD	2.463	2.100	6.667	1.111	3.076	3.076	7.500	3.531	2.344
100-I-OD	4.349	1.557	1.786	3.738	7.417	7.417	5.677	9.241	8.744
100-O-OD	6.976	7.857	6.750	4.388	5.574	5.574	5.094	8.532	6.818
101-I-OD	2.703	3.200	20.000	6.128	2.109	2.109	2.546	3.225	2.786
101-O-OD	2.239	4.444	5.667	5.641	1.910	1.910	3.250	2.295	4.262
102-I-OD	60.460	464.881	25.841	34.063	6.378	6.378	6.378	62.814	22.022
102-O-OD	25.876	21.047	21.744	21.744	5.690	5.690	5.690	7.742	8.981
103-I-OD	3.182	24.941	13.000	2.843	3.466	3.466	9.692	4.605	6.745
103-O-OD	2.374	3.388	8.500	2.106	3.832	3.832	5.143	3.073	4.657
104-I-OD	1.157	1.250	5.308	1.406	2.593	2.593	3.438	2.927	2.179
104-O-OD	1.372	1.920	6.143	2.213	2.145	2.145	3.143	1.687	2.112
105-I-OD	3.973	2.333	12.800	3.446	6.288	6.288	8.429	10.207	7.107
105-O-OD	1.955	1.108	9.182	3.359	6.536	6.536	18.429	7.329	7.452
106-I-OD	1.183	4.429	5.000	1.714	1.296	1.296	1.500	1.795	1.159
106-O-OD	1.296	1.265	32.000	1.769	1.488	1.488	2.333	1.373	1.488
107-I-OD	1.862	7.800	19.000	2.250	1.281	1.281	3.333	1.913	1.288
107-O-OD	1.626	2.136	2.500	1.054	1.153	1.153	1.000	1.383	1.226
108-I-OD	1.000	1.833	6.333	1.600	2.086	2.086	1.000	3.300	2.370
108-O-OD	1.076	1.387	1.667	1.000	2.097	2.097	2.000	3.200	2.547

## Appendix 6.4 EXPANSION FACTORS

STATION	PC	LB	MB	HB	PP	PT	LT	MT	HT
109-1-OD	1.460	2.476	4.600	3.647	1.348	1.348	2.800	1.914	2.188
109-0-OD	2.185	4.077	1.889	3.765	1.421	1.421	3.250	1.971	2.896
110-1-OD	1.573	6.556	8.000	3.946	3.179	3.179	1.520	3.735	2.265
110-0-OD	1.655	1.852	3.500	4.387	2.975	2.975	1.546	4.923	2.980
111-1-OD	1.069	1.813	2.667	1.429	2.201	2.201	1.250	2.707	1.330
111-0-OD	1.317	2.500	1.500	1.047	1.871	1.871	1.000	1.849	1.506
112-1-OD	1.137	4.833	14.000	1.750	1.220	1.220	18.000	1.786	1.941
112-0-OD	1.302	2.423	1.500	1.593	2.096	2.096	2.800	1.650	2.051
113-1-OD	1.359	2.769	1.542	1.542	2.105	2.105	1.333	1.864	2.273
113-0-OD	1.324	5.400	2.044	2.044	1.905	1.905	1.857	2.158	2.000
114-1-OD	1.180	1.611	-	1.204	1.660	1.660	2.500	1.603	1.962
114-0-OD	1.158	2.895	1.000	1.346	1.490	1.490	3.667	1.706	2.073
115-1-OD	1.060	1.563	-	2.857	1.736	1.736	3.000	1.698	2.251
115-0-OD	1.482	1.750	1.000	2.393	1.701	1.701	48.000	2.295	1.799
116-1-OD	1.314	1.833	1.000	2.296	1.252	1.252	1.875	1.906	1.586
116-0-OD	1.337	2.821	3.000	1.306	1.310	1.310	3.600	1.507	1.455
117-1-OD	1.310	6.071	1.375	1.333	1.792	1.792	4.667	2.032	2.491
117-0-OD	1.435	3.778	1.143	1.143	1.441	1.441	1.500	2.179	1.392
118-1-OD	1.271	2.226	3.500	1.532	1.535	1.535	2.429	1.750	1.296
118-0-OD	1.243	1.546	1.200	1.642	1.206	1.206	1.889	1.540	1.245
119-1-OD	1.037	1.357	-	3.539	1.507	1.507	1.400	1.231	2.262
119-0-OD	1.758	2.727	4.000	2.600	1.414	1.414	1.500	1.643	1.917
120-1-OD	1.105	3.097	10.833	1.158	2.371	2.371	7.286	3.196	1.791
120-0-OD	1.294	1.944	1.239	1.239	3.093	3.093	6.000	3.292	2.150
121-1-OD	1.244	1.397	4.667	1.085	1.744	1.744	2.125	1.297	1.350
121-0-OD	1.335	3.556	3.833	1.250	1.551	1.551	2.222	1.809	1.234
122-1-OD	1.736	2.842	1.500	1.429	2.038	2.038	2.250	2.692	2.908
122-0-OD	1.351	3.818	4.000	1.150	2.486	2.486	1.111	2.556	1.994
123-1-OD	1.321	3.091	8.000	1.222	1.480	1.480	1.500	1.811	1.964
123-0-OD	1.157	1.118	13.000	1.257	1.236	1.236	1.000	1.293	1.354

Appendix 6.5 NUMBER OF EFFECTIVE SAMPLES

(Unit: Vehicles)

Seq	Survey Route Station Code	No.	Sect.	Ctl' Dire-ction	Vehicle Type									
					PC	LB	HB	HB	PP	PT	LT	MT	HT	Total
1	101030	340	201	IN	267	32	11	95	138	133	30	248	456	1410
				OUT	115	8	3	88	154	74	20	301	486	1249
				BOTH	382	40	14	183	292	207	50	549	942	2659
2	101071	303	100	IN	378	5	13	892	304	171	57	128	153	2101
				OUT	628	46	43	524	413	232	57	312	535	2790
				BOTH	1006	51	56	1416	717	403	114	440	688	4891
3	101072	3	200	IN	666	91	25	186	270	225	24	174	296	1957
				OUT	451	80	27	199	322	234	52	149	208	1722
				BOTH	1117	171	52	385	592	459	76	323	504	3679
4	103020	304	202	IN	410	56	2	86	419	216	19	92	195	1495
				OUT	421	47	3	91	557	133	4	141	596	1993
				BOTH	831	103	5	177	976	349	23	233	791	3488
5	105071	4	100	IN	362	63	15	360	313	107	21	113	233	1587
				OUT	505	74	19	340	412	146	30	139	369	2034
				BOTH	867	137	34	700	725	253	51	252	602	3621
6	105072	35	100	IN	488	36	11	235	352	135	11	153	429	1850
				OUT	329	4	12	112	334	195	16	162	546	1710
				BOTH	817	40	23	347	686	330	27	315	975	3560
8	1022111	1	900	IN	104	7	2	79	290	94	13	34	110	733
				OUT	131	35	4	67	391	89	5	41	151	914
				BOTH	235	42	6	146	681	183	18	75	261	1647
9	1022112	1	1101	IN	645	12	1	170	585	119	13	105	377	2027
				OUT	467	14	5	216	513	61	15	101	400	1792
				BOTH	1112	26	6	386	1098	180	28	206	777	3819
10	1025060	340	600	IN	134	2	1	18	198	42	3	31	151	580
				OUT	224	6	3	32	360	78	13	58	194	968
				BOTH	358	8	4	50	558	120	16	89	345	1548
11	1031040	346	300	IN	151	22	1	46	371	196	14	96	386	1283
				OUT	199	7	3	46	330	204	24	71	403	1287
				BOTH	350	29	4	92	701	400	38	167	789	2570
14	1043050	305	102	IN	196	24	9	26	275	112	15	54	231	942
				OUT	240	4	10	36	300	116	21	56	230	1013
				BOTH	436	28	19	62	575	228	36	110	461	1955
15	1051080	311	100	IN	257	23	1	77	351	92	11	107	297	1216
				OUT	216	5	1	67	394	58	10	74	228	1053
				BOTH	473	28	2	144	745	150	21	181	525	2269
16	1051101	309	302	IN	91	7	7	25	88	68	3	19	24	332
				OUT	102	4	5	31	135	38	7	20	23	365
				BOTH	193	11	12	56	223	106	10	39	47	697
17	1051102	32	500	IN	218	66	4	184	268	76	13	77	179	1085
				OUT	203	32	5	94	216	53	12	62	298	975
				BOTH	421	98	9	278	484	129	25	139	477	2060
18	1052110	11	101	IN	86	7	1	20	220	20	3	24	130	511
				OUT	90	3	1	25	180	61	4	32	98	494
				BOTH	176	10	2	45	400	81	7	56	228	1005
19	1061081	1	500	IN	222	34	2	73	276	108	8	58	280	1061
				OUT	297	90	1	132	345	86	3	57	233	1244
				BOTH	519	124	3	205	621	194	11	115	513	2305
20	1061082	21	200	IN	244	9	2	55	384	74	6	67	181	1022
				OUT	286	19	4	60	317	117	31	73	153	1060
				BOTH	530	28	6	115	701	191	37	140	334	2082

(Unit: Vehicles)

Seq	Survey Route Station Code	No.	Sect.	Ctl' Dire-ction	Vehicle Type									
					PC	LB	HB	HB	PP	PT	LT	MT	HT	Total
21	1061090	1	301	IN	41	7	5	468	50	47	11	69	636	1334
				OUT	47	15	4	487	75	81	25	96	845	1675
				BOTH	88	22	9	955	125	128	36	165	1481	3009
22	1063050	33	101	IN	128	12	22	87	227	127	26	95	220	944
				OUT	106	19	2	130	141	262	15	77	264	1016
				BOTH	234	31	24	217	368	389	41	172	484	1960
23	1064060	2	101	IN	356	22	18	200	556	24	11	47	355	1589
				OUT	404	22	6	257	416	97	15	111	359	1687
				BOTH	760	44	24	457	972	121	26	158	714	3276
24	1073021	34	100	IN	299	75	16	265	214	150	11	100	1058	2188
				OUT	498	44	26	257	339	107	7	73	941	2292
				BOTH	797	119	42	522	553	257	18	173	1999	4480
25	1073022	3	301	IN	81	3	31	53	141	121	6	27	144	607
				OUT	70	11	26	36	108	75	2	35	197	560
				BOTH	151	14	57	89	249	196	8	62	341	1167
26	1082090	21	501	IN	137	15	9	68	359	153	12	58	124	935
				OUT	97	17	4	64	309	131	8	36	112	778
				BOTH	234	32	13	132	668	284	20	94	236	1713
27	1082110	1	700	IN	56	4	2	33	166	53	21	26	57	418
				OUT	62	0	19	28	155	40	14	29	41	388
				BOTH	118	4	21	61	321	93	35	55	98	806
28	1084030	205	501	IN	41	1	1	32	118	38	8	34	63	336
				OUT	27	1	2	25	112	29	7	21	34	258
				BOTH	68	2	3	57	230	67	15	55	97	594
29	2012040	1	1600	IN	175	45	9	38	192	162	1	51	263	936
				OUT	119	47	9	53	247	216	5	39	119	854
				BOTH	294	92	18	91	439	378	6	90	382	1790
30	2012070	115	200	IN	68	6	1	21	173	25	4	13	17	328
				OUT	45	1	1	18	195	14	3	7	32	316
				BOTH	113	7	2	39	368	39	7	20	49	644
31	2012110	1	1301	IN	314	9	4	153	440	74	5	96	267	1362
				OUT	405	1	1	100	452	79	10	59	290	1397
				BOTH	719	10	5	253	892	153	15	155	557	2759
32	2012150	101	301	IN	28	25	5	19	117	63	5	22	61	345
				OUT	27	16	8	20	134	53	8	35	65	366
				BOTH	55	41	13	39	251	116	13	57	126	711
33	2022030	1019	200	IN	223	33	0	39	285	54	4	29	14	681
				OUT	239	32	2	36	259	41	2	34	11	656
				BOTH	462	65	2	75	544	95	6	63	25	1337
34	2022060	1	2903	IN	130	47	1	44	422	35	8	63	71	821
				OUT	98	51	1	88	345	78	9	59	103	832
				BOTH	228	98	2	132	767	113	17	122	174	1653
35	2032120	106	602	IN	263	227	95	1	268	466	12	68	15	1415
				OUT	226	284	120	1	354	424	3	61	7	1480
				BOTH	489	511	215	2	622	890	15	129	22	2895
36	2032140	108	500	IN	29	5	3	8	119	32	2	49	34	281
				OUT	48	14	0	8	112	30	1	27	8	248
				BOTH	77	19	3	16	231	62	3	76	42	529
37	2042130	1	1901	IN	198	5	2	41	196	35	2	56	257	792
				OUT	242	8	5	41	223	29	4	36	136	724
				BOTH	440	13	7	82	419	64	6	92	393	1516



## Appendix 6.5 NUMBER OF EFFECTIVE SAMPLES

(Unit:Vehicles)

Seq	Survey Route Station Code	No.	Ctl' Sect.	Dire-ction	Vehicle Type										Total
					PC	LB	HB	HB	PP	PT	LT	HT	HT	HT	
38	2052100	101	1100	IN	63	13	2	30	128	89	14	26	18	383	
				OUT	41	18	3	20	120	31	10	25	23	291	
				BOTH	104	31	5	50	248	120	24	51	41	674	
39	2062130	1	2603	IN	196	20	2	45	307	47	11	103	98	829	
				OUT	183	29	0	104	314	64	21	107	161	983	
				BOTH	379	49	2	149	621	111	32	210	259	1812	
40	2072081	117	400	IN	203	17	1	67	400	31	1	30	49	799	
				OUT	203	12	1	62	405	31	1	30	49	794	
				BOTH	406	29	2	129	805	62	2	60	98	1593	
41	2072082	11	502	IN	148	5	2	63	371	36	3	36	55	719	
				OUT	197	2	1	47	390	48	11	39	47	782	
				BOTH	345	7	3	110	761	84	14	75	102	1501	
42	2072090	113	202	IN	55	10	3	31	227	85	2	19	56	488	
				OUT	47	17	3	23	317	30	4	30	75	546	
				BOTH	102	27	6	54	544	115	6	49	131	1034	
43	2072111	117	200	IN	167	16	2	94	476	90	6	62	153	1066	
				OUT	230	9	12	57	506	92	7	70	222	1205	
				BOTH	397	25	14	151	982	182	13	132	375	2271	
44	2072112	11	201	IN	115	1	2	48	230	44	12	23	70	545	
				OUT	168	1	2	37	245	54	4	37	104	652	
				BOTH	283	2	4	85	475	98	16	60	174	1197	
45	2082150	12	400	IN	109	10	22	43	325	33	4	30	45	621	
				OUT	97	12	27	55	351	46	8	35	28	659	
				BOTH	206	22	49	98	676	79	12	65	73	1280	
46	2082170	11	700	IN	269	3	1	92	301	27	7	45	136	881	
				OUT	290	6	1	44	300	40	5	45	58	789	
				BOTH	559	9	2	136	601	67	12	90	194	1670	
47	2094020	12	1000	IN	61	3	5	17	11	214	15	48	102	476	
				OUT	71	2	3	21	2	218	12	59	103	491	
				BOTH	132	5	8	38	13	432	27	107	205	967	
48	2094030	225	600	IN	13	8	1	6	72	31	9	13	24	177	
				OUT	19	6	5	21	99	9	2	14	12	187	
				BOTH	32	14	6	27	171	40	11	27	36	364	
49	2094120	203	202	IN	15	11	8	7	14	227	6	20	7	315	
				OUT	13	19	11	8	21	230	2	17	9	330	
				BOTH	28	30	19	15	35	457	8	37	16	645	
50	2102131	103	100	IN	90	22	2	32	288	35	14	30	70	583	
				OUT	103	12	1	32	268	33	8	20	30	507	
				BOTH	193	34	3	64	556	68	22	50	100	1090	
51	2102132	11	1200	IN	275	16	2	25	338	49	8	28	12	753	
				OUT	259	4	2	27	431	121	7	35	23	909	
				BOTH	534	20	4	52	769	170	15	63	35	1662	
52	2102150	101	700	IN	37	22	11	1	126	20	18	13	9	257	
				OUT	27	27	9	3	117	8	8	13	1	213	
				BOTH	64	49	20	4	243	28	26	26	10	470	
53	2122130	11	1300	IN	351	97	18	122	559	92	9	82	166	1496	
				OUT	244	117	3	108	512	182	9	98	255	1528	
				BOTH	595	214	21	230	1071	274	18	180	421	3024	
54	2152170	102	100	IN	33	1	7	24	159	21	4	17	20	286	
				OUT	55	1	5	17	147	14	6	21	20	286	
				BOTH	88	2	12	41	306	35	10	38	40	572	

(Unit:Vehicles)

Seq	Survey Route Station Code	No.	Ctl' Sect.	Dire-ction	Vehicle Type										Total
					PC	LB	HB	HB	PP	PT	LT	HT	HT	HT	
55	3013040	3	1300	IN	202	57	1	20	563	154	5	58	82	1142	
				OUT	182	43	3	34	504	297	3	59	59	1184	
				BOTH	384	100	4	54	1067	451	8	117	141	2326	
56	3013060	317	302	IN	29	40	14	51	232	70	7	41	26	510	
				OUT	40	39	16	41	244	62	1	33	42	518	
				BOTH	69	79	30	92	476	132	8	74	68	1028	
58	3023031	3	402	IN	11	2	55	229	23	10	6	10	191	537	
				OUT	197	30	5	343	81	44	5	71	682	1458	
				BOTH	208	32	60	572	104	54	11	81	873	1995	
59	3023032	315	200	IN	208	78	16	42	306	82	11	53	209	1005	
				OUT	172	53	6	36	245	84	3	66	196	861	
				BOTH	380	131	22	78	551	166	14	119	405	1866	
60	3023033	331	400	IN	145	18	2	27	413	79	7	36	169	896	
				OUT	139	16	2	32	311	133	4	50	86	773	
				BOTH	284	34	4	59	724	212	11	86	255	1669	
61	3023061	319	200	IN	167	16	8	18	317	70	6	63	119	784	
				OUT	141	10	1	22	303	109	8	59	177	830	
				BOTH	308	26	9	40	620	179	14	122	296	1614	
62	3023062	304	400	IN	226	37	5	45	165	245	11	52	273	1059	
				OUT	211	37	1	42	115	261	6	54	438	1165	
				BOTH	437	74	6	87	280	506	17	106	711	2224	
63	3033071	3	800	IN	246	271	2	72	562	97	11	30	103	1394	
				OUT	199	136	1	78	477	74	6	40	93	1104	
				BOTH	445	407	3	150	1039	171	17	70	196	2498	
64	3033072	36	200	IN	337	85	2	32	425	83	10	55	149	1178	
				OUT	283	83	2	33	434	81	3	61	119	1099	
				BOTH	620	168	4	65	859	164	13	116	268	2277	
65	3033073	344	300	IN	263	76	26	54	473	186	18	97	141	1334	
				OUT	171	36	24	55	470	119	5	60	91	1031	
				BOTH	434	112	50	109	943	305	23	157	232	2365	
67	3064060	304	700	IN	61	29	13	39	272	36	19	49	82	600	
				OUT	85	25	19	34	178	134	6	42	145	668	
				BOTH	146	54	32	73	450	170	25	91	227	1268	
68	4014090	213	102	IN	131	28	1	120	89	743	9	118	95	1334	
				OUT	110	29	3	108	86	703	5	92	164	1300	
				BOTH	241	57	4	228	175	1446	14	210	259	2634	
69	4014110	214	200	IN	95	6	7	41	50	338	8	86	67	698	
				OUT	83	6	9	32	15	323	11	94	89	662	
				BOTH	178	12	16	73	65	661	19	180	156	1360	
70	4014130	213	303	IN	66	1	9	17	14	161	6	26	37	337	
				OUT	92	5	36	22	26	158	5	31	22	397	
				BOTH	158	6	45	39	40	319	11	57	59	734	
71	4024030	201	702	IN	93	2	11	33	4	401	53	79	81	757	
				OUT	52	1	14	14	10	327	25	76	116	635	
				BOTH	145	3	25	47	14	728	78	155	197	1392	
72	4024060	2	702	IN	142	3	2	143	121	346	5	74	204	1040	
				OUT	179	6	1	104	92	254	5	85	342	1068	
				BOTH	321	9	3	247	213	600	10	159	546	2108	
73	4024091	208	102	IN	33	16	8	79	29	260	8	41	28	502	
				OUT	25	21	6	80	54	272	13	55	24	550	
				BOTH	58	37	14	159	83	532	21	96	52	1052	

Appendix 6.5 NUMBER OF EFFECTIVE SAMPLES

(Unit: Vehicles)

Seq	Survey Route		Ctl' Sect.	Dire-ction	Vehicle Type									Total
	Station Code	No.			PC	LB	HB	HB	PP	PT	LT	MT	HT	
74	4024092	23	103	IN	89	13	22	65	63	246	19	95	33	645
				OUT	158	2	15	72	41	351	25	104	47	815
				BOTH	247	15	37	137	104	597	44	199	80	1460
75	4024120	201	800	IN	79	1	1	31	10	193	12	54	74	455
				OUT	77	2	7	31	19	190	10	35	41	412
				BOTH	156	3	8	62	29	383	22	89	115	867
76	4024160	2	1100	IN	124	20	1	110	59	433	16	81	224	1068
				OUT	121	51	9	89	77	486	24	67	99	1023
				BOTH	245	71	10	199	136	919	40	148	323	2091
77	4034061	205	702	IN	72	3	2	54	29	197	11	45	31	444
				OUT	51	12	5	51	169	21	44	51	20	424
				BOTH	123	15	7	105	198	218	55	96	51	868
78	4034062	202	301	IN	31	2	4	14	28	129	9	80	100	397
				OUT	25	2	5	15	21	131	8	95	102	404
				BOTH	56	4	9	29	49	260	17	175	202	801
79	4044080	212	1302	IN	25	17	3	30	35	219	17	31	18	395
				OUT	26	18	2	26	26	221	13	29	20	381
				BOTH	51	35	5	56	61	440	30	60	38	776
80	4044130	22	502	IN	45	12	9	34	32	128	7	30	37	334
				OUT	38	14	9	26	44	129	3	29	26	318
				BOTH	83	26	18	60	76	257	10	59	63	652
81	4054160	2	1303	IN	181	39	2	67	102	581	14	94	123	1203
				OUT	183	51	3	70	117	598	16	102	154	1294
				BOTH	364	90	5	137	219	1179	30	196	277	2497
82	4064071	24	300	IN	53	17	2	66	259	65	3	56	186	707
				OUT	89	11	2	80	298	67	4	72	138	761
				BOTH	142	28	4	146	557	132	7	128	324	1468
83	4064072	226	400	IN	192	12	2	17	35	27	7	23	77	392
				OUT	274	11	4	14	11	43	6	31	44	438
				BOTH	466	23	6	31	46	70	13	54	121	830
84	4074141	226	600	IN	103	57	6	16	174	131	8	57	35	587
				OUT	73	40	1	22	142	152	12	38	38	518
				BOTH	176	97	7	38	316	283	20	95	73	1105
85	4074142	219	400	IN	38	2	2	37	10	215	21	52	83	460
				OUT	36	1	4	36	23	204	22	70	90	486
				BOTH	74	3	6	73	33	419	43	122	173	946
86	4084100	212	1400	IN	19	10	3	27	30	176	18	29	36	348
				OUT	18	10	3	20	22	180	17	34	61	365
				BOTH	37	20	6	47	52	356	35	63	97	713
87	4094111	23	303	IN	137	1	3	95	30	336	12	97	96	807
				OUT	149	3	1	72	11	484	17	125	59	921
				BOTH	286	4	4	167	41	820	29	222	155	1728
88	4094112	202	700	IN	42	5	11	21	33	129	8	39	78	366
				OUT	33	12	15	35	18	154	4	46	33	350
				BOTH	75	17	26	56	51	283	12	85	111	716
89	4104110	23	501	IN	96	1	15	33	28	238	22	61	35	529
				OUT	96	1	3	34	20	270	25	79	29	557
				BOTH	192	2	18	67	48	508	47	140	64	1086
90	4104170	23	600	IN	60	9	6	38	28	234	12	52	57	496
				OUT	45	9	3	35	28	238	23	42	42	465
				BOTH	105	18	9	73	56	472	35	94	99	961

(Unit: Vehicles)

Seq	Survey Route		Ctl' Sect.	Dire-ction	Vehicle Type									Total
	Station Code	No.			PC	LB	HB	HB	PP	PT	LT	MT	HT	
91	4114140	214	500	IN	35	11	4	14	23	157	14	61	20	339
				OUT	32	3	3	12	19	152	22	62	36	341
				BOTH	67	14	7	26	42	309	36	123	56	680
92	4124160	210	302	IN	33	11	3	37	29	274	18	79	17	501
				OUT	38	16	7	35	27	198	22	62	23	428
				BOTH	71	27	10	72	56	472	40	141	40	929
93	4134160	22	301	IN	107	1	1	51	27	298	12	68	117	682
				OUT	137	1	7	54	11	291	15	83	110	709
				BOTH	244	2	8	105	38	589	27	151	227	1391
94	4144150	226	800	IN	63	16	13	23	18	155	17	35	43	383
				OUT	67	18	7	23	26	134	12	53	31	371
				BOTH	130	34	20	46	44	289	29	88	74	754
95	4154170	226	1200	IN	110	12	10	32	71	357	20	52	53	717
				OUT	108	26	10	32	70	338	23	52	56	715
				BOTH	218	38	20	64	141	695	43	104	109	1432
96	5015050	323	103	IN	371	14	13	135	613	227	30	65	720	2188
				OUT	449	59	11	135	713	431	24	71	553	2446
				BOTH	820	73	24	270	1326	658	54	136	1273	4634
97	5015060	324	202	IN	58	1	1	36	313	145	9	54	213	830
				OUT	62	2	4	32	280	113	12	40	194	739
				BOTH	120	3	5	68	593	258	21	94	407	1569
98	5025050	4	302	IN	35	2	2	162	128	101	16	132	724	1302
				OUT	44	1	3	275	111	108	27	134	830	1533
				BOTH	79	3	5	437	239	209	43	266	1554	2835
99	5025060	321	202	IN	112	19	8	46	115	347	15	77	206	945
				OUT	95	10	3	72	151	245	6	64	241	887
				BOTH	207	29	11	118	266	592	21	141	447	1832
100	5035040	4	800	IN	315	88	14	107	146	132	31	58	160	1051
				OUT	168	14	4	97	203	135	32	62	207	922
				BOTH	483	102	18	204	349	267	63	120	367	1973
101	5036020	4	1400	IN	148	15	1	39	237	112	11	88	371	1022
				OUT	184	18	3	39	253	123	8	105	267	1000
				BOTH	332	33	4	78	490	235	19	193	638	2022
103	5055081	35	300	IN	143	17	2	134	119	147	13	76	434	1085
				OUT	187	49	2	161	110	271	14	110	607	1511
				BOTH	330	66	4	295	229	418	27	186	1041	2596
104	5055082	325	200	IN	172	52	13	69	227	95	16	41	95	780
				OUT	129	50	7	47	245	100	21	67	89	755
				BOTH	301	102	20	116	472	195	37	108	184	1535
105	5075080	35	201	IN	331	45	5	166	391	89	14	58	438	1537
				OUT	462	83	11	156	247	154	7	76	389	1585
				BOTH	793	128	16	322	638	243	21	134	827	3122
106	6016030	4	3500	IN	191	7	2	49	327	57	2	39	44	718
				OUT	186	34	1	26	281	55	3	51	43	680
				BOTH	377	41	3	75	608	112	5	90	87	1398
107	6016070	4	3200	IN	123	5	1	16	245	54	3	46	80	573
				OUT	163	22	6	37	236	65	5	60	106	700
				BOTH	286	27	7	53	481	119	8	106	186	1273
108	6016140	4035	200	IN	73	42	3	20	132	124	1	20	81	496
				OUT	105	30	8	26	93	173	2	20	86	543
				BOTH	178	72	11	46	225	297	3	40	167	1039

Appendix 6.5 NUMBER OF EFFECTIVE SAMPLES

(Unit: Vehicles)

Seq	Survey Route Station Code	Ctl' No.	Dire- Sect.	Dire- ction	Vehicle Type									Total
					PC	LB	HB	HB	PP	PT	LT	HT	HT	
109	6026100	4	1800	IN	111	21	5	17	179	65	5	35	112	550
				OUT	81	13	9	17	193	40	4	34	67	458
				BOTH	192	34	14	34	372	105	9	69	179	1008
110	6026140	41	300	IN	323	9	4	37	216	63	25	68	366	1111
				OUT	296	27	4	31	130	150	11	52	150	851
				BOTH	619	36	8	68	346	213	36	120	516	1962
111	6036040	403	302	IN	392	32	3	42	40	184	8	41	115	857
				OUT	240	14	6	43	86	200	4	66	91	750
				BOTH	632	46	9	85	126	384	12	107	206	1607
112	6036060	4	3800	IN	255	18	1	36	322	42	1	28	34	737
				OUT	268	26	4	29	231	39	5	40	39	681
				BOTH	523	44	5	65	553	81	6	68	73	1418
113	6046060	41	1100	IN	206	13	6	42	81	166	6	59	110	689
				OUT	253	5	2	44	33	262	7	57	186	849
				BOTH	459	18	8	86	114	428	13	116	296	1538
114	6046120	408	302	IN	278	36	0	49	290	92	4	73	52	874
				OUT	254	19	1	55	13	375	3	85	69	874
				BOTH	532	55	1	104	303	467	7	158	121	1748
115	6046141	41	800	IN	252	32	0	21	263	47	3	63	207	888
				OUT	272	8	1	28	398	63	1	61	303	1135
				BOTH	524	40	1	49	661	110	4	124	510	2023
116	6046142	401	801	IN	255	48	1	44	343	110	8	64	169	1042
				OUT	202	28	2	49	424	67	5	75	178	1030
				BOTH	457	76	3	93	767	177	13	139	347	2072
117	6056080	42	701	IN	203	14	8	33	14	313	3	31	53	672
				OUT	207	18	2	40	241	125	12	28	79	752
				BOTH	410	32	10	73	255	438	15	59	132	1424
118	6066120	4	4100	IN	513	53	2	79	206	284	7	104	328	1576
				OUT	511	77	5	67	588	81	9	113	302	1753
				BOTH	1024	130	7	146	794	365	16	217	630	3329
119	6076100	4	2300	IN	54	14	0	13	31	105	5	26	42	290
				OUT	33	11	1	20	138	24	4	14	24	269
				BOTH	87	25	1	33	169	129	9	40	66	559
120	6076110	402	101	IN	352	31	6	101	148	254	7	46	158	1103
				OUT	402	36	10	113	162	127	4	48	133	1035
				BOTH	754	67	16	214	310	381	11	94	291	2138
121	6086090	410	102	IN	254	68	6	71	293	82	8	64	40	886
				OUT	194	27	6	80	429	34	9	47	47	873
				BOTH	448	95	12	151	722	116	17	111	87	1759
122	6086120	4086	300	IN	390	19	2	21	249	118	4	52	120	975
				OUT	473	11	1	20	42	248	9	54	159	1017
				BOTH	863	30	3	41	291	366	13	106	279	1992
123	6126130	406	200	IN	190	11	2	36	266	55	2	53	55	670
				OUT	230	17	1	35	234	97	4	75	79	772
				BOTH	420	28	3	71	500	152	6	128	134	1442

Appendix 6.6 INTER - CHANGWAT TRAFFIC BY SURVEY STATION - 1990

(Unit : vehicles/day)

SURVEY STN. SEQ.	ROUTE NO.	SEC. CODE	COUNTING TRAFFIC VOLUME				FLUCTUATION FACTOR	UNDER CONST- RUCTION FACTOR *	A.D.T (1990)				INTRA-CHANGWAT TRAFFIC				FROM/TO FOREIGN COUNTRIES TRAFFIC				INTER-CHANGWAT TRAFFIC							
			PC	BUS	PU+T	TOTAL			PC	BUS	PU+T	TOTAL	PC	BUS	PU+T	TOTAL	PC	BUS	PU+T	TOTAL	VEHICLES				PERCENTAGE			
																					PC	BUS	PU+T	TOTAL	PC	BUS	PU+T	TOTAL
1	340	201	10175	596	17350	28121	1.037	-	10551	618	17992	29161	517	2	1260	1779	0	0	0	0	10034	616	16732	27382	95.1	99.7	93.0	93.9
2	303	100	17053	3353	16835	37241	1.061	-	18093	3558	17862	39513	1065	127	896	2088	0	0	0	0	17028	3431	16966	37425	94.1	96.4	95.0	94.7
3	3	200	14446	7820	13885	36151	1.061	-	15327	8297	14732	38356	2458	1063	2915	6436	0	0	0	0	12869	7234	11817	31920	84.0	87.2	80.2	83.2
4	304	202	2031	889	5898	8818	1.061	-	2155	943	6258	9356	23	10	83	116	0	0	0	0	2132	933	6175	9240	98.9	98.9	98.7	98.8
5	4	100	10917	3019	19407	33343	1.037	-	11321	3131	20125	34577	468	136	1014	1618	0	0	0	0	10853	2995	19111	32959	95.9	95.7	95.0	95.3
6	35	100	3570	788	8831	13189	0.890	1.6977	3922	867	9985	14774	164	7	388	559	0	0	0	0	3758	860	9597	14215	95.8	99.2	96.1	96.2
7	32	700	3439	935	3227	7601	-	-	3439	935	3227	7601	411	58	184	653	0	0	0	0	3028	877	3043	6948	88.0	93.8	94.3	91.4
8	1	900	371	305	2354	3030	0.938	-	348	286	2208	2842	74	69	412	555	0	0	0	0	274	217	1796	2287	78.7	75.9	81.3	80.5
9	1	1101	3402	1263	7072	11737	0.981	-	3337	1239	6938	11514	160	52	322	534	0	0	0	0	3177	1187	6616	10980	95.2	95.8	95.4	95.4
10	340	600	564	118	1741	2423	0.936	1.782	680	145	2080	2905	96	0	271	367	0	0	0	0	584	145	1809	2538	85.9	100.0	87.0	87.4
11	346	300	597	571	3917	5085	1.037	-	619	592	4062	5273	49	18	426	493	0	0	0	0	570	574	3636	4780	92.1	97.0	89.5	90.7
12	340	300	8343	5218	18457	32018	-	-	8343	5218	18457	32018	418	0	623	1041	0	0	0	0	7925	5218	17834	30977	95.0	100.0	96.6	96.7
13	1	201	17990	12275	17655	47920	-	-	17990	12275	17655	47920	1573	1164	1100	3837	0	0	0	0	16417	11111	16555	44083	91.3	90.5	93.8	92.0
14	305	102	1028	150	7632	8810	1.037	-	1066	156	7914	9136	24	1	166	191	0	0	0	0	1042	155	7748	8945	97.7	99.4	97.9	97.9
15	311	100	1061	382	3365	4808	0.965	-	1024	369	3247	4640	2	2	9	13	0	0	0	0	1022	367	3238	4627	99.8	99.5	99.7	99.7
16	309	302	275	149	713	1137	1.037	-	285	155	739	1179	3	7	26	36	0	0	0	0	282	148	713	1143	98.9	95.5	96.5	96.9
17	32	500	1354	1289	6654	9297	1.037	-	1404	1337	6900	9641	7	4	95	106	0	0	0	0	1397	1333	6805	9535	99.5	99.7	98.6	98.9
18	11	101	236	155	1374	1765	0.936	-	221	145	1286	1652	0	0	0	0	0	0	0	0	221	145	1286	1652	100.0	100.0	100.0	100.0
19	1	500	1561	722	5470	7753	0.965	-	1506	697	5279	7482	14	2	71	87	0	0	0	0	1492	695	5208	7395	99.1	99.7	98.7	98.8
20	21	200	968	330	2931	4229	0.890	-	862	294	2609	3764	34	17	196	247	0	0	0	0	828	277	2413	3517	96.1	94.2	92.5	93.4
21	1	301	3177	1961	21192	26330	1.061	-	3371	2081	22485	27936	0	4	432	436	0	0	21	21	3371	2077	22032	27479	100.0	99.8	98.0	98.4
22	33	101	379	589	3386	4354	1.061	-	402	625	3593	4620	17	3	221	241	0	0	0	0	385	622	3372	4379	95.8	99.5	93.8	94.8
23	2	101	1918	1798	10750	14466	0.915	-	1755	1645	9836	13236	129	63	863	1055	0	0	0	0	1626	1582	8973	12181	92.6	96.2	91.2	92.0
24	34	100	8353	2679	25869	36901	1.061	-	8863	2842	27447	39152	106	35	705	846	0	0	0	0	8757	2807	26742	38306	98.8	98.8	97.4	97.8
25	3	301	183	467	2942	3592	1.037	-	190	484	3051	3725	0	4	78	82	0	0	0	0	190	480	2973	3643	100.0	99.2	97.4	97.8
26	21	501	332	366	2398	3096	0.979	-	325	358	2348	3031	38	25	503	566	0	0	0	0	287	333	1845	2465	88.3	93.0	78.6	81.3
27	1	700	165	207	866	1238	0.938	-	155	194	812	1161	0	0	1	1	0	0	0	0	155	194	811	1160	100.0	100.0	99.9	99.9
28	205	501	103	73	816	992	0.992	-	102	72	809	984	0	0	2	2	0	0	0	0	102	72	807	982	100.0	100.0	99.8	99.8
29	1	1600	498	487	3521	4506	1.001	-	498	487	3525	4511	0	102	55	157	0	0	0	0	498	385	3470	4354	100.0	79.1	98.4	96.5
30	115	200	167	68	648	883	1.001	-	167	68	649	884	0	0	12	12	0	0	0	0	167	68	637	872	100.0	100.0	98.1	98.6
31	1	1301	1800	788	4946	7534	0.979	-	1762	771	4842	7376	10	8	28	46	0	0	0	0	1752	763	4814	7330	99.4	99.0	99.4	99.4
32	101	301	89	124	887	1100	1.001	-	89	124	888	1101	2	2	21	25	0	0	0	0	87	122	867	1076	97.8	98.4	97.6	97.7
33	118	200	744	227	1319	2290	0.976	-	726	222	1287	2235	10	1	43	54	0	0	0	0	716	221	1244	2181	98.6	99.5	96.7	97.6
34	1	2903	346	408	2559	3313	1.001	-	346	408	2562	3316	6	5	93	104	0	0	0	0	340	403	2469	3212	98.3	98.8	96.4	96.9
35	106	602	753	1007	3327	5087	0.976	-	735	983	3247	4965	14	11	52	77	0	0	0	0	721	972	3195	4888	98.1	98.9	98.4	98.4
36	108	500	110	56	628	794	0.976	-	107	55	613	775	18	8	219	245	0	0	0	0	89	47	394	530	83.2	85.4	64.3	68.4
37	1	1901	843	389	1932	3164	0.953	-	803	371	1841	3015	0	0	4	4	0	0	0	0	803	371	1837	3011	100.0	100.0	99.8	99.9
38	101	1100	168	176	1184	1528	0.950	-	160	167	1125	1452	1	0	31	32	0	0	0	0	159	167	1094	1420	99.4	100.0	97.2	97.8
39	1	2603	765	507	2405	3677	1.001	-	766	508	2407	3681	63	134	524	721	0	0	0	0	703	374	1883	2960	91.8	73.6	78.2	80.4
40	117	400	903	556	3580	5039	1.001	-	904	557	3584	5044	0	0	34	34	0	0	0	0	904	557	3550	5010	100.0	100.0	99.1	99.3
41	11	502	508	295	1653	2456	0.976	-	496	288	1613	2397	60	11	273	344	0	0	0	0	436	277	1340	2053	87.9	96.2	83.1	85.6
42	113	202	257	141	1385	1783	1.001	-	257	141	1386	1785	10	15	31	56	0	0	0	0	247	126	1355	1729	96.1	89.4	97.8	96.9
43	117	200	831	540	4096	5467	0.979	-	814	529	4010	5352	4	0	34	38	0	0	0	0	810	529	3976	5314	99.5	100.0	99.2	99.3
44	11	201	398	243	1321	1962	1.005	-	400	244	1328	1972	17	0	46	63	0	0	0	0	383	244	1282	1909	95.7	100.0	96.5	96.8
45	12	400	428	346	2650	3424	0.976	-	418	338	2586	3342	4	2	39	45	0	0	0	0	414	336	2547	3297	99.0	99.4	98.5	98.7

## Appendix 6.6 INTER-CHANGWAT TRAFFIC BY SURVEY STATION - 1990

(Unit : vehicles/day)

SURVEY	COUNTING TRAFFIC VOLIME							UNDER CONST- RUCTION FACTOR *	A.D.T (1990)				INTRA-CHANGWAT TRAFFIC				FROM/TO FOREIGN COUNTRIES TRAFFIC			INTER-CHANGWAT TRAFFIC								
	STN. ROUTE SEQ.	SEC. NO.	SEC. CODE	PC	BUS	PU+T	TOTAL		FLUCTUATION FACTOR	PC	BUS	PU+T	TOTAL	PC	BUS	PU+T	TOTAL	PC	BUS	PU+T	TOTAL	PC	BUS	PU+T	TOTAL			
46	11	700	1194	479	2180	3853	0.978	-	1168	468	2132	3768	0	0	46	46	0	0	0	0	1168	468	2086	3722	100.0	100.0	97.8	98.8
47	12	1000	219	125	1319	1663	0.971	-	213	121	1281	1615	9	3	154	166	0	0	0	0	204	118	1127	1449	95.8	97.5	88.0	89.7
48	225	600	41	101	522	664	0.988	-	41	100	516	656	0	1	28	29	0	0	0	0	41	99	488	627	100.0	99.0	94.6	95.6
49	203	202	88	89	784	961	0.971	-	85	86	761	933	19	34	389	442	0	0	0	0	66	52	372	491	77.8	60.7	48.9	52.6
50	103	200	268	332	1791	2391	0.953	-	255	316	1707	2279	2	2	32	36	0	0	0	0	253	314	1675	2243	99.2	99.4	98.1	98.4
51	11	1200	768	187	1755	2710	0.950	-	730	178	1667	2575	4	2	1	7	0	0	0	0	726	176	1666	2568	99.5	98.9	99.9	99.7
52	101	700	87	98	501	686	0.953	-	83	93	477	654	17	78	278	373	0	0	0	0	66	15	199	281	79.5	16.5	41.8	42.9
53	11	1300	846	650	4410	5906	0.956	-	809	621	4216	5646	20	63	128	211	0	0	0	0	789	558	4088	5435	97.5	89.9	97.0	96.3
54	102	100	125	85	711	921	0.978	-	122	83	695	901	7	0	12	19	0	0	0	0	115	83	683	882	94.3	100.0	98.3	97.9
55	3	1300	976	1154	4516	6646	1.008	-	984	1163	4552	6699	19	19	194	232	0	0	0	0	965	1144	4358	6467	98.1	98.4	95.7	96.5
56	317	302	94	293	1540	1927	0.981	-	92	287	1511	1890	1	3	37	41	0	0	0	0	91	284	1474	1849	98.9	99.0	97.6	97.8
57	3	1000	3058	1383	5893	10334	-	-	3058	1383	5893	10334	223	580	1086	1889	0	0	0	0	2835	803	4807	8445	92.7	58.1	81.6	81.7
58	3	402	8420	2824	36215	47459	1.037	-	8732	2928	37555	49215	68	36	1266	1370	0	0	0	0	8664	2892	36289	47845	99.2	98.8	96.6	97.2
59	315	200	505	459	2295	3259	0.890	-	449	409	2043	2901	23	27	152	202	0	0	0	0	426	382	1891	2699	94.9	93.4	92.6	93.0
60	331	400	416	281	1983	2680	0.890	-	370	250	1765	2385	7	10	123	140	0	0	0	0	363	240	1642	2245	98.1	96.0	93.0	94.1
61	319	200	556	194	2267	3017	1.011	-	562	196	2292	3050	11	2	42	55	0	0	0	0	551	194	2250	2995	98.0	99.0	98.2	98.2
62	304	400	868	329	3331	4528	1.011	-	878	333	3368	4578	36	3	236	275	0	0	0	0	842	330	3132	4303	95.9	99.1	93.0	94.0
63	3	800	1221	2308	4060	7589	0.938	-	1145	2165	3808	7118	167	341	924	1432	0	0	0	0	978	1824	2884	5686	85.4	84.2	75.7	79.9
64	36	200	1637	557	4424	6618	0.925	-	1514	515	4092	6122	43	8	197	248	0	0	0	0	1471	507	3895	5874	97.2	98.4	95.2	95.9
65	344	300	1079	530	5137	6746	0.936	-	1010	496	4808	6314	23	5	428	456	0	0	3	3	987	491	4377	5855	97.7	99.0	91.0	92.7
66	33	202	1606	583	2413	4602	-	-	1606	583	2413	4602	132	9	128	269	0	0	0	0	1474	574	2285	4333	91.8	98.5	94.7	94.2
67	304	700	262	357	2448	3067	0.959	-	251	342	2348	2941	6	11	220	237	0	0	0	0	245	331	2128	2704	97.6	96.8	90.6	91.9
68	213	102	706	593	3458	4757	0.970	-	685	575	3354	4614	177	56	1114	1347	0	0	0	0	508	519	2240	3267	74.2	90.3	66.8	70.8
69	214	200	355	163	1548	2066	0.970	-	344	158	1502	2004	19	11	92	122	0	0	0	0	325	147	1410	1882	94.5	93.0	93.9	93.9
70	213	303	282	332	795	1409	0.943	-	266	313	750	1329	15	8	139	162	0	0	0	0	251	305	611	1167	94.4	97.4	81.5	87.8
71	201	702	337	340	2715	3392	0.943	-	318	321	2560	3199	34	17	366	417	0	0	0	0	284	304	2194	2782	89.3	94.7	85.7	87.0
72	2	702	832	809	3349	4990	0.975	-	811	789	3265	4865	12	12	143	167	0	0	0	0	799	777	3122	4698	98.5	98.5	95.6	96.6
73	208	102	204	308	1247	1759	0.975	-	199	300	1216	1715	4	23	76	103	0	0	0	0	195	277	1140	1612	98.0	92.3	93.7	94.0
74	23	103	535	789	2336	3660	0.975	-	522	769	2278	3569	3	0	29	32	0	0	0	0	519	769	2249	3537	99.4	100.0	98.7	99.1
75	201	800	239	132	1080	1451	0.968	-	231	128	1045	1405	6	0	39	45	0	0	0	0	225	128	1006	1360	97.4	100.0	96.3	96.8
76	2	1100	697	763	3170	4630	0.978	-	682	746	3100	4528	14	9	92	115	0	0	0	0	668	737	3008	4413	97.9	98.8	97.0	97.5
77	205	702	308	183	934	1425	1.045	-	322	191	976	1489	22	11	69	102	0	0	0	0	300	180	907	1387	93.2	94.2	92.9	93.2
78	202	301	139	88	1192	1419	0.940	-	131	83	1120	1334	5	7	39	51	0	0	0	0	126	76	1081	1283	96.2	91.5	96.5	96.2
79	212	1302	89	241	962	1292	0.975	-	87	235	938	1260	7	40	153	200	0	0	0	0	80	195	785	1060	91.9	83.0	83.7	84.1
80	22	502	198	159	569	926	0.943	-	187	150	537	873	12	19	110	141	0	0	0	0	175	131	427	732	93.6	87.3	79.5	83.9
81	2	1303	785	359	2591	3735	0.975	-	765	350	2526	3642	6	8	68	82	2	0	1	3	757	342	2457	3557	99.0	97.7	97.3	97.7
82	24	300	216	532	2368	3116	1.045	-	226	556	2475	3256	0	0	51	51	0	0	0	0	226	556	2424	3205	100.0	100.0	97.9	98.4
83	226	400	710	176	605	1491	0.940	-	667	165	569	1402	16	0	9	25	0	0	0	0	651	165	560	1377	97.6	100.0	98.4	98.2
84	226	600	242	449	1138	1829	0.975	-	236	438	1110	1783	48	294	263	605	0	0	0	0	188	144	847	1178	79.7	32.8	76.3	66.1
85	219	400	262	137	1190	1589	0.970	-	254	133	1154	1541	7	0	54	61	0	0	0	0	247	133	1100	1480	97.2	100.0	95.3	96.0
86	212	1400	65	225	1093	1383	0.978	-	64	220	1069	1353	0	7	44	51	0	0	0	0	64	213	1025	1302	100.0	96.8	95.9	96.2
87	23	303	573	414	2277	3264	0.978	-	560	405	2227	3192	8	0	27	35	0	0	0	0	552	405	2200	3157	98.6	100.0	98.8	98.9
88	202	700	162	223	1115	1500	0.968	-	157	216	1079	1452	12	63	219	294	0	0	0	0	145	153	860	1158	92.3	70.8	79.7	79.8
89	23	501	324	187	1308	1819	0.975	-	316	182	1275	1774	2	0	30	32	0	0	0	0	314	182	1245	1742	99.4	100.0	97.6	98.2
90	23	600	150	269	1071	1490	0.943	-	141	254	1010	1405	1	1	62	64	0	0	0	0	140	253	948	1341	99.3	99.6	93.9	95.4

Appendix 6.6 INTER-CHANGWAT TRAFFIC BY SURVEY STATION -- 1990

(Unit : vehicles/day)

SURVEY STN. SEQ.	ROUTE NO.	SEC. CODE	COUNTING TRAFFIC VOLIME				FLUCTUATION FACTOR	UNDER CONST- RUCTION FACTOR *	A.D.T (1990)				INTRA-CHANGWAT TRAFFIC				FROM/TO FOREIGN COUNTRIES TRAFFIC			INTER-CHANGWAT TRAFFIC VEHICLES			PERCENTAGE					
			PC	BUS	PU+T	TOTAL			PC	BUS	PU+T	TOTAL	PC	BUS	PU+T	TOTAL	PC	BUS	PU+T	TOTAL	PC	BUS	PU+T	TOTAL				
91	214	500	163	71	980	1214	0.943	-	154	67	924	1145	2	5	65	72	0	0	0	0	152	62	859	1073	98.7	92.5	93.0	93.7
92	210	302	181	165	1227	1573	0.968	-	175	160	1188	1523	5	10	203	218	0	0	0	0	170	150	985	1305	97.1	93.7	82.9	85.7
93	22	301	350	209	1622	2181	0.975	-	341	204	1581	2126	2	0	62	64	0	0	0	0	339	204	1519	2062	99.4	100.0	96.1	97.0
94	226	800	191	236	953	1380	0.978	-	187	231	932	1350	29	25	208	262	0	0	0	0	158	206	724	1088	84.5	89.2	77.7	80.6
95	226	1200	417	266	1574	2257	0.970	-	404	258	1527	2189	5	27	37	69	0	0	0	0	399	231	1490	2120	98.8	89.5	97.6	96.8
96	323	101	2186	1626	13293	17105	1.011	-	2210	1644	13439	17293	48	50	559	657	0	0	0	0	2162	1594	12880	16636	97.8	97.0	95.8	96.2
97	324	202	207	113	2645	2965	0.890	-	184	101	2354	2639	14	1	194	209	0	0	0	0	170	100	2160	2430	92.4	99.0	91.8	92.1
98	4	302	4907	1060	25542	31509	1.011	-	4961	1072	25823	31856	0	3	514	517	0	0	0	0	4961	1069	25309	31339	100.0	99.7	98.0	98.4
99	321	202	482	320	4077	4879	0.890	-	429	285	3629	4342	10	8	109	127	0	0	0	0	419	277	3520	4215	97.7	97.2	97.0	97.1
100	4	800	2542	1129	8172	11843	1.037	-	2636	1171	8474	12281	55	12	351	418	0	0	0	0	2581	1159	8123	11863	97.9	99.0	95.9	96.6
101	4	1400	812	624	4215	5651	1.034	-	840	645	4358	5843	0	0	28	28	3	0	0	3	837	645	4330	5812	99.6	100.0	99.4	99.5
102	4	601	5434	1292	8858	15584	-	-	5434	1292	8858	15584	22	63	243	328	0	0	0	0	5412	1229	8615	15256	99.6	95.1	97.3	97.9
103	35	300	899	1353	9029	11281	1.011	-	909	1368	9128	11405	9	4	85	98	0	0	7	7	900	1364	9036	11300	99.0	99.7	99.0	99.1
104	325	200	376	474	2324	3174	1.011	-	380	479	2350	3209	1	8	36	45	0	0	0	0	379	471	2314	3164	99.7	98.3	98.5	98.6
105	35	201	2218	1458	13047	16723	0.890	-	1974	1298	11612	14883	18	17	236	271	0	0	7	7	1956	1281	11369	14605	99.1	98.7	97.9	98.1
106	4	3500	467	246	1264	1977	0.979	-	457	241	1237	1935	1	1	24	26	0	0	0	0	456	240	1213	1909	99.8	99.6	98.1	98.7
107	4	3200	494	195	1149	1838	1.020	-	504	199	1172	1875	0	2	6	8	0	0	0	0	504	197	1166	1867	100.0	99.0	99.5	99.6
108	4035	200	186	206	1635	2027	0.953	-	177	196	1558	1932	26	76	474	576	0	0	0	0	151	120	1084	1356	85.3	61.3	69.6	70.2
109	4	1800	339	271	1260	1870	0.958	-	325	260	1207	1791	0	2	6	8	0	0	0	0	325	258	1201	1783	100.0	99.2	99.5	99.6
110	41	300	998	437	3561	4996	0.958	-	956	419	3411	4786	12	2	142	156	0	0	0	0	944	417	3269	4630	98.7	99.5	95.8	96.7
111	403	302	735	215	1565	2515	0.979	-	720	210	1532	2462	7	2	58	67	0	0	0	0	713	208	1474	2395	99.0	99.0	96.2	97.3
112	4	3800	639	279	1304	2222	1.020	-	652	285	1330	2286	34	14	55	103	0	0	0	0	618	271	1275	2163	94.8	95.1	95.9	95.5
113	41	1100	615	231	1958	2804	1.020	-	627	236	1997	2860	3	0	6	9	3	6	0	9	621	230	1991	2842	99.0	97.5	99.7	99.4
114	408	302	622	247	1740	2609	1.020	-	634	252	1775	2661	4	0	4	8	1	4	2	7	629	248	1769	2646	99.2	98.4	99.7	99.4
115	41	800	670	192	2637	3499	0.953	-	639	183	2513	3335	9	0	10	19	0	0	2	2	630	183	2501	3314	98.6	100.0	99.5	99.4
116	401	801	605	339	2005	2949	0.953	-	577	323	1911	2810	5	0	44	49	0	0	0	0	572	323	1867	2761	99.1	100.0	97.7	98.3
117	42	701	563	256	1509	2328	1.020	-	574	261	1539	2375	11	27	71	109	2	0	0	2	561	234	1468	2264	97.7	89.7	95.4	95.3
118	4	4100	1287	481	2750	4518	0.964	-	1241	464	2651	4355	10	0	23	33	6	1	7	14	1225	463	2621	4308	98.7	99.8	98.9	98.9
119	4	2300	114	151	643	908	1.020	-	116	154	656	926	1	0	7	8	0	0	0	0	115	154	649	918	99.1	100.0	98.9	99.1
120	402	101	909	500	2796	4205	1.020	-	927	510	2852	4289	14	2	50	66	0	0	0	0	913	508	2802	4223	98.5	99.6	98.2	98.5
121	410	102	575	419	1689	2683	0.953	-	548	399	1610	2557	2	7	17	26	1	0	9	10	545	392	1584	2521	99.5	98.2	98.4	98.6
122	43	300	1316	156	2432	3904	0.953	-	1254	149	2318	3721	12	3	32	47	14	4	2	20	1228	142	2284	3654	97.9	95.3	98.5	98.2
123	406	200	517	170	1299	1986	1.020	-	527	173	1325	2026	6	0	78	84	0	0	1	1	521	173	1246	1941	98.9	100.0	94.0	95.8

Appendix 6.7 AVERAGE CAPACITY OF TRUCKS — 1990

(Unit: Ton)

Seq	Survey Station Code	Route No.	Ctl' Sect.	Dire- ction	Vehicle Type				
					PT	LT	MT	HT	Total
1	101030	340	201	IN	1.1	2.9	4.9	10.5	7.2
				OUT	1.1	2.2	4.7	11.3	8.0
				BOTH	1.1	2.6	4.8	10.9	7.6
2	101071	303	100	IN	1.1	2.2	4.6	10.3	4.9
				OUT	1.2	2.6	5.3	10.8	6.9
				BOTH	1.2	2.4	5.1	10.7	6.3
3	101072	3	200	IN	1.2	4.5	6.8	10.6	6.5
				OUT	1.2	3.4	6.5	13.7	6.6
				BOTH	1.2	3.8	6.6	11.9	6.6
4	103020	304	202	IN	1.2	2.5	3.9	11.5	5.6
				OUT	1.0	2.5	4.2	11.8	8.9
				BOTH	1.1	2.5	4.1	11.7	7.6
5	105071	4	100	IN	1.3	3.2	6.5	11.2	7.5
				OUT	1.2	3.6	6.2	15.8	10.2
				BOTH	1.2	3.5	6.3	14.0	9.1
6	105072	35	100	IN	1.3	2.8	5.3	11.0	7.9
				OUT	1.1	2.6	5.3	10.7	7.5
				BOTH	1.2	2.7	5.3	10.8	7.7
8	1022111	1	900	IN	1.2	4.0	5.5	11.7	6.6
				OUT	1.0	3.6	5.6	12.5	7.8
				BOTH	1.1	3.9	5.6	12.2	7.2
9	1022112	1	1101	IN	1.0	2.6	5.1	13.8	9.6
				OUT	1.0	2.9	6.4	16.4	12.7
				BOTH	1.0	2.8	5.7	15.2	11.1
10	1025060	340	600	IN	1.0	3.0	5.7	15.8	11.5
				OUT	0.9	4.5	6.0	13.0	8.8
				BOTH	0.9	4.2	5.9	14.3	9.9
11	1031040	346	300	IN	1.1	2.9	4.1	11.9	7.6
				OUT	0.7	2.8	3.9	11.7	7.4
				BOTH	0.9	2.8	4.0	11.8	7.5
14	1043050	305	102	IN	1.2	3.2	6.9	15.4	10.0
				OUT	1.2	2.8	5.5	17.0	10.5
				BOTH	1.2	3.0	6.2	16.2	10.2
15	1051080	311	100	IN	1.0	3.8	5.5	15.0	10.2
				OUT	1.1	2.8	5.8	16.6	11.6
				BOTH	1.0	3.3	5.6	15.7	10.8
16	1051101	309	302	IN	1.0	3.7	5.3	13.6	4.5
				OUT	1.1	3.0	5.6	14.9	5.8
				BOTH	1.0	3.2	5.4	14.2	5.1
17	1051102	32	500	IN	1.1	3.2	6.1	10.6	7.2
				OUT	1.0	3.7	4.6	11.5	8.9
				BOTH	1.0	3.4	5.4	11.1	8.2
18	1052110	11	101	IN	1.0	1.0	4.1	13.9	10.9
				OUT	1.1	2.3	6.1	14.8	8.8
				BOTH	1.0	1.7	5.2	14.3	9.8
19	1061081	1	500	IN	1.2	3.1	5.4	15.1	10.4
				OUT	1.1	3.0	4.9	16.5	11.2
				BOTH	1.2	3.1	5.1	15.8	10.7
20	1061082	21	200	IN	1.0	2.0	5.3	12.0	8.0
				OUT	0.9	3.1	5.0	13.6	7.1
				BOTH	1.0	2.9	5.2	12.7	7.5

(Unit: Ton)

Seq	Survey Station Code	Route No.	Ctl' Sect.	Dire- ction	Vehicle Type				
					PT	LT	MT	HT	Total
21	1061090	1	301	IN	1.2	5.9	7.4	16.8	14.9
				OUT	1.3	5.4	7.1	15.3	13.3
				BOTH	1.3	5.6	7.2	16.0	13.9
22	1063050	33	101	IN	1.3	3.7	7.4	14.9	9.1
				OUT	0.9	2.3	4.6	13.0	6.6
				BOTH	1.0	3.2	6.2	13.9	7.6
23	1064060	2	101	IN	1.5	3.2	4.8	14.8	12.7
				OUT	1.1	3.5	5.5	13.1	9.4
				BOTH	1.2	3.4	5.3	13.9	10.8
24	1073021	34	100	IN	1.2	3.9	7.8	13.5	11.6
				OUT	1.3	3.1	8.0	19.0	16.5
				BOTH	1.2	3.6	7.9	16.1	13.8
25	1073022	3	301	IN	1.1	5.2	4.6	11.9	6.7
				OUT	1.2	3.0	3.9	12.9	9.0
				BOTH	1.1	4.6	4.2	12.5	7.9
26	1082090	21	501	IN	1.0	2.8	5.6	12.9	6.1
				OUT	1.3	3.0	5.8	14.3	7.0
				BOTH	1.1	2.9	5.7	13.5	6.5
27	1082110	1	700	IN	0.8	3.3	5.6	14.6	6.9
				OUT	1.0	3.9	5.0	13.3	6.3
				BOTH	0.9	3.5	5.3	14.0	6.7
28	1084030	205	501	IN	1.0	3.1	5.4	12.1	7.0
				OUT	0.9	3.3	4.4	15.4	7.3
				BOTH	0.9	3.2	5.0	13.2	7.1
29	2012040	1	1600	IN	0.8	3.0	6.5	14.8	9.2
				OUT	1.0	2.8	5.6	17.4	6.6
				BOTH	0.9	2.8	6.1	15.6	8.0
30	2012070	115	200	IN	1.0	4.3	5.3	11.1	5.1
				OUT	1.1	4.3	5.9	11.9	8.0
				BOTH	1.1	4.3	5.5	11.6	6.5
31	2012110	1	1301	IN	1.0	3.0	5.5	15.7	10.9
				OUT	1.0	2.9	4.9	13.5	9.9
				BOTH	1.0	2.9	5.3	14.6	10.4
32	2012150	101	301	IN	1.0	2.6	4.8	13.4	6.6
				OUT	1.0	3.4	5.3	14.0	7.3
				BOTH	1.0	3.1	5.1	13.7	7.0
33	2022030	1019	200	IN	1.0	3.5	5.8	11.9	4.0
				OUT	1.0	3.0	5.2	14.1	4.3
				BOTH	1.0	3.3	5.5	12.9	4.1
34	2022060	1	2903	IN	1.2	2.9	5.9	15.6	8.7
				OUT	1.1	3.8	5.4	15.6	8.2
				BOTH	1.1	3.4	5.6	15.6	8.4
35	2032120	106	602	IN	1.0	4.0	5.4	13.3	1.9
				OUT	1.0	5.0	5.4	15.4	1.8
				BOTH	1.0	4.2	5.4	14.0	1.9
36	2032140	108	500	IN	1.0	4.0	6.2	11.9	6.4
				OUT	1.0	5.0	6.4	11.6	4.6
				BOTH	1.0	4.3	6.3	11.8	5.7
37	2042130	1	1901	IN	1.0	3.0	6.1	15.6	12.5
				OUT	1.0	3.8	6.3	15.7	11.8
				BOTH	1.0	3.5	6.2	15.6	12.2

Appendix 6.7 AVERAGE CAPACITY OF TRUCKS — 1990

(Unit: Ton)

Seq	Survey Route Station Code	No.	Ctl' Sect.	Dire- ction	Vehicle Type				
					PT	LT	MT	HT	Total
38	2052100	101	1100	IN	1.0	2.9	5.0	17.4	3.9
				OUT	0.9	3.6	5.7	14.0	5.9
				BOTH	1.0	3.2	5.4	15.5	4.7
39	2062130	1	2603	IN	1.0	3.5	5.3	13.3	7.5
				OUT	1.0	3.7	6.6	14.0	8.8
				BOTH	1.0	3.6	5.9	13.7	8.2
40	2072081	117	400	IN	1.0	2.0	5.0	19.7	10.3
				OUT	1.0	2.0	5.0	19.7	10.3
				BOTH	1.0	2.0	5.0	19.7	10.3
41	2072082	11	502	IN	1.0	3.3	5.1	11.1	6.4
				OUT	1.0	3.8	5.9	12.0	6.1
				BOTH	1.0	3.7	5.5	11.5	6.3
42	2072090	113	202	IN	1.1	2.0	6.1	12.6	5.7
				OUT	1.1	2.8	4.4	12.3	7.9
				BOTH	1.1	2.5	5.0	12.4	6.7
43	2072111	117	200	IN	1.0	2.7	6.1	13.6	8.2
				OUT	1.1	3.3	5.9	13.5	9.0
				BOTH	1.0	3.0	6.0	13.5	8.7
44	2072112	11	201	IN	1.1	4.7	6.3	18.0	10.1
				OUT	1.0	4.0	5.1	14.1	8.7
				BOTH	1.0	4.5	5.6	15.6	9.3
45	2082150	12	400	IN	1.1	2.0	5.0	16.8	8.5
				OUT	1.0	3.8	6.5	12.8	5.6
				BOTH	1.0	3.2	5.8	15.3	7.0
46	2082170	11	700	IN	1.1	3.7	6.3	13.9	10.4
				OUT	1.0	3.4	4.8	13.0	6.9
				BOTH	1.0	3.6	5.5	13.7	9.0
47	2094020	12	1000	IN	1.1	4.0	6.2	13.2	5.1
				OUT	1.1	3.9	5.7	11.8	4.7
				BOTH	1.1	4.0	5.9	12.5	4.9
48	2094030	225	600	IN	1.3	3.8	5.5	12.4	5.8
				OUT	1.0	2.0	4.9	11.5	5.9
				BOTH	1.2	3.5	5.2	12.1	5.8
49	2094120	203	202	IN	1.1	2.5	4.0	13.3	1.7
				OUT	1.1	2.5	4.1	12.0	1.7
				BOTH	1.1	2.5	4.1	12.6	1.7
50	2102131	103	100	IN	1.1	3.4	5.8	14.0	8.3
				OUT	1.2	3.6	6.0	16.0	7.3
				BOTH	1.1	3.5	5.8	14.6	7.9
51	2102132	11	1200	IN	1.0	3.1	5.0	12.4	3.8
				OUT	1.0	3.3	5.9	12.5	3.4
				BOTH	1.0	3.2	5.5	12.5	3.5
52	2102150	101	700	IN	1.0	3.4	5.8	11.1	4.3
				OUT	1.0	3.4	5.1	10.0	3.7
				BOTH	1.0	3.4	5.4	11.0	4.1
53	2122130	11	1300	IN	1.0	3.8	5.3	13.2	7.9
				OUT	1.2	2.3	5.2	14.4	8.1
				BOTH	1.1	3.1	5.3	13.9	8.0
54	2152170	102	100	IN	1.1	3.8	5.0	15.9	7.1
				OUT	1.0	3.0	5.5	15.6	7.5
				BOTH	1.1	3.3	5.3	15.8	7.3

(Unit: Ton)

Seq	Survey Route Station Code	No.	Ctl' Sect.	Dire- ction	Vehicle Type				
					PT	LT	MT	HT	Total
55	3013040	3	1300	IN	1.0	5.6	12.2	21.0	8.7
				OUT	0.6	5.0	12.4	20.8	5.2
				BOTH	0.8	5.4	12.3	20.9	6.7
56	3013060	317	302	IN	1.0	5.0	11.8	21.0	7.9
				OUT	1.0	5.0	11.7	20.7	9.6
				BOTH	1.0	5.0	11.8	20.8	8.7
58	3023031	3	402	IN	0.9	8.5	8.0	13.7	12.7
				OUT	1.4	5.8	7.5	18.6	16.6
				BOTH	1.3	7.3	7.5	17.5	15.7
59	3023032	315	200	IN	1.2	4.4	7.3	12.2	8.7
				OUT	1.1	4.7	6.8	11.1	7.8
				BOTH	1.1	4.4	7.0	11.7	8.3
60	3023033	331	400	IN	1.0	2.9	3.9	12.0	7.8
				OUT	1.0	3.0	4.3	12.0	5.1
				BOTH	1.0	2.9	4.1	12.0	6.5
61	3023061	319	200	IN	1.1	2.2	5.3	12.8	7.5
				OUT	1.2	3.0	5.3	12.3	7.5
				BOTH	1.1	2.6	5.3	12.5	7.5
62	3023062	304	400	IN	1.0	4.8	6.9	11.4	6.5
				OUT	1.0	4.3	7.2	13.9	8.9
				BOTH	1.0	4.6	7.0	12.9	7.8
63	3033071	3	800	IN	1.1	5.2	11.7	20.6	10.9
				OUT	1.0	6.0	12.0	21.0	11.9
				BOTH	1.0	5.5	11.9	20.8	11.4
64	3033072	36	200	IN	1.0	5.1	12.2	20.9	13.2
				OUT	1.0	5.0	12.0	20.9	12.6
				BOTH	1.0	5.1	12.1	20.9	12.9
65	3033073	344	300	IN	1.0	5.2	12.1	20.9	9.9
				OUT	0.9	5.0	11.9	21.0	10.0
				BOTH	0.9	5.2	12.0	21.0	10.0
67	3064060	304	700	IN	1.0	1.2	12.0	21.0	12.7
				OUT	0.7	5.2	12.0	21.0	11.2
				BOTH	0.8	2.1	12.0	21.0	11.8
68	4014090	213	102	IN	1.1	2.8	4.1	11.7	2.5
				OUT	1.1	2.8	4.1	13.1	3.4
				BOTH	1.1	2.8	4.1	12.6	2.9
69	4014110	214	200	IN	1.0	3.4	5.2	11.4	3.2
				OUT	1.1	3.7	6.7	12.7	4.1
				BOTH	1.0	3.6	6.0	12.2	3.7
70	4014130	213	303	IN	1.1	3.3	6.3	12.8	3.6
				OUT	1.0	3.4	5.5	11.5	2.8
				BOTH	1.1	3.4	5.8	12.4	3.2
71	4024030	201	702	IN	1.0	3.6	5.7	11.7	3.3
				OUT	1.1	4.7	5.2	12.2	4.2
				BOTH	1.0	4.0	5.4	12.0	3.7
72	4024060	2	702	IN	1.0	2.8	4.7	12.7	5.2
				OUT	1.1	4.2	6.5	17.1	9.8
				BOTH	1.0	3.5	5.7	15.5	7.6
73	4024091	208	102	IN	1.0	2.9	4.4	14.3	2.6
				OUT	1.0	2.4	4.1	11.5	2.2
				BOTH	1.0	2.6	4.2	13.0	2.4



Appendix 6.7 AVERAGE CAPACITY OF TRUCKS -- 1990

(Unit: Ton)

Seq	Survey Route Station Code	No.	Ctl' Sect.	Dire- ction	Vehicle Type				
					PT	LT	MT	HT	Total
74	4024092	23	103	IN	1.0	3.3	5.4	13.0	3.2
				OUT	1.1	3.5	5.7	13.1	3.2
				BOTH	1.0	3.4	5.5	13.1	3.2
75	4024120	201	800	IN	1.2	4.5	6.9	14.8	5.3
				OUT	1.0	3.6	5.9	12.8	3.5
				BOTH	1.1	4.1	6.5	14.1	4.4
76	4024160	2	1100	IN	1.0	3.0	4.0	12.1	4.7
				OUT	1.0	2.8	4.0	11.5	2.9
				BOTH	1.0	2.9	4.0	11.9	3.8
77	4034061	205	702	IN	1.2	4.0	6.0	16.0	3.7
				OUT	1.2	2.1	6.6	13.4	5.3
				BOTH	1.2	2.5	6.3	15.0	4.2
78	4034062	202	301	IN	1.2	4.1	7.0	13.8	6.7
				OUT	1.1	4.5	5.6	20.0	8.2
				BOTH	1.1	4.3	6.2	16.9	7.5
79	4044080	212	1302	IN	1.1	2.2	3.9	11.2	2.1
				OUT	1.0	2.5	4.0	11.5	2.2
				BOTH	1.1	2.3	4.0	11.4	2.1
80	4044130	22	502	IN	1.1	2.9	4.5	12.1	3.7
				OUT	1.0	3.0	4.0	11.8	3.0
				BOTH	1.1	2.9	4.3	12.0	3.4
81	4054160	2	1303	IN	1.0	3.0	4.0	12.0	3.1
				OUT	1.0	2.3	4.1	12.6	3.5
				BOTH	1.0	2.6	4.1	12.3	3.3
82	4064071	24	300	IN	0.8	3.0	3.8	12.1	8.2
				OUT	1.1	2.8	4.8	13.9	8.4
				BOTH	1.0	2.9	4.4	12.9	8.3
83	4064072	226	400	IN	1.1	2.7	4.0	12.4	8.2
				OUT	1.0	2.8	3.9	11.7	5.6
				BOTH	1.1	2.8	4.0	12.2	7.0
84	4074141	226	600	IN	0.9	2.4	4.0	12.1	3.4
				OUT	1.1	2.7	3.8	12.9	3.5
				BOTH	1.0	2.6	3.9	12.5	3.5
85	4074142	219	400	IN	1.1	4.1	6.8	15.7	5.3
				OUT	1.0	3.4	5.1	13.1	4.7
				BOTH	1.1	3.7	5.8	14.4	5.0
86	4084100	212	1400	IN	1.0	2.6	4.2	11.4	2.9
				OUT	1.1	2.2	3.8	11.5	3.6
				BOTH	1.0	2.4	4.0	11.5	3.3
87	4094111	23	303	IN	1.0	4.3	5.7	15.8	4.6
				OUT	1.0	4.6	7.0	14.1	3.3
				BOTH	1.0	4.5	6.5	15.2	3.9
88	4094112	202	700	IN	1.1	4.0	6.7	15.9	6.6
				OUT	1.0	3.3	4.4	12.0	3.2
				BOTH	1.0	3.8	5.5	14.8	5.0
89	4104110	23	501	IN	1.1	3.6	6.8	12.8	3.4
				OUT	1.0	3.5	5.8	13.9	3.0
				BOTH	1.0	3.6	6.3	13.3	3.2
90	4104170	23	600	IN	1.0	3.1	4.0	13.3	3.5
				OUT	1.0	2.5	4.1	11.6	2.8
				BOTH	1.0	2.7	4.0	12.6	3.1

(Unit: Ton)

Seq	Survey Route Station Code	No.	Ctl' Sect.	Dire- ction	Vehicle Type				
					PT	LT	MT	HT	Total
91	4114140	214	500	IN	1.0	3.6	4.7	13.0	3.0
				OUT	1.1	4.0	6.6	15.1	4.5
				BOTH	1.1	3.8	5.7	14.4	3.8
92	4124160	210	302	IN	1.1	2.4	4.1	11.9	2.2
				OUT	1.0	3.0	4.1	12.4	2.6
				BOTH	1.0	2.7	4.1	12.2	2.4
93	4134160	22	301	IN	1.0	3.8	5.6	12.7	4.5
				OUT	1.2	3.6	7.5	14.4	5.2
				BOTH	1.1	3.7	6.6	13.5	4.8
94	4144150	226	800	IN	1.1	2.6	4.0	11.5	3.4
				OUT	1.0	2.1	4.4	11.7	3.3
				BOTH	1.1	2.4	4.3	11.6	3.4
95	4154170	226	1200	IN	1.1	2.7	4.0	11.4	2.6
				OUT	1.1	2.5	4.0	11.9	2.7
				BOTH	1.1	2.6	4.0	11.7	2.7
96	5015050	323	103	IN	1.1	3.2	4.2	12.0	8.9
				OUT	1.2	2.4	4.2	11.9	6.9
				BOTH	1.1	2.8	4.2	12.0	7.9
97	5015060	324	202	IN	1.6	3.7	8.2	15.8	9.7
				OUT	1.6	4.4	6.7	23.0	13.8
				BOTH	1.6	4.1	7.6	19.2	11.6
98	5025050	4	302	IN	1.6	4.9	9.2	16.2	13.5
				OUT	1.6	4.2	7.6	17.5	14.4
				BOTH	1.6	4.5	8.4	16.9	14.0
99	5025060	321	202	IN	1.0	3.5	3.9	12.7	5.1
				OUT	1.0	3.0	4.2	12.5	6.4
				BOTH	1.0	3.4	4.0	12.6	5.7
100	5035040	4	800	IN	1.0	3.0	6.2	13.0	7.0
				OUT	0.9	2.9	6.3	10.6	6.4
				BOTH	1.0	3.0	6.3	11.6	6.7
101	5036020	4	1400	IN	1.3	3.0	6.0	11.3	8.4
				OUT	0.8	3.8	5.1	11.8	7.6
				BOTH	1.0	3.3	5.5	11.5	8.1
103	5055081	35	300	IN	1.0	3.9	4.8	13.2	9.4
				OUT	1.0	2.2	4.3	12.6	8.4
				BOTH	1.0	3.0	4.5	12.8	8.8
104	5055082	325	200	IN	1.0	2.9	7.6	13.7	7.1
				OUT	1.1	4.2	5.9	17.0	7.6
				BOTH	1.1	3.6	6.6	15.3	7.4
105	5075080	35	201	IN	1.3	3.4	5.3	12.2	9.7
				OUT	1.3	4.4	7.6	19.2	13.2
				BOTH	1.3	3.7	6.6	15.5	11.5
106	6016030	4	3500	IN	1.2	3.0	4.6	10.4	5.0
				OUT	1.0	3.0	4.9	10.3	5.0
				BOTH	1.1	3.0	4.8	10.3	5.0
107	6016070	4	3200	IN	0.9	5.3	4.4	12.5	6.9
				OUT	1.1	3.4	6.0	12.1	7.4
				BOTH	1.0	4.1	5.3	12.3	7.2
108	6016140	4035	200	IN	1.0	3.0	5.6	13.8	6.0
				OUT	1.0	2.0	5.8	12.1	4.8
				BOTH	1.0	2.3	5.7	12.9	5.3

## Appendix 6.7 AVERAGE CAPACITY OF TRUCKS — 1990

(Unit: Ton)

Seq	Survey Route Station Code	Ctl' No.	Dire- Sect. ction	Vehicle Type					
				PT	LT	MT	HT	Total	
109	6026100	4	1800	IN	1.3	3.0	6.4	12.3	7.9
				OUT	1.0	2.8	4.6	11.9	6.9
				BOTH	1.2	2.9	5.5	12.2	7.5
110	6026140	41	300	IN	1.0	3.4	5.9	13.7	10.6
				OUT	1.0	4.6	5.5	12.9	6.7
				BOTH	1.0	3.8	5.7	13.4	9.0
111	6036040	403	302	IN	1.0	4.5	5.3	10.8	4.8
				OUT	1.0	4.5	6.5	15.2	5.6
				BOTH	1.0	4.5	6.0	12.7	5.2
112	6036060	4	3800	IN	1.2	2.0	5.1	11.6	5.6
				OUT	1.0	3.0	4.9	10.0	5.2
				BOTH	1.1	2.8	5.0	10.8	5.4
113	6046060	41	1100	IN	1.0	3.0	5.8	15.7	6.6
				OUT	1.0	3.7	5.1	11.7	5.4
				BOTH	1.0	3.4	5.5	13.2	5.9
114	6046120	408	302	IN	1.0	2.5	5.8	11.6	5.1
				OUT	1.0	3.0	5.0	10.4	2.9
				BOTH	1.0	2.7	5.4	11.0	3.5
115	6046141	41	800	IN	1.0	5.3	5.3	10.9	8.3
				OUT	1.0	3.0	5.4	11.7	9.2
				BOTH	1.0	4.8	5.3	11.4	8.8
116	6046142	401	801	IN	1.0	2.9	5.0	10.0	6.1
				OUT	1.2	4.0	4.6	11.1	7.5
				BOTH	1.1	3.3	4.8	10.6	6.8
117	6056080	42	701	IN	1.0	3.0	5.5	10.2	2.6
				OUT	1.0	1.2	6.3	11.8	5.1
				BOTH	1.0	1.5	5.9	11.2	3.5
118	6066120	4	4100	IN	1.0	3.3	4.8	10.8	6.0
				OUT	1.0	2.6	4.8	10.3	7.4
				BOTH	1.0	2.9	4.8	10.6	6.6
119	6076100	4	2300	IN	0.7	2.6	4.9	10.0	3.6
				OUT	1.1	3.8	5.1	10.9	5.7
				BOTH	0.8	3.1	5.0	10.3	4.2
120	6076110	402	101	IN	1.0	4.1	6.2	12.5	5.5
				OUT	1.0	4.0	5.1	12.6	6.6
				BOTH	1.0	4.1	5.7	12.6	5.9
121	6086090	410	102	IN	1.0	2.5	5.2	10.2	4.3
				OUT	1.2	3.0	4.6	11.0	5.8
				BOTH	1.1	2.8	4.9	10.6	4.9
122	6086120	4086	300	IN	1.0	3.0	5.8	12.6	6.6
				OUT	1.0	4.6	5.1	10.6	4.8
				BOTH	1.0	4.1	5.4	11.5	5.5
123	6126130	406	200	IN	1.2	3.0	4.1	10.7	5.3
				OUT	1.0	2.0	4.9	10.3	5.1
				BOTH	1.1	2.3	4.6	10.4	5.2

## Appendix 6.8 AVERAGE ESTIMATED PAYLOAD OF TRUCKS - 1990

(Unit: Ton)

Seq	Survey Route Station Code	No.	Sect.	Dir- ction	Vehicle Type				
					PT	LT	HT	HT	Total
1	101030	340	201	IN	0.8	2.0	4.0	8.3	5.6
				OUT	0.8	1.5	3.7	10.0	6.9
				BOTH	0.8	1.8	3.9	9.2	6.2
2	101071	303	100	IN	0.7	1.5	3.4	7.9	3.8
				OUT	0.9	1.7	4.5	9.3	5.6
				BOTH	0.8	1.6	4.2	8.9	5.0
3	101072	3	200	IN	0.9	3.5	5.4	9.8	6.0
				OUT	0.7	2.1	4.9	10.6	4.9
				BOTH	0.8	2.4	5.2	10.1	5.4
4	103020	304	202	IN	0.8	2.6	3.4	10.9	4.7
				OUT	0.9	0.8	3.5	10.9	8.7
				BOTH	0.8	2.3	3.4	10.9	7.6
5	105071	4	100	IN	0.8	1.6	6.0	9.8	6.2
				OUT	0.8	1.9	5.2	15.0	10.7
				BOTH	0.8	1.8	5.5	13.7	9.2
6	105072	35	100	IN	0.9	2.6	4.1	9.9	6.6
				OUT	0.8	1.9	4.1	8.6	6.6
				BOTH	0.8	2.3	4.1	9.0	6.6
8	1022111	1	900	IN	0.6	2.6	3.7	11.6	4.4
				OUT	0.8	3.0	5.1	11.6	7.2
				BOTH	0.7	2.6	4.6	11.6	6.3
9	1022112	1	1101	IN	0.7	2.0	4.6	14.1	9.9
				OUT	0.9	2.0	5.9	16.2	12.9
				BOTH	0.8	2.0	5.3	15.4	11.7
10	1025060	340	600	IN	0.9	3.0	5.6	15.7	12.2
				OUT	0.8	2.5	5.0	12.6	6.9
				BOTH	0.8	2.6	5.3	14.8	10.1
11	1031040	346	300	IN	0.9	2.5	3.5	10.3	7.6
				OUT	0.7	2.4	3.3	10.0	7.4
				BOTH	0.8	2.4	3.4	10.2	7.5
14	1043050	305	102	IN	0.9	2.3	4.9	13.1	5.7
				OUT	0.9	1.5	5.0	16.1	10.9
				BOTH	0.9	1.9	5.0	15.6	9.3
15	1051080	311	100	IN	0.8	2.1	4.6	14.6	9.5
				OUT	0.8	1.8	6.4	17.3	13.3
				BOTH	0.8	2.0	5.2	15.7	10.9
16	1051101	309	302	IN	0.7	1.4	4.2	14.1	4.3
				OUT	0.7	2.3	3.8	14.0	4.9
				BOTH	0.7	1.9	4.1	14.1	4.5
17	1051102	32	500	IN	0.9	2.4	5.1	9.9	7.4
				OUT	0.8	3.2	3.5	10.7	8.3
				BOTH	0.9	2.8	4.4	10.3	7.8
18	1052110	11	101	IN	0.9	0.5	2.9	13.6	6.9
				OUT	0.7	0.0	5.1	13.7	10.1
				BOTH	0.8	0.5	4.5	13.7	9.2
19	1061081	1	500	IN	0.9	2.1	3.8	10.1	6.9
				OUT	1.2	0.0	5.2	16.6	13.1
				BOTH	1.0	2.1	4.2	12.7	9.0
20	1061082	21	200	IN	0.8	1.7	5.9	13.2	8.3
				OUT	0.9	2.6	3.8	12.8	6.7
				BOTH	0.8	2.5	4.5	13.0	7.3

(Unit: Ton)

Seq	Survey Route Station Code	No.	Sect.	Dir- ction	Vehicle Type				
					PT	LT	HT	HT	Total
21	1061090	1	301	IN	1.1	5.1	6.1	14.0	12.5
				OUT	0.9	4.1	4.6	13.5	10.8
				BOTH	1.0	4.4	5.4	13.8	11.9
22	1063050	33	101	IN	1.1	4.9	7.1	14.6	9.9
				OUT	0.9	1.7	3.5	11.3	4.9
				BOTH	1.0	3.6	5.7	13.6	7.7
23	1064060	2	101	IN	1.4	2.3	4.8	15.2	13.3
				OUT	1.0	2.7	5.2	12.8	9.5
				BOTH	1.1	2.6	5.1	13.6	10.6
24	1073021	34	100	IN	1.0	3.2	7.9	13.9	11.8
				OUT	1.4	1.7	7.2	19.1	17.2
				BOTH	1.2	2.6	7.6	17.1	15.0
25	1073022	3	301	IN	1.0	4.3	3.4	9.3	4.1
				OUT	1.0	3.0	3.4	11.8	9.5
				BOTH	1.0	4.1	3.4	11.4	8.1
26	1082090	21	501	IN	0.7	3.1	4.5	12.6	5.5
				OUT	0.9	2.1	5.1	13.5	5.3
				BOTH	0.9	2.7	4.8	13.1	5.4
27	1082110	1	700	IN	0.8	2.5	5.6	15.1	7.6
				OUT	0.8	3.2	3.9	13.3	6.0
				BOTH	0.8	2.8	4.6	14.2	6.7
28	1084030	205	501	IN	0.8	3.5	4.6	8.7	4.5
				OUT	1.2	2.5	4.0	18.6	12.7
				BOTH	0.9	3.0	4.5	12.6	6.7
29	2012040	1	1600	IN	0.8	0.0	5.7	12.5	8.8
				OUT	0.8	2.3	5.7	17.5	8.6
				BOTH	0.8	2.3	5.7	14.3	8.7
30	2012070	115	200	IN	0.8	3.0	5.5	10.9	6.7
				OUT	0.9	2.3	7.0	9.6	6.5
				BOTH	0.8	2.7	6.0	10.3	6.6
31	2012110	1	1301	IN	0.9	0.8	4.4	15.9	12.4
				OUT	1.0	2.8	5.1	13.9	10.4
				BOTH	0.9	2.3	4.7	15.1	11.5
32	2012150	101	301	IN	0.8	2.1	4.0	12.9	7.1
				OUT	0.8	2.3	4.1	9.6	3.6
				BOTH	0.8	2.1	4.0	12.0	5.6
33	2022030	1019	200	IN	0.8	4.0	5.2	17.7	2.7
				OUT	0.9	0.0	4.1	15.0	3.0
				BOTH	0.9	4.0	4.5	16.3	2.8
34	2022060	1	2903	IN	1.1	3.0	5.3	13.3	6.8
				OUT	0.9	2.8	4.9	15.2	8.2
				BOTH	1.0	2.9	5.1	14.7	7.7
35	2032120	106	602	IN	0.8	3.6	4.6	13.0	1.9
				OUT	0.8	2.3	4.7	13.9	2.3
				BOTH	0.8	3.3	4.7	13.6	2.1
36	2032140	108	500	IN	0.8	4.0	6.0	12.1	4.2
				OUT	0.9	0.0	5.9	9.9	3.3
				BOTH	0.9	4.0	5.9	11.3	3.8
37	2042130	1	1901	IN	0.8	4.0	6.2	15.3	12.3
				OUT	0.9	4.0	6.0	16.0	12.4
				BOTH	0.8	4.0	6.2	15.6	12.4

Appendix 6.8 AVERAGE ESTIMATED PAYLOAD OF TRUCKS -- 1990

					(Unit:Ton)				
Seq	Survey Station Code	Route No.	Ctl' Sect.	Dire- ction	Vehicle Type				
					PT	LT	MT	HT	Total
38	2052100	101	1100	IN	0.8	2.5	4.1	17.4	3.8
				OUT	0.9	3.7	5.6	14.3	5.9
				BOTH	0.9	3.0	4.9	15.2	4.9
39	2062130	1	2603	IN	0.8	2.9	4.7	12.4	5.5
				OUT	0.9	3.2	6.5	13.0	8.5
				BOTH	0.8	3.0	5.9	12.9	7.7
40	2072081	117	400	IN	0.9	0.0	4.7	20.5	10.1
				OUT	0.9	0.0	4.7	20.5	10.1
				BOTH	0.9	0.0	4.7	20.5	10.1
41	2072082	11	502	IN	0.8	0.8	4.6	9.1	4.7
				OUT	0.9	2.3	4.8	12.6	6.1
				BOTH	0.8	1.5	4.7	10.7	5.3
42	2072090	113	202	IN	0.8	2.0	4.9	10.1	3.7
				OUT	0.9	1.5	3.9	11.6	7.0
				BOTH	0.8	1.8	4.4	11.1	5.4
43	2072111	117	200	IN	0.8	1.9	5.5	13.2	7.3
				OUT	0.8	3.0	5.3	11.7	7.9
				BOTH	0.8	2.6	5.4	12.3	7.7
44	2072112	11	201	IN	1.0	3.5	5.5	19.4	13.5
				OUT	1.0	1.0	4.9	12.0	5.3
				BOTH	1.0	3.1	5.1	16.9	9.6
45	2082150	12	400	IN	1.1	0.0	3.8	16.1	7.5
				OUT	1.0	4.0	6.4	13.1	4.3
				BOTH	1.0	4.0	5.2	15.1	5.7
46	2082170	11	700	IN	0.9	3.0	6.1	13.8	10.5
				OUT	0.9	4.0	4.4	12.6	6.5
				BOTH	0.9	3.3	5.3	13.5	9.0
47	2094020	12	1000	IN	1.0	4.2	6.5	13.3	7.3
				OUT	0.8	1.0	4.8	9.3	2.8
				BOTH	0.9	3.7	6.2	13.2	6.7
48	2094030	225	600	IN	0.6	1.8	4.4	8.5	3.4
				OUT	0.6	0.0	3.7	10.8	4.9
				BOTH	0.6	1.8	4.0	9.3	3.9
49	2094120	203	202	IN	0.8	0.0	3.4	10.8	2.1
				OUT	0.7	1.5	2.9	6.0	1.3
				BOTH	0.8	1.5	3.2	9.0	1.7
50	2102131	103	100	IN	0.9	3.3	5.5	12.5	7.9
				OUT	1.0	3.7	6.0	15.1	7.7
				BOTH	0.9	3.5	5.7	13.3	7.8
51	2102132	11	1200	IN	0.9	4.0	5.0	12.5	3.3
				OUT	0.7	3.7	4.2	9.6	1.8
				BOTH	0.8	3.8	4.5	11.0	2.2
52	2102150	101	700	IN	0.8	2.8	4.1	8.7	3.3
				OUT	0.8	2.5	3.2	0.0	1.4
				BOTH	0.8	2.8	3.9	8.7	2.8
53	2122130	11	1300	IN	0.9	3.7	4.7	13.6	5.9
				OUT	1.0	2.2	4.9	13.2	8.0
				BOTH	1.0	2.7	4.8	13.3	7.4
54	2152170	102	100	IN	1.0	3.0	4.9	16.5	7.3
				OUT	0.8	1.6	4.1	17.1	6.9
				BOTH	0.9	2.0	4.4	16.8	7.1

					(Unit:Ton)				
Seq	Survey Station Code	Route No.	Ctl' Sect.	Dire- ction	Vehicle Type				
					PT	LT	MT	HT	Total
55	3013040	3	1300	IN	0.8	5.0	9.6	17.4	8.0
				OUT	0.9	4.4	11.1	20.1	6.8
				BOTH	0.8	4.8	10.2	18.3	7.5
56	3013060	317	302	IN	0.8	4.1	10.1	16.8	3.9
				OUT	0.8	0.0	10.1	19.9	10.3
				BOTH	0.8	4.1	10.1	19.5	7.2
58	3023031	3	402	IN	1.5	8.0	10.0	17.6	16.6
				OUT	1.7	5.9	8.4	19.7	18.1
				BOTH	1.6	7.0	8.5	19.5	18.0
59	3023032	315	200	IN	0.9	3.0	6.7	12.0	8.6
				OUT	0.8	7.0	6.1	10.3	7.0
				BOTH	0.9	3.4	6.4	11.2	7.9
60	3023033	331	400	IN	0.9	2.3	3.4	11.2	7.9
				OUT	0.7	3.0	3.4	10.2	5.6
				BOTH	0.8	2.4	3.4	10.9	7.1
61	3023061	319	200	IN	0.7	2.0	5.9	12.5	6.0
				OUT	0.9	2.5	4.7	11.8	8.2
				BOTH	0.9	2.2	5.2	12.0	7.6
62	3023062	304	400	IN	0.8	5.6	5.5	11.2	6.7
				OUT	0.8	2.3	5.9	13.8	11.5
				BOTH	0.8	4.6	5.7	13.3	10.2
63	3033071	3	800	IN	0.9	4.0	8.5	18.6	10.0
				OUT	0.7	4.7	9.3	20.3	8.1
				BOTH	0.8	4.3	8.9	19.1	9.2
64	3033072	36	200	IN	0.7	4.3	11.1	19.9	13.4
				OUT	0.8	5.0	11.3	20.0	10.1
				BOTH	0.8	4.4	11.2	19.9	11.8
65	3033073	344	300	IN	0.9	3.4	10.4	18.8	10.3
				OUT	0.8	2.5	10.8	20.1	7.5
				BOTH	0.8	3.3	10.6	19.2	9.1
67	3064060	304	700	IN	0.8	1.0	10.2	18.3	8.5
				OUT	0.7	6.7	10.3	20.7	16.2
				BOTH	0.8	1.9	10.3	20.2	13.7
68	4014090	213	102	IN	0.9	1.4	3.7	10.3	4.6
				OUT	0.8	3.0	3.8	12.1	6.9
				BOTH	0.9	1.9	3.7	11.7	6.0
69	4014110	214	200	IN	0.9	4.0	4.9	11.2	5.7
				OUT	0.9	2.9	5.8	13.3	5.3
				BOTH	0.9	3.1	5.3	11.7	5.5
70	4014130	213	303	IN	0.8	1.9	4.1	13.2	8.4
				OUT	0.8	3.0	4.7	11.0	4.7
				BOTH	0.8	2.3	4.6	12.5	6.4
71	4024030	201	702	IN	0.8	3.1	5.3	11.2	4.2
				OUT	1.0	6.3	4.3	11.8	6.8
				BOTH	0.9	3.8	4.9	11.6	5.3
72	4024060	2	702	IN	1.0	0.0	3.9	12.9	9.7
				OUT	0.7	1.0	5.2	18.3	13.5
				BOTH	0.8	1.0	4.7	16.2	12.0
73	4024091	208	102	IN	0.8	2.7	4.3	14.2	6.6
				OUT	0.7	2.5	3.6	8.2	2.6
				BOTH	0.7	2.6	3.9	13.0	4.9

## Appendix 6.8 AVERAGE ESTIMATED PAYLOAD OF TRUCKS - 1990

(Unit: Ton)

Seq	Survey Route Station Code	No.	Sect.	Dire-ction	Vehicle Type				
					PT	LT	MT	HT	Total
74	4024092	23	103	IN	0.7	0.0	5.8	13.3	5.9
				OUT	0.9	0.8	6.8	15.6	7.9
				BOTH	0.8	0.8	6.1	14.4	6.7
75	4024120	201	800	IN	1.1	1.5	6.4	17.2	10.6
				OUT	0.7	3.1	6.5	12.4	5.0
				BOTH	0.8	2.8	6.4	15.4	7.4
76	4024160	2	1100	IN	0.8	2.4	3.1	10.7	7.3
				OUT	0.9	2.8	3.3	10.8	5.2
				BOTH	0.8	2.6	3.2	10.7	6.5
77	4034061	205	702	IN	1.0	4.0	6.0	21.5	4.6
				OUT	1.1	0.0	5.4	12.2	6.2
				BOTH	1.0	4.0	5.7	17.1	5.1
78	4034062	202	301	IN	0.8	3.4	8.0	19.8	7.5
				OUT	0.7	4.5	6.8	24.6	14.3
				BOTH	0.8	3.8	7.7	23.0	10.5
79	4044080	212	1302	IN	0.9	2.1	3.5	10.1	2.5
				OUT	0.8	1.9	2.9	10.9	3.5
				BOTH	0.9	2.0	3.2	10.6	2.9
80	4044130	22	502	IN	0.8	2.3	3.6	10.2	5.5
				OUT	0.7	0.0	3.3	10.5	3.7
				BOTH	0.7	2.3	3.5	10.3	4.8
81	4054160	2	1303	IN	0.8	2.2	3.1	10.1	4.8
				OUT	0.9	2.0	4.0	11.9	5.3
				BOTH	0.9	2.0	3.6	10.8	5.1
82	4064071	24	300	IN	1.0	0.0	3.5	11.5	8.8
				OUT	0.7	1.4	4.7	13.6	9.4
				BOTH	0.8	1.4	4.2	12.4	9.1
83	4064072	226	400	IN	0.9	2.0	3.7	10.5	7.4
				OUT	0.9	0.0	3.2	11.0	5.7
				BOTH	0.9	2.0	3.5	10.7	6.7
84	4074141	226	600	IN	0.8	2.2	4.0	12.0	4.9
				OUT	0.8	1.6	2.6	11.1	4.3
				BOTH	0.8	1.8	3.3	11.5	4.6
85	4074142	219	400	IN	1.0	3.1	5.9	17.1	9.7
				OUT	0.9	2.4	4.5	12.3	4.5
				BOTH	1.0	2.8	5.2	15.9	7.5
86	4084100	212	1400	IN	0.8	2.2	3.6	11.1	4.4
				OUT	0.9	1.8	3.6	10.9	4.5
				BOTH	0.9	2.0	3.6	11.0	4.5
87	4094111	23	303	IN	1.1	3.3	5.0	17.1	9.9
				OUT	1.2	5.8	7.8	20.3	8.2
				BOTH	1.1	4.8	6.2	17.8	9.3
88	4094112	202	700	IN	0.8	2.6	5.8	15.5	11.0
				OUT	0.7	0.0	3.7	12.0	4.1
				BOTH	0.8	2.6	5.2	15.1	9.3
89	4104110	23	501	IN	1.0	3.0	7.6	14.1	5.9
				OUT	0.8	3.4	5.6	13.5	4.2
				BOTH	0.8	3.3	6.3	13.8	4.7
90	4104170	23	600	IN	1.0	3.6	3.7	11.4	5.3
				OUT	0.8	1.9	3.4	11.3	5.1
				BOTH	0.9	2.5	3.5	11.4	5.2

(Unit: Ton)

Seq	Survey Route Station Code	No.	Sect.	Dire-ction	Vehicle Type				
					PT	LT	MT	HT	Total
91	4114140	214	500	IN	0.8	6.5	3.5	14.7	3.6
				OUT	0.9	3.3	6.2	14.0	6.6
				BOTH	0.9	4.0	5.4	14.2	5.3
92	4124160	210	302	IN	0.9	2.2	3.9	12.0	2.5
				OUT	0.7	1.9	3.2	13.0	3.2
				BOTH	0.8	2.1	3.6	12.8	2.8
93	4134160	22	301	IN	0.8	3.8	5.7	11.6	6.8
				OUT	1.1	3.1	8.5	17.2	9.9
				BOTH	1.0	3.5	7.0	14.3	8.3
94	4144150	226	800	IN	0.9	1.9	3.7	10.4	5.1
				OUT	1.0	1.5	3.6	11.8	3.5
				BOTH	1.0	1.7	3.6	10.7	4.4
95	4154170	226	1200	IN	1.0	2.5	3.7	11.1	5.2
				OUT	0.8	1.9	3.4	10.3	3.3
				BOTH	0.8	2.1	3.5	10.8	4.1
96	5015050	323	103	IN	0.9	3.1	3.4	10.9	9.1
				OUT	1.0	1.8	3.3	9.5	5.6
				BOTH	0.9	2.8	3.3	10.6	8.2
97	5015060	324	202	IN	1.1	3.5	6.5	17.1	9.3
				OUT	1.0	3.5	5.7	22.6	15.8
				BOTH	1.0	3.5	6.1	21.3	13.8
98	5025050	4	302	IN	1.2	4.6	7.3	17.8	11.8
				OUT	1.4	2.9	6.6	15.3	13.0
				BOTH	1.3	3.3	6.9	15.8	12.7
99	5025060	321	202	IN	0.7	2.1	3.2	10.5	4.1
				OUT	0.8	2.3	3.9	11.9	8.6
				BOTH	0.7	2.2	3.5	11.6	6.7
100	5035040	4	800	IN	0.6	2.1	5.2	11.7	8.2
				OUT	0.8	2.1	4.4	9.3	6.3
				BOTH	0.7	2.1	4.8	10.4	7.2
101	5036020	4	1400	IN	1.1	2.6	5.1	10.4	7.6
				OUT	0.7	2.2	3.9	9.8	7.5
				BOTH	0.9	2.4	4.5	10.1	7.6
103	5055081	35	300	IN	0.9	4.5	4.5	12.6	10.1
				OUT	0.9	1.8	3.7	14.6	9.3
				BOTH	0.9	3.3	4.1	13.1	9.9
104	5055082	325	200	IN	1.0	2.5	7.8	18.9	8.2
				OUT	1.0	4.8	6.0	17.4	8.6
				BOTH	1.0	4.4	6.7	17.9	8.5
105	5075080	35	201	IN	1.0	1.9	4.5	12.5	8.8
				OUT	1.2	3.7	7.3	18.7	14.4
				BOTH	1.1	2.8	6.0	16.7	12.5
106	6016030	4	3500	IN	1.0	0.0	4.1	9.1	3.4
				OUT	0.7	3.0	3.7	8.1	3.4
				BOTH	0.8	3.0	3.9	8.5	3.4
107	6016070	4	3200	IN	0.8	2.0	3.6	12.0	6.8
				OUT	0.9	3.0	5.8	12.8	6.1
				BOTH	0.9	2.7	5.2	12.3	6.4
108	6016140	4035	200	IN	0.6	0.0	5.4	15.8	6.8
				OUT	0.5	0.8	4.7	11.4	5.8
				BOTH	0.5	0.8	5.0	13.0	6.2

## Appendix 6.8 AVERAGE ESTIMATED PAYLOAD OF TRUCKS — 1990

(Unit: Ton)

Seq	Survey Route Station Code	No.	Sect.	Dir- ction	Vehicle Type				Total
					PT	LT	MT	HT	
109	6026100	4	1800	IN	1.1	2.3	5.6	12.2	7.8
				OUT	0.9	3.0	3.9	11.7	6.7
				BOTH	1.0	2.6	4.6	12.0	7.4
110	6026140	41	300	IN	0.7	1.9	5.0	12.3	9.9
				OUT	0.8	4.2	5.0	12.6	7.8
				BOTH	0.8	2.5	5.0	12.4	9.2
111	6036040	403	302	IN	0.6	4.2	4.3	11.7	4.5
				OUT	0.7	2.5	5.0	15.3	7.2
				BOTH	0.7	3.3	4.8	14.5	6.4
112	6036060	4	3800	IN	0.9	2.0	5.1	12.1	5.0
				OUT	0.8	2.5	3.8	8.6	3.8
				BOTH	0.9	2.4	4.3	10.2	4.4
113	6046060	41	1100	IN	0.7	2.0	5.2	16.0	8.7
				OUT	0.6	3.7	3.8	11.9	7.1
				BOTH	0.7	2.7	4.7	13.8	7.9
114	6046120	408	302	IN	0.9	3.0	5.4	11.6	4.7
				OUT	0.9	0.0	4.4	10.5	3.7
				BOTH	0.9	3.0	4.9	11.0	4.1
115	6046141	41	800	IN	0.8	0.0	4.3	9.9	7.6
				OUT	1.0	0.0	4.0	10.8	9.0
				BOTH	0.9	0.0	4.2	10.5	8.4
116	6046142	401	801	IN	0.8	2.2	4.4	8.9	4.6
				OUT	1.1	4.3	4.1	10.4	7.1
				BOTH	0.9	3.3	4.2	9.9	6.0
117	6056080	42	701	IN	0.7	3.0	4.5	9.3	3.2
				OUT	0.8	1.0	5.9	11.0	4.5
				BOTH	0.7	1.3	5.4	10.3	4.0
118	6066120	4	4100	IN	0.9	2.5	4.6	10.6	7.4
				OUT	0.8	2.5	3.8	9.0	6.3
				BOTH	0.8	2.5	4.2	10.0	7.0
119	6076100	4	2300	IN	0.7	0.5	2.9	8.8	4.2
				OUT	1.1	3.3	3.9	9.9	4.7
				BOTH	0.9	2.6	3.2	9.2	4.4
120	6076110	402	101	IN	0.8	3.4	5.8	12.5	7.7
				OUT	0.8	2.4	4.0	13.2	7.8
				BOTH	0.8	3.1	5.1	12.7	7.8
121	6086090	410	102	IN	0.7	1.8	3.2	8.4	2.2
				OUT	1.0	1.5	3.7	9.5	4.9
				BOTH	0.8	1.6	3.5	9.2	3.5
122	6086120	4086	300	IN	0.8	1.9	4.4	12.1	7.5
				OUT	0.9	2.5	4.5	10.2	5.8
				BOTH	0.8	2.3	4.5	11.1	6.5
123	6126130	406	200	IN	1.0	2.0	3.5	9.7	4.7
				OUT	0.8	0.3	4.6	9.3	3.3
				BOTH	0.9	1.2	3.9	9.6	4.0

## Appendix 6.9 EMPTY VEHICLE RATIO OF TRUCKS -- 1990

(Unit:%)

Seq	Survey Station Code	Route No.	Ctl' Sect.	Dire-ction	Vehicle Type				
					PT	LT	MT	HT	Total
1	101030	340	201	IN	36.1	46.7	38.3	41.7	40.0
				OUT	35.1	35.0	43.2	40.7	41.0
				BOTH	35.7	42.0	41.0	41.2	40.5
2	101071	303	100	IN	26.9	28.1	30.5	19.6	25.7
				OUT	31.5	31.6	26.0	41.3	34.6
				BOTH	29.5	29.8	27.3	36.5	31.9
3	101072	3	200	IN	44.4	50.0	41.4	33.4	39.4
				OUT	29.9	17.3	24.2	33.2	28.6
				BOTH	37.0	27.6	33.4	33.3	34.3
4	103020	304	202	IN	54.2	52.6	31.5	59.0	51.9
				OUT	30.1	50.0	44.0	13.8	21.3
				BOTH	45.0	52.2	39.1	24.9	32.7
5	105071	4	100	IN	43.9	52.4	48.7	55.4	51.1
				OUT	43.8	36.7	43.9	11.9	26.3
				BOTH	43.9	43.1	46.0	28.7	36.4
6	105072	35	100	IN	45.9	18.2	37.9	51.3	47.0
				OUT	47.7	37.5	44.4	22.0	31.7
				BOTH	47.0	29.6	41.3	34.9	38.4
8	1022111	1	900	IN	55.3	38.5	55.9	77.3	64.1
				OUT	19.1	80.0	29.3	22.5	23.4
				BOTH	37.7	50.0	41.3	45.6	42.5
9	1022112	1	1101	IN	52.1	84.6	56.2	50.7	52.6
				OUT	21.3	80.0	45.5	24.0	28.9
				BOTH	41.7	82.1	51.0	36.9	41.1
10	1025060	340	600	IN	38.1	33.3	38.7	17.2	24.2
				OUT	57.7	61.5	53.4	74.7	66.8
				BOTH	50.8	56.3	48.3	49.6	49.8
11	1031040	346	300	IN	58.7	57.1	52.1	25.6	39.3
				OUT	83.3	66.7	57.7	62.5	68.2
				BOTH	71.3	63.2	54.5	44.5	53.9
14	1043050	305	102	IN	50.0	33.3	40.7	81.0	65.5
				OUT	37.1	57.1	33.9	13.0	24.6
				BOTH	43.4	47.2	37.3	47.1	44.8
15	1051080	311	100	IN	23.9	45.5	52.3	39.7	39.6
				OUT	55.2	70.0	63.5	40.8	48.4
				BOTH	36.0	57.1	56.9	40.2	43.3
16	1051101	309	302	IN	32.4	0.0	47.4	25.0	32.5
				OUT	34.2	57.1	80.0	43.5	48.9
				BOTH	33.0	40.0	64.1	34.0	39.6
17	1051102	32	500	IN	56.6	46.2	51.9	22.3	37.4
				OUT	62.3	41.7	56.5	56.0	56.5
				BOTH	58.9	44.0	54.0	43.4	47.9
18	1052110	11	101	IN	5.0	66.7	70.8	83.1	72.3
				OUT	63.9	100.0	37.5	14.3	35.4
				BOTH	49.4	85.7	51.8	53.5	53.0
19	1061081	1	500	IN	34.3	50.0	50.0	40.7	40.5
				OUT	72.1	100.0	78.9	53.2	61.7
				BOTH	51.0	63.6	64.3	46.4	50.2
20	1061082	21	200	IN	55.4	66.7	67.2	64.1	62.8
				OUT	40.2	54.8	38.4	35.3	39.0
				BOTH	46.1	56.8	52.1	50.9	50.1

(Unit:%)

Seq	Survey Station Code	Route No.	Ctl' Sect.	Dire-ction	Vehicle Type				
					PT	LT	MT	HT	Total
21	1061090	1	301	IN	25.5	27.3	10.1	5.8	7.7
				OUT	54.3	36.0	40.6	64.0	60.5
				BOTH	43.8	33.3	27.9	39.0	38.2
22	1063050	33	101	IN	52.8	50.0	27.4	24.5	34.2
				OUT	60.3	40.0	41.6	70.5	61.8
				BOTH	57.8	46.3	33.7	49.6	49.9
23	1064060	2	101	IN	41.7	90.9	87.2	66.5	68.0
				OUT	42.3	60.0	54.1	38.2	42.4
				BOTH	42.1	73.1	63.9	52.2	53.4
24	1073021	34	100	IN	53.3	45.5	31.0	52.9	51.3
				OUT	48.6	42.9	28.8	14.2	18.6
				BOTH	51.4	44.4	30.1	34.7	36.2
25	1073022	3	301	IN	66.9	16.7	48.1	81.9	71.5
				OUT	62.7	50.0	37.1	11.7	27.2
				BOTH	65.3	25.0	41.9	41.3	48.9
26	1082090	21	501	IN	57.5	50.0	39.7	58.9	54.8
				OUT	13.0	62.5	36.1	45.5	30.0
				BOTH	37.0	55.0	38.3	52.5	43.5
27	1082110	1	700	IN	69.8	47.6	53.8	56.1	59.2
				OUT	47.5	42.9	37.9	43.9	43.5
				BOTH	60.2	45.7	45.5	51.0	52.3
28	1084030	205	501	IN	13.2	75.0	35.3	52.4	39.2
				OUT	86.2	71.4	71.4	41.2	64.8
				BOTH	44.8	73.3	49.1	48.5	49.1
29	2012040	1	1600	IN	58.6	100.0	27.5	31.9	40.7
				OUT	53.7	40.0	35.9	18.5	40.6
				BOTH	55.8	50.0	31.1	27.7	40.7
30	2012070	115	200	IN	68.0	75.0	69.2	23.5	55.9
				OUT	57.1	66.7	71.4	62.5	62.5
				BOTH	64.1	71.4	70.0	49.0	59.1
31	2012110	1	1301	IN	59.5	80.0	59.4	27.7	40.5
				OUT	60.8	70.0	49.2	53.8	54.8
				BOTH	60.1	73.3	55.5	41.3	47.6
32	2012150	101	301	IN	44.4	40.0	31.8	21.3	33.1
				OUT	28.3	87.5	51.4	73.8	54.7
				BOTH	37.1	69.2	43.9	48.4	44.2
33	2022030	1019	200	IN	24.1	75.0	58.6	78.6	43.6
				OUT	36.6	100.0	50.0	72.7	47.7
				BOTH	29.5	83.3	54.0	76.0	45.5
34	2022060	1	2903	IN	37.1	75.0	46.0	60.6	51.4
				OUT	14.1	66.7	40.7	14.6	22.5
				BOTH	21.2	70.6	43.4	33.3	34.5
35	2032120	106	602	IN	68.2	25.0	47.1	73.3	64.9
				OUT	71.5	33.3	39.3	0.0	66.3
				BOTH	69.8	26.7	43.4	50.0	65.5
36	2032140	108	500	IN	15.6	50.0	67.3	76.5	55.6
				OUT	10.0	100.0	55.6	37.5	33.3
				BOTH	12.9	66.7	63.2	69.0	47.5
37	2042130	1	1901	IN	28.6	50.0	35.7	32.7	32.9
				OUT	24.1	50.0	50.0	20.6	26.8
				BOTH	26.6	50.0	41.3	28.5	30.6

Appendix 6.9 EMPTY VEHICLE RATIO OF TRUCKS - 1990

(Unit:%)

Seq	Survey Route Station Code	No.	Ctl' Sect.	Dire- ction	Vehicle Type				
					PT	LT	MT	HT	Total
38	2052100	101	1100	IN	59.6	50.0	38.5	55.6	54.4
				OUT	3.2	40.0	24.0	13.0	15.7
				BOTH	45.0	45.8	31.4	31.7	39.8
39	2062130	1	2603	IN	40.4	18.2	63.1	71.4	60.2
				OUT	12.5	85.7	29.9	18.6	24.9
				BOTH	24.3	62.5	46.2	38.6	39.9
40	2072081	117	400	IN	41.9	100.0	63.3	55.1	54.1
				OUT	41.9	100.0	63.3	55.1	54.1
				BOTH	41.9	100.0	63.3	55.1	54.1
41	2072082	11	502	IN	30.6	66.7	19.4	56.4	39.2
				OUT	60.4	90.9	48.7	57.4	58.6
				BOTH	47.6	85.7	34.7	56.9	49.5
42	2072090	113	202	IN	38.8	50.0	47.4	60.7	47.5
				OUT	3.3	75.0	56.7	34.7	33.8
				BOTH	29.6	66.7	53.1	45.8	41.2
43	2072111	117	200	IN	16.7	66.7	41.9	37.9	33.1
				OUT	30.4	42.9	44.3	30.6	33.2
				BOTH	23.6	53.8	43.2	33.6	33.2
44	2072112	11	201	IN	65.9	58.3	69.6	28.6	48.3
				OUT	33.3	75.0	75.7	76.0	64.3
				BOTH	48.0	62.5	73.3	56.9	57.5
45	2082150	12	400	IN	39.4	100.0	43.3	51.1	47.3
				OUT	10.9	50.0	42.9	60.7	35.0
				BOTH	22.8	66.7	43.1	54.8	41.0
46	2082170	11	700	IN	25.9	71.4	37.8	27.2	30.7
				OUT	27.5	80.0	46.7	39.7	39.9
				BOTH	26.9	75.0	42.2	30.9	34.4
47	2094020	12	1000	IN	70.6	60.0	47.9	27.5	55.7
				OUT	91.7	91.7	93.2	97.1	93.4
				BOTH	81.3	74.1	72.9	62.4	74.8
48	2094030	225	600	IN	35.5	55.6	61.5	54.2	48.1
				OUT	33.3	100.0	35.7	50.0	43.2
				BOTH	35.0	63.6	48.1	52.8	46.5
49	2094120	203	202	IN	80.6	100.0	60.0	28.6	78.1
				OUT	82.6	50.0	58.8	66.7	80.2
				BOTH	81.6	87.5	59.5	50.0	79.2
50	2102131	103	100	IN	20.0	71.4	50.0	22.9	32.2
				OUT	33.3	62.5	50.0	20.0	35.2
				BOTH	26.5	68.2	50.0	22.0	33.3
51	2102132	11	1200	IN	38.8	87.5	64.3	50.0	51.5
				OUT	20.7	57.1	48.6	69.6	33.3
				BOTH	25.9	73.3	55.6	62.9	39.6
52	2102150	101	700	IN	40.0	61.1	46.2	44.4	48.3
				OUT	0.0	75.0	84.6	100.0	60.0
				BOTH	28.6	65.4	65.4	50.0	52.2
53	2122130	11	1300	IN	13.0	66.7	63.4	65.1	51.0
				OUT	26.4	33.3	27.6	9.8	18.9
				BOTH	21.9	50.0	43.9	31.6	31.5
54	2152170	102	100	IN	19.0	75.0	35.3	25.0	29.0
				OUT	14.3	50.0	23.8	35.0	27.9
				BOTH	17.1	60.0	28.9	30.0	28.5

(Unit:%)

Seq	Survey Route Station Code	No.	Ctl' Sect.	Dire- ction	Vehicle Type				
					PT	LT	MT	HT	Total
55	3013040	3	1300	IN	51.3	20.0	39.7	35.4	44.1
				OUT	76.4	33.3	59.3	59.3	71.3
				BOTH	67.8	25.0	49.6	45.4	60.0
56	3013060	317	302	IN	22.9	42.9	58.5	80.8	44.4
				OUT	43.5	100.0	51.5	16.7	37.7
				BOTH	32.6	50.0	55.4	41.2	41.1
58	3023031	3	402	IN	80.0	66.7	70.0	64.4	65.4
				OUT	43.2	60.0	43.7	24.8	27.7
				BOTH	50.0	63.6	46.9	33.4	35.7
59	3023032	315	200	IN	41.5	27.3	39.6	34.4	36.6
				OUT	38.1	66.7	50.0	44.4	44.1
				BOTH	39.8	35.7	45.4	39.3	40.3
60	3023033	331	400	IN	50.6	28.6	44.4	30.2	37.5
				OUT	78.9	75.0	58.0	52.3	66.7
				BOTH	68.4	45.5	52.3	37.6	51.6
61	3023061	319	200	IN	47.1	50.0	71.4	73.1	65.1
				OUT	46.8	75.0	55.9	19.8	35.4
				BOTH	46.9	64.3	63.9	41.2	48.0
62	3023062	304	400	IN	76.3	54.5	50.0	69.2	70.2
				OUT	75.1	66.7	46.3	13.7	37.5
				BOTH	75.7	58.8	48.1	35.0	51.7
63	3033071	3	800	IN	36.1	54.5	36.7	30.1	34.4
				OUT	31.1	33.3	50.0	67.7	50.7
				BOTH	33.9	47.1	44.3	48.0	42.1
64	3033072	36	200	IN	54.2	50.0	45.5	37.6	44.1
				OUT	17.3	66.7	62.3	49.6	42.8
				BOTH	36.0	53.8	54.3	42.9	43.5
65	3033073	344	300	IN	63.4	55.6	47.4	41.8	52.7
				OUT	26.9	80.0	61.7	54.9	44.7
				BOTH	49.2	60.9	52.9	47.0	49.7
67	3064060	304	700	IN	33.3	21.1	65.3	67.1	55.4
				OUT	82.1	50.0	45.2	15.9	47.4
				BOTH	71.8	28.0	56.0	34.4	50.3
68	4014090	213	102	IN	94.2	77.8	63.6	61.1	87.0
				OUT	88.6	80.0	73.9	35.4	78.1
				BOTH	91.5	78.6	68.1	44.8	82.6
69	4014110	214	200	IN	83.7	87.5	61.6	23.9	71.9
				OUT	92.0	63.6	75.5	84.3	87.0
				BOTH	87.7	73.7	68.9	58.3	79.6
70	4014130	213	303	IN	93.2	66.7	73.1	29.7	80.0
				OUT	86.1	80.0	48.4	36.4	75.5
				BOTH	89.7	72.7	59.6	32.2	77.8
71	4024030	201	702	IN	88.5	71.7	63.3	75.3	82.1
				OUT	93.0	84.0	77.6	69.0	85.3
				BOTH	90.5	75.6	70.3	71.6	83.6
72	4024060	2	702	IN	91.0	100.0	67.6	36.8	70.7
				OUT	79.9	80.0	57.6	41.8	58.2
				BOTH	86.3	90.0	62.3	39.9	64.2
73	4024091	208	102	IN	92.3	75.0	78.0	32.1	85.2
				OUT	92.6	84.6	81.8	79.2	89.8
				BOTH	92.5	81.0	80.2	53.8	87.6



## Appendix 6.9 EMPTY VEHICLE RATIO OF TRUCKS — 1990

(Unit:%)

Seq	Survey Route Station Code	No.	Sect.	Dire-ction	Vehicle Type				
					PT	LT	MT	HT	Total
74	4024092	23	103	IN	87.4	100.0	72.6	33.3	79.9
				OUT	94.6	96.0	87.5	57.4	89.9
				BOTH	91.6	97.7	80.4	47.5	85.7
75	4024120	201	800	IN	91.7	83.3	72.2	52.7	79.6
				OUT	77.9	30.0	51.4	46.3	68.1
				BOTH	84.9	59.1	64.0	50.4	74.4
76	4024160	2	1100	IN	89.4	68.8	65.4	42.0	72.3
				OUT	90.3	75.0	61.2	51.5	81.2
				BOTH	89.9	72.5	63.5	44.9	76.5
77	4034061	205	702	IN	68.0	63.6	53.3	61.3	64.8
				OUT	57.1	100.0	52.9	45.0	67.6
				BOTH	67.0	92.7	53.1	54.9	65.7
78	4034062	202	301	IN	55.8	11.1	35.0	68.0	53.1
				OUT	74.8	50.0	80.0	40.2	65.2
				BOTH	65.4	29.4	59.4	54.0	59.3
79	4044080	212	1302	IN	81.7	76.5	64.5	61.1	78.2
				OUT	91.4	61.5	51.7	55.0	83.4
				BOTH	86.6	70.0	58.3	57.9	80.8
80	4044130	22	502	IN	87.5	85.7	40.0	35.1	70.8
				OUT	86.8	100.0	55.2	69.2	79.7
				BOTH	87.2	90.0	47.5	49.2	75.1
81	4054160	2	1303	IN	85.2	85.7	63.8	36.6	75.4
				OUT	89.1	68.8	54.9	63.6	80.2
				BOTH	87.2	76.7	59.2	51.6	77.9
82	4064071	24	300	IN	60.0	100.0	64.3	38.7	48.4
				OUT	62.7	50.0	58.3	35.5	48.0
				BOTH	61.4	71.4	60.9	37.3	48.2
83	4064072	226	400	IN	51.9	85.7	26.1	35.1	39.6
				OUT	53.5	100.0	64.5	45.5	55.6
				BOTH	52.9	92.3	48.1	38.8	47.3
84	4074141	226	600	IN	83.2	75.0	64.9	54.3	74.0
				OUT	84.2	66.7	52.6	52.6	73.3
				BOTH	83.7	70.0	60.0	53.4	73.7
85	4074142	219	400	IN	88.8	66.7	50.0	43.4	72.0
				OUT	85.3	72.7	68.6	82.2	80.8
				BOTH	87.1	69.8	60.7	63.6	76.5
86	4084100	212	1400	IN	88.6	55.6	44.8	55.6	76.8
				OUT	85.6	70.6	70.6	70.5	79.8
				BOTH	87.1	62.9	58.7	64.9	78.4
87	4094111	23	303	IN	92.9	66.7	60.8	38.5	76.9
				OUT	95.5	64.7	77.6	74.6	89.6
				BOTH	94.4	65.5	70.3	52.3	84.0
88	4094112	202	700	IN	88.4	62.5	43.6	15.4	58.3
				OUT	88.3	100.0	78.3	75.8	84.8
				BOTH	88.3	75.0	62.4	33.3	71.1
89	4104110	23	501	IN	91.2	81.8	68.9	71.4	84.8
				OUT	79.6	72.0	57.0	48.3	72.5
				BOTH	85.0	76.6	62.1	60.9	78.3
90	4104170	23	600	IN	90.2	58.3	65.4	59.6	80.6
				OUT	87.8	60.9	45.2	26.2	73.3
				BOTH	89.0	60.0	56.4	45.5	77.0

(Unit:%)

Seq	Survey Route Station Code	No.	Sect.	Dire-ction	Vehicle Type				
					PT	LT	MT	HT	Total
91	4114140	214	500	IN	81.5	85.7	68.9	65.0	77.4
				OUT	91.4	68.2	30.6	58.3	71.3
				BOTH	86.4	75.0	49.6	60.7	74.2
92	4124160	210	302	IN	83.2	50.0	50.6	88.2	75.3
				OUT	81.8	72.7	51.6	56.5	73.1
				BOTH	82.6	62.5	51.1	70.0	74.3
93	4134160	22	301	IN	88.9	58.3	55.9	55.6	75.8
				OUT	88.7	73.3	69.9	56.4	78.0
				BOTH	88.8	66.7	63.6	55.9	76.9
94	4144150	226	800	IN	81.9	52.9	25.7	20.9	61.6
				OUT	79.9	58.3	56.6	71.0	72.2
				BOTH	81.0	55.2	44.3	41.9	66.7
95	4154170	226	1200	IN	89.4	80.0	67.3	37.7	80.9
				OUT	82.8	69.6	46.2	58.9	75.3
				BOTH	86.2	74.4	56.7	48.6	78.1
96	5015050	323	103	IN	65.6	40.0	44.6	26.9	36.9
				OUT	82.8	79.2	57.7	79.9	79.6
				BOTH	76.9	57.4	51.5	50.0	58.6
97	5015060	324	202	IN	77.2	44.4	61.1	78.4	75.1
				OUT	53.1	75.0	45.0	20.1	35.1
				BOTH	66.7	61.9	54.3	50.6	56.7
98	5025050	4	302	IN	45.5	62.5	39.4	76.9	68.3
				OUT	46.3	25.9	35.1	23.6	27.3
				BOTH	45.9	39.5	37.2	48.5	46.6
99	5025060	321	202	IN	71.8	53.3	50.6	71.8	68.8
				OUT	75.9	33.3	56.3	22.8	50.2
				BOTH	73.5	47.6	53.2	45.4	60.2
100	5035040	4	800	IN	72.7	61.3	43.1	20.6	45.4
				OUT	61.5	53.1	43.5	30.4	43.6
				BOTH	67.0	57.1	43.3	26.2	44.4
101	5036020	4	1400	IN	31.3	45.5	38.6	35.3	35.2
				OUT	68.3	37.5	45.7	18.7	36.8
				BOTH	50.6	42.1	42.5	28.4	35.9
103	5055081	35	300	IN	60.5	38.5	27.6	14.7	26.7
				OUT	84.9	57.1	49.1	78.6	76.7
				BOTH	76.3	48.1	40.3	52.0	56.7
104	5055082	325	200	IN	50.5	87.5	46.3	64.2	57.5
				OUT	41.0	42.9	47.8	24.7	37.5
				BOTH	45.6	62.2	47.2	45.1	46.9
105	5075080	35	201	IN	42.7	71.4	44.8	64.4	59.4
				OUT	47.4	42.9	46.1	14.9	27.0
				BOTH	45.7	61.9	45.5	41.1	42.9
106	6016030	4	3500	IN	26.3	100.0	51.3	65.9	46.5
				OUT	21.8	33.3	45.1	44.2	36.2
				BOTH	24.1	60.0	47.8	55.2	41.2
107	6016070	4	3200	IN	38.9	66.7	73.9	41.3	49.2
				OUT	27.7	60.0	43.3	62.3	47.9
				BOTH	32.8	62.5	56.6	53.2	48.4
108	6016140	4035	200	IN	58.9	100.0	60.0	55.6	58.0
				OUT	64.7	0.0	25.0	27.9	50.2
				BOTH	62.3	33.3	42.5	41.3	53.6

## Appendix 6.9 EMPTY VEHICLE RATIO OF TRUCKS — 1990

(Unit:%)

Seq	Survey Route Station Code	No.	Ctl' Sect.	Dire- ction	Vehicle Type				Total
					PT	LT	HT	HT	
109	6026100	4	1800	IN	35.4	60.0	54.3	33.9	38.2
				OUT	42.5	50.0	38.2	40.3	40.7
				BOTH	38.1	55.6	46.4	36.3	39.2
110	6026140	41	300	IN	33.3	20.0	27.9	12.8	17.6
				OUT	58.0	36.4	40.4	24.0	40.8
				BOTH	50.7	25.0	33.3	16.1	27.1
111	6036040	403	302	IN	77.2	62.5	53.7	80.0	75.0
				OUT	62.0	25.0	25.8	15.4	43.2
				BOTH	69.3	50.0	36.4	51.5	58.8
112	6036060	4	3800	IN	26.2	0.0	53.6	47.1	40.0
				OUT	20.5	40.0	45.0	46.2	37.4
				BOTH	23.5	33.3	48.5	46.6	38.6
113	6046060	41	1100	IN	62.0	33.3	28.8	16.4	41.1
				OUT	75.6	57.1	59.6	43.5	61.9
				BOTH	70.3	46.2	44.0	33.4	53.6
114	6046120	408	302	IN	18.5	75.0	45.2	28.8	30.8
				OUT	72.0	100.0	60.0	42.0	66.4
				BOTH	61.5	85.7	53.2	36.4	55.9
115	6046141	41	800	IN	34.0	100.0	41.3	28.5	32.5
				OUT	36.5	100.0	57.4	19.8	27.8
				BOTH	35.5	100.0	49.2	23.3	29.8
116	6046142	401	801	IN	31.8	62.5	42.2	58.6	47.3
				OUT	20.9	40.0	45.3	21.9	27.4
				BOTH	27.7	53.8	43.9	39.8	37.7
117	6056080	42	701	IN	72.2	33.3	54.8	37.7	66.0
				OUT	32.0	8.3	17.9	35.4	30.3
				BOTH	60.7	13.3	37.3	36.4	52.5
118	6066120	4	4100	IN	60.9	57.1	39.4	11.6	35.4
				OUT	29.6	55.6	46.0	39.7	39.8
				BOTH	54.0	56.3	42.9	25.1	37.2
119	6076100	4	2300	IN	81.9	80.0	38.5	52.4	68.5
				OUT	25.0	25.0	50.0	41.7	36.4
				BOTH	71.3	55.6	42.5	48.5	59.8
120	6076110	402	101	IN	76.4	28.6	34.8	32.9	56.8
				OUT	70.9	50.0	58.3	52.6	60.9
				BOTH	74.5	36.4	46.8	41.9	58.4
121	6086090	410	102	IN	14.6	75.0	70.3	67.5	46.4
				OUT	8.8	66.7	40.4	25.5	29.2
				BOTH	12.9	70.6	57.7	44.8	39.3
122	6086120	4086	300	IN	55.9	50.0	46.2	17.5	38.4
				OUT	63.7	66.7	35.2	28.9	48.7
				BOTH	61.2	61.5	40.6	24.0	44.8
123	6126130	406	200	IN	20.0	50.0	30.2	23.6	24.8
				OUT	30.9	75.0	64.0	72.2	54.1
				BOTH	27.0	66.7	50.0	52.2	42.6

## Appendix 6.10 AVERAGE NUMBER OF ASSISTANTS — 1990

(Unit:Person)

Seq	Survey Route Station Code	No.	Sect.	Dire-ction	Vehicle Type				
					PT	LT	MT	HT	Total
1	101030	340	201	IN	0.3	0.7	0.5	0.4	0.4
				OUT	0.3	0.1	0.6	0.4	0.5
				BOTH	0.3	0.4	0.6	0.4	0.4
2	101071	303	100	IN	0.2	0.3	0.2	0.3	0.2
				OUT	0.4	0.4	0.7	0.5	0.5
				BOTH	0.3	0.4	0.5	0.4	0.4
3	101072	3	200	IN	0.6	0.8	1.1	0.9	0.8
				OUT	0.6	0.9	0.8	0.7	0.7
				BOTH	0.6	0.9	0.9	0.8	0.8
4	103020	304	202	IN	0.0	0.3	0.3	0.2	0.1
				OUT	0.1	0.0	0.3	0.2	0.2
				BOTH	0.1	0.2	0.3	0.2	0.2
5	105071	4	100	IN	0.4	0.5	0.9	0.5	0.6
				OUT	0.5	0.4	0.7	0.3	0.4
				BOTH	0.4	0.5	0.8	0.4	0.5
6	105072	35	100	IN	0.3	1.3	0.7	0.5	0.5
				OUT	0.1	0.6	0.3	0.3	0.3
				BOTH	0.2	0.9	0.5	0.4	0.4
8	1022111	1	900	IN	0.2	0.6	0.4	0.2	0.2
				OUT	0.1	0.2	0.5	0.3	0.3
				BOTH	0.1	0.5	0.5	0.2	0.2
9	1022112	1	1101	IN	0.2	0.5	0.5	0.4	0.4
				OUT	0.5	0.4	0.8	0.4	0.5
				BOTH	0.3	0.4	0.6	0.4	0.4
10	1025060	340	600	IN	0.4	2.7	0.5	0.3	0.4
				OUT	0.2	0.5	0.6	0.4	0.4
				BOTH	0.3	0.9	0.6	0.4	0.4
11	1031040	346	300	IN	0.0	0.0	0.0	0.3	0.2
				OUT	0.0	0.0	0.1	0.2	0.1
				BOTH	0.0	0.0	0.0	0.2	0.1
14	1043050	305	102	IN	0.3	0.4	0.5	0.3	0.3
				OUT	0.4	0.5	0.6	0.3	0.4
				BOTH	0.3	0.5	0.6	0.3	0.4
15	1051080	311	100	IN	0.1	0.9	0.5	0.6	0.5
				OUT	0.2	0.2	0.4	0.2	0.3
				BOTH	0.2	0.6	0.4	0.4	0.4
16	1051101	309	302	IN	0.2	1.3	0.5	0.5	0.3
				OUT	0.3	0.1	0.4	0.4	0.3
				BOTH	0.2	0.5	0.4	0.5	0.3
17	1051102	32	500	IN	0.2	0.8	0.8	0.4	0.5
				OUT	0.2	0.5	0.5	0.3	0.3
				BOTH	0.2	0.7	0.6	0.3	0.4
18	1052110	11	101	IN	0.6	0.7	1.5	0.4	0.6
				OUT	0.3	0.5	1.1	0.6	0.6
				BOTH	0.4	0.6	1.3	0.5	0.6
19	1061081	1	500	IN	0.2	1.0	0.6	0.3	0.3
				OUT	0.2	0.0	0.2	0.2	0.2
				BOTH	0.2	0.7	0.4	0.3	0.3
20	1061082	21	200	IN	0.1	0.0	0.6	0.2	0.3
				OUT	0.2	0.2	0.2	0.3	0.2
				BOTH	0.2	0.2	0.4	0.2	0.3

(Unit:Person)

Seq	Survey Route Station Code	No.	Sect.	Dire-ction	Vehicle Type				
					PT	LT	MT	HT	Total
21	1061090	1	301	IN	0.4	0.9	0.4	0.4	0.4
				OUT	0.4	0.4	0.4	0.3	0.4
				BOTH	0.4	0.5	0.4	0.4	0.4
22	1063050	33	101	IN	0.0	0.4	0.5	0.3	0.3
				OUT	0.0	0.0	0.1	0.1	0.1
				BOTH	0.0	0.2	0.3	0.2	0.2
23	1064060	2	101	IN	0.3	0.1	0.1	0.1	0.1
				OUT	0.3	0.5	0.6	0.5	0.5
				BOTH	0.3	0.3	0.5	0.3	0.3
24	1073021	34	100	IN	0.0	0.3	0.4	0.2	0.2
				OUT	0.2	0.4	0.6	0.5	0.5
				BOTH	0.1	0.3	0.5	0.3	0.3
25	1073022	3	301	IN	0.0	0.0	0.1	0.0	0.0
				OUT	0.0	0.0	0.0	0.0	0.0
				BOTH	0.0	0.0	0.1	0.0	0.0
26	1082090	21	501	IN	0.2	0.8	0.5	0.5	0.4
				OUT	0.6	0.4	0.9	0.7	0.7
				BOTH	0.4	0.6	0.6	0.6	0.5
27	1082110	1	700	IN	0.1	0.4	0.4	0.6	0.4
				OUT	0.2	1.4	0.8	0.3	0.5
				BOTH	0.2	0.8	0.6	0.4	0.4
28	1084030	205	501	IN	0.6	0.5	0.6	0.5	0.6
				OUT	0.1	0.3	0.2	0.4	0.3
				BOTH	0.4	0.4	0.5	0.5	0.5
29	2012040	1	1600	IN	0.3	0.0	0.5	0.4	0.4
				OUT	0.1	0.0	0.6	0.6	0.3
				BOTH	0.2	0.0	0.5	0.5	0.4
30	2012070	115	200	IN	0.2	0.0	0.8	0.2	0.3
				OUT	0.4	0.0	0.7	0.2	0.3
				BOTH	0.3	0.0	0.8	0.2	0.3
31	2012110	1	1301	IN	0.3	0.4	0.3	0.1	0.2
				OUT	0.2	0.4	0.5	0.2	0.2
				BOTH	0.2	0.4	0.3	0.2	0.2
32	2012150	101	301	IN	0.2	0.0	0.4	0.3	0.3
				OUT	0.0	0.0	0.5	0.4	0.3
				BOTH	0.1	0.0	0.4	0.4	0.3
33	2022030	1019	200	IN	0.6	0.5	0.7	0.5	0.6
				OUT	0.3	0.0	0.4	0.3	0.3
				BOTH	0.5	0.3	0.5	0.4	0.5
34	2022060	1	2903	IN	0.5	0.5	0.7	0.6	0.6
				OUT	0.6	2.4	1.2	0.8	0.9
				BOTH	0.6	1.5	0.9	0.7	0.8
35	2032120	106	602	IN	0.3	1.8	1.1	0.9	0.4
				OUT	0.1	0.7	0.9	0.7	0.2
				BOTH	0.2	1.5	1.0	0.9	0.3
36	2032140	108	500	IN	0.4	1.5	0.6	0.2	0.4
				OUT	0.5	1.0	0.6	0.1	0.5
				BOTH	0.5	1.3	0.6	0.2	0.5
37	2042130	1	1901	IN	0.5	2.0	0.6	0.6	0.6
				OUT	0.5	0.5	0.9	0.8	0.8
				BOTH	0.5	1.0	0.7	0.6	0.6

Appendix 6.10 AVERAGE NUMBER OF ASSISTANTS — 1990

(Unit: Person)

Seq	Survey Station Code	Route No.	Ctl Sect.	Dire-ction	Vehicle Type				
					PT	LT	HT	HT	Total
38	2052100	101	1100	IN	0.1	0.6	0.4	0.3	0.2
				OUT	0.7	1.5	1.2	0.8	0.9
				BOTH	0.2	1.0	0.8	0.6	0.5
39	2062130	1	2603	IN	0.4	1.2	0.4	0.3	0.4
				OUT	0.6	0.2	0.6	0.5	0.5
				BOTH	0.5	0.6	0.5	0.4	0.5
40	2072081	117	400	IN	0.1	0.0	0.3	0.3	0.2
				OUT	0.1	0.0	0.3	0.3	0.2
				BOTH	0.1	0.0	0.3	0.3	0.2
41	2072082	11	502	IN	0.3	0.0	1.2	0.5	0.6
				OUT	0.1	0.1	0.3	0.3	0.2
				BOTH	0.2	0.1	0.7	0.4	0.4
42	2072090	113	202	IN	0.3	0.0	0.3	0.4	0.3
				OUT	0.5	3.5	1.1	0.3	0.6
				BOTH	0.3	2.3	0.8	0.3	0.4
43	2072111	117	200	IN	0.6	0.5	0.8	0.5	0.6
				OUT	0.4	0.6	0.6	0.6	0.5
				BOTH	0.5	0.5	0.7	0.5	0.6
44	2072112	11	201	IN	0.1	0.0	0.2	0.2	0.1
				OUT	0.4	1.0	0.4	0.3	0.3
				BOTH	0.3	0.3	0.3	0.2	0.3
45	2082150	12	400	IN	0.1	0.0	0.4	0.4	0.3
				OUT	0.7	1.0	0.9	0.5	0.7
				BOTH	0.5	0.7	0.6	0.4	0.5
46	2082170	11	700	IN	0.4	0.4	0.5	0.5	0.5
				OUT	0.7	0.4	0.8	0.6	0.6
				BOTH	0.6	0.4	0.6	0.5	0.5
47	2094020	12	1000	IN	0.0	0.0	0.0	0.0	0.0
				OUT	0.0	0.3	0.0	0.0	0.0
				BOTH	0.0	0.1	0.0	0.0	0.0
48	2094030	225	600	IN	0.5	0.6	0.9	0.7	0.6
				OUT	0.2	0.5	1.4	2.3	1.4
				BOTH	0.4	0.5	1.2	1.2	0.9
49	2094120	203	202	IN	0.0	0.0	0.0	0.4	0.0
				OUT	0.0	1.0	0.4	0.6	0.1
				BOTH	0.0	0.3	0.2	0.5	0.0
50	2102131	103	100	IN	0.7	2.4	0.8	0.7	0.9
				OUT	0.6	0.5	0.9	0.6	0.7
				BOTH	0.7	1.7	0.8	0.7	0.8
51	2102132	11	1200	IN	0.3	1.1	0.4	0.7	0.5
				OUT	0.5	1.6	0.4	0.6	0.5
				BOTH	0.5	1.3	0.4	0.6	0.5
52	2102150	101	700	IN	0.4	0.6	0.6	0.2	0.5
				OUT	0.8	1.0	0.2	0.0	0.5
				BOTH	0.5	0.7	0.4	0.2	0.5
53	2122130	11	1300	IN	0.7	1.0	0.9	0.7	0.8
				OUT	0.4	0.7	0.7	0.6	0.6
				BOTH	0.5	0.8	0.8	0.7	0.6
54	2152170	102	100	IN	0.2	0.0	0.5	0.3	0.3
				OUT	0.3	0.3	0.7	0.5	0.5
				BOTH	0.3	0.2	0.6	0.4	0.4

(Unit: Person)

Seq	Survey Station Code	Route No.	Ctl Sect.	Dire-ction	Vehicle Type				
					PT	LT	HT	HT	Total
55	3013040	3	1300	IN	0.9	1.8	1.4	1.1	1.0
				OUT	0.3	1.0	2.0	1.9	0.7
				BOTH	0.5	1.5	1.7	1.4	0.9
56	3013060	317	302	IN	0.9	2.0	2.0	1.2	1.3
				OUT	0.9	3.0	1.4	0.9	1.1
				BOTH	0.9	2.1	1.8	1.0	1.2
58	3023031	3	402	IN	0.3	0.7	0.2	0.6	0.6
				OUT	0.3	0.4	0.4	0.4	0.4
				BOTH	0.3	0.5	0.4	0.4	0.4
59	3023032	315	200	IN	0.4	0.6	0.9	0.6	0.6
				OUT	0.5	1.0	1.0	0.8	0.8
				BOTH	0.5	0.7	0.9	0.7	0.7
60	3023033	331	400	IN	0.1	0.4	0.1	0.3	0.2
				OUT	0.0	0.0	0.5	0.3	0.2
				BOTH	0.0	0.3	0.3	0.3	0.2
61	3023061	319	200	IN	0.3	0.5	0.7	0.4	0.4
				OUT	0.2	0.0	0.2	0.3	0.2
				BOTH	0.3	0.2	0.4	0.3	0.3
62	3023062	304	400	IN	0.1	0.5	0.6	0.4	0.3
				OUT	0.1	0.0	0.7	0.5	0.4
				BOTH	0.1	0.4	0.7	0.4	0.3
63	3033071	3	800	IN	0.8	2.6	1.6	1.1	1.1
				OUT	0.8	2.5	2.0	1.3	1.3
				BOTH	0.8	2.6	1.8	1.2	1.2
64	3033072	36	200	IN	0.8	1.0	1.3	1.2	1.1
				OUT	0.7	2.0	2.6	1.4	1.5
				BOTH	0.7	1.2	2.0	1.3	1.3
65	3033073	344	300	IN	0.6	2.3	1.4	1.1	1.0
				OUT	0.7	2.2	1.8	1.7	1.3
				BOTH	0.7	2.3	1.5	1.4	1.1
67	3064060	304	700	IN	0.8	0.9	1.4	0.7	0.9
				OUT	0.3	1.2	1.5	1.0	0.8
				BOTH	0.4	1.0	1.5	0.9	0.8
68	4014090	213	102	IN	0.0	0.1	0.2	0.1	0.0
				OUT	0.1	0.0	0.3	0.3	0.2
				BOTH	0.1	0.1	0.3	0.2	0.1
69	4014110	214	200	IN	0.0	0.0	0.0	0.0	0.0
				OUT	0.0	0.0	0.0	0.0	0.0
				BOTH	0.0	0.0	0.0	0.0	0.0
70	4014130	213	303	IN	0.0	0.0	0.0	0.0	0.0
				OUT	0.0	0.0	0.0	0.0	0.0
				BOTH	0.0	0.0	0.0	0.0	0.0
71	4024030	201	702	IN	0.0	0.0	0.0	0.0	0.0
				OUT	0.0	0.0	0.1	0.0	0.0
				BOTH	0.0	0.0	0.0	0.0	0.0
72	4024060	2	702	IN	0.0	0.6	0.2	0.2	0.1
				OUT	0.1	0.2	0.1	0.1	0.1
				BOTH	0.0	0.4	0.2	0.1	0.1
73	4024091	208	102	IN	0.0	0.4	0.2	0.3	0.1
				OUT	0.0	0.0	0.0	0.0	0.0
				BOTH	0.0	0.1	0.1	0.2	0.0

Appendix 6.10 AVERAGE NUMBER OF ASSISTANTS — 1990

(Unit:Person)

Seq	Survey Station Code	Route No.	Ctl' Sect.	Dire-ction	Vehicle Type				
					PT	LT	MT	HT	Total
74	4024092	23	103	IN	0.0	0.0	0.0	0.0	0.0
				OUT	0.0	0.3	0.0	0.1	0.0
				BOTH	0.0	0.2	0.0	0.1	0.0
75	4024120	201	800	IN	0.0	0.0	0.0	0.0	0.0
				OUT	0.0	0.0	0.0	0.0	0.0
				BOTH	0.0	0.0	0.0	0.0	0.0
76	4024160	2	1100	IN	0.0	0.3	0.1	0.1	0.0
				OUT	0.0	0.3	0.1	0.1	0.0
				BOTH	0.0	0.3	0.1	0.1	0.0
77	4034061	205	702	IN	0.0	0.0	0.0	0.1	0.0
				OUT	0.2	0.2	0.8	0.8	0.5
				BOTH	0.0	0.1	0.4	0.3	0.2
78	4034062	202	301	IN	0.0	0.0	0.1	0.0	0.0
				OUT	0.1	0.0	0.1	0.1	0.1
				BOTH	0.1	0.0	0.1	0.0	0.1
79	4044080	212	1302	IN	0.0	0.0	0.0	0.0	0.0
				OUT	0.0	0.0	0.4	0.3	0.1
				BOTH	0.0	0.0	0.2	0.2	0.0
80	4044130	22	502	IN	0.0	0.4	0.2	0.2	0.1
				OUT	0.0	0.0	0.3	0.1	0.1
				BOTH	0.0	0.3	0.3	0.2	0.1
81	4054160	2	1303	IN	0.0	0.1	0.1	0.2	0.0
				OUT	0.0	0.0	0.1	0.1	0.0
				BOTH	0.0	0.0	0.1	0.1	0.0
82	4064071	24	300	IN	0.2	0.0	0.1	0.1	0.1
				OUT	0.1	0.8	0.3	0.3	0.2
				BOTH	0.1	0.4	0.2	0.2	0.2
83	4064072	226	400	IN	0.2	0.1	0.4	0.3	0.3
				OUT	0.0	0.0	0.2	0.1	0.1
				BOTH	0.1	0.1	0.3	0.2	0.2
84	4074141	226	600	IN	0.0	0.1	0.2	0.1	0.1
				OUT	0.0	0.3	0.5	0.5	0.2
				BOTH	0.0	0.2	0.3	0.3	0.1
85	4074142	219	400	IN	0.1	0.1	0.2	0.0	0.1
				OUT	0.1	0.3	0.2	0.0	0.1
				BOTH	0.1	0.2	0.2	0.0	0.1
86	4084100	212	1400	IN	0.0	0.0	0.1	0.1	0.0
				OUT	0.0	0.1	0.2	0.1	0.1
				BOTH	0.0	0.0	0.2	0.1	0.0
87	4094111	23	303	IN	0.0	0.0	0.0	0.0	0.0
				OUT	0.0	0.0	0.0	0.0	0.0
				BOTH	0.0	0.0	0.0	0.0	0.0
88	4094112	202	700	IN	0.1	0.1	0.1	0.1	0.1
				OUT	0.1	0.0	0.3	0.1	0.2
				BOTH	0.1	0.1	0.2	0.1	0.1
89	4104110	23	501	IN	0.1	0.2	0.1	0.1	0.1
				OUT	0.0	0.0	0.0	0.0	0.0
				BOTH	0.0	0.1	0.0	0.1	0.0
90	4104170	23	600	IN	0.0	0.0	0.0	0.0	0.0
				OUT	0.0	0.0	0.1	0.0	0.0
				BOTH	0.0	0.0	0.1	0.0	0.0

(Unit:Person)

Seq	Survey Station Code	Route No.	Ctl' Sect.	Dire-ction	Vehicle Type				
					PT	LT	MT	HT	Total
91	4114140	214	500	IN	0.1	0.0	0.5	0.1	0.2
				OUT	0.0	0.0	0.0	0.0	0.0
				BOTH	0.0	0.0	0.3	0.0	0.1
92	4124160	210	302	IN	0.0	0.2	0.5	0.4	0.1
				OUT	0.0	0.1	0.3	0.4	0.1
				BOTH	0.0	0.2	0.4	0.4	0.1
93	4134160	22	301	IN	0.0	0.0	0.0	0.0	0.0
				OUT	0.0	0.0	0.0	0.0	0.0
				BOTH	0.0	0.0	0.0	0.0	0.0
94	4144150	226	800	IN	0.0	0.4	0.5	0.5	0.2
				OUT	0.0	0.1	0.2	0.2	0.1
				BOTH	0.0	0.3	0.3	0.4	0.2
95	4154170	226	1200	IN	0.0	0.0	0.0	0.1	0.0
				OUT	0.0	0.1	0.4	0.1	0.1
				BOTH	0.0	0.1	0.2	0.1	0.0
96	5015050	323	103	IN	0.0	0.0	0.2	0.1	0.1
				OUT	0.0	0.2	0.3	0.1	0.1
				BOTH	0.0	0.1	0.2	0.1	0.1
97	5015060	324	202	IN	0.4	0.3	1.1	0.7	0.6
				OUT	0.4	1.5	1.2	0.7	0.7
				BOTH	0.4	1.0	1.2	0.7	0.7
98	5025050	4	302	IN	0.4	0.7	1.0	0.4	0.5
				OUT	0.7	1.1	1.2	0.7	0.8
				BOTH	0.5	1.0	1.1	0.6	0.6
99	5025060	321	202	IN	0.0	0.1	0.0	0.0	0.0
				OUT	0.0	0.0	0.0	0.1	0.1
				BOTH	0.0	0.0	0.0	0.1	0.0
100	5035040	4	800	IN	0.6	1.0	0.9	1.0	0.8
				OUT	0.3	0.3	0.9	0.4	0.4
				BOTH	0.4	0.7	0.9	0.7	0.6
101	5036020	4	1400	IN	0.4	0.5	0.7	0.5	0.5
				OUT	0.1	0.3	0.3	0.3	0.2
				BOTH	0.2	0.4	0.5	0.4	0.4
103	5055081	35	300	IN	0.0	0.0	0.1	0.1	0.1
				OUT	0.0	0.0	0.0	0.0	0.0
				BOTH	0.0	0.0	0.0	0.1	0.0
104	5055082	325	200	IN	0.2	0.4	0.7	0.3	0.3
				OUT	0.1	0.4	0.4	0.2	0.2
				BOTH	0.1	0.4	0.5	0.2	0.3
105	5075080	35	201	IN	0.1	0.2	0.2	0.2	0.2
				OUT	0.2	0.9	0.6	0.4	0.4
				BOTH	0.2	0.4	0.4	0.3	0.3
106	6016030	4	3500	IN	0.1	0.0	0.1	0.1	0.1
				OUT	0.3	0.3	0.4	0.3	0.3
				BOTH	0.2	0.2	0.3	0.2	0.2
107	6016070	4	3200	IN	0.0	0.3	0.2	0.3	0.2
				OUT	0.4	1.0	0.6	0.5	0.5
				BOTH	0.2	0.8	0.4	0.4	0.4
108	6016140	4035	200	IN	0.7	0.0	1.2	0.4	0.6
				OUT	0.7	0.0	0.9	0.7	0.7
				BOTH	0.7	0.0	1.0	0.6	0.7

## Appendix 6.10 AVERAGE NUMBER OF ASSISTANTS - 1990

(Unit: Person)

Seq	Survey Route Station No. Code	Ctl' Sect.	Dire- ction	Vehicle Type					
				PT	LT	MT	HT	Total	
109	6026100	4	1800	IN	0.4	0.2	0.9	0.7	0.6
				OUT	0.1	0.3	0.3	0.3	0.2
				BOTH	0.3	0.2	0.6	0.5	0.5
110	6026140	41	300	IN	0.6	0.6	0.8	0.7	0.7
				OUT	0.7	1.5	0.8	0.8	0.8
				BOTH	0.7	0.9	0.8	0.7	0.7
111	6036040	403	302	IN	0.8	0.8	1.0	0.7	0.8
				OUT	0.7	1.0	1.2	0.5	0.7
				BOTH	0.8	0.8	1.1	0.6	0.8
112	6036060	4	3800	IN	0.0	0.0	0.0	0.1	0.0
				OUT	0.3	0.0	0.3	0.2	0.2
				BOTH	0.1	0.0	0.2	0.2	0.2
113	6046060	41	1100	IN	0.7	0.8	1.1	0.9	0.8
				OUT	0.7	0.3	0.8	0.6	0.7
				BOTH	0.7	0.5	0.9	0.7	0.7
114	6046120	408	302	IN	0.8	3.0	1.2	1.0	1.0
				OUT	0.8	2.0	1.2	0.7	0.8
				BOTH	0.8	2.6	1.2	0.8	0.9
115	6046141	41	800	IN	0.2	0.0	0.3	0.4	0.4
				OUT	0.0	0.0	0.2	0.4	0.3
				BOTH	0.1	0.0	0.3	0.4	0.4
116	6046142	401	801	IN	0.1	0.1	0.3	0.2	0.2
				OUT	0.0	0.0	0.1	0.1	0.1
				BOTH	0.1	0.1	0.2	0.2	0.2
117	6056080	42	701	IN	0.8	0.7	1.6	0.9	0.9
				OUT	0.9	0.9	1.2	1.2	1.0
				BOTH	0.9	0.9	1.4	1.1	1.0
118	6066120	4	4100	IN	0.8	2.0	1.3	0.9	1.0
				OUT	0.1	0.1	0.3	0.2	0.2
				BOTH	0.7	0.9	0.7	0.6	0.6
119	6076100	4	2300	IN	0.0	0.6	0.4	0.5	0.2
				OUT	0.0	0.0	0.1	0.6	0.2
				BOTH	0.0	0.3	0.3	0.5	0.2
120	6076110	402	101	IN	0.5	0.7	1.0	0.6	0.6
				OUT	0.5	1.3	0.8	0.7	0.7
				BOTH	0.5	0.9	0.9	0.6	0.6
121	6086090	410	102	IN	0.2	0.3	0.3	0.2	0.2
				OUT	0.0	0.1	0.2	0.1	0.1
				BOTH	0.1	0.2	0.3	0.2	0.2
122	6086120	4086	300	IN	0.8	1.5	1.2	1.1	1.0
				OUT	0.8	1.3	1.2	1.0	0.9
				BOTH	0.8	1.4	1.2	1.0	0.9
123	6126130	406	200	IN	0.0	0.0	0.2	0.1	0.1
				OUT	0.1	0.3	0.2	0.2	0.2
				BOTH	0.1	0.2	0.2	0.2	0.1

Appendix 6.11 ESTMATED COMMODITY FLOW - 1990

(Unit: Ton/Day)

Seq	Station	No.	Sect.	Dirac-	Commodity Type																							Total
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	101030	340	201	IN	647	2379	596	834	921	845	112	506	262	795	144	0	0	288	149	223	140	286	211	2310	126	386	6147	18309
				OUT	1776	1686	2476	552	1609	777	22	207	233	785	503	194	0	557	49	289	233	246	61	492	339	764	4327	16279
				BOTH	2423	4065	3072	1386	2531	1622	134	713	496	1582	647	194	0	945	198	511	373	532	272	2802	466	1150	10475	36588
2	101071	303	100	IN	2572	3267	432	2453	950	1114	211	2406	144	245	22	264	0	229	0	4	423	0	318	547	270	562	8573	25007
				OUT	490	427	334	2387	1282	1211	152	2348	86	62	123	160	46	75	17	258	576	49	131	3693	499	1178	4640	20225
				BOTH	3062	3695	765	4840	2232	2325	363	4755	230	307	144	424	46	304	17	262	999	49	448	4241	769	1741	13213	45232
3	101072	3	200	IN	1005	1797	972	2753	2138	733	0	1008	292	532	487	218	0	359	93	265	686	138	37	492	424	1873	3601	19904
				OUT	697	1010	851	3048	1216	633	167	918	98	89	296	231	0	82	64	326	406	8	407	995	200	1815	2676	16232
				BOTH	1702	2807	1823	5801	3354	1366	167	1926	390	621	783	449	0	441	156	591	1092	146	444	1487	624	3689	6277	36136
4	103020	304	202	IN	167	1397	149	154	698	113	0	20	0	157	72	170	0	156	0	14	76	723	108	1079	100	121	2035	7509
				OUT	744	11739	71	15	727	300	0	568	0	260	52	146	0	0	0	50	51	1682	30	129	104	95	499	17260
				BOTH	911	13136	219	169	1425	413	0	588	0	417	124	316	0	156	0	64	127	2404	138	1209	204	215	2534	24769
5	105071	4	100	IN	1340	1393	305	2939	2106	524	532	1913	365	98	0	171	143	294	0	0	1375	382	601	1937	413	2865	6165	25859
				OUT	1111	20402	1820	2665	5457	764	51	2253	121	144	432	383	0	0	186	470	1080	375	81	1290	1003	4631	19169	63888
				BOTH	2451	21795	2126	5604	7563	1288	583	4165	485	242	432	554	143	294	186	470	2454	757	682	3227	1416	7496	25334	89747
6	105072	35	100	IN	182	877	150	581	666	775	2	1933	162	347	120	0	13	103	17	48	482	54	1008	1338	263	810	2791	12720
				OUT	247	1443	72	343	121	1434	116	548	220	492	0	0	0	0	11	0	92	278	767	242	78	126	4835	11465
				BOTH	429	2320	222	924	787	2208	118	2481	382	839	120	0	13	103	28	48	573	332	1775	1581	341	936	7626	24185
8	1022111	1	900	IN	66	240	1	1	16	101	0	120	0	28	0	0	0	21	0	25	2	2	3	0	11	7	196	838
				OUT	21	1099	275	0	49	7	0	18	0	50	0	13	347	2	0	0	42	11	0	49	3	35	355	2373
				BOTH	86	1338	276	1	65	107	0	137	0	78	0	13	347	22	0	25	44	13	3	49	14	42	551	3210
9	1022112	1	1101	IN	346	750	3423	148	243	187	0	2684	561	179	202	72	0	0	10	0	327	123	88	436	119	268	1482	11658
				OUT	1151	1123	354	112	17	84	269	1038	4055	1377	500	105	1	624	0	125	117	69	68	104	156	25	1474	12947
				BOTH	1497	1873	3777	260	260	271	269	3722	4616	1556	702	177	1	624	10	125	444	191	157	540	275	293	2966	24605
10	1025060	340	600	IN	422	529	11	22	0	58	64	24	262	348	79	31	39	230	11	1	22	3	18	8	10	35	265	2490
				OUT	0	0	52	29	71	182	0	75	22	23	0	17	65	0	7	0	18	124	62	63	29	58	276	1174
				BOTH	422	529	64	52	71	240	64	98	285	371	79	48	104	230	18	1	40	128	79	72	38	93	540	3664
11	1031040	346	300	IN	235	3864	44	105	228	260	1	451	0	303	78	21	51	27	0	27	2	44	26	224	44	28	1519	7583
				OUT	611	539	69	77	306	95	35	380	0	252	50	0	50	0	25	49	77	52	14	146	0	43	832	3702
				BOTH	846	4403	113	181	534	355	36	831	0	555	128	21	102	27	25	75	79	97	40	371	44	72	2350	11285
14	1043050	305	102	IN	136	756	136	485	260	561	19	804	0	358	190	0	0	0	0	215	84	265	93	251	324	42	1533	6511
				OUT	296	6846	364	7	612	372	0	191	0	472	0	0	0	71	0	185	399	1233	367	12	9	84	19177	30698
				BOTH	432	7601	500	492	872	932	19	995	0	830	190	0	0	71	0	401	483	1499	459	263	333	126	20710	37209
15	1051080	311	100	IN	79	600	192	85	156	6	144	36	1636	63	15	4	122	0	0	29	18	127	27	112	70	85	352	3959
				OUT	84	1305	1385	43	247	0	0	72	237	98	0	74	1129	9	0	0	21	9	8	38	0	0	558	5315
				BOTH	163	1905	1577	128	404	6	144	108	1873	159	15	78	1250	9	0	29	38	136	35	150	70	85	911	9274
16	1051101	309	302	IN	88	0	0	1	7	0	0	1	107	19	13	2	0	0	0	4	138	8	54	30	23	347	841	
				OUT	0	27	0	0	27	28	0	134	112	8	0	0	0	0	0	0	0	3	5	63	0	1	159	566
				BOTH	88	27	0	1	34	28	0	135	219	27	13	2	0	0	0	0	4	141	14	116	30	24	506	1408
17	1051102	32	500	IN	1111	204	157	127	298	846	22	1247	1046	1014	673	393	294	761	0	401	24	278	78	85	20	585	2291	11954
				OUT	28	316	175	190	307	387	0	1472	46	195	520	228	107	112	46	101	0	0	49	270	128	627	1930	7235
				BOTH	1138	520	332	317	604	1233	22	2718	1092	1209	1193	621	401	873	46	502	24	278	127	355	148	1212	4221	19188
18	1052110	11	101	IN	17	18	0	0	3	46	0	135	68	4	18	0	0	0	0	2	4	19	0	47	0	1	125	506
				OUT	129	37	43	0	11	206	23	49	638	22	17	13	593	87	0	7	1	28	2	0	3	26	366	2299
				BOTH	146	55	43	0	13	251	23	184	706	26	34	13	593	87	0	8	4	48	2	47	3	27	491	2805
19	1061081	1	500	IN	32	957	1046	18	180	32	0	139	137	97	26	115	20	10	0	12	14	17	14	107	78	153	421	3627
				OUT	283	444	273	76	67	9	264	15	2458	180	81	31	0	0	115	2	0	2	0	174	57	57	506	5076
				BOTH	315	1401	1319	94	247	41	264	155	2595	257	107	147	20	10	115	14	14	19	14	281	136	211	927	8703
20	1061082	21	200	IN	0	157	37	7	195																			

Appendix 6.11 ESTMATED COMMODITY FLOW — 1990

(Unit: Ton/Day)

Survey Route Ctl' Direc-				Commodity Type																							Total	
Seq	Station	No. Sect.	tion	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	
Code																												
21	1061090	1	301	IN	8512	32250	12763	1274	4539	874	400	1027	516	3263	9800	1030	453	965	735	667	1043	978	100	1284	406	1048	9839	93785
				OUT	1739	9431	2660	901	2759	460	209	3813	119	590	955	37	0	790	0	22	1030	251	538	2038	1354	767	5642	36107
				BOTH	10251	41682	15423	2176	7299	1334	609	4839	635	3873	10755	1067	453	1755	735	689	2073	1229	639	3322	1760	1815	15481	129893
22	1063050	33	101	IN	85	1977	1538	61	357	9	7	369	29	352	24	157	24	56	0	80	66	184	0	1480	75	117	256	7302
				OUT	123	989	146	34	66	49	2	5	14	236	88	16	0	2	0	4	8	37	1	88	104	41	820	2874
				BOTH	208	2965	1684	95	423	58	9	374	43	587	113	173	24	58	0	83	74	221	1	1568	179	157	1076	10176
23	1064060	2	101	IN	259	443	2709	322	576	155	0	2641	126	305	57	0	0	0	0	0	0	12	0	282	69	197	2617	10770
				OUT	936	248	274	412	273	955	143	1044	54	761	3316	269	108	341	179	247	147	134	187	242	166	793	2777	14006
				BOTH	1194	691	2983	734	849	1110	143	3686	180	1066	3373	269	108	341	179	247	147	146	187	523	235	990	5394	24776
24	1073021	34	100	IN	1504	8248	1805	2627	3304	3143	245	3451	16	637	2370	1002	149	980	0	430	207	434	523	8288	376	1701	11234	52673
				OUT	2153	56265	1280	417	5623	1918	136	3118	0	2739	2777	326	0	0	122	0	335	2997	375	2329	596	430	11442	95374
				BOTH	3657	64513	3084	3044	8926	5061	380	6569	16	3375	5147	1328	149	980	122	430	542	3431	898	10617	971	2131	22676	148048
25	1073022	3	301	IN	4	198	18	0	77	20	2	203	0	64	90	0	0	0	0	57	9	96	108	67	0	3	418	1433
				OUT	0	4907	83	1	311	84	79	88	39	92	3	0	0	0	0	9	3	51	59	150	37	41	587	6623
				BOTH	4	5104	101	1	388	104	81	291	39	156	94	0	0	0	0	65	12	148	166	217	37	43	1005	8056
26	1082090	21	501	IN	35	108	43	37	78	0	0	207	39	61	0	51	0	0	0	42	29	36	14	75	25	84	584	1546
				OUT	265	383	0	52	187	92	0	329	0	365	2	19	0	2	2	16	69	6	19	19	49	136	299	2310
				BOTH	300	491	43	88	265	92	0	536	39	425	2	69	0	2	2	58	98	42	33	94	74	220	883	3856
27	1082110	1	700	IN	6	192	0	26	9	25	0	0	117	8	10	0	0	18	0	0	2	21	5	12	10	2	176	639
				OUT	57	33	140	6	19	3	0	0	183	32	0	4	27	0	0	0	3	49	1	40	3	5	70	676
				BOTH	63	225	140	32	28	28	0	0	300	39	10	4	27	18	0	0	5	71	6	53	13	6	246	1315
28	1084030	205	501	IN	24	244	15	9	49	17	0	37	0	21	8	0	0	2	0	0	20	59	6	2	36	10	103	663
				OUT	0	0	0	0	0	0	0	31	0	8	775	221	0	43	0	0	0	37	0	0	0	0	88	1202
				BOTH	24	244	15	9	49	17	0	68	0	29	784	221	0	44	0	0	20	96	6	2	36	10	191	1865
29	2012040	1	1600	IN	54	0	844	246	108	46	3	404	289	165	20	45	0	31	38	101	135	142	159	121	152	177	913	4194
				OUT	152	139	69	55	15	401	21	115	2086	243	1	11	0	277	0	64	35	76	50	0	72	93	545	4520
				BOTH	206	139	913	301	123	447	24	519	2375	408	21	56	0	308	38	165	170	218	209	121	224	271	1458	8715
30	2012070	115	200	IN	0	12	0	8	0	0	1	95	0	0	0	0	0	0	0	0	8	0	0	0	0	6	71	202
				OUT	44	14	0	0	17	0	0	72	0	4	0	0	15	0	0	0	0	0	0	1	0	0	35	203
				BOTH	44	27	0	8	17	0	1	167	0	4	0	0	15	0	0	0	8	0	0	1	0	6	106	405
31	2012110	1	1301	IN	107	309	0	0	7	246	259	617	4093	374	577	0	42	265	0	64	310	43	52	65	71	40	625	8166
				OUT	20	349	918	196	183	0	0	747	98	89	100	30	70	35	0	118	96	16	9	308	50	46	1783	5262
				BOTH	126	658	918	196	190	246	259	1365	4190	463	677	30	111	300	0	182	406	59	61	378	121	87	2408	13428
32	2012150	101	301	IN	10	335	275	2	73	22	0	20	0	1	0	0	220	1	0	0	26	1	2	0	7	19	390	1405
				OUT	19	29	22	0	9	6	7	31	0	0	0	0	38	0	0	7	16	71	0	1	8	2	108	374
				BOTH	29	364	297	2	82	28	8	51	0	1	0	0	259	2	0	8	42	72	2	1	15	20	498	1779
33	2022030	1019	200	IN	34	0	6	0	8	3	0	0	0	22	0	0	0	8	0	28	6	11	0	1	9	13	79	226
				OUT	1	15	16	12	0	0	1	10	0	53	0	0	0	0	0	0	44	1	0	0	1	8	74	237
				BOTH	36	15	22	12	8	3	1	10	0	75	0	0	0	8	0	28	49	11	0	1	11	22	153	463
34	2022060	1	2903	IN	192	334	87	4	30	0	0	18	0	48	23	2	2	37	0	0	18	46	60	18	13	2	365	1300
				OUT	96	43	847	68	55	86	0	274	0	67	0	0	0	0	0	30	37	66	18	38	132	258	414	2530
				BOTH	289	377	934	72	85	86	0	292	0	116	23	2	2	37	0	30	54	112	78	56	145	260	779	3830
35	2032120	106	602	IN	12	20	70	1	22	21	0	2	0	36	0	2	0	0	19	45	19	3	39	128	83	144	666	
				OUT	0	128	19	9	50	25	0	12	0	65	0	3	0	4	0	0	9	8	0	3	2	22	411	767
				BOTH	12	148	88	9	71	46	0	14	0	101	0	5	0	4	0	19	54	27	3	42	130	105	555	1433
36	2032140	108	500	IN	0	28	14	5	9	38	0	16	0	12	0	0	0	17	0	9	55	0	0	1	7	14	56	282
				OUT	35	25	0	0	0	0	0	1	0	17	0	0	0	7	0	3	74	59	0	0	4	91	83	399
				BOTH	35	53	14	5	9	38	0	16	0	29	0	0	0	25	0	12	129	59	0	1	12	105	139	682
37	2042130	1	1901	IN	25	12	767	159	90	106	0	395	105	80	0	1	0	89	31	14	312	164	20	237	190	98	1005	3899
				OUT	58	0	187	15	0	219	15	90	1352	362	0	2	0	163	0	76	40	76	32	0	87			



Appendix 6.11 ESTMATED COMMODITY FLOW - 1990

(Unit: Ton/Day)

Seq	Station	No.	Sect.	Dirac-	Commodity Type																							Total
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
38	2052100	101	1100	IN	1	0	0	5	0	243	2	0	0	149	0	0	0	26	0	0	16	0	0	10	1	134	585	
				OUT	20	0	69	29	36	3	29	225	0	14	0	0	0	11	0	32	54	64	0	98	99	56	233	1074
				BOTH	21	0	69	34	36	246	31	225	0	163	0	0	0	36	0	32	69	64	0	98	109	57	367	1659
39	2062130	1	2603	IN	205	65	6	13	13	38	1	193	29	92	96	33	0	0	0	57	124	180	24	0	36	13	128	1346
				OUT	42	1212	917	50	135	100	0	213	0	89	0	0	0	0	0	19	33	66	23	18	120	61	716	3814
				BOTH	247	1278	922	63	147	138	1	406	29	181	96	33	0	0	0	76	157	246	47	18	156	74	843	5160
40	2072081	117	400	IN	0	62	72	0	0	108	54	720	0	0	72	0	0	0	0	0	0	2	0	0	0	2	585	1678
				OUT	0	212	265	0	0	397	199	2649	0	0	265	0	0	0	0	0	0	3	0	0	0	3	1748	5740
				BOTH	0	274	337	0	0	505	252	3369	0	0	337	0	0	0	0	0	0	6	0	0	0	6	2333	7418
41	2072082	11	502	IN	5	172	43	24	20	1	2	13	0	14	4	10	0	0	0	10	46	29	14	10	34	73	129	655
				OUT	106	13	12	10	32	2	0	42	0	7	128	0	0	0	0	2	15	22	0	53	9	11	133	596
				BOTH	111	186	55	34	52	3	2	55	0	22	132	10	0	0	0	11	61	51	14	63	43	84	262	1250
42	2072090	113	202	IN	159	20	20	1	25	0	17	4	0	31	3	0	0	14	0	0	21	2	0	17	46	12	144	535
				OUT	44	136	0	0	1	0	0	0	74	15	0	9	0	0	0	0	0	10	0	15	0	39	528	872
				BOTH	202	156	20	1	27	0	17	4	74	45	3	9	0	14	0	0	21	12	0	32	46	51	672	1407
43	2072111	117	200	IN	441	247	301	56	35	3	5	239	194	281	360	43	360	121	0	42	243	99	85	167	56	138	1497	5011
				OUT	121	603	483	79	156	87	0	1445	65	38	31	26	0	58	0	295	276	12	5	177	230	88	1010	5285
				BOTH	562	850	784	136	190	90	5	1684	259	319	391	69	360	179	0	337	519	110	90	344	287	225	2507	10296
44	2072112	11	201	IN	36	0	0	57	0	52	0	48	1110	39	0	0	0	2	0	95	1	6	0	60	4	21	374	1904
				OUT	14	19	135	16	66	0	1	90	30	21	0	16	0	0	0	16	23	5	0	1	4	20	72	549
				BOTH	50	19	135	73	66	52	1	138	1139	60	0	16	0	2	0	111	24	11	0	62	7	41	447	2453
45	2082150	12	400	IN	3	0	152	47	23	0	0	400	0	14	0	0	1	0	0	22	0	58	0	3	3	0	864	1690
				OUT	620	80	0	18	0	2	0	81	0	154	0	162	0	1	0	0	0	150	1	79	29	50	231	1659
				BOTH	623	80	152	65	23	2	0	481	0	168	0	162	1	1	0	22	0	208	1	81	31	50	1195	3349
46	2082170	11	700	IN	32	0	158	53	120	189	0	420	31	9	35	0	45	0	0	0	44	6	52	207	220	128	950	2699
				OUT	123	238	0	74	16	0	1	714	20	282	0	195	0	40	0	92	18	0	20	0	2	0	319	2152
				BOTH	155	238	158	127	135	189	1	1135	51	292	35	195	45	40	0	92	62	6	72	207	222	128	1269	4851
47	2094020	12	1000	IN	9	1968	0	0	0	2	0	12	0	74	5	0	0	32	0	0	14	29	0	50	7	34	22	2256
				OUT	0	56	0	0	6	0	0	1	0	0	0	0	0	0	0	0	4	10	12	2	3	2	22	118
				BOTH	9	2024	0	0	6	2	0	13	0	74	5	0	0	32	0	0	18	39	12	52	10	36	44	2374
48	2094030	225	600	IN	23	23	0	0	4	0	3	58	0	30	0	1	0	0	0	17	2	21	1	16	25	18	4	246
				OUT	36	1	0	0	10	0	0	0	0	8	0	0	0	26	0	0	0	48	0	6	2	13	75	226
				BOTH	60	24	0	0	13	0	3	58	0	39	0	1	0	26	0	17	2	70	1	22	27	31	80	472
49	2094120	203	202	IN	3	34	1	2	0	27	0	16	0	3	0	0	0	0	2	0	8	1	9	15	1	38	159	
				OUT	0	6	1	0	2	2	1	6	0	21	0	0	0	5	0	2	5	12	1	0	5	0	36	103
				BOTH	3	40	1	2	2	29	1	22	0	24	0	0	5	0	4	5	20	1	9	19	1	75	262	
50	2102131	103	100	IN	11	3	174	34	25	67	0	61	23	78	25	0	0	0	25	13	46	18	30	125	35	181	977	
				OUT	48	0	121	0	49	332	0	124	230	80	44	0	0	0	0	0	2	37	97	80	48	88	241	1621
				BOTH	59	3	295	34	74	400	0	186	254	159	69	0	0	0	25	14	83	114	111	173	123	422	2598	
51	2102132	11	1200	IN	0	0	0	1	27	42	0	19	0	41	0	0	0	7	0	18	26	27	0	0	7	12	108	336
				OUT	19	0	10	1	4	8	0	10	0	79	0	0	0	18	0	0	4	1	1	22	15	38	133	365
				BOTH	19	0	10	3	31	50	0	29	0	121	0	0	0	24	0	18	31	29	1	22	22	49	241	701
52	2102150	101	700	IN	7	15	0	0	17	30	0	0	0	10	0	0	0	0	1	0	0	0	12	2	6	55	156	
				OUT	7	3	0	0	6	1	0	0	0	7	0	0	0	0	0	0	5	0	0	0	0	0	1	30
				BOTH	14	18	0	0	17	37	1	0	0	16	0	0	0	0	1	5	0	0	12	2	6	56	186	
53	2122130	11	1300	IN	88	23	48	51	31	60	0	171	0	429	44	0	0	19	0	182	58	91	2	140	154	92	447	2132
				OUT	188	13	788	200	266	240	21	540	13	174	0	13	0	145	0	21	257	30	35	107	97	115	1869	5132
				BOTH	276	36	836	251	297	300	21	711	13	603	44	13	0	164	0	203	316	122	38	247	252	207	2316	7264
54	2152170	102	100	IN	20	27	0	0	0	0	0	19	0	16	0	0	0	0	2	13	11	0	0	60	0	394	561	
				OUT	45	12	5	0	1	16	0	0	0	0	0	0	12	0	0	0	7	0	7	0	6	3	311	425
				BOTH	65	38	5	0	1	16	0	19	0	16	0	0	12	0	2	20	11	7	0	66	3	706	986	

Note. Commodity type 1: Rice 2: Sand & Gravel 3: Cement & Products 4: Steel 5: Construction materials 6: Timber 7: Firewood 8: Petroleum products  
 9: Minerals 10: Vegetables & Fruits 11: Cassava 12: Maize 13: Sugar 14: Bean 15: Jute & Products 16: Beverages 17: Grocery  
 18: Animals 19: Fish 20: Fertilizer & Animal feed 21: Household appliances 22: Other manufactures 23: All others

Appendix 6.11 ESTMATED COMMODITY FLOW - 1990

(Unit: Ton/Day)

Seq	Station	No.	Sect.	Dirac-	Commodity Type																							Total
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
55	3013040	3	1300	IN	215	889	286	58	513	2	0	447	0	114	2	105	0	0	0	4	88	51	40	61	83	66	1016	4039
				OUT	0	0	23	1	0	436	0	149	0	1073	37	0	0	0	0	2	0	10	182	13	0	2	1568	3498
				BOTH	215	889	309	59	513	440	0	596	0	1187	39	105	0	0	0	7	88	61	222	74	83	68	2583	7537
56	3013060	317	302	IN	3	24	0	0	0	0	1	0	0	214	0	0	24	0	0	0	130	24	3	48	53	0	196	722
				OUT	152	131	347	0	105	2	0	32	0	91	0	0	0	0	0	24	32	2	2	102	115	36	426	1599
				BOTH	155	155	347	0	105	2	1	32	0	306	0	0	24	0	0	24	162	26	5	151	168	36	622	2321
58	3023031	3	402	IN	2545	6720	266	1953	2075	2075	1038	1038	0	1453	3113	0	0	1038	0	0	1038	2260	3622	988	1038	33017	65277	
				OUT	371	76048	1813	895	5254	1144	0	3916	282	4317	6042	0	282	0	0	496	282	3103	2323	3429	431	1213	33519	145158
				BOTH	2916	82768	2079	2848	7329	3219	1038	4954	282	5770	9155	0	282	1038	0	496	282	4141	4583	7050	1420	2251	66537	210436
59	3023032	315	200	IN	247	38	204	47	230	25	35	113	24	73	369	12	12	12	0	18	4	82	2	181	48	139	563	2475
				OUT	114	323	52	30	116	37	0	60	0	56	15	29	0	0	0	29	40	371	3	96	69	46	699	2188
				BOTH	361	361	256	77	346	62	35	173	24	130	384	40	12	12	0	48	44	453	5	276	117	185	1262	4663
60	3023033	331	400	IN	161	38	528	18	113	28	0	112	14	80	93	52	0	0	0	95	8	132	0	64	35	9	164	1747
				OUT	0	202	62	18	29	56	0	259	0	61	22	0	58	0	0	22	1	47	0	30	13	21	245	1145
				BOTH	161	240	590	36	142	85	0	371	14	141	114	52	58	0	0	117	9	180	0	95	48	30	409	2891
61	3023061	319	200	IN	23	34	140	73	61	10	0	89	0	29	119	0	0	0	0	2	53	48	4	155	19	3	268	1128
				OUT	21	130	1246	18	58	33	0	146	0	55	189	43	0	0	0	20	9	36	6	58	20	12	443	2543
				BOTH	44	164	1385	91	119	43	0	236	0	85	308	43	0	0	0	21	61	84	10	213	38	15	710	3671
62	3023062	304	400	IN	16	40	1	45	89	28	0	410	0	34	211	18	24	0	0	19	31	39	136	270	81	89	685	2266
				OUT	936	97	16	137	184	42	38	478	0	113	4919	426	0	11	0	0	49	155	26	283	18	230	1599	9757
				BOTH	952	137	17	182	273	70	38	888	0	147	5130	444	24	11	0	19	80	194	161	554	98	319	2285	12023
63	3033071	3	800	IN	114	1215	379	55	152	44	0	771	2	66	42	2	0	0	10	6	4	39	12	21	106	8	319	3367
				OUT	0	193	740	38	75	132	0	267	0	50	0	0	0	0	0	50	1	61	48	47	12	27	222	1963
				BOTH	114	1408	1119	93	227	176	0	1038	2	116	42	2	0	0	10	56	5	100	60	68	119	35	540	5330
64	3033072	36	200	IN	36	210	453	308	95	339	44	2836	0	272	3	0	0	0	0	12	63	171	0	596	1	89	693	6221
				OUT	0	557	198	135	3	170	0	1370	0	291	3	0	0	0	0	70	0	329	56	36	6	473	981	4678
				BOTH	36	767	651	443	98	510	44	4206	0	564	6	0	0	0	0	82	63	500	56	632	7	562	1675	10899
65	3033073	344	300	IN	72	136	633	61	299	1004	15	256	0	84	2	59	44	44	0	118	8	357	261	733	225	439	1240	6093
				OUT	160	198	0	91	123	1160	62	231	182	874	273	69	0	0	0	91	0	184	189	334	77	96	660	5053
				BOTH	231	333	633	152	421	2164	77	487	182	959	276	128	44	44	0	209	8	541	450	1067	302	536	1900	11146
67	3064060	304	700	IN	0	0	0	95	1	65	0	349	0	61	224	0	0	0	0	0	5	81	172	152	126	11	638	1981
				OUT	877	0	62	1	166	747	0	547	62	334	3462	644	62	8	0	0	33	65	128	128	130	67	781	8302
				BOTH	877	0	62	96	167	812	0	896	62	395	3686	644	62	8	0	0	38	145	300	281	255	77	1418	10283
68	4014090	213	102	IN	178	379	19	0	65	41	3	3	0	12	86	0	5	0	3	7	51	26	7	44	14	6	365	1314
				OUT	90	434	137	16	202	87	0	173	0	75	444	0	0	29	0	62	32	37	19	22	54	1	565	2479
				BOTH	268	813	156	16	267	128	3	176	0	87	530	0	5	29	3	69	83	63	26	66	68	7	930	3794
69	4014110	214	200	IN	61	863	23	0	31	5	2	31	0	41	51	4	0	1	0	0	0	21	0	48	31	31	185	1430
				OUT	28	182	0	0	8	24	0	18	14	14	0	5	0	0	0	0	26	35	0	6	1	23	124	508
				BOTH	88	1045	23	0	39	29	2	48	14	55	51	10	0	1	0	0	26	56	0	54	32	54	309	1939
70	4014130	213	303	IN	0	0	181	0	0	0	0	26	0	0	0	0	0	0	0	45	20	14	0	1	3	0	452	742
				OUT	0	0	0	0	9	0	0	12	0	28	79	0	0	0	0	8	1	3	0	13	58	4	285	500
				BOTH	0	0	181	0	9	0	0	37	0	28	79	0	0	0	0	53	21	17	0	15	62	4	738	1243
71	4024030	201	702	IN	14	417	30	0	28	4	1	46	14	32	29	29	65	0	0	2	2	17	2	28	11	112	232	1112
				OUT	43	58	74	0	66	0	0	212	0	127	0	11	0	0	0	0	115	12	29	68	28	45	437	1326
				BOTH	57	475	103	0	93	4	1	258	14	159	29	40	65	0	0	2	117	29	31	96	39	157	668	2437
72	4024080	2	702	IN	554	7	1	80	187	36	0	522	0	225	3921	0	0	0	0	0	53	19	26	56	53	51	953	6743
				OUT	169	1500	2538	136	63	138	0	954	0	163	182	0	48	0	0	4	153	40	46	857	98	184	1390	8662
				BOTH	723	1506	2539	215	249	175	0	1476	0	388	4104	0	48	0	0	4	206	59	72	913	151	235	2342	15405
73	4024091	208	102	IN	25	55	1	0	1	1	0	132	0	10	0	0	0	0	0	15	3	26	1	18	1	3	395	686
				OUT	2	0	0	0	7	13	0	52	0	6	0	0	0	0	0	7	1	7	0	0	0	1	86	182
				BOTH	27	55	1	0	8	14	0	183	0	16	0	0	0	0	0	23	4	33	1	18	1	4	481	868

Note. Commodity type 1: Rice 2: Sand & Gravel 3: Cement & Products 4: Steel 5: Construction materials 6: Timber 7: Firewood 8: Petroleum products  
 9: Minerals 10: Vegetables & Fruits 11: Cassava 12: Maize 13: Sugar 14: Bean 15: Jute & Products 16: Beverages 17: Grocery  
 18: Animals 19: Fish 20: Fertilizer & Animal feed 21: Household appliances 22: Other manufactures 23: All others

Appendix 6.11 ESTMATED COMMODITY FLOW -- 1990

(Unit: Ton/Day)

Seq	Station	No.	Sect.	Direc-	Commodity Type																							Total
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
74	4024092	23	103	IN	150	59	209	0	23	0	0	756	0	107	0	0	0	79	59	23	36	0	37	39	73	266	1917	
				OUT	125	146	4	0	0	0	0	293	0	257	212	21	220	0	0	110	0	9	1	146	3	4	948	2498
				BOTH	275	206	213	0	23	0	0	1049	0	364	212	21	220	0	79	169	23	45	1	183	42	77	1214	4415
75	4024120	201	800	IN	0	23	232	25	25	0	0	201	38	5	0	0	42	0	3	0	90	11	0	132	56	42	372	1296
				OUT	20	538	0	8	27	6	1	60	0	18	0	234	56	100	0	0	0	8	0	40	18	34	113	1279
				BOTH	20	561	232	33	51	6	1	261	38	23	0	234	97	100	3	0	90	19	0	172	74	76	485	2575
76	4024160	2	1100	IN	34	30	364	101	200	63	0	440	0	78	81	1	0	0	86	95	22	13	217	22	12	942	2803	
				OUT	155	61	0	0	19	93	0	243	0	187	181	0	273	14	0	100	113	19	2	53	10	49	936	2510
				BOTH	189	92	364	101	219	157	0	683	0	265	263	1	273	14	0	187	208	41	15	270	33	62	1878	5313
77	4034061	205	702	IN	74	0	0	2	11	31	0	91	0	69	133	26	0	0	39	0	0	5	0	38	5	9	459	993
				OUT	39	50	0	12	3	1	0	130	0	66	29	0	44	0	0	5	8	23	0	22	0	64	107	605
				BOTH	113	50	0	14	14	33	0	221	0	136	163	26	44	0	39	5	8	28	0	61	5	73	566	1598
78	4034062	202	301	IN	218	105	0	2	41	81	2	61	0	18	1090	0	166	0	0	7	0	24	1	65	10	11	146	2049
				OUT	89	235	13	12	4	1	0	0	0	17	80	0	2597	0	0	0	0	74	0	0	21	1	240	3385
				BOTH	307	340	13	14	45	82	2	61	0	36	1169	0	2763	0	0	7	0	98	1	65	31	12	385	5433
79	4044080	212	1302	IN	17	44	0	1	8	0	0	32	0	6	0	0	0	0	33	5	2	0	0	14	9	62	234	
				OUT	12	0	42	0	0	25	1	53	0	14	0	0	0	0	0	0	1	0	0	0	14	0	124	286
				BOTH	29	44	42	1	8	25	1	84	0	20	0	0	0	0	0	33	6	2	0	0	28	9	187	520
80	4044130	22	502	IN	32	48	20	0	16	12	0	12	0	0	14	0	0	0	0	45	2	0	13	5	10	0	159	389
				OUT	6	81	6	2	0	0	1	3	0	0	0	0	0	0	0	0	1	0	0	0	24	6	86	216
				BOTH	37	129	25	2	16	12	1	15	0	0	14	0	0	0	0	0	45	3	0	13	5	35	6	245
81	4054160	2	1303	IN	24	887	1	8	13	70	0	60	0	69	148	0	5	4	0	207	5	1	2	1	3	0	273	1782
				OUT	24	128	255	2	54	0	0	166	0	41	7	10	35	0	0	55	22	3	5	50	57	6	417	1335
				BOTH	48	1015	256	9	67	70	0	226	0	110	156	10	41	4	0	262	27	3	6	51	61	6	690	3117
82	4064071	24	300	IN	0	83	299	134	383	103	0	451	24	69	88	0	63	0	0	47	268	1	89	489	160	29	935	3717
				OUT	212	213	124	39	0	163	1	194	0	103	2055	0	0	0	0	198	2	44	0	176	3	22	1244	4793
				BOTH	212	296	423	173	383	265	1	644	24	172	2143	0	63	0	0	246	270	45	90	665	163	51	2179	8509
83	4064072	226	400	IN	0	77	353	51	124	50	0	134	0	1	0	0	0	0	174	1	6	0	331	106	42	359	1808	
				OUT	20	56	18	13	0	78	0	20	0	7	20	0	0	0	0	0	5	2	0	0	9	23	253	525
				BOTH	20	133	371	64	124	127	0	154	0	8	20	0	0	0	0	174	6	9	0	331	115	65	611	2333
84	4074141	226	600	IN	64	26	98	7	40	71	0	0	0	10	6	0	0	0	0	78	0	1	0	0	12	37	133	582
				OUT	44	9	45	60	12	20	2	0	0	2	0	0	0	0	0	0	8	20	3	20	17	0	209	471
				BOTH	109	35	143	67	52	91	2	0	0	12	6	0	0	0	0	78	8	21	3	20	29	37	342	1053
85	4074142	219	400	IN	1	1189	24	0	31	11	0	126	0	4	0	0	0	0	53	1	3	0	14	15	9	195	1676	
				OUT	132	4	17	5	50	4	0	103	0	3	0	0	0	0	0	27	15	11	0	0	8	45	108	534
				BOTH	133	1193	42	5	81	15	0	229	0	7	0	0	0	0	0	80	16	14	0	14	23	54	303	2210
86	4084100	212	1400	IN	0	88	0	0	0	56	1	113	0	10	39	0	3	0	0	1	2	0	91	11	3	308	727	
				OUT	0	0	0	2	26	29	0	52	0	11	0	0	93	26	0	0	1	38	28	13	2	0	228	549
				BOTH	0	88	0	2	26	85	1	166	0	21	39	0	97	26	0	0	2	39	28	104	13	3	536	1277
87	4094111	23	303	IN	151	450	207	99	128	0	0	176	0	151	64	0	0	1	21	56	127	2	176	0	57	723	2589	
				OUT	44	0	1	1	22	0	29	389	0	25	57	49	0	0	16	3	1	280	0	153	2	3	337	1413
				BOTH	195	450	208	100	150	0	29	565	0	176	121	49	0	0	17	23	57	408	2	330	2	60	1060	4002
88	4094112	202	700	IN	2	505	373	0	62	0	0	256	0	0	0	0	0	0	0	0	0	47	484	3	216	603	2550	
				OUT	367	0	0	15	9	114	0	0	0	144	0	0	0	0	0	0	0	1	0	0	2	5	18	675
				BOTH	369	505	373	15	71	114	0	256	0	144	0	0	0	0	0	0	0	1	47	484	5	221	621	3226
89	4104110	23	501	IN	45	0	5	1	27	0	0	0	20	21	0	0	0	0	30	1	17	0	0	9	15	343	534	
				OUT	33	22	0	7	7	0	0	22	0	17	4	7	0	0	0	22	0	119	4	251	49	15	275	853
				BOTH	79	22	5	8	34	0	0	22	0	36	25	7	0	0	0	52	1	136	4	251	58	30	618	1386
90	4104170	23	600	IN	1	53	58	22	11	55	0	37	0	7	0	1	0	0	49	0	0	0	51	27	3	142	518	
				OUT	29	348	32	0	8	6	0	39	0	27	3	0	0	0	0	60	8	4	0	0	16	3	232	815
				BOTH	30	401	90	22	19	61	0	77	0	35	3	1	0	0	0	110	8	4	0	51	43	6	374	1333

Note, Commodity type 1: Rice 2: Sand & Gravel 3: CEMENT & Products 4: Steel 5: Construction materials 6: Timber 7: Firewood 8: Petroleum products  
 9: Minerals 10: Vegetables & Fruits 11: Cassava 12: Maize 13: Sugar 14: Bean 15: Jute & Products 16: Beverages 17: Grocery  
 18: Animals 19: Fish 20: Fertilizer & Animal feed 21: Household appliances 22: Other manufactures 23: All others

Appendix 6.11 ESTMATED COMMODITY FLOW -- 1990

(Unit: Ton/Day)

Seq	Station	Route	No. Sect.	Dirac-	Commodity Type																							
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
91	4114140	214	500	IN	75	24	0	21	6	0	0	0	33	0	0	0	5	0	0	2	1	0	0	11	12	172	362	
				OUT	28	379	47	0	15	50	0	0	40	81	0	0	6	15	0	8	3	0	50	0	6	301	1022	
				BOTH	103	403	47	21	20	50	0	0	73	81	0	0	5	15	0	8	5	0	50	11	18	473	1384	
92	4124160	210	302	IN	56	21	0	2	14	0	0	7	0	16	1	0	0	42	0	0	195	7	13	19	17	42	453	
				OUT	30	89	0	0	66	0	0	33	0	8	1	36	0	45	0	28	0	62	5	0	11	13	99	527
				BOTH	86	110	0	2	80	0	0	41	0	24	3	36	0	45	42	28	0	257	12	13	31	31	141	981
93	4134160	22	301	IN	351	0	0	1	11	0	0	190	0	88	312	0	0	0	0	21	2	25	0	53	5	1	350	1410
				OUT	79	384	73	2	128	0	0	288	19	39	50	0	0	0	32	20	6	5	2	68	74	50	379	1698
				BOTH	430	384	73	4	139	0	0	478	19	126	362	0	0	0	32	41	8	31	2	121	78	50	729	3108
94	4144150	226	800	IN	40	125	40	18	22	0	0	8	0	33	0	0	0	0	18	0	27	35	53	43	4	366	832	
				OUT	179	0	9	1	15	0	0	9	0	51	0	0	0	0	0	0	39	3	4	2	48	4	62	428
				BOTH	219	125	49	19	37	0	0	17	0	84	0	0	0	0	18	39	30	40	55	92	8	427	1260	
95	4154170	226	1200	IN	55	92	155	30	34	25	0	36	0	30	0	0	0	0	3	11	7	25	100	38	27	223	891	
				OUT	36	128	10	1	12	20	1	65	0	31	0	0	0	18	42	32	0	1	22	12	8	152	591	
				BOTH	91	220	166	31	46	45	1	101	0	61	0	0	0	18	45	44	7	27	121	50	35	375	1483	
96	5015050	323	103	IN	597	11606	4	15	437	146	94	1002	92	487	157	103	5030	0	0	14	71	165	11	241	151	73	3082	23579
				OUT	266	1267	43	116	505	174	0	1188	61	267	3	51	1145	15	0	23	95	22	2	319	67	0	535	6162
				BOTH	863	12873	47	131	942	318	94	2190	154	753	160	154	6175	15	0	36	166	187	13	561	217	73	3617	29741
97	5015060	324	202	IN	15	148	22	30	17	55	25	95	0	56	35	0	445	0	0	81	21	30	2	11	35	12	517	1653
				OUT	192	792	76	5	57	46	65	57	78	108	115	21	4768	0	23	92	44	15	6	183	174	30	536	7484
				BOTH	207	940	98	35	74	100	90	152	78	165	150	21	5214	0	23	174	65	45	8	194	209	42	1053	9137
98	5025050	4	302	IN	2324	2382	2167	568	2155	275	0	3672	211	3134	12	119	733	229	257	109	499	380	162	4020	579	1553	8799	34339
				OUT	1092	42951	323	342	540	3225	23	1783	246	3089	294	270	26	149	0	643	1687	585	810	1006	869	1198	16335	77486
				BOTH	3416	45333	2491	910	2695	3499	23	5455	456	6224	306	389	759	378	257	752	2186	965	972	5026	1448	2752	25134	111825
99	5025060	321	202	IN	48	450	16	37	107	59	0	141	0	92	0	0	175	0	0	0	20	20	35	65	61	199	579	2104
				OUT	142	2781	60	3	84	33	1	180	69	289	47	93	213	3	0	0	45	78	17	242	72	98	600	5147
				BOTH	190	3231	76	40	190	92	1	321	69	382	47	93	388	3	0	0	64	97	52	306	133	297	1179	7251
100	5035040	4	800	IN	238	691	468	271	51	2613	501	372	0	1586	91	93	14	121	84	12	9	96	2490	256	79	1100	4209	15446
				OUT	434	930	673	195	501	568	16	772	221	1573	247	6	71	124	22	483	87	12	1234	503	115	518	1905	11210
				BOTH	672	1621	1141	466	552	3182	517	1144	221	3160	338	99	84	245	106	495	95	107	3724	759	194	1619	6114	26656
101	5036020	4	1400	IN	307	119	193	139	370	239	29	335	29	1231	0	2	60	86	0	22	171	103	93	1038	130	376	3270	8341
				OUT	0	17	57	3	101	3534	460	270	46	335	22	29	0	5	0	49	26	100	2671	218	79	108	1890	10020
				BOTH	307	136	250	142	471	3773	489	604	75	1566	22	31	60	91	0	71	197	204	2764	1256	209	484	5160	18362
103	5055081	35	300	IN	142	11391	443	551	0	4649	664	1718	136	1625	0	0	0	0	0	107	9	290	3747	987	113	583	6229	33384
				OUT	370	396	428	550	643	19	45	1247	0	228	42	12	134	0	0	202	346	219	410	1800	274	528	1903	9796
				BOTH	512	11786	871	1101	644	4668	710	2965	136	1852	42	12	134	0	0	309	355	509	4156	2787	387	1111	8132	43180
104	5055082	325	200	IN	0	282	6	0	15	33	0	751	0	159	0	0	0	1	0	0	275	50	65	5	3	0	419	2063
				OUT	98	1195	0	0	32	115	0	150	0	183	0	16	0	0	0	0	0	19	5	0	0	3	1343	3159
				BOTH	98	1477	6	0	47	149	0	901	0	343	0	16	0	1	0	0	275	68	69	5	3	3	1762	5223
105	5075080	35	201	IN	270	2192	185	469	1463	835	0	1756	81	443	76	0	0	68	0	197	291	80	647	1170	287	496	2963	13970
				OUT	197	12867	375	329	3650	5519	630	1077	0	5666	337	60	139	133	0	6	394	526	2532	442	541	436	7870	43728
				BOTH	468	15059	560	798	5113	6354	630	2833	81	6109	413	60	139	201	0	203	685	606	3180	1612	828	933	10832	57698
106	6016030	4	3500	IN	11	23	24	0	0	0	0	17	0	4	0	0	0	0	5	8	9	9	0	1	16	221	348	
				OUT	1	97	73	1	40	25	0	21	0	17	0	0	0	0	0	1	1	16	13	0	11	157	477	
				BOTH	13	120	96	1	40	25	0	38	0	21	0	0	0	0	5	9	11	25	13	1	26	378	825	
107	6016070	4	3200	IN	27	0	149	0	25	26	0	209	8	36	0	0	0	0	0	4	31	36	66	8	13	229	867	
				OUT	11	275	117	0	27	26	0	2	0	34	0	0	0	0	1	0	25	28	179	9	5	1	229	969
				BOTH	37	275	267	0	52	52	0	211	8	70	0	0	0	0	1	0	29	59	215	75	13	13	458	1836
108	6016140	4035	200	IN	3	259	4	43	19	40	52	477	171	61	0	1	0	0	0	0	1	14	0	2	95	243	1484	
				OUT	131	272	216	38	86	40	0	687	12	51	0	2	0	0	0	44	1	0	2	131	4	5	269	1990
				BOTH	134	531	219	81	105	80	52	1164	184	113	0	3	0	0	0	44	1	1	16	131	6	99	512	3474

Note. Commodity type 1: Rice 2: Sand & Gravel 3: Cement & Products 4: Steel 5: Construction materials 6: Timber 7: Firewood 8: Petroleum products  
 9: Minerals 10: Vegetables & Fruits 11: Cassava 12: Maize 13: Sugar 14: Bean 15: Jute & Products 16: Beverages 17: Grocery  
 18: Animals 19: Fish 20: Fertilizer & Animal feed 21: Household appliances 22: Other manufactures 23: All others

Appendix 6.11 ESTIMATED COMMODITY FLOW -- 1990

(Unit: Ton/Day)

Seq	Station	Code	No.	Sect.	Dirac-	Commodity Type																							Total
						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
109	6026100		4	1800	IN	35	103	141	38	125	23	0	331	22	17	0	0	0	0	0	76	44	5	43	32	0	56	1040	2131
					OUT	0	0	67	0	9	171	12	244	0	22	0	0	0	0	0	0	0	60	570	0	9	10	322	1497
					BOTH	35	103	208	38	134	194	12	576	22	39	0	0	0	0	76	44	65	613	32	9	66	1362	3628	
110	6026140		41	300	IN	126	233	168	355	711	92	0	749	22	1165	0	8	0	1	0	328	67	22	517	861	49	126	3947	9545
					OUT	114	10	43	76	282	260	103	1140	0	374	3	16	0	8	0	90	0	29	716	29	85	66	1576	5020
					BOTH	239	243	211	431	993	352	103	1889	22	1540	3	24	0	9	0	418	67	50	1233	890	134	192	5523	14565
111	6036040		403	302	IN	11	30	0	14	30	27	44	142	0	52	0	0	0	0	0	0	0	150	10	18	1	111	639	
					OUT	26	657	255	2	119	159	18	293	27	17	0	19	0	0	0	1	23	5	56	48	5	1	551	2282
					BOTH	36	687	255	16	149	187	63	435	27	69	0	19	0	0	0	1	23	5	206	58	23	2	662	2922
112	6036060		4	3800	IN	0	0	0	18	0	57	61	15	0	5	0	20	0	0	0	57	6	27	134	10	0	0	215	626
					OUT	50	8	42	1	1	85	0	84	1	23	0	0	0	0	0	0	0	26	9	31	8	0	222	592
					BOTH	51	8	42	19	1	141	61	98	1	28	0	20	0	0	0	57	6	54	143	41	8	0	438	1217
113	6046060		41	1100	IN	121	125	560	21	98	26	0	207	0	883	0	0	0	0	0	72	52	0	587	58	2	0	1128	3940
					OUT	48	11	41	34	26	304	15	0	0	268	0	0	0	0	0	102	65	14	739	90	26	64	982	2829
					BOTH	170	136	601	55	124	330	15	207	0	1152	0	0	0	0	0	174	116	14	1325	148	28	64	2110	6769
114	6046120		408	302	IN	20	106	72	0	106	5	0	92	0	251	0	0	0	20	0	30	5	66	189	134	2	10	226	1334
					OUT	74	36	44	0	21	21	0	66	0	11	0	0	1	0	9	21	0	26	220	233	10	3	491	1288
					BOTH	94	142	116	0	127	26	0	158	0	263	0	0	1	20	9	51	5	92	409	368	12	13	716	2622
115	6046141		41	800	IN	50	82	299	86	219	425	43	99	0	57	0	0	0	0	43	0	59	389	8	21	2	1557	3439	
					OUT	123	34	309	199	111	38	0	390	17	677	17	53	0	14	0	91	381	56	213	359	38	0	1672	4793
					BOTH	173	116	608	285	330	463	43	490	17	734	17	53	0	14	0	134	381	115	602	367	59	2	3229	8233
116	6046142		401	801	IN	8	62	41	21	28	199	15	101	8	103	0	0	0	0	0	0	0	35	204	48	30	15	404	1323
					OUT	30	146	0	25	45	46	0	505	243	276	0	0	0	12	6	44	84	46	46	168	3	10	623	2358
					BOTH	38	208	41	45	74	246	15	606	250	379	0	0	0	12	6	44	84	81	250	216	34	25	1027	3681
117	6056080		42	701	IN	3	25	1	2	12	80	0	154	25	40	0	0	0	0	1	10	1	48	26	10	137	472	1050	
					OUT	79	62	0	0	14	23	0	78	3	206	0	0	1	0	0	0	159	0	56	62	13	52	406	1212
					BOTH	82	87	1	2	26	103	0	232	28	246	0	0	1	0	0	1	169	1	104	88	23	189	878	2262
118	6066120		4	4100	IN	214	14	229	47	154	0	1	115	19	480	20	21	0	0	14	65	176	103	482	266	95	28	1934	4476
					OUT	12	97	72	26	83	364	23	147	0	19	0	0	7	0	0	0	3	55	431	61	1	29	958	2386
					BOTH	226	112	302	72	237	364	24	261	19	499	20	21	7	0	14	65	180	158	913	327	95	57	2892	6863
119	6076100		4	2300	IN	0	1	0	0	0	46	52	0	0	27	0	0	0	0	0	0	23	0	137	0	13	0	184	483
					OUT	39	0	1	10	0	0	0	20	3	13	0	0	0	0	0	0	0	1	68	41	3	52	108	360
					BOTH	39	1	1	10	0	46	52	20	3	40	0	0	0	0	0	0	23	1	205	41	16	52	292	843
120	6076110		402	101	IN	102	684	103	13	386	80	0	418	80	101	0	0	0	0	46	0	2	233	0	5	32	928	3214	
					OUT	92	368	55	63	81	22	0	251	2	72	0	0	0	72	0	44	3	16	448	2	0	0	628	2218
					BOTH	195	1052	158	76	467	102	0	669	82	172	0	0	0	72	0	90	3	19	682	2	5	32	1557	5433
121	6086090		410	102	IN	17	0	0	5	11	12	13	15	2	7	0	0	1	0	0	15	5	2	22	6	0	3	173	308
					OUT	35	152	3	18	11	66	11	37	0	19	0	0	0	0	0	12	7	1	13	1	3	0	238	627
					BOTH	52	152	3	22	22	78	23	52	2	26	0	0	1	0	0	26	12	3	35	8	3	3	411	935
122	6086120		4086	300	IN	87	55	30	0	43	881	83	189	0	139	0	0	1	0	18	13	9	5	1094	50	71	111	837	3717
					OUT	134	38	124	0	138	0	0	609	0	279	2	21	0	2	0	0	40	51	292	86	27	53	873	2769
					BOTH	220	93	154	0	182	881	83	798	0	418	2	21	1	2	18	13	49	55	1386	136	99	164	1710	6487
123	6126130		406	200	IN	13	321	18	0	20	82	1	157	0	14	0	0	0	0	20	5	29	31	30	15	27	340	1123	
					OUT	0	35	0	14	8	21	0	22	0	43	0	0	10	0	0	0	0	28	153	2	3	0	181	520
					BOTH	13	355	18	14	28	102	1	179	0	57	0	0	10	0	0	20	5	57	184	32	18	27	521	1643

Note. Commodity type 1: Rice 2: Sand & Gravel 3: Cement & Products 4: Steel 5: Construction materials 6: Timber 7: Firewood 8: Petroleum products  
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