

フィリピン共和国

マニラ首都圏都市交通計画調査

報告書

(資料編)

昭和59年3月

国際協力事業団

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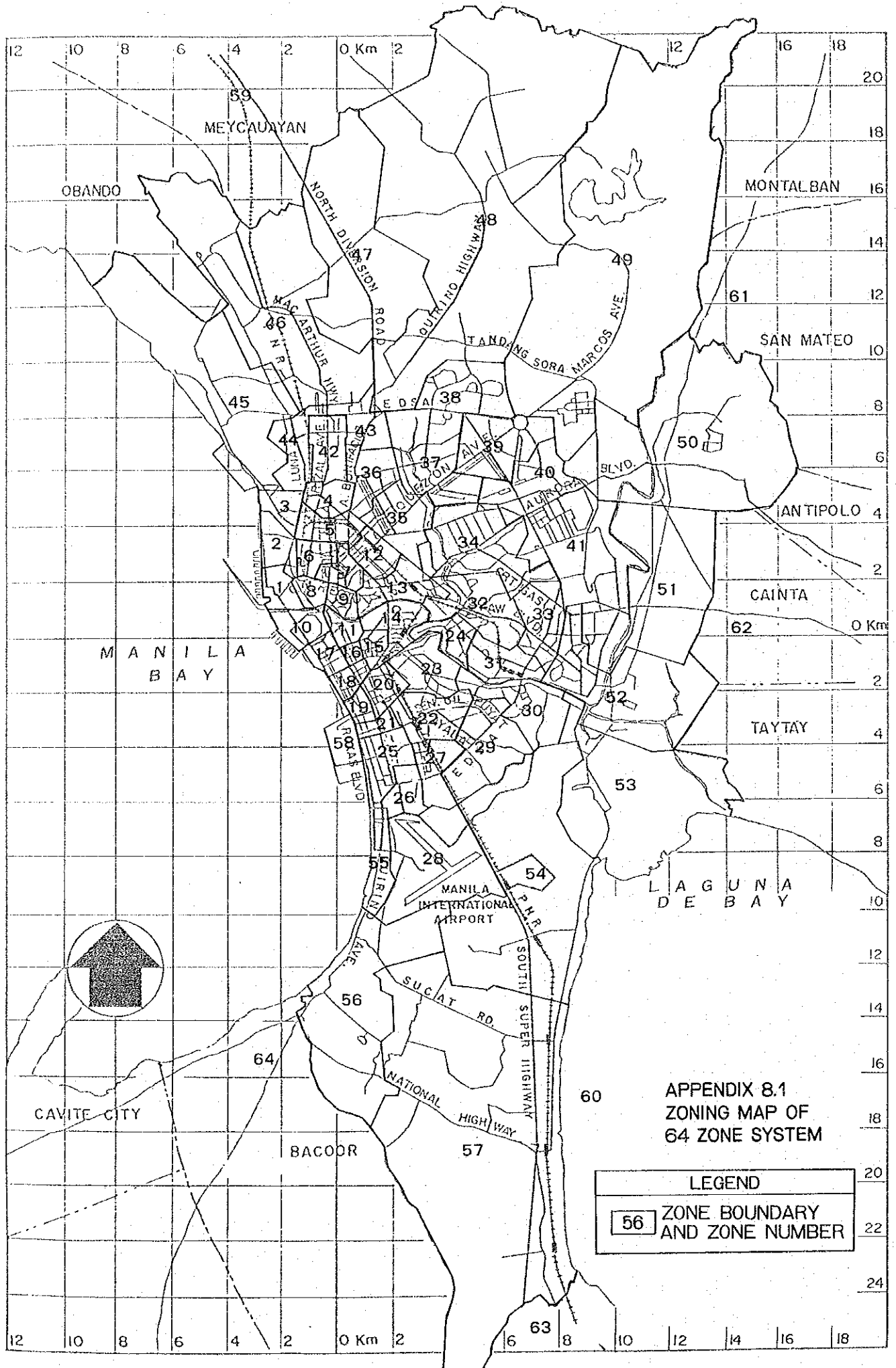
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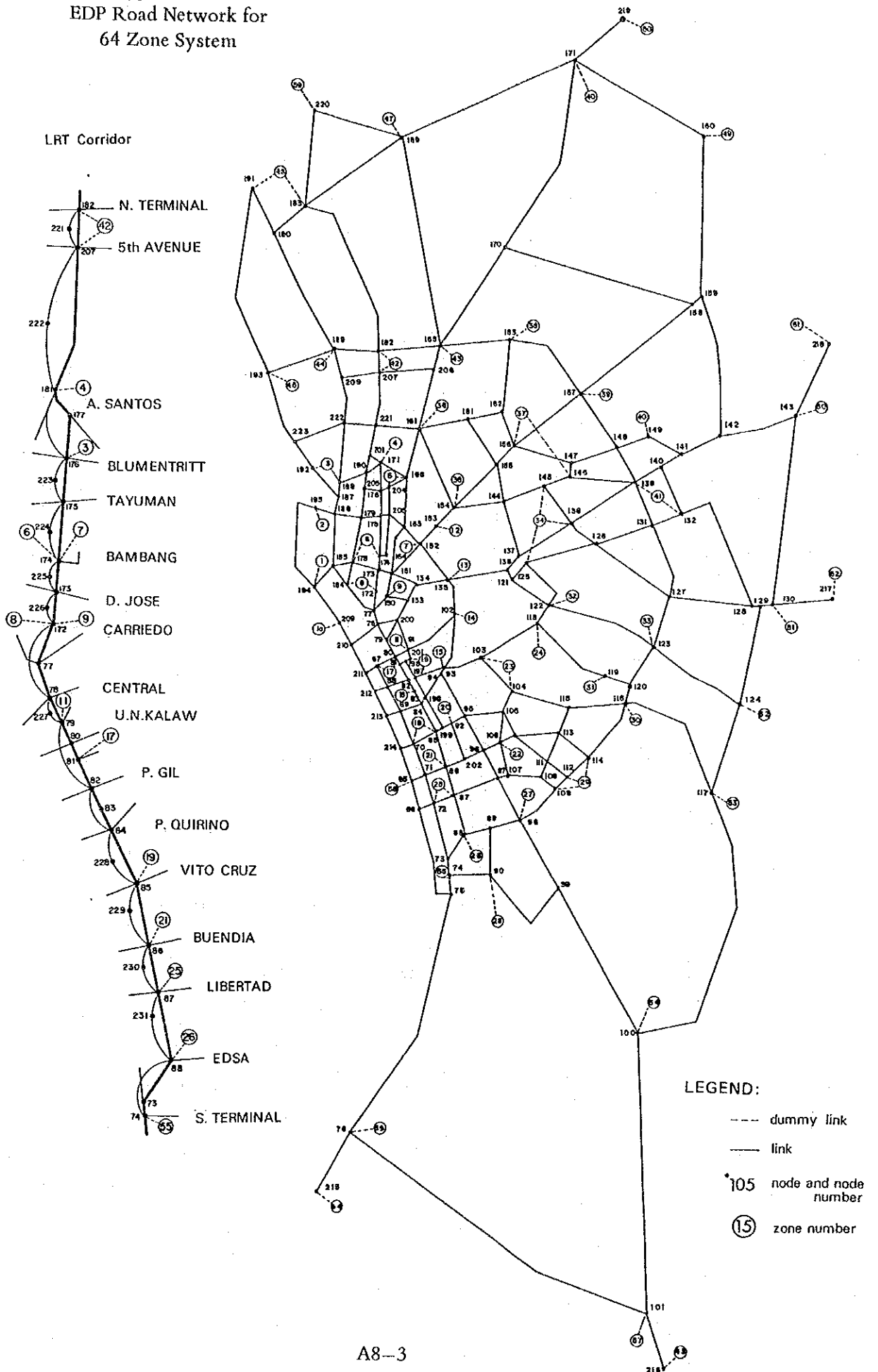
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Appendix 8.2
JUMSUT 64 Zoning System

JUMSUT Zone No.	Zone Name	MMUTIP Zone No.	JUMSUT Zone No.	Zone Name	MMUTIP Zone No.
1	Divisoria	1, 9	37	Roces/Roosevelt	100, 102, 108
2	Tondo	2	38	Pag-asa/Bago-bantay	99, 103, 104, 131, 132
3	Balut	3, 4			
4	Manuguit	5, 6	39	Philcoa/QMC	105, 106, 124
5	Blumentritt	7, 16, 25	40	Kamuning/Kamias	107, 120, 121, 123
6	Sta. Cruz	8, 15			
7	Lerma/Recto	14, 19, 23	41	Cubao	112, 113, 114, 115, 116, 117, 118, 119
8	Binondo	10, 11, 12			
9	Quiapo	13, 17, 18, 33	42	Monumento	136, 139
10	Intramuros	34, 35	43	Balintawak	98, 134, 141
11	San Marcelino	36, 37	44	Sangandaan	137, 138, 140
12	Sampaloc	22, 24, 26	45	Navotas	156, 157, 158, 159, 160, 161, 162, 163
13	Sta. Mesa	20, 21, 27, 28, 31, 32			
14	Pandacan	49, 50, 51	46	Malabon	148, 149, 150, 151, 152, 153, 154, 155
15	Paco	40, 41, 47			
16	Leon Guinto	39			
17	Ermita	38	47	Valenzuela	145, 146, 147
18	Malate	42, 43	48	Novaliches	128, 129, 133, 142, 143, 144
19	Vito Cruz	44			
20	Singalong	45, 46	49	Fairview	125, 126, 127, 130
21	Taft/Buendia	53, 54			
22	Buendia	65, 68, 71	50	Marikina	122, 164, 165, 166, 167, 168, 169, 170, 171
23	Sta. Ana	48, 52, 66			
24	Punta	30, 80, 81			
25	Libertad	55, 56, 57, 58	51	Ugong/Rosario	173, 174, 175
26	Pasay Rotonda	59, 60, 61	52	Pasig	172, 176, 177, 178, 179
27	Pasong Tamo	64, 69, 78	53	Taguig	76, 180, 182, 183
28	MIA	62, 63, 188			
29	Ayala	70, 72, 77	54	Bicutan	181, 184, 185, 187, 192
30	Guadalupe	67, 73, 74, 75	55	Baclaran	189
31	Boni	79, 84	56	Zapote	190, 191, 197, 199, 200
32	JRC/Kalentong	29, 82, 83, 90	57	Alabang	186, 193, 194, 195, 196, 198
33	Crossing	85, 86			
34	San Juan	87, 88, 89, 91, 92, 109, 110, 111	58	Reclamation	201, 202
35	España Rotonda	93, 94, 95, 101	59	External: Bulacan	203, 204
36	La Loma/Retiro	96, 97, 135	60	External: Norzagaray/ S. Jose del Monte	205
			61	External: San Mateo/ Montalban	206
			62	External: Rizal	207, 208
			63	External: Biñan/San Pedro	209
			64	External: Bacoor/Imus/ Cavite	210, 211

Appendix 8.3
EDP Road Network for
64 Zone System



Appendix 8.4
TRANSTEP Data and Planning Base for 74 Zoning System

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1. はじめに
2. ゾーニング
3. 道路網とリンクデータ
4. 公共輸送ラインデータ
5. 公共輸送旅客OD表

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- A 74-Zoning System for TRANSTEP Application
- B EPD Road Network for TRANSTEP Application

(1) はじめに

- LRTコリドールにおける提案された路線再編の効果および影響を詳細に分析するために、次のデータが74ゾーンシステムをベースとして作成された。
 - a) ゾーニング：LRTコリドールでのゾーニングの細分化（アペンディクス図A）
 - b) 道路ネットワーク：新ゾーニングに対応し、修正された。（アペンディクス図B）
 - c) 公共輸送ラインデータ：新ゾーニングに対応し、修正された。
 - d) 公共輸送旅客OD表：新ゾーニングに対応し、修正された。

(2) ゾーニング

- 特徴は以下の通りである。
 - a) 同じゾーンにLRT駅が2つ以上属さない。
 - b) LRTに平行する幹線道路についてもLRTコリドールと同様に各道路/道路区間上の交通量が推計できるようにゾーニングを行った。
 - c) LRTから離れた地域ではゾーニングの目はあらい。
 - d) マニラ首都圏外のゾーンは、域内ゾーンに統合する。
 - e) LRTコリドールでゾーンを細分化したため、ゾーン界はMMUTIP202ゾーンシステムに一致しない。
- LRT周辺のゾーン数は54、その他20である（アペンディクス図A参照）

(3) 道路網とリンクデータ

- 新ゾーンに対応し、MMUTIP道路網をベースとしてEDP道路網が作成された。（アペンディクス図B）
- 各道路リンクに対し、次の情報を作成した。： a)リンク長、 b)車線数 c)リンク速度 d)QV条件（速度-容量の関係）
- このEDP道路システムの特徴は次の通りである。
 - a) LRT周辺の幹線は、ノード・リンクを明瞭につけ、充分検討ができるようなネットワークを組んだ。LRT周辺の幹線道路の属するゾーン中心からの徒歩リンク

はLRTコリドーにも結びつけることとしたが、徒歩距離は実態に合わせて変えた。

b) 各LRT駅は平行する幹線道路につながるリンクを持つ。結果として、LRT周辺の道路網ははしご状となった。

c) LRTから離れた地域の道路網はできる限り単純化した。

(4) 公共輸送ラインデータ

● 現況ジープニィ・バス路線はTRANSTEP用に各々99と42のBDP路線に統合した。その方法は64ゾーンシステムの場合(本編参照)と同じであるが、新ゾーンに対応してその結果は異なる。

● 統合路線の特徴は次の通りである。

a) TaftとHarrisonのような平行するLRT沿の幹線道路を通る路線の明確な区別。

b) LRT沿の路線は路線長の短いものもゾーン間路線として対象とした。

c) LRTコリドー外では相当数のゾーン内路線を対象外とした。

(5) 公共輸送旅客OD表

● 第16章で詳述したように1980/1983年HISの結果に基づいてMMUTIP 202ゾーンベースでJUMSUT OD表が作成された。これは、朝ピーク74ゾーン公共輸送旅客OD表作成のために用いられている。

● 74ゾーンシステムのゾーン界はMMUTIPのゾーン界に一致しないため、74ゾーンOD表は202ゾーンOD表をもとに関連ゾーンの面積按分により近似して推定した。

(App.8.4 cont'd.)

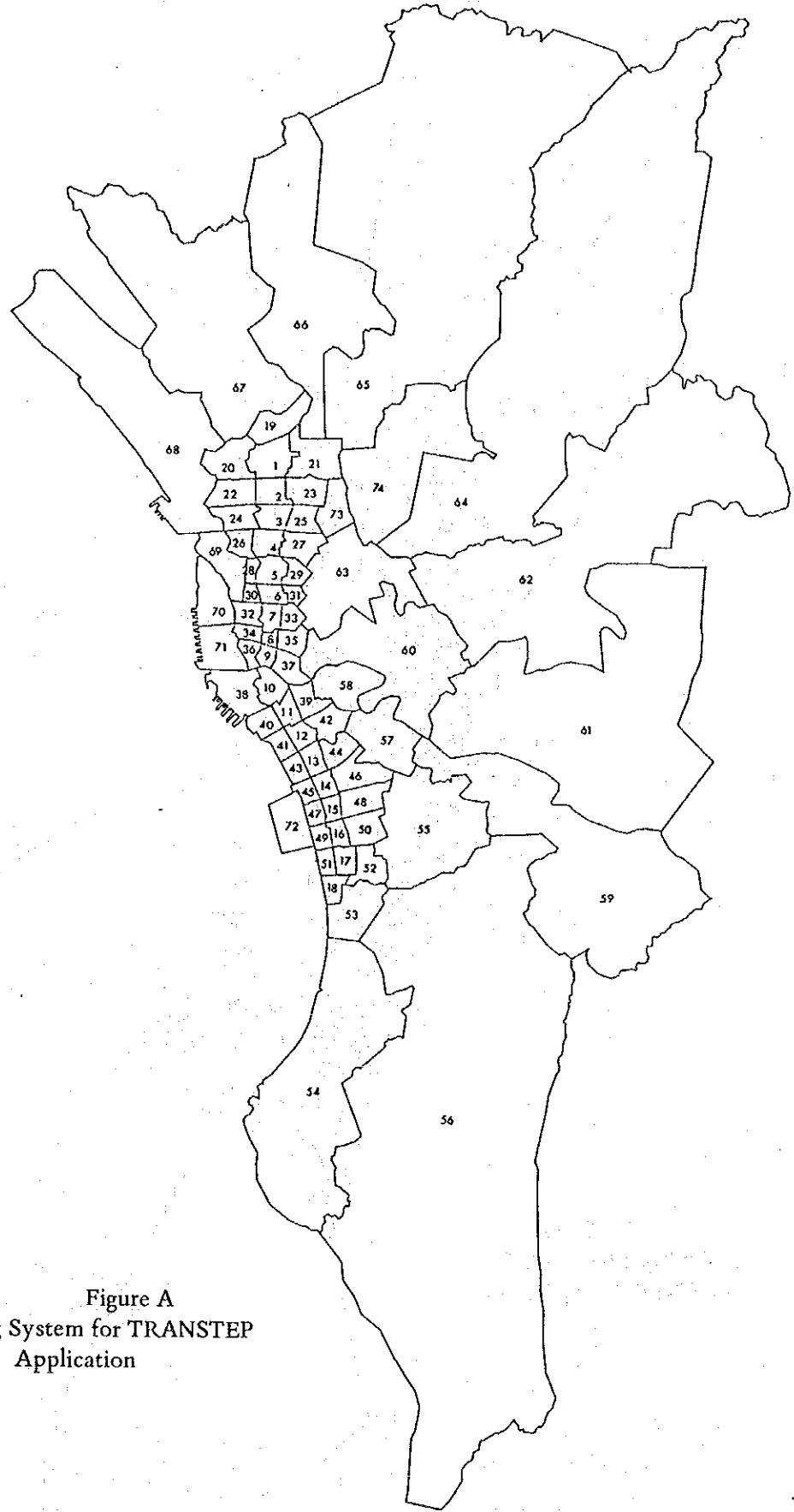


Figure A
74-Zoning System for TRANSTEP
Application

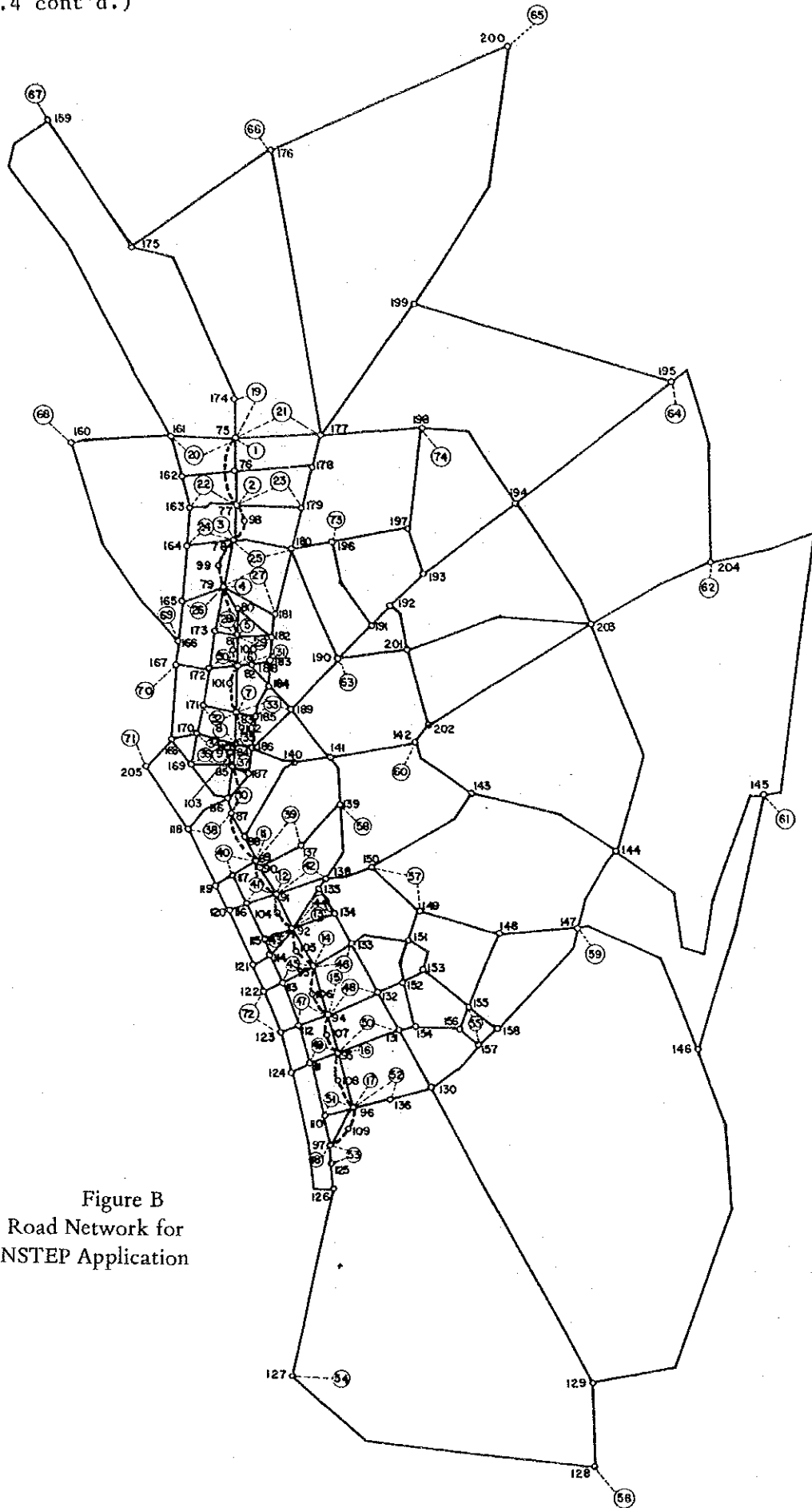


Figure B
EDP Road Network for
TRANSTEP Application

APPENDIX 8.5 EDP ROUTE LIST AND LINE CONFIGURATION

List of Table and Figures

- Table A EDP Route List Prepared for 64-Zoning System
Figure A EDP Line Configuration: Existing Jeepney Routes
Figure B EDP Line Configuration: Existing Bus Routes

Appendix 8.5
Table A
EDP Route List Prepared for 64 Zone System

EDP Route No.	1/ Mode	2/ Service Type	Route Name	One-way Frequency (Morning Peak)	EDP Route No.	Mode	Service Type	Route Name	One-way Frequency (Morning Peak)
1	Jeepney	Intra	Divisoria - Tondo	121	71	Jeepney	Intra	Cubao - Marikina	285
2	"	"	Balut - Divisoria	45	72	"	"	Baclaran - Valenzuela	22
3	"	"	Divisoria - Frisco	180	73	"	"	Philcoa - Vito Cruz	63
4	"	"	Divisoria - Quiapo	277	74	"	Inter	Norzagaray - Pier	35
5	"	"	Divisoria - Kalaw	301	75	"	Intra	A. Bonifacio - A. Mabini	155
6	"	"	Divisoria - Pasay Rotonda	47	76	"	"	Gasak - Monumento	118
7	"	"	Divisoria - Libertad	117	77	"	Inter	Bulacan - Monumento	296
8	"	"	Baclaran - Divisoria	163	78	"	Intra	Malinta - Novaliches	140
9	"	"	Divisoria - Punta	233	79	"	Inter	Bulacan - Monumento via Expressway	118
10	"	"	Cubao - Divisoria	259	80	"	Intra	Meralco - San Juan	39
11	"	"	Divisoria - Monumento	43	81	"	"	Frisco - Stop and Shop	70
12	"	"	Divisoria - Sangandaan	211	82	"	"	Cubao - Roces	149
13	"	"	Divisoria - Navotas	161	83	"	"	Del Monte - España	186
14	"	"	Divisoria - Malabon	47	84	"	"	España Rotonda - Kamias	41
15	"	"	Sta. Mesa - Tondo	100	85	"	"	Crossing - Nichols	80
16	"	"	Balut - Blumentritt	160	86	"	Inter	Antipolo - JRC	300
17	"	"	Blumentritt - Quiapo	239	87	"	Intra	Guadalupe - Pasig	107
18	"	"	Blumentritt - Sampaloc	33	88	"	"	Bagumbayan - Guadalupe	22
19	"	"	Blumentritt - Vito Cruz	71	89	"	"	Crossing - Guadalupe	184
20	"	"	Libertad - Retiro	181	90	"	Inter	Cubao - Montalban	81
21	"	"	Baclaran - Blumentritt	405	91	"	"	Antipolo - Cubao	102
22	"	"	Blumentritt - Novaliches	400	92	"	Intra	Alabang - Marikina	129
23	"	"	Binondo - Tayuman	61	93	"	Inter	Antipolo - Pasig	65
24	"	"	Pier - Retiro	95	94	"	Intra	Alabang - Pasay Rotonda	181
25	"	"	Quiapo - Roces	50	95	"	"	Alabang - Baclaran via Zapote	499
26	"	"	Muñoz - Pier	393	96	"	Inter	Baclaran - Cavite	162
27	"	"	Project 2 & 3 - Quiapo	239	97	"	"	Cavite - Zapote	141
28	"	"	Monumento - Pier	109	98	"	"	Alabang - Biñan	204
29	"	"	Malabon - Sta. Cruz	190	99	ORB	"	Antipolo - Quiapo	30
30	"	Inter	Bulacan - Sta. Cruz	107	100	"	Intra	Divisoria - Marikina	18
31	"	Intra	España Rotonda - Quiapo	367	101	"	Inter	Divisoria - Tanay	42
32	"	"	Fairview - Pier	332	102	"	Intra	Divisoria - Pateros via Nagtahan	10
33	"	"	JRC - Quiapo	151	103	"	"	Ayala - Quiapo	80
34	"	"	Pasig - Quiapo	162	104	"	"	Guadalupe - Quiapo	56
35	"	"	España Rotonda - Pier	52	105	"	"	Pandacan - Quiapo	34
36	"	"	Pier - Project 2 & 3	129	106	"	"	Fairview - Quiapo	5
37	"	"	Pier - Valenzuela	163	107	"	"	Baclaran - Project 2 & 3 via Quiapo	28
38	"	"	Leon Guinto - Sta. Mesa	297	108	"	"	Baclaran - Cubao via EDSA	65
39	"	Inter	Biñan - Pasay Rotonda	254	109	"	"	Ayala - Monumento via EDSA	62
40	"	Intra	Boni - Sta. Mesa	400	110	"	"	FTI - Valenzuela via Sta. Cruz	2
41	"	"	Marikina - Sta. Mesa	300	111	"	Inter	Ayala - Sapang Palay via Quiapo	9
42	"	"	Pasig - Sta. Mesa	50	112	"	Intra	Baclaran - Novaliches via EDSA	35
43	"	"	Buendia - Leon Guinto	312	113	"	"	Fairview - Zapote via Quiapo	3
44	"	"	Paco - P. Faura	196	114	"	"	Alabang - Novaliches via EDSA, Expressway	19
45	"	"	Pier - Sta. Ana	120	115	"	"	Baclaran - Fairview via EDSA	41
46	"	"	Cubao - Fairview	130	116	"	Inter	Ayala - Sapang Palay via EDSA, Expressway	10
47	"	"	P. Faura - Valenzuela	28	117	"	Intra	Baclaran - Sangandaan via EDSA	225
48	"	"	Guadalupe - Leon Guinto	308	118	"	"	Alabang - Fairview via EDSA	28
49	"	"	Frisco - Vito Cruz	44	119	"	"	Alabang - Valenzuela via EDSA	90
50	"	"	Muñoz - Vito Cruz	235	120	"	"	Alabang - Novaliches via EDSA	14
51	"	"	Project 2 & 3 - Vito Cruz	125	121	PRB	Inter	Bulacan - Divisoria	19
52	"	"	Mantrade - PRC	113	122	"	"	Biñan - Lawton	23
53	"	"	Guadalupe - Washington	149	123	"	"	Cavite - Lawton	14
54	"	"	Libertad - Zobel Roxas	62	124	LMB	Intra	Ayala - Cubao - Quiapo	7
55	"	"	Guadalupe - Libertad	125	125	"	"	Ayala - Monumento via EDSA	7
56	"	"	Libertad - Mantrade	425	126	LBB	"	FTI - Marikina via EDSA	1
57	"	"	Libertad - Pasay Rotonda	159	127	"	"	Ayala - Sangandaan via EDSA	11
58	"	"	Kalentong - Libertad	102	128	"	"	Binondo - Ayala - Cubao	22
59	"	"	España Rotonda - Libertad	39	129	"	"	Cubao - Baclaran - Quiapo - Philcoa	1
60	"	"	Libertad - Project 2 & 3	84	130	"	"	Ayala - Cubao - Quiapo - Ayala (loop)	5
61	"	"	Libertad - Monumento	79	131	"	"	Domestic - Philtrade via Ayala	2
62	"	"	Libertad - Valenzuela	61	132	"	Inter	Antipolo - Ayala - Jones	5
63	"	"	Baclaran - España Rotonda	155	133	MNB	"	Bulacan - Divisoria via Expressway	6
64	"	"	Baclaran - Project 2 & 3	70	134	"	"	Bulacan - Sta. Cruz via Expressway	27
65	"	"	Baclaran - Nichols	134	135	"	"	San Jose - Sta. Cruz via Expressway	43
66	"	"	Baclaran - Frisco	26	136	"	"	Biñan - Lawton - Sangandaan	20
67	"	"	Commonwealth - Quirino Hwy.	54	137	"	"	Antipolo - Cubao - Fairview	4
68	"	"	Balintawak - Quezon Ave	89	138	"	"	Baclaran - Cavite	34
69	"	"	Baclaran - Pag-asá	14	139	"	"	Antipolo - CBD - Cavite	31
70	"	"	Baclaran - Monumento	73					

1/ EDP route numbers correspond to those shown in Figures A and B of this Appendix

2/ Abbreviations are as follows:

JPY : Jeepney PRB : Provincial Bus
ORB : Ordinary Bus LMB : Limited Bus
LBB : Love Bus MNB : Mini-bus

A8-8

3/ Intra : Intra-city service, Inter: Inter-city service

Figure A
 EDP Line Configuration: Existing
 Jeepney Routes

(App.8.5 cont'd.)

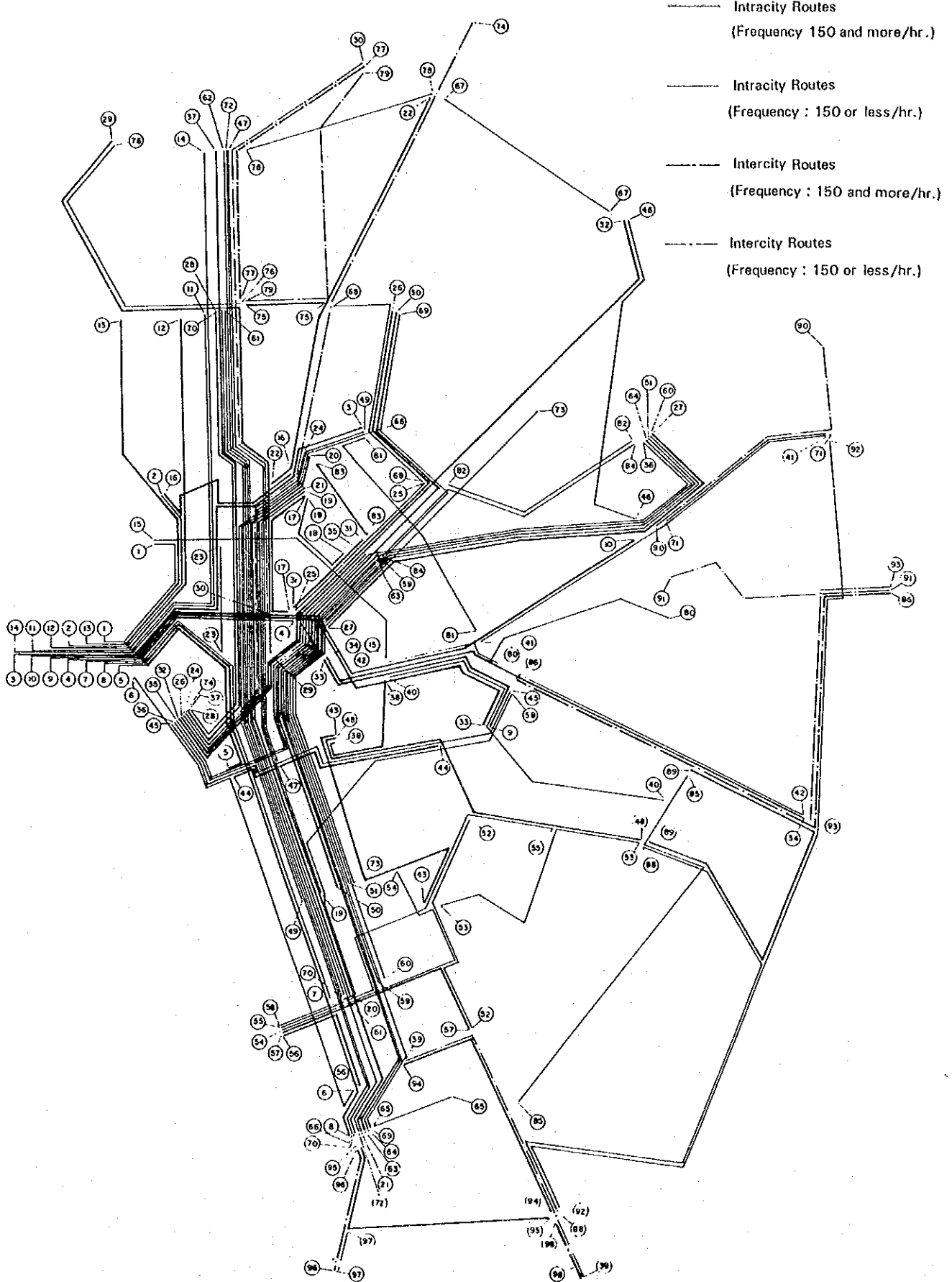
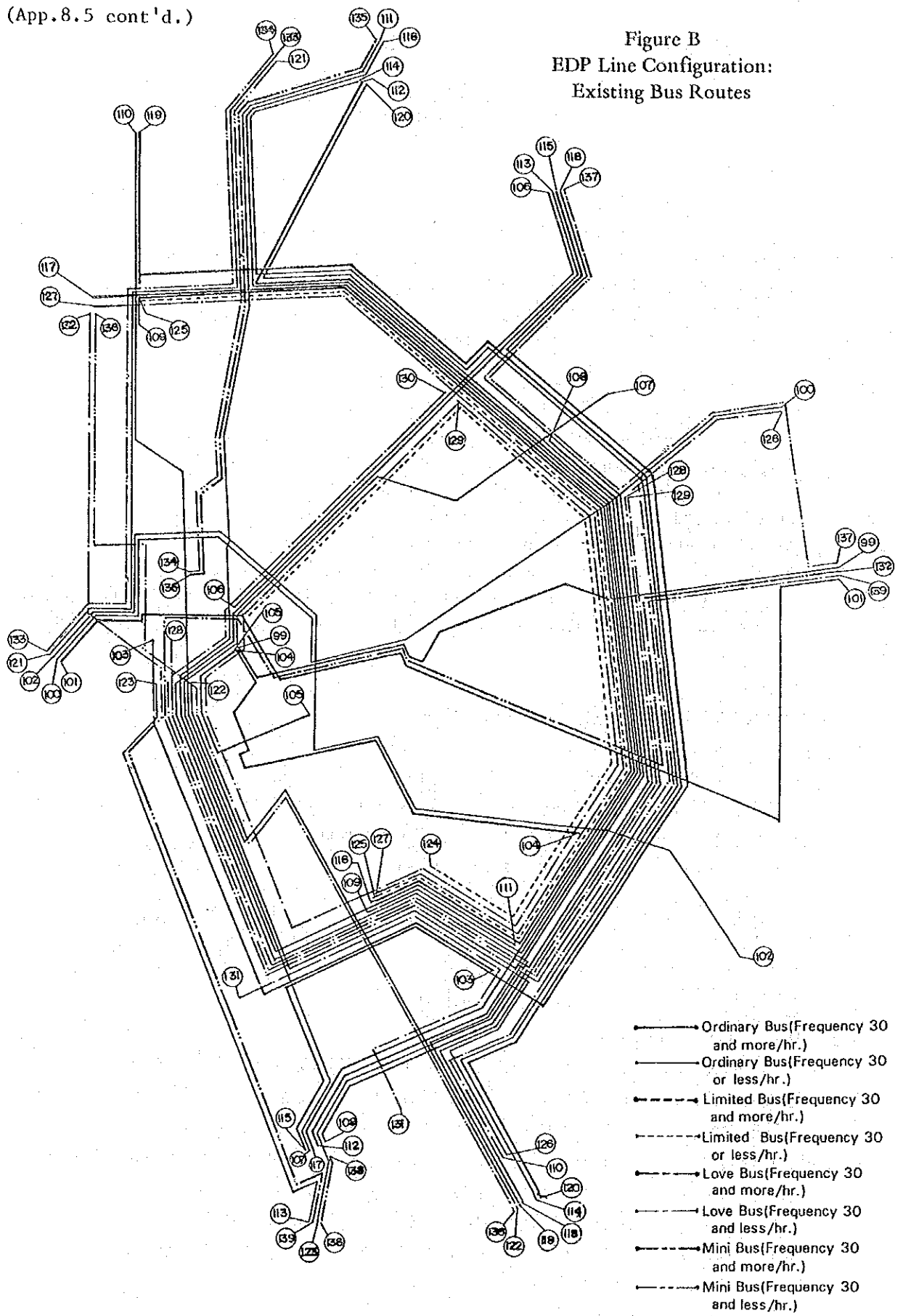


Figure B
BDP Line Configuration:
Existing Bus Routes



Appendix 8.6 Calibration of TRANSTEP

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1. はじめに

- TRANSTEP 適用に先立って十分な検討の必要な点がいくつかある。モデルの適用に際しては通常、結果をそのまま読みとるのではなく、前提条件・パラメータの検討により十分な解釈を必要とする。とりわけそのモデル自体の持つ限界を知ることが重要である。TRANSTEP 適用に際しては、a)容量の限界、b)一連の相互に関連するパラメータ(Mode Coefficients)の決定、という2つの問題がある。
- TRANSTEP の容量は路線(ライン)数約150(JUMSUT により100から拡張された)である。したがって、この限界内にライン数を減少しなければならず、このために配分結果にどんな影響がでてくるかを予め十分に予測しておかなければならない。JUMSUT では、こうした作業を軽減するために上記のようにライン数の容量を50%増加させた。

2. Mode Coefficient(モード係数)の決定

- モード係数の決定はきわめて複雑である。TRANSTEP では、旅客は所与のODペアで総コスト(Generalized Cost と呼ぶ)が最低となるようなバスを選択するということが仮定されている。コストは次の項目からなる。

- 1) WALK : トリップ発生地点から公共輸送ノードまでの徒歩時間で時速5km/hとして計算される。
- 2) WAIT : 公共輸送車両待ち時間で運行間隔の1/2とされる。
- 3) LOAD : 乗降時間。一人当たり0.1分
- 4) FARE : 支払料金
- 5) TRAVEL : 乗車時間
- 6) TRANSFER : 乗換のための待ち時間。運行間隔の1/2とされる。
- 7) DISCOMFORT : 交通量/容量比が80%以上となった場合に働く容量制限係数。

- モード係数は上記の各コスト項目における時間価値がそれぞれ異なるという意味から決定される係数である。(例えば、晴の日に外で1分待つのとエアコン付のラフバス内で1分過ごすのでは旅客にとっての評価値が異なる。)「FARE」なるモード係数は時間評価値を意味し、これによって時間を貨幣タームに換算している。
- しかし、一組のモード係数を決定するに際してその評価をするのはきわめて困難である。したがってアペンディクス表Aに示すような様々なケースが検討された。
- アペンディクス表BはMMUTIP調査およびLRTマスタープランで用いられたバス・ジープニィ運行の総コストのシェアを示したものである。時間価値0.6ペソ/時(MMUTIPの値)の仮定では、料金が唯一最大の説明変数となるが、3ペソ/時(LRTマスタープランでの値)では料金の説明力は45%程度となり、旅行時間も同様に重要となる。また他の変数は左程重要ではない。
- 上記のケースでは徒歩・待合・乗換時間が過小評価されているので、改良が必要と考えられる。これらを理論的に適切に決めることは非常に難しいので、問題はマニラの実状にあった現実的かつ実際的な係数設定をするかにある。
- 時間価値を幾らとみるかも常に問題となる。様々な議論を検討した結果、現実的な値は1.0~2.0ペソ/時間程度にすることで関係者の合意を得た。
- 上記より、当調査ではアペンディクス表Cに示す2組のモード係数を当初採用した。

3. 6.4ゾーンシステムでの検証

- 適用に先立って、現況ベースでの検証が必要である。多くのファクターが関係するなかで特に下記のファクターの影響が大きい。
 - 1) モード別ライン数のバランス：例えばバスとジープニィの間の分担をシミュレートする時に現実のバランスをこえてどちらかに偏っていたりすると他のインプット、係数指定が如何にうまくいっていても結果は歪む可能性が大きい。
 - 2) リンク速度と路線標定速度：リンク速度とは実際の道路上の歩行速度で路線標定速度とは通常異なる。モデルでは何れかの低い方の速度を採用する。
 - 3) 時間価値：時間価値が高ければ、速度の速いモードが多くの乗客を引きつける。この調査では1.0ペソ/時間、1.7ペソ/時間、3.0ペソ/時間の3つの時間価値が検討された。
 - 4) アクセシビリティ：徒歩・待合・乗換時間を含み、これらの係数は相当高い値でセットされない限り結果にきいてこない。
 - 5) 容量制限：「Discomfort Cost (不快コスト)」と呼ばれる。ラインごとの乗客数を平均化するのに重要であるが、PTPATHによりいくつかのバスが選ばれた後にはじめて効果を持つ。
- 3)、4)、5) に関しては、検証は、あらかじめ決定されたモード係数を修正することによってなされる。モード係数を決定するのは困難であるので、モデルの検証は上記の要因を総合的に考慮することによりなされる。
- 検証の際の基準は次の通りである。
 - 乗客数(人、人・km、人・時間)の点からみて機関分担が現況とおおむね一致する。
 - モード別の平均トリップ長が現況とかけ離れていない。
 - モード別乗車効率が現況とかけ離れていない。

- 路線別の乗客数が現況と比較的等しい。
 - TRANSTEPモデルを検証するために、上記の点を考慮しつつ、多くのケースが実行された。その結果は、アペンディクス表Dに示す。
4. 7.4 ゾーンシステムでの検証
- 前節で述べたように、TRANSTEP適用に先立ち、Mode Coefficient（モード係数）を決定する必要がある。
時間価値を1.70ペソ/時間とした他は前節とほとんど同様である。（アペンディクス表E参照）
 - この結果、コスト項目の比重はアペンディクス表Fに示すように様々に変化した。
 - TRANSTEPは実地調査で得られた実測値と比較、検証された。その要約をアペンディクス表G、Hに示す。

Table A
Alternative Sets of Mode Coefficients

a. MMUTIP Coefficient:

Mode	Walk	Wait	Load	Fare ^{1/}	Travel	Transfer	Discomfort
Love Bus	: 1.67	1.0	1.0	1.0	1.0	1.0	2.0
Standard Bus	: 1.67	1.0	1.0	1.0	1.0	1.0	2.0
Jeepney	: 1.67	1.0	1.0	1.0	1.0	1.0	2.0
LRT	: 1.67	1.0	1.0	1.0	1.0	1.0	2.0

b. LRT Master Plan Coefficient:

Mode	Walk	Wait	Load	Fare ^{2/}	Travel	Transfer	Discomfort
Love Bus	: 1.0	1.5	0.6	0.2	0.5	2.0	0.2
Standard Bus	: 1.0	1.5	0.4	0.2	1.0	2.0	0.9
Jeepney	: 1.0	1.5	0.4	0.2	1.0	1.8	1.1
LRT	: 1.0	1.5	0.3	0.2	1.0	1.5	0.9

c. Modified Coefficient (1): used LRT Line No. 1 Study

Mode	Walk	Wait	Load	Fare ^{3/}	Travel	Transfer	Discomfort
Love Bus	: 1.67	1.0	0.6	0.35	0.5	1.2	2.0
Standard Bus	: 1.67	1.0	0.4	0.35	1.0	1.2	2.0
Jeepney	: 1.67	1.0	0.4	0.35	1.0	1.1	2.0
LRT	: 1.67	1.0	0.3	0.35	1.0	1.0	1.8

d. Modified Coefficient (2): used in LRT Line No. 1 Study

Mode	Walk	Wait	Load	Fare ^{4/}	Travel	Transfer	Discomfort
Love Bus	: 1.67	1.0	0.6	0.6	0.5	1.2	2.0
Standard Bus	: 1.67	1.0	0.4	0.6	1.0	1.2	2.0
Jeepney	: 1.67	1.0	0.4	0.6	1.0	1.1	2.0
LRT	: 1.67	1.0	0.3	0.6	1.0	1.5	1.8

Note: Mode coefficient values for fare correspond as follows:

1/ 1.0 = P0.6/hr. 3/ 0.35 = P1.7/hr.

2/ 0.2 = P3.0/hr. 4/ 0.6 = P1.0/hr.

Table B
Relative Importance of Various Cost
Items in Total Generalized Cost (%)

Mode	Coefficient	Walk	Wait	Load	Fare	Travel	Transfer	Total
MMUTIP		3.5	0.6	2.5	77.3	15.8	0.3	100.0
LRT Master Plan		5.8	1.6	2.4	45.0	43.7	1.5	100.0

Table C
Initial Mode Coefficients Applied in JUMSUT

Mode	Walk	Wait	Load	Fare ^{2/}	Travel	Transfer	Discomfort
Love Bus	2.4	1.2	0.7	0.6	1.2	1.8	3.0
Limited Bus	2.4	1.2	0.9	0.6	1.2	1.8	3.0
Standard Bus	1.5	1.0	0.5	0.6	1.2	1.2	1.5
Mini-bus	1.5	1.0	0.5	0.6	1.2	1.3	5.0
Jeepney	1.0	1.0	0.4	0.6	1.0	1.0	2.0
LRT	2.0	10.0 ^{1/}	0.3	0.6	1.0	10.0 ^{1/}	2.0

1/ mode coefficient values of 10 (for wait and transfer) were set so that the access cost to LRT will share more or less 10% of the total generalized cost of LRT passengers.

(App.8.6 cont'd.)

Table D
Major Characteristics of the Calibrated Case
(Do-Nothing Case Without LRT)

Mode	Vehicle /Hour ^{1/}		Passenger /Hour ^{1/}			Average Trip Length ^{2/} (kms)	Average Vol./Cap. Ratio.
	kms	Hours	Number ^{3/}	Kms.	Hours		
Jeepney	301,130	16,342	715,019 (73.9)	4,230,707 (63.1)	218,463 (64.8)	5.9	0.94
Ordinary Bus	45,091	2,023	210,149 (21.7)	1,913,765 (28.5)	89,170 (26.4)	9.1	0.71
Limited Bus	591	27	2,014 (0.2)	35,169 (0.5)	1,550 (0.5)	17.5	0.99
Love Bus	2,070	103	4,244 (0.4)	57,913 (0.9)	2,980 (0.9)	13.6	0.47
Mini Bus	10,482	546	36,101 (3.7)	470,409 (7.0)	24,987 (7.4)	13.0	1.28
Total	-	-	967,527 (100.0%)	6,707,963 (100.0%)	337,150 (100.0%)	6.9	0.87

^{1/} morning peak hour

^{2/} long trip length of each mode compared to those identified in MMUTIP is due to that JUMSUT OD table includes external trips, while MMUTIP OD table does not.

^{3/} this calibration was made on the JUMSUT initial OD table before the HIS results were finalized.

Table E
New Mode Coefficients Applied in JUMSUT

	WALK	WAIT	LOAD	FARE	TRAVEL	TRANSFER	DISCOMFORT
Jeepney	1.0	1.0	0.4	0.35	1.0	1.0	2.0
Ordinary Bus	1.5	1.0	0.5	0.35	1.2	1.2	1.5
Premium Bus	2.4	1.2	0.9	0.35	1.2	1.8	3.0
Mini-Bus	1.5	1.0	0.5	0.35	1.2	1.3	5.0
LRT	2.0	1.0	0.3	0.35	1.0	2.0	2.0

Table F
Relative Importance of Various Cost Items
in Total Generalized Cost (%)

Mode Coefficient	WALK	WAIT	LOAD	FARE	TRAVEL	TRANSFER	TOTAL
MMUTIP	3.5	0.6	2.5	77.3	15.8	0.3	100.0
LRT Masterplan	5.8	1.6	2.4	45.0	43.7	1.5	100.0
JUMSUT	7.3	0.6	1.2	57.1	33.7	0.2	100.0

(App.8.6 cont'd.)

Table G
Comparison of TRANSTEP Assignment Results With Actual Survey Results
(Jeepney)

Route Type	Corridor Used Other than LRT Corridor	Route Length (kms.)		Vehicle - Kms.		Vehicle - Hrs.		No. of Passengers		Pass.-Kms.		Pass.-Hrs.		Load Factor		Average Trip Length (kms.)	
		TRANSTEP	Surveyed	TRANSTEP	Surveyed	TRANSTEP	Surveyed	TRANSTEP	Surveyed	TRANSTEP	Surveyed	TRANSTEP	Surveyed	TRANSTEP	Surveyed	TRANSTEP	Surveyed
I		8.9	10.2	17288.4	18317	1106.6	1640	46210	34091	190305	166487	11651	17645	0.69	0.57	4.1	4.9
II	McArthur	17.4	12.0	4368.0	4636	243.7	312	7798	7239	68940	42080	3775	3193	0.97	0.57	8.8	5.8
	Harrison	10.9	11.1	926.8	990	59.6	99	1208	2503	7306	12025	452	1027	0.49	0.76	6.0	4.8
	A. Bonifacio	10.9	11.1	2549.4	2274	158.8	195	4728	5105	27136	21532	1669	1717	0.67	0.59	5.7	4.2
	J. A. Santos	7.1	7.9	610.6	618	38.4	41	2008	1196	9651	4822	610	330	0.99	0.49	4.8	4.0
	Pier	11.2	11.4	1747.2	2195	106.1	190	3512	3354	16560	18745	1010	1797	0.59	0.53	4.7	5.6
	EDSA (N)	11.2	11.8	9004.8	6827	519.9	550	28244	12723	96538	55061	5520	4636	0.67	0.50	3.4	4.3
	España	14.7	15.8	14372.0	12738	849.3	1025	28147	24187	187087	117139	10999	10666	0.81	0.57	6.6	4.8
	Jones Bridge	9.1	10.6	3794.2	3523	263.9	333	9424	6972	38687	35118	2465	2861	0.64	0.62	4.1	5.0
	Vito Cruz	2.5	3.7	1560.0	2206	94.6	188	1647	5764	1904	10856	107	909	0.08	0.31	1.2	1.9
	Sub-total	95.0	95.4	38933.0	36007	2335.3	2933	86716	69053	453809	317378	26607	27136	0.73	0.55	5.2	4.6
III	McArthur	17.9	18.4	9665.4	8676	547.1	696	17810	10917	129812	91934	7222	7040	0.84	0.16	7.3	8.4
	A. Bonifacio	10.2	10.8	3071.2	3328	200.8	283	5514	5955	19543	27214	1300	2331	0.40	0.51	3.5	4.5
	España	13.3	12.5	46012.0	40403	2671.0	2874	57238	68959	360986	367949	19467	25189	0.49	0.57	6.3	5.3
	Jones Bridge	8.2	8.4	967.6	810	73.6	74	609	1600	1904	8270	153	637	0.12	0.64	3.1	5.2
	Sub-total	49.6	50.1	59716.2	53217	3492.5	3927	81171	87431	512245	495367	28142	35197	0.54	0.58	6.3	5.7
IV		5.4	8.7	74251.6	86992	3774	6237	110672	136700	697477	664690	34441	76472	0.59	0.48	6.3	4.9
V		6.3	5.6	17498.2	13518	1158.1	1252	41900	39133	121914	102321	7738	9366	0.44	0.47	2.9	2.6
VI		8.3	6.6	59927.4	48677	2986.6	3526	139067	118769	965289	418319	46664	28972	1.01	0.54	6.9	3.5
TOTAL		174.5	176.5	267614.8	256728	14853.1	19615	505736	485177	2941039	2164562	155243	194788	0.69	0.53	5.8	4.5

(App.8.6 cont'd.)

Table H
Comparison of TRANSTEP Assignment Results with Actual Survey Results (Bus)

Corridor Used Route Type	Route Length (Kms.)		Vehicle - Kms.		Vehicle - Hrs.		No. of Passengers		Pass.-Kms.		Pass.-Hrs.		Load Factor		Average Trip Length (Kms.)			
	TRANSTEP	Surveyed	TRANSTEP	Surveyed	TRANSTEP	Surveyed	TRANSTEP	Surveyed	TRANSTEP	Surveyed	TRANSTEP	Surveyed	TRANSTEP	Surveyed	TRANSTEP	Surveyed		
II	España	20.4	19.3	1428.0	1624	80.1	120	5598	5319	40525	42166	2288	2743	0.48	0.44	7.2	7.7	
	Quirino Ave.	15.6	34.0	405.6	1071	21.4	51	1792	2264	25717	47481	1322	2409	0.98	0.69	14.2	30.0	
	S.S. Hi-way	44.4	68.6	1332.0	1990	57.0	83	8661	2439	153521	40498	6103	1730	2.12	0.37	17.7	16.6	
	Roxas Blvd.	10.1	12.0	20.2	48	1.1	3	0	188	0	517	0	29	0	0.20	0	2.8	
	Ruendia	20.2	12.3	727.2	995	37.2	80	758	4263	7813	22164	430	1270	0.20	0.41	10.3	5.2	
	A. Bonifacio	17.9	47.7	2506.0	5558	131.6	235	6037	7399	45300	135166	2372	5360	0.38	0.52	7.5	18.5	
	Sub-Total	128.6	193.9	6419.0	11286	328.4	572	22846	21872	282576	287992	12515	13541	0.80	0.49	11.9	13.2	
III	Dimasatang	27.3	52.1	546.0	656	30.2	26	3158	1339	28134	13262	1539	452	0.87	0.34	8.9	9.9	
	P. Gil	0.8	9.6	704.0	778	41.2	66	10207	8643	43572	40204	2660	3056	1.05	0.88	4.3	4.7	
	Ruendia	36.0	30.3	1845.0	1873	110.6	142	11704	5920	64161	73326	3813	4593	0.60	0.67	5.5	12.4	
	U.N. Ave.	5.0	5.4	440.0	428	27.4	176	1570	4780	13130	13255	785	7042	0.51	0.52	2.9	2.8	
	McArthur	22.8	23.7	45.6	56	2.6	4	590	344	5258	1919	283	106	1.95	0.58	8.9	5.6	
	N. Diversion Rd.	28.0	89.8	523.6	1949	29.7	55	4448	3193	31628	88063	1733	2013	0.97	0.73	7.1	27.6	
	España	36.6	18.1	213.6	507	10.6	44	385	1277	5377	11011	289	617	0.47	0.40	14.0	8.6	
	Quirino Ave.	18.4	24.3	1030.4	1729	60.9	120	4023	3416	39496	42941	2066	2739	0.82	0.53	9.8	12.6	
	Jones Pr.	12.0	11.6	552.0	363	35.5	31	12023	1456	34449	10435	2256	908	1.33	0.61	2.9	7.2	
	Sub-Total	193.9	264.9	5900.2	8339	348.7	664	51118	30368	265205	294416	15424	21536	0.61	0.36	5.2	9.7	
IV		37.5	66.2	2297.0	4038	127.2	195	5640	10172	40488	72207	2365	5043	0.32	0.35	7.2	7.1	
V		68.4	101.7	3115.2	4418	181.6	282	15807	14697	72813	133555	4135	7561	0.44	0.57	4.6	9.1	
VI		196.6	179.4	8197.8	8040	332.0	522	14618	21798	241711	262039	9709	16716	0.50	0.56	16.5	12.0	
VII		239.0	233.5	2435.4	21868	1024.5	1170	57837	91208	467991	894708	19462	44118	0.33	0.69	8.3	9.8	
	TOTAL	884.0	1039.6	50283.2	57989	2342.4	3385	167866	190115	1370784	1944917	63610	108515	0.45	0.50	8.2	10.2	

**APPENDIX 8.7 LOADING/UNLOADING PATTERN OF LRT
PASSENGERS FOR REROUTING PLANS
A, B, C, D, AND E**

List of Table and Figures

- Table A Summary of Assessment of Alternative Rerouting
 Plans (LRT Fare ₱1.5 flat, Time Value ₱1.0/hr)
- Figure A Loading/Unloading Pattern of LRT Passengers
 (Rerouting Plan A)
- Figure B Loading/Unloading Pattern of LRT Passengers
 (Rerouting Plan B)
- Figure C Loading/Unloading Pattern of LRT Passengers
 (Rerouting Plan C)
- Figure D Loading/Unloading Pattern of LRT Passengers
 (Rerouting Plan D)
- Figure E Loading/Unloading Pattern of LRT Passengers
 (Rerouting Plan E)

(App.8.7 cont'd.)

Table A
Summary of Assessment of Alternative Rerouting
Plans (LRT Fare ₱1.5 flat, Time Value ₱1.0/hr)^{1/}

Item	Base Case (W/out Bus/Jpy. Rerouting)		Alternative Bus/Jeepney Rerouting Plans				
	W/out LRT	With LRT	PLAN A	PLAN B	PLAN C	PLAN D	PLAN E
1. LRT Traffic							
1) No. of Pass/hr.	-	23,242	23,991	37,291	32,789	31,986	28,343
2) Ave. Trip Length (kms.)	-	10.0	10.0	8.5	9.0	9.0	9.4
3) Ave. Load Factor (%)	-	43.0	44.0	58.0	54.0	53.0	49.0
4) Max. Volume Capacity	-	0.83	0.84	1.13	1.08	1.0	0.88
2. Estimated LRT FARE Revenue (Pmillion/year)							
	-	106.8	108.0	167.7	147.6	144.0	127.8
3. LRT Impact on BUS/JEEPNEY							
1) No. of Pass. (000)/Hr.							
JPY.	715.0	705.0	703.9	682.7	681.5	693.3	696.6
BUS	<u>252.5</u>	<u>247.8</u>	<u>249.1</u>	<u>265.7</u>	<u>265.9</u>	<u>228.5</u>	<u>233.5</u>
TOTAL	967.5	952.8	953.0	948.4	947.4	921.8	930.1
2) Pass. kms. (000)/kms.							
JPY.	4,230.7	4,123.1	4,107.7	3,892.9	3,884.7	4,141.8	4,133.8
BUS	<u>2,447.7</u>	<u>2,243.3</u>	<u>2,352.0</u>	<u>2,492.2</u>	<u>2,527.0</u>	<u>2,217.4</u>	<u>2,247.3</u>
TOTAL	6,678.4	6,366.4	6,459.7	6,385.1	6,411.7	6,359.2	6,381.1
4. LRT Economic Impact							
1) Total Fare Paid(P000/hr)	1,038.3	1,041.8	1,042.2	1,057.3	1,056.0	1,029.4	1,028.0
2) Total General- ized Cost ex- cluding Fare (P000/hr.)	438.4	432.8	432.7	438.6	437.3	423.6	425.2

^{1/} Based on the provisional 1980 HIS OD table.

Figure A
Loading/Unloading Pattern of LRT Passengers
(Rerouting Plan A)

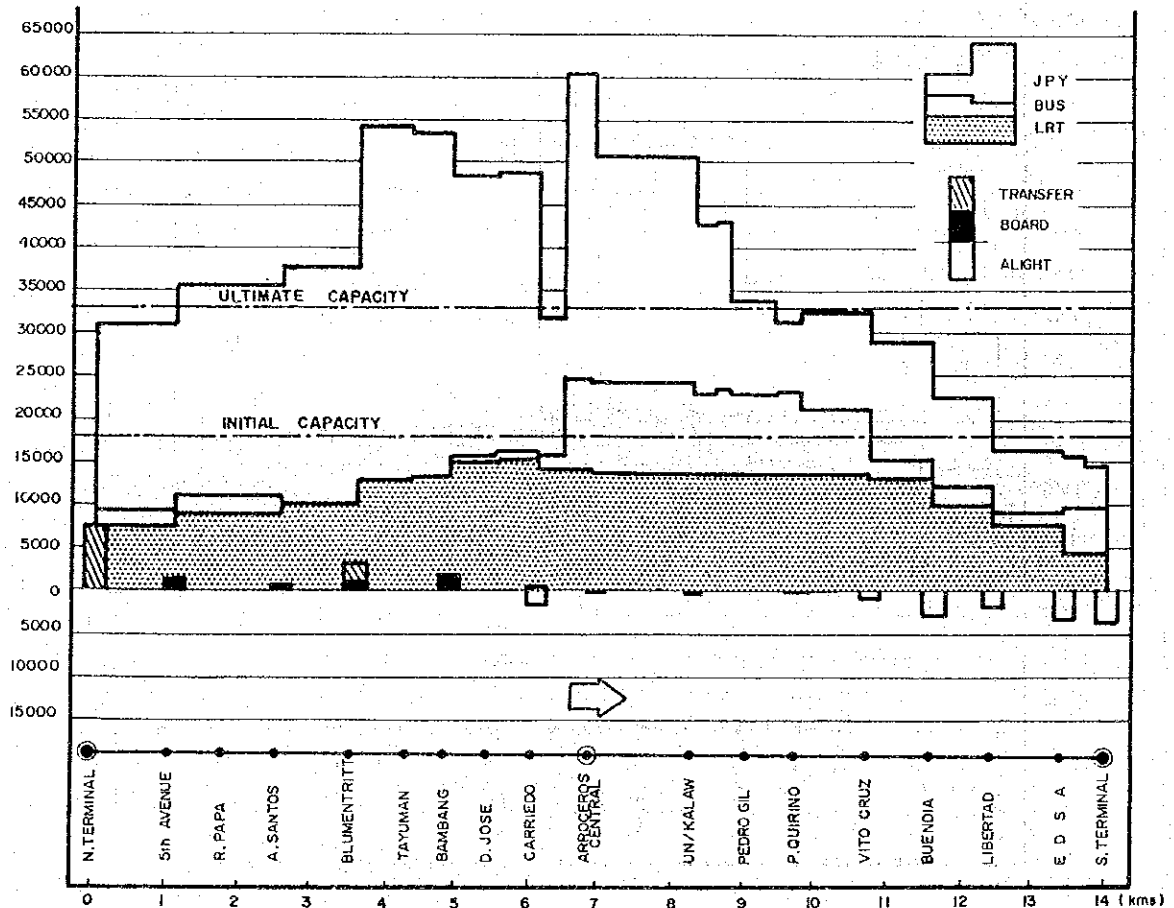
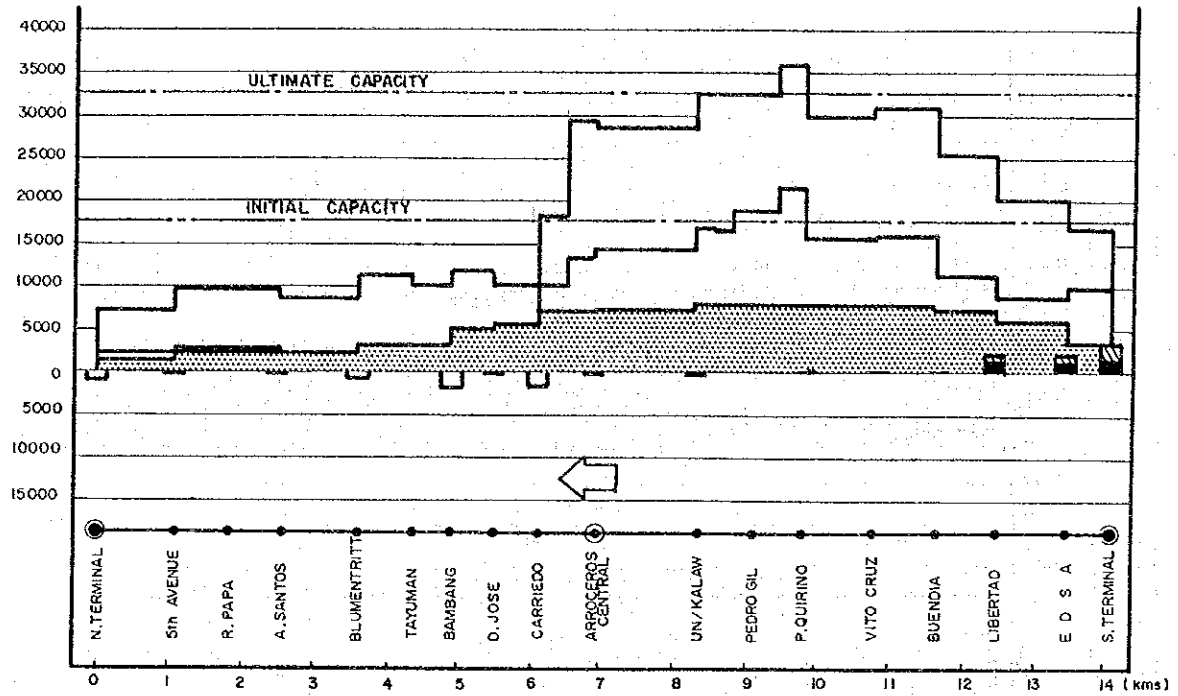


Figure B
Loading/Unloading Pattern of LRT Passengers
(Rerouting Plan B)

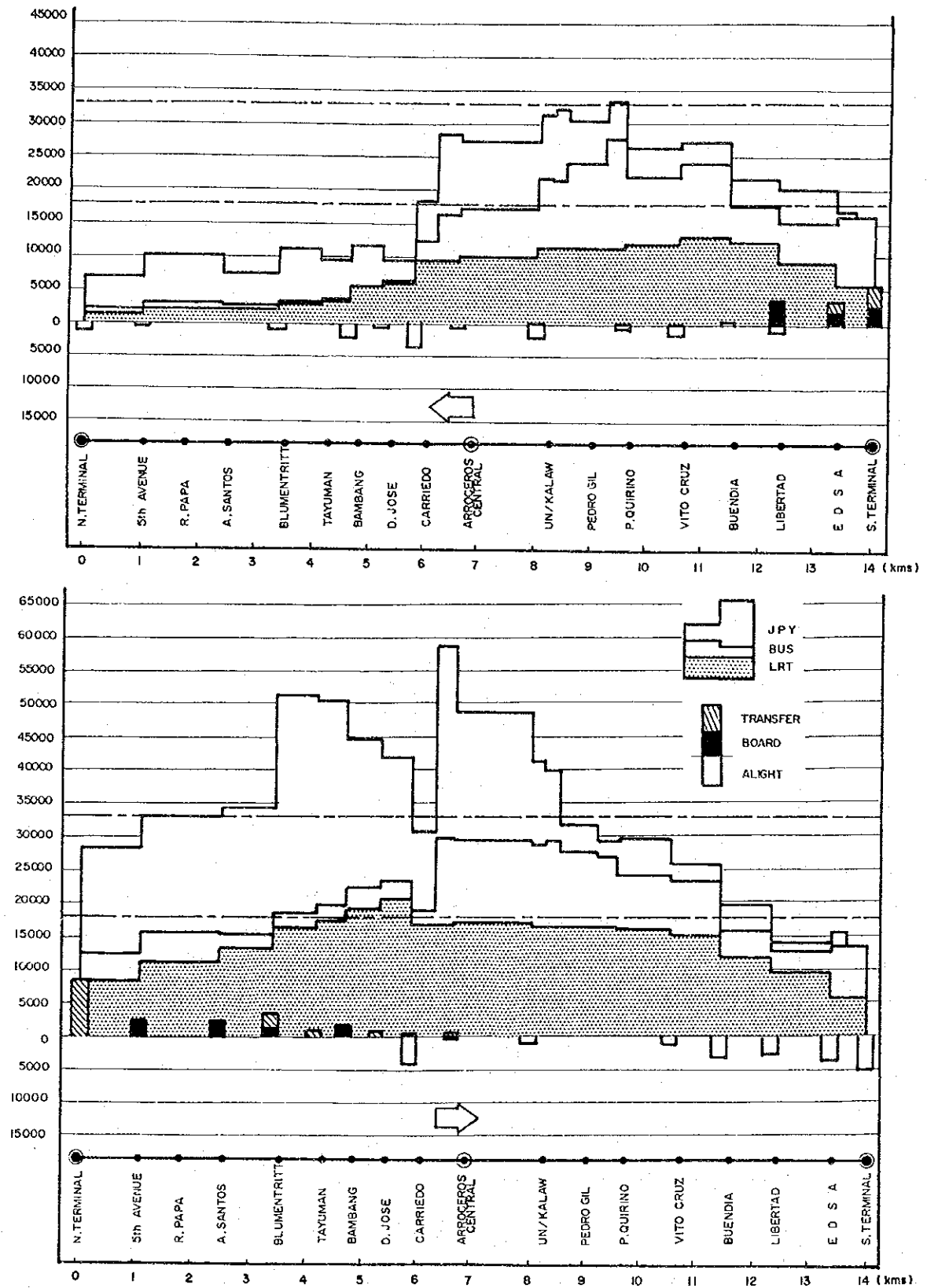


Figure C
Loading/Unloading Pattern of LRT Passengers
(Rerouting Plan C)

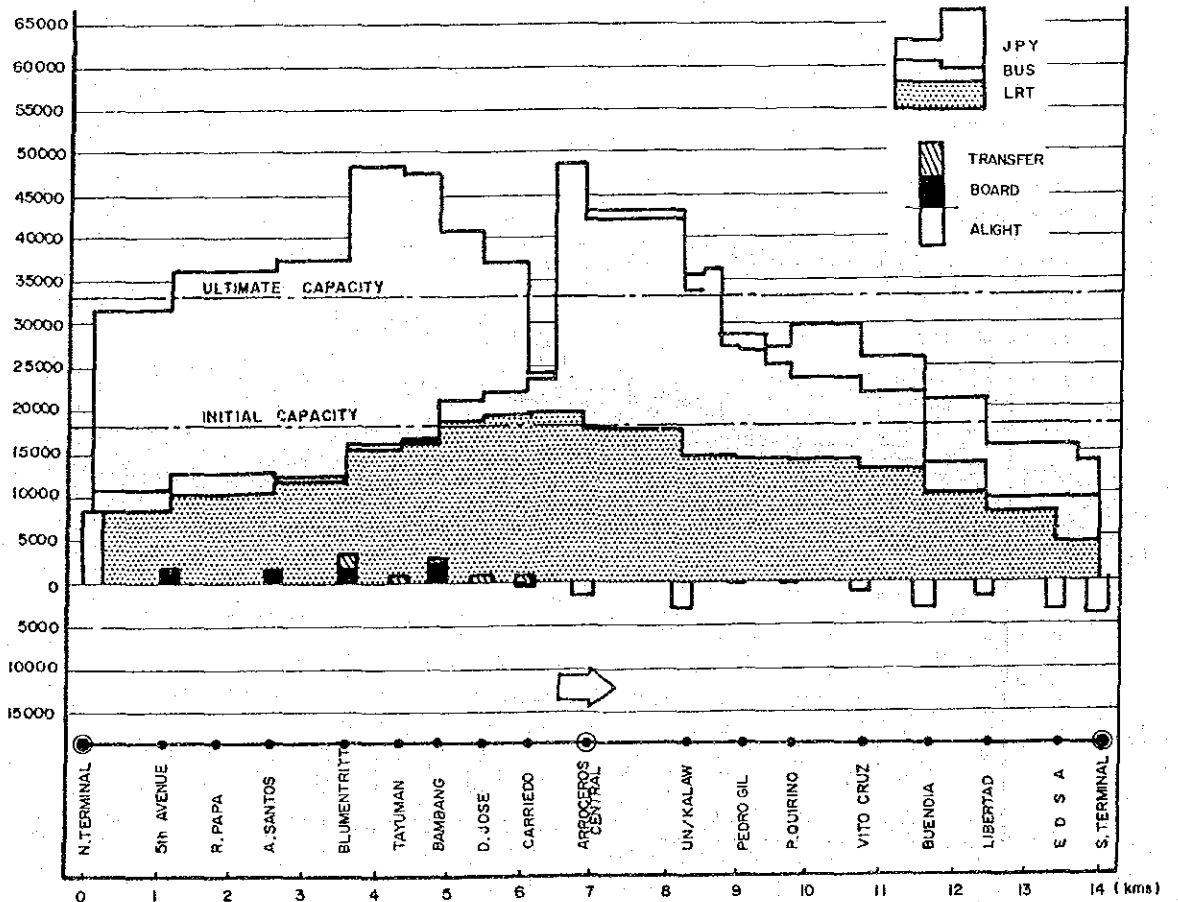
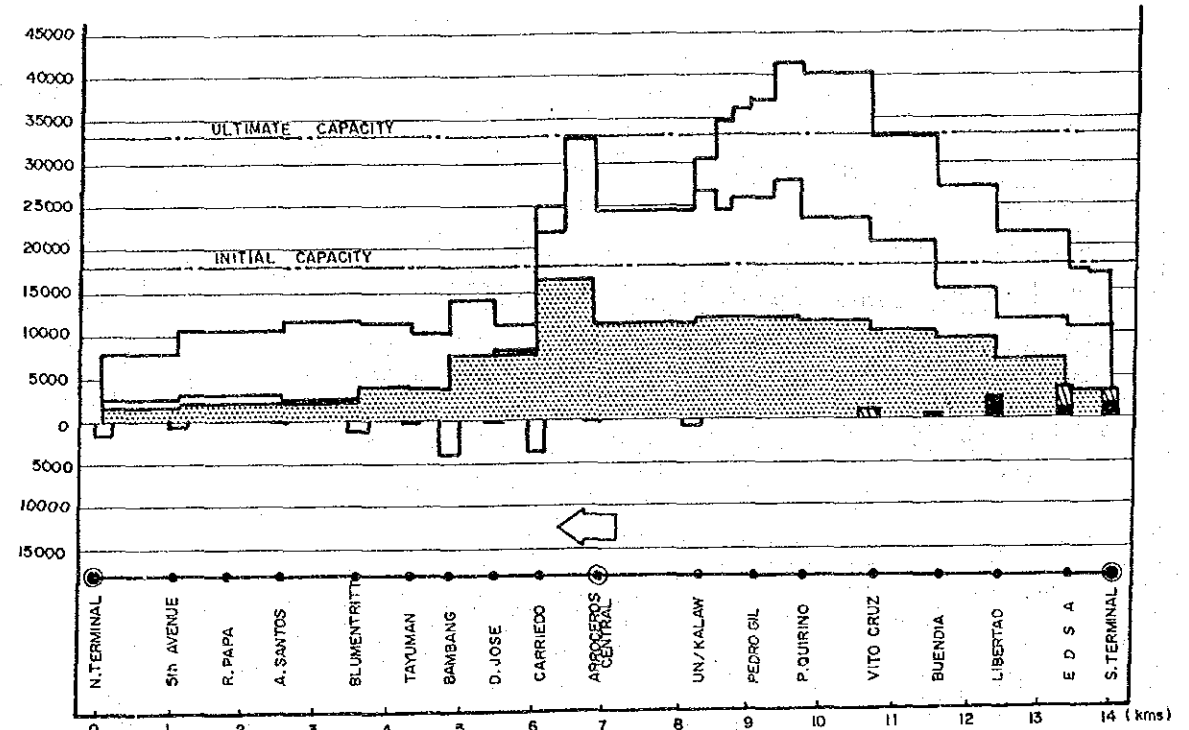


Figure D
Loading/Unloading Pattern of LRT Passengers
(Rerouting Plan D)

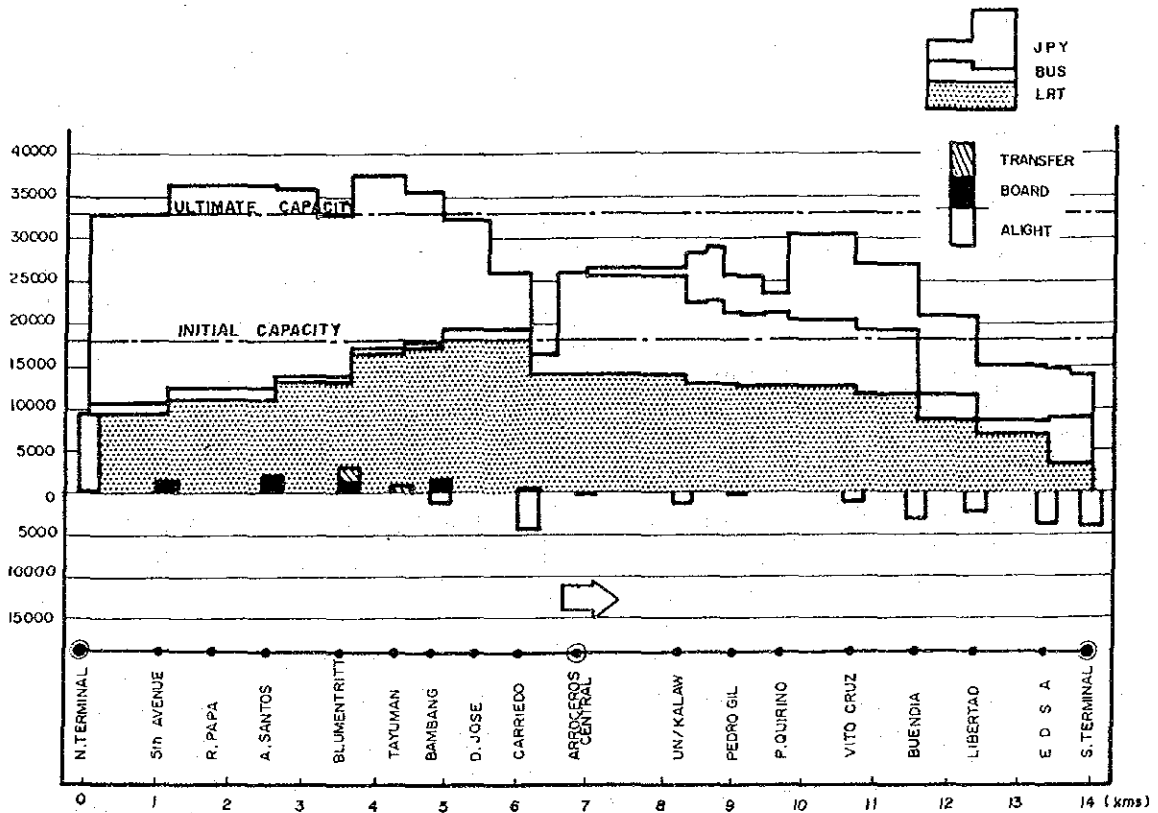
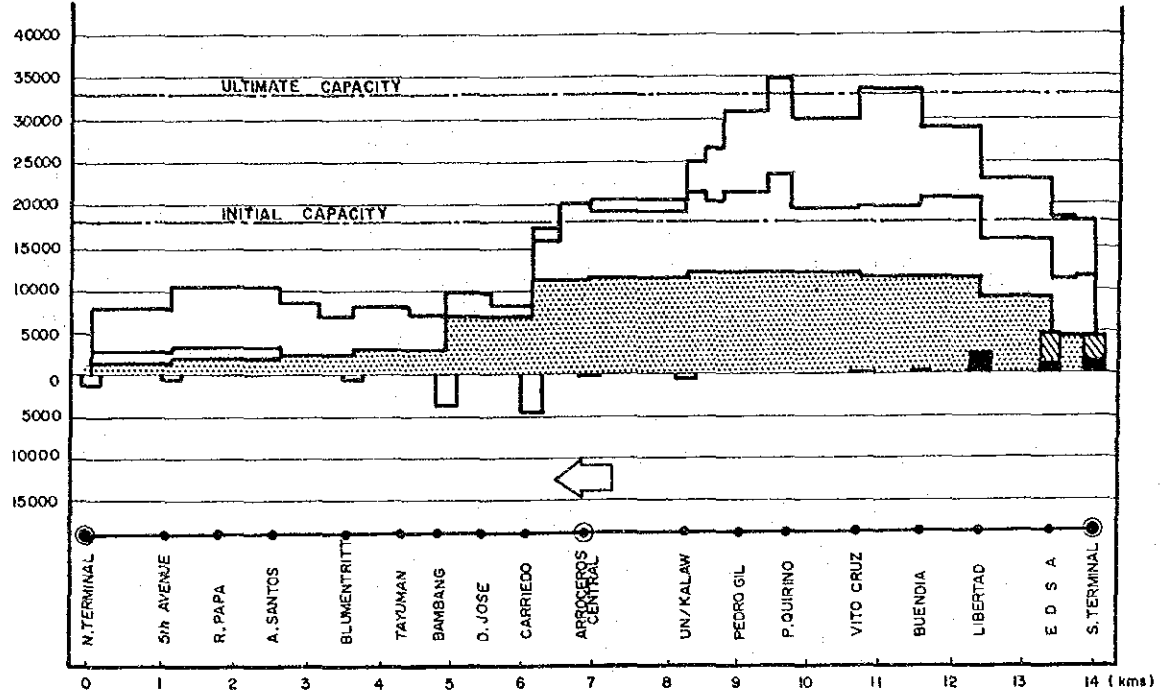
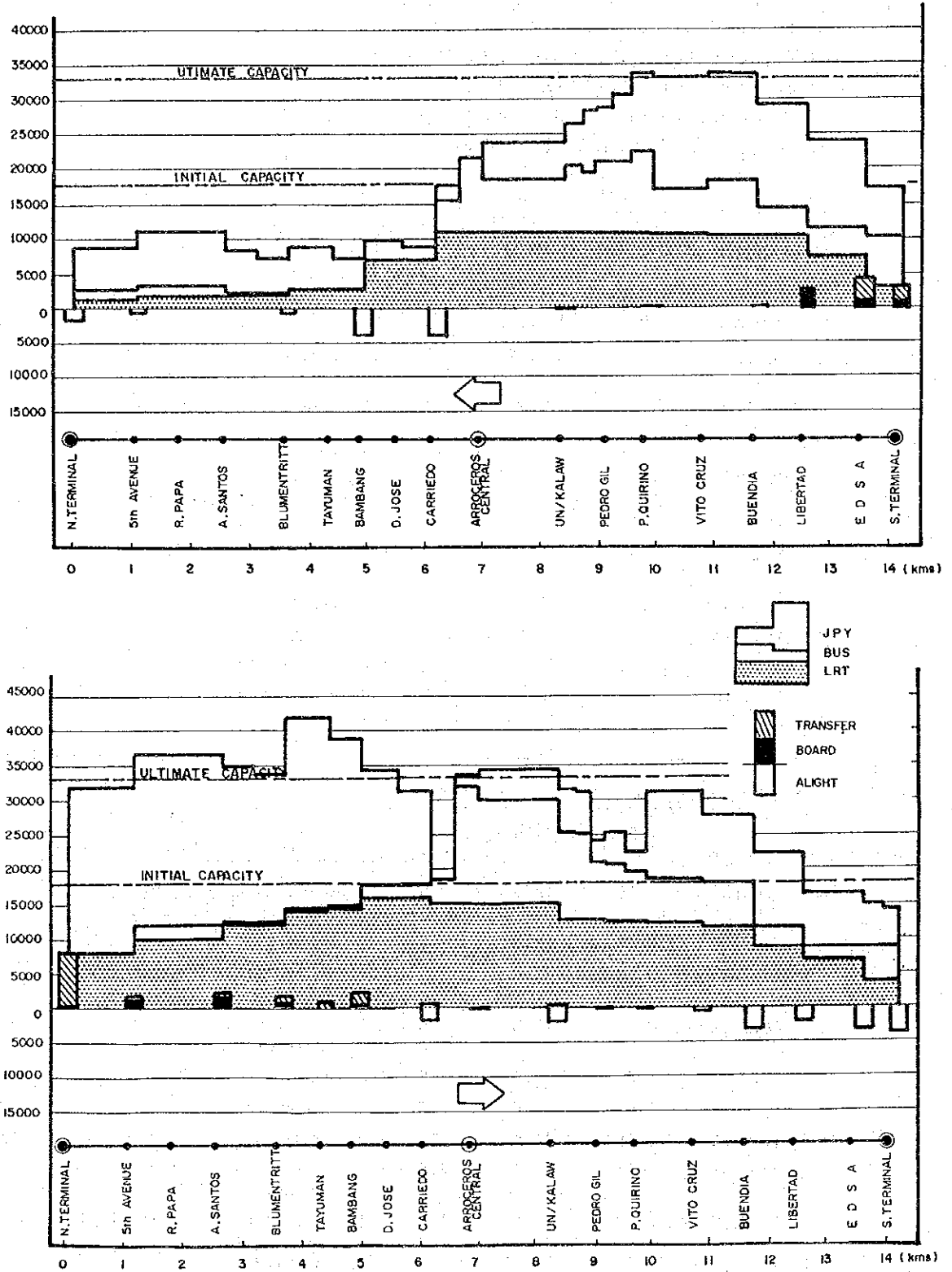


Figure E
Loading/Unloading Pattern of LRT Passengers
(Rerouting Plan E)



**APPENDIX 8.8 SUMMARY INFORMATION ON AVAILABLE
SIDE STREETS**

List of Appendices

- A North Blumentritt Area
- B Between Blumentritt and Tayuman Area
- C Between Tayuman and C. M. Recto Area
- D Between Pedro Gil and San Andres Area
- E Between Buendia and EDSA Area
- F Between San Andres and Buendia Area
- G Between C. M. Recto and C. Palanca St. Area

A NORTH OF BLUMENTRITT AREA:

Road Name	Length (km)	Carriageway Width (m)	Sidewalk Width (m)	Landuse Alongside	Roadside Parking	Road Surface Condition
Solis	0.40	5.2 - 12.0	0 + 0 2.5 + 2.8	residential commercial	rare	good
Cavite	0.52	11.8	3.1 + 1.3	commercial	partly rampant	fair
New Antipolo	0.30	10.0	2.0 + 2.5	commercial	rare	good
Old Antipolo	0.75	8.8	2.5 + 0	commercial PNR station	partly rampant	poor
Tecson	0.33	12.0	2.0 + 1.8	residential commercial	rampant	fair
T. Bugallon	0.28	12.0	2.0 + 1.4	residential	rare	poor
Tindalo	0.23	12.0	2.5 + 2.3	residential	rare	poor
Ipil	0.20	12.0	2.6 + 1.8	residential	rampant	good
S. Reyes	0.22	12.0	2.0 + 2.4	residential	rare	fair
T. Mapua	0.23	12.0	2.0 + 2.3	commercial	rare	good

B BETWEEN BLUMENTRITT AND TAYUMAN AREA:

Road Name	Length (km)	Carriageway Width (m)	Sidewalk Width (m)	Landuse Alongside	Roadside Parking	Road Surface Condition
Laguna	0.58	12.0	2.5 + 2.0	commercial	partly rampant	poor
Batangas	0.67	12.0	3.0 + 2.0	commercial	rare	good
Tayabas	0.68	12.0	2.5 + 2.0	commercial	partly rampant	poor
Camarines	0.60	12.0	2.5 + 2.0	residential commercial	partly rampant	fair
Ipil	0.68	12.0	2.8 + 1.8	residential	rare	good
S. Reyes	0.67	12.0	2.0 + 2.3	residential	rampant	fair
T. Mapua	0.65	12.0	2.0 + 2.3	commercial	rampant	good
Oroquieta	0.61	11.9	2.0 + 1.7	residential (school)	partly rampant	fair
F. Huertas	0.59	12.0	1.7 + 1.6	commercial (San Lazaro race track)	rampant	fair

(App.8.8 cont'd.)

C Between Tayuman and C. M. Recto Area

Road Name	Length (km)	Carriageway Width (m)	Sidewalk Width (m)	Landuse Alongside	Roadside Parking	Road Surface Condition
Quiricada	0.94	10.1 - 12.0	1.4 + 1.6 1.6 + 3.4	residential (San Lazaro Hospital, Elem. sch.)	partly rampant	good
Alvarez	0.57	12.0	0 + 2.6	residential (Elem. sch.)	rare	poor
Bambang	0.97	8.0 - 12.0	1.1 + 1.1 1.5 + 2.0	residential commercial	partly rampant	fair
E. Remegio	0.52	12.0	2.5 + 2.3	residential commercial	rare	fair
Mayhaligue	0.41	12.0	2.1 + 3.3	residential commercial	rare	fair
V. Fuguso	0.57	14.4	1.2 + 1.6	commercial (Central Mkt)	rampant	fair
Lope de Vega	0.45	11.9	2.2 + 2.7	commercial	rare	fair
Doroteo Jose	0.36	12.5	2.0 + 2.0	commercial	rampant	poor
S. Reyes	0.85	9.8	2.5 + 2.7	residential commercial	rare	poor
T. Mapua	0.85	9.9 - 10.0	2.1 + 0 1.8 + 1.5	commercial	partly rampant	poor
Oroquieta	1.38	11.9	2.3 + 1.3 2.0 + 1.7	residential commercial (Old prison)	partly rampant	poor
F. Huertas	1.11	11.9	1.7 + 2.0	residential commercial	partly rampant	poor
P. Guevarra	1.10	11.9	1.8 + 2.0	residential commercial (Elem. sch., Central Mkt.)	rare	good
T. Alonzo	0.37	12.0	2.1 + 2.5 2.8 + 2.7	residential (High Sch.)	rare	good

D Between Pedro Gil and San Andres Area

Road Name	Length (km)	Carriageway Width (m)	Sidewalk Width (m)	Landuse Alongside	Roadside Parking	Road Surface Condition
Gen. Malvar	0.95	10.2 - 10.8	2.2 + 2.2 2.4 + 2.4	commercial (SPC, PCU, PWU)	partly rampant	fair
Julio Nakpil	0.94	10.2	2.5 + 2.2	commercial (PWU)	rampant	fair
Remedios	0.82	9.9	2.8 + 2.6	commercial	partly rampant	fair
M. Adriatico	0.65	11.0	2.0 + 2.15	commercial	partly rampant	good
J. C. Bocobo	0.65	10.0	2.2 + 2.2	commercial residential	rampant	good

(App.8.8 cont'd.)

M.Y. Orosa	0.65	10.0	2.5 + 2.2	commercial residential (St.Paul Col.)	rampant	fair
L. Ma. Guerrero	0.65	10.8	2.8 + 2.1	commercial residential (SPC, PCU)	rampant	fair
Dr. A.Varquez	0.65	10.0	1.5 + 1.5	residential (PCU)	rampant	fair
Indiana	0.70	10.2	2.2 + 2.2	residential commercial	rare	fair
L. Guinto	0.75	10.1	2.4 + 2.4	commercial (PCU, PWU)	rare	poor
T. Agoncillo	0.75	9.0	nothing	commercial	rare	good
San Pascual	0.75	11.1	nothing	commercial	rare	fair
Kansas	0.75	10.2	1.6 + 0	residential commercial	rare	poor
Singalong	0.77	7.8 - 8.8	1.7 + 1.7	residential	rare	good

Legend:

SPC - St. Paul's College
PCU - Philippine Christian College
PWU - Philippine Women's University

E Between Buendia and EDSA Area

Road Name	Length (km)	Carriageway Width (m)	Sidewalk Width (m)	Landuse Alongside	Roadside Parking	Road Surface Condition
G. Villanueva	0.20	3.1 - 4.6	nothing	residential	rare	good
Villareal	0.22	5.0	nothing	residential	rare	good
Vergel	0.25	4.6	nothing	commercial	partly rampant	good
Villaruel	0.47	4.9 - 6.3	nothing	commercial	rare	good
A. Pablo	0.20	3.10	nothing	commercial residential	rare	fair
Cartimar	0.21	12.1	2.5 + 2.5	commercial	rampant	fair
Mabolo	0.21	5.8	nothing	commercial	rare	fair
Dancel	0.23	4.2	nothing	residential	rare	good
Lucban	0.23	3.2	nothing	residential	rare	good
P. Manahan	0.25	3.0	nothing	residential	rare	poor
Col. Doro	0.24	3.0	nothing	residential	rare	poor
Primero De Mayo	0.24	3.0	nothing	commercial	rampant	poor
J.S. Galvez	0.40	4.0	nothing	residential	rare	fair
Pasay Lions RD	0.11	3.0	nothing	commercial	rare	fair

(App.8.8 cont'd.)

Sanchez	0.23	3.0	nothing	commercial	rare	fair
R.-Domingo	0.23	5.1	nothing	commercial	rare	good
Ignacio	0.29	6.0 - 10.0	nothing	commercial residential	rare	good
Leveriza	0.67	6.1	nothing	residential commercial	rampant	good
A. Luna	0.62	5.1	nothing	residential commercial	rare	good
P. Burgos	0.70	6	nothing	residential	rare	good
Park Ave.	1.32	6.1	nothing	residential	rare	good
L. Villanueva	0.87	4.2	nothing	commercial	rare	good
Marquita	0.35	4.0	nothing	commercial	rare	good
Zamora	1.10	6.0	nothing	residential	rare	good
Figueroa	0.60	3.0 - 6.0	nothing	commercial	rare	poor

F Between San Andres and Buendia Area

Road Name	Length (km)	Carriageway Width (m)	Sidewalk Width (m)	Landuse Alongside	Roadside Parking	Road Surface Conditions
Maligaya	0.22	4.4	nothing	residential	rare	fair
Dagonoy	0.08	8.0	1.7 + 2.5	residential	rare	fair
Estrada	0.28	10.5	2.0 + 2.2	commercial (SSC)	rare	fair
Inquimboy	0.10	3.0	nothing	residential	rare	good
Balagtas	0.31	7.0	1.4 + 1.4	residential	rare	poor
Gotamco	0.28	6.9	1.2 + 1.2	residential commercial	rare	good
San Juan	0.52	6.2 - 7.1	nothing 1.4 + 1.4	residential commercial	rare	good
M. Adriatico	1.07	10.5 - 19.0	2.2 + 2.2 3.5 + 3.5	commercial park (Rizal Mem. Stadium, Zoo, Century Park Sheraton H.)	partly rampant	fair
Leveriza	0.55	8.5	nothing	commercial	rampant	fair
L. Guinto	0.87	12.0	2.5 + 2.6 3.1 + 3.1	commercial residential (SSC)	partly rampant	fair
Singalong	0.86	8.0	1.1 + 1.7	residential (SSC)	rare	good

(App.8.8 cont'd.)

Leveriza	0.76	8.5	nothing	residential	partly rampant	fair
Donada	0.79	6.0 - 7.3	nothing	residential commercial	rare	fair
San Juan	0.83	4.6	nothing	residential	partly rampant	fair
Domingo	0.83	6.0	nothing	residential	rare	good
Bautista	0.90	12.1	1.3 + 1.3	residential commercial	rare	good

Legend:

SSC - St. Scholastica College

G Between C. M. Recto and C. Palanca St. Area:

Road Name	Length (km)	Carriageway Width (m)	Sidewalk Width (m)	Landuse Alongside	Roadside Parking	Road Surface Conditions
Soler	0.63	4.5 - 12.0	1.5 + 1.2 3.2 + 3.2	commercial residential	rare	poor
Ongpin	0.38	7.0 - 9.5	0 + 0.9 1.5 + 1.0	commercial	rare	good
G. Puyat	0.38	6.0 - 8.7	1.0 + 0.9 1.7 + 1.7	commercial	rare	fair
Paterno	0.20	4.0 - 4.1	0 + 0 0.7 + 0.7	commercial	rare	fair
Carriedo	0.20	12.0	2.9 + 2.9	commercial	rampant	good
T. Alonzo	0.30	12.0	2.8 + 2.7	commercial (Ortañez Univ)	rare	good
T. Mapua	0.30	7.0	1.6 + 1.6	commercial	rare	fair
Evangelista	0.49	7.1 - 8.4	1.4 + 1.4	commercial	rare	good
Villalobos	0.12	11.0	0.9 + 0.8	commercial	rare	good

APPENDIX 8.9 LRT CORRIDOR ROADS BY WIDTH

List of Figures

- A North Corridor
- B South Corridor

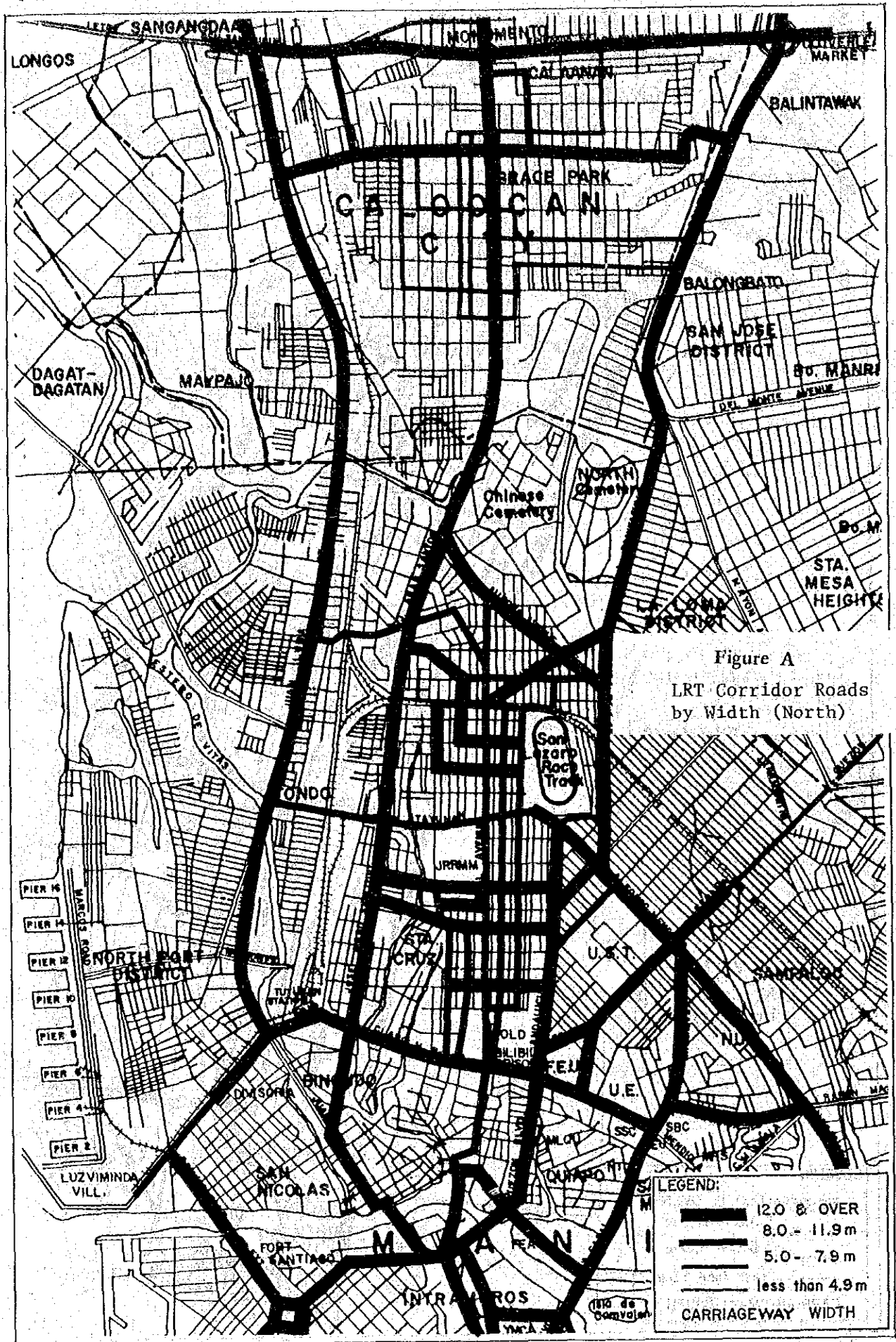


Figure A
LRT Corridor Roads
by Width (North)

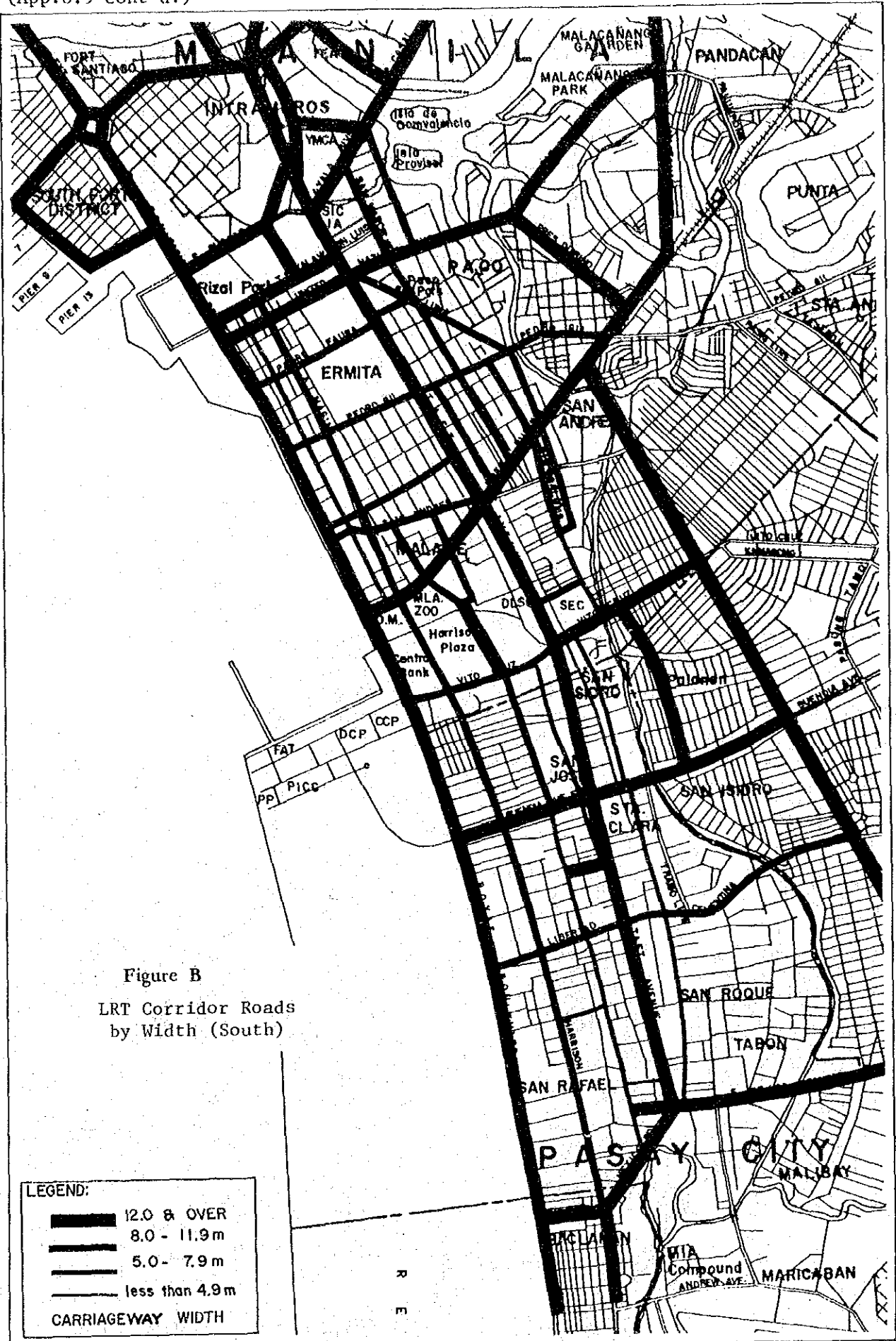


Figure B
LRT Corridor Roads
by Width (South)

APPENDIX 8.10 ALTERNATIVE REROUTING PLANS

List of Figures

- A Rerouting Plan Alternative A (Banning of Jeepney for V. Fugozo – Plaza Sta. Cruz Section of Rizal Avenue)
- B Rerouting Plan Alternative B (Banning of Jeepney for Solis-Plaza Sta. Cruz Section of Rizal Avenue)
- C Rerouting Plan Alternative C (Banning of Jeepney for Solis-McArthur Bridge Section of Rizal Avenue)
- D Rerouting Plan Alternative C' (Banning of Jeepney for Solis-McArthur Bridge Section of Rizal Avenue)
- E Rerouting Plan Alternative I (Banning of Jeepney for P. Quirino – Vito Cruz Section of Taft Avenue)
- F Rerouting Plan Alternative II (Banning of Jeepney for P. Quirino – Buendia Section of Taft Avenue)
- G Rerouting Plan Alternative III (Banning of Jeepney for P. Quirino – Pasay Rotonda Section of Taft Avenue)
- H Rerouting Plan Alternative IV (Banning of Jeepney for Vito Cruz – Pasay Rotonda Section of Taft Avenue)

(App. 8.10 cont'd.)

Figure A REROUTING PLAN Alternative A (Barring of Jeepney for V. Fugoso – Plaza Sta. Cruz Section of Rizal Avenue)

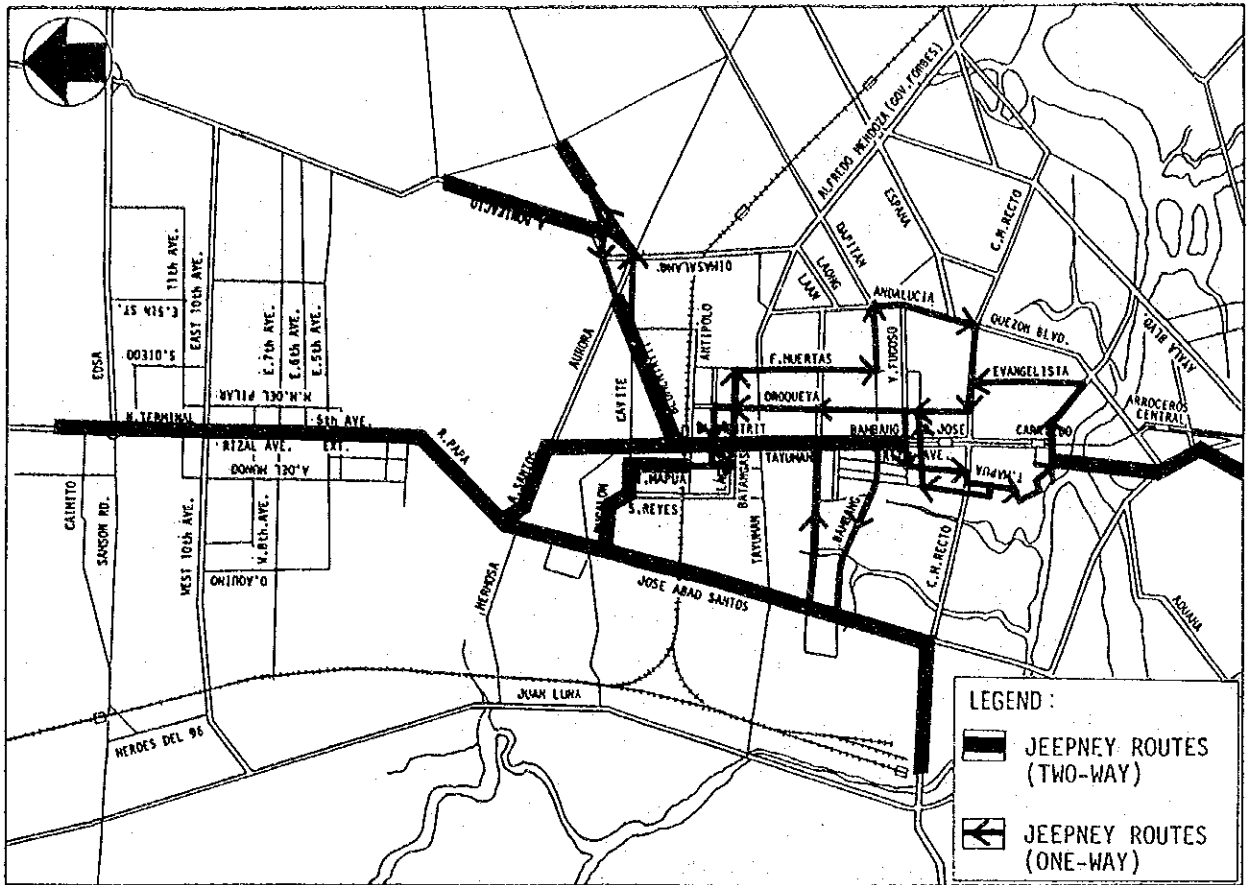
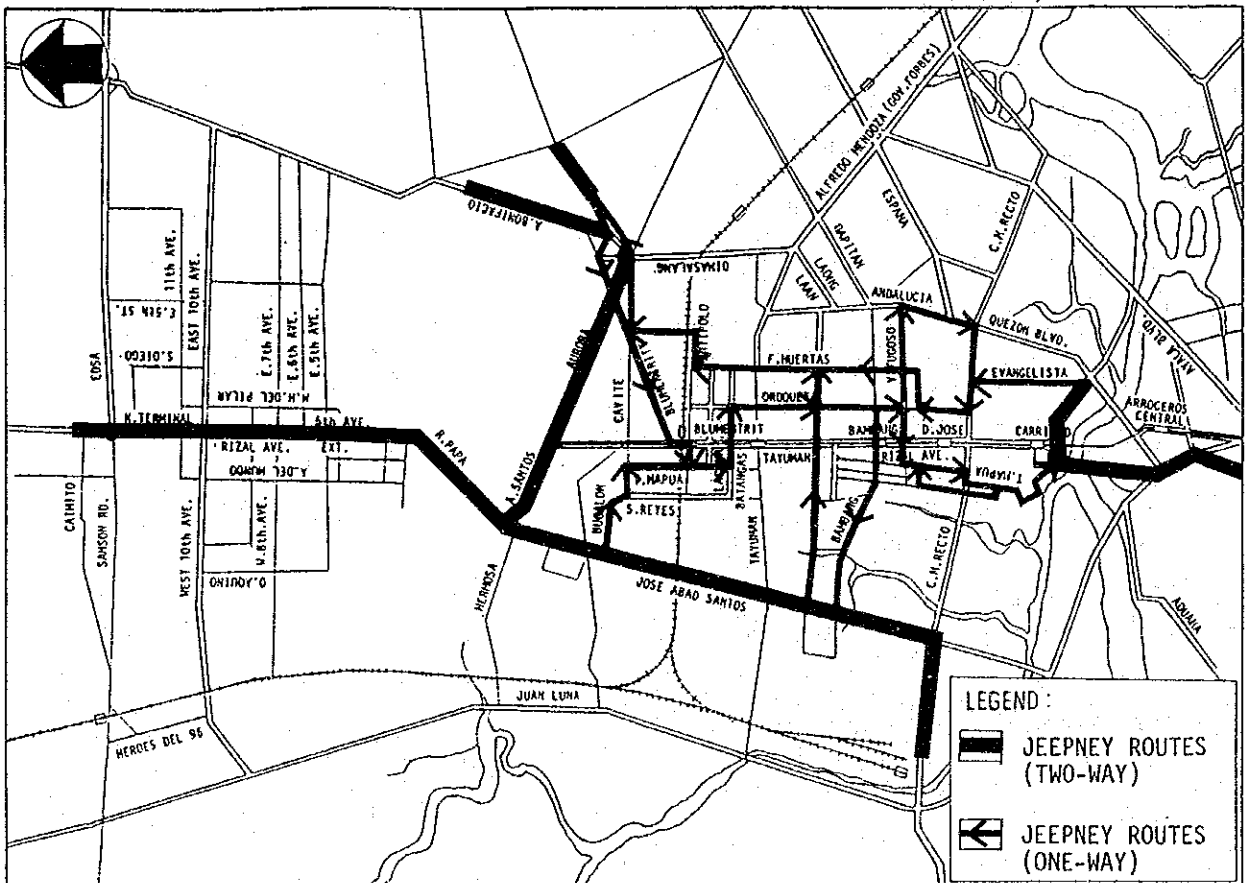


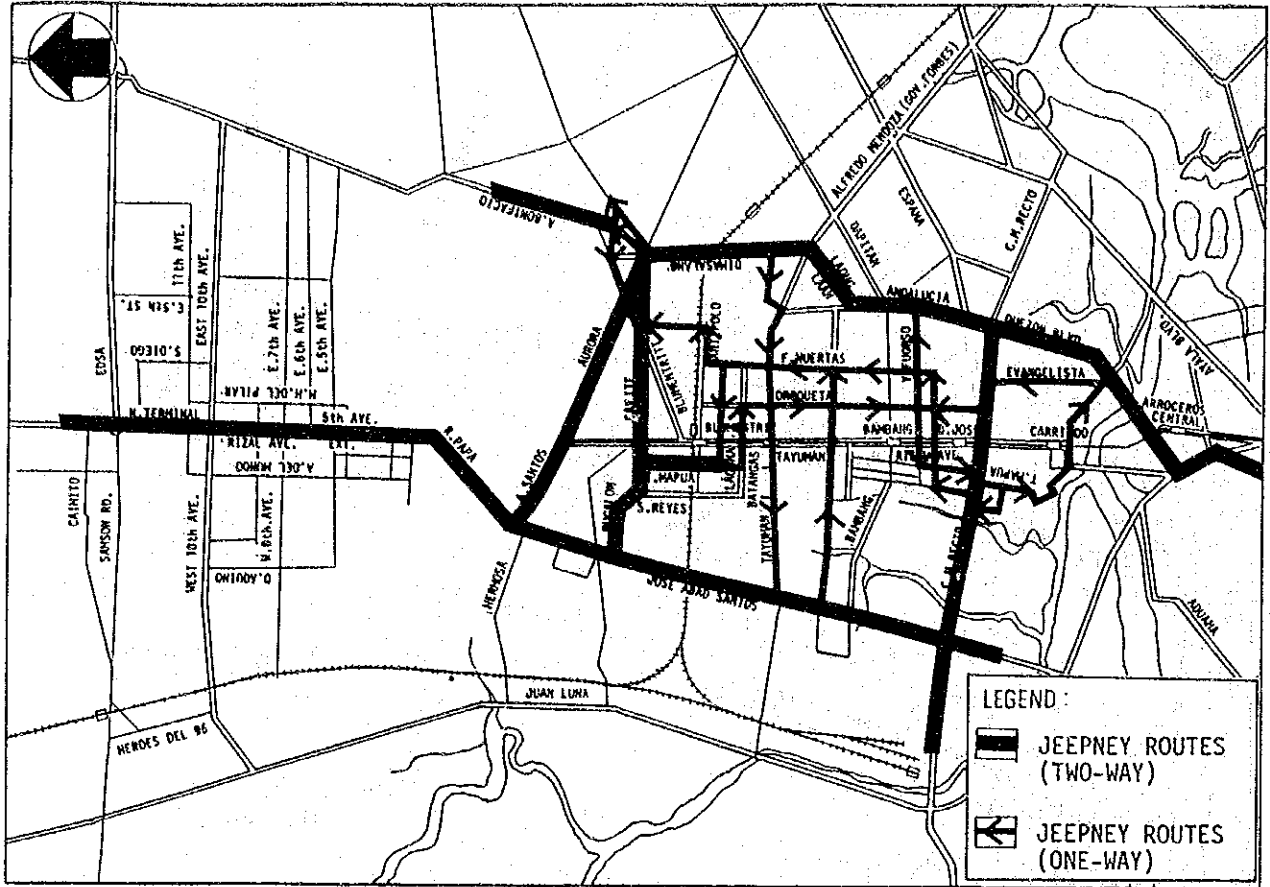
Figure B REROUTING PLAN Alternative B (Banning of Jeepney for Solis-Plaza Sta. Cruz Section of Rizal Avenue)



REROUTING PLAN Alternative C
 (Banning of Jeepney for Solis – McArthur
 Bridge Section of Rizal Avenue)

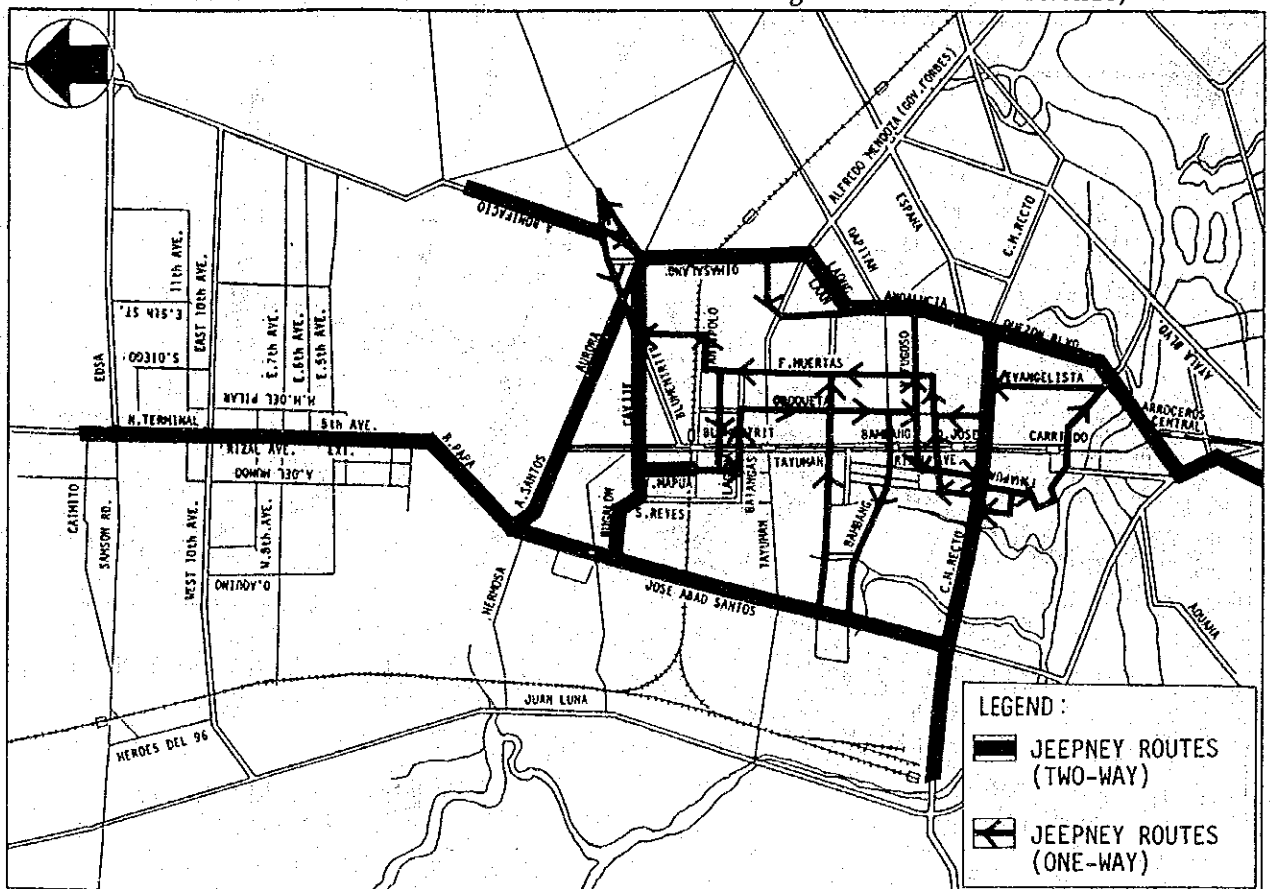
Figure C

(App.8.10 cont'd.)



REROUTING PLAN Alternative C'
 (Banning of Jeepney for Solis-McArthur
 Bridge Section of Rizal Avenue)

Figure D



(App.8.10 cont'd.)

Figure E

REROUTING PLAN Alternative I
(Banning of Jeepney for P. Quirino –
Vito Cruz Section of Taft Avenue)

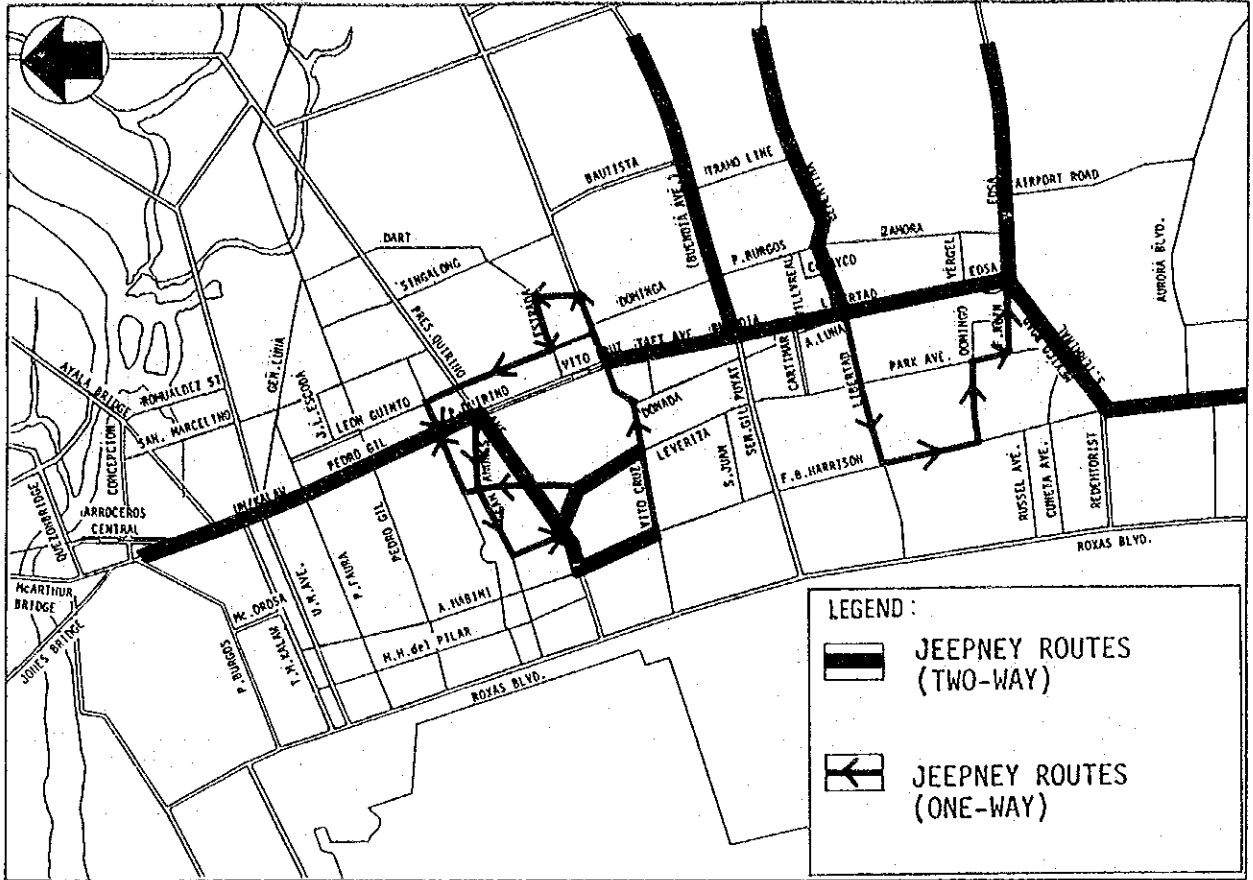
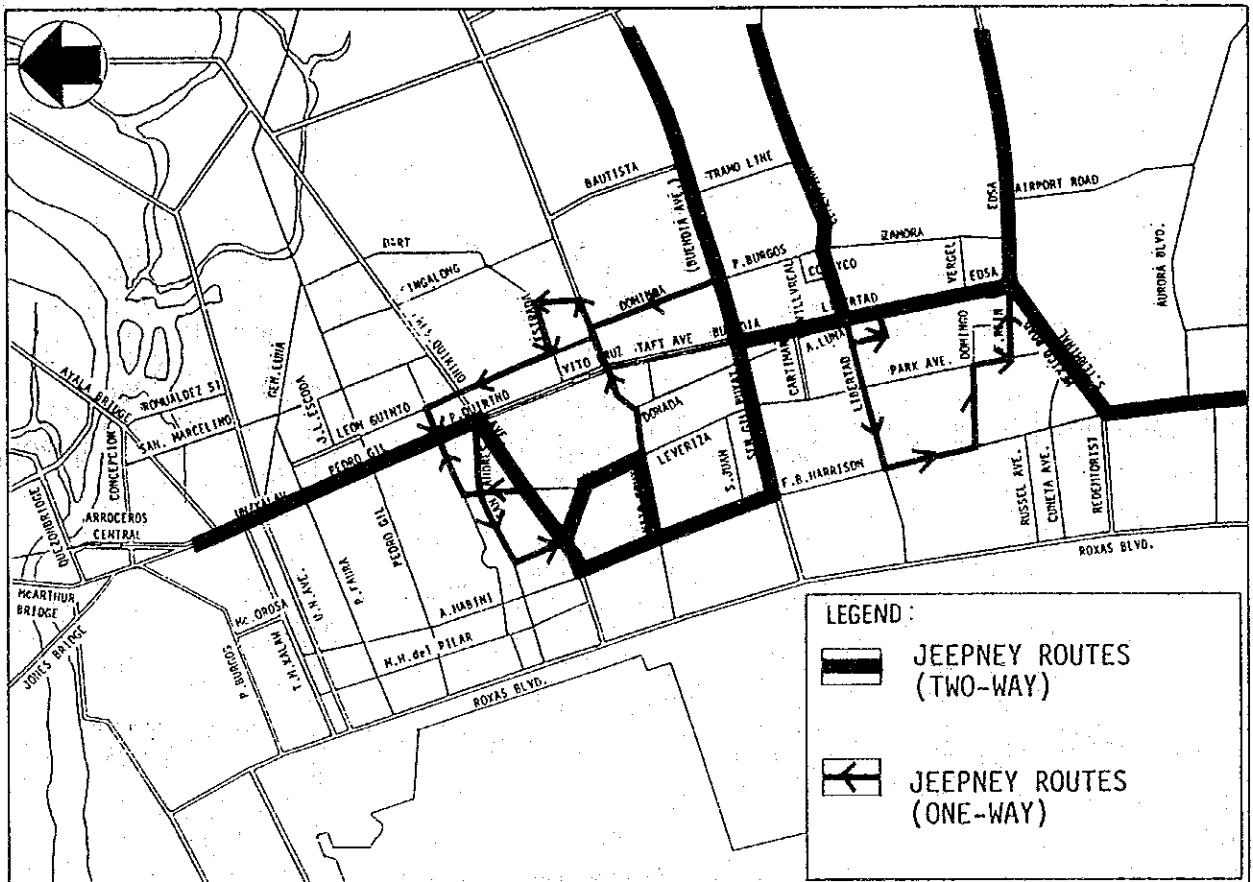


Figure F

REROUTING PLAN Alternative II
(Banning of Jeepney for P. Quirino –
Buendia Section of Taft Avenue)



(App.8.10 cont'd.)

Figure G

REROUTING PLAN Alternative III
(Banning of Jeepney for P. Quirino –
Pasay Rtda. Section of Taft Avenue)

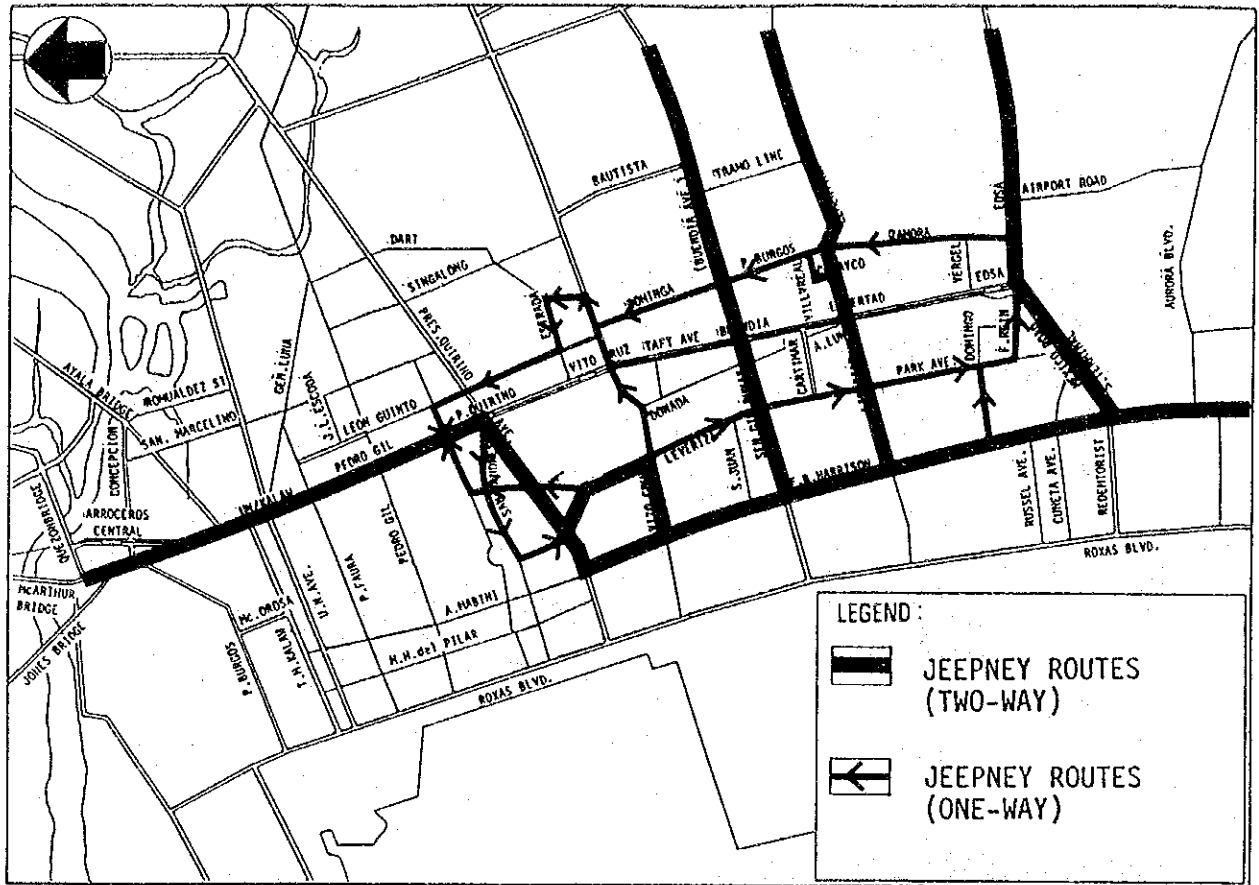
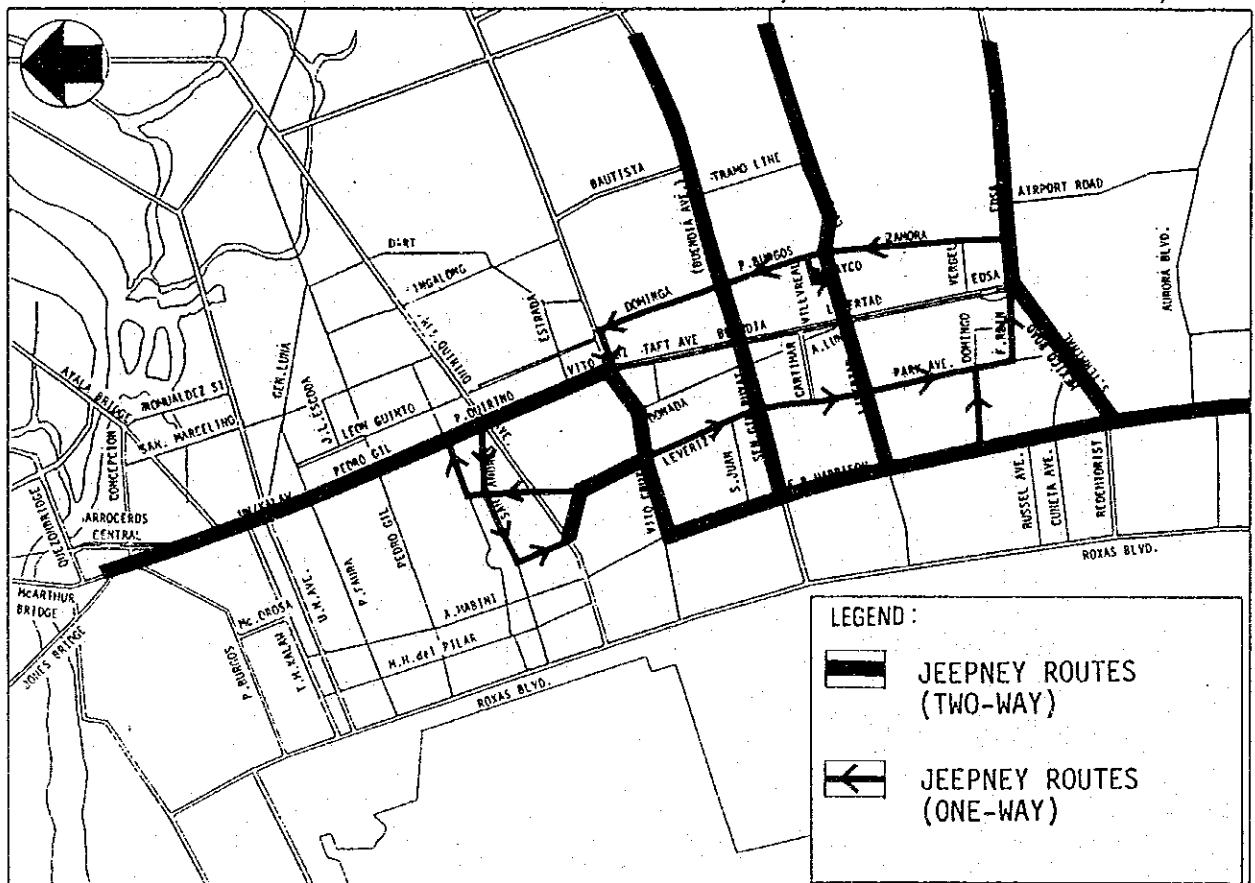


Figure H

REROUTING PLAN Alternative IV
(Banning of Jeepney for V. Cruz –
Pasay Rtda. Section of Taft Avenue)



Appendix 9.1 道路容量算定方式

- 道路容量算定の方式は種々あるが、JUMSUT調査ではマニラ首都圏の実状を考慮して、'Highway Planning Manual' (MPWH、1981年8月)の方式を採用した。
- 第一段階として、アペンディクス表Aに示すようにMPWHマニュアルにおいて、「乗用車換算での時間当たり基本的断面容量」が決定されている。

Appendix Table A
Basic Hourly Capacity in PCU (Passenger Car Unit) for Both Directions

Road Type	Carriageway Width (M)	Roadside Friction	Basic Hourly Capacity in PCU in Both Direction
Highway	- 4.0	None or Light	600
Highway	4.1 - 5.0	None or Light	1,200
Highway	5.1 - 5.5	None or Light	1,800
Highway	5.6 - 6.1	None or Light	1,900
Highway	6.2 - 6.5	None or Light	2,000
Highway	6.6 - 7.3	None or Light	2,400
Highway	2 x 7.0	None or Light	7,200 (Expressway)
Urban Street	6.0	Heavy	1,200
Urban Street	6.1 - 6.5	Heavy	1,600
Urban Street	6.6 - 7.3	Heavy	1,800
Urban Street	2 x 7.0	Heavy	6,700

Source : MPWH Highway Planning Manual

- 第2段階として、上記の容量を次のように調整する。
 - a) 路側が2.0m以下の場合：10%減少させる。
 - b) 車道から1.5m以内に障害物がある場合：10%減少（一方向のみにある場合）、20%減少（二方向ともある場合）
- 上記に加え、交差点の影響を表す変数が考慮された。
 - a) 2車線の場合：0.8（20%減少）
 - b) 多車線の場合：0.6（40%減少）
- 最後に次のように道路容量が算出された。
 - a) 2車線道路（両方向）
 - A) 車道幅員6.0m以下
 $1,200 \times 0.9 \times 0.8 \times 0.8 = 690$ pcu/時間
 - B) 車道幅員6.1-6.5m
 $1,600 \times 0.9 \times 0.8 \times 0.8 = 920$ pcu/時間
 - C) 車道幅員6.6-7.3m
 $1,800 \times 0.9 \times 0.8 \times 0.8 = 1,040$ pcu/時間
 - b) 多車線道路（各車線）
 - A) 中央分離帯のある場合
 $1,675 \times 0.9 \times 1.0 \times 0.6 = 900$ pcu/時間
 - B) 中央分離帯のない場合
 $1,675 \times 0.9 \times 0.8 \times 0.6 = 720$ pcu/時間
- PCU（乗用車換算台数）はジープニィ1.5、バス2.5、トラック2.0である。

Appendix 9.2
Traffic Conditions by Road Section
Along LRT Corridor (Before Rerouting)

Road Name	Section		Length (kms.)	Width of Carriageway (No. of Lanes)	Private			Public Transport			Total		PT Total Ratio(%)	Heavy Direction Percentage (%)	Hourly Capacity	V/C Ratio
	Name				Car, Van	Jeep	Jeepney	Bus/Truck	Total	(Vehicle)	(P.C.U.)					
ROXAS BLVD.	MIA Rd. - Libertad		3.0	28.0 (6)	3,347	330	180	510	3,857	4,292	13.2	65	900/lane	1.03		
	Libertad - Buendia		0.7	28.0 (6)	3,544	12	152	164	3,708	3,942	58.7	58.7	900/lane	0.86		
	Buendia - P. Quirino		1.3	28.0 (6)	4,146	33	1,026	1,059	5,205	6,761	20.3	50.6	900/lane	1.27		
	P. Quirino - P. Burgos		2.3	28.0 (8)	4,090	32	993	1,025	5,115	6,621	20.0	53.7	900/lane	0.99		
QUIRINO AVENUE	Redemptorist - MIA Rd.		1.6	14.4 (4)	108	1,075	166	1,241	1,349	2,136	72.4	64.2	720/lane	0.95		
	MIA Road - Real		7.4	14.0 (4)	1,852	795	172	968	2,820	3,476	34.3	60.0	720/lane	1.45		
TAFT AVENUE	City Hall - P. Gil		1.2	26.3 (8)	1,397	2,755	504	3,259	4,656	6,790	70.0	55.5	900/lane	1.05		
	P. Gil - P. Quirino		0.7	26.3 (8)	1,341	2,764	510	3,274	4,615	6,762	70.9	55.9	900/lane	1.05		
	P. Quirino - Vito Cruz		0.9	13.8 (4)	1,248	1,239	286	1,525	2,773	3,822	55.0	65.1	720/lane	1.73		
	Vito Cruz - Buendia		0.9	13.0 (4)	629	1,235	158	1,393	2,022	2,877	68.9	53.3	720/lane	1.07		
	Buendia - EDSA		4.6	13.0 (4)	497	1,054	183	1,237	1,734	2,536	71.6	50.5	720/lane	0.89		
BUENDIA	Roxas Blvd. - Taft Ave.		0.8	14.4 (4)	1,503	209	67	276	1,779	1,985	15.5	57.8	720/lane	0.80		
	Taft Ave. - SSH		0.6	14.4 (4)	2,636	355	271	626	3,262	3,847	19.2	52.9	720/lane	1.41		
PRES. QUIRINO	Roxas Blvd. - Taft Ave.		1.1	22.8 (6)	1,798	2	293	295	2,093	2,534	14.1	63.8	900/lane	0.60		
	Taft Ave - SSH		0.9	22.8 (6)	2,688	15	575	590	3,278	4,149	18.0	63.8	900/lane	0.98		
PEDRO GIL	Roxas Blvd. - Taft Ave.		0.9	10.1 (2)	402	569	13	582	984	1,289	59.1	1.040	1,040	1.24		
	Taft Ave. - SSH		1.1	10.5 (2)	338	580	7	597	925	1,226	63.5	1,040	1,040	1.18		
MIA ROAD	Quirino Ave. - MIA		2.5	14.8 (4)	1,890	276	74	350	2,240	2,489	15.6	51.0	720/lane	0.88		
	Roxas Blvd. - Mexico Rd		0.3	14.0 (4)	150	127	86	213	413	556	51.6	68.5	720/lane	0.26		
REDEMPTORIST	Mexico Rd - Libertad		0.5	10.1 (2)	6	312	0	312	318	474	98.1	one-way	1,040	0.46		
	Libertad - Buendia		0.7	10.1 (2)	345	993	33	1,026	1,371	1,918	74.8	61.3	1,040	1.84		
	Buendia - P. Quirino		1.4	10.1 (2)	178	1,431	40	1,471	1,649	2,425	89.2	61.3	1,040	2.33		
	P. Quirino - P. Gil		1.1	9.0 (2)	431	441	18	459	890	1,138	51.6	one-way	720/lane	0.79		
A. MABINI	P. Gil - T.M. Kalaw		0.9	9.0 (2)	765	619	34	653	1,418	1,779	46.1	one-way	720/lane	1.24		

(App. 9.2 cont'd.)

Road Name	Section		Width of Carriageway (No. of Lanes)			Private Car, Van Jeep			Peak Hour Traffic Volume			Total (Vehicle) (P.C.U.)	PT Total Ratio(%)	Heavy Direction Percentage (%)	Hourly Capacity	V/C Ratio	
	Name	Length (kms.)	7.1 (2)	6.5 (2)	6.5 (2)	Jeepney	Bus/Truck	Total	Jeepney	Bus/Truck	Total						
M. H. DEL PILAR	P. Quirino - T.M. Kalaw	2.0	7.1 (2)	6.5 (2)	6.5 (2)	504	31	550	519	0	0	1,054	1,361	52.2	one-way	720/lane	0.95
DOMADA	Vito Cruz - Buendia	0.8	6.5 (2)	6.5 (2)	6.5 (2)	208	0	0	0	0	0	208	208		one-way	720/lane	0.14
SAN JUAN	Leveriza-F.B.Harrison	0.3	6.5 (2)	6.5 (2)	6.5 (2)	137	0	0	0	0	0	137	137	30.0	one-way	720/lane	0.10
EDSA	Taft Ave. - SSH	1.6	36.0 (8)	36.0 (8)	36.0 (8)	2,103	465	900	435	0	0	3,003	3,919	81.8	54.7	900/lane	0.60
MEXICO ROAD	Taft Ave.-Quirino Ave.	0.8	13.0 (4)	13.0 (4)	13.0 (4)	218	252	980	728	0	0	1,198	1,940	66.4	53.7	720/lane	0.72
LIBERTAD	Roxas Blvd.-Taft Ave.	0.8	7.0 (2)	7.0 (2)	7.0 (2)	257	9	509	500	0	0	766	1,030	70.5		1,040	0.99
	Taft Ave. - SSH	1.1	7.0 (2)	7.0 (2)	7.0 (2)	252	9	601	592	0	0	853	1,163	44.1		1,040	1.12
VITO CRUZ	Roxas Blvd. - Taft Ave.	0.8	10.0 (2)	10.0 (2)	10.0 (2)	611	86	483	397	0	0	1,094	1,422	13.6	one-way	720/lane	1.37
	Taft Ave. - SSH	0.9	11.2 (2)	11.2 (2)	11.2 (2)	1,039	163	163	163	0	0	1,202	1,447	4.0	one-way	720/lane	1.00
SAN ANDRES	Roxas Blvd. - Taft Ave.	0.9	10.6 (2)	10.6 (2)	10.6 (2)	772	32	32	32	0	0	804	852	0.8	one-way	720/lane	0.59
U.N. AVENUE	Roxas Blvd.-Taft Ave.	0.8	13.1 (4)	13.1 (4)	13.1 (4)	1,945	12	16	4	0	0	1,961	1,981	60.3	57.0	720/lane	0.78
	Taft Ave.-P. Quirino	1.0	13.1 (4)	13.1 (4)	13.1 (4)	1,633	15	15	15	0	0	1,648	1,671	0.9	68.6	720/lane	0.80
T.M. KALAW	Roxas Blvd.-Taft Ave.	0.8	25.0 (8)	25.0 (8)	25.0 (8)	1,093	205	1,660	1,455	0	0	2,753	3,789	50	56.1	900/lane	0.59
T. CLAUDIO	Roxas Blvd.-Quirino Ave.	0.3	7.0 (2)	7.0 (2)	7.0 (2)	90	0	791	791	0	0	881	1,227	2.1	one-way	720/lane	0.85
LEVERIZA	Remedios-Rizal Memorial	0.3	5.0 (2)	5.0 (2)	5.0 (2)	46	1	1	0	1	1	47	50	7.1	53.2	720/lane	0.03
	Vito Cruz - Buendia	0.8	8.5 (2)	8.5 (2)	8.5 (2)	208	0	16	16	0	0	224	232	50	one-way	720/lane	0.16
	Buendia - Libertad	0.7	6.1 (2)	6.1 (2)	6.1 (2)	208	0	208	208	0	0	416	520	0	one-way	720/lane	0.36
PARK AVENUE	Libertad - Mexico Rd.	1.1	6.0 (2)	6.0 (2)	6.0 (2)	394	0	394	394	0	0	788	985	0	one-way	720/lane	0.68
A. LUNA	Buendia - Libertad	0.6	7.3 (2)	7.3 (2)	7.3 (2)	208	0	0	0	0	0	208	208	0	one-way	720/lane	6.14
ADRIATICO	P. Faura - P. Gil	0.4	9.0 (2)	9.0 (2)	9.0 (2)	242	0	0	0	0	0	242	242	50		1,040	0.23
	P. Gil - P. Quirino	1.0	11.0 (2)	11.0 (2)	11.0 (2)	242	0	242	242	0	0	484	605	0		1,040	0.58
	P. Quirino-Vito Cruz	0.7	10.5 (2)	10.5 (2)	10.5 (2)	242	0	42	42	0	0	284	305	50		1,040	0.29
LEON GUINTO	P. Faura - P. Quirino	1.1	12.0 (2)	12.0 (2)	12.0 (2)	476	0	476	476	0	0	952	1,190	0		1,040	1.14

(App.9.2 cont'd.)

Road Name	Section		Length (kms.)	Width of Carriageway (No. of Lanes)	Peak Hour Traffic Volume				Total (Vehicle)	Total (P.C.U.)	PT Total Ratio(%)	Heavy Direction Percentage (%)	Hourly Capacity	V/C Ratio	
	Name	Private Car, Van Jeep			Public Transport Jeepney/Bus/Truck	Total	Private Car, Van Jeep	Public Transport Jeepney/Bus/Truck							Total
DOMINGA	P. Quirino-Vito Cruz	466	0	466	932	1,165	50	one-way	720/lane	1.12					
	Vito Cruz - Buendia	217	0	17	234	243	one-way	720/lane	0.17						
P. BURGOS	Buendia - Libertad	217	0	17	234	243	50	one-way	720/lane	0.17					
	Libertad - EDSA	217	0	217	434	543	one-way	720/lane	0.38						
P. FAURA	Roxas Blvd. - Paco Park	622	41	65	687	761	9.5	one-way	720/lane	0.53					
GEN. LUNA	Taft Ave. - P. Gil	490	0	0	490	490	0	one-way	720/lane	0.34					
DEL PAN BRIDGE		2,602	7	181	2,783	2,881	6.5	57.5	900/lane	0.92					
JONES BRIDGE		2,662	40	924	3,586	4,088	25.8	67.5	900/lane	1.53					
MCARTHUR BRIDGE		1,736	107	1,909	3,645	4,707	52.4	50.3	900/lane	1.32					
QUEZON BRIDGE		1,656	218	2,425	4,081	5,512	59.4	51.2	900/lane	1.57					
AYALA BRIDGE		2,832	156	172	3,004	3,246	5.7	54.3	900/lane	0.55					
NAGTAHAN BRIDGE		4,397	11	259	4,656	4,797	5.6	52.9	900/lane	0.94					
C. M. RECTO	Del Pan. - J.A. Santos	690	255	1,926	2,616	3,833	73.6	52.6	900/lane	0.45					
	J.A. Santos-Quezon Blvd.	1,376	273	3,096	4,472	6,294	69.2	69.2	900/lane	1.61					
	Quezon Blvd.-Legarda	900	77	1,269	2,269	3,031	60.3	50.1	900/lane	0.56					
QUEZON BLVD.	Quezon Bridge - Lerma	2,590	495	2,183	4,773	6,359	45.7	61.4	900/lane	1.45					
ANDALUCIA	Lerma - V. Fugoso	1,457	290	1,836	3,293	4,501	55.8	60.6	900/lane	1.01					
	V. Fugoso - Bambang	1,459	243	1,911	3,370	4,569	56.7	59.0	900/lane	1.50					
	Bambang - Laon Laan	1,153	391	1,426	2,579	3,682	55.3	53.4	900/lane	1.09					
LERMA	Quezon Blvd. - N. Reyes	797	102	2,241	3,038	4,260	73.8	56.9	900/lane	0.67					
ESPARA	Lerma - A. Mendoza	1,762	108	2,500	4,262	5,620	58.7	62.3	900/lane	0.97					

(App.9.2 cont'd.)

Road Name	Section		Length (kms.)	Width of Carriageway (No. of Lanes)	Private Car, Van Jeep	Peak Hour Traffic Volume			Total (Vehicle)	Total (P.C.U.)	PT Total Ratio(%)	Heavy Direction Percentage (%)	Hourly Capacity	V/C Ratio
	Name	Public Transport Jeepney/Bus/Truck				Total	Public Transport Jeepney/Bus/Truck	Total						
LAONG-LAAN	Andalucia - A. Mendoza	376	184	241	617	921	39.1	78.3	720/lane	0.50				
DIMASALANG	A. Mendoza-Blumentritt	1,079	832	1,140	2,219	3,097	51.4	63.9	720/lane	1.37				
BLUMENTRITT	Rizal Ave.-A.Bonifacio	130	1,755	7	1,892	2,780	93.1	67.3	900/lane	1.04				
V. FUGUSO	T. Mapua - Andalucia	171	74	82	253	302	32.4	63.2	1,040	0.29				
BAMBANG	Rizal Ave. - Andalucia	642	3	31	673	717	4.6	57.9	1,040	0.69				
A. MENDOZA	Espana - Laong-Laan	1,300	320	748	2,048	2,850	36.5	51.9	900/lane	0.82				
	Laong-Laan - Rizal Ave.	733	205	626	1,359	2,094	46.1	52.2	900/lane	0.61				
TAYUMAN	Rizal Ave. - J. Luna	651	308	454	1,105	1,478	41.1	50.4	1,040	1.42				
RIZAL AVENUE	McArthur Br.-C.M.Recto	400	2,125	80	2,605	3,787	84.6	62.6	720/lane	1.65				
	C. M. Recto - Tayuman	483	1,891	114	2,005	3,605	80.6	57.7	720/lane	1.44				
	Tayuman - Solis	266	1,646	75	1,987	2,923	86.6	54.9	720/lane	1.11				
RIZAL AVENUE EXT.	Solis - EDSA	1,147	2,156	182	3,485	4,836	67.0	51.7	900/lane	0.93				
MCARTHUR HWY.	EDSA-Mal-Va1 Bridge	1,032	1,417	358	1,775	4,052	62.6	67.9	720/lane	1.91				
AURORA	Dimasalang - Rizal Ave.	1,857	718	61	2,636	3,086	29.6	56.1	720/lane	0.80				
REINA REGENTE	Binondo - C.M. Recto	1,786	93	29	1,908	1,997	6.4	55.3	720/lane	0.77				
J. A. SANTOS	C.M. Recto - Tayuman	2,225	116	89	2,430	2,621	8.4	59.8	720/lane	0.73				
	Tayuman - Rizal Ave.	2,355	423	142	2,920	3,344	19.3	59.5	720/lane	0.92				
J. LUNA	Jones Bridge - Binondo	1,421	561	16	1,998	2,302	28.9		720/lane	1.60				
	Binondo - C.M. Recto	38	403	8	449	662	91.5		720/lane	0.92				
	C.M. Recto - Tayuman	93	149	3	245	323	62.0		720/lane	0.45				
	Tayuman - Hermosa	1,163	1,246	113	2,522	3,315	53.9	58.8	720/lane	1.35				
HERMOSA	J.A. Santos - J. Luna	527	27	54	581	636	9.3	98.3	1,040	0.61				
10TH AVENUE	Rizal Ave. Ext.-A. Boni.	485	342	64	891	1,158	45.6	51.6	1,040	1.11				
	Rizal Ave. Ext.-J. Luna	498	411	70	979	1,289	49.1	63.5	1,040	1.24				

(App. 9.2 cont'd.)

Road Name	Section		Length (kms.)	Width of Carriageway (No. of Lanes)	Private Car, Van Jeep	Peak Hour Traffic Volume			Total (Vehicle)	Total (P.C.U.)	PT Total Ratio(%)	Heavy Direction Percentage (%)	Hourly Capacity	V/C Ratio
	Name					Jeepney	Bus/Truck	Total						
EDSA	Rizal Ave. Ext. - A. Boni		1.5	36.0 (6)	699	542	629	1,171	1,870	3,085	62.6	57.7	900/lane	0.66
SAMSON ROAD	Rizal Ave. Ext. - Sangandaan		1.3	15.0 (4)	514	703	375	1,078	1,592	2,507	67.7	63.7	720/lane	1.11
LOPE DE VEGA	P. Guevarra-Rizal Ave.		1.5	12.0 (2)	159	41	4	45	204	231	22.1	one-way	720/lane	0.16
P. GUEVARRA	Blumentritt - Antipolo		0.3	8.0 (2)	200	350	0	350	550	725	63.6	one-way	720/lane	0.50
ANTIPOLO	P. Guevarra-F. Huertas		0.8	9.0 (2)	35	157	0	157	192	271	81.8	one-way	720/lane	0.19
F. HUERTAS	Antipolo - Lope de Vega		1.7	12.0 (2)	365	365	0	365	730	913	50		720/lane	0.63
OROQUIETA	Antipolo-C.M. Recto		2.1	12.0 (2)	378	378	0	378	756	945	50		720/lane	0.66
T. MAPUA	Cavite - Laguna		0.3	12.0 (2)	378	0	0	0	378	378			1,040	0.36
	V. Fuguso - C.M. Recto		0.4	10.0 (2)	378	0	0	0	378	378			1,040	0.36
	C.M. Recto-McArthur Br.		0.7	7.0 (2)	378	0	0	0	378	378			1,040	0.36
CAVITE	Rizal Ave.-Dimasalang		0.6	12.0 (2)	378	378	0	378	756	945			1,040	0.91
	Rizal Ave.-J.A. Santos		0.4	12.0 (2)	378	378	0	378	756	945			1,040	0.91
LAGUNA	Ipil - F. Huertas		0.5	12.0 (2)	107	276	9	285	392	544	72.7	84.2	1,040	0.52
BATANGAS	Ipil - F. Huertas		0.5	12.0 (2)	346	105	22	127	473	526	26.8	55.8	1,040	0.51
BUGALLON	Cavite - J.A. Santos		0.3	11.0 (2)	378	378	0	378	756	945			1,040	0.91
3RD AVENUE	Rizal Ave. Ext. - D. Aquino		0.5	6.0 (2)	327	21	39	60	387	457	15.5	59.4	690	0.66
5TH AVENUE	Rizal Ave. Ext. - O. Aquino		0.5	7.0 (2)	327	21	39	60	387	457	15.5	59.4	1,040	0.44
6TH AVENUE	Rizal Ave. Ext. - A. Bonifacio		1.0	6.0 (2)	451	204	55	259	710	895	36.5	one-way	720/lane	0.62
7TH AVENUE	Rizal Ave. - Ext. - A. Bonifacio		1.0	7.0 (2)	451	204	55	259	710	895	36.5	one-way	720/lane	0.62
A. DEL MUNDO	3rd Ave. - 10th Avenue		1.0	6.0 (2)	226	104	28	130	356	449	36.5		690	0.65
P. SEVILLA	3rd Ave.-10th Avenue		1.0	6.0 (2)	226	102	28	130	356	(449)	36.5		690	0.65
5TH STREET	10th Ave. - EDSA		0.6	10.0 (2)	451	204	55	259	710	(895)	36.5		1,040	0.86
HEROES DEL 96	10th Ave. - Samson Rd.		0.6	10.0 (2)	451	204	55	259	710	(895)	36.5		1,040	0.86

Appendix 9.3
Traffic Conditions by Road Section
Along LRT Corridor (After Rerouting)

Road Name	Section		Length (kms.)	Width of Carriageway (No. of Lanes)	Peak Hour Traffic Volume				Total (Vehicle) (P.C.U.)	PT Total Ratio(%)	Heavy Direction Percentage (%)	Hourly Capacity	V/C Ratio
	N.a.m.e	Private Car, Van Jeep			Public Transport Jeepney Bus/Truck	Total	Total	Total					
ROXAS BLVD.	MIA Rd. - Libertad	2,753	550	696	1,246	3,999	5,318	31.2	55.0	900/lane	1.08		
	Libertad - Buendia	2,740	8	106	114	2,854	3,017	4.0	58.7	900/lane	0.66		
	Buendia - P. Quirino	3,677	23	718	741	4,418	5,506	16.8	50.6	900/lane	1.03		
	P. Quirino - P. Burgos	3,621	32	993	1,025	4,646	6,152	22.1	53.7	900/lane	0.92		
QUIRINO AVENUE	Redemptorist - MIA Rd.	108	1,410	640	2,050	2,168	3,823	95.0	64.2	720/lane	1.33		
	MIA Road - Real	1,471	860	128	988	2,459	3,081	40.2	60.0	720/lane	1.28		
TAFT AVENUE	City Hall - P. Gil	2,901	1,950	284	2,234	5,135	6,536	43.5	55.5	900/lane	1.01		
	P. Gil - P. Quirino	3,296	700	248	948	4,244	4,966	22.3	55.9	900/lane	0.77		
	P. Quirino - Vito Cruz	3,465	0	160	160	3,625	3,865	4.4	65.1	720/lane	1.75		
	Vito Cruz - Buendia	2,312	0	166	166	2,478	2,727	6.7	53.3	720/lane	1.01		
	Buendia - EDSA	2,851	0	132	132	2,983	3,181	4.4	50.5	720/lane	1.11		
BUENDIA	Roxas Blvd. - Taft Ave.	1,876	260	78	338	2,214	2,461	15.3	57.8	720/lane	0.99		
	Taft Ave. - SSH	3,191	260	310	570	3,761	4,356	15.2	52.9	720/lane	1.60		
PRES. QUIRINO	Roxas Blvd. - Taft Ave.	1,900	50	381	431	2,331	2,928	18.5	63.8	900/lane	0.69		
	Taft Ave. - SSH	2,988	8	288	296	3,284	3,720	9.0	63.8	900/lane	0.88		
PEDRO GIL	Roxas Blvd. - Taft Ave.	311	360	0	360	671	851	53.7	0.82	1,040	0.82		
	Taft Ave. - SSH	146	360	156	516	662	1,076	77.9	1.03	1,040	1.03		
MIA ROAD	Quirino Ave. - MIA Rd.	1,512	276	34	310	1,822	2,011	17.0	51.0	720/lane	0.71		
REDEMPTORIST	Roxas Blvd. - Mexico Rd.	100	350	640	990	1,090	2,225	90.8	68.5	720/lane	1.06		
F. B. HARRISON	Mexico Rd. - Libertad	6	660	0	660	666	996	99.1	61.3	1,040	0.96		
	Libertad - Buendia	481	1,290	0	1,290	1,771	2,416	72.8	one-way	1,040	2.32		
	Buendia - P. Quirino	210	810	34	844	1,054	1,510	80.1	one-way	720/lane	1.05		
A. MABINI	P. Quirino - P. Gil	431	430	34	464	895	1,161	51.8	one-way	720/lane	0.81		
	P. Gil - T.M. Kalaw	765	430	34	464	1,229	1,495	37.8	one-way	720/lane	1.04		
M.H. DEL PILAR	P. Quirino - P. Gil	504	550	0	550	1,054	1,329	52.2	one-way	720/lane	0.92		

(App.9.3 cont'd.)

Road Name	Section		Length (kms.)	Width of Carriageway (No. of Lanes)	Private Car, Van Jeep			Public Transport (Jeepney Bus/Truck Total)			Peak Hour Traffic Volume			PT Total Ratio(%)	Heavy Direction Percentage (%)	Hourly Capacity	V/C Ratio
	Name																
DONADA	Vito Cruz - Buendia		0.8	6.5 (2)	208	220	0	220	428	538	51.4	one-way	720/lane	0.37			
SAN JUAN	Leveriza - F.R.Harrison		0.3	6.5 (2)	137	480	0	480	617	857	77.8	one-way	720/lane	0.60			
EDSA	Taft Ave. - SSH		1.6	36.0 (8)	3,098	960	520	1,480	4,578	5,838	32.3	54.7	900/lane	0.89			
MEXICO ROAD	Taft Ave.-Quirino Ave.		0.8	13.0 (4)	770	500	560	1,060	1,830	2,920	57.9	53.7	720/lane	1.09			
LIBERTAD	Roxas Blvd.-Taft Ave.		0.8	7.0 (2)	250	330	0	330	580	745	56.7		1,040	0.72			
	Taft Ave. - SSH		1.1	7.0 (2)	250	540	0	540	790	1,060	68.4		1,040	1.02			
VITO CRUZ	Roxas Blvd. - Taft Ave.		0.8	10.0 (2)	597	300	112	412	1,009	1,327	40.8		1,040	1.28			
	Taft Ave. - SSH		0.9	11.2 (2)	789	-	163	163	952	1,197	17.1	one-way	720/lane	0.83			
SAN ANDRES	Roxas Blvd.-Taft Ave.		0.9	10.6 (2)	522	1,130	0	1,130	1,652	2,217	68.4	one-way	720/lane	1.54			
U.N. AVENUE	Roxas Blvd.-Taft Ave.		0.8	13.1 (4)	2,000	4	0	4	2,004	2,006	0.2	57.0	720/lane	0.79			
	Taft Ave. - P. Quirino		1.0	13.1 (4)	1,650	0	36	36	1,686	1,740	2.1	68.6	720/lane	0.83			
T.M. KALAW	Roxas Blvd.-Taft Ave.		0.8	25.0 (8)	820	430	0	430	1,250	1,465	34.4	56.1	900/lane	0.23			
T. CLAUDIO	Roxas Blvd.-Quirino Ave		0.3	7.0 (2)	90	550	0	550	640	915	85.9	one-way	720/lane	0.64			
LEVERIZA	Remedios - Rizal Mem.		0.3	5.0 (2)	46	580	0	580	626	916	92.7	one-way	720/lane	0.64			
	Vito Cruz - Buendia		0.8	8.5 (2)	208	220	0	220	428	538	51.4	one-way	720/lane	0.37			
	Buendia - Libertad		0.7	6.1 (2)	208	220	0	220	428	538	51.4	one-way	720/lane	0.37			
PARK AVENUE	Libertad - Mexico Rd.		11.1	6.0 (2)	394	350	0	350	744	919	47.0	one-way	720/lane	0.64			
A. LUNA	Buendia - Libertad		0.6	7.3 (2)	208	130	0	130	338	403	38.5	one-way	720/lane	0.28			
ADRIATICO	P. Faura - P. Gil		0.4	9.0 (2)	242	360	0	360	602	782	59.8		1,040	0.75			
	P. Gil - P. Quirino		1.0	11.0 (2)	120	700	0	700	820	1,170	85.4		1,040	1.13			
	P. Quirino - Vito Cruz		0.7	12.0 (4)	120	1,280	0	1,280	1,400	2,040	91.4	60	900/lane	0.68			
LEON GUINTO	P.Faura - P. Quirino		1.1	12.0 (2)	0	820	0	820	820	1,230		one-way	720/lane	0.85			
	P. Quirino-Vito Cruz		0.9	12.0 (2)	0	670	0	670	670	1,005			1,040	0.97			
DOMINGA	Vito Cruz - Buendia		1.0	6.4 (2)	217	550	0	550	767	1,042	71.7	one-way	720/lane	0.72			

(App.9.3 cont'd.)

Road Name	Section		Length (kms.)	Width of Carriageway (No. of Lanes)	Peak Hour Traffic Volume				PT Total Ratio (%)	Heavy Direction Percentage (%)	Hourly Capacity	V/C Ratio
	Name	Private Car, Van Jeep			Public Transport		Total (Vehicle)	Total (P.C.U.)				
					Jeepney	Bus/Truck						
P. BURGOS	Buendia - Libertad	217	550	0	550	767	1,042	71.7	one-way	720/lane	0.72	
ZAMORA	Libertad - EDSA	2,117	350	0	350	567	742	61.7	one-way	720/lane	0.52	
P. FAURA	Roxas Blvd.-Paco Park	622	360	0	360	982	1,162	36.7	one-way	720/lane	0.81	
GEN. LUNA	Taft Ave. - P. Gil	490	360	156	516	1,006	1,420	51.3	one-way	720/lane	0.99	
DEL PAN BRIDGE		2,373	139	0	139	2,512	2,582	5.5	57.5	900/lane	0.55	
JONES BRIDGE		2,937	560	28	588	3,525	3,847	16.7	60.0	900/lane	1.28	
MCARTHUR BRIDGE		3,959	1,280	22	1,302	5,261	5,934	24.7	50.3	900/lane	1.66	
QUEZON BRIDGE		1,272	2,400	216	2,616	3,888	5,412	67.3	51.2	900/lane	1.54	
AYALA BRIDGE		1,408	16	188	204	1,612	1,902	12.7	54.3	900/lane	0.38	
NAGTAHAN BRIDGE		2,973	248	130	378	3,351	3,670	11.3	52.9	647/lane	0.72	
C.M. RECTO	Del Pan - J.A.Santos	592	1,150	100	1,250	1,842	2,567	67.9	52.6	900/lane	0.75	
	J.A.Santos-Quezon Blvd	609	1,244	58	1,302	1,911	2,620	68.1	69.2	900/lane	0.67	
	Quezon Blvd.-Legarda	567	1,006	160	1,166	1,733	2,476	67.3	50.1	900/lane	0.45	
QUEZON BLVD.	Quezon Bridge - Lerma	2,590	1,350	326	1,676	4,266	5,430	39.3	61.4	900/lane	1.23	
ANDALUCIA	Lerma - V. Fugoso	939	1,237	234	1,471	2,410	3,380	61.0	60.6	900/lane	0.76	
	V. Fugoso - Bambang	941	1,334	178	1,512	2,453	3,387	61.6	59.0	900/lane	1.11	
	Bambang - Laong Laan	635	932	78	1,010	1,645	2,228	61.4	53.4	900/lane	0.66	
LERMA	Quezon Blvd.-N.Reyes	579	1,925	56	1,981	2,560	3,607	77.4	56.9	900/lane	0.57	
ESPAÑA	Lerma-A. Mendoza	1,544	2,153	56	2,209	3,753	4,914	58.9	62.3	900/lane	0.85	
LAONG LAAN	Andalucia - A.Mendoza	188	51	262	313	501	920	62.5	78.3	720/lane	0.50	
DIMASALANG	A.Mendoza-Blumentrirt	336	749	134	883	1,219	1,795	72.4	63.9	720/lane	0.80	
BLUMENTRITT	Rizal Ave.-A.Bonifacio	0	870	0	870	870	1,305	69.3	69.3	900/lane	0.36	
V: FUGOSO	Rizal Ave.-Andalucia	171	750	8	750	921	1,296	81.4		720/lane	0.90	

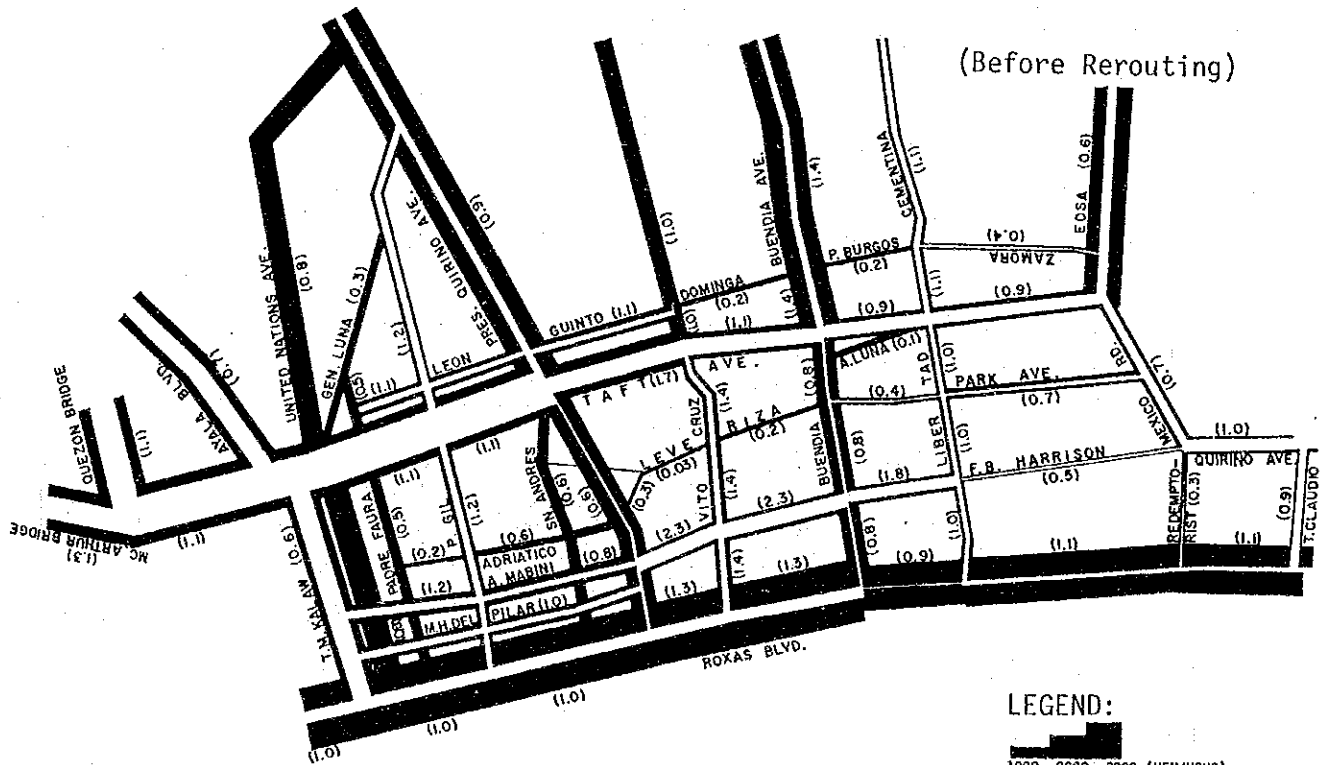
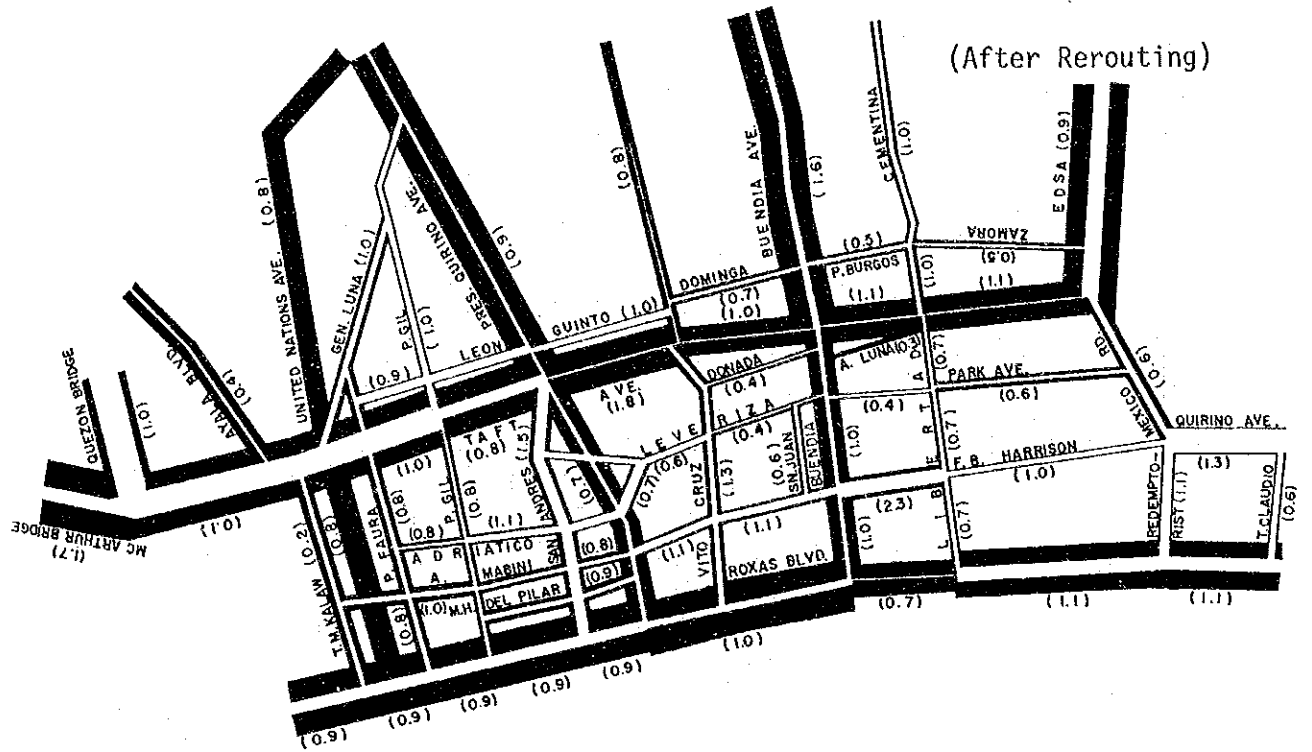
(App. 9.3 cont'd.)

Road Name	Section		Length (kms.)	Width of Carriageway (No. of Lanes)	Private Car, Van Jeep	Peak Hour Traffic Volume			Total (Vehicle)	Total (P.C.U.)	PT Total Ratio(%)	Heavy Direction Percentage (%)	Hourly Capacity	V/C Ratio
	Name					Jeepney	Bus/Truck	Total						
BAMBANG	Rizal Ave.-Andalucia		0.4	12.0 (2)	600	3	29	3	603	605	0.5		1,040	0.58
A. MENDOZA	España - Laong Laan		0.6	18.0 (4)	734	320	130	450	1,184	1,539	38.0	51.9	900/lane	0.44
	Laong Laan - Rizal Ave.		0.8	18.0 (4)	392	226	130	356	748	1,056	47.6	52.2	900/lane	0.31
TAYUMAN	Rizal Ave.-J. Luna		1.2	8.6 (2)	326	339	48	387	713	955	54.3	50.4	1,040	0.92
RIZAL AVENUE	McArthur Br.-C.M.Recto		0.6	15.0 (4)	2,500	750	22	772	3,272	3,680	23.6	62.6	720/lane	1.60
	C.M.Recto-Tayuman		1.4	15.0 (4)	2,383	750	160	910	3,293	3,908	27.5	60.0	720/lane	1.63
	Tayuman - Aurora		1.3	15.0 (4)	1,266	640	24	664	1,930	2,286	34.4	54.9	720/lane	0.87
RIZAL AVE. EXT.	Aurora - EDSA		2.6	20.0 (6)	959	1,509	46	1,555	2,514	3,338	61.9	51.7	900/lane	0.64
MCARTHUR HWY.	EDSA - Mal-Val Bridge		2.9	12.4 (4)	1,071	1,417	54	1,471	2,542	3,332	57.9	60.0	720/lane	1.39
AURORA	Dimasalang - Rizal Ave		0.8	18.0 (6)	2,360	359	24	383	2,743	3,959	14.0	56.1	720/lane	0.77
REINA REGENTE	Binondo - C.M. Recto		0.5	16.5 (4)	1,140	102	0	102	1,242	1,293	8.2	55.3	720/lane	0.50
J.A. SANTOS	C.M.Recto-Tayuman		1.1	25.7 (6)	961	116	138	254	1,215	1,480	20.9	59.8	720/lane	0.41
	Tayuman - Rizal Ave.		1.6	25.7 (6)	1,273	381	128	509	1,782	2,165	28.6	59.5	720/lane	0.60
J. LUNA	Jones Br. - Binondo		0.5	12.0 (2)	1,696	449	28	477	2,173	2,440	22.0		720/lane	1.69
	Binondo - C.M. Recto		0.6	12.0 (2)	829	242	28	270	1,099	1,262	24.6		720/lane	0.88
	C.M. Recto-Tayuman		1.4	12.0 (2)	869	119	0	119	988	1,048	12.0		720/lane	0.73
	Tayuman - Hermosa		1.6	16.2 (4)	1,173	1,121	102	1,223	2,396	3,110	51.0	58.8	720/lane	1.27
HERMOSA	J.A. Santos - J. Luna		0.6	7.9 (2)	527	24	0	24	551	563	4.4		1,040	0.54
10TH AVENUE	Rizal Ave. Ext. - A. Bonifacio		1.5	12.0 (2)	407	342	64	406	813	1,080	49.9	51.6	1,040	1.04
	Rizal Ave. Ext. - J. Luna		1.1	11.0 (2)	460	411	70	481	941	1,252	51.1	63.5	1,040	1.20
EDSA	Rizal Ave. Ext. - A. Bonifacio		1.5	36.0 (6)	790	596	746	1,342	2,132	3,549	62.9	57.7	900/lane	0.76
SAMSON ROAD	Rizal Ave. Ext. -		1.3	15.0 (4)	550	703	375	1,078	1,628	2,542	66.2	63.7	720/lane	1.12

(App. 9.3 cont'd.)

Road Name	Section		Length (kms.)	Width of Carrigeaway (No. of Lanes)	Private Car, Van Jeep	Peak Hour Traffic Volume			Total (Vehicle)	Total (P.C.U.)	PT Total Ratio(%)	Heavy Direction Percentage (%)	Hourly Capacity	V/C Ratio
	Name	Lenght (kms.)				Jeepney	Bus/Truck	Total						
LOPE DE VEGA	P. Guevarra - Rizal Ave.	1.5	12.0 (2)	50	970	0	970	1,020	1,505	95.1	one-way	720/lane	1.05	
P. GUEVARRA	Blumentritt-Antipolo	0.3	8.0 (2)	200	80	0	80	280	320	28.6	one-way	1,040	0.31	
ANTIPOLO	P. Guevarra-J.A.Santos	0.8	9.0 (2)	35	40	0	40	75	95	53.3	one-way	720/lane	0.07	
F. HUERTAS	Antipolo-Lope de Vega	1.7	12.0 (2)	200	970	0	970	1,170	1,655	82.9	one-way	720/lane	1.15	
OROQUIETA	Antipolo-C.M. Recto	2.1	12.0 (2)	200	970	0	970	1,170	1,655	82.9	one-way	720/lane	1.15	
T.M. MAPUA	Cavite - Laguna	0.3	12.0 (2)	200	600	0	600	800	1,100	75.0	one-way	720/lane	0.76	
	V. Fugoso-C.M. Recto	0.4	10.0 (2)	200	750	0	750	950	1,325	78.9	one-way	720/lane	0.98	
	C.M. Recto-McArthur Br.	0.7	7.0 (2)	200	750	0	750	950	1,325	78.9	one-way	720/lane	0.92	
CAVITE	Rizal Ave.-Dimasalang	0.6	12.0 (2)	200	860	0	860	1,060	1,490	81.1	one-way	720/lane	1.03	
	Rizal Ave.-J.A.Santos	0.4	12.0 (2)	200	1,060	0	1,060	1,260	1,790	84.1	one-way	1,040	1.72	
LAGUNA	Ipil - F. Huertas	0.5	12.0 (2)	50	930	0	930	980	1,445	94.9	one-way	720/lane	1.00	
BATANGAS	Ipil - F. Huertas	0.5	12.0 (2)	200	970	22	992	1,192	1,710	83.2	one-way	720/lane	1.19	
BUGALLON	Cavite - J.A. Santos	0.3	11.0 (2)	200	1,060	0	1,060	1,260	1,790	84.1	one-way	1,040	1.72	
3RD AVENUE	Rizal Ave. Ext. - D. Aquino	0.5	6.0 (2)	150	680	39	719	869	1,268	82.7	one-way	720/lane	0.88	
5TH AVENUE	Rizal Ave. Ext. - D. Aquino	0.5	7.0 (2)	150	140	39	179	329	488	54.4	one-way	720/lane	0.32	
6TH AVENUE	Rizal Ave. Ext. - A. Bonifacio	1.0	6.0 (2)	451	50	55	105	556	664	18.9	one-way	720/lane	0.46	
7TH AVENUE	Rizal Ave. Ext. - A. Bonifacio	1.0	7.0 (2)	451	50	55	105	556	664	18.9	one-way	720/lane	0.46	
A. DEL MUNDO	3rd Ave. - 10th Ave.	1.0	6.0 (2)	100	680	28	708	808	1,190	87.6	one-way	720/lane	0.83	
R. SEVILLA	3rd Ave. - 10th Ave.	1.0	6.0 (2)	100	680	28	708	808	1,190	87.6	one-way	720/way	0.83	
5TH STREET	10th Ave. - EDSA	0.6	10.0 (2)	100	500	55	555	655	987	84.7	one-way	720/way	0.69	
HEROES DEL 96	10th Ave. - Samson Rd.	0.6	10.0 (2)	451	140	55	195	646	798	30.2	one-way	1,040	0.77	

Appendix 9.4
 Traffic Volume and Volume Capacity Ratio
 by Road Section (South Corridor)

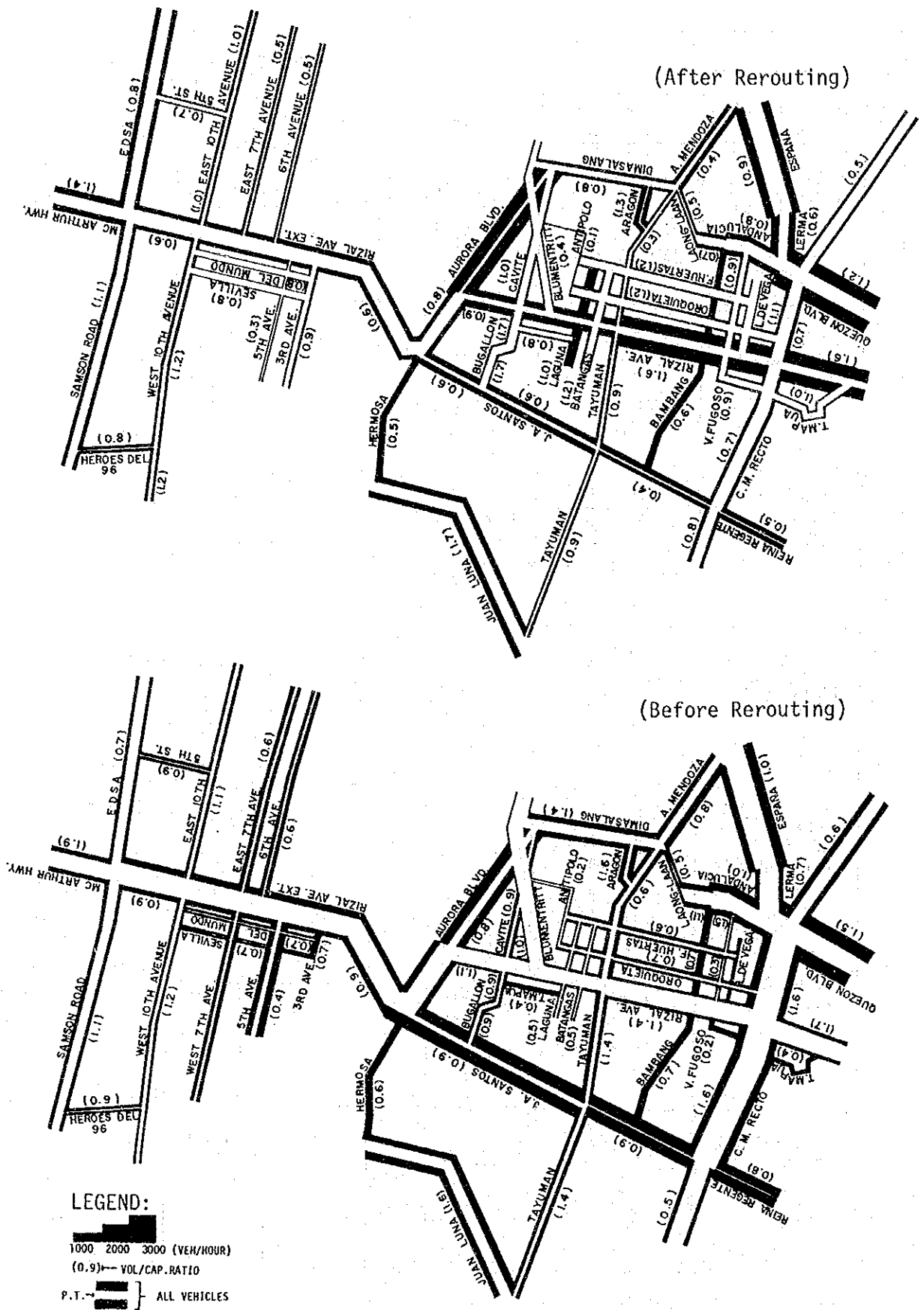


LEGEND:

1000 2000 3000 (VEN/HOUR)
 (0.9) — VOL/CAP. RATIO

P.T. — } ALL VEHICLES

Appendix 9.4 Traffic Volume and Volume Capacity Ratio by Road Section (North Corridor)



Appendix 9.5
Studied Intersections Along LRT Corridor

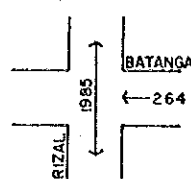
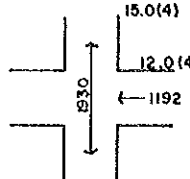
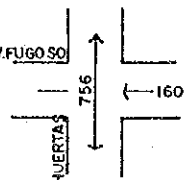
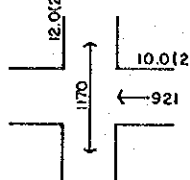
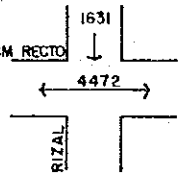
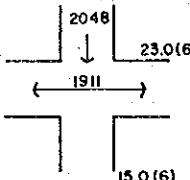
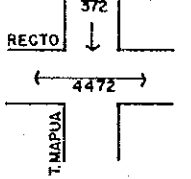
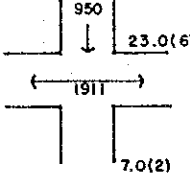
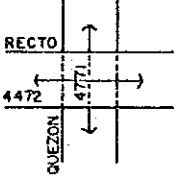
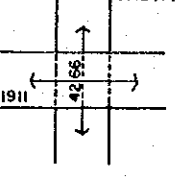
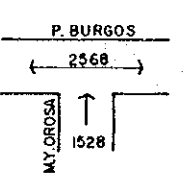
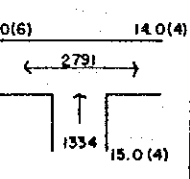
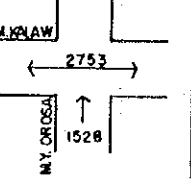
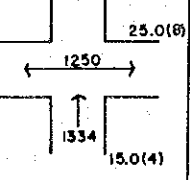
Intersection Name	Traffic Volume		Traffic Signal			Remarks
	Before Rerouting	After Rerouting	Necessity	Present Condition	Plan ^{1/}	
EDSA/ RIZAL AVE. EXT			Yes	None	Phase II	
EDSA/ 5TH STREET			Yes	None		
RIZAL AVE. EXT./ 10TH AVENUE			Yes	Existing		
A. BONIFACIO/ 7TH AVENUE			Yes	None	Phase II	
RIZAL AVE. EXT./ J.A. SANTOS			Yes	Existing		
RIZAL AVE./ AURORA			Yes	Existing		
J.A. SANTOS/ SOLIS			Yes	Existing		

^{1/} Phase II; MMTEAM Project Phase II

(App.9.5 cont'd.)

Intersection Name	Traffic Volume		Traffic Signal			Remarks
	Before Rerouting	After Rerouting	Necessity	Present Condition	Plan	
J.A.SANTOS/ BUGALLON			Yes	None	Phase II	
BLUMENTRITT/ DIMASALANG			Yes	None	Phase II	
BLUMENTRITT/ AURORA			Yes	Existing		
DIMASALANG/ AURORA			Yes	Existing		
RIZAL AVENUE/ CAVITE			Yes	None	Phase II	
RIZAL AVENUE/ BLUMENTRITT			Yes	Existing		
RIZAL AVENUE/ LAGUNA			Yes	Existing		

(App.9.5 cont'd.)

Intersection Name	Traffic Volume		Traffic Signal			Remarks
	Before Rerouting	After Rerouting	Necessity	Present Condition	Plan	
RIZAL AVENUE/ BATANGAS			Yes	None	Phase II	
V. FUGOSO/ F. HUERTAS			Yes	None		
RIZAL AVENUE/ C.M. RECTO			Yes	Existing		
MAPUA/ C.M. RECTO			Yes	Existing		
QUEZON BLVD./ C.M. RECTO				None		Separate Grade Intersection
P. BURGOS/ M.Y. OROSA			Yes	Existing		
T.M. KALAW/ M.Y. OROSA			Yes	Existing		

(App.9.5 cont'd.)

Intersection Name	Traffic Volume		Traffic Signal			Remarks
	Before Rerouting	After Rerouting	Necessity	Present Condition	Plan	
T.M. KALAW A. MABINI			Yes	None		
T.M. KALAW/ M.H. DEL PILAR			Yes	Existing		
TAFT AVENUE/ P. FAURA			Yes	Existing		
TAFT AVENUE/ P. GIL			Yes	Existing		
TAFT AVENUE/ P. QUIRINO			Yes	Existing		
TAFT AVENUE/ REMEDIOS			Yes	Existing		
P. QUIRINO/ LEVERIZA			Yes	None		

(App.9.5 cont'd.)

Intersection Name	Traffic Volume		Traffic Signal			Remarks
	Before Rerouting	After Rerouting	Necessity	Present Condition	Plan	
P. QUIRINO/ ADRIATICO			Yes	Existing		
P. QUIRINO/ A. MABINI			Yes	Existing		
P. QUIRINO/ M.H. DEL PILAR			Yes	Existing		
VITO CRUZ/ TAFT AVENUE			Yes	Existing		
VITO CRUZ/ ADRIATICO			Yes	None		
VITO CRUZ/ F.B. HARRISON			Yes	Existing		
BUENDIA/ DOMINGA			Yes	None	Phase II	

(App.9.5 cont'd.)

Intersection Name	Traffic Volume		Traffic Signal			Remarks
	Before Rerouting	After Rerouting	Necessity	Present Condition	Plan	
BUENDIA/ TAFT AVENUE			Yes	Existing		
BUENDIA/ DONADA			not necessary	none		Right turn only (traffic flow from Donada) Median Island
BUENDIA/ LEVERIZA			Yes	none		
BUENDIA/ F.B. HARRISON			Yes	Existing		
LIBERTAD/ P. BURGOS			Yes	None	Phase II	
LIBERTAD/ TAFT AVENUE			Yes	Existing		
LIBERTAD/ LEVERIZA			Yes	none		

(App.9.5 cont'd.)

Intersection Name	Traffic Volume		Traffic Signal			Remarks
	Before Rerouting	After Rerouting	Necessity	Present Condition	Plan	
LIBERTAD/ F.B. HARRISON			Yes	Existing		
TAFT AVENUE/ EDSA			Yes	Existing *Not in use during LRT Construction	Phase II	
MEXICO ROAD/ REDEMP-TORIST			Yes	Existing *not in use during LRT construction	Phase II	
T. CLAUDIO/ QUIRINO AVE.			Yes	none		
T. CLAUDIO/ ROXAS BLVD.			Not Necessary	none		
MIA ROAD/ QUIRINO AVE.			Yes	Existing		
RIZAL AVENUE/ V. FUGOSO			Yes	none	Phase II	

(App.9.5 cont'd.)

Intersection Name	Traffic Volume		Traffic Signal			Remarks
	Before Rerouting	After Rerouting	Necessity	Present Condition	Plan	
L. GUINTO/ P. GIL			Yes	none		
P. GIL/DART			Not necessary	none		

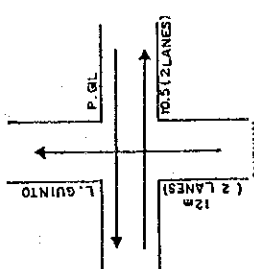
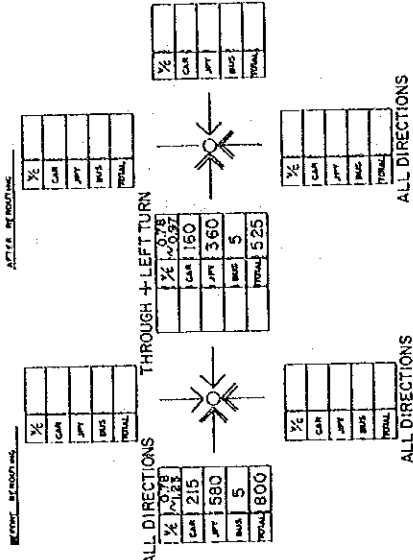
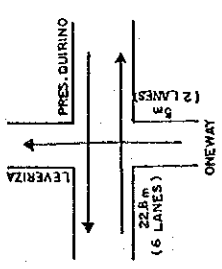
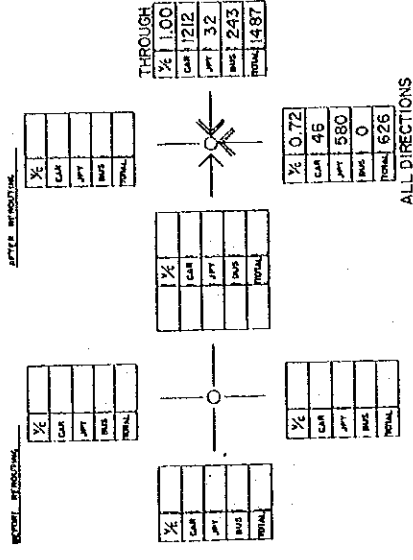
Appendix 9.6
Intersections where Traffic Signal is Needed

Name of Intersection	V/C Ratio by Traffic Signal		Status	Critical Traffic Flow by Direction																																																																						
	Before Rerouting	After Rerouting																																																																								
(1) EDSA/5th St.	0.66 ~ 0.83	0.81 ~ 0.95		<p>BEFORE REROUTING</p> <table border="1"> <tr><td>%</td><td></td></tr> <tr><td>CAR</td><td></td></tr> <tr><td>TRUCK</td><td></td></tr> <tr><td>BUS</td><td></td></tr> <tr><td>TOTAL</td><td></td></tr> </table> <p>THROUGH</p> <table border="1"> <tr><td>%</td><td>0.66</td></tr> <tr><td>CAR</td><td>407</td></tr> <tr><td>TRUCK</td><td>339</td></tr> <tr><td>BUS</td><td>381</td></tr> <tr><td>TOTAL</td><td>1187</td></tr> </table> <p>LEFT TURN</p> <table border="1"> <tr><td>%</td><td>0.81</td></tr> <tr><td>CAR</td><td>360</td></tr> <tr><td>TRUCK</td><td>100</td></tr> <tr><td>BUS</td><td>3</td></tr> <tr><td>TOTAL</td><td>528</td></tr> </table> <p>AFTER REROUTING</p> <table border="1"> <tr><td>%</td><td></td></tr> <tr><td>CAR</td><td></td></tr> <tr><td>TRUCK</td><td></td></tr> <tr><td>BUS</td><td></td></tr> <tr><td>TOTAL</td><td></td></tr> </table> <p>LEFT TURN</p> <table border="1"> <tr><td>%</td><td>0.95</td></tr> <tr><td>CAR</td><td>106</td></tr> <tr><td>TRUCK</td><td>240</td></tr> <tr><td>BUS</td><td>30</td></tr> <tr><td>TOTAL</td><td>376</td></tr> </table>	%		CAR		TRUCK		BUS		TOTAL		%	0.66	CAR	407	TRUCK	339	BUS	381	TOTAL	1187	%	0.81	CAR	360	TRUCK	100	BUS	3	TOTAL	528	%		CAR		TRUCK		BUS		TOTAL		%	0.95	CAR	106	TRUCK	240	BUS	30	TOTAL	376																				
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(2) Rizal Avenue/Laguna	0.48 ~ 0.74	0.71 ~ 0.90	<p>Both way traffic at Rizal Ave. and Laguna before rerouting.</p> <p>oneway traffic at Laguna after rerouting.</p>	<p>BEFORE REROUTING</p> <table border="1"> <tr><td>%</td><td></td></tr> <tr><td>CAR</td><td></td></tr> <tr><td>TRUCK</td><td></td></tr> <tr><td>BUS</td><td></td></tr> <tr><td>TOTAL</td><td></td></tr> </table> <p>LEFT TURN</p> <table border="1"> <tr><td>%</td><td>0.48</td></tr> <tr><td>CAR</td><td>21</td></tr> <tr><td>TRUCK</td><td>20</td></tr> <tr><td>BUS</td><td>1</td></tr> <tr><td>TOTAL</td><td>42</td></tr> </table> <p>AFTER REROUTING</p> <table border="1"> <tr><td>%</td><td></td></tr> <tr><td>CAR</td><td></td></tr> <tr><td>TRUCK</td><td></td></tr> <tr><td>BUS</td><td></td></tr> <tr><td>TOTAL</td><td></td></tr> </table> <p>LEFT TURN</p> <table border="1"> <tr><td>%</td><td>0.71</td></tr> <tr><td>CAR</td><td>109</td></tr> <tr><td>TRUCK</td><td>644</td></tr> <tr><td>BUS</td><td>29</td></tr> <tr><td>TOTAL</td><td>782</td></tr> </table> <p>THROUGH + RIGHT TURN</p> <table border="1"> <tr><td>%</td><td>0.70</td></tr> <tr><td>CAR</td><td>110</td></tr> <tr><td>TRUCK</td><td>784</td></tr> <tr><td>BUS</td><td>29</td></tr> <tr><td>TOTAL</td><td>923</td></tr> </table> <p>ALL DIRECTIONS</p> <table border="1"> <tr><td>%</td><td>0.82</td></tr> <tr><td>CAR</td><td>94</td></tr> <tr><td>TRUCK</td><td>203</td></tr> <tr><td>BUS</td><td>13</td></tr> <tr><td>TOTAL</td><td>310</td></tr> </table> <p>ALL DIRECTIONS</p> <table border="1"> <tr><td>%</td><td>0.79</td></tr> <tr><td>CAR</td><td>42</td></tr> <tr><td>TRUCK</td><td>0</td></tr> <tr><td>BUS</td><td>0</td></tr> <tr><td>TOTAL</td><td>42</td></tr> </table>	%		CAR		TRUCK		BUS		TOTAL		%	0.48	CAR	21	TRUCK	20	BUS	1	TOTAL	42	%		CAR		TRUCK		BUS		TOTAL		%	0.71	CAR	109	TRUCK	644	BUS	29	TOTAL	782	%	0.70	CAR	110	TRUCK	784	BUS	29	TOTAL	923	%	0.82	CAR	94	TRUCK	203	BUS	13	TOTAL	310	%	0.79	CAR	42	TRUCK	0	BUS	0	TOTAL	42
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(App. 9.6 cont'd.)

Name of Intersection	V/C Ratio by Traffic Signal		Status	Critical Traffic Flow by Direction																																								
	Before Rerouting	After Rerouting																																										
(3) V. Fugoso/ F. Huertas	Not necessary to install the traffic signal before rerouting	0.63 ~ 0.69	<p>Not necessary to install the traffic signal before rerouting.</p>	<p>BEFORE REROUTING</p> <table border="1"> <tr><th>%</th><th>CAR</th><th>TRUCK</th><th>BUS</th><th>TOTAL</th></tr> <tr><td>100</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> </table> <p>AFTER REROUTING</p> <table border="1"> <tr><th>%</th><th>CAR</th><th>TRUCK</th><th>BUS</th><th>TOTAL</th></tr> <tr><td>100</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> </table> <p>THROUGH</p> <table border="1"> <tr><th>%</th><th>CAR</th><th>TRUCK</th><th>BUS</th><th>TOTAL</th></tr> <tr><td>100</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> </table> <p>THROUGH + LEFT TURN</p> <table border="1"> <tr><th>%</th><th>CAR</th><th>TRUCK</th><th>BUS</th><th>TOTAL</th></tr> <tr><td>100</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> </table>	%	CAR	TRUCK	BUS	TOTAL	100	0	0	0	0	%	CAR	TRUCK	BUS	TOTAL	100	0	0	0	0	%	CAR	TRUCK	BUS	TOTAL	100	0	0	0	0	%	CAR	TRUCK	BUS	TOTAL	100	0	0	0	0
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100	0	0	0	0																																								
(4) T.M. Kalaw/ A. Mabini	0.44 ~ 0.82	0.21 ~ 0.54	<p>However V/C ratio at T.M. Kalaw is small, it is necessary to install the traffic signal for control the inflow traffic from Mabini.</p>	<p>BEFORE REROUTING</p> <table border="1"> <tr><th>%</th><th>CAR</th><th>TRUCK</th><th>BUS</th><th>TOTAL</th></tr> <tr><td>100</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> </table> <p>AFTER REROUTING</p> <table border="1"> <tr><th>%</th><th>CAR</th><th>TRUCK</th><th>BUS</th><th>TOTAL</th></tr> <tr><td>100</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> </table> <p>THROUGH</p> <table border="1"> <tr><th>%</th><th>CAR</th><th>TRUCK</th><th>BUS</th><th>TOTAL</th></tr> <tr><td>100</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> </table> <p>LEFT TURN</p> <table border="1"> <tr><th>%</th><th>CAR</th><th>TRUCK</th><th>BUS</th><th>TOTAL</th></tr> <tr><td>100</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> </table>	%	CAR	TRUCK	BUS	TOTAL	100	0	0	0	0	%	CAR	TRUCK	BUS	TOTAL	100	0	0	0	0	%	CAR	TRUCK	BUS	TOTAL	100	0	0	0	0	%	CAR	TRUCK	BUS	TOTAL	100	0	0	0	0
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(App. 9.6 cont'd.)

Name of Intersection	V/C Ratio by Traffic Signal		Status	Critical Traffic Flow by Direction
	Before Rerouting	After Rerouting		
(5) L. Guinto/ P. Gil	0.78 ~ 1.40	0.75 ~ 0.99	<ul style="list-style-type: none"> Both way traffic at L. Guinto and P. Gil before rerouting. Northbound one-way traffic at Leon Guinto after rerouting. 	
(6) Pres. Qui-rino/Leve-riza	Not necessary to install the traffic signal	0.72 ~ 1.00	<ul style="list-style-type: none"> Not necessary to install the traffic signal before rerouting. 	

(App.9.6 cont'd.)

Name of Intersection	V/C Ratio by Traffic Signal		Status	Critical Traffic Flow by Direction																																																																																																
	Before Rerouting	After Rerouting																																																																																																		
(7) Vito Cruz/ Adriatico	0.52 ~ 0.64	1.01 ~ 1.34	Change the direction of oneway at Leveriza after rerouting.	<p>BEFORE REROUTING</p> <table border="1"> <tr><th colspan="2">ALL DIRECTIONS</th></tr> <tr><td>%</td><td>0.65</td></tr> <tr><td>CAR</td><td>370</td></tr> <tr><td>JPT</td><td>20</td></tr> <tr><td>BUS</td><td>70</td></tr> <tr><td>TOTAL</td><td>460</td></tr> </table> <p>AFTER REROUTING</p> <table border="1"> <tr><th colspan="2">ALL DIRECTIONS</th></tr> <tr><td>%</td><td>0.52</td></tr> <tr><td>CAR</td><td>145</td></tr> <tr><td>JPT</td><td>396</td></tr> <tr><td>BUS</td><td>0</td></tr> <tr><td>TOTAL</td><td>541</td></tr> </table> <p>BEFORE REROUTING</p> <table border="1"> <tr><th colspan="2">LEFT TURN</th></tr> <tr><td>%</td><td>1.34</td></tr> <tr><td>CAR</td><td>14</td></tr> <tr><td>JPT</td><td>320</td></tr> <tr><td>BUS</td><td>0</td></tr> <tr><td>TOTAL</td><td>334</td></tr> </table> <p>AFTER REROUTING</p> <table border="1"> <tr><th colspan="2">LEFT TURN</th></tr> <tr><td>%</td><td>1.13</td></tr> <tr><td>CAR</td><td>118</td></tr> <tr><td>JPT</td><td>460</td></tr> <tr><td>BUS</td><td>0</td></tr> <tr><td>TOTAL</td><td>578</td></tr> </table> <p>BEFORE REROUTING</p> <table border="1"> <tr><th colspan="2">ALL DIRECTIONS</th></tr> <tr><td>%</td><td>1.01</td></tr> <tr><td>CAR</td><td>280</td></tr> <tr><td>JPT</td><td>20</td></tr> <tr><td>BUS</td><td>70</td></tr> <tr><td>TOTAL</td><td>370</td></tr> </table> <p>AFTER REROUTING</p> <table border="1"> <tr><th colspan="2">ALL DIRECTIONS</th></tr> <tr><td>%</td><td>0.65</td></tr> <tr><td>CAR</td><td>125</td></tr> <tr><td>JPT</td><td>125</td></tr> <tr><td>BUS</td><td>0</td></tr> <tr><td>TOTAL</td><td>250</td></tr> </table> <p>BEFORE REROUTING</p> <table border="1"> <tr><th colspan="2">THROUGH + RIGHT TURN</th></tr> <tr><td>%</td><td>0.46</td></tr> <tr><td>CAR</td><td>862</td></tr> <tr><td>JPT</td><td>40</td></tr> <tr><td>BUS</td><td>33</td></tr> <tr><td>TOTAL</td><td>935</td></tr> </table> <p>AFTER REROUTING</p> <table border="1"> <tr><th colspan="2">THROUGH + RIGHT TURN</th></tr> <tr><td>%</td><td>0.82</td></tr> <tr><td>CAR</td><td>81</td></tr> <tr><td>JPT</td><td>220</td></tr> <tr><td>BUS</td><td>0</td></tr> <tr><td>TOTAL</td><td>345</td></tr> </table>	ALL DIRECTIONS		%	0.65	CAR	370	JPT	20	BUS	70	TOTAL	460	ALL DIRECTIONS		%	0.52	CAR	145	JPT	396	BUS	0	TOTAL	541	LEFT TURN		%	1.34	CAR	14	JPT	320	BUS	0	TOTAL	334	LEFT TURN		%	1.13	CAR	118	JPT	460	BUS	0	TOTAL	578	ALL DIRECTIONS		%	1.01	CAR	280	JPT	20	BUS	70	TOTAL	370	ALL DIRECTIONS		%	0.65	CAR	125	JPT	125	BUS	0	TOTAL	250	THROUGH + RIGHT TURN		%	0.46	CAR	862	JPT	40	BUS	33	TOTAL	935	THROUGH + RIGHT TURN		%	0.82	CAR	81	JPT	220	BUS	0	TOTAL	345
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(8) Buendia/ Leveriza	0.58 ~ 0.65	0.46 ~ 0.82	<ul style="list-style-type: none"> Southbound oneway at Leveriza No inflow of jeepney traffic to Buendia from Leveriza after rerouting. 	<p>BEFORE REROUTING</p> <table border="1"> <tr><th colspan="2">ALL DIRECTIONS</th></tr> <tr><td>%</td><td>0.65</td></tr> <tr><td>CAR</td><td>125</td></tr> <tr><td>JPT</td><td>125</td></tr> <tr><td>BUS</td><td>0</td></tr> <tr><td>TOTAL</td><td>250</td></tr> </table> <p>AFTER REROUTING</p> <table border="1"> <tr><th colspan="2">ALL DIRECTIONS</th></tr> <tr><td>%</td><td>0.46</td></tr> <tr><td>CAR</td><td>862</td></tr> <tr><td>JPT</td><td>40</td></tr> <tr><td>BUS</td><td>33</td></tr> <tr><td>TOTAL</td><td>935</td></tr> </table> <p>BEFORE REROUTING</p> <table border="1"> <tr><th colspan="2">THROUGH</th></tr> <tr><td>%</td><td>0.58</td></tr> <tr><td>CAR</td><td>862</td></tr> <tr><td>JPT</td><td>40</td></tr> <tr><td>BUS</td><td>33</td></tr> <tr><td>TOTAL</td><td>935</td></tr> </table> <p>AFTER REROUTING</p> <table border="1"> <tr><th colspan="2">THROUGH</th></tr> <tr><td>%</td><td>0.82</td></tr> <tr><td>CAR</td><td>81</td></tr> <tr><td>JPT</td><td>220</td></tr> <tr><td>BUS</td><td>0</td></tr> <tr><td>TOTAL</td><td>345</td></tr> </table>	ALL DIRECTIONS		%	0.65	CAR	125	JPT	125	BUS	0	TOTAL	250	ALL DIRECTIONS		%	0.46	CAR	862	JPT	40	BUS	33	TOTAL	935	THROUGH		%	0.58	CAR	862	JPT	40	BUS	33	TOTAL	935	THROUGH		%	0.82	CAR	81	JPT	220	BUS	0	TOTAL	345																																																
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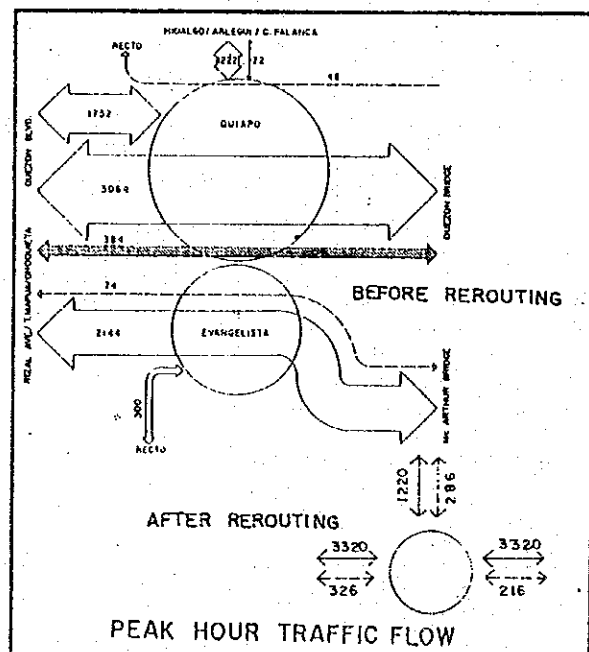
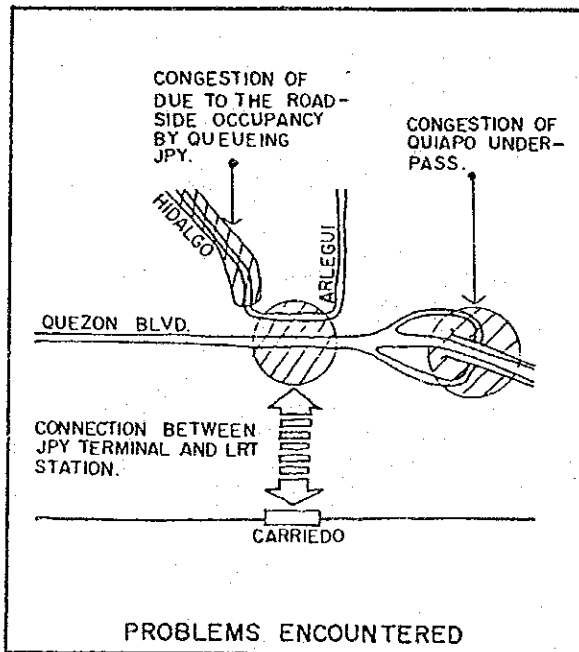
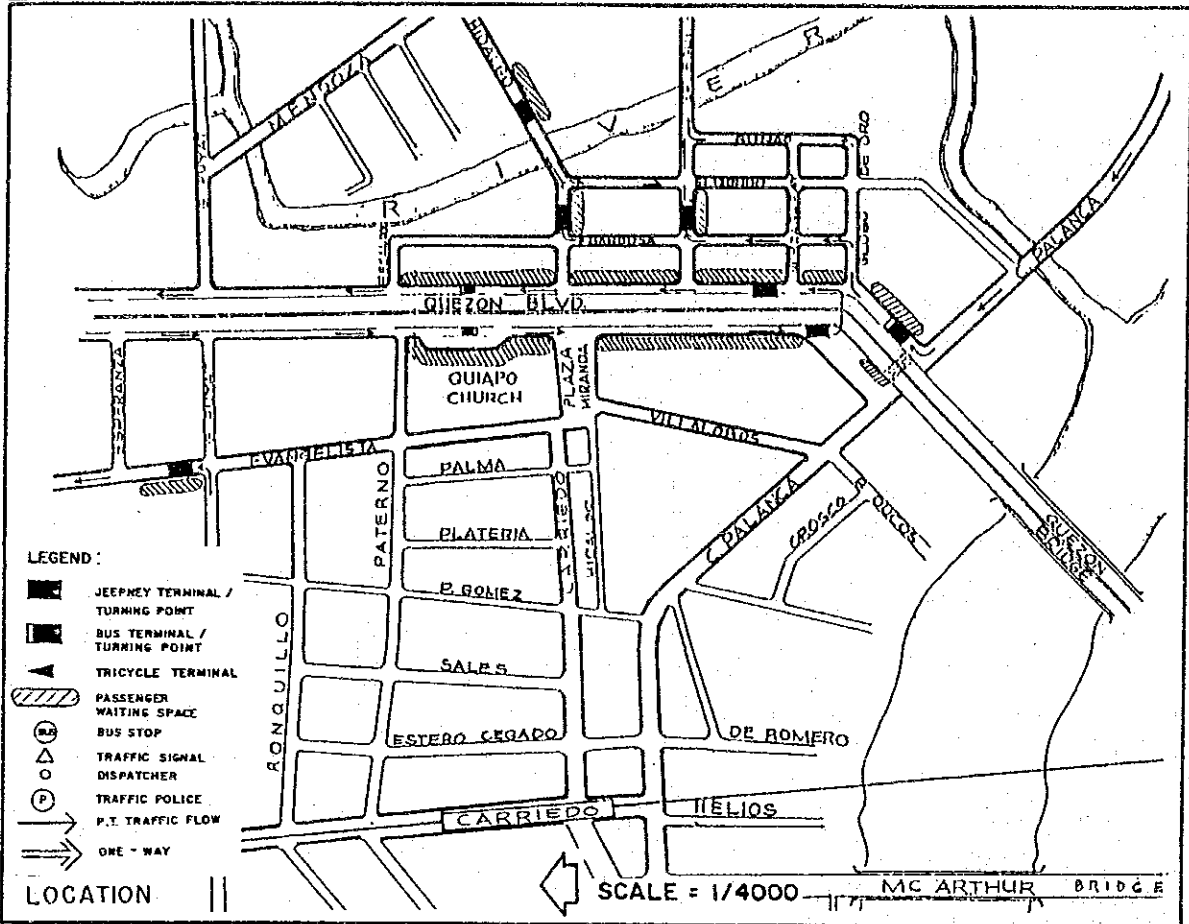
(App. 9.6 cont'd.)

Name of Intersection	V/C Ratio by Traffic Signal		Status	Critical Traffic Flow by Direction																																																																																																														
	Before Rerouting	After Rerouting																																																																																																																
(9) Libertad/Leveriza	0.67 ~ 0.89	0.50 ~ 0.91		<p>BEFORE REROUTING</p> <table border="1"> <tr><th colspan="5">ALL DIRECTIONS</th></tr> <tr><td>%</td><td>0.89</td><td></td><td></td><td></td></tr> <tr><td>CAR</td><td>208</td><td></td><td></td><td></td></tr> <tr><td>TRUCK</td><td>208</td><td></td><td></td><td></td></tr> <tr><td>BUS</td><td>0</td><td></td><td></td><td></td></tr> <tr><td>TOTAL</td><td>416</td><td></td><td></td><td></td></tr> </table> <p>THROUGH + RIGHT TURN</p> <table border="1"> <tr><td>%</td><td>0.87</td><td></td><td></td><td></td></tr> <tr><td>CAR</td><td>162</td><td></td><td></td><td></td></tr> <tr><td>TRUCK</td><td>289</td><td></td><td></td><td></td></tr> <tr><td>BUS</td><td>9</td><td></td><td></td><td></td></tr> <tr><td>TOTAL</td><td>460</td><td></td><td></td><td></td></tr> </table> <p>THROUGH + RIGHT TURN</p> <table border="1"> <tr><td>%</td><td>0.5</td><td></td><td></td><td></td></tr> <tr><td>CAR</td><td>150</td><td></td><td></td><td></td></tr> <tr><td>TRUCK</td><td>198</td><td></td><td></td><td></td></tr> <tr><td>BUS</td><td>0</td><td></td><td></td><td></td></tr> <tr><td>TOTAL</td><td>348</td><td></td><td></td><td></td></tr> </table> <p>AFTER REROUTING</p> <table border="1"> <tr><th colspan="5">ALL DIRECTIONS</th></tr> <tr><td>%</td><td>0.91</td><td></td><td></td><td></td></tr> <tr><td>CAR</td><td>208</td><td></td><td></td><td></td></tr> <tr><td>TRUCK</td><td>220</td><td></td><td></td><td></td></tr> <tr><td>BUS</td><td>0</td><td></td><td></td><td></td></tr> <tr><td>TOTAL</td><td>428</td><td></td><td></td><td></td></tr> </table>	ALL DIRECTIONS					%	0.89				CAR	208				TRUCK	208				BUS	0				TOTAL	416				%	0.87				CAR	162				TRUCK	289				BUS	9				TOTAL	460				%	0.5				CAR	150				TRUCK	198				BUS	0				TOTAL	348				ALL DIRECTIONS					%	0.91				CAR	208				TRUCK	220				BUS	0				TOTAL	428			
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(10) T. Claudio/Quirino	1.00 ~ 1.22	0.78 ~ 0.94		<p>BEFORE REROUTING</p> <table border="1"> <tr><th colspan="5">ALL DIRECTIONS</th></tr> <tr><td>%</td><td>1.00</td><td></td><td></td><td></td></tr> <tr><td>CAR</td><td>111</td><td></td><td></td><td></td></tr> <tr><td>TRUCK</td><td>478</td><td></td><td></td><td></td></tr> <tr><td>BUS</td><td>103</td><td></td><td></td><td></td></tr> <tr><td>TOTAL</td><td>692</td><td></td><td></td><td></td></tr> </table> <p>LEFT TURN</p> <table border="1"> <tr><td>%</td><td>1.22</td><td></td><td></td><td></td></tr> <tr><td>CAR</td><td>90</td><td></td><td></td><td></td></tr> <tr><td>TRUCK</td><td>791</td><td></td><td></td><td></td></tr> <tr><td>BUS</td><td>0</td><td></td><td></td><td></td></tr> <tr><td>TOTAL</td><td>881</td><td></td><td></td><td></td></tr> </table> <p>THROUGH</p> <table border="1"> <tr><td>%</td><td>0.78</td><td></td><td></td><td></td></tr> <tr><td>CAR</td><td>90</td><td></td><td></td><td></td></tr> <tr><td>TRUCK</td><td>550</td><td></td><td></td><td></td></tr> <tr><td>BUS</td><td>0</td><td></td><td></td><td></td></tr> <tr><td>TOTAL</td><td>640</td><td></td><td></td><td></td></tr> </table> <p>AFTER REROUTING</p> <table border="1"> <tr><th colspan="5">ALL DIRECTIONS</th></tr> <tr><td>%</td><td>0.94</td><td></td><td></td><td></td></tr> <tr><td>CAR</td><td>883</td><td></td><td></td><td></td></tr> <tr><td>TRUCK</td><td>516</td><td></td><td></td><td></td></tr> <tr><td>BUS</td><td>76</td><td></td><td></td><td></td></tr> <tr><td>TOTAL</td><td>1475</td><td></td><td></td><td></td></tr> </table>	ALL DIRECTIONS					%	1.00				CAR	111				TRUCK	478				BUS	103				TOTAL	692				%	1.22				CAR	90				TRUCK	791				BUS	0				TOTAL	881				%	0.78				CAR	90				TRUCK	550				BUS	0				TOTAL	640				ALL DIRECTIONS					%	0.94				CAR	883				TRUCK	516				BUS	76				TOTAL	1475			
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QUIAPO

Appendix 12.1-A

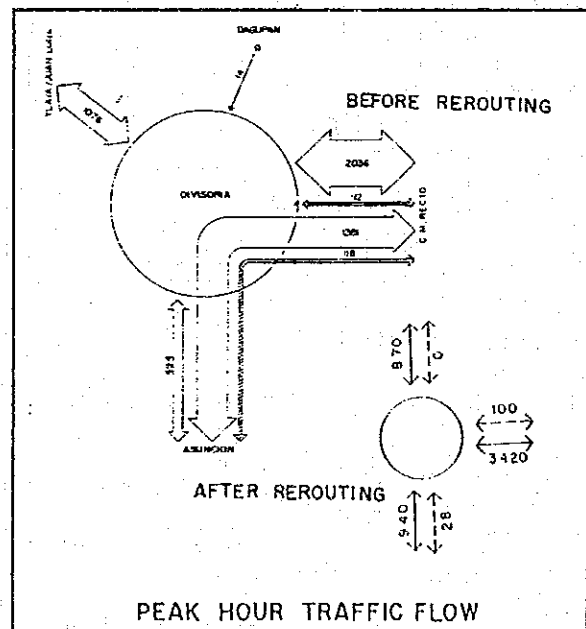
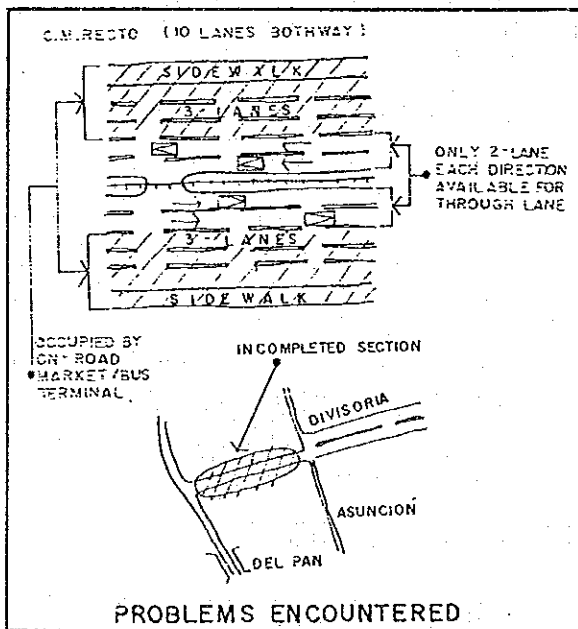
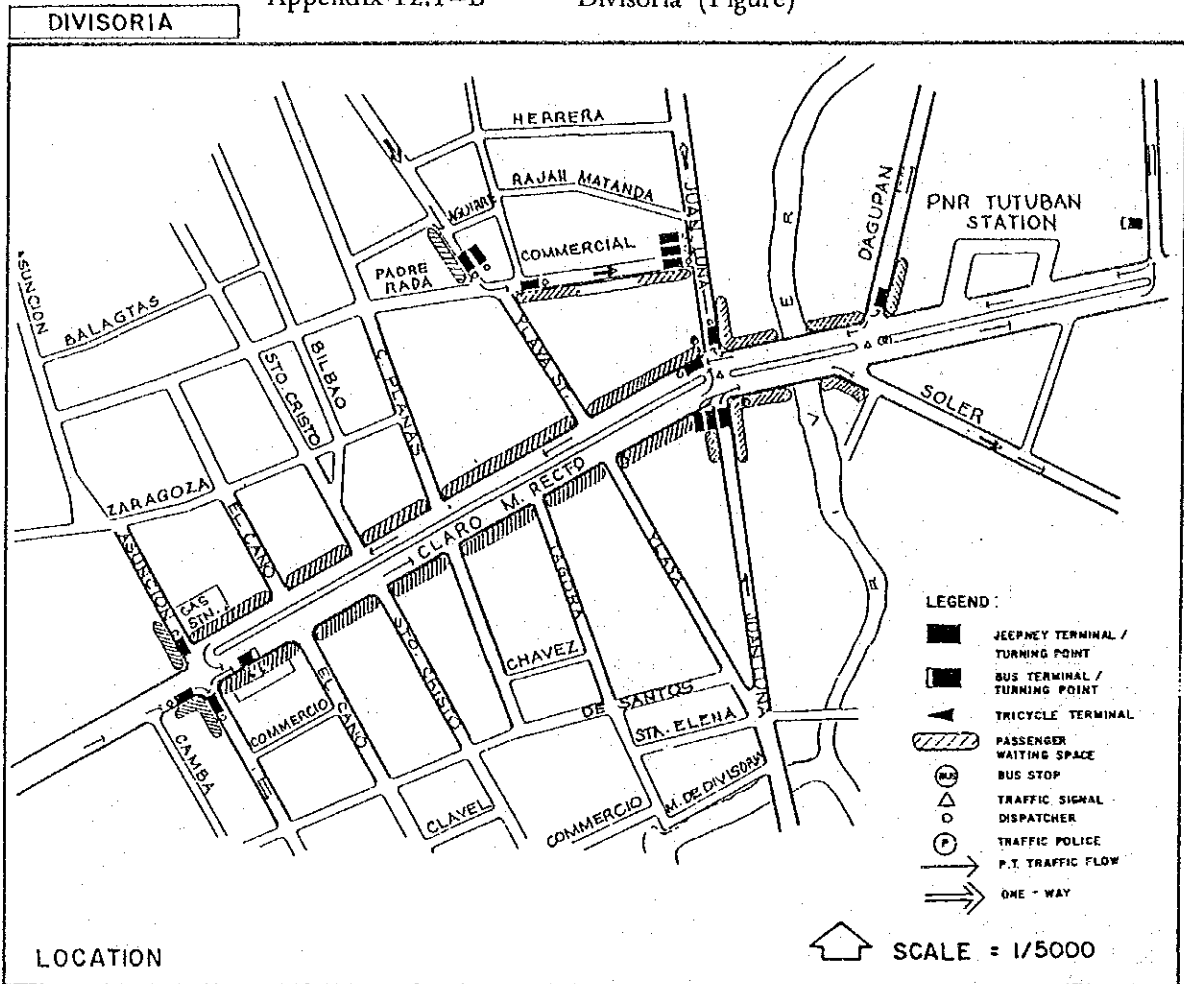
Quiapo (Figure)



(App.12.1 cont'd.)

Appendix 12.1-A Quiapo (Table)

QUIAPO								
Location/Land Use/Facilities								
Location/Major Roads Related		Center of the CBD along Quezon Blvd.						
Land Use of the Adjacent Area		Commercial/Business/Institutional (Church)						
No. of Queueing/Waiting Jeepneys		Off-Road	-					
		On-Road	100					
Terminal Facilities		Roads	Service Road of Quezon Blvd., Evangelista, Quiapo Underpass (Ilalim), Hidalgo, Arligue					
		Pedestrian Facilities	Sidewalk, Pedestrian overpass and underpass (Quezon Blvd.)					
		Other Related Facilities	Bus Terminal (D. Jose) LRT Carriedo Station Bus Bay					
Route Characteristics/Traffic								
Items		Jeepney		Bus		Tricycle	PNR	LRT
		Intracity	Intercity	Intracity	Intercity			
No. of Routes		39	-	16	-	-	-	1
Frequency (one-way)	16 Hours	78,400	-	2,407	-	-	-	-
	Peak Hour	6,803	-	183	-	-	-	24
No. of Pass. Boarding/Aighting (16 Hrs.)		210,300	-	60,900	900	-	-	9,600
Generating/Passing Through		G	-	G	G	-	-	-
Major Origins/Destinations of Routes Using the Terminals		Lealtad, Balic-Balic, Punta Divisoria, Fairview		Pasig, Ayala, Guadalupe etc.	Taytay, Cainta etc.			
Problems Encountered								
Traffic Congestion	Road Section	°Quezon Blvd., Hidalgo, Arligue, Evangelista Quiapo underpass (Ilalim)						
	Inter-section	°C.M. Recto/Evangelista						
Pedestrian Facilities		°Lack of passenger loading/unloading space along Quezon Blvd. °Lack of sidewalk capacity along Evangelista						
Deterioration of Road Facilities								
Accessibility in the Terminal among Modes		°Scattered jeepney turning points within a 650-meter distance °Connection between LRT Carriedo Station and jeepney terminals						
Roadside Usage								
Other Problems								



(App.12.1 cont'd.)

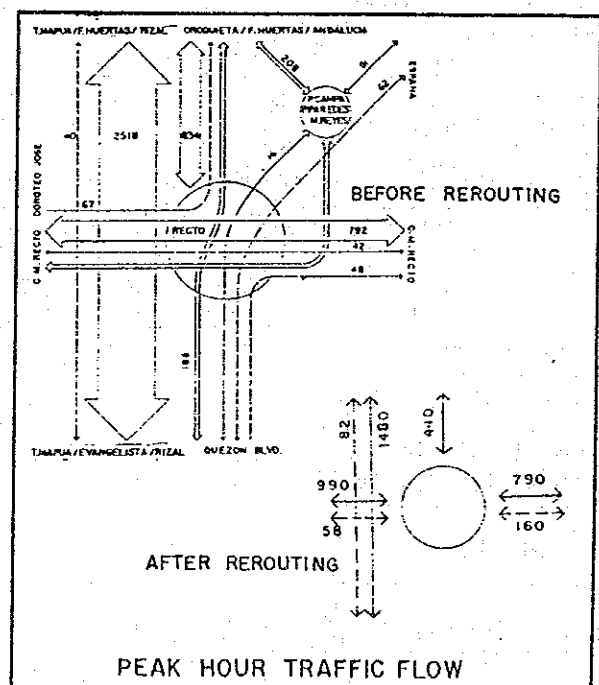
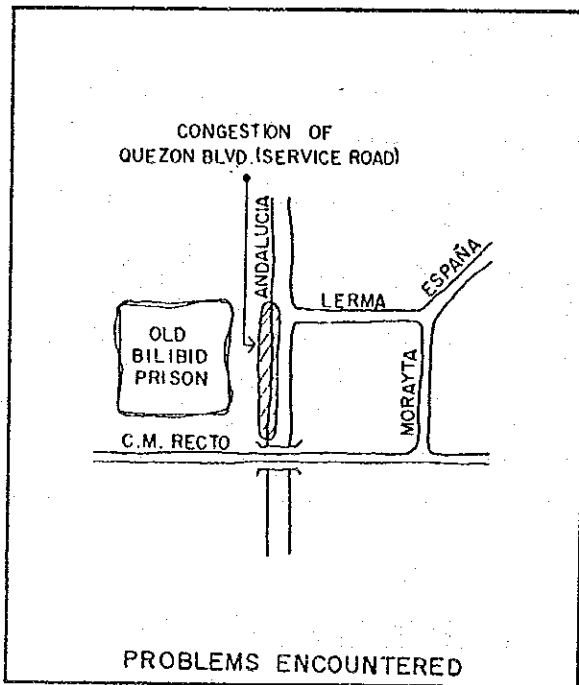
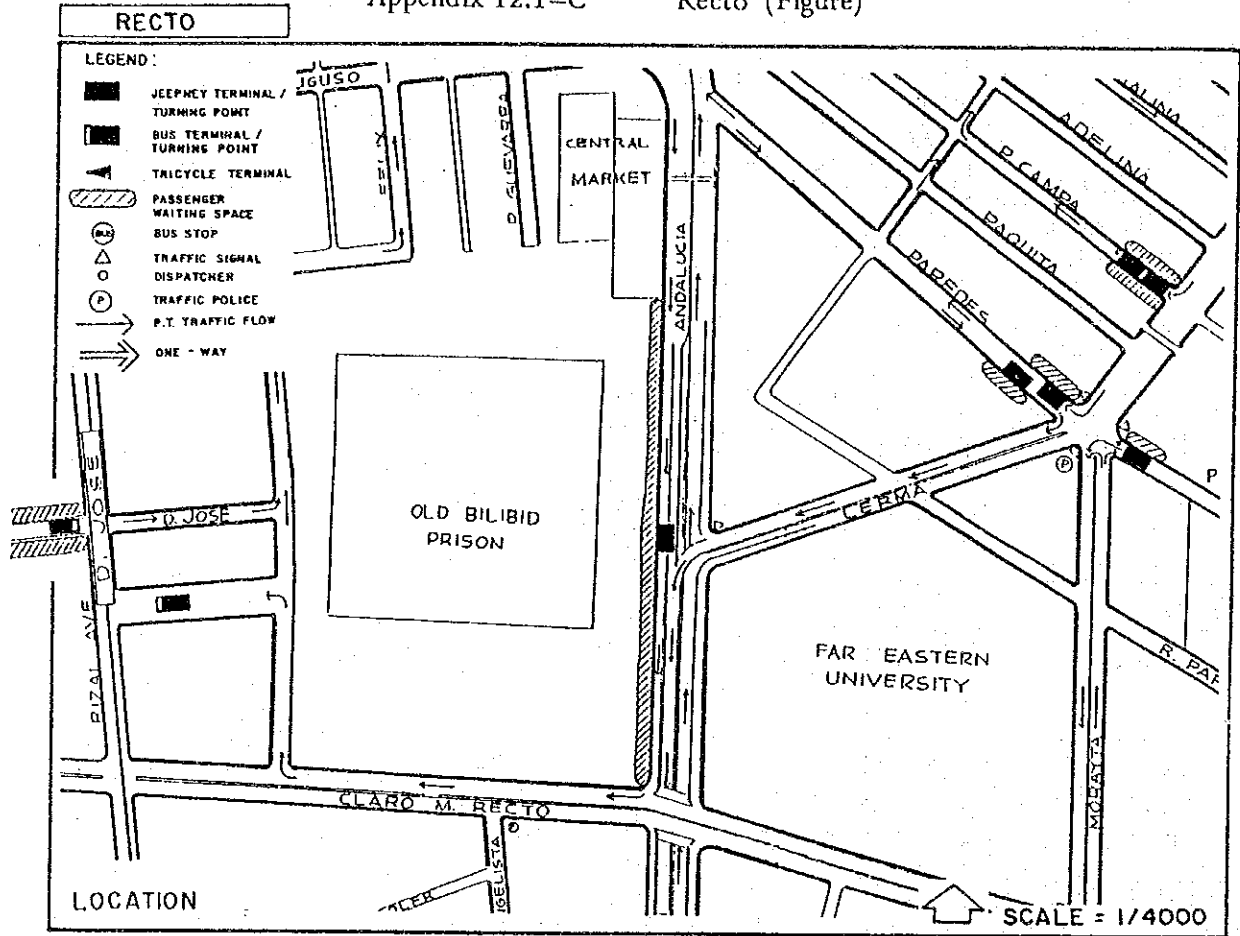
Appendix 12.1-B Divisoria (Table)

DIVISORIA								
Location/Land Use/Facilities								
Location/Major Roads Related		East part of the CBD along C.M. Recto near North Harbor						
Land Use of the Adjacent Area		Business/Commercial Area (Public Market)						
No. of Queueing/Waiting Jeepneys		Off-Road	-					
		On-Road	140					
Terminal Facilities		Roads	C.M. Recto, Asuncion, J. Luna, Dagupan, P. Rada					
		Pedestrian Facilities	Sidewalk					
		Other Related Facilities	Tutuban PNR Station with Provincial Bus Terminal Bus terminal along C.M. Recto Disused PNR track (C.M. Recto)					
Route Characteristics/Traffic								
Items		Jeepney		Bus		Tricycle	PNR	LRT
		Intracity	Intercity	Intracity	Intercity			
No. of Routes		44	3	12	33	-	-	-
Frequency (one-way)	16 Hours	38,426	74	605	710	-	-	-
	Peak Hour	2,772	7	49	107	-	-	-
No. of Pass. Boarding/Alighting (16 Hrs.)		215,900	700	21,400	13,800	-	-	-
Generating/Passing Through		G	G	G	G	-	-	-
Major Origins/Destinations of Routes Using the Terminals		San Juan Sta. Mesa Sangandaan Navotas	Bulacan etc.	Marikina Pasig etc.	Bataan Bulacan Cavite	-	-	-
Problems Encountered								
Traffic Congestion	Road Section	° C.M. Recto, J. Luna, Asuncion						
	Inter-section	° C.M. Recto/Asuncion, J. Luna/C.M. Recto						
Pedestrian Facilities		° Lack of sidewalk capacity along C.M. Recto						
Deterioration of Road Facilities		° C.M. Recto between Del Pan and Asuncion (very poor)						
Accessibility in the Terminal among Modes		° Scattered jeepney and bus terminals within a 900-meter distance						
Roadside Usage		° Street vendors and bus and jeepney queues along C.M. Recto						
Other Problems		° Traffic congestion due to the mixture of calessa and other public transport traffic along C.M. Recto and Asuncion						

(App.12.1 cont'd.)

Appendix 12.1-C

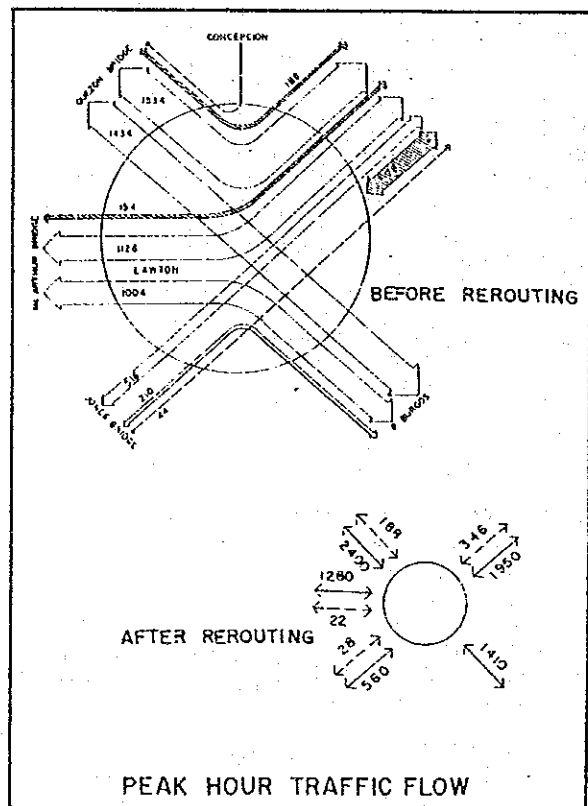
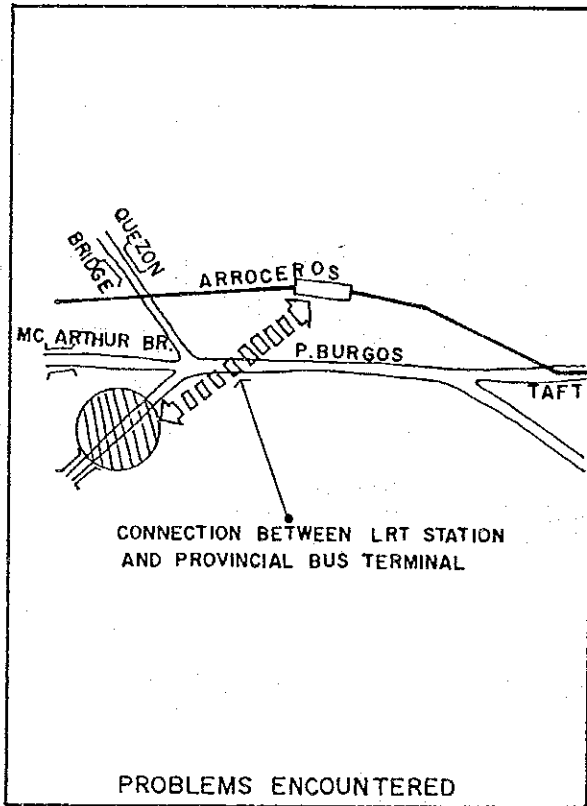
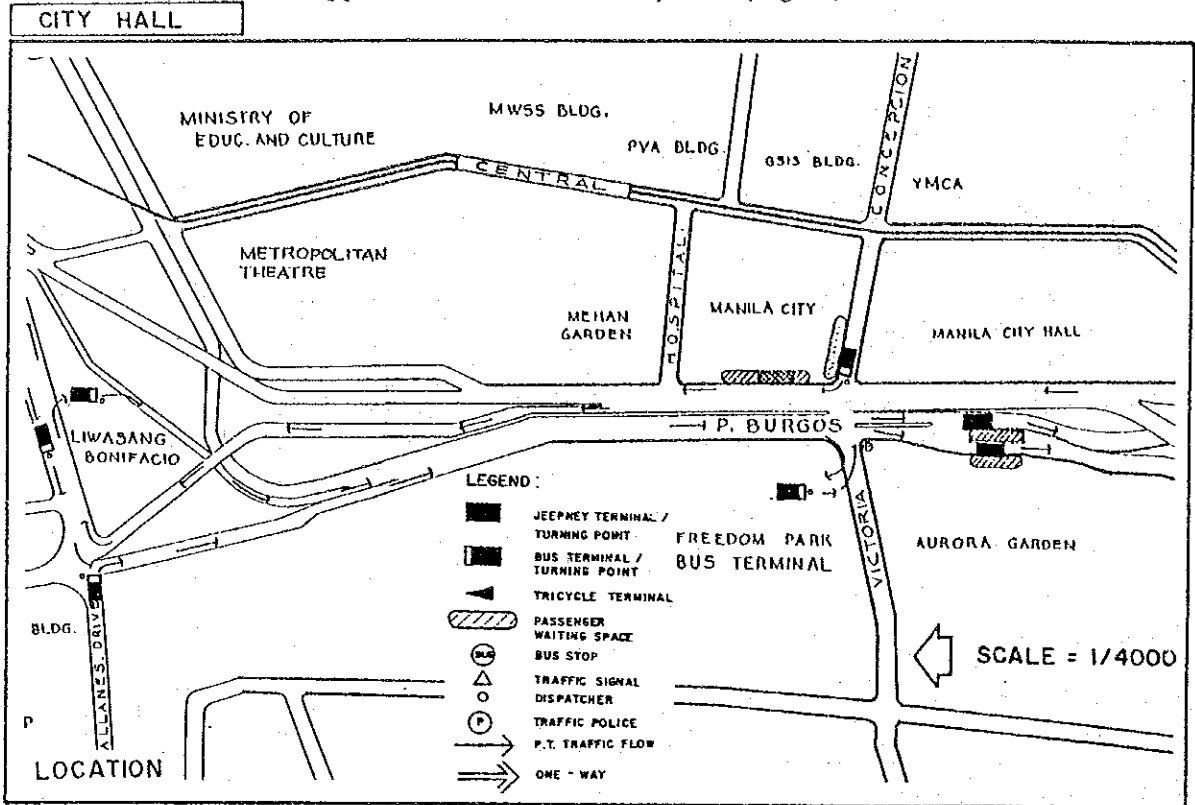
Recto (Figure)



(App.12.1 cont'd.)

Appendix 12.1-C Recto (Table)

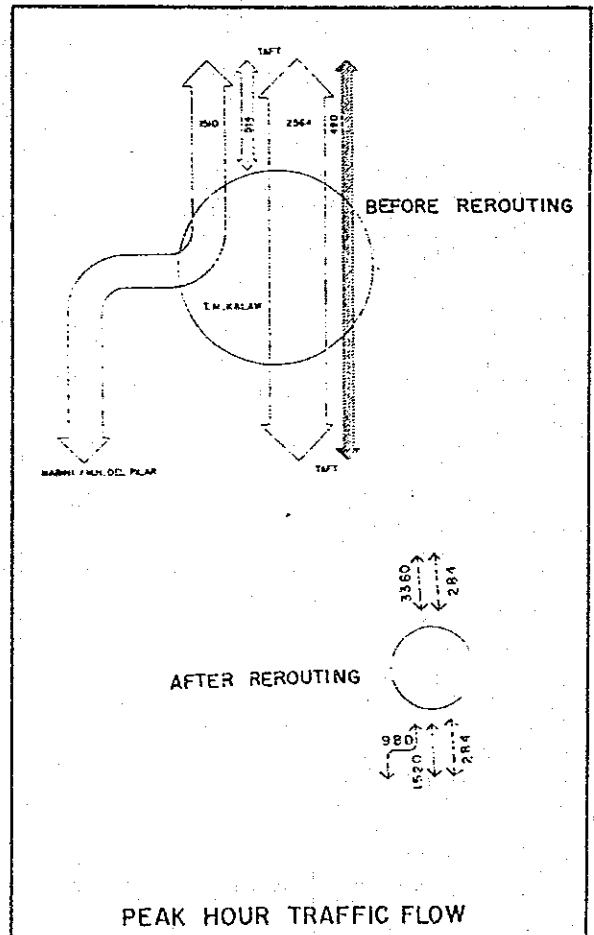
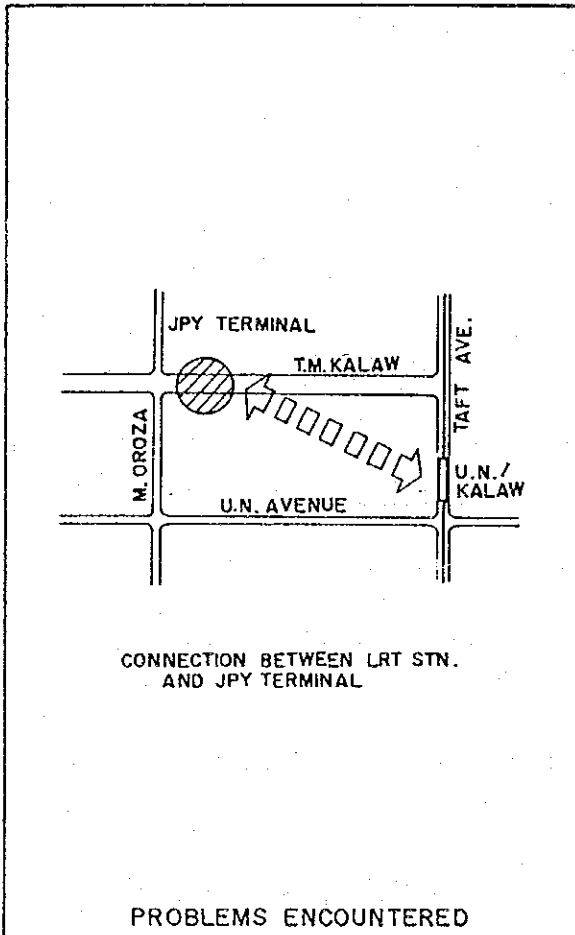
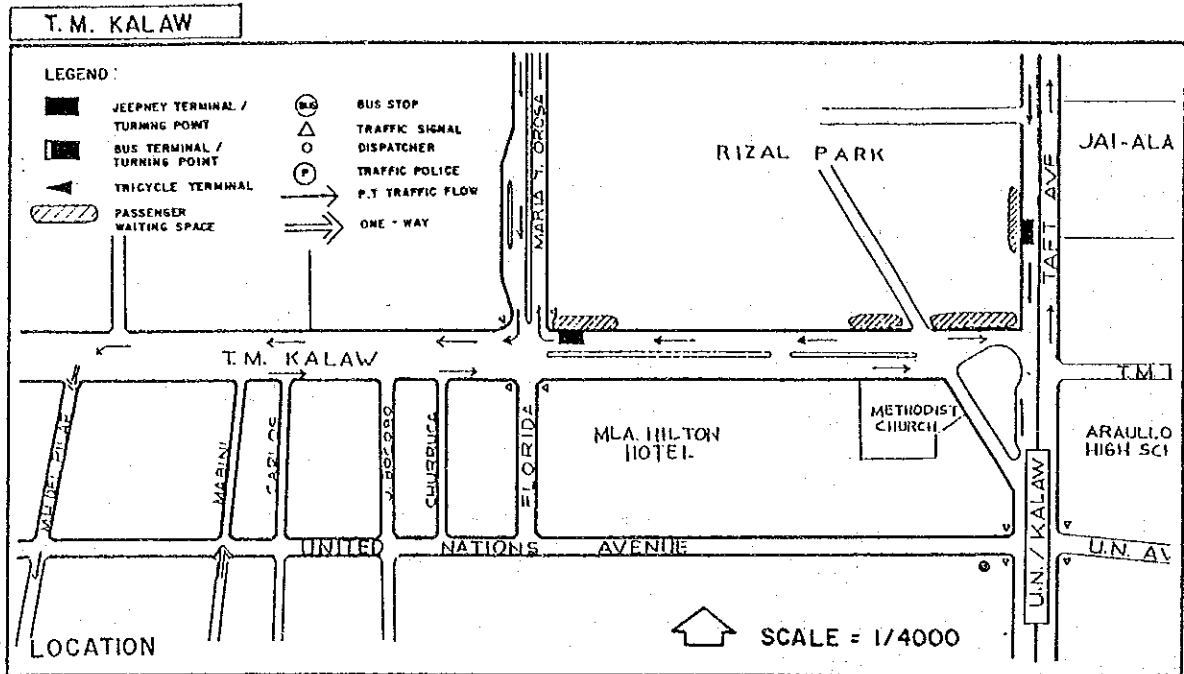
RECTO								
Location/Land Use/Facilities								
Location/Major Roads Related		Northern part of the CBD at the junction of Quezon Blvd. and C.M. Recto						
Land Use of the Adjacent Area		Commercial/Business/Institutional near the University Belt						
No. of Queueing/Waiting Jeepneys		Off-Road	-					
		On-Road	-					
Terminal Facilities		Roads	Quezon Blvd. (Service Road), C.M. Recto, Oroquieta					
		Pedestrian Facilities	Pedestrian overpass on the Andalucia Pedestrian Underpass under the C.M. Recto sidewalk					
		Other Related Facilities	Provincial bus terminal (D. Jose) LRT D. Jose terminal					
Route Characteristics/Traffic								
Items		Jeepney		Bus		Tricycle	PNR	LRT
		Intracity	Intercity	Intracity	Intercity			
No. of Routes		12	4	-	7	-	-	1
Frequency (one-way)	16 Hours	52,791	709	-	695	-	-	-
	Peak Hour	5,462	62	-	41	-	-	24
No. of Pass. Boarding/Alighting (16 Hrs.)		119,800	1,300	12,700	800	-	-	12,500
Generating/Passing Through		G	G	P	G	-	-	-
Major Origins/Destinations of Routes Using the Terminals		Blum. Gasak Nayotas Malinta	Bulacan	-	Pampanga etc.	-	-	-
Problems Encountered								
Traffic Congestion	Road Section	° Quezon Blvd. (Especially Service Road)						
	Inter-section	° Rizal Avenue/C.M. Recto						
Pedestrian Facilities		° Lack of passenger loading/unloading space along Quezon Blvd. (Service Road)						
Deterioration of Road Facilities								
Accessibility in the Terminal among Modes		° Connection between LRT D. Jose Station and jeepney terminal						
Roadside Usage								
Other Problems								



(App.12.1 cont'd.)

Appendix 12.1-D City Hall (Table)

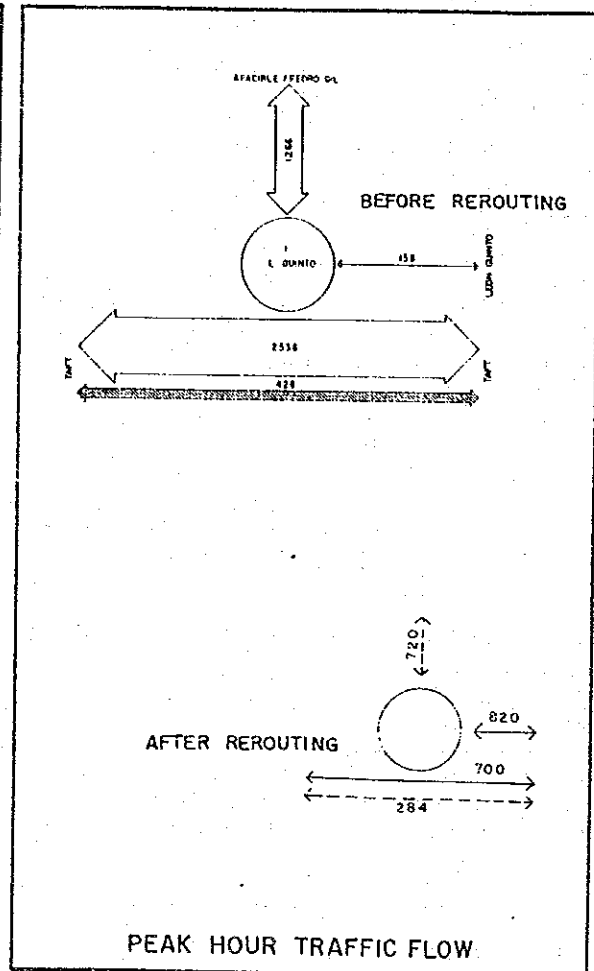
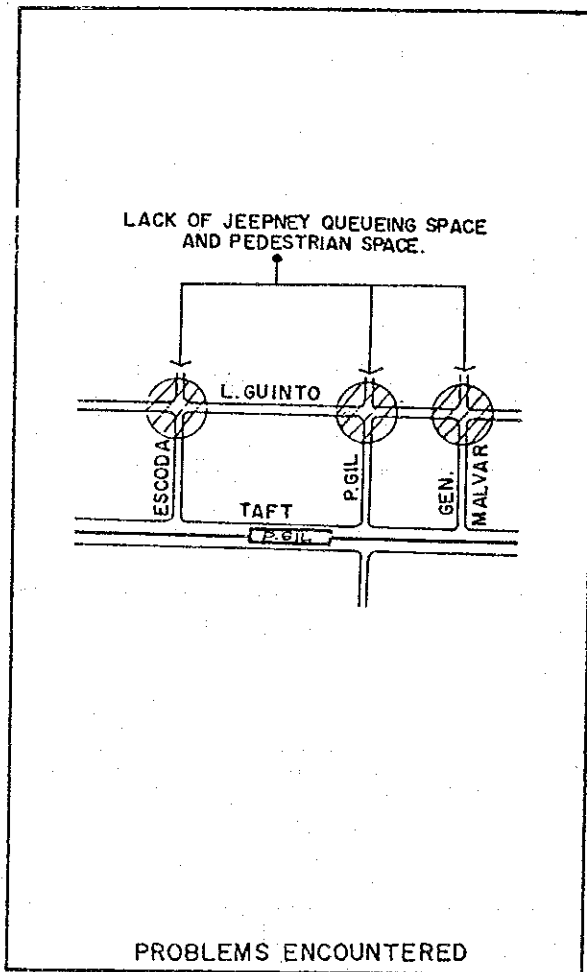
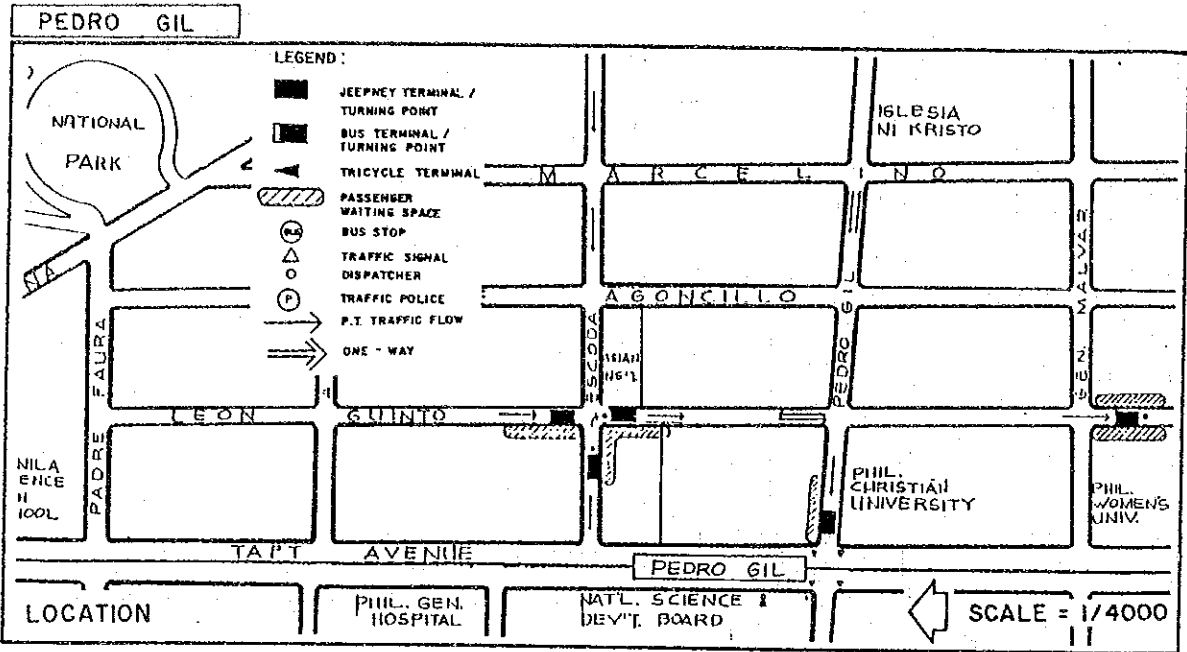
CITY HALL								
Location/Land Use/Facilities								
Location/Major Roads Related		Center of the CBD in front of City Hall along P. Burgos						
Land Use of the Adjacent Area		Business/Institutional (City Hall, Mehan Garden, Liwasang Bonifacio, Post Office)						
No. of Queueing/Waiting Jeepneys		Off-Road	-					
		On-Road	-					
Terminal Facilities		Roads	P. Burgos, Magallanes Drive					
		Pedestrian Facilities	Pedestrian Underpass at P. Burgos Sidewalk,					
		Other Related Facilities	Bus Bay Lawton Bus Terminal LRT Central Terminal					
Route Characteristics/Traffic								
Items		Jeepney		Bus		Tricycle	PNR	LRT
		Intracity	Intercity	Intracity	Intercity			
No. of Routes		1	-	-	17	-	-	1
Frequency (one-way)		16 Hours	57,600	-	-	1,096	-	-
		Peak Hour	12,171	-	-	201	-	24
No. of Pass. Boarding/Aighting (16 Hrs.)		90,900	-	17,900	57,800	-	-	9,400
Generating/Passing Through		P		P	G	-	-	
Major Origins/Destinations of Routes Using the Terminals		Divisoria	-	-	Laguna Batangas Cavite etc.	-	-	-
Problems Encountered								
Traffic Congestion		Road Section						
		Inter-section						
Pedestrian Facilities		°Lack of Passenger loading/unloading space in front of City Hall. °Lack of waiting sheds in the Bus terminal						
Deterioration of Road Facilities								
Accessibility in the Terminal among Modes		°Scattered Bus/Jeepney Terminals within a 700-meter distance °Connection between LRT Station and Provincial Bus Terminal						
Roadside Usage								
Other Problems								



(App.12.1 cont'd.)

Appendix 12.1-E T. M. Kalaw (Table)

T.M. KALAW								
Location/Land Use/Facilities								
Location/Major Roads Related		Center of CBD in front of Rizal Park along T. M. Kalaw						
Land Use of the Adjacent Area		Commercial/Institutional/Open spaces (Rizal Park, Hilton Hotel)						
No. of Queueing/Waiting Jeepneys		Off-Road	-					
		On-Road	-					
Terminal Facilities		Roads	T.M. Kalaw					
		Pedestrian Facilities	Sidewalk					
		Other Related Facilities	LRT T.M. Kalaw station					
Route Characteristics/Traffic								
Items		Jeepney		Bus		Tricycle	PNR	LRT
		Intracity	Intercity	Intracity	Intercity			
No. of Routes		20	2	-	-	-	-	1
Frequency (one-way)	16 Hours	6,539	161	-	-	-	-	-
	Peak Hour	533	8	-	-	-	-	-
No. of Pass. Boarding /Alighting (16 Hrs.)		31,700	600	1,400	-	-	-	4,600
Generating/Passing Through		P	G	P	-	-	-	-
Major Origins/Destinations of Routes Using the Terminals		Proj 2 & 3 Divisoria Proj. 6 Mandalay	Bulacan	-	-	-	-	-
Problems Encountered								
Traffic Congestion	Road Section							
	Inter-section							
Pedestrian Facilities								
Deterioration of Road Facilities								
Accessibility in the Terminal among Modes		° Connection between LRT station and Jeepney Terminal						
Roadside Usage								
Other Problems								

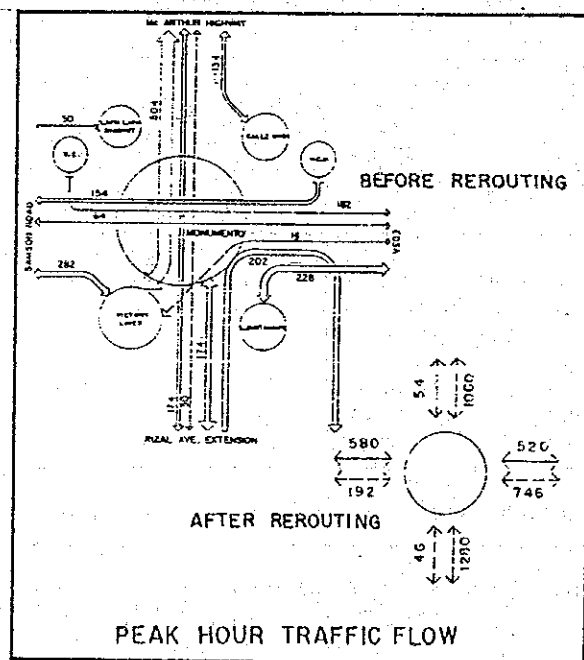
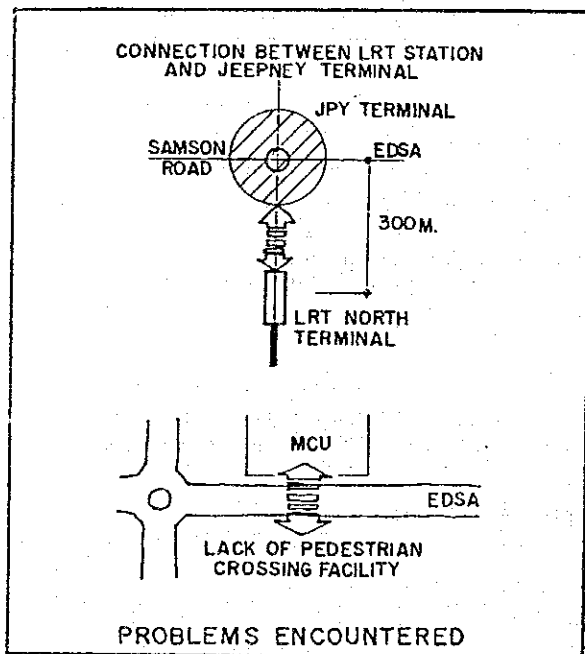
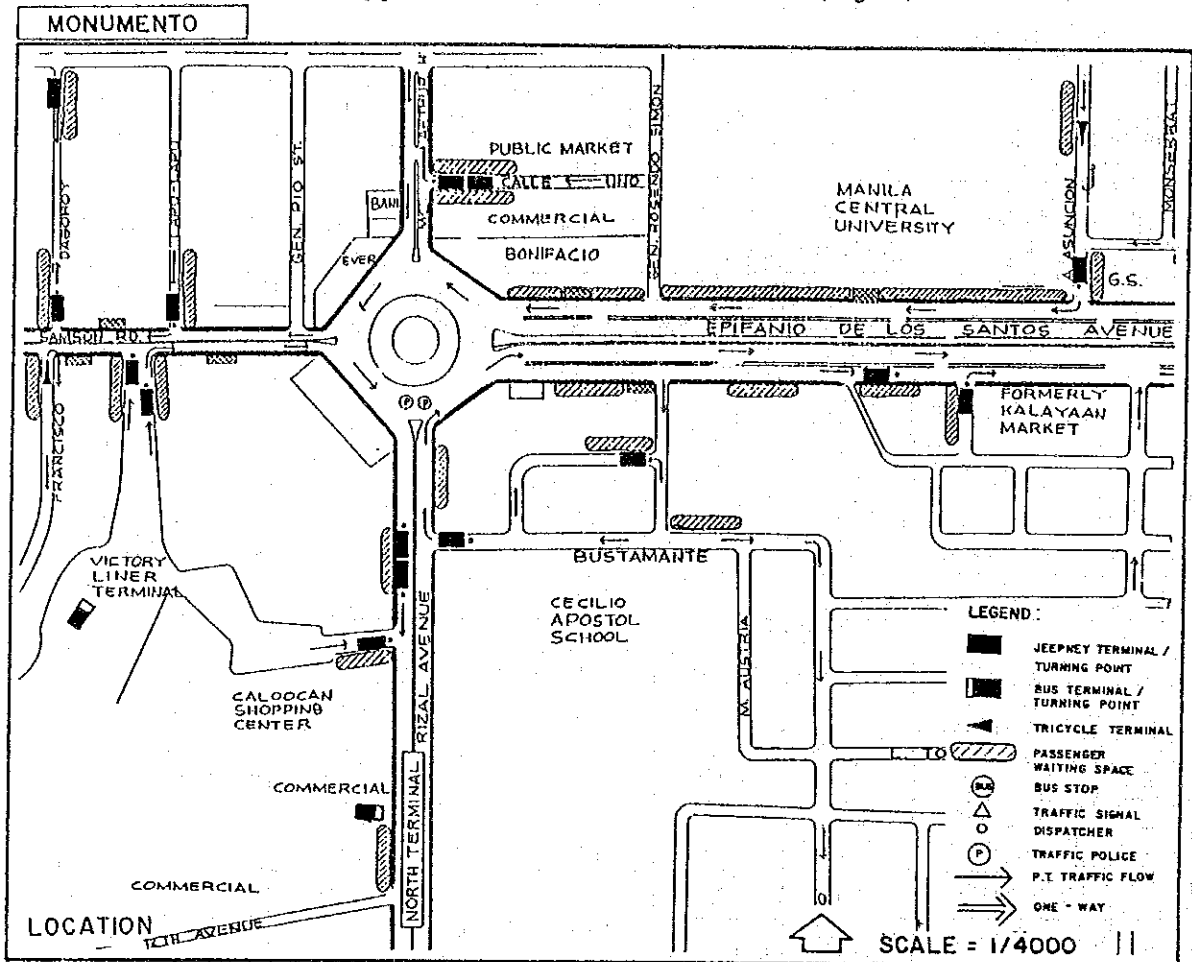


(App.12.1 cont'd.)

Appendix 12.1-F

Pedro Gil/Leon Guinto (Table)

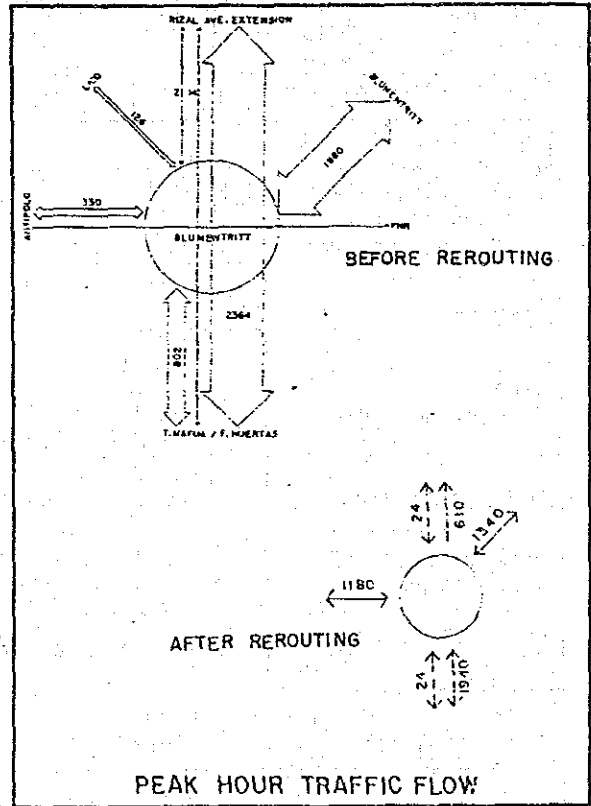
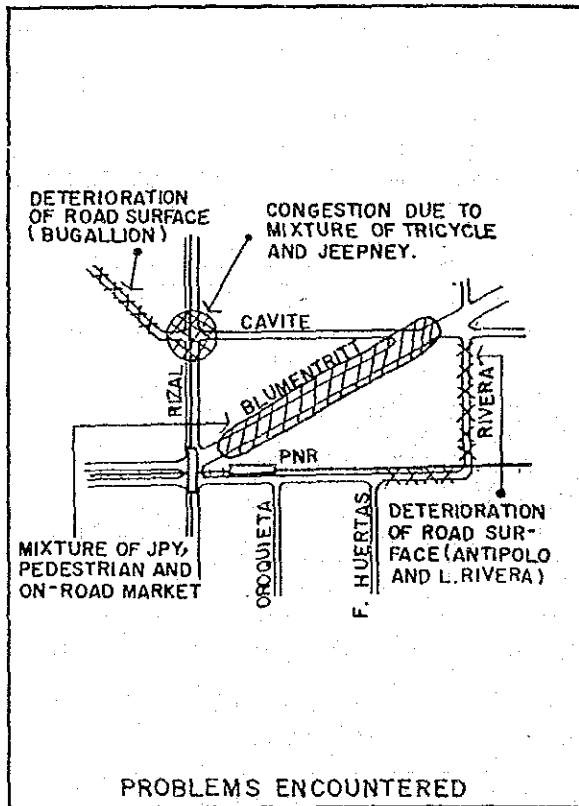
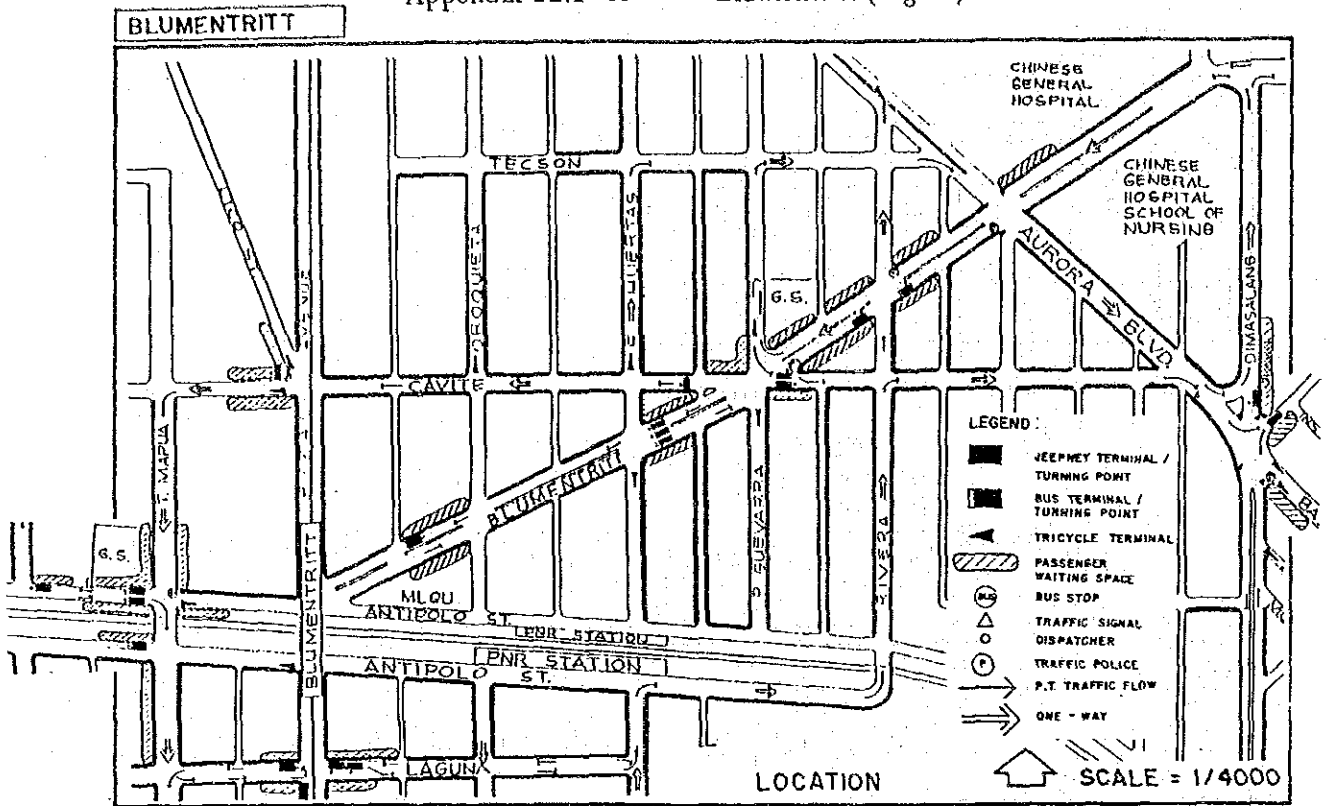
P. GIL/L.GUINTO								
Location/Land Use/Facilities								
Location/Major Roads Related		Southern part of the CBD near Paco Park along L. Guinto						
Land Use of the Adjacent Area		Institutional/Residential (PCU, PWU, PGH)						
No. of Queuing/Waiting Jeepneys		Off-Road	-					
		On-Road	40					
Terminal Facilities		Roads	L. Guinto, Escoda, P. Gil					
		Pedestrian Facilities	Sidewalk					
		Other Related Facilities	LRT Pedro Gil Station					
Route Characteristics/Traffic								
Items		Jeepney		Bus		Tricycle	PNR	LRT
		Intracity	Intercity	Intracity	Intercity			
No. of Routes		13	-	-	-	-	-	1
Frequency (one-way)	16 Hours	15,000	-	-	-	-	-	-
	Peak Hour	3,337	-	-	-	-	-	24
No. of Pass. Boarding/Alighting (16 Hrs.)		103,200	-	-	-	-	-	4,000
Generating/Passing Through		6	-	-	-	-	-	-
Major Origins/Destinations of Routes Using the Terminals		Guadalupe Sta. Ana Pandacan etc.	-	-	-	-	-	-
Problems Encountered								
Traffic Congestion	Road Section	° L. Guinto, P. Gil						
	Inter-section	° L. Guinto/P. Gil						
Pedestrian Facilities		° Lack of Passenger waiting space along L. Guinto						
Deterioration of Road Facilities								
Accessibility in the Terminal among Modes		° Scattered jeepney turning point within a 400-meter distance ° Connection between LRT stations and jeepney terminals.						
Roadside Usage								
Other Problems								



(App.12.1 cont'd.)

Appendix 12.1-G Monumento (Table)

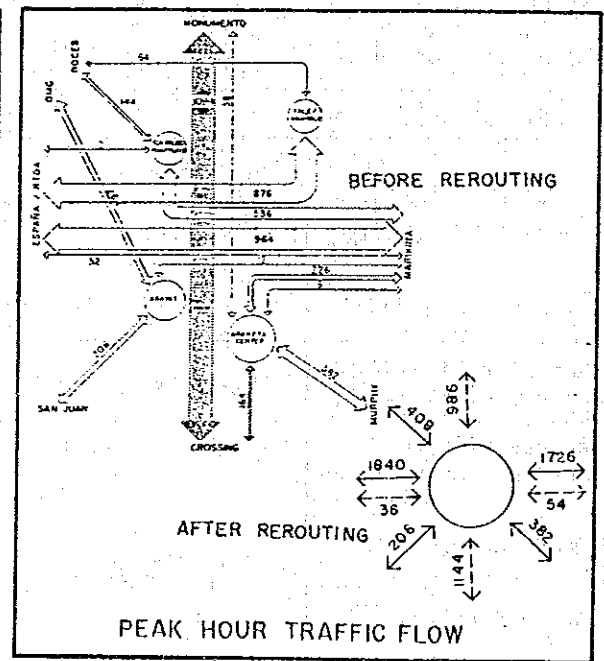
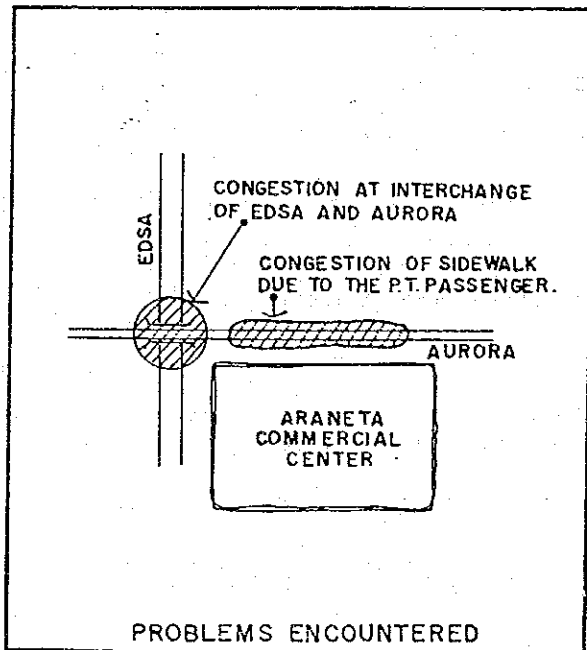
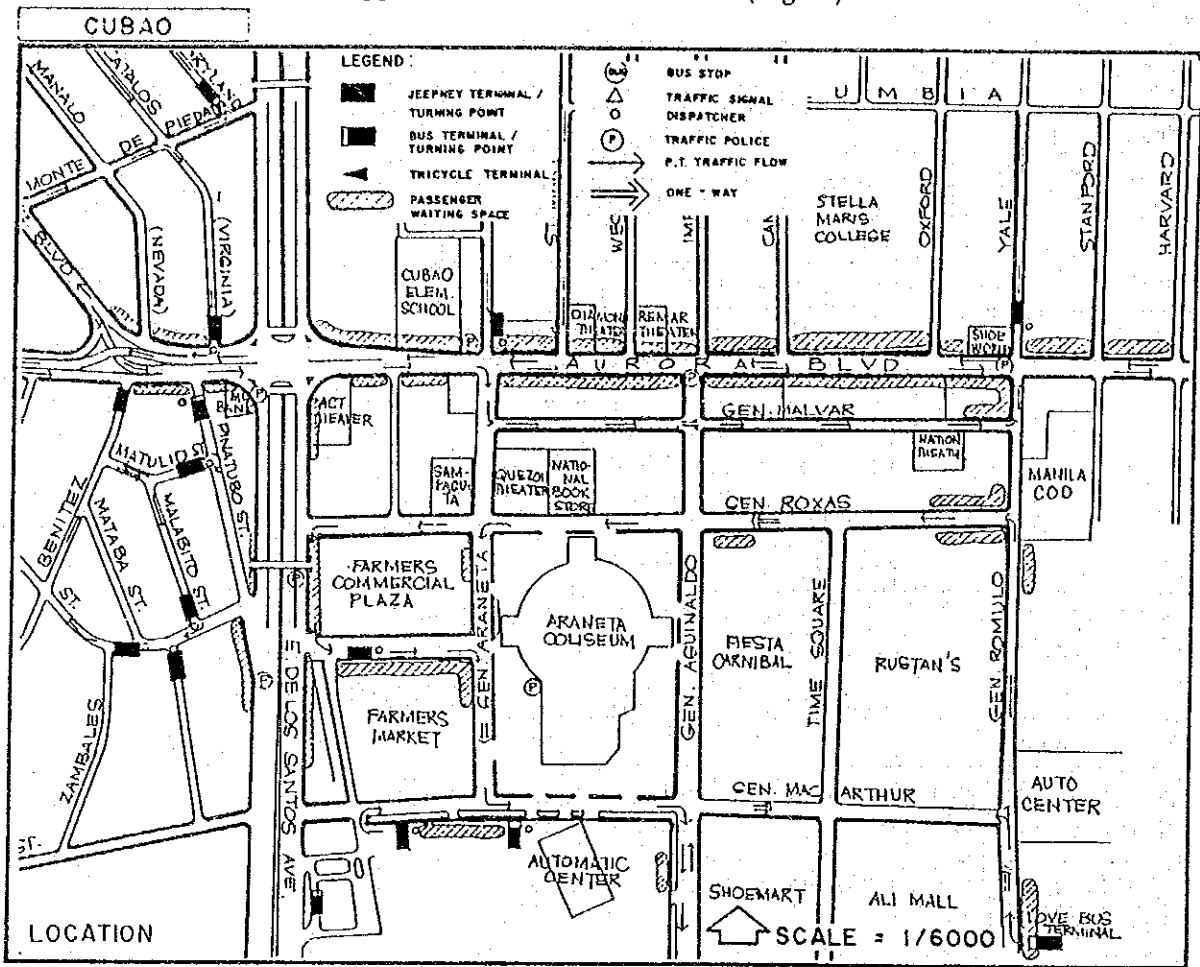
MONUMENTO								
Location/Land Use/Facilities								
Location/Major Roads Related		Center of Caloocan City along EDSA at the Bonifacio Monument						
Land Use of the Adjacent Area		Commercial/Institutional (Public Market, MCU, Araneta University)						
No. of Queueing/Waiting Jeepneys		Off-Road	70					
		On-Road	30					
Terminal Facilities		Roads	EDSA, Rizal Ave. Ext., Calle Uno, Bustamante, Lapu-Lapu, Dagohoy, A. Asuncion, Francisco					
		Pedestrian Facilities	Sidewalk					
		Other Related Facilities	<ul style="list-style-type: none"> ◦ Victory Liner Provincial Bus terminal ◦ LRT North Terminal ◦ Gas Station 					
Route Characteristics/Traffic								
Items		Jeepney		Bus		Tricycle	PNR	LRT
		Intracity	Intercity	Intracity	Intercity			
No. of Routes		30	15	17	2	3	-	1
Frequency (one-way)	16 Hours	27,792	3,008	3,051	112	34,275	-	-
	Peak Hour	5,211	313	215	8	3,428	-	24
No. of Pass. Boarding /Alighting (16 Hrs.)		235,600	21,300	103,300	2,000	81,000	-	16,000
Generating/Passing Through		G	G	G	P	G	-	G
Major Origins/Destinations of Routes Using the Terminals		888/Tullahan Pasay Rtda. Baclaran Libertad etc.	Bulacan etc.	MIA Ayala Baclaran	Zambales Arayat Bataan			
Problems Encountered								
Traffic Congestion	Road Section	◦ Samson Road ◦ McArthur Highway						
	Inter-section	◦ Monumento Rotonda, EDSA/5th Avenue						
Pedestrian Facilities		<ul style="list-style-type: none"> ◦ Lack of pedestrian crossing on EDSA in front of MCU ◦ Lack of sidewalk capacity around the LRT North Terminal 						
Deterioration of Road Facilities								
Accessibility in the Terminal among Modes		<ul style="list-style-type: none"> ◦ Scattered jeepney turning points within a 700-meter distance ◦ Connection between jeepney terminal and LRT North Terminal 						
Roadside Usage		◦ On-road market on the sidewalk along EDSA						
Other Problems								



(App.12.1 cont'd.)

Appendix 12.1-H Blumentritt (Table)

BLUMENTRITT									
Location/Land Use/Facilities									
Location/Major Roads Related		In the north of the CBD at the intersection of Rizal Avenue and Blumentritt							
Land Use of the Adjacent Area		Commercial/Institutional (Public Market, MLQU, San Roque Church)							
No. of Queueing/Waiting Jeepneys		Off-Road	35						
		On-Road	155						
Terminal Facilities		Roads	Blumentritt, Cavite, Laguna, Antipolo						
		Pedestrian Facilities	Sidewalk						
		Other Related Facilities	LRT Blumentritt Station PNR San Lazaro Station Gas Station						
Route Characteristics/Traffic									
Items		Jeepney		Bus		Tricycle	PNR	LRT	
		Intracity	Intercity	Intracity	Intercity				
No. of Routes		44	3	-	-	5	-	1	
Frequency (one-way)		16 Hours	29,213	87	-	-	11,200	-	-
		Peak Hour	7,385	8	-	-	1,200	-	24
No. of Pass. Boarding /Alighting (16 Hrs.)		132,500	600	-	-	31,600	-	3,500	
Generating/Passing Through		G	P	P	P	-	-	G	
Major Origins/Destinations of Routes Using the Terminals		Divisoria Pasay Rtda Baclaran Libertad	Grotto etc.	-	-	-	-	-	
Problems Encountered									
Traffic Congestion		Road Section	° F. Huertas, Antipolo, P. Guevarra, Cavite						
		Inter-section	° Rizal Avenue/Blumentritt, Rizal Avenue/Cavite, Rizal Ave./Laguna, P. Guevarra/Cavite						
Pedestrian Facilities		° Lack of sidewalk capacity along Rizal Avenue/Blumentritt/Cavite/Antipolo							
Deterioration of Road Facilities		° Antipolo, (F. Huertas - L. Rivera) (very poor) T. Bugallon (very poor) L. Rivera (poor)							
Accessibility in the Terminal among Modes		° Scattered jeepney turning points within a 650 meter distance							
Roadside Usage		° On-road market along Blumentritt and Antipolo							
Other Problems		° Traffic congestion by mixture of tricycle, jeepney and bus ° Anticipated increase of traffic along T. Bugallon after rerouting							



CUBAO

Location/Land Use/Facilities		
Location/Major Roads Related	Eastern business/commercial center of M. Manila at the junction of EDSA and Aurora Blvd.	
Land Use of the Adjacent Area	Commercial (Araneta Commercial Center)	
No. of Queueing/Waiting Jeepneys	Off-Road	110
	On-Road	150
Terminal Facilities	Roads	Arayat, Pinatubo, Meryland, Anapolis, Center Ave., Gen. McArthur, Yale
	Pedestrian Facilities	Sidewalk Pedestrian Overpass (EDSA)
	Other Related Facilities	Mini/Love/Prov. Bus Terminals

Route Characteristics/Traffic								
Items		Jeepney		Bus		Tricycle	PNR	LRT
		Intracity	Intercity	Intracity	Intercity			
No. of Routes		47	7	12	14			
Frequency (one-way)	16 Hours	65,113	2,387	1,339	503			
	Peak Hour	4,237	172	93	44			
No. of Pass. Boarding/Alighting (16 Hrs.)		207,400	31,300	24,800	3,700			
Generating/Passing Through		6	6	6	6			
Major Origins/Destinations of Routes Using the Terminals		Baclaran San Juan Marikina QMC etc.	Montalban Angono Taytay etc.	Ayala Quiapo etc.	Cogeo			

Problems Encountered		
Traffic Congestion	Road Section	◦ EDSA (Service Road)
	Inter-section	◦ EDSA/Aurora
Pedestrian Facilities	◦ Lack of Sidewalk width along Aurora (Slightly)	
Deterioration of Road Facilities	◦ Arayat (very poor)	
Accessibility in the Terminal among Modes	◦ Scattered jeepney turning points within a 900-meter distance	
Roadside Usage		
Other Problems		