JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)

DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS
REPUBLIC OF THE PHILIPPINES

THE STUDY ON SELECTED AIRPORTS MASTER PLANNING PROJECT IN THE REPUBLIC OF THE PHILIPPINES

FINAL REPORT

Volume 3 : APPENDIX

March 1997

PACIFIC CONSULTANTS INTERNATIONAL
AERO ASAHI CORPORATION
JOINT VENTURE-TOKYO, JAPAN

JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)

DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS
REPUBLIC OF THE PHILIPPINES

THE STUDY ON SELECTED AIRPORTS MASTER PLANNING PROJECT IN THE REPUBLIC OF THE PHILIPPINES

FINAL REPORT

Volume 3 : APPENDIX

March 1997

PACIFIC CONSULTANTS INTERNATIONAL
AERO ASAHI CORPORATION
JOINT VENTURE-TOKYO, JAPAN

TABLE OF CONTENTS

Appendix to Chapter 8

Appendix to Chapter 10

Appendix to Chapter 12

Appendix to Chapter 13

Appendix to Chapter 15

Appendix to Chapter 17

Minutes of Meeting

on

the Inception Report

of

the Study on Selected Airports Master Planning Project

in

the Republic of the Philippines

A team organized by Japan International Cooperation Agency (hereinafter referred to as the JICA) arrived in Manila on April 9, 1996 for the Study on Selected Airports Master Planning Project (hereinafter referred to as the Study). The JICA team consisted of the Study Team, headed by Mr. Hideki Murata, two members of the Advisory Committee, headed by Mr. Kazuhito Arao and a Coordinator.

The JICA team submitted twenty (20) copies of the Inception Report to the Department of Transportation and Communications (hereinafter referred to as the DOTC) on April 10, 1996.

Meetings were held on April 19 and 22, 1996 between the JICA team and DOTC counterparts for the presentation and discussion of the Inception Report. DOTC counterparts consisted of the members of the Technical Working Committee and Steering Committee, headed by Dr. Primitivo C. Cal, Undersecretary of DOTC. A list of participants is shown in Appendix-A.

After the presentation and discussions, DOTC accepted, in principle, the Inception Report, and promised full cooperation for the Study. Some additional comments noted by both sides are as follows:

1) With regard to the study organization, the chart shown in page 4-1 of the Inception Report will be revised to reflect that the Steering Committee reports to DOTC.

2) DOTC requested the JICA to include site selection studies for Iloilo, Tacloban and Legaspi Airports if ultimate development of the existing airports could not accommodate anticipated demand. However, it was agreed between DOTC and JICA that the site selection for a new airport would be conducted only for Bacolod due to the limited time and budget for the Study.

3) The site selection study for the new Bacold Airport will be conducted for the four sites identified by the province. However, other potential sites may be added, if there are any other appropriate sites within 20 km from Bacolod City.

4) DOTC promised the Study Team to provide with the three rooms at Manila Luxury Condominium, Pasig City as the office space. A telephone (direct line) and 12 desks with chairs will be provided in the Study Team office.

5) JICA informed DOTC that the request for equipment was not approved. The DOTC promised to provide the required computer and copy machine for the Study.

April 22, 1996

For the DOTC

Cesar T. VALBUENA
Project Director
Technical Working Committee

For the JICA

Hideki MURATA
Team Leader
Study Team

Witnessed by

Primitivo C. CAL
Chairman
Steering Committee

Witnessed by

Kazuhito ARAO
Chairman
Advisory Committee

LIST OF PARTICIPANTS

I. ON APRIL 19, 1996

1) DOTC

(1) Technical Working Committee

Chairman:	George D. ESGUERRA, DOTC
Co-Chairman:	Florante MAGDAMO, ATO
Project Manager:	Raphael S. LAVIDES, DOTC
Asst. Project Manager:	Reynaldo A. CACATIAN, ATO
	Manuel ESCOBAR, ATO
	Andrew B. BASALLOTE, ATO
	Ma. Filipinas CABANA, DOTC
	Felicisimo PANGILINAN Jr., DOTC
	Ligaya S. POSTRERO, ATO
	Rolando C. MENDOZA, Philippine Airlines
	Napoleon G. QUEZON, Philippine Airlines
	Neneng MABOOT, Air Philippines
	Tomas YANEZ, Aerolift Philippines

2) JICA

(1) JICA Advisory Committee

Chairman:	Kazuhito ARAO
	Shinichiro KOIKE

(2) JICA Coordinator

Hiroyuki KANZAKI

(3) JICA Study Team

Team Leader:	Hideki MURATA
	Toru SHIMADA
	Hiroyuki UEDA
	Masashi KABURAGI
	Tadamitsu ITO
	Motoyoshi YAMADA
	Masato DOMON
	Yutaka YAMASAKI
	Eiko MORI

(4) Observer

Yukihiko EJIRI, JICA Philippine Office
Salima C. BAUTISTA, JICA Philippine Office
Toshiji ABE, ATO/JICA

2. **ON APRIL 22, 1996**

1) **DOTC**

(1) Steering Committee

Chairman:
Primitivo C. CAL, Undersecretary, DOTC
George D. ESGUERRA, DOTC
(Representing Asst. Sec. Cesar VALBUENA)
Martin S. VALERA, Department of Tourism
Victor DATO, National Economic and Development Authority

(2) Others

Raphael S. LAVIDES, Division Chief, DOTC
Felicisimo C. PANGILINAN Jr., DOTC
Ma. Filipinas Z. CABANA, DOTC
Elmira M. DOMINGO, DOTC

2) **JICA**

(1) JICA Advisory Committee

Chairman:
Kazuhito ARAO
Shinichiro KOIKE

(2) JICA Coordinator

Hiroyuki KANZAKI

(3) JICA Study Team

Team Leader:
Hideki MURATA
Toru SHIMADA

(4) Observer

Yukihiko EJIRI, JICA Philippine Office
Salima C. BAUTISTA, JICA Philippine Office
Toshiji ABE, ATO/JICA

Minutes of Meeting

on

the Progress Report

of

the Study on Selected Airports Master Planning Project

in

the Republic of the Philippines

From April 19, 1996, a study team organized by Japan International Cooperation Agency (hereinafter referred to as the JICA Study Team) has conducted the First Field Survey in the Philippines for the Study on Selected Airports Master Planning Project (hereinafter referred to as the Study).

As a result of the First Field Survey, the JICA Study Team submitted twenty (20) copies of the Progress Report to the Department of Transportation and Communications (hereinafter referred to as DOTC) on May 30, 1996.

Meetings were held on June 3, 1996 between the JICA Study Team and the DOTC Technical Working Committee and Steering Committee. The list of participants is shown in Appendix-A.

As recommended by the Steering Committee, DOTC accepted, in principle, the Progress Report. Comments noted and decisions made are as follows:

1) DOTC confirmed that most of the information and data in the Progress Report were accurate. Should there be any additional information/comments for the JICA Study Team, DOTC would inform the JICA Study Team before June 10, 1996 by facsimile.

2) DOTC selected Site 3 as an alternative site for Bacolod Airport, subject to further consultation with local government authorities within the next two (2) weeks. The comparative study between the existing airport development and new airport development at Site 3 would be conducted during the First Study Work in Japan, which would prepare an optimum development master plan for Bacolod Airport.

3) DOTC and the JICA Study Team agreed, in principle, that the optimum development plan of each airport shall consider the following factors:

   a) Convenience of users including passenger, airline, airport authority, and others.
   b) Operational conditions including aircraft operation and obstacles on air space.
   c) Expandability of facilities and flexibility in phased implementation.
   d) Environmental impact including those on natural environment, social environment and pollution.
   e) Project cost and ease of implementation including effective use of existing facilities, ease of removal and/or relocation of existing facilities, ease of land acquisition, length of access road construction/improvement, ease of construction, preliminary project cost, economic net present value and financial internal rate of returns.

4) DOTC and the JICA Study Team agreed, in principle, that the major determining factors for selecting an airport for the Feasibility Study should be as follows:

   a) Optimal economic internal rate of returns in the long term
   b) Large number of beneficiaries (high traffic volume) in the long term
   c) Least problems in project implementation in the medium term
   d) Project cost estimates

Signed on 3rd of June 1996 in Pasig City, Metro Manila.

For the DOTC

for Cesar T. VALBUENA
Project Director,
Technical Working Committee

For the JICA

Hideki MURATA
Team Leader,
Study Team

Noted by

Primitivo C. CAL
Undersecretary and Chairman,
Steering Committee

Masashi SHUKUNOBE
Assistant Resident Representative
JICA - Philippine Office

Appendix-A

LIST OF PARTICIPANTS

1) DOTC

(1) Steering Committee

Chairman:	Primitivo C. CAL, Undersecretary, DOTC
	Manuel GASPAY, Director, EMB
	William Russel SOBREPENA, Undersecretary DOT
	Victor DATO, National Economic and Development Authority
	Margaret DEFENSOR, President, FEDAVOR

(2) Technical Working Committee

Chairman:	George D. ESGUERRA, DOTC
Project Manager:	Raphael S. LAVIDES, DOTC
Asst. Project Manager:	Reynaldo A. CACATIAN, ATO
	Ligaya S. POSTRERO, ATO
	Ricardito EGUNA
	Merle NEGRADAS
	Frisco Sto. DOMINGO
	Filipina L. LARRACAS, DOTC
	Ma. Filipinas CABANA, DOTC
	Andrew B. BASALLOTE, ATO
	Elmira M. DOMINGO, DOTC
	Roy GAMOSA, ATO
	Brendo ELEGIO, DOTC
	Felicisimo PANGILINAN Jr., DOTC
	Elsa PINEDA, DOTC
	Ruby MANZO, DOTC
	Napoleon G. QUEZON, Philippine Airlines

(3) Others

Renato M. SANTOS, ATO
Gilbert BASBAS, EMB
Ember TAN, FEDAVOR

2) JICA

(1) JICA Study Team

Team Leader:	Hideki MURATA
	Toru SHIMADA
	Motoyoshi YAMADA
	Masato DOMON
	Per TOON

(2) Observer

Masami SHUKUNOBE, JICA Philippine Office
Toshiji ABE, ATO/JICA

Minutes of Meeting
on
the Selection Report
of
the Study on Selected Airports Master Planning Project
in
the Republic of the Philippines

The Study Team organized by Japan International Cooperation Agency (hereinafter referred to as the JICA Study Team) arrived in Manila on August 4, 1996 for the Study on Selected Airports Master Planning Project (hereinafter referred to as the Study).

The JICA Study Team submitted twenty (20) copies of the Selection Report to the Department of Transportation and Communications (hereinafter referred to as the DOTC) on August 5, 1996.

Meetings were held on August 9, 1996 between the JICA Study Team and the DOTC Technical Working Committee and Steering Committee. A list of participants is shown in Appendix-A.

As recommended by the Steering Committee, DOTC accepted, in principle, the Selection Report. Comments noted and decisions made are as follows:

1) DOTC reconfirmed its selection of Site 3 (Silay) as the site for the proposed new Bacolod Airport after the discussion of its advantages over the alternative sites.

2) DOTC selected Bacolod Airport as the airport for the feasibility study, as recommended by the JICA Study Team, and confirmed that the JICA Study Team can proceed with the topographic survey, soil investigations and environmental survey at the new Bacolod Airport Site 3.

3) The JICA Study Team recommended studies on alternative sites of Iloilo and Legaspi Airports, and DOTC fully endorsed this recommendation for immediate action.

4) DOTC requested the JICA Study Team to provide an estimate of man-months required for the said site selection study, and the JICA Study Team noted the request. DOTC decided to

formally request JICA to consider these additional site selection studies for funding under the Study.

Signed on 9th of August 1996 in Pasig City, Metro Manila.

For the DOTC

Cesar T. VALBUENA
Project Director,
Technical Working Committee

For the JICA

Hideki MURATA
Team Leader,
Study Team

Noted by

Primitivo C. CAL
Undersecretary and Chairman,
Steering Committee

Hisakatsu OKUDA
Assistant Resident Representative
JICA Philippine Office

Appendix-A

LIST OF PARTICIPANTS

1) DOTC

(1) Steering Committee

Chairman:	Primitivo C. CAL, Undersecretary, DOTC
Vise-Chairman:	Carlos F. TANEGA, Assistant Secretary, ATO
Project Director:	Cesar T. VALBUENA, Assistant Secretary, DOTC
	Francisco A. ARELLANO, Representative, EMB
	William Russel SOBREPENA, Undersecretary DOT
	Victor DATO, National Economic and Development Authority
	Arturo VALDES, Office of the Secretary, DOTC

(2) Technical Working Committee

Project Director:	Cesar T. VALBUENA, Assistant Secretary, DOTC
Project Manager:	Raphael S. LAVIDES, DOTC
Asst. Project Manager:	Reynaldo A. CACATIAN, ATO
Chairman:	George D. ESGUERRA, DOTC
	Ricardito EGUNA, ATO
	Merle NEGRADAS, ATO
	Edmundo GEROCHI, ATO
	Frisco Sto. DOMINGO, ATO
	Adelaida OLBOC, DOTC
	Ma. Filipinas CABANA, DOTC
	Elmira M. DOMINGO, DOTC
	Brendo ELEGIO, DOTC
	Felicisimo PANGILINAN Jr., DOTC
	Elsa PINEDA, DOTC

2) JICA

(1) JICA Study Team

Team Leader:	Hideki MURATA
	Toru SHIMADA
	Motoyoshi YAMADA
	Tadamitsu ITO

(2) Observer

	Hisakatsu OKUDA, JICA Philippine Office
	Grace M. CIEGO, JICA Philippine Office

Minutes of Meeting
on
the Interim Report
of
the Study on Selected Airports Master Planning Project
in
the Republic of the Philippines

A team organized by Japan International Cooperation Agency (hereinafter referred to as the JICA) arrived in Manila on September 15, 1996 for the Study on Selected Airports Master Planning Project (hereinafter referred to as the Study). The JICA mission consisted of the Study Team, two members of the Advisory Committee and a Coordinator.

The JICA mission submitted twenty (20) copies of the Interim Report to the Department of Transportation and Communications (hereinafter referred to as the DOTC) on September 16, 1996.

The JICA mission held three meetings with DOTC on September 18, 20 and 23, 1996 for the presentation and discussion of the Interim Report. A list of participants is shown in Appendix-A.

After the presentation and discussions, DOTC accepted, in principle, the Interim Report. DOTC also agreed to the following measures to ensure the smooth implementation of the Study:

i) The preliminary design and feasibility study of the new Bacolod Airport should be based on the air traffic demand forecast and facility requirements presented in the Interim Report.

ii) The master plan of the new Bacolod Airport should be developed further in the Second Study Work in Japan. In determining the area of the land acquisition for the new Bacolod Airport, due consideration should be given to the future airport developments even beyond the year 2015, especially on the developments as follows:

- provision of complete parallel taxiway

- expansion of terminal area
- introduction of B747 class aircraft (ICAO code letter E)
- runway extension up to 3,200m

iii) The JICA Study Team will try to provide DOTC with the project information required for realization of the project under the 22nd Yen Credit Package of the OECF, Japan even before the submission of the Draft Final Report. DOTC should, in advance, inform the Study Team of the types of information required for the NEDA ICC approval.

Signed on 23rd of September 1996 in Pasig City, Metro Manila.

For DOTC

M/Gen. CARLOS F. TANEGA
Assistant Secretary,
Air Transportation Office

For JICA

HIDEKI MURATA
Team Leader,
Study Team

Noted by

PRIMITIVO C. CAL
Undersecretary and Chairman
Steering Committee

HISAKATSU OKUDA
Assistant Resident Representative
JICA Philippine Office

Appendix-A

LIST OF PARTICIPANTS

I. September 18, 1996

1) DOTC

(1) Technical Working Committee

Project Manager: Raphael S. LAVIDES, DOTC
Asst. Project Manager: Reynaldo A. CACATIAN, ATO
Ligaya POSTRERO, ATO
Ricardito EGUNA, ATO
Merla NEGRADAS, ATO
Frisco STO. DOMINGO, ATO
Ma. Filipinas CABANA, DOTC
Andrew B. BASALLOTE, ATO
Elmira M. DOMINGO, DOTC
Felicisimo PANGILINAN Jr., DOTC
Efren A CRUZ, Philippine Airlines
Antonio S. SOLIS Jr., Air Philippines
Jessie P. UY, Cebu Pacific Air
Elsa P. ILAGAN, DOTC

(2) Observer

Anacleto V. VENTURINA, ATO

2) JICA

(1) JICA Advisory Committee

Chairman: Kazuhito ARAO
Seinosuke IWATA

(2) JICA Coordinator

Tasturo MORIKATSU

(3) JICA Study Team

Team Leader: Hideki MURATA
Toru SHIMADA

(4) Observer

Toshiji ABE, ATO/JICA
Emily B. OSORIO, ATO

II. September 20, 1996

1) DOTC

(1) Steering Committee

Chairman:	Primitivo C. CAL, Undersecretary, DOTC
Project Director:	Cesar T. VALBUENA, Assistant Secretary, DOTC
	William Russel SOBREPENA, Undersecretary DOT
	Francisco A. ARELLANO, Representative, EMB
	Victor DATO, National Economic and Development Authority
	Margaret S. DEFENSOR, President, FEDAVOR

(2) Technical Working Committee

Chairman:	George D. ESGUERRA, DOTC
Project Manager:	Raphael S. LAVIDES, DOTC
	Ligaya POSTRERO, ATO
	Merla NEGRADAS, ATO
	Ma. Filipinas CABANA, DOTC
	Andrew B BASALLOTE, ATO
	Elmira M. DOMINGO, DOTC
	Brendo ELEGIO, DOTC
	Felicisimo PANGILINAN Jr., DOTC
	Elsa P. ILAGAN, DOTC
	Ruby MANZO, DOTC

(3) Observer

Cristina T. SOLOMON, DOT

2) JICA

(1) JICA Advisory Committee

Chairman:	Kazuhito ARAO
	Seinosuke IWATA

(2) JICA Coordinator

Tasturo MORIKATSU

(3) JICA Study Team

Team Leader:	Hideki MURATA
	Toru SHIMADA

(4) Observer

Hisakatsu OKUDA, JICA Philippine Office
Grace M. CIEGO, JICA Philippine Office
Toshiji ABE, ATO/JICA

III. September 23, 1996

1) DOTC

Amado S. LAGDAMEO, Jr. Secretary, DOTC
Primitivo C. CAL, Undersecretary, DOTC
M/Gen.Carlos F. TANEGA (Ret.), Assistant Secretary, ATO

Arturo VALDEZ, DOTC
Ma. Filipinas Z. CABANA, DOTC
Felicisimo C. PANGILINAN, Jr., DOTC

2) JICA

Hideki MURATA, Team Leader, Study Team
Toru SHIMADA, Member, Study Team

Hisakatsu OKUDA, JICA Philippine Office
Grace M. CIEGO, JICA Philippine Office
Toshiji ABE, ATO/JICA

Minutes of Meeting
on
the Draft Final Report
of
the Study on Selected Airports Master Planning Project
in
the Republic of the Philippines

A team organized by Japan International Cooperation Agency (hereinafter referred to as the JICA) arrived in Manila on January 19, 1997 for the Study on Selected Airports Master Planning Project (hereinafter referred to as the Study). The JICA mission consisted of the Study Team and two members of the Advisory Committee.

The JICA mission submitted twenty (20) copies of the Interim Report to the Department of Transportation and Communications/Air Transportation Office (hereinafter referred to as the DOTC/ATO) on January 20, 1997.

The JICA mission held two separate meetings with the DOTC/ATO Technical Working Committee and Steering Committee on January 21 and 22, 1997, respectively for the presentation and discussion of the Draft Final Report. A list of participants is shown in Appendix-A.

After the presentation and discussions, DOTC/ATO accepted, in principle, the Draft Final Report as recommended by the Steering Committee. Comments noted and decisions made were as follows:

1. DOTC/ATO promised to consolidate the Philippine Government's comments on the Draft Final Report and to send them to the JICA Manila Office by February 24, 1997.

2. Noting the possible inclusion of the project under the 22nd Yen Credit Package of the Overseas Economic Cooperation Fund of Japan, DOTC/ATO confirmed its intention to finalize the project proposal, which will consist of the engineering services for the four airports and the initial phase development of the new airport in Silay City, Negros Occidental for onward transmittal to NEDA.

3. DOTC/ATO reiterated their sincere appreciation to JICA and the Study Team for the successful conduct of the Study.

Signed on 23rd of January 1997 in Pasay City, Metro Manila.

For DOTC/ATO

GEORGE D. ESGUERRA
Project Director,
Technical Working Committee

For JICA

HIDEKI MURATA
Team Leader
Study Team

Noted by

M/Gen. CARLOS F. TANEGA
Assistant Secretary and Chairman
Steering Committee

KAZUHITO ARAO
Chairman
Advisory Committee

Appendix-A

LIST OF PARTICIPANTS

I. January 21, 1996

1) DOTC/ATO

(1) Steering Committee

Chairman: Calros F. TANEGA, Assistant Secretary, ATO
Margaret DEFENSOR, President, FEDAVOR

(2) Technical Working Committee

Project Director: George D. ESGUERRA, DOTC
Reynaldo A. CACATIAN, ATO
Brendo C. ELEGIO, ATO
Andrew B. BASALLOTE, ATO
Manuel E. ESCOBAR, ATO
Ma. Filipinas Z. CABANA, DOTC/ATO
Victor DATO, NEDA
Rolando C. MENDOZA, Philippine Airlines
Naporeon G. QUEZON, Philippine Airlines
Felicisimo C. PANGILINAN Jr., DOTC
Ricardito EGUNA, ATO
Merla NEGRADAS, ATO
Frisco STO. DOMINGO, ATO
Alan A. JAVA, ATO
Mario A. RADAZ, ATO
Roy G. GAMOSA, ATO

2) JICA

(1) JICA Advisory Committee

Chairman: Kazuhito ARAO
Shinichiro KOIKE

(2) JICA Study Team

Team Leader: Hideki MURATA
Toru SHIMADA
Motoyoshi YAMADA

(3) Observer

Hisakatsu OKUDA, JICA Philippine Office

II. January 22, 1996

1) DOTC/ATO

(1) Steering Committee

Chairman:	Carlos F. TANEGA, Assistant Secretary, ATO
	William Russel SOBREPENA, Undersecretary DOT
	Miguel O. CORDERO, Assistant Secretary, DOTC
	Ember D. TAN, Representative, FEDAVOR

(2) Technical Working Committee

Deputy Project Director:	Zosimo S. PASCUA, Jr., DOTC
Project Manager:	Raphael S. LAVIDES, DOTC/ATO
	Reynaldo A. CACATIAN, ATO
	Ma. Filipinas Z. CABANA, DOTC/ATO
	Felicisimo C. PANGILINAN Jr., DOTC

2) JICA

(1) JICA Advisory Committee

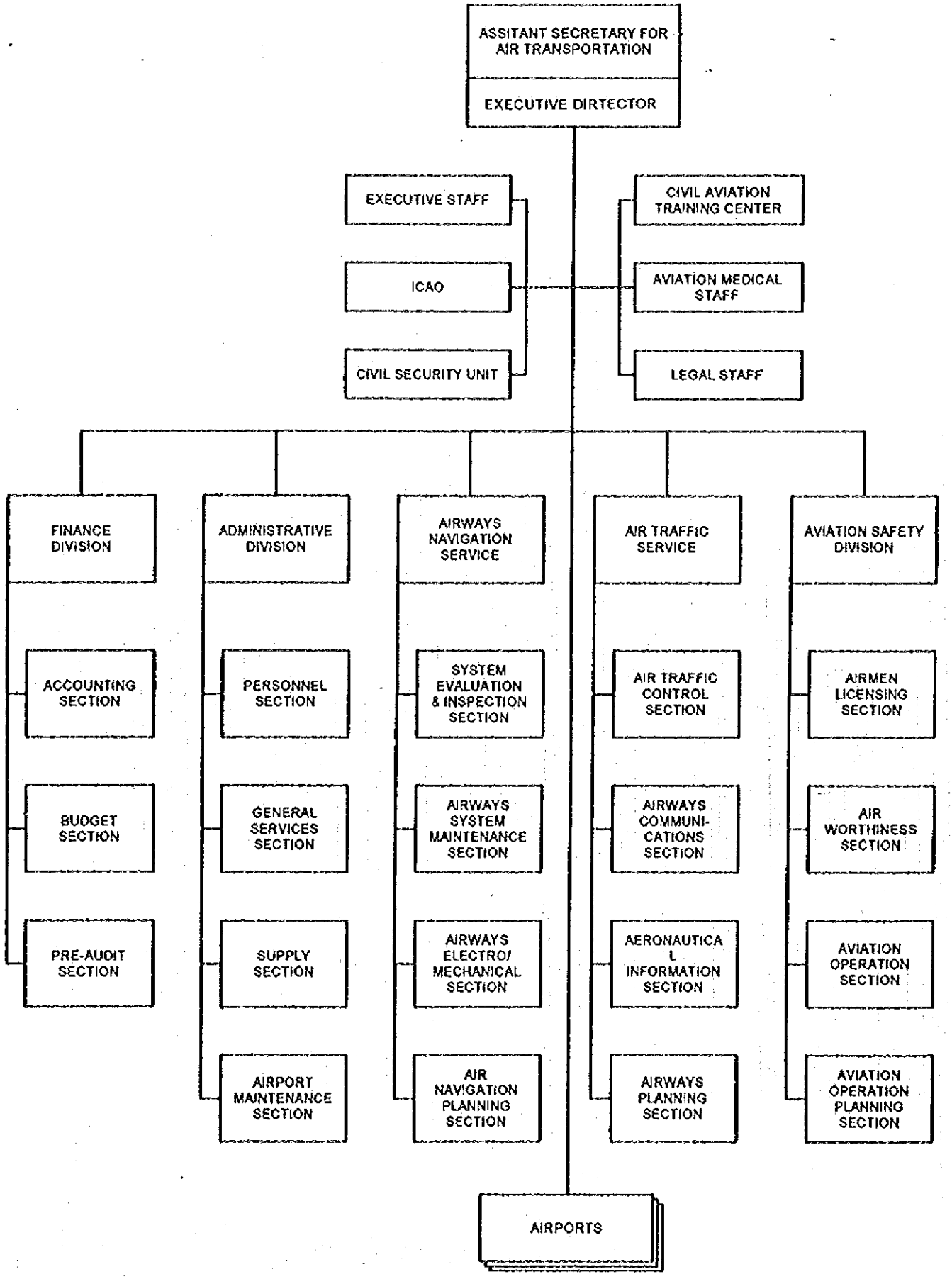
Chairman:	Kazuhito ARAO
	Shinichiro KOIKE

(2) JICA Study Team

Team Leader:	Hideki MURATA
	Toru SHIMADA
	Motoyoshi YAMADA

(3) Observer

Toshiji ABE, ATO/JICA


ASSITANT SECRETARY FOR AIR TRANSPORTATION
EXECUTIVE DIRTECTOR
EXECUTIVE STAFF
ICAO
CIVIL SECURITY UNIT
CIVIL AVIATION TRAINING CENTER
AVIATION MEDICAL STAFF
LEGAL STAFF
FINANCE DIVISION
ACCOUNTING SECTION
BUDGET SECTION
PRE-AUDIT SECTION
ADMINISTRATIVE DIVISION
PERSONNEL SECTION
GENERAL SERVICES SECTION
SUPPLY SECTION
AIRPORT MAINTENANCE SECTION
AIRWAYS NAVIGATION SERVICE
SYSTEM EVALUATION & INSPECTION SECTION
AIRWAYS SYSTEM MAINTENANCE SECTION
AIRWAYS ELECTRO/ MECHANICAL SECTION
AIR NAVIGATION PLANNING SECTION
AIR TRAFFIC SERVICE
AIR TRAFFIC CONTROL SECTION
AIRWAYS COMMUNI-CATIONS SECTION
AERONAUTICAL INFORMATION SECTION
AIRWAYS PLANNING SECTION
AVIATION SAFETY DIVISION
AIRMEN LICENSING SECTION
AIR WORTHINESS SECTION
AVIATION OPERATION SECTION
AVIATION OPERATION PLANNING SECTION
AIRPORTS

SECRETARY
3 UNDERSECRETARIES
COMMUNI-CATIONS
TRANS-PORTATION
STAFF SERVICE
MIAA MCIAA CAB
MMIC LRTA NTC
PNMA TRB PADC
PNR PPA OTC
PPC MARINA
MANAGEMENT INFORMATION SERVICE
MUNICIPAL TELEPHONE PROJECT OFFICE
PUBLIC AFFAIRS
BUSINESS DEVELOPMENT GROUP
PROGECT MONITORING & AUDIT GROUP
ASSISTANT SECRETARY FOR PROJECT MANAGEMENT
PROJECT MANAGEMENT SERVICE
MUNICIPAL PORTS PROJECT
PROJECT CONTROL DIVISION
ENGINEERING, ARCHITECTURAL & DESIGN DIVISION
AREA I (LUZON)
AREA II (VISAYA)
AREA III (MINDANAO)
ASSISTANT SECRETARY FOR PLANNING
TRANSPORTATION PLANNING SERVICE
COMMUNICATIONS PLANNING SERVICE
ROAD TRANSPORTATION PLANNING DIVISION
WATER TRANSPORTATION PLANNING DIVISION
AIR TRANSPORTATION PLANNING DIVISION
RAILWAY TRANSPORTATION PLANNING DIVISION
TELECOMMUNICATIONS PLANNING DIVISION
POSTAL INDUSTRY SERVICES & PLANNING DIV.
TELE-COMMUNICATIONS OFFICE
LAND TRANSPORTATION OFFICE
CORDILLERA AUTONOMOUS REGION
AIR TRANSPORTATION OFFICE
ASSISTANT SECRETARY FOR FINANCE AND COMPTROLLERSHIP
COMPTROLLER-SHIP SERVICE
ACCOUNTING DIVISION
TREASURY DIVISION
FINANCE & MANAGEMENT SERVICE
BUDGET DIVISION
MANAGEMENT DIVISION
FISCAL PLANNING & CONTROL DIVISION
ASSISTANT SECRETARY FOR ADMINISTARTIVE & LEGAL AFFAIRS
LEGAL SERVICE
INVESTIGATION & ADJUDICATION DIVISION
CONTRACT REVIEW & DOCUMENTATION DIV.
LEGAL AFFAIRS & RESSERCH DIVISION
LEGISLATIVE & ISSUANCE DIVISION
FRANCHISING REGULATORY STAFF
INVESTIGATION SECURITY LAW ENFORCEMENT STAFF
PROCUREMENT SUPPLY & PROPERTY MANAGEMENT SERVICE
PROCUREMENT DIVISION
SUPPLY DIVISION
PROPERTY UTILIZATION & DISPOSAL DIVISION
ADMINISTRATIVE SERVICE
PERSONNEL DIVISION
HUMAN RESOURCES DEVELOPMENT DIVISION
GENERAL SERVICES DIVISION
PUBLIC INFORMATION DIVISION

International Airport	
Clark	3,200 x 61
	3,200 x 46
Davao	2,500 x 45
Laoag	2,420 x 45
Mactan	2,591 x 45
NAIA	3,345 x 60
	2,425 x 30
Subic	2,744 x 45
Zamboanga	2,610 x 45

Trunkline Airport	
Bacolod	1,958 x 30
Baguio	1,680 x 30
Cagayan de Oro	2,380 x 36
Cotabato	2,000 x 36
Dumaguete	1,731 x 36
General Santos	1,700 x 30
Iloilo	2,100 x 45
Legaspi	2,158 x 36
Puerto Princesa	2,600 x 45
Roxas	1,890 x 30
San Jose	1,836 x 30
Tacloban	2,140 x 45

Secondary Airport	
Allah Valley	1,340 x 18
Antique	975 x 30
Bagabag	1,000 x 30
Basco	1,300 x 30
Bislig	1,200 x 30
Butuan	1,952 x 36
Calapan	960 x 30
Calbayog	1,475 x 30
Catarman	1,250 x 30
Cauayan	1,740 x 36
Daet	1,150 x 30
Dipolog	1,870 x 30
Iligan	1,400 x 30
Jolo	1,350 x 30
Kalibo	1,830 x 30
Lahug	800 x 30
Lubang	1,210 x 30
Malabang	1,257 x 30
Mamburao	1,300 x 30
Marinduque	1,400 x 30
Masbate	1,200 x 30
Mati	1,300 x 36
Naga	1,282 x 30
Ormoc	1,100 x 30
Ozamis	1,200 x 30
Pagadian	1,680 x 36
Plaridel	900 x 30
Romblon	1,204 x 30
San Fernando	1,250 x 36
Sanga-Sanga	1,448 x 36
Sorsogon/Bacon	1,350 x 30
Surigao	1,536 x 30
Tagabilaran	1,382 x 30
Tandag	1,360 x 30
Tuguegarao	1,771 x 36
Vigan	1,045 x 30
Virac	1,560 x 30

Feeder Airport	
Alabat	670 x 49
Aparri	1,100 x 30
Baler	1,400 x 30
Barobo	800 x 20
Biliran	1,000 x 30
Borongan	800 x 30
Bulan	890 x 30
Busuanga	1,200 x 30
Cagayan de Sulu	1,300 x 30
Camiguin	1,200 x 30
Castillejos	1,020 x 30
Catbalogan	1,200 x 30
Caticlan	810 x 30
Corregidor	1,200 x 20
Cuyo	800 x 30
Dolores	1,000 x 36
Guiuan	2,134 x 50
Hilongos	1,000 x 30
Iba	1,000 x 30
Ipil	750 x 30
Itbayat	500 x 30
Jomalig	570 x 30
Liloy	500 x 30
Lingayen	800 x 30
Lucena	1,000 x 30
Maasin	1,000 x 30
Malaybalay	962 x 30
Palanan	1,000 x 30
Rosales	800 x 30
Siargao	1,020 x 30
Siocon	500 x 30
Siquijor	1,250 x 30
Ubay	1,475 x 30
Wasig	1,000 x 30

PHILIPPINE AIRLINES, INC.
DOMESTIC FLIGHT SCHEDULE (DFS01-96)
EFFECTIVE: 31 MARCH 1996

SECT DIST	FROM	TO	FLIGHT NUMBER	FREQUENCY	LEAVE	ARRIVE	A/C TYPE		ONE-WAY FARE(PHP)	TERMINAL FEE
BACOLOD (BCD)										1.50
120		Cebu	PR371	DAILY	5:40 am	6:10 am	B737		752.00	
478		Manila	PR132	DAILY	8:15 am	9:15 am	B737		1,535.00	
478		Manila	PR134	DAILY	1:30 pm	2:30 pm	B737		1,535.00	
478		Manila	PR136	DAILY	5:15 pm	6:15 pm	B737		1,535.00	
478		Manila	PR138	DAILY	8:15 pm	9:15 pm	B737		1,535.00	
478		Manila	PR1380 (*)	DAILY	9:20 pm	10:20 pm	B737		1,535.00	
(*) - Extra section flight as need arises.										
BAGUIO (BAG)		*Suspended effective 15 April 1996 until 07 August 1996 due WIP*								1.50
213		Manila	PR205	MO/WE/FR/SU	10:00 am	10:35 am	B737		1,001.00	
BASCO (BSO)										0.75
267		Laoag	PR218	MONDAY	11:35 am	12:35 pm	F50		811.00	
672		Manila	PR223	MO/WE	3:05 pm	5:05 pm	F50		1,870.00	
672		Manila	PR227	FRIDAY	9:10 am	11:10 am	F50		1,870.00	
317		Tuguegarao	PR224	WEDNESDAY	11:35 am	12:35 pm	F50		942.00	
BUTUAN (BXU)										1.50
224		Cebu	PR466	TU/TH/FR	10:15 am	11:05 am	F50		796.00	
224		Cebu	PR468	MO/SA	1:25 pm	2:15 pm	F50		796.00	
787		Manila	PR478	MO/WE/FR/SU	2:55 pm	4:15 pm	B737		2,362.00	
CAGAYAN DE ORO (CGY)										1.50
228		Cebu	PR176	MO/WE/SA	7:20 am	7:55 am	B737		1,041.00	
143		Cotabato	PR498	TH/SU	9:45 am	10:20 am	B737		814.00	
181		Davao	PR121	MO/WE	2:35 pm	3:10 pm	B737		915.00	
181		Davao	PR157	FRIDAY	8:50 am	9:25 am	B737		915.00	
781		Manila	PR182	DAILY	7:30 am	8:50 am	B737		2,345.00	
781		Manila	PR164	FRIDAY	11:35 am	12:55 am	B737		2,345.00	
781		Manila	PR162	TH/SA	12:10 pm	1:30 pm	B737		2,345.00	
781		Manila	PR184	DAILY	2:25 pm	3:45 pm	B737		2,345.00	
781		Manila	PR186	DAILY	3:40 pm	5:00 pm	B737		2,345.00	
CALBAYOG (CYP)										0.75
470		Manila	PR360	EX WE-SA	4:45 pm	6:10 pm	F50		1,342.00	
CATARMAN (CRM)										0.75
454		Manila	PR358	EX MO-WE	1:35 pm	3:00 pm	F50		1,300.00	
CEBU (CEB)										10.00
120		Bacolod	PR370	DAILY	7:00 am	7:35 am	B737		752.00	
224		Butuan	PR465	TU/TH/FR	9:00 am	9:50 am	F50		796.00	
224		Butuan	PR467	MO/SA	12:10 pm	1:00 pm	F50		796.00	
228		Cagayan	PR175	MO/WE/SA	6:00 am	6:40 am	B737		1,041.00	
350		Cotabato	PR439	MO/WE	11:25 am	12:20 pm	B737		1,192.00	
398		Davao	PR409	DAILY	5:35 am	6:30 am	A300	C	1,440.00	
								Y	1,145.00	
398		Davao	PR459	DAILY	6:50 pm	7:45 pm	B737		1,321.00	
204		Dipolog	PR489	TU/TH/FR/SU	9:00 am	9:45 am	F50		743.00	
131		Dumaguete	PR367	EX TH/SU	6:40 am	7:20 am	F50		552.00	
485		Gen. Santos	PR451	DAILY	6:30 am	8:00 am	F50		1,381.00	
485		Gen. Santos	PR563	SUNDAY	6:45 am	7:15 am	F50		1,381.00	
485		Gen. Santos	PR455	DAILY	3:00 pm	4:30 pm	F50		1,381.00	
163		Iloilo	PR380	DAILY	8:05 am	8:45 am	B737		867.00	
163		Iloilo	PR247	TH/SA	12:35 pm	1:15 pm	B737		867.00	
231		Kalibo	PR346	MO/WE/FR/SA	6:05 am	6:55 am	F50		814.00	
319		Legazpi	PR362	MO/WE	10:25 am	11:30 am	F50		947.00	
319		Legazpi	PR352	TH/SU	1:25 pm	2:30 pm	F50		947.00	
569		Manila	PR832	DAILY	6:55 am	8:05 am	A300	C	1,973.00	
								Y	1,570.00	
569		Manila	PR830	DAILY	8:10 am	9:20 am	A300	C	1,973.00	
								Y	1,570.00	
569		Manila	PR848	DAILY	10:10 am	11:20 am	A300	C	1,973.00	
								Y	1,570.00	
569		Manila	PR852	DAILY	12:40 pm	1:50 pm	A300	C	1,973.00	
								Y	1,570.00	
569		Manila	PR844	DAILY	2:30 pm	3:40 pm	A300	C	1,973.00	
								Y	1,570.00	

PHILIPPINE AIRLINES, INC.
DOMESTIC FLIGHT SCHEDULE (DFS01-96)
EFFECTIVE: 31 MARCH 1996

SECT DIST	FROM	TO	FLIGHT NUMBER	FREQUENCY	LEAVE	ARRIVE	A/C TYPE		ONE-WAY FARE(PHP)	TERMINAL FEE
CEBU (CEB)										10.00
569		Manila	PR842	FRIDAY	4:15 pm	5:25 pm	A300	C	1,973.00	
								Y	1,570.00	
569		Manila	PR856	DAILY	5:00 pm	6:10 pm	A300	C	1,973.00	
								Y	1,570.00	
569		Manila	PR854	MO/WE/SA	5:40 pm	6:50 pm	A300	C	1,973.00	
								Y	1,570.00	
569		Manila	PR834	DAILY	7:10 pm	8:20 pm	A300	C	1,973.00	
								Y	1,570.00	
569		Manila	PR433	WE/SU	8:00 pm	9:10 pm	B747	C	1,973.00	
								Y	1,570.00	
569		Manila	PR433	THURSDAY	8:00 pm	9:10 pm	A300	C	1,973.00	
								Y	1,570.00	
569		Manila	PR866	DAILY	10:20 pm	11:30 pm	B737		1,423.00	
237		Ozamis	PR461	TU/TH/SU	6:10 am	7:10 am	F50		830.00	
237		Ozamis	PR441	TU/FR	12:10 pm	1:10 pm	F50		830.00	
281		Pagadian	PR483	DAILY	7:55 am	8:55 am	F50		848.00	
578		Pto. Princesa via Iloilo	PR247	TH/SA	12:35 pm	2:55 pm	B737		1,802.00	
174		Surigao	PR473	TU/TH/FR/SA	10:25 am	11:10 am	F50		665.00	
152		Tacloban	PR392	MO/WE/SA	8:45 am	9:20 am	B737		838.00	
74		Tagbilaran	PR363	EX TU/FR	6:10 am	6:35 am	F50		403.00	
74		Tagbilaran	PR375	MO/WE/SA	4:25 pm	4:50 pm	F50		403.00	
280		Tandag	PR476	MO/WE/SA	9:00 am	10:00 am	F50		845.00	
431		Zamboanga	PR349	TU/TH/FR/SU	5:00 am	6:00 am	B737		1,409.00	
431		Zamboanga	PR399	MO/WE/SA	9:00 am	10:30 am	F50		1,240.00	
COTABATO (CBO)										1.50
143		Cagayan	PR497	MO/WE	1:20 pm	1:55 pm	B737		814.00	
350		Cebu	PR440	TH/SU	11:00 am	11:50 am	B737		1,192.00	
887		Manila	PR188	DAILY	12:50 pm	2:20 pm	B737		2,629.00	
241		Zamboanga	PR495	TU/FR	8:20 am	9:00 am	B737		1,076.00	
DAET (DTE)										0.75
215		Manila	PR266	TU/FR	1:25 pm	2:15 pm	F50		772.00	
DAVAO (DVO)										1.50
181		Cagayan	PR122	TH/SU	8:30 am	9:05 am	B737		915.00	
181		Cagayan	PR156	FRIDAY	10:05 am	10:40 am	B737		915.00	
398		Cebu	PR410	DAILY	6:10 am	7:00 am	A300	C	1,440.00	
								Y	1,145.00	
398		Cebu	PR460	DAILY	8:45 pm	9:40 pm	B737		1,321.00	
969		Manila	PR810	DAILY	7:50 am	9:25 am	A300	C	3,218.00	
								Y	2,564.00	
969		Manila	PR812	DAILY	2:00 pm	3:35 pm	A300	C	3,218.00	
								Y	2,564.00	
969		Manila	PR814	DAILY	7:40 pm	9:15 pm	A300	C	3,218.00	
								Y	2,564.00	
969		Manila	PR818	DAILY	9:20 pm	11:00 pm	B737		2,199.00	
394		Zamboanga	PR171	MO/WE	3:50 pm	4:40 pm	B737		1,310.00	
DIPOLOG (DPL)										0.75
204		Cebu	PR490	MO/TU/WE/FR	2:50 pm	3:35 pm	F50		743.00	
704		Manila	PR166	EX TH/SA	12:00 nn	1:15 pm	B737		2,139.00	
235		Zamboanga	PR465	TU/TH/FR/SU	10:10 am	11:00 am	F50		824.00	
DUMAGUETE (DGT)										1.50
131		Cebu	PR368	EX TH/SU	7:45 am	8:25 am	F50		552.00	
626		Manila	PR250	DAILY	8:05 am	9:15 am	B737		1,931.00	
626		Manila	PR160	TU/TH/SA	3:05 pm	4:15 pm	B737		1,931.00	
GEN. SANTOS (GES)										1.50
485		Cebu	PR452	DAILY	8:25 am	9:55 am	F50		1,381.00	
485		Cebu	PR564	SUNDAY	12:25 pm	1:55 pm	F50		1,381.00	
485		Cebu	PR456	DAILY	4:55 pm	6:25 pm	F50		1,381.00	
589		Iloilo	PR458	SUNDAY	7:40 am	9:20 am	F50		1,653.00	

PHILIPPINE AIRLINES, INC.
DOMESTIC FLIGHT SCHEDULE (DFS01-96)
EFFECTIVE: 31 MARCH 1996

SECT DIST	FROM	TO	FLIGHT NUMBER	FREQUENCY	LEAVE	ARRIVE	A/C TYPE	ONE-WAY FARE(PHP)	TERMINAL FEE
ILOILO (ILO)									1.50
163		Cebu	PR381	DAILY	6:40 am	7:15 am	B737	867.00	
163		Cebu	PR248	TH/SA	5:25 pm	6:00 pm	B737	867.00	
569		Gen. Santos	PR457	SUNDAY	9:45 am	11:25 am	F50	1,653.00	
450		Manila	PR140	DAILY	9:35 am	10:35 am	B737	1,460.00	
450		Manila	PR148	DAILY	12:10 pm	1:10 pm	B737	1,460.00	
450		Manila	PR142	DAILY	4:00 pm	5:00 pm	B737	1,460.00	
450		Manila	PR146	DAILY	8:10 pm	9:10 pm	B737	1,460.00	
450		Manila	PR1460 (*)	DAILY	9:15 pm	10:15 pm	B737	1,460.00	
431		Pto. Princesa	PR247	TH/SA	2:05 pm	2:55 pm	B737	1,409.00	
(*) - Extra section flight as need arises.									
JOLO (JOL)									
154		Zamboanga	PR480	DAILY	12:30 pm	1:05 pm	F50	613.00	
154		Zamboanga	PR482	DAILY	2:55 pm	3:30 pm	F50	613.00	
KALIBO (KLO)									0.75
231		Cebu	PR345	MO/WE/FR/SA	7:20 am	8:10 am	F50	814.00	
348		Manila	PR322	DAILY	10:45 am	11:35 am	B737	1,187.00	
348		Manila	PR328	DAILY	4:10 pm	5:00 pm	B737	1,187.00	
348		Manila	PR326	DAILY	5:15 pm	6:05 pm	B737	1,187.00	
LAOAG (LAO)									1.50
267		Basco	PR219	MONDAY	1:35 pm	2:35 pm	F50	811.00	
409		Manila	PR229	WE/SU	9:40 am	10:35 am	B737	1,350.00	
143		Tuguegarao	PR221	MO/FR	11:30 am	12:10 pm	B737	639.00	
LEGAZPI (LGP)									1.50
319		Cebu	PR361	MO/WE	2:35 pm	3:40 pm	F50	947.00	
319		Cebu	PR351	TH/SU	2:55 pm	4:00 pm	F50	947.00	
328		Manila	PR276	MO-SA	8:10 am	9:00 am	B737	1,134.00	
328		Manila	PR178	WEDNESDAY	10:15 am	11:05 am	B737	1,134.00	
328		Manila	PR278	TU/FR/SU	11:35 am	12:25 pm	B737	1,134.00	
328		Manila	PR280	EX TU/TH	4:35 pm	5:25 pm	B737	1,134.00	
91		Masbate	PR297	MO/WE	11:25 am	12:00 nn	F50	448.00	
70		Virac	PR293	MO/WE	12:30 pm	1:05 pm	F50	393.00	
MAMBURAO (MBO)									0.75
152		Manila	PR240	FR/SU	10:10 am	10:50 am	F50	607.00	
MANILA (MNL)									50.00
478		Bacolod	PR131	DAILY	3:30 am	4:40 am	B737	1,535.00	
478		Bacolod	PR133	DAILY	11:25 am	12:30 pm	B737	1,535.00	
478		Bacolod	PR135	DAILY	3:20 pm	4:25 pm	B737	1,535.00	
478		Bacolod	PR137	DAILY	6:10 pm	7:15 pm	B737	1,535.00	
478		Bacolod	PR1370 (*)	DAILY	7:15 pm	8:20 pm	B737	1,535.00	
213		Baguio	PR204 (1)	MO/WE/FR/SU	8:40 am	9:20 am	B737	1,001.00	
672		Basco	PR222	MO/WE	9:05 am	11:05 am	F50	1,870.00	
672		Basco	PR226	FRIDAY	6:45 am	8:45 am	F50	1,870.00	
767		Butuan	PR477	MO/WE/FR/SU	12:50 pm	2:15 pm	B737	2,362.00	
781		Cagayan	PR181	DAILY	5:00 am	6:30 am	B737	2,345.00	
781		Cagayan	PR183	DAILY	12:15 pm	1:45 pm	B737	2,345.00	
781		Cagayan	PR185	DAILY	1:25 pm	2:50 pm	B737	2,345.00	
781		Cagayan	PR161	FRIDAY	6:25 am	7:50 am	B737	2,345.00	
781		Cagayan	PR163	TH/SA	9:40 am	11:10 am	B737	2,345.00	
470		Calbayog	PR359	EX WE/SA	2:55 pm	4:20 pm	F50	1,342.00	
454		Catarman	PR357	EX MO/WE	11:45 am	1:10 pm	F50	1,300.00	
569		Cebu	PR829	DAILY	3:20 am	4:35 am	A300	C - 1,973.00	
								Y - 1,570.00	
569		Cebu	PR434	WE/SU	5:30 am	6:40 am	B747	C - 1,973.00	
								Y - 1,570.00	
569		Cebu	PR434	THURSDAY	5:30 am	6:40 am	A300	C - 1,973.00	
								Y - 1,570.00	
(*) - Extra section flight as need arises.									
(1) - Suspended effective 15 April 1996 until 07 August 1996 due WIP.									

PHILIPPINE AIRLINES, INC.
DOMESTIC FLIGHT SCHEDULE (DFS01-96)
EFFECTIVE: 31 MARCH 1996

DIST	FROM	TO	FLIGHT NUMBER	FREQUENCY	LEAVE	ARRIVE	A/C TYPE		ONE-WAY FARE(PHP)	YR ROUND FARE
CAGAYAN (KC)										
569		Cebu	PR841	FRIDAY	6:10 am	7:20 am	A300	C -	1,973.00	
								Y -	1,570.00	
569		Cebu	PR831	DAILY	4:30 am	5:45 am	A300	C -	1,973.00	
								Y -	1,570.00	
569		Cebu	PR853	MO/WE/SA	7:15 am	8:25 am	A300	C -	1,973.00	
								Y -	1,570.00	
569		Cebu	PR847	EX TH/SU	8:00 am	9:10 am	A300	C -	1,973.00	
								Y -	1,570.00	
569		Cebu	PR849	DAILY	10:20 am	11:30 am	A300	C -	1,973.00	
								Y -	1,570.00	
569		Cebu	PR843	DAILY	12:20 pm	1:30 pm	A300	C -	1,973.00	
								Y -	1,570.00	
569		Cebu	PR855	DAILY	2:50 pm	4:00 pm	A300	C -	1,973.00	
								Y -	1,570.00	
569		Cebu	PR833	DAILY	4:50 pm	6:00 pm	A300	C -	1,973.00	
								Y -	1,570.00	
569		Cebu	PR837	DAILY	9:00 pm	10:15 pm	B737		1,423.00	
887		Cotabato	PR187	DAILY	10:15 am	11:50 am	B737		2,629.00	
215		Daet	PR265	TU/FR	12:10 pm	1:00 pm	F50		772.00	
969		Davao	PR809	DAILY	3:05 am	4:50 am	A300	C -	3,218.00	
								Y -	2,564.00	
969		Davao	PR811	DAILY	11:00 am	12:40 pm	A300	C -	3,218.00	
								Y -	2,564.00	
969		Davao	PR813	DAILY	4:40 pm	6:20 pm	A300	C -	3,218.00	
								Y -	2,564.00	
969		Davao	PR815	DAILY	6:40 pm	8:20 pm	B737		2,189.00	
704		Dipolog	PR165	EX TH/SA	9:40 am	11:00 am	B737		2,139.00	
626		Dumaguete	PR249	DAILY	5:50 am	7:05 am	B737		1,931.00	
626		Dumaguete	PR159	TU/TH/SA	1:10 pm	2:25 pm	B737		1,931.00	
450		Iloilo	PR139	DAILY	4:30 am	5:40 am	B737		1,460.00	
450		Iloilo	PR147	DAILY	10:05 am	11:10 am	B737		1,460.00	
450		Iloilo	PR141	DAILY	2:10 pm	3:15 pm	B737		1,460.00	
450		Iloilo	PR145	DAILY	6:00 pm	7:10 pm	B737		1,460.00	
450		Iloilo	PR1450 (*)	DAILY	7:05 pm	8:15 pm	B737		1,460.00	
348		Kalibo	PR321	DAILY	9:10 am	10:05 am	B737		1,187.00	
348		Kalibo	PR327	DAILY	2:35 pm	3:30 pm	B737		1,187.00	
348		Kalibo	PR325	DAILY	3:30 pm	4:25 pm	B737		1,187.00	
409		Laoag	PR220	MO/FR	9:50 am	10:50 am	B737		1,350.00	
328		Legazpi	PR275	MO/SA	6:35 am	7:30 am	B737		1,134.00	
328		Legazpi	PR177	WEDNESDAY	8:40 am	9:35 am	B737		1,134.00	
328		Legazpi	PR277	TU/FR/SU	9:50 am	10:45 am	B737		1,134.00	
328		Legazpi	PR279	EX TU/TH	3:00 pm	3:55 pm	B737		1,134.00	
152		Mamburao	PR239	FR/SU	9:05 am	9:45 am	F50		607.00	
154		Marinduque	PR231	DAILY	6:00 am	6:40 am	F50		613.00	
370		Masbate	PR257	EX MO/WE	8:15 am	9:25 am	F50		1,080.00	
370		Masbate	PR253	MO/WE	8:15 am	9:25 am	F50		1,080.00	
267		Naga	PR261	DAILY	6:10 am	7:10 am	F50		811.00	
267		Naga	PR263	MO/WE/SU	11:50 am	12:50 pm	F50		811.00	
583		Pto. Princesa	PR195	DAILY	9:05 am	10:15 am	A300	C -	2,016.00	
								Y -	1,605.00	
374		Roxas	PR189	DAILY	5:20 am	6:20 am	B737		1,257.00	
241		San Fernando	PR208 (1)	DAILY	8:30 am	9:30 am	F50		840.00	
237		San Jose	PR129	MO/WE/TH/SA	9:50 am	10:35 am	B737		1,065.00	
267		Tablas	PR323	TU/TH/SA	9:05 am	10:05 am	F50		811.00	
565		Tacloban	PR181	DAILY	4:00 am	5:15 am	B737		1,768.00	
565		Tacloban	PR291	DAILY	4:40 pm	5:50 pm	B737		1,768.00	
565		Tacloban	PR193	DAILY	6:05 pm	7:15 pm	B737		1,768.00	
619		Tagbilaran	PR187	MO/WE/SA	2:10 pm	4:05 pm	F50		1,731.00	
619		Tagbilaran	PR169	TU/TH/FR/SU	12:10 pm	2:05 pm	F50		1,731.00	
356		Tuguegarao via Laoag	PR220	MO/FR	9:50 am	12:10 pm	B737		1,208.00	

(*) - Extra section flight as need arises.
(1) - To operate effective 15 April 1996.

PHILIPPINE AIRLINES, INC.
DOMESTIC FLIGHT SCHEDULE (DFS01-96)
EFFECTIVE: 31 MARCH 1996

SECT DIST	FROM	TO	FLIGHT NUMBER	FREQUENCY	LEAVE	ARRIVE	A/C TYPE	ONE-WAY FARE(PHP)	TERMINAL FEE
	MANILA (MNL)								50.00
356		Tuguegarao	PR238	SATURDAY	10:00 am	10:55 am	B737	1,208.00	
356		Tuguegarao	PR216	WE/SU	11:25 am	12:20 pm	B737	1,208.00	
359		Virac	PR269	TU/TH/SA	8:40 am	9:30 am	B737	1,216.00	
359		Virac	PR271	FRIDAY	1:50 pm	2:40 pm	B737	1,216.00	
852		Zamboanga	PR123	DAILY	4:20 am	6:00 am	B737	2,535.00	
852		Zamboanga	PR125	DAILY	5:15 pm	6:50 pm	B737	2,535.00	
	MARINDUQUE (MRQ)								0.75
154		Manila	PR232	DAILY	7:05 am	7:45 am	F50	613.00	
	MASBATE (MBT)								0.75
91		Legazpi	PR298	MO/WE	9:50 am	10:25 am	F50	448.00	
370		Manila	PR258	EX MO/WE	9:55 am	11:05 am	F50	1,060.00	
370		Manila	PR254	MO/WE	12:30 pm	1:40 pm	F50	1,080.00	
	NAGA (WNP)								0.75
267		Manila	PR262	DAILY	7:35 am	8:35 am	F50	811.00	
267		Manila	PR264	MO/WE/SU	1:15 pm	2:15 pm	F50	811.00	
	OZAMIS (OZC)								0.75
237		Cebu	PR462	TU/TH/SU	7:35 am	8:35 am	F50	830.00	
237		Cebu	PR442	TU/FR	1:35 pm	2:35 pm	F50	830.00	
	PAGADIAN (PAG)								0.75
281		Cebu	PR484	DAILY	5:05 pm	6:05 pm	F50	848.00	
187		Zamboanga	PR487	DAILY	9:20 am	10:00 am	F50	699.00	
	PTO. PRINCESA (PPS)								1.50
578		Cebu via Iloilo	PR248	TH/SA	3:45 pm	6:00 pm	B737	1,802.00	
431		Iloilo	PR248	TH/SA	3:45 pm	4:35 pm	B737	1,409.00	
583		Manila	PR196	DAILY	11:15 am	12:25 pm	A300	C - 2,016.00	
								Y - 1,605.00	
	ROXAS (RXS)								1.50
374		Manila	PR190	DAILY	7:20 am	8:10 am	B737	1,257.00	
	SAN FERNANDO (SFE	*To operate effective 15 April 1996.*							1.50
241		Manila	PR207	DAILY	10:00 am	11:00 am	F50	840.00	
	SAN JOSE (SJI)								1.50
237		Manila	PR130	MO/WE/TH/SA	11:15 am	11:55 am	B737	1,065.00	
	SURIGAO (SUG)								0.75
174		Cebu	PR474	TU/TH/FR/SA	11:35 am	12:20 pm	F50	665.00	
	TABLAS (TBH)								0.75
267		Manila	PR324	TU/TH/SA	10:30 am	11:30 am	F50	811.00	
	TACLOBAN (TAC)								1.50
152		Cebu	PR393	MO/WE/SA	10:00 am	10:30 am	B737	838.00	
565		Manila	PR192	DAILY	6:15 am	7:20 am	B737	1,768.00	
565		Manila	PR292	DAILY	6:50 pm	7:55 pm	B737	1,768.00	
565		Manila	PR194	DAILY	8:15 pm	9:20 pm	B737	1,768.00	
	TAGBILARAN (TAG)								0.75
74		Cebu	PR364	EX TU/FR	7:00 am	7:25 am	F50	403.00	
74		Cebu	PR374	MO/WE/SA	4:30 pm	4:55 pm	F50	403.00	
619		Manila	PR170	TU/TH/FR/SU	2:50 pm	4:45 pm	F50	1,731.00	
619		Manila	PR168	MO/WE/SA	5:15 pm	7:10 pm	F50	1,731.00	
	TANDAG (TDG)								0.75
280		Cebu	PR476	MO/WE/SA	10:25 am	11:25 am	F50	845.00	
	TAWI-TAWI (TWT)								0.75
337		Zamboanga	PR494	DAILY	11:55 am	12:55 pm	F50	994.00	
	TUGUEGARAO (TUG)								0.75
317		Basco	PR225	WEDNESDAY	1:35 pm	2:35 pm	F50	942.00	
356		Manila	PR237	SATURDAY	11:45 am	12:35 pm	B737	1,208.00	
356		Manila	PR217	WE/SU	1:20 pm	2:10 pm	B737	1,208.00	
356		Manila	PR221	MO/FR	1:10 pm	2:00 pm	B737	1,208.00	

PHILIPPINE AIRLINES, INC.
DOMESTIC FLIGHT SCHEDULE (DFS01-98)
EFFECTIVE: 1 MARCH 1998

SECT DIST	FROM	TO	FLIGHT NUMBER	FREQUENCY	LEAVE	ARRIVE	A/C TYPE	ONE-WAY FARE(PHP)	TERMINAL FEE
VIRAC (VRC)									0.76
70		Legazpi	PR294	MO/WE	1:30 pm	2:05 pm	F50	393.00	
359		Manila	PR270	TU/TH/SA	10:10 am	10:55 am	B737	1,216.00	
359		Manila	PR272	FRIDAY	3:20 pm	4:05 pm	B737	1,216.00	
ZAMBOANGA (ZAM)									1.50
431		Cebu	PR338	TU/FR	9:40 am	10:35 am	B737	1,409.00	
431		Cebu	PR350	MO/WE	5:20 pm	6:15 pm	B737	1,409.00	
431		Cebu	PR398	TH/SA/SU	1:35 pm	3:05 pm	F50	1,240.00	
241		Cotabato	PR496	TU/FR	7:00 am	7:40 am	B737	1,076.00	
394		Davao	PR172	TH/SU	7:00 am	7:50 am	B737	1,310.00	
235		Dipolog	PR486	MO/TU/WE/FR	1:35 pm	2:25 pm	F50	824.00	
154		Jolo	PR479	DAILY	11:30 am	12:05 pm	F50	613.00	
154		Jolo	PR481	DAILY	1:55 pm	2:30 pm	F50	613.00	
852		Manila	PR124	DAILY	7:10 am	8:40 am	B737	2,535.00	
852		Manila	PR126	DAILY	7:50 pm	9:20 pm	B737	2,535.00	
187		Pagadian	PR488	DAILY	4:00 pm	4:40 pm	F50	699.00	
337		Tawi-Tawi	PR493	DAILY	10:30 am	11:30 am	F50	994.00	

Air Philippines, flying colors in the sky!

Effective May 31, 1996

Daily Flights	AIRCRAFT	FLIGHT NUMBER	LEAVE	ARRIVE	*ONE WAY PROMO FARE (PHP)		TERMINAL /AS FEE (PHP)
MANILA to KALIBO	YS-11	GAP 751	7:50 am	9:00 am	830.00	978.-	53.00
	YS-11	GAP 753	2:10 pm	3:20 pm	830.00		53.00
KALIBO to MANILA	YS-11	GAP 752	9:40 am	10:50 am	830.00	978.-	3.75
	YS-11	GAP 754	4:00 pm	5:10 pm	830.00		3.75
MANILA to PUERTO PRINCESA	B737	GAP 531	9:50 am	11:00 am	1,200.00	1,460.-	53.00
PUERTO PRINCESA TO MANILA	B737	GAP 532	11:40 am	12:50 pm	1,200.00		4.50
MANILA to ILOILO	B737	GAP 571	6:20 am	7:20 am	1,100.00	1,352.-	53.00
	B737	GAP 573	6:10 pm	7:10 pm	1,100.00		53.00
ILOILO to MANILA	B737	GAP 572	8:00 am	9:00 am	1,100.00	1,352	4.50
	B737	GAP 574	7:50 pm	8:50 pm	1,100.00		4.50
MANILA to ZAMBOANGA	B737	GAP 871	1:40 pm	3:10 pm	2,190.00	2,315.-	53.00
ZAMBOANGA to MANILA	B737	GAP 872	3:50 pm	5:20 pm	2,190.00		4.50
MANILA to SUBIC	YS-11	GAP 980	11:40 am	12:10 pm	379.00	377.-	53.00
	YS-11	GAP 982	6:00 pm	6:30 pm	379.00		53.00
	B737	GAP 970	9:40 pm	10:10 pm	505.00	505.-	53.00
SUBIC to MANILA	B737	GAP 971	5:00 am	5:30 am	505.00		+3.00
	YS-11	GAP 981	6:30 am	7:00 am	379.00		+3.00
	YS-11	GAP 983	12:50 pm	1:20 pm	379.00		+3.00

*Good only up to 30 June 1996.
+Aviation Security Fee only.
Schedule is subject to CAB approval. Rates are subject to change without prior notice.

Book your reservations now and enjoy the promo fare!

For reservations and ticketing please call:

SUBIC:	(047) 252-7256/67/68	fax: (047) 252-7258	PUERTO PRINCESA:	(048) 433-2764/7003	fax: (048) 433-7006
ILOILO:	(033) 79115, 335-1347 to 49, 77939	fax: (033) 3200-965, 335-1349	KALIBO:	(036) 662-4444/5555/8888	fax: (036) 662-4540
ZAMBOANGA:	(062) 993-2587/1940	fax: (062) 993-1940			

Or call your Travel Agent.

Air Philippines Corporation Tel # 526-4741, Fax # 521-6747/2603

7/F Ramon Magsaysay Center, Roxas Boulevard, Manila

5/21/96

CEBU PACIFIC
Level 1 Robinson's Galleria, Ortigas Ave.,
cor ADB Ave., Pasig
636-4938 to 45

ROUTE	FLIGHT NO.	ETD	ETA	One-way Fares Value Fare	Normal Fare
MNL - CEB	5J-561	0800H	0910H	*PHP 999*	*PHP 1,479*
	5J-565	1220H	1330H	(Value fare - until	
	5J-567	1610H	1720H	15 June 1996)	
	5J-569	1850H	2000H		
CEB - MNL	5J-562	1000H	1110H		
	5J-566	1420H	1530H		
	5J-568	1810H	1920H		
	5J-570	2050H	2200H		
MNL - ILO	5J-453	0400H	0505H	*PHP 979*	*PHP 1,322*
	5J-457	1500H	1605H	(Value fare - until	
				15 June 1996)	
ILO - MNL	5J-454	0555H	0700H		
	5J-458	1655H	1800H		
MNL - CGY	5J-385	0520H	0650H	*PHP 1,699*	*PHP 2,031*
	5J-387	1010H	1140H	(Value fare - until	
				15 June 1996)	
CGY - MNL	5J-386	0740H	0910H		
	5J-388	1230H	1400H		
* *MNL - DVO*	5J-961	0500	0650	*PHP 1,799*	*PHP 2,519*
	5J-967	1500	1650	(Value fare - until	
				15 August 1996)	
* *DVO - MNL*	5J-962	0740	0930		
	5J-968	1740	1930		

* Exclusive of Aviation Security Fee and Terminal Fee
* Fares & schedules are subject to gov't approval
* *MNL/DVO/MNL* - start date 23 May 1996

MANILA-CEBU-MANILA FLIGHTS

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	
8L - 101	07:00	07:00	07:00	07:00	07:00	07:00	07:00	ETD
MNL CEB	08:10	08:10	08:10	08:10	08:10	08:10	08:10	ETA
8L - 102	09:10	09:10	09:10	09:10	09:10	09:10	09:10	ETD
CEB MNL	10:20	10:20	10:20	10:20	10:20	10:20	10:20	ETA
8L - 103	11:20	11:20	11:20	11:20	11:20	11:20	11:20	ETD
MNL CEB	12:30	12:30	12:30	12:30	12:30	12:30	12:30	ETA
8L - 104	13:30	13:30	13:30	13:30	13:30	13:30	13:30	ETD
CEB MNL	14:40	14:40	14:40	14:40	14:40	14:40	14:40	ETA
8L - 105	17:30	17:30		17:30		17:30		ETD
MNL CEB	18:40	18:40		18:40		18:40		ETA
8L - 106	19:40	19:40		19:40		19:40		ETD
CEB MNL	20:50	20:50		20:50		20:50		ETA

MANILA-CAGAYAN DE ORO-MANILA FLIGHTS *

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	
8L - 211	06:50	06:50	06:50	06:50	06:50	06:50	06:50	ETD
MNL CGY	08:10	08:10	08:10	08:10	08:10	08:10	08:10	ETA
8L - 212	09:10	09:10	09:10	09:10	09:10	09:10	09:10	ETD
CGY MNL	10:30	10:30	10:30	10:30	10:30	10:30	10:30	ETA

MANILA-ILOILO-MANILA FLIGHTS *

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	
8L - 121	11:30	11:30	11:30	11:30	11:30	11:30	11:30	ETD
MNL ILO	12:30	12:30	12:30	12:30	12:30	12:30	12:30	ETA
8L - 122	13:30	13:30	13:30	13:30	13:30	13:30	13:30	ETD
ILO MNL	14:30	14:30	14:30	14:30	14:30	14:30	14:30	ETA

MANILA-DAVAO-MANILA FLIGHTS

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	
8L - 201	09:30	09:30	09:30	09:30	09:30	09:30	09:30	ETD
MNL DVO	11:05	11:05	11:05	11:05	11:05	11:05	11:05	ETA
8L - 202	12:20	12:20	12:20	12:20	12:20	12:20	12:20	ETD
DVO MNL	13:55	13:55	13:55	13:55	13:55	13:55	13:55	ETA
8L - 203	15:40	15:40	15:40	15:40	15:40	15:40	15:40	ETD
MNL DVO	17:15	17:15	17:15	17:15	17:15	17:15	17:15	ETA
8L - 204	18:30	18:30	18:30	18:30	18:30	18:30	18:30	ETD
DVO MNL	20:05	20:05	20:05	20:05	20:05	20:05	20:05	ETA

MANILA-TACLOBAN-MANILA FLIGHTS *

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	
8L - 111	15:40	15:40		15:40	15:40	15:40	15:40	ETD
MNL TAC	16:50	16:50		16:50	16:50	16:50	16:50	ETA
8L - 112	17:50	17:50		17:50	17:50	17:50	17:50	ETD
TAC MNL	19:00	19:00		19:00	19:00	19:00	19:00	ETA
8L - 113			16:25					ETD
MNL TAC			17:35					ETA
8L - 114			18:35					ETD
TAC MNL			19:45					ETA

MANILA-HONGKONG-MANILA FLIGHTS

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	
8L - 801			19:30		19:30		19:30	ETD
MNL HKG			21:25		21:25		21:25	ETA

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	
8L - 802			22:40		22:40		22:40	ETD
HKG MNL			0:35		0:35		0:35	ETA

Fares and Schedules are subject to change without prior notice

REQUIRED TAKE-OFF RUNWAY LENGTH

1. Bacolod Airport

Approximate Takeoff Weight for Manila at Maximum Payload (Source : PAL)

B737-300 :53.4 ton (117,700lbs)
A320-200 :66.8 ton (147,300lbs)
A300-B4 :137.4 ton (302,900lbs)

Typical Takeoff Runway Length at Sea Level and 30°C

B737-300 : 1,660m
A320-200 : 1,860m
A300-B4 : 1,670m

Takeoff Runway Length at Each Airport

Airport Elevation : 6.1m (20ft)
Reference Temperature : 32.6°C (90.7°F)
Longitudinal Slope of the Runway : 0.15%
a = (1 + 0.07 x 6.1 / 300) x (1 + 0.01 x 2.6) x (1 + 0.1 x 0.15) = 1.043
B737-300 :1,660 x 1.043 = 1,730m
A320-200 :1,860 x 1.043 = 1,940m
A300-B4 : 1,670 x 1.043 = 1,740m

2. Iloilo Airport

Approximate Takeoff Weight for Manila at Maximum Payload (Source : PAL)

B737-300 :53.1 ton (117,100lbs)
A320-200 :66.7 ton (147,000lbs)
A300-B4 :137.0 ton (302,000lbs)

Typical Takeoff Runway Length at Sea Level and 30°C

B737-300 : 1,650m
A320-200 : 1,850m
A300-B4 : 1,660m

Airport Elevation : 8.2m (27ft)
Reference Temperature : 32.5°C (90.5°F)
Longitudinal Slope : 0.15%
a = (1 + 0.07 x 8.2 / 300) x (1 + 0.01 x 2.5) x (1 + 0.1 x 0.15) = 1.042
B737-300 :1,650 x 1.042 = 1,720m
A320-200 :1,850 x 1.042 = 1,930m
A300-B4 : 1,660 x 1.042 = 1,730m

3. Tacloban Airport

Approximate Takeoff Weight for Manila at Maximum Payload (Source : PAL)

B737-300 :53.5 ton (117,900lbs)
A320-200 :66.1 ton (145,700lbs)
A300-B4 :138.1 ton (304,500lbs)

Typical Takeoff Runway Length at Sea Level and 30°C

B737-300 : 1,700m
A320-200 : 1,870m
A300-B4 : 1,680m

Airport Elevation : 1.8m (6ft)
Reference Temperature : 31.4°C (88.5°F)
Longitudinal Slope : 0.09%
a = (1 + 0.07 x 1.8 / 300) x (1 + 0.01 x 1.4) x (1 + 0.1 x 0.09) = 1.024
B737-300 :1,700 x 1.024 = 1,740m
A320-200 :1,870 x 1.024 = 1,910m
A300-B4 : 1,680 x 1.024 = 1,720m

4. Legaspi Airport

Approximate Takeoff Weight for Manila at Maximum Payload (Source : PAL)

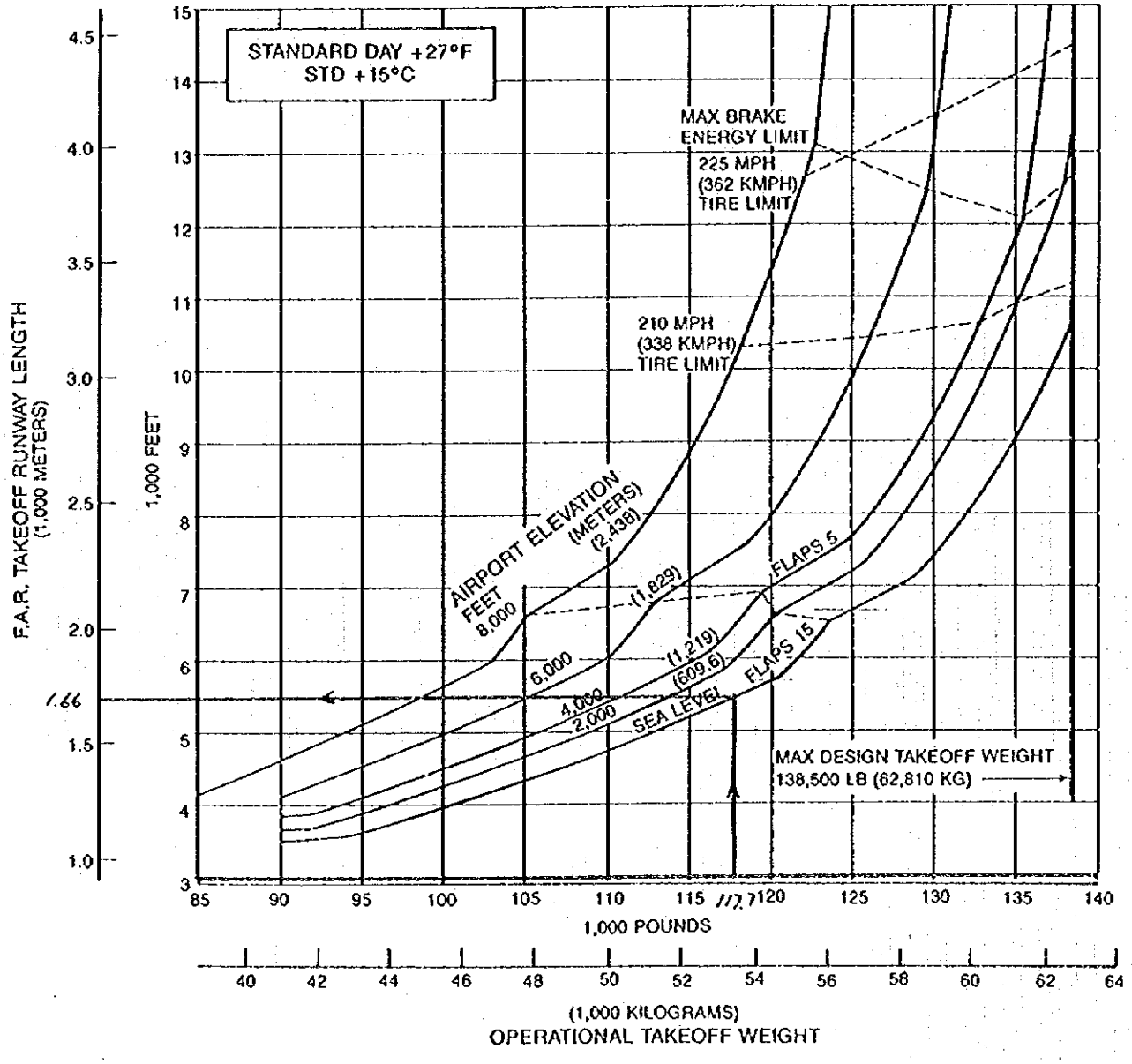
B737-300 :52.7 ton (116,200lbs)
A320-200 :66.3 ton (146,200lbs)
A300-B4 :136.1 ton (300,000lbs)

Typical Takeoff Runway Length at Sea Level and 30°C

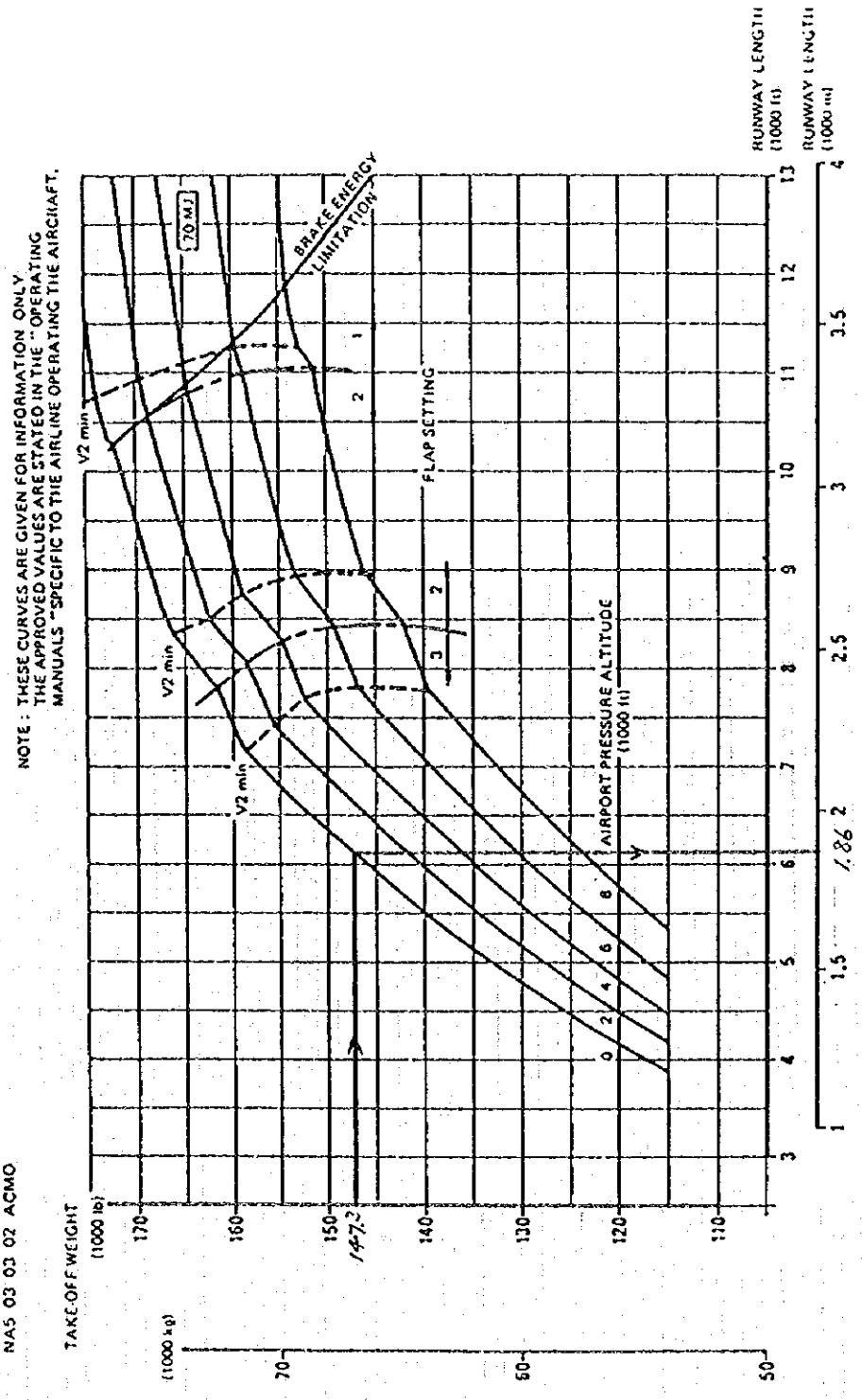
B737-300 : 1,610m
A320-200 : 1,830m
A300-B4 : 1,640m

Airport Elevation : 20m (66ft)
Reference Temperature : 32.2°C (90.0°F)
Longitudinal Slope : 0.7%
a = (1 + 0.07 x 20 / 300) x (1 + 0.01 x 2.2) x (1 + 0.1 x 0.7) = 1.099
B737-300 :1,610 x 1.099 = 1,770m
A320-200 :1,830 x 1.099 = 2,010m
A300-B4 : 1,640 x 1.099 = 1,800m

NOTES:
- NO ENGINE AIRBLEED FOR AIR CONDITIONING
- ZERO WIND, ZERO RUNWAY GRADIENT
- CONSULT WITH USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- CFM56-3B-1 ENGINES RATED AT 20,000 LB SLST

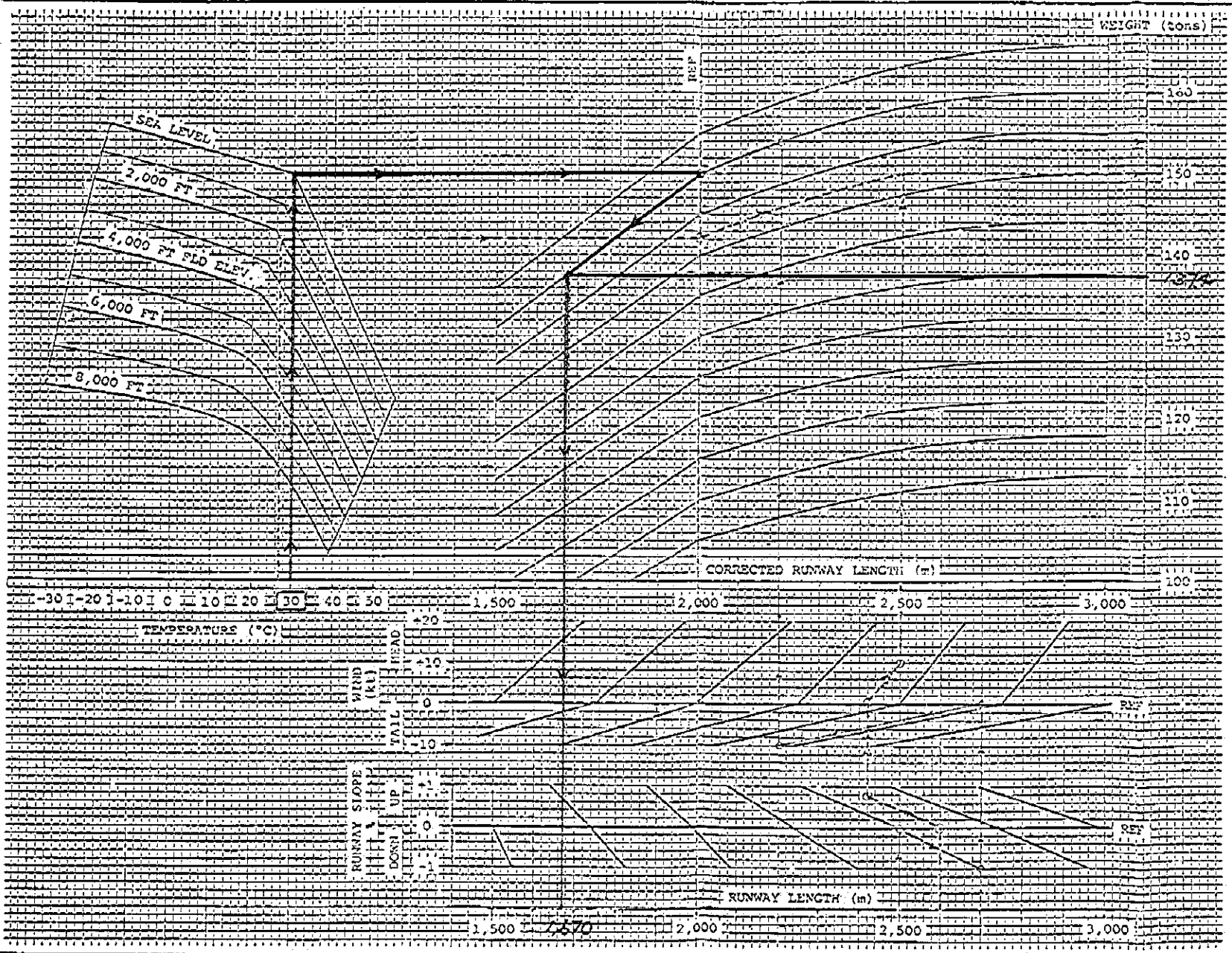


3.3.2 F.A.R. TAKEOFF RUNWAY LENGTH REQUIREMENTS—STANDARD DAY + 27°F (STD + 15°C)
MODEL 737-300 (CFM56-3B-1 ENGINES, 20,000 LB SLST)



3.3 F.A.R.TAKE OFF RUNWAY LENGTH REQUIREMENTS
3.3.2 ISA +15°C (59°F) CONDITIONS
V2500 A1 ENGINE

Printed in France



8° FLAPS

CHART BASED ON:
. No engine Bleed.

CORRECTIONS:
. QNH:
Above 1013 mb ADD 8(
Below 1013 mb SUB 1(
. Nacelle Anti-Ice:
SUBTRACT 1,500 kg.
. Total Anti-Ice:
SUBTRACT 4,000 kg.
. Bleeds to PACKS ON:
SUBTRACT 2,000 kg.

See:
——— Example No. (
– – – – – Example No.

Meteorological Analysis for Bacolod Airport

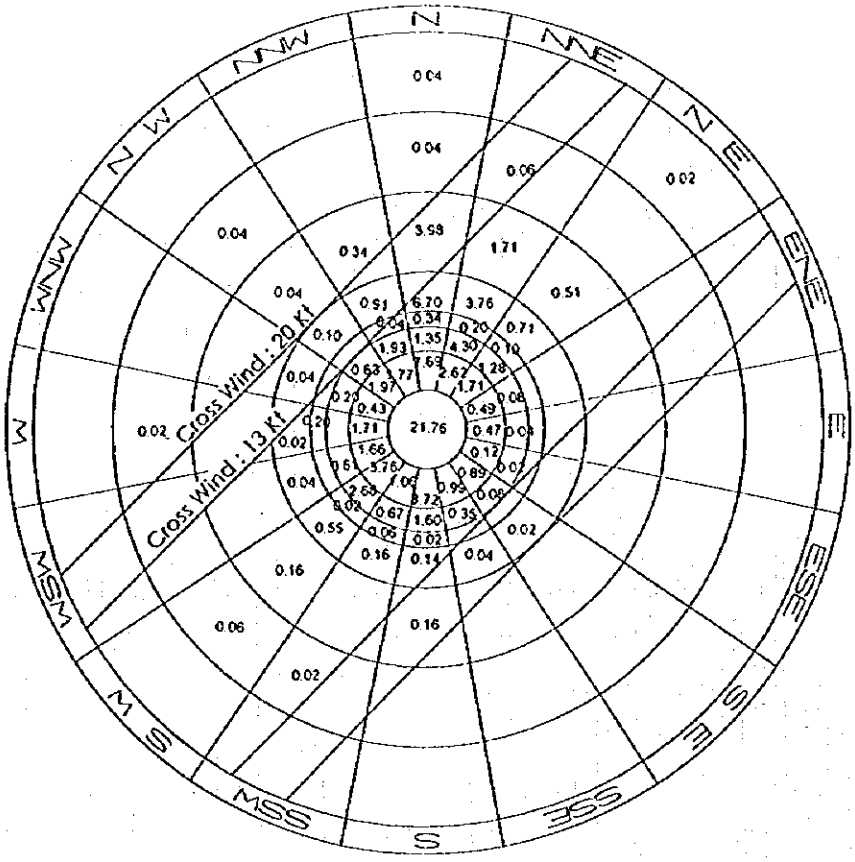


Figure A5.3.1 Wind Rose

Table A5.3.1 All Weather Wind Coverage

Direction	Cross Wind (Kt)	Tale Wind (Kt)	Wind Coverage (%)
RWY 04	13	5	76.26
	20	5	81.74
RWY 22	13	5	51.24
	20	5	51.65
RWY 04/22	13	0	93.38
	20	0	99.07

PAVEMENT INVESTIGATION REPORT: BACOLOD AIRPORT

1. Runway and Taxiway

The structure of the runway and taxiway pavements is 25cm aggregate base, 25cm cement concrete slab and 10cm asphalt overlay on it. The original cement concrete pavement was completed in 1967. The overlay work was completed in 1993.

The gravel has about 30% of broken faces, but the rest is pebbles rather than crushed stones. Reflection cracks were observed along joints of the cement concrete slabs. However the number of hair cracks are not many as they damage the pavement. Stagnant water were observed due to unevenness of the pavement surface. It is also not serious as it affects aircraft operations. The quality of asphalt concrete is generally good. With adequate maintenance of cracks, by asphalt fillers, the runway can be used without major repair for the present traffic load.

The taxiway pavement is generally in the same condition as the runway pavement. The elevation of the northern taxiway near the apron is low and often have stagnant water from rain. Filling of cracks with asphalt and an overlay for grade correction are recommended.

2. Apron

The structure of the apron pavement is 25cm aggregate base and 25cm cement concrete slab on it. The standard size of the slabs is 6.0m by 3.0m. The apron was constructed in 1967 and expanded in 1981.

The quality of the cement concrete slabs have been deteriorating with many hair cracks, corner cracking and scaling. More than 10% of the slabs have cracks dividing a slab into two 3m by 3m pieces, which might reach to the bottom of the slabs. Many other slabs are about to have corner missing and scaling, which together with deteriorated joint sealant will accelerate the destruction of the cement concrete pavement by infiltration of rain water. Some of major cracks were sealed with asphalt joint sealant. However since the fillers are deteriorated, no effective prevention of rain water penetration can be expected.

In addition, a large area (approx. 50m by 40m) on the northern part of the apron has stagnant water lasting for a few days after heavy rain fall. This is caused by lower elevation of pavement surface than the surrounding pavements. Mal-setting of base course at the time of construction may be the cause since no irregular cracks and destroyed joints to be caused by uneven settlement of concrete slabs were observed.

As a temporary countermeasure, an asphalt overlay with a minimum thickness of 10cm (6cm binder course and 4cm surface course) is required after sticking a 50cm wide reflection prevention sheet along

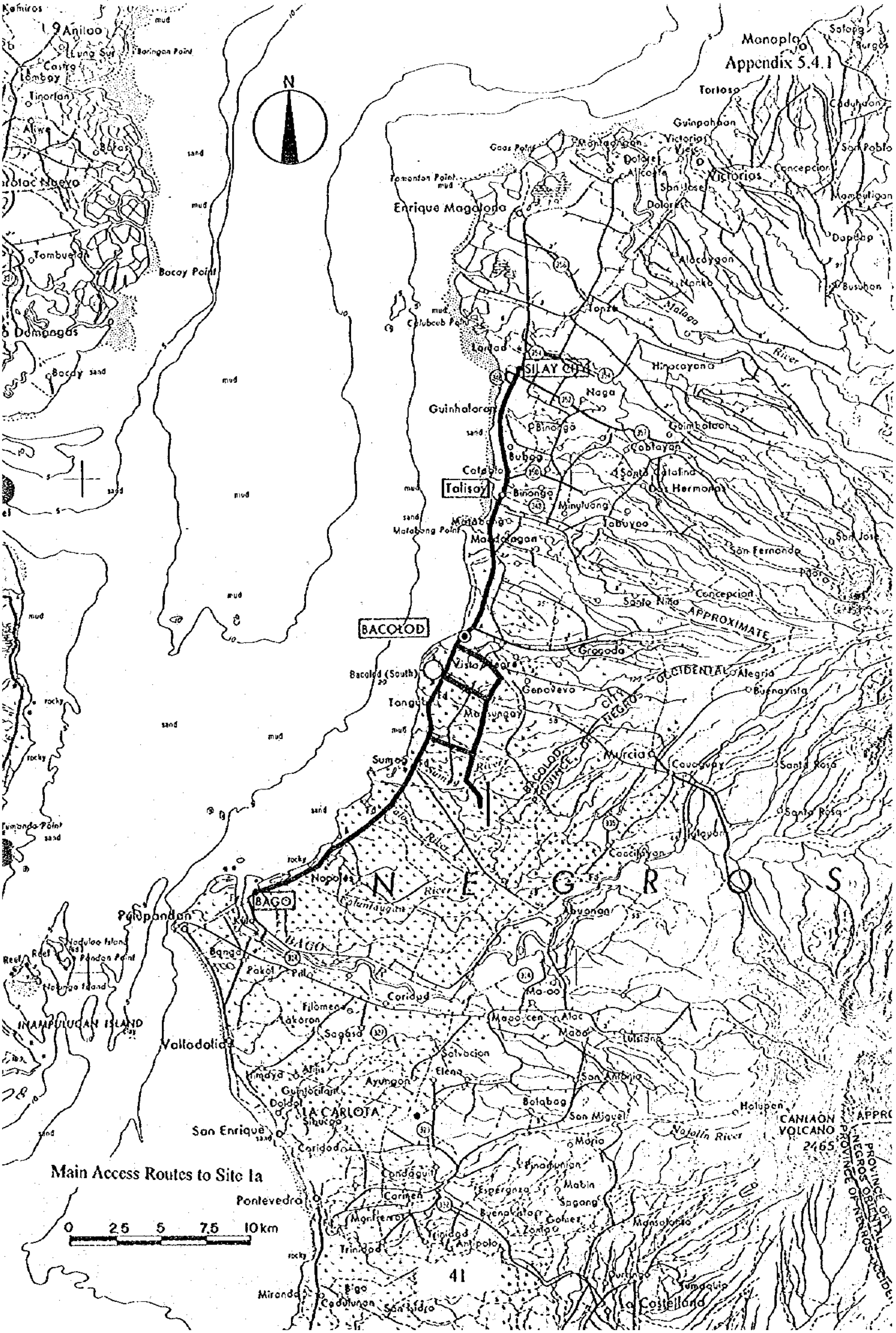
the joint. Oil proof coating should be applied for aircraft parking positions. The northern part of the apron would require a thicker asphalt overlay to correct grading.

3. Vehicle Parking Area

Asphalt concrete pavement constructed in 1992 is in good condition and can be used with adequate maintenance. Around the eastern edge of the vehicle parking area, grass penetrate upon the asphalt concrete. It is necessary to construct a base course to avoid growing of grass. Therefore, when the damage become serious, this part may require re-pavement after demolishing the existing one.

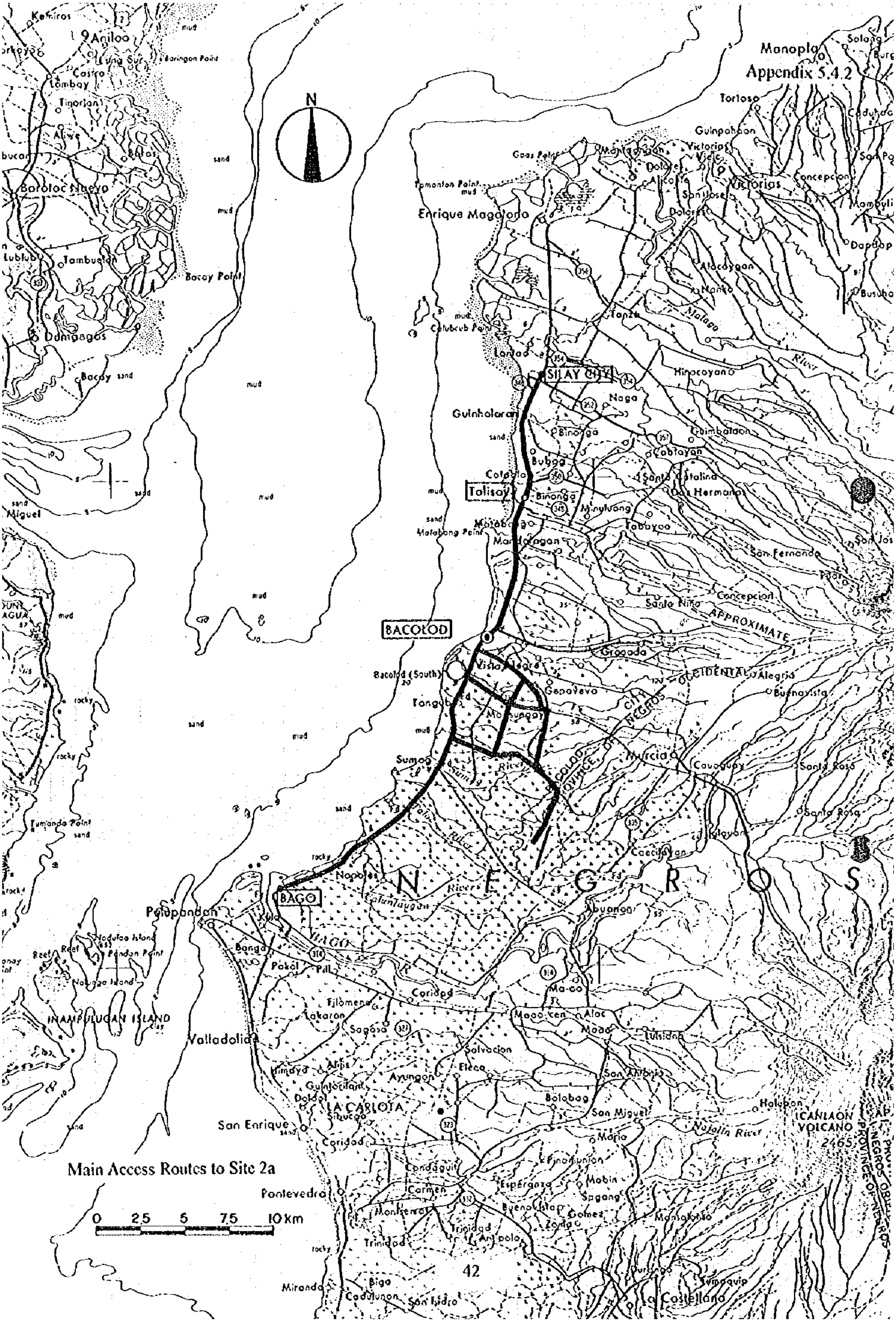
Passenger Terminal Space Analysis for Bacolod Airport

		Current Data	Remarks
a: Number of peak hour originating passengers		140	
b: Number of peak hour landside transfer passengers		0	
c: Number of peak hour departing passengers		140	
d: Number of peak hour terminating passengers		140	
g: Time of first passenger at gate lounge (mins. before STD)		50	
m: Maximum number of seats on largest aircraft handled at gate in question		141	
o: Number of visitors - Originating passengers		1.7	
o: Number of visitors - Terminating passengers		1.7	
p: Proportion of passengers using car/taxi - Originating passengers		90%	
p: Proportion of passengers using car/taxi - Terminating passengers		90%	
q: Proportion of passengers arriving by wide-body aircraft during peak hour		0%	
r: Proportion of passengers arriving by narrow-body aircraft during peak hour		100%	
s: Maximum number of seats on largest aircraft handled at airport		141	
t1: Average processing time per passenger at check-in desk (mins.)		2.0	
		Required	
1. Departure Curb	L = (0.095 a p) 1.1 =	13	m
2. Departure Concourse	A = 0.75 [a (1 + o) + b] =	284	sq.m
3. Security Check (Check-in Baggage)	N = (a + b) / 300 =	0.5	
4. Check-in Queuing Area	A = (0.25 [a + b)] 1.1 =	39	sq.m
5. Check-in Counters	N = [(a + b) t1 / 60] 1.1 =	5.1	
6. Security Check (Gate Lounge)	N = 0.2 m / (g - 5) =	0.6	
7. Gate Lounge	A = 1.375 a x 0.5 x 1.3 =	125	sq.m
8. Baggage Claim Area	A = (0.9 d) 1.1 =	139	sq.m
9. Number of Baggage Claim Devices - Narrow Body	N = d r / 300 =	0.5	
10. Arrival Concourse Waiting Area	A = (0.375 (d + b + 2 d o)] 1.1 =	254	sq.m
11. Arrival Curb	L = (0.095 d p) 1.1 =	13	m



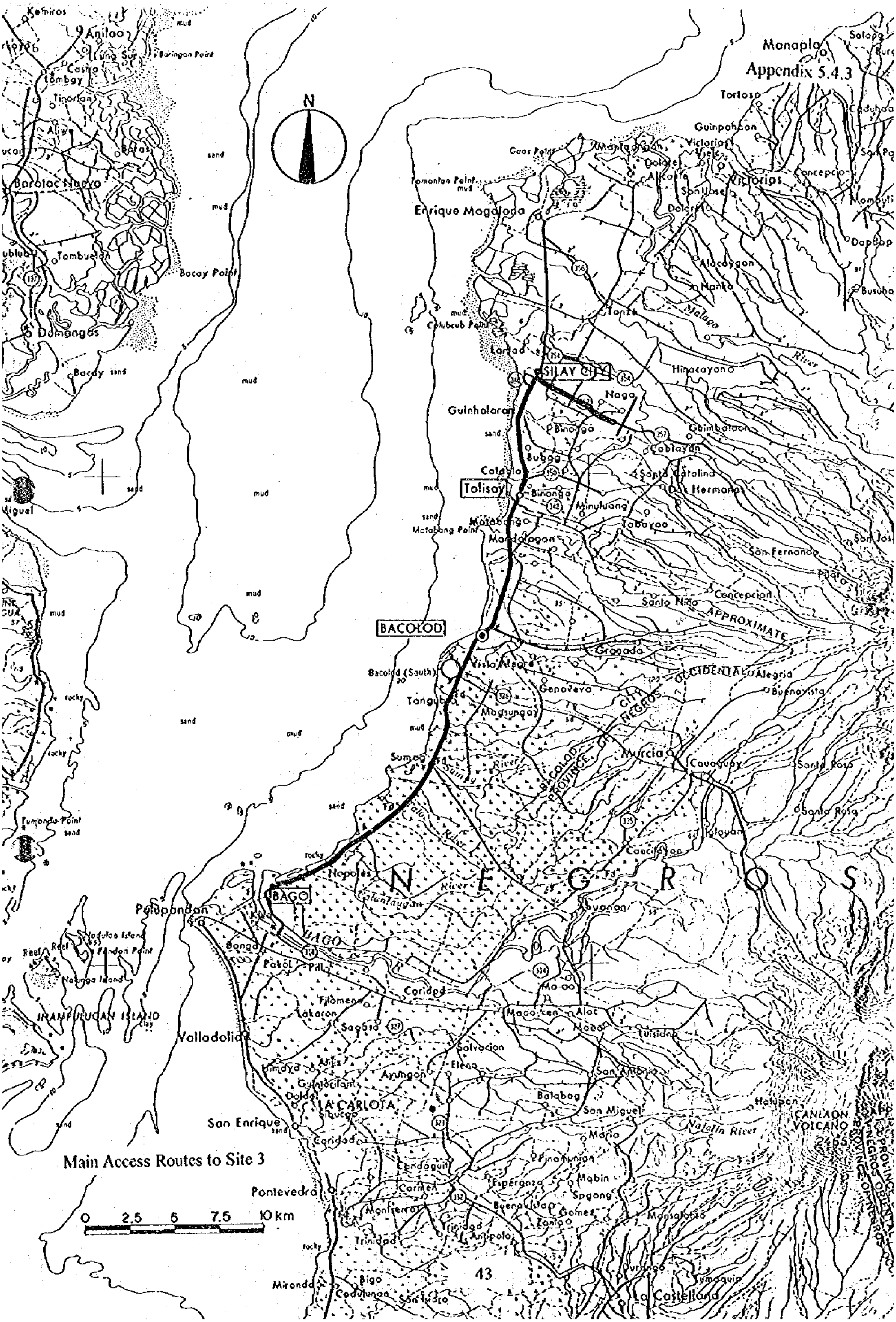
Main Access Routes to Site Ia

Appendix 5.4.2



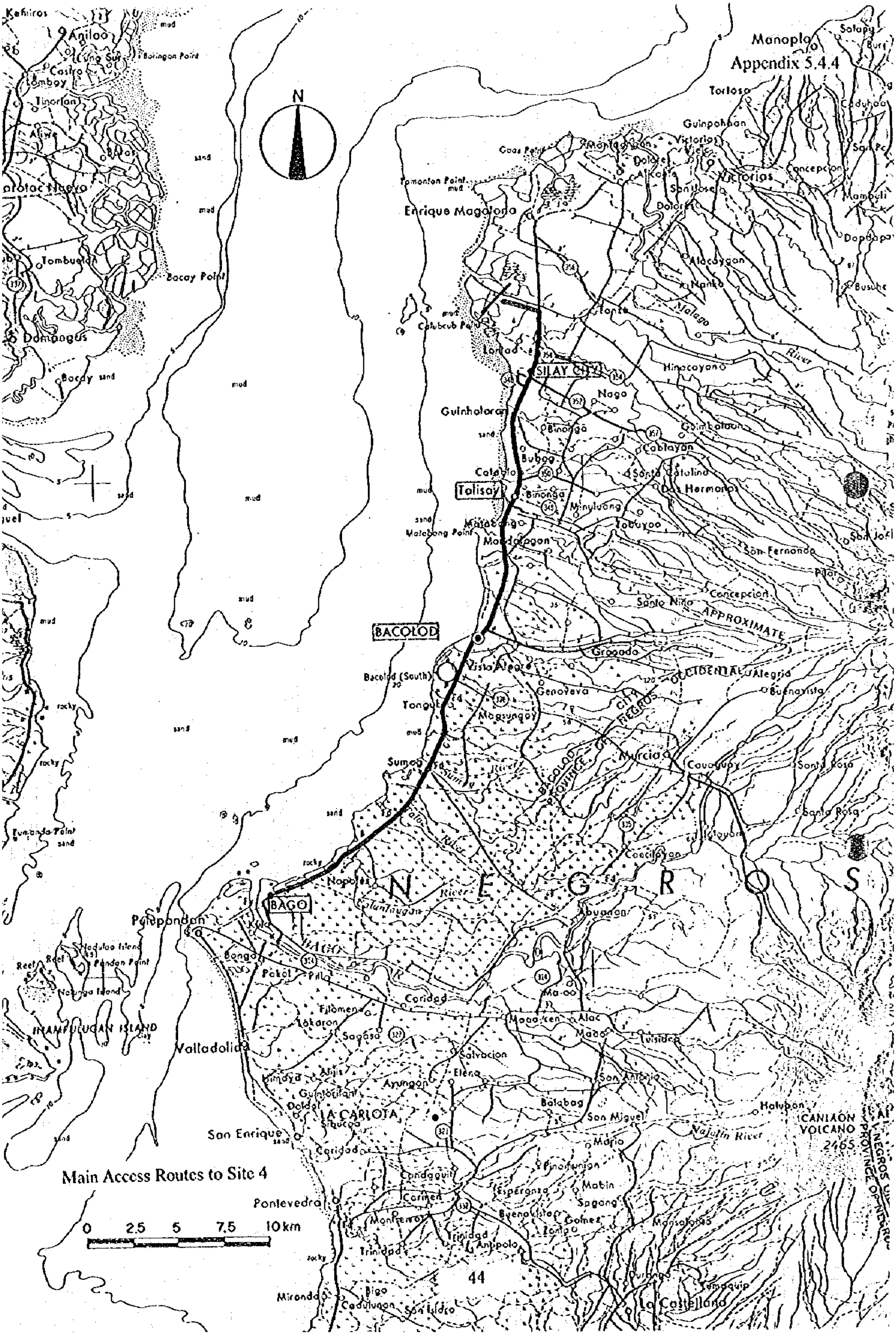
Main Access Routes to Site 2a

Appendix 5.4.3



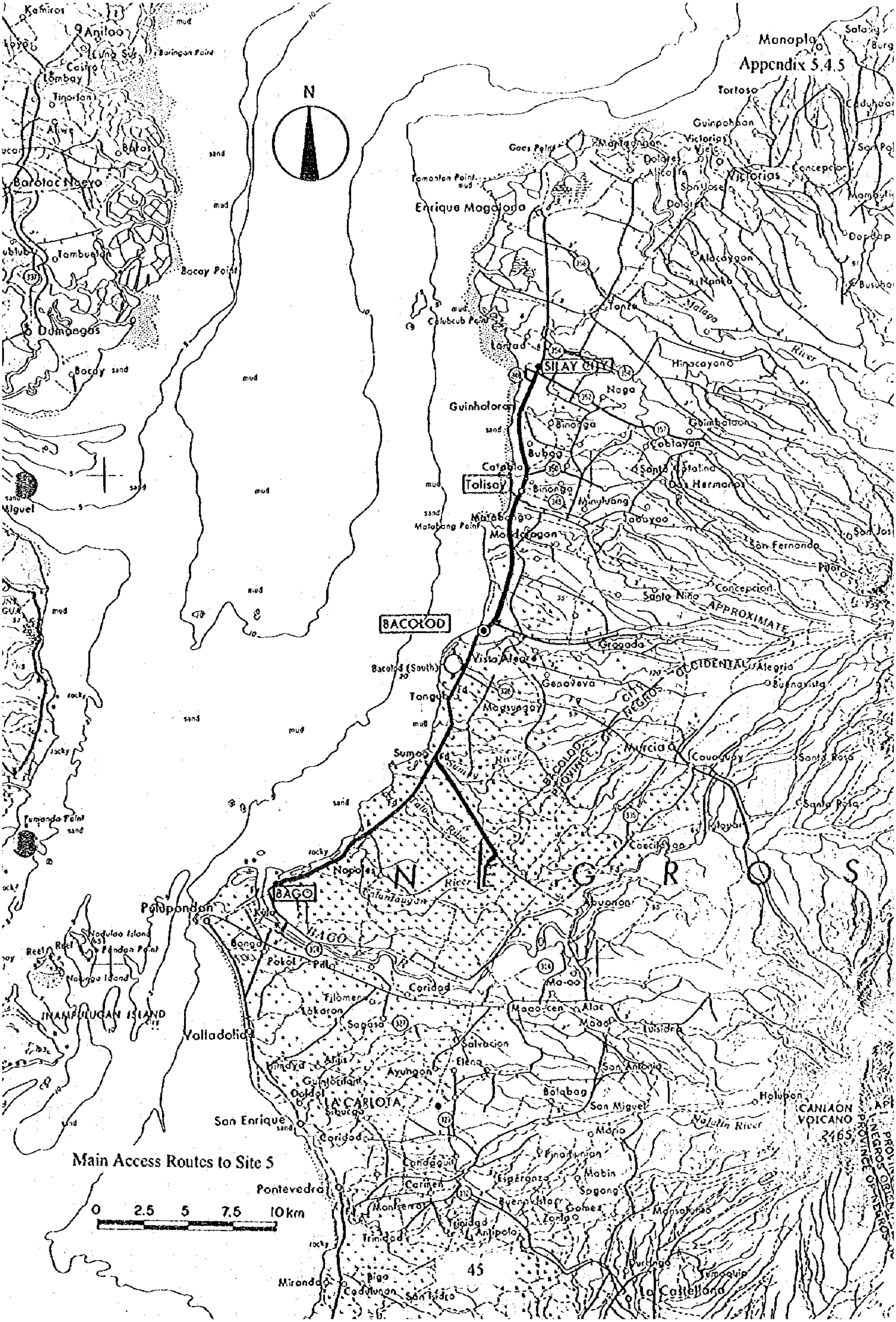
Main Access Routes to Site 3

Appendix 5.4.4



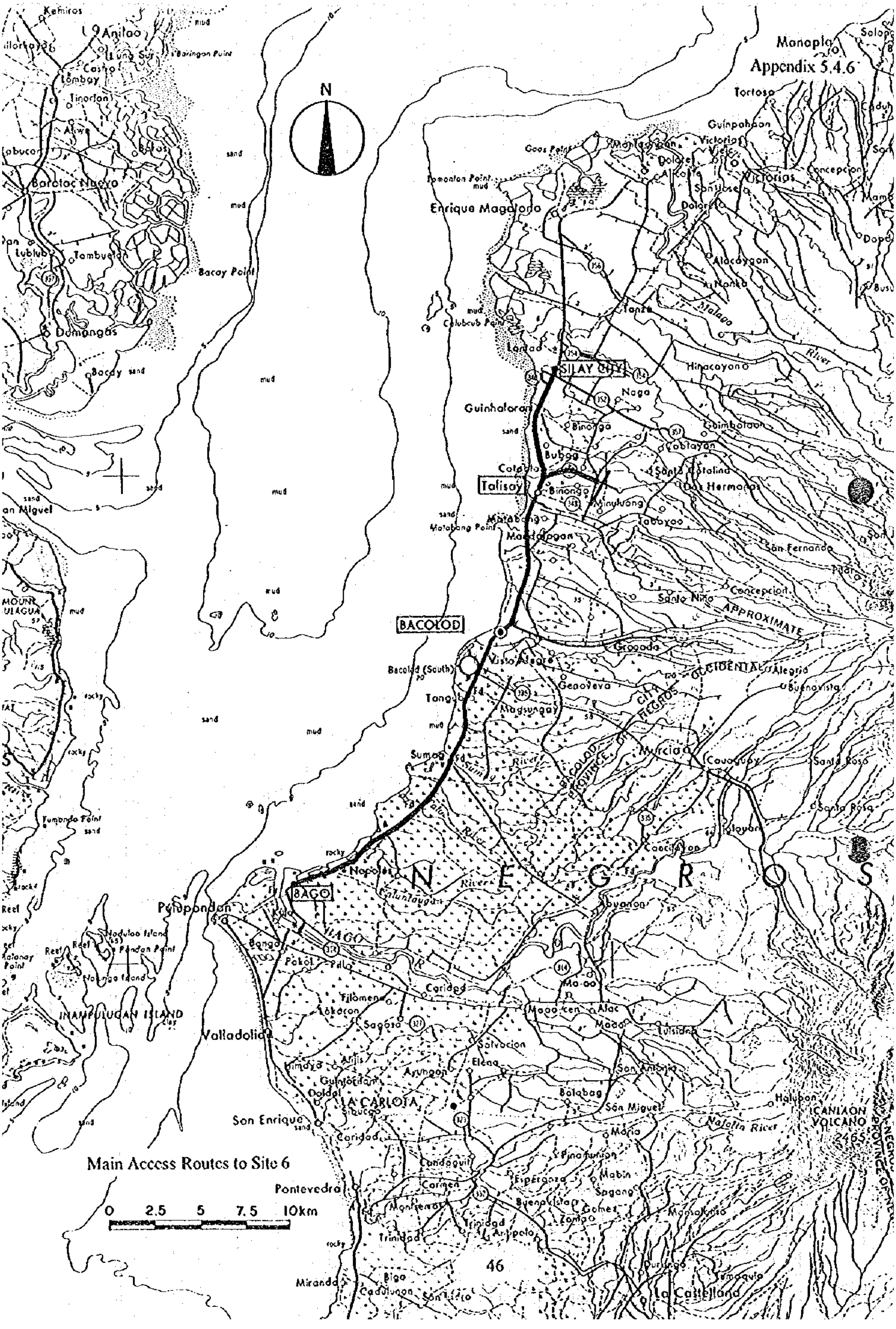
Main Access Routes to Site 4

Appendix 5.4.5



Main Access Routes to Site 5

Appendix 5.4.6



Main Access Routes to Site 6

REQUIRED ASPHALT OVERLAY THICKNESS FOR BACOLOD AIRPORT

1) Existing Pavement (PCN41R/C/W/U)

Asphalt Overlay: 10cm
PCC Slab: 25cm
Base Course: 25cm

2) ACN of Typical Aircraft Operating at the Airport

B737-300 at Maximum Ramp Weight (56,470kg) : ACN = 37
A320 at Maximum Ramp Weight (68,400kg) : ACN = 44
A300-B4 at 140,000kg : ACN = (61 - 27) / (157,000 - 87,826) x (140,000 - 87,826) +27 = 53

3) Overlay Required for A300 and A320 Operations

Assumed CBR = 6%
Assumed K on Top of Subgrade = 40MN/m^3
Assumed Concrete Flexural Strength: 650 psi
Assumed Equivalent Annual Departure: 3,000
K on Top of Base Course (Figure-1): 240pci
Thickness of New Rigid Pavement
for A300 (Figure-2): h_d = 13 inches = 32.5 cm
for A320 (Figure-3): h_d = 14 inches = 35 cm
therefore, required thickness is 35cm
F-Factor (Figure-4): 0.96
Condition Factor of Existing Rigid Pavement: $C_b = 0.9$
Thickness of Asphalt Overlay: $t = 2.5 \times (F \times h_d - C_b \times h_e) = 2.5 \times (0.96 \times 35 - 0.9 \times 25) = 28$ cm
Effective Thickness of Existing Asphalt Overlay: 9 cm
Required Overlay Thickness: 28 - 9 = 19 cm

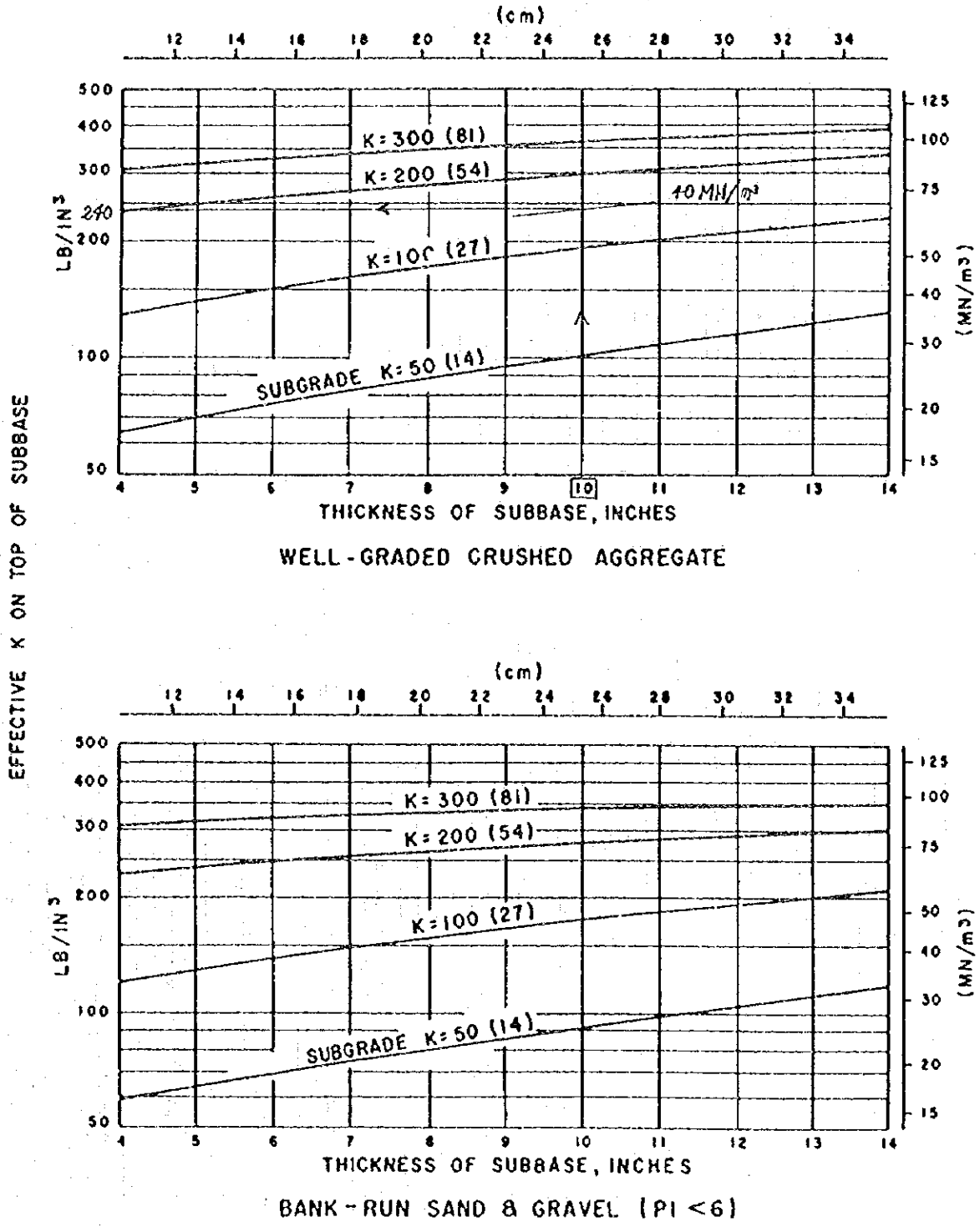


Figure-1 Effect of Subbase on Modulus of Subgrade Reaction

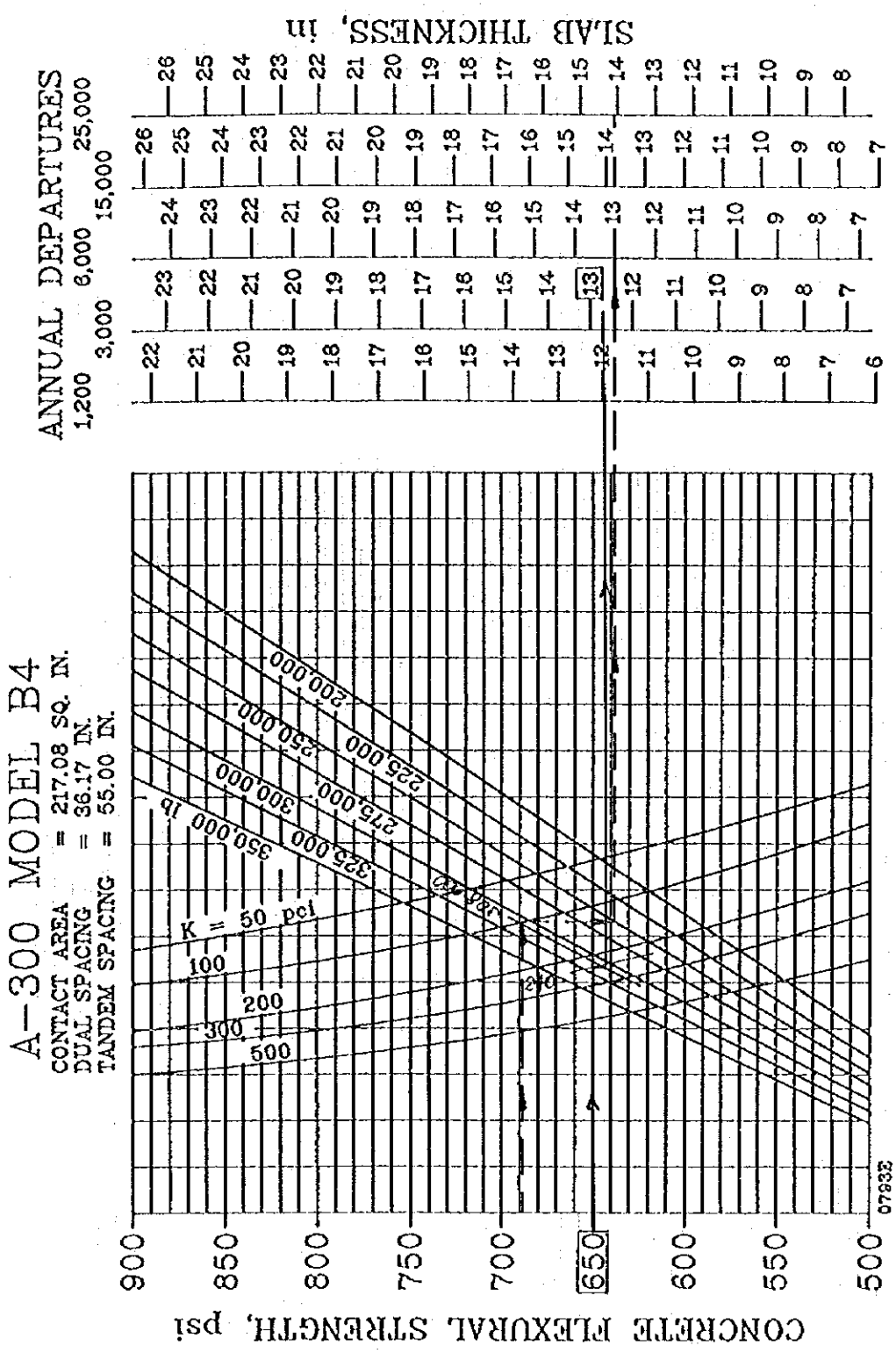


Figure-2 Rigid Pavement Design Curves, A-300 Model B4

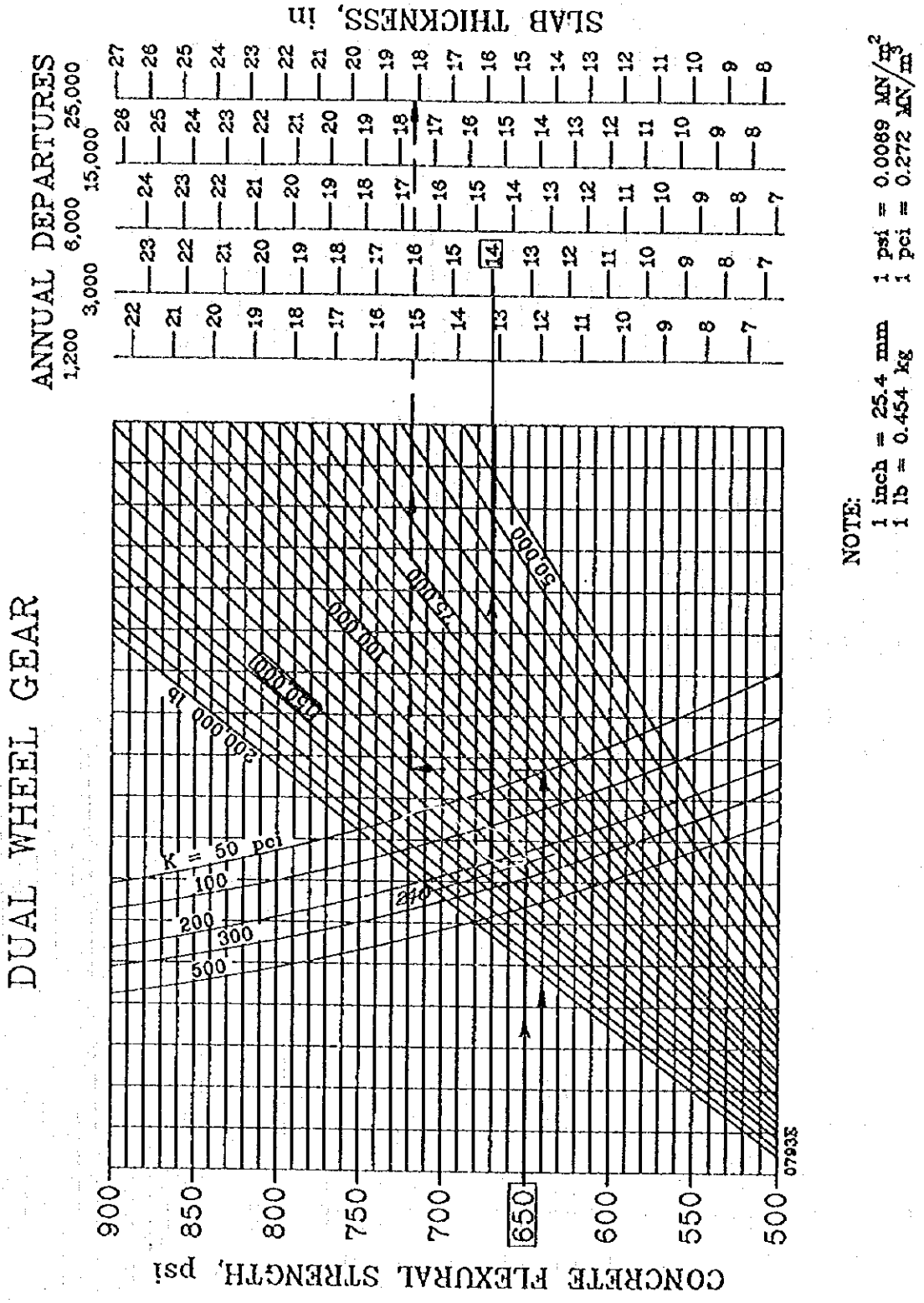


Figure-3 Rigid Pavement Design Curves, Dual Wheel Gear

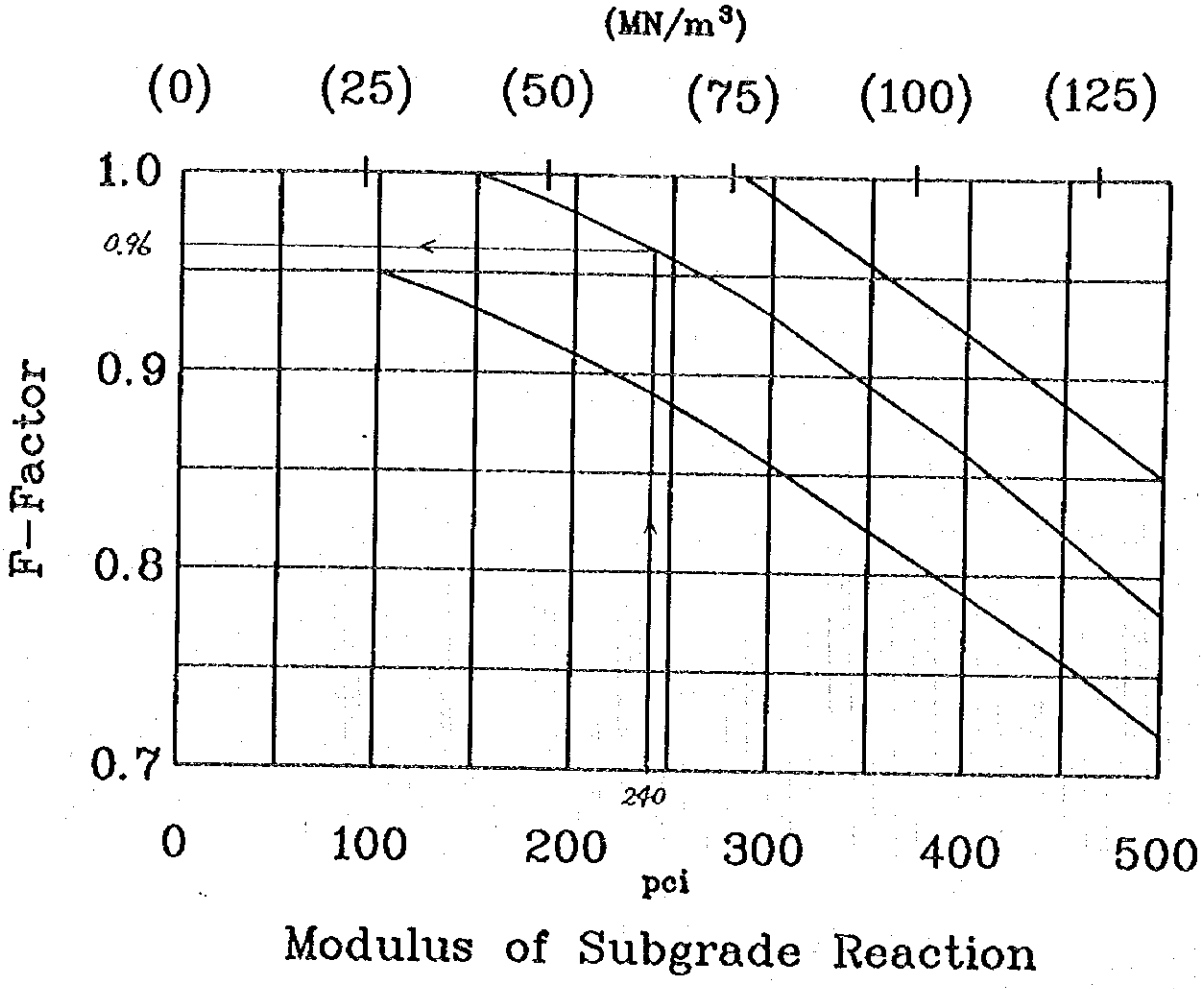


Figure-4 Graph of "F" Factor vs. Modulus of Subgrade Reaction for Different Traffic Levels

Appendix 5.5.2 Economic Benefits by the Project for Bacolod Airport

Year	Air Passenger Traffic			Time Savings Benefit						Tourism Earnings Benefit									Benefit from Cargo					Total Benefit by the Project
	Passengers in WP Case	Passengers in WOP Case	Incremental Passengers in WP Case	Incremental Business Passengers in WP Case	Time Value of Business Passengers	Cost of Travel by Bus Transport	Cost of Travel by Air Transport	Time Savings Benefit per Business Passenger	Time Savings Benefit by the Project	Incremental Tourist Passengers in WP Case	Incremental Tourists in WP Case	Incremental Foreign Tourist in WP Case	Incremental Domestic Tourist in WP Case	Tourism Earnings Benefit per Foreign Tourist	Tourism Earnings Benefit per Domestic Tourist	Tourism Earnings Benefit from Foreign Tourist	Tourism Earnings Benefit from Domestic Tourist	Tourism Earnings Benefit by the Project	Cargo in WP Case	Cargo in WOP Case	Incremental Cargo in WP Case	Cargo Benefit per ton of Cargo	Cargo Benefit by the Project	
	(1)	(2)	(3)=(1)-(2)	(4)=(3)x56.0%	(5)	(6)=(5)x17.3 hours +720	(7)=(5)x2.4 hours +1,398	(8)	(9)=(4)x(8)	(10)=(3)X12.3%	(11)=(10)/2	(12)=(11)x14.1%	(13)=(11)x85.9%	(14)	(15)	(16)=(12)x(14)	(17)=(13)x(15)	(18)=(16)+(17)	(19)	(20)	(21)=(19)-(20)	(22)	(23)=(21)x(22)	(24)=(9)+(18)+(23)
				(PHP/hour)		(PHP)	(PHP)	(PHP)	(PHP '000)					(PHP)	(PHP)	(PHP '000)	(PHP '000)	(PHP '000)	(ton)	(ton)	(ton)	(PHP/ton)	(PHP '000)	(PHP '000)
1995	371,955	371,955	0	0					0	0	0	0	0	2,700	800	0	0	0	7,531	7,531	0		0	0
1996	426,000	426,000	0	0	50	1,585	1,518		0	0	0	0	0	2,865	849	0	0	0	8,300	8,300	0		0	0
1997	426,000	426,000	0	0	53	1,638	1,525		0	0	0	0	0	3,039	901	0	0	0	8,300	8,300	0		0	0
1998	426,000	426,000	0	0	56	1,694	1,533		0	0	0	0	0	3,225	956	0	0	0	8,300	8,300	0		0	0
1999	426,000	426,000	0	0	60	1,753	1,541		0	0	0	0	0	3,422	1,014	0	0	0	8,300	8,300	0		0	0
2000	426,000	426,000	0	0	63	1,816	1,550		0	0	0	0	0	3,630	1,076	0	0	0	8,300	8,300	0		0	0
2001	426,000	426,000	0	0	67	1,881	1,559		0	0	0	0	0	3,844	1,139	0	0	0	8,300	8,300	0		0	0
2002	833,000	426,000	407,000	227,920	71	1,949	1,569	381	86,790	50,061	25,031	3,529	21,501	4,071	1,206	14,369	25,937	40,306	13,500	8,300	5,200	4,575	23,790	150,886
2003	886,000	426,000	460,000	257,600	75	2,022	1,579	443	114,183	56,580	28,290	3,989	24,301	4,312	1,277	17,198	31,044	48,242	14,200	8,300	5,900	4,575	26,993	189,418
2004	943,000	426,000	517,000	289,520	80	2,099	1,589	509	147,485	63,591	31,796	4,483	27,312	4,566	1,353	20,470	36,950	57,419	14,900	8,300	6,600	4,575	30,195	235,099
2005	1,003,000	426,000	577,000	323,120	84	2,180	1,601	579	187,238	70,971	35,486	5,003	30,482	4,835	1,433	24,193	43,671	67,864	15,600	8,300	7,300	4,575	33,398	288,500
2006	1,045,000	426,000	619,000	346,640	89	2,256	1,611	645	223,534	76,137	38,069	5,368	32,701	5,087	1,507	27,304	49,286	76,589	16,200	8,300	7,900	4,575	36,143	336,266
2007	1,088,000	426,000	662,000	370,720	93	2,336	1,622	714	264,563	81,426	40,713	5,741	34,972	5,351	1,586	30,719	55,450	86,169	16,900	8,300	8,600	4,575	39,345	390,077
2008	1,133,000	426,000	707,000	395,920	98	2,420	1,634	786	311,198	86,961	43,481	6,131	37,350	5,629	1,668	34,513	62,299	96,812	17,600	8,300	9,300	4,575	42,548	450,558
2009	1,180,000	426,000	754,000	422,240	103	2,508	1,646	862	364,031	92,742	46,371	6,538	39,833	5,922	1,755	38,721	69,896	108,617	18,300	8,300	10,000	4,575	45,750	518,397
2010	1,229,000	426,000	803,000	449,680	109	2,601	1,659	942	423,701	98,769	49,385	6,963	42,421	6,230	1,846	43,382	78,309	121,690	19,000	8,300	10,700	4,575	48,953	594,344
2011	1,268,000	426,000	842,000	471,520	113	2,682	1,670	1,012	477,130	103,566	51,783	7,301	44,482	6,498	1,925	47,445	85,643	133,088	19,600	8,300	11,300	4,575	51,698	661,915
2012	1,308,000	426,000	882,000	493,920	118	2,766	1,682	1,085	535,688	108,486	54,243	7,648	46,595	6,777	2,008	51,836	93,569	145,405	20,300	8,300	12,000	4,575	54,900	735,993
2013	1,349,000	426,000	923,000	516,880	123	2,854	1,694	1,160	599,764	113,529	56,765	8,004	48,761	7,069	2,094	56,578	102,129	158,707	21,000	8,300	12,700	4,575	58,103	816,573
2014	1,392,000	426,000	966,000	540,960	129	2,946	1,707	1,239	670,468	118,818	59,409	8,377	51,032	7,373	2,185	61,760	111,483	173,243	21,700	8,300	13,400	4,575	61,305	905,016
2015	1,436,000	426,000	1,010,000	565,600	134	3,042	1,720	1,322	747,639	124,230	62,115	8,758	53,357	7,690	2,278	67,350	121,573	188,923	22,400	8,300	14,100	4,575	64,508	1,001,070
2016	1,436,000	426,000	1,010,000	565,600	139	3,133	1,733	1,400	791,753	124,230	62,115	8,758	53,357	7,990	2,367	69,976	126,314	196,291	22,400	8,300	14,100	4,575	64,508	1,052,551
2017	1,436,000	426,000	1,010,000	565,600	145	3,227	1,746	1,481	837,587	124,230	62,115	8,758	53,357	8,301	2,460	72,706	131,240	203,946	22,400	8,300	14,100	4,575	64,508	1,106,040
2018	1,436,000	426,000	1,010,000	565,600	151	3,324	1,759	1,565	885,208	124,230	62,115	8,758	53,357	8,625	2,556	75,541	136,359	211,900	22,400	8,300	14,100	4,575	64,508	1,161,616
2019	1,436,000	426,000	1,010,000	565,600	156	3,426	1,773	1,653	934,687	124,230	62,115	8,758	53,357	8,962	2,655	78,487	141,677	220,164	22,400	8,300	14,100	4,575	64,508	1,219,359
2020	1,436,000	426,000	1,010,000	565,600	163	3,531	1,788	1,743	986,096	124,230	62,115	8,758	53,357	9,311	2,759	81,548	147,202	228,750	22,400	8,300	14,100	4,575	64,508	1,279,353
2021	1,436,000	426,000	1,010,000	565,600	168	3,630	1,802	1,828	1,034,031	124,230	62,115	8,758	53,357	9,637	2,855	84,402	152,354	236,757	22,400	8,300	14,100	4,575	64,508	1,335,295
2022	1,436,000	426,000	1,010,000	565,600	174	3,732	1,816	1,916	1,083,643	124,230	62,115	8,758	53,357	9,974	2,955	87,356	157,687	245,043	22,400	8,300	14,100	4,575	64,508	1,393,194
2023	1,436,000	426,000	1,010,000	565,600	180	3,837	1,830	2,007	1,134,993	124,230	62,115	8,758	53,357	10,323	3,059	90,414	163,206	253,620	22,400	8,300	14,100	4,575	64,508	1,453,120
2024	1,436,000	426,000	1,010,000	565,600	186	3,946	1,846	2,101	1,188,139	124,230	62,115	8,758	53,357	10,685	3,166	93,578	168,918	262,496	22,400	8,300	14,100	4,575	64,508	1,515,143
2025	1,436,000	426,000	1,010,000	565,600	193	4,059	1,861	2,198	1,243,146	124,230	62,115	8,758	53,357	11,059	3,277	96,854	174,830	271,684	22,400	8,300	14,100	4,575	64,508	1,579,337
2026	1,436,000	426,000	1,010,000	565,600	200	4,176	1,877	2,299	1,300,077	124,230	62,115	8,758	53,357	11,446	3,391	100,243	180,949	281,193	22,400	8,300	14,100	4,575	64,508	1,645,777

Notes: Column (5): Average time value of business passengers in 1996 are estimated to be PHP50 per hour.
Minimum income for choosing air transport over surface transport is estimated to be PHP45, PHP40 and PHP61respectively for Bacolod-Manila, Iloilo-Manila and Tacloban-Manila. PHP50 is determined as average of those values.
This value is assumed to increase at the same rate as the projected GDP per capita annual growth rates, i.e., 6.1% (1996-2000), 5.9% (2000-2005), 5.2% (2005-2010), 4.3% (2010-2015), 3.9% (2015-2020) and 3.5% thereafter.

Columns (6) and (7): Travel time and passenger fare by sea and air are estimated as weighted average of Manila and Cebu routes using the number of passengers in 2005 as a weight, 82.5% for Manila and 17.5% for Cebu.
Travel time of Bacolod-Manila is 2.5 hours by air and 19.0 hours by boat. That of Bacolod-Cebu is 2.0 hours by air and 9.0 hours by boat. Those include waiting time of 1.5 hours for air and 1.0 hour for boat.
Travel fare of Bacolod-Manila is PHP1,535 by air and PHP752 by boat. That of Bacolod-Cebu is PHP752 by air and 360 by boat.

Columns (14) and (15): Tourism earnings per foreign tourist in 1995 are estimated as PHP 2,250 (daily expenditure) x 4 days (average length of stay) x 30% (rate of value added) based on the data from the Department of Tourism.
Tourism earnings per domestic tourist in 1995 are estimated as PHP 2,000 (daily expenditure) x 2 days (average length of stay) x 20% (rate of value added) based on the data from the Department of Tourism.
Those values are assumed to increase at the same rate as GDP per capita growth rate.

Column (22): Cargo airfare is estimated based on the present airfare on each routes weighted by the projected number of passengers in 2005. Cargo airfare per one kilogram of air cargo from Bacolod is PHP10.05 for Manila and PHP4.92 for Cebu.
Cargo benefit per unit weight of cargo is estimated as 50% of the cargo airfare.
This is based on the consideration that consumers' surplus per unit weight of cargo is 50% of the cargo airfare when a straight line demand curve with a price axis intercept (demand=0) being the twice the airfare is assumed.

Columns (4), (10), (12) and (13) Percentage of business passengers, tourist passengers and their breakdown into foreign and domestic passengers is based on the air passenger interview survey conducted by the Study Team. See Appendix A for details.

Appendix 5.5.3 Incremental Revenues by the Project for Bacolod Airport

Year	Landing Fee					Operational Charge					Aircraft Parking Charge			Passenger Service Charge					Passenger Terminal Space Rental				
	WP		WOP		Incremental	WP		WOP		Incremental	WP	WOP	Incremental	WP		WOP		Incremental	WP		WOP		Incremental
	Total Weigh (ton)	Total Fee ('000 PHP)	Total Weigh (ton)	Total Fee ('000 PHP)	Revenue ('000 PHP)	Aircraft Landings	Total Fee ('000 PHP)	Aircraft Landings	Total Fee ('000 PHP)	Revenue ('000 PHP)	('000 PHP)	('000 PHP)	Revenue ('000 PHP)	Departing Passengers	Total Fee ('000 PHP)	Departing Passengers	Total Fee ('000 PHP)	Revenue ('000 PHP)	Rent Space (sq. m)	Total Fee ('000 PHP)	Rent Space (sq. m)	Total Fee ('000 PHP)	Revenue ('000 PHP)
	(1)	(2)	(3)	(4)	(5)=(2)-(4)	(6)	(7)	(8)	(9)	(10)=(7)-(9)	(11)	(12)	(13)=(11)-(12)	(14)	(15)	(16)	(17)	(18)=(15)-(17)	(19)	(20)	(21)	(22)	(23)=(20)-(22)
1995	128,555	3,085	128,555	3,085	0	1,585	951	1,585	951	0	123	123	0	185,978	0	185,978	0	0	0	0	0	0	0
1996	150,855	3,621	150,855	3,621	0	1,780	1,068	1,780	1,068	0	145	145	0	213,000	0	213,000	0	0	0	0	0	0	0
1997	150,855	3,621	150,855	3,621	0	1,995	1,197	1,995	1,197	0	145	145	0	213,000	0	213,000	0	0	0	0	0	0	0
1998	150,855	3,621	150,855	3,621	0	1,995	1,197	1,995	1,197	0	145	145	0	213,000	0	213,000	0	0	0	0	0	0	0
1999	150,855	3,621	150,855	3,621	0	1,995	1,197	1,995	1,197	0	145	145	0	213,000	0	213,000	0	0	0	0	0	0	0
2000	150,855	3,621	150,855	3,621	0	1,995	1,197	1,995	1,197	0	145	145	0	213,000	0	213,000	0	0	0	0	0	0	0
2001	150,855	3,621	150,855	3,621	0	1,995	1,197	1,995	1,197	0	145	145	0	213,000	0	213,000	0	0	0	0	0	0	0
2002	323,200	62,054	150,855	3,621	58,434	3,045	14,616	1,995	1,197	13,419	2,482	145	2,337	416,500	33,320	213,000	0	33,320	1,260	6,048	0	0	6,048
2003	346,345	66,498	150,855	3,621	62,878	3,195	15,336	1,995	1,197	14,139	2,660	145	2,515	443,000	35,440	213,000	0	35,440	1,260	6,048	0	0	6,048
2004	371,140	71,259	150,855	3,621	67,638	3,355	16,104	1,995	1,197	14,907	2,850	145	2,706	471,500	37,720	213,000	0	37,720	1,260	6,048	0	0	6,048
2005	398,410	76,495	150,855	3,621	72,874	3,530	16,944	1,995	1,197	15,747	3,060	145	2,915	501,500	40,120	213,000	0	40,120	1,260	6,048	0	0	6,048
2006	416,025	79,877	150,855	3,621	76,256	3,645	17,496	1,995	1,197	16,298	3,195	145	3,050	522,500	41,800	213,000	0	41,800	1,660	7,968	0	0	7,968
2007	435,580	83,631	150,855	3,621	80,011	3,765	18,072	1,995	1,197	16,875	3,345	145	3,200	544,000	43,520	213,000	0	43,520	1,660	7,968	0	0	7,968
2008	455,670	87,489	150,855	3,621	83,868	3,890	18,672	1,995	1,197	17,475	3,500	145	3,355	566,500	45,320	213,000	0	45,320	1,660	7,968	0	0	7,968
2009	476,050	91,402	150,855	3,621	87,781	4,020	19,296	1,995	1,197	18,099	3,656	145	3,511	590,000	47,200	213,000	0	47,200	1,660	7,968	0	0	7,968
2010	498,325	95,678	150,855	3,621	92,058	4,155	19,944	1,995	1,197	18,747	3,827	145	3,682	614,500	49,160	213,000	0	49,160	1,660	7,968	0	0	7,968
2011	515,405	98,958	150,855	3,621	95,337	4,265	20,472	1,995	1,197	19,275	3,958	145	3,813	634,000	50,720	213,000	0	50,720	1,660	7,968	0	0	7,968
2012	532,775	102,293	150,855	3,621	98,672	4,380	21,024	1,995	1,197	19,827	4,092	145	3,947	654,000	52,320	213,000	0	52,320	1,660	7,968	0	0	7,968
2013	551,795	105,945	150,855	3,621	102,324	4,500	21,600	1,995	1,197	20,403	4,238	145	4,093	674,500	53,960	213,000	0	53,960	1,660	7,968	0	0	7,968
2014	569,990	109,438	150,855	3,621	105,818	4,625	22,200	1,995	1,197	21,003	4,378	145	4,233	696,000	55,680	213,000	0	55,680	1,660	7,968	0	0	7,968
2015	608,235	116,781	150,855	3,621	113,161	4,445	21,336	1,995	1,197	20,139	4,671	145	4,526	718,000	57,440	213,000	0	57,440	1,660	7,968	0	0	7,968
2016	608,235	116,781	150,855	3,621	113,161	4,445	21,336	1,995	1,197	20,139	4,671	145	4,526	718,000	57,440	213,000	0	57,440	1,660	7,968	0	0	7,968
2017	608,235	116,781	150,855	3,621	113,161	4,445	21,336	1,995	1,197	20,139	4,671	145	4,526	718,000	57,440	213,000	0	57,440	1,660	7,968	0	0	7,968
2018	608,235	116,781	150,855	3,621	113,161	4,445	21,336	1,995	1,197	20,139	4,671	145	4,526	718,000	57,440	213,000	0	57,440	1,660	7,968	0	0	7,968
2019	608,235	116,781	150,855	3,621	113,161	4,445	21,336	1,995	1,197	20,139	4,671	145	4,526	718,000	57,440	213,000	0	57,440	1,660	7,968	0	0	7,968
2020	608,235	116,781	150,855	3,621	113,161	4,445	21,336	1,995	1,197	20,139	4,671	145	4,526	718,000	57,440	213,000	0	57,440	1,660	7,968	0	0	7,968
2021	608,235	116,781	150,855	3,621	113,161	4,445	21,336	1,995	1,197	20,139	4,671	145	4,526	718,000	57,440	213,000	0	57,440	1,660	7,968	0	0	7,968
2022	608,235	116,781	150,855	3,621	113,161	4,445	21,336	1,995	1,197	20,139	4,671	145	4,526	718,000	57,440	213,000	0	57,440	1,660	7,968	0	0	7,968
2023	608,235	116,781	150,855	3,621	113,161	4,445	21,336	1,995	1,197	20,139	4,671	145	4,526	718,000	57,440	213,000	0	57,440	1,660	7,968	0	0	7,968
2024	608,235	116,781	150,855	3,621	113,161	4,445	21,336	1,995	1,197	20,139	4,671	145	4,526	718,000	57,440	213,000	0	57,440	1,660	7,968	0	0	7,968
2025	608,235	116,781	150,855	3,621	113,161	4,445	21,336	1,995	1,197	20,139	4,671	145	4,526	718,000	57,440	213,000	0	57,440	1,660	7,968	0	0	7,968
2026	608,235	116,781	150,855	3,621	113,161	4,445	21,336	1,995	1,197	20,139	4,671	145	4,526	718,000	57,440	213,000	0	57,440	1,660	7,968	0	0	7,968

Year	Cargo Terminal Space Rental					Concession Privilege Fee			Aviation Fuel Surcharge					Utilities Services			Traffic Related Services	Commercial Services	Miscella-neous Revenue	Total Incremental Revenue
	WP		WOP		Incremental	WP	WOP	Incremental	WP		WOP		Incremental	WP	WOP	Incremental				
	Rent Space (sq. m)	Total Fee ('000 PHP)	Rent Space (sq. m)	Total Fee ('000 PHP)	Revenue ('000 PHP)	('000 PHP)	('000 PHP)	Revenue ('000 PHP)	Fuel Supply (KL)	Total Fee ('000 PHP)	Fuel Supply (KL)	Total Fee ('000 PHP)	Revenue ('000 PHP)	('000 PHP)	('000 PHP)	Revenue ('000 PHP)	('000 PHP)	('000 PHP)	('000 PHP)	('000 PHP)
	(24)	(25)	(26)	(27)	(28)=(25)-(27)	(29)	(30)	(31)=(29)-(30)	(32)	(33)	(34)	(35)	(36)=(33)-(35)	(37)	(38)	(39)=(37)-(38)	(40)=(5)+(10)+(13)+(18)	(41)=(23)+(28)+(31)+(36)	(42)=(39)	(43)=(40)+(41)+(42)
1995	0	0	0	0	0	42	42	0	0	0	0	0	0	0	0	0	0	0	0	0
1996	0	0	0	0	0	42	42	0	0	0	0	0	0	0	0	0	0	0	0	0
1997	0	0	0	0	0	42	42	0	0	0	0	0	0	0	0	0	0	0	0	0
1998	0	0	0	0	0	42	42	0	0	0	0	0	0	0	0	0	0	0	0	0
1999	0	0	0	0	0	42	42	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	42	42	0	0	0	0	0	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	42	42	0	0	0	0	0	0	0	0	0	0	0	0	0
2002	1,560	4,493	0	0	4,493	4,234	42	4,192	13,357	3,206	0	0	3,206	688	0	688	107,510	17,938	688	126,136
2003	1,560	4,493	0	0	4,493	4,234	42	4,192	14,280	3,427	0	0	3,427	688	0	688	114,972	18,160	688	133,819
2004	1,560	4,493	0	0	4,493	4,234	42	4,192	15,203	3,649	0	0	3,649	688	0	688	122,971	18,381	688	142,039
2005	1,560	4,493	0	0	4,493	4,234	42	4,192	16,126	3,870	0	0	3,870	688	0	688	131,656	18,603	688	150,946
2006	2,240	6,451	0	0	6,451	5,578	42	5,536	16,728	4,015	0	0	4,015	792	0	792	137,406	23,970	792	162,167
2007	2,240	6,451	0	0	6,451	5,578	42	5,536	17,330	4,159	0	0	4,159	792	0	792	143,606	24,114	792	168,512
2008	2,240	6,451	0	0	6,451	5,578	42	5,536	17,933	4,304	0	0	4,304	792	0	792	150,018	24,259	792	175,068
2009	2,240	6,451	0	0	6,451	5,578	42	5,536	18,535	4,448	0	0	4,448	792	0	792	156,591	24,403	792	181,786
2010	2,240	6,451	0	0	6,451	5,578	42	5,536	19,137	4,593	0	0	4,593	792	0	792	163,647	24,548	792	188,987
2011	2,240	6,451	0	0	6,451	5,578	42	5,536	19,885	4,772	0	0	4,772	792	0	792	169,146	24,727	792	194,665
2012	2,240	6,451	0	0	6,451	5,578	42	5,536	20,633	4,952	0	0	4,952	792	0	792	174,766	24,907	792	200,465
2013	2,240	6,451	0	0	6,451	5,578	42	5,536	21,381	5,131	0	0	5,131	792	0	792	180,780	25,086	792	206,658
2014	2,240	6,451	0	0	6,451	5,578	42	5,536	22,129	5,311	0	0	5,311	792	0	792	186,733	25,266	792	212,791
2015	2,240	6,451	0	0	6,451	5,578	42	5,536	22,877	5,491	0	0	5,491	792	0	792	195,266	25,445	792	221,503
2016	2,240	6,451	0	0	6,451	5,578	42	5,536	22,877	5,491	0	0	5,491	792	0	792	195,266	25,445	792	221,503
2017	2,240	6,451	0	0	6,451	5,578	42	5,536	22,877	5,491	0	0	5,491	792	0	792	195,266	25,445	792	221,503
2018	2,240	6,451	0	0	6,451	5,578	42	5,536	22,877	5,491	0	0	5,491	792	0	792	195,266	25,445	792	221,503
2019	2,240	6,451	0	0	6,451	5,578	42	5,536	22,877	5,491	0	0	5,491	792	0	792	195,266	25,445	792	221,503
2020	2,240	6,451	0	0	6,451	5,578	42	5,536	22,877	5,491	0	0	5,491	792	0	792	195,266	25,445	792	221,503
2021	2,240	6,451	0	0	6,451	5,578	42	5,536	22,877	5,491	0	0	5,491	792	0	792	195,266	25,445	792	221,503
2022	2,240	6,451	0	0	6,451	5,578	42	5,536	22,877	5,491	0	0	5,491	792	0	792	195,266	25,445	792	221,503
2023	2,240	6,451	0	0	6,451	5,578	42	5,536	22,877	5,491	0	0	5,491	792	0	792	195,266	25,445	792	221,503
2024	2,240	6,451	0	0	6,451	5,578	42	5,536	22,877	5,491	0	0	5,491	792	0	792	195,266	25,445	792	221,503
2025	2,240	6,451	0	0	6,451	5,578	42	5,536	22,877	5,491	0	0	5,491	792	0	792	195,266	25,445	792	221,503
2026	2,240	6,451	0	0	6,451	5,578	42	5,536	22,877	5,491	0	0	5,491	792	0	792	195,266	25,445	792	221,503

Notes: The following prices of airport charges are used for calculation based on the present conditions.
The above table assumes 700% increases in the prices of airport charges in 2001 before the new facilities are completed.

a) Landing Charges: PHP 24 per ton of landing aircraft. MTOW of MJ, SJ and TP is assumed to be 165 tons, 58 tons and 21 tons respectively.
b) Operational Charges: PHP 600 per landing.
c) Parking Charges: Estimated as 4% of the total landing charges based on the past financial records.
d) Passenger Service Charges: PHP 10 per departing passenger.
e) Passenger Terminal Space Rent: PHP 50 per sq.m per month. It is assumed 20% of the total floor area is rentable.
f) Cargo Terminal Space Rent: PHP 30 per sq.m per month.
g) Concession Fee: Estimated as 70% of the space rent revenues of the passenger terminal building based on the past financial records.
h) Aviation Fuel Surcharge: PHP 30 per kilo liter of aviation fuel sales.
i) Utility Charges: Estimated as 110% of actual anticipated cost.

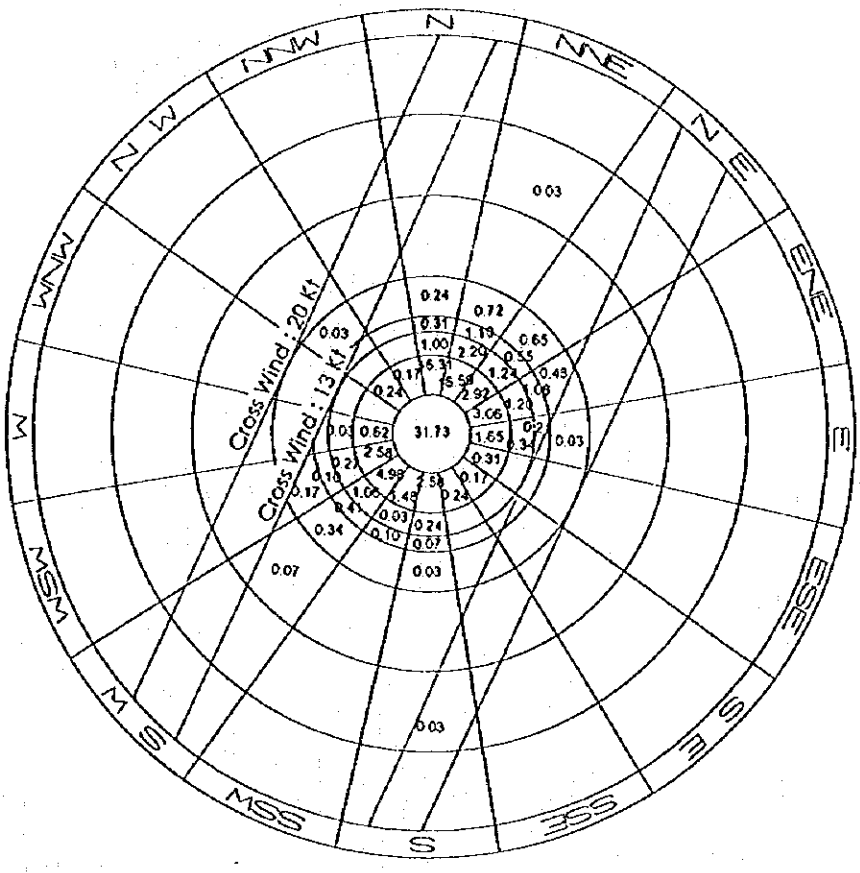


Figure A6.3.1 Wind Rose

Table A6.3.1 All Weather Wind Coverage

Direction	Cross Wind (Kt)	Tale Wind (Kt)	Wind Coverage (%)
RWY 02	13	5	86.32
	20	5	86.62
RWY 20	13	5	52.17
	20	5	52.32
RWY 02/20	13	0	99.61
	20	0	100

Table A6.3.2 Cloud Height and Visibility Matrix

Cloud Height (ft) \ Visibility (m)	-800	-1600	-2400	-3200	-4000	-4800	-5600	5600-	Total
0- 100	0	0	0	0	0	0	0	2	2
- 200	0	0	0	0	0	0	0	0	0
- 300	0	0	0	0	0	0	0	0	0
- 400	0	0	0	0	0	0	0	0	0
- 500	0	0	0	0	0	0	0	0	0
- 600	0	0	0	0	0	0	0	0	0
- 700	0	0	0	0	0	0	0	0	0
- 800	0	0	0	0	0	0	0	0	0
- 900	0	0	0	0	0	0	0	0	0
- 1000	0	0	0	0	0	0	0	1	1
- 1100	0	0	0	0	0	0	0	0	0
- 1200	2	0	3	0	0	0	4	159	168
- 1300	0	0	0	0	0	0	0	0	0
- 1400	0	0	0	0	0	0	0	0	0
- 1500	0	0	0	0	0	0	0	0	0
1500 -	0	0	0	0	0	0	2	1,539	1,541
< 5/8	0	0	0	0	0	1	0	1,199	1,200
Total	2	0	3	0	0	1	6	2,900	2,912

Table A6.3.3 Cloud Height/Visibility Coverage

	OCH (ft)	VIS (km)	Coverage
Existing Minima	636	2.80	99.8%

PAVEMENT INVESTIGATION REPORT: ILOILO AIRPORT

1. Runway and Taxiway

The structure of the runway and taxiway pavements is 23cm aggregate base, 20cm cement concrete slab and 10cm asphalt overlay on it. The original cement concrete pavement was constructed in phases between the 1960s and the mid 1970s. The overlay work was completed in March 1993.

In spite of relatively new overlay, the surface of the pavements is already very rough. Asphalt mortar was lost, and gravels, which appears pebbles rather than crushed stones, are exposed to the surface. This condition was observed for the entire length of the runway. In particular, loose stones observed for the touch down zones are receiving complaint from airline companies. The defect was caused by poor mixture of asphalt concrete and poor workmanship. In addition, the asphalt overlay pavement has many reflection cracks along the joints of cement concrete slabs. The maximum width of the cracks is about 5mm. Those cracks allows infiltration of rain water and further damage asphalt concrete.

An asphalt overlay, as a temporary countermeasure, using fine grade asphalt concrete, with a minimum thickness of 5cm is recommended.

2. Apron

The structure of the apron pavement is 23cm aggregate base and 20cm cement concrete slab on it. The standard size of the slabs is 6.0m by 3.0m. The apron was constructed some 30 years ago.

The cement concrete slabs have many hair cracks, alligator cracks and corner cracking. Approximately 5% of the slabs have cracks dividing a slab into two 3m by 3m pieces, which may be caused by their high length/width ration of 2.0. Some of major cracks were sealed with asphalt joint sealant. However, this countermeasure was not effective since further opening of cracks is observed. The hair cracks, which are a normal phenomenon for the cement concrete pavement, require a careful maintenance to avoid further crack widening. Joint sealant is generally aged and hardened. The elasticity and flexibility required for fillers are have been lost. In addition, many of them have been forced out of joint grooves.

As a temporary countermeasure, an asphalt overlay with a minimum thickness of 10cm (6cm binder course and 4cm surface course) is required after sticking a 50cm wide reflection prevention sheet along the joint. Oil proof coating should be applied for aircraft parking positions.

3. Vehicle Parking Area

The similar condition to the apron pavement was observed for the pavement of the vehicle parking are pavement. There are many deep cross-section cracks. Asphalt joint sealant is deteriorated and has lost flexibility to prevent rain water from infiltration. Since the infiltration of water and repetitious traffic load

will cause a pumping phenomenon, and further damage concrete slabs, base course and subgrade, some countermeasure is required. As a temporary countermeasure, an asphalt overlay with a minimum thickness of 10cm (6cm binder course and 4cm surface course) is recommended after sticking a reflection prevention sheet along the cement concrete slab joint.

Passenger Terminal Space Analysis for Iloilo Airport

		Current Data	Remarks
a: Number of peak hour originating passengers		210	
b: Number of peak hour landside transfer passengers		0	
c: Number of peak hour departing passengers		210	
d: Number of peak hour terminating passengers		210	
g: Time of first passenger at gate lounge (mins. before STD)		50	
m: Maximum number of seats on largest aircraft handled at gate in question		141	
o: Number of visitors - Originating passengers		2.1	
o: Number of visitors - Terminating passengers		2.1	
p: Proportion of passengers using car/taxi - Originating passengers		92%	
p: Proportion of passengers using car/taxi - Terminating passengers		92%	
q: Proportion of passengers arriving by wide-body aircraft during peak hour		0%	
r: Proportion of passengers arriving by narrow-body aircraft during peak hour		100%	
s: Maximum number of seats on largest aircraft handled at airport		141	
t1: Average processing time per passenger at check-in desk (mins.)		2.0	
		Required	
1. Departure Curb	L = (0.095 a p) 1.1 =	20	m
2. Departure Concourse	A = 0.75 [a (1 + o) + b] =	488	sq.m
3. Security Check (Check-in Baggage)	N = (a + b) / 300 =	0.7	
4. Check-in Queuing Area	A = [0.25 (a + b)] 1.1 =	58	sq.m
5. Check-in Counters	N = [(a + b) t1 / 60] 1.1 =	7.7	
6. Security Check (Gate Lounge)	N = 0.2 m / (g - 5) =	0.6	
7. Gate Lounge	A = 1.375 a x 0.5 x 1.3 =	188	sq.m
8. Baggage Claim Area	A = (0.9 d) 1.1 =	208	sq.m
9. Number of Baggage Claim Devices - Narrow Body	N = d r / 300 =	0.7	
10. Arrival Concourse Waiting Area	A = [0.375 (d + b + 2 d o)] 1.1 =	450	sq.m
11. Arrival Curb	L = (0.095 d p) 1.1 =	20	m

REQUIRED ASPHALT OVERLAY THICKNESS FOR ILOILO AIRPORT

1) Existing Pavement (PCN39R/B/W/U)

Asphalt Overlay: 10cm
PCC Slab: 20cm
Base Course: 23cm

2) ACN of Typical Aircraft Operating at the Airport

B737-300 at Maximum Ramp Weight (56,470kg) : ACN = 35
A320 at Maximum Ramp Weight (68,400kg) : ACN = 42
A300-B4 at 140ton : ACN = (52 - 23) / (157,000 - 87,826) x (140,000 - 87,826) +23 = 45

3) Overlay Required for A320 Operations
(The study on pavement for Bacolod Airport indicates A320 is critical rather than A300, for more details refer to Appendix 5.5.1.)

Assumed CBR = 10%
Assumed K on Top of Subgrade = 80MN/m^3
Assumed Concrete Flexural Strength: 650 psi
Assumed Equivalent Annual Departure: 3,000
K on Top of Base Course: 350pci
Thickness of New Rigid Pavement: h_d = 13 inches = 33 cm
F-Factor: 0.89
Condition Factor of Existing Rigid Pavement: $C_b = 0.9$
Thickness of Asphalt Overlay: $t = 2.5 \times (F \times h_d - C_b \times h_e) = 2.5 \times (0.89 \times 33 - 0.9 \times 20) = 28$ cm
Effective Thickness of Existing Asphalt Overlay: 9 cm
Required Overlay Thickness: 28 - 9 = 19 cm

Appendix 6.4.2 Economic Benefits by the Project for Iloilo Airport

Year	Air Passenger Traffic			Time Savings Benefit						Tourism Earnings Benefit									Benefit from Cargo					Total Benefit by the Project
	Passengers in WP Case	Passengers in WOP Case	Incremental Passengers in WP Case	Incremental Business Passengers in WP Case	Time Value of Business Passengers	Cost of Travel by Bus Transport	Cost of Travel by Air Transport	Time Savings Benefit per Business Passenger	Time Savings Benefit by the Project	Incremental Tourist Passengers in WP Case	Incremental Tourists in WP Case	Incremental Foreign Tourist in WP Case	Incremental Domestic Tourist in WP Case	Tourism Earnings Benefit per Foreign Tourist	Tourism Earnings Benefit per Domestic Tourist	Tourism Earnings Benefit from Foreign Tourist	Tourism Earnings Benefit from Domestic Tourist	Tourism Earnings Benefit by the Project	Cargo in WP Case	Cargo in WOP Case	Incremental Cargo in WP Case	Cargo Benefit per ton of Cargo	Cargo Benefit by the Project	
	(1)	(2)	(3)=(1)-(2)	(4)=(3)x50.5%	(5)	(6)=(5)x16.6 hours +694	(7)=(5)x2.4 hours +1,317	(8)	(9)=(4)x(8)	(10)=(3)X15.5%	(11)=(10)/2	(12)=(11)x13.6%	(13)=(11)x86.4%	(14)	(15)	(16)=(12)x(14)	(17)=(13)x(15)	(18)=(16)+(17)	(19)	(20)	(21)=(19)-(20)	(22)	(23)=(21)x(22)	(24)=(9)+(18)+(23)
					(PHP/hour)	(PHP)	(PHP)	(PHP)	(PHP '000)					(PHP)	(PHP)	(PHP '000)	(PHP '000)	(PHP '000)	(ton)	(ton)	(ton)	(PHP/ton)	(PHP '000)	(PHP '000)
1995	460,423	460,423	0	0					0	0	0	0	0	2,700	800	0	0	0	4,771	4,771	0		0	0
1996	525,000	525,000	0	0	50	1,524	1,437	87	0	0	0	0	0	2,865	849	0	0	0	5,500	5,500	0		0	0
1997	525,000	525,000	0	0	53	1,575	1,444	130	0	0	0	0	0	3,039	901	0	0	0	5,500	5,500	0		0	0
1998	525,000	525,000	0	0	56	1,628	1,452	176	0	0	0	0	0	3,225	956	0	0	0	5,500	5,500	0		0	0
1999	525,000	525,000	0	0	60	1,685	1,460	225	0	0	0	0	0	3,422	1,014	0	0	0	5,500	5,500	0		0	0
2000	525,000	525,000	0	0	63	1,746	1,469	277	0	0	0	0	0	3,630	1,076	0	0	0	5,500	5,500	0		0	0
2001	525,000	525,000	0	0	67	1,808	1,478	330	0	0	0	0	0	3,844	1,139	0	0	0	5,500	5,500	0		0	0
2002	993,000	525,000	468,000	236,340	71	1,874	1,488	386	91,239	72,540	36,270	4,933	31,337	4,071	1,206	20,083	37,802	57,885	11,100	5,500	5,600	4,420	24,752	173,876
2003	1,051,000	525,000	526,000	265,630	75	1,943	1,498	446	118,360	81,530	40,765	5,544	35,221	4,312	1,277	23,903	44,994	68,897	11,600	5,500	6,100	4,420	26,962	214,219
2004	1,113,000	525,000	588,000	296,940	80	2,017	1,508	509	151,032	91,140	45,570	6,198	39,372	4,566	1,353	28,297	53,265	81,562	12,200	5,500	6,700	4,420	29,614	262,208
2005	1,179,000	525,000	654,000	330,270	84	2,095	1,520	575	190,035	101,370	50,685	6,893	43,792	4,835	1,433	33,330	62,739	96,070	12,800	5,500	7,300	4,420	32,266	318,371
2006	1,228,000	525,000	703,000	355,015	89	2,168	1,530	638	226,397	108,965	54,483	7,410	47,073	5,087	1,507	37,691	70,947	108,637	13,300	5,500	7,800	4,420	34,476	369,510
2007	1,279,000	525,000	754,000	380,770	93	2,244	1,541	703	267,783	116,870	58,435	7,947	50,488	5,351	1,586	42,527	80,051	122,578	13,800	5,500	8,300	4,420	36,686	427,047
2008	1,332,000	525,000	807,000	407,535	98	2,325	1,553	772	314,712	125,085	62,543	8,506	54,037	5,629	1,668	47,883	90,133	138,016	14,400	5,500	8,900	4,420	39,338	492,066
2009	1,387,000	525,000	862,000	435,310	103	2,410	1,565	845	367,744	133,610	66,805	9,085	57,720	5,922	1,755	53,806	101,282	155,088	15,000	5,500	9,500	4,420	41,990	564,822
2010	1,445,000	525,000	920,000	464,600	109	2,499	1,578	921	427,948	142,600	71,300	9,697	61,603	6,230	1,846	60,413	113,718	174,130	15,600	5,500	10,100	4,420	44,642	646,720
2011	1,491,000	525,000	966,000	487,830	113	2,577	1,589	988	481,736	149,730	74,865	10,182	64,683	6,498	1,925	66,161	124,538	190,699	16,100	5,500	10,600	4,420	46,852	719,287
2012	1,538,000	525,000	1,013,000	511,565	118	2,658	1,601	1,057	540,601	157,015	78,508	10,677	67,830	6,777	2,008	72,363	136,213	208,576	16,600	5,500	11,100	4,420	49,062	798,239
2013	1,587,000	525,000	1,062,000	536,310	123	2,742	1,613	1,129	605,488	164,610	82,305	11,193	71,112	7,069	2,094	79,126	148,942	228,068	17,200	5,500	11,700	4,420	51,714	885,270
2014	1,637,000	525,000	1,112,000	561,560	129	2,830	1,626	1,204	676,300	172,360	86,180	11,720	74,460	7,373	2,185	86,414	162,661	249,074	17,800	5,500	12,300	4,420	54,366	979,741
2015	1,688,000	525,000	1,163,000	587,315	134	2,922	1,639	1,283	753,466	180,265	90,133	12,258	77,874	7,690	2,278	94,263	177,436	271,699	18,400	5,500	12,900	4,420	57,018	1,082,183
2016	1,688,000	525,000	1,163,000	587,315	139	3,009	1,652	1,357	797,121	180,265	90,133	12,258	77,874	7,990	2,367	97,939	184,356	282,295	18,400	5,500	12,900	4,420	57,018	1,136,434
2017	1,688,000	525,000	1,163,000	587,315	145	3,099	1,665	1,434	842,479	180,265	90,133	12,258	77,874	8,301	2,460	101,759	191,546	293,305	18,400	5,500	12,900	4,420	57,018	1,192,802
2018	1,688,000	525,000	1,163,000	587,315	151	3,193	1,678	1,515	889,605	180,265	90,133	12,258	77,874	8,625	2,556	105,727	199,016	304,744	18,400	5,500	12,900	4,420	57,018	1,251,367
2019	1,688,000	525,000	1,163,000	587,315	156	3,290	1,692	1,598	938,570	180,265	90,133	12,258	77,874	8,962	2,655	109,851	206,778	316,629	18,400	5,500	12,900	4,420	57,018	1,312,217
2020	1,688,000	525,000	1,163,000	587,315	163	3,392	1,707	1,685	989,444	180,265	90,133	12,258	77,874	9,311	2,759	114,135	214,842	328,977	18,400	5,500	12,900	4,420	57,018	1,375,440
2021	1,688,000	525,000	1,163,000	587,315	168	3,456	1,721	1,765	1,036,881	180,265	90,133	12,258	77,874	9,637	2,855	118,130	222,362	340,492	18,400	5,500	12,900	4,420	57,018	1,434,391
2022	1,688,000	525,000	1,163,000	587,315	174	3,584	1,735	1,849	1,085,979	180,265	90,133	12,258	77,874	9,974	2,955	122,264	230,144	352,409	18,400	5,500	12,900	4,420	57,018	1,495,405
2023	1,688,000	525,000	1,163,000	587,315	180	3,685	1,749	1,936	1,136,794	180,265	90,133	12,258	77,874	10,323	3,059	126,543	238,200	364,743	18,400	5,500	12,900	4,420	57,018	1,558,555
2024	1,688,000	525,000	1,163,000	587,315	186	3,790	1,765	2,025	1,189,388	180,265	90,133	12,258	77,874	10,685	3,166	130,973	246,537	377,509	18,400	5,500	12,900	4,420	57,018	1,623,915
2025	1,688,000	525,000	1,163,000	587,315	193	3,898	1,780	2,118	1,243,823	180,265	90,133	12,258	77,874	11,059	3,277	135,557	255,165	390,722	18,400	5,500	12,900	4,420	57,018	1,691,563
2026	1,688,000	525,000	1,163,000	587,315	200	4,010	1,796	2,214	1,300,164	180,265	90,133	12,258	77,874	11,446	3,391	140,301	264,096	404,397	18,400	5,500	12,900	4,420	57,018	1,761,579

Notes: Column (5): Average time value of business passengers in 1996 are estimated to be PHP50 per hour.
Minimum income for choosing air transport over surface transport is estimated to be PHP45, PHP40 and PHP61respectively for Bacolod-Manila, Iloilo-Manila and Tacloban-Manila. PHP50 is determined as average of those values.
This value is assumed to increase at the same rate as the projected GDP per capita annual growth rates, i.e., 6.1% (1996-2000), 5.9% (2000-2005), 5.2% (2005-2010), 4.3% (2010-2015), 3.9% (2015-2020) and 3.5% thereafter.

Columns (6) and (7): Travel time and passenger fare by sea and air are estimated as weighted average of Manila and Cebu routes using the number of passengers in 2005 as a weight, 75.9% for Manila and 24.1% for Cebu.
Travel time of Iloilo-Manila is 2.5 hours by air and 19.0 hours by boat. That of Iloilo-Cebu is 2.1 hours by air and 9.0 hours by boat. Those include waiting time of 1.5 hours for air and 1.0 hour for boat.
Travel fare of Iloilo-Manila is PHP1,460 by air and PHP800 by boat. That of Iloilo-Cebu is PHP867 by air and 360 by boat.

Columns (14) and (15): Tourism earnings per foreign tourist in 1995 are estimated as PHP 2,250 (daily expenditure) x 4 days (average length of stay) x 30% (rate of value added) based on the data from the Department of Tourism.
Tourism earnings per domestic tourist in 1995 are estimated as PHP 2,000 (daily expenditure) x 2 days (average length of stay) x 20% (rate of value added) based on the data from the Department of Tourism.
Those values are assumed to increase at the same rate as GDP per capita growth rate.

Column (22): Cargo airfare is estimated based on the present airfare on each routes weighted by the projected number of passengers in 2005. Cargo airfare per one kilogram of air cargo from Iloilo is PHP9.80 for Manila and PHP5.82 for Cebu.
Cargo benefit per unit weight of cargo is estimated as 50% of the cargo airfare.
This is based on the consideration that consumers' surplus per unit weight of cargo is 50% of the cargo airfare when a straight line demand curve with a price axis intercept (demand=0) being the twice the airfare is assumed.

Columns (4), (10), (12) and (13) Percentage of business passengers, tourist passengers and their breakdown into foreign and domestic passengers is based on the air passenger interview survey conducted by the Study Team. See Appendix A for details.

Appendix 6.4.3 Forecast of Incremental Revenues by the Project for Iloilo Airport

Year	Landing Fee					Operational Charge					Aircraft Parking Charge			Passenger Service Charge					Passenger Terminal Space Rental				
	WP		WOP		Incremental	WP		WOP		Incremental	WP	WOP	Incremental	WP		WOP		Incremental	WP		WOP		Incremental
	Total Weight (ton)	Total Fee ('000 PHP)	Total Weight (ton)	Total Fee ('000 PHP)	Revenue ('000 PHP)	Aircraft Landings	Total Fee ('000 PHP)	Aircraft Landings	Total Fee ('000 PHP)	Revenue ('000 PHP)	('000 PHP)	('000 PHP)	Revenue ('000 PHP)	Departing Passengers	Total Fee ('000 PHP)	Departing Passengers	Total Fee ('000 PHP)	Revenue ('000 PHP)	Rent Space (sq. m)	Total Fee ('000 PHP)	Rent Space (sq. m)	Total Fee ('000 PHP)	Revenue ('000 PHP)
	(1)	(2)	(3)	(4)	(5)=(2)-(4)	(6)	(7)	(8)	(9)	(10)=(7)-(9)	(11)	(12)	(13)=(11)-(12)	(14)	(15)	(16)	(17)	(18)=(15)-(17)	(19)	(20)	(21)	(22)	(23)=(20)-(22)
1995	159,005	3,816	159,005	3,816	0	2,085	1,251	2,085	1,251	0	153	153	0	230,212	2,302	230,212	2,302	0	220	132	220	132	0
1996	182,305	4,375	182,305	4,375	0	2,320	1,392	2,320	1,392	0	175	175	0	262,500	2,625	262,500	2,625	0	220	132	220	132	0
1997	182,305	4,375	182,305	4,375	0	2,320	1,392	2,320	1,392	0	175	175	0	262,500	2,625	262,500	2,625	0	220	132	220	132	0
1998	182,305	4,375	182,305	4,375	0	2,320	1,392	2,320	1,392	0	175	175	0	262,500	2,625	262,500	2,625	0	220	132	220	132	0
1999	182,305	4,375	182,305	4,375	0	2,320	1,392	2,320	1,392	0	175	175	0	262,500	2,625	262,500	2,625	0	220	132	220	132	0
2000	182,305	4,375	182,305	4,375	0	2,320	1,392	2,320	1,392	0	175	175	0	262,500	2,625	262,500	2,625	0	220	132	220	132	0
2001	182,305	4,375	182,305	4,375	0	2,320	1,392	2,320	1,392	0	175	175	0	469,000	2,625	262,500	2,625	0	220	132	220	132	0
2002	371,830	71,391	182,305	4,375	67,016	3,980	19,104	2,320	1,392	17,712	2,856	175	2,681	496,500	39,720	262,500	2,625	37,095	1,340	6,432	220	132	6,300
2003	397,775	76,373	182,305	4,375	71,997	4,185	20,088	2,320	1,392	18,696	3,055	175	2,880	525,500	42,040	262,500	2,625	39,415	1,340	6,432	220	132	6,300
2004	425,080	81,615	182,305	4,375	77,240	4,400	21,120	2,320	1,392	19,728	3,265	175	3,090	556,500	44,520	262,500	2,625	41,895	1,340	6,432	220	132	6,300
2005	456,000	87,552	182,305	4,375	83,177	4,640	22,272	2,320	1,392	20,880	3,502	175	3,327	589,500	47,160	262,500	2,625	44,535	1,340	6,432	220	132	6,300
2006	476,170	91,425	182,305	4,375	87,049	4,810	23,088	2,320	1,392	21,696	3,657	175	3,482	614,000	49,120	262,500	2,625	46,495	1,800	8,640	220	132	8,508
2007	515,610	98,997	182,305	4,375	94,622	4,685	22,488	2,320	1,392	21,096	3,960	175	3,785	639,500	51,160	262,500	2,625	48,535	1,800	8,640	220	132	8,508
2008	540,400	103,757	182,305	4,375	99,381	4,835	23,208	2,320	1,392	21,816	4,150	175	3,975	666,000	53,280	262,500	2,625	50,655	1,800	8,640	220	132	8,508
2009	566,365	108,742	182,305	4,375	104,367	4,985	23,928	2,320	1,392	22,536	4,350	175	4,175	693,500	55,480	262,500	2,625	52,855	1,800	8,640	220	132	8,506
2010	593,270	113,908	182,305	4,375	109,533	5,115	24,552	2,320	1,392	23,160	4,556	175	4,381	722,500	57,800	262,500	2,625	55,175	1,800	8,640	220	132	8,506
2011	614,250	117,938	182,305	4,375	113,563	5,225	25,080	2,320	1,392	23,688	4,718	175	4,543	745,500	59,640	262,500	2,625	57,015	1,800	8,640	220	132	8,508
2012	635,610	122,229	182,305	4,375	117,854	5,340	25,632	2,320	1,392	24,240	4,889	175	4,714	769,000	61,520	262,500	2,625	58,895	1,800	8,640	220	132	8,508
2013	659,600	126,643	182,305	4,375	122,268	5,460	26,208	2,320	1,392	24,816	5,066	175	4,891	793,500	63,480	262,500	2,625	60,855	1,800	8,640	220	132	8,508
2014	683,845	131,298	182,305	4,375	126,923	5,580	26,784	2,320	1,392	25,392	5,252	175	5,077	818,500	65,480	262,500	2,625	62,855	1,800	8,640	220	132	8,508
2015	708,440	136,020	182,305	4,375	131,645	5,700	27,360	2,320	1,392	25,968	5,441	175	5,266	844,000	67,520	262,500	2,625	64,895	1,800	8,640	220	132	8,508
2016	708,440	136,020	182,305	4,375	131,645	5,700	27,360	2,320	1,392	25,968	5,441	175	5,266	844,000	67,520	262,500	2,625	64,895	1,800	8,640	220	132	8,508
2017	708,440	136,020	182,305	4,375	131,645	5,700	27,360	2,320	1,392	25,968	5,441	175	5,266	844,000	67,520	262,500	2,625	64,895	1,800	8,640	220	132	8,508
2018	708,440	136,020	182,305	4,375	131,645	5,700	27,360	2,320	1,392	25,968	5,441	175	5,266	844,000	67,520	262,500	2,625	64,895	1,800	8,640	220	132	8,508
2019	708,440	136,020	182,305	4,375	131,645	5,700	27,360	2,320	1,392	25,968	5,441	175	5,266	844,000	67,520	262,500	2,625	64,895	1,800	8,640	220	132	8,508
2020	708,440	136,020	182,305	4,375	131,645	5,700	27,360	2,320	1,392	25,968	5,441	175	5,266	844,000	67,520	262,500	2,625	64,895	1,800	8,640	220	132	8,508
2021	708,440	136,020	182,305	4,375	131,645	5,700	27,360	2,320	1,392	25,968	5,441	175	5,266	844,000	67,520	262,500	2,625	64,895	1,800	8,640	220	132	8,508
2022	708,440	136,020	182,305	4,375	131,645	5,700	27,360	2,320	1,392	25,968	5,441	175	5,266	844,000	67,520	262,500	2,625	64,895	1,800	8,640	220	132	8,508
2023	708,440	136,020	182,305	4,375	131,645	5,700	27,360	2,320	1,392	25,968	5,441	175	5,266	844,000	67,520	262,500	2,625	64,895	1,800	8,640	220	132	8,508
2024	708,440	136,020	182,305	4,375	131,645	5,700	27,360	2,320	1,392	25,968	5,441	175	5,266	844,000	67,520	262,500	2,625	64,895	1,800	8,640	220	132	8,508
2025	708,440	136,020	182,305	4,375	131,645	5,700	27,360	2,320	1,392	25,968	5,441	175	5,266	844,000	67,520	262,500	2,625	64,895	1,800	8,640	220	132	8,508
2026	708,440	136,020	182,305	4,375	131,645	5,700	27,360	2,320	1,392	25,968	5,441	175	5,266	844,000	67,520	262,500	2,625	64,895	1,800	8,640	220	132	8,508

Year	Cargo Terminal Space Rental					Concession Privilege Fee			Aviation Fuel Surcharge					Utilities Services			Traffic Related Services ('000 PHP)	Commercial Services ('000 PHP)	Miscella-neous Revenue ('000 PHP)	Total Incremental Revenue ('000 PHP)
	WP		WOP		Incremental	WP	WOP	Incremental	WP		WOP		Incremental	WP	WOP	Incremental				
	Rent Space (sq. m)	Total Fee ('000 PHP)	Rent Space (sq. m)	Total Fee ('000 PHP)	Revenue ('000 PHP)	('000 PHP)	('000 PHP)	Revenue ('000 PHP)	Fuel Supply (KL)	Total Fee ('000 PHP)	Fuel Supply (KL)	Total Fee ('000 PHP)	Revenue ('000 PHP)	('000 PHP)	('000 PHP)	Revenue ('000 PHP)				
	(24)	(25)	(26)	(27)	(28)=(25)-(27)	(29)	(30)	(31)=(29)-(30)	(32)	(33)	(34)	(35)	(36)=(33)-(35)	(37)	(38)	(39)=(37)-(38)	(40)=(5)+(10)+(13)+(18)	(41)=(23)+(28)+(31)+(36)	(42)=(39)	(43)=(40)+(41)+(42)
1995	0	0	0	0	0	39	39	0	0	0	0	0	0	0	0	0	0	0	0	0
1996	0	0	0	0	0	39	39	0	0	0	0	0	0	0	0	0	0	0	0	0
1997	0	0	0	0	0	39	39	0	0	0	0	0	0	0	0	0	0	0	0	0
1998	0	0	0	0	0	39	39	0	0	0	0	0	0	0	0	0	0	0	0	0
1999	0	0	0	0	0	39	39	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	39	39	0	0	0	0	0	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	39	39	0	0	0	0	0	0	0	0	0	0	0	0	0
2002	1,280	3,686	0	0	3,686	4,502	39	4,463	15,339	3,681	0	0	3,681	778	0	778	124,504	18,131	778	143,413
2003	1,280	3,686	0	0	3,686	4,502	39	4,463	16,475	3,954	0	0	3,954	778	0	778	132,988	18,404	778	152,170
2004	1,280	3,686	0	0	3,686	4,502	39	4,463	17,612	4,227	0	0	4,227	778	0	778	141,953	18,677	778	161,407
2005	1,280	3,686	0	0	3,686	4,502	39	4,463	18,749	4,500	0	0	4,500	778	0	778	151,919	18,949	778	171,646
2006	1,840	5,299	0	0	5,299	6,048	39	6,009	19,924	4,782	0	0	4,782	935	0	935	158,722	24,598	935	184,255
2007	1,840	5,299	0	0	5,299	6,048	39	6,009	21,099	5,064	0	0	5,064	935	0	935	168,038	24,880	935	193,853
2008	1,840	5,299	0	0	5,299	6,048	39	6,009	22,275	5,346	0	0	5,346	935	0	935	175,828	25,162	935	201,925
2009	1,840	5,299	0	0	5,299	6,048	39	6,009	23,450	5,628	0	0	5,628	935	0	935	183,932	25,444	935	210,312
2010	1,840	5,299	0	0	5,299	6,048	39	6,009	24,626	5,910	0	0	5,910	935	0	935	192,249	25,726	935	218,910
2011	1,840	5,299	0	0	5,299	6,048	39	6,009	25,267	6,064	0	0	6,064	935	0	935	198,808	25,880	935	225,623
2012	1,840	5,299	0	0	5,299	6,048	39	6,009	25,908	6,218	0	0	6,218	935	0	935	205,703	26,034	935	232,672
2013	1,840	5,299	0	0	5,299	6,048	39	6,009	26,549	6,372	0	0	6,372	935	0	935	212,830	26,188	935	239,953
2014	1,840	5,299	0	0	5,299	6,048	39	6,009	27,190	6,526	0	0	6,526	935	0	935	220,247	26,342	935	247,524
2015	1,840	5,299	0	0	5,299	6,048	39	6,009	27,831	6,680	0	0	6,680	935	0	935	227,774	26,496	935	255,205
2016	1,840	5,299	0	0	5,299	6,048	39	6,009	27,831	6,680	0	0	6,680	935	0	935	227,774	26,496	935	255,205
2017	1,840	5,299	0	0	5,299	6,048	39	6,009	27,831	6,680	0	0	6,680	935	0	935	227,774	26,496	935	255,205
2018	1,840	5,299	0	0	5,299	6,048	39	6,009	27,831	6,680	0	0	6,680	935	0	935	227,774	26,496	935	255,205
2019	1,840	5,299	0	0	5,299	6,048	39	6,009	27,831	6,680	0	0	6,680	935	0	935	227,774	26,496	935	255,205
2020	1,840	5,299	0	0	5,299	6,048	39	6,009	27,831	6,680	0	0	6,680	935	0	935	227,774	26,496	935	255,205
2021	1,840	5,299	0	0	5,299	6,048	39	6,009	27,831	6,680	0	0	6,680	935	0	935	227,774	26,496	935	255,205
2022	1,840	5,299	0	0	5,299	6,048	39	6,009	27,831	6,680	0	0	6,680	935	0	935	227,774	26,496	935	255,205
2023	1,840	5,299	0	0	5,299	6,048	39	6,009	27,831	6,680	0	0	6,680	935	0	935	227,774	26,496	935	255,205
2024	1,840	5,299	0	0	5,299	6,048	39	6,009	27,831	6,680	0	0	6,680	935	0	935	227,774	26,496	935	255,205
2025	1,840	5,299	0	0	5,299	6,048	39	6,009	27,831	6,680	0	0	6,680	935	0	935	227,774	26,496	935	255,205
2026	1,840	5,299	0	0	5,299	6,048	39	6,009	27,831	6,680	0	0	6,680	935	0	935	227,774	26,496	935	255,205

Notes: The following prices of airport charges are used for calculation based on the present conditions.
The above table assumes 700% increases in the prices of airport charges in 2001 before the new facilities are completed.

a) Landing Charges: PHP 24 per ton of landing aircraft. MTOW of MJ, SJ and TP is assumed to be 165 tons, 58 tons and 21 tons respectively.
b) Operational Charges: PHP 600 per landing.
c) Parking Charges: Estimated as 4% of the total landing charges based on the past financial records.
d) Passenger Service Charges: PHP 10 per departing passenger.
e) Passenger Terminal Space Rent: PHP 50 per sq.m per month. It is assumed 20% of the total floor area is rentable.
f) Cargo Terminal Space Rent: PHP 30 per sq.m per month.
g) Concession Fee: Estimated as 70% of the space rent revenues of the passenger terminal building based on the past financial records.
h) Aviation Fuel Surcharge: PHP 30 per kilo liter of aviation fuel sales.
i) Utility Charges: Estimated as 110% of actual anticipated cost.

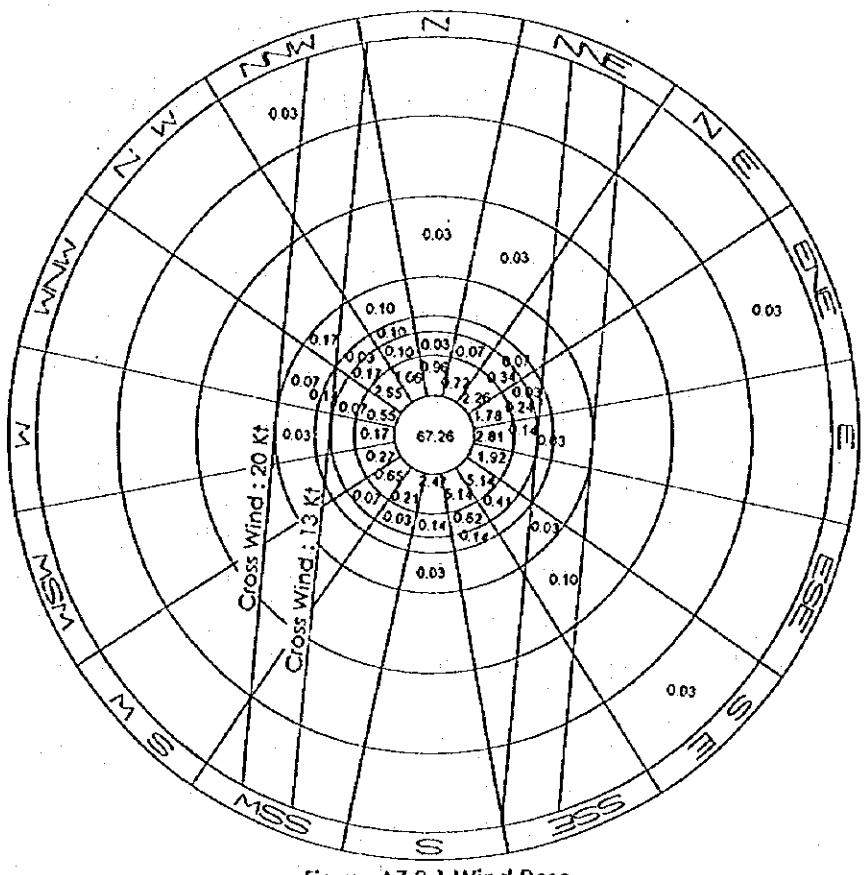


Figure A7.3.1 Wind Rose

Table A7.3.1 All Weather Wind Coverage

Direction	Cross Wind (Kt)	Tale Wind (Kt)	Wind Coverage (%)
RWY 36	13	5	87.67
	20	5	88.00
RWY 18	13	5	92.22
	20	5	92.47
RWY 36/18	13	0	99.45
	20	0	99.88

Table A7.3.2 Cloud Height and Visibility Matrix

Cloud Height (ft) \ Visibility (m)	-800	-1600	-2400	-3200	-4000	-4800	-5600	5600-	Total
0- 100	0	0	0	0	0	0	0	0	0
- 200	0	0	0	0	0	0	0	1	1
- 300	0	0	0	0	0	0	0	0	0
- 400	0	0	0	0	0	0	0	0	0
- 500	0	0	0	0	0	0	0	0	0
- 600	0	0	0	0	0	0	0	0	0
- 700	0	0	0	0	0	0	0	0	0
- 800	0	0	0	0	0	0	0	0	0
- 900	0	0	0	0	0	0	0	0	0
- 1000	0	0	0	0	0	0	0	0	0
- 1100	0	0	0	0	0	0	0	0	0
- 1200	0	0	0	0	0	0	0	0	0
- 1300	0	0	0	0	0	0	0	0	0
- 1400	0	0	0	0	0	0	0	0	0
- 1500	0	0	0	2	0	0	1	13	16
1500 -	0	0	0	0	0	7	8	1,788	1,803
< 5/8	0	0	0	0	0	3	0	1,097	1,100
Total	0	0	0	2	0	10	9	2,899	2,920

Table A7.3.3 Cloud Height/Visibility Coverage

	OCH (ft)	VIS (km)	Coverage
Existing Minima	733	3.20	99.97%

PAVEMENT INVESTIGATION REPORT: TACLOBAN AIRPORT

1. Runway and Taxiway

The structure of the runway and taxiway pavement is 25cm aggregate base, 23cm cement concrete slab and two layers of asphalt overlay of 7cm and 10cm thick on it. The initial construction of the cement concrete pavement dates back to some 30 years ago. The overlay work was undertaken to accommodate heavier aircraft. The latest overlay work was completed in 1990.

In many places, the gravel, contained pebbles, is exposed to the pavement surface, probably due to lack of compaction at the time of construction. Honey-comb surface, which was caused by poor asphalt mix or poor workmanship (insufficient fishing by finisher and rake-man) is also widely observed on the runway pavement. In addition, hair cracks due to aging and weathering are everywhere. The widened part of the runway, 7.5m on each side of the runway, has reflection cracks along the joint with the older pavement.

As a temporary measure, an asphalt overlay, using fine grade asphalt concrete, with a minimum thickness of 5cm would be necessary in a few years.

The taxiway pavement is generally in the same condition as the runway pavement, which is aged and has many cracks. Reflection cracks as wide as 10mm were observed. The past patching work did not improve the unevenness of the surface. Asphalt fillers should be used for the reflection cracks as soon as possible. An asphalt overlay, using fine grade asphalt concrete, with a minimum thickness of 5cm would be necessary in a few years.

2. Apron

The structure of the apron pavement is 25cm aggregate base and 23cm cement concrete slab on it. The standard size of the slabs is 6.0m by 3.0m and 3.0m by 3.0m. The apron was constructed in 1969 and expanded in 1981.

The cement concrete slabs have major transverse cracks, broken edges, corner cracking and cracks along joints. However, those represents less than 3% of the total slabs.

As a temporary countermeasure, filling with joint sealant is recommended. No overlay would be required for the present traffic load.

3. Vehicle Parking Area and Airport Access Road

The condition of the pavement is generally good. However, the surface of the asphalt concrete pavement is in many places rough. In particular, the northern part of the vehicle parking area have lost 1-2cm

surface and is very uneven. It seemed that a thin overlay in the past to correct unevenness was stripped off. In addition, some part of the asphalt surface is cut back by oil.

The pavement condition of the airport access road, linking the terminal area and Tacloban's city network, is generally good. There are only minor cracks and cut-back of asphalt surface. No major repair would be necessary.

Passenger Terminal Space Analysis for Tacloban Airport

		Current Data	Remarks
a: Number of peak hour originating passengers		140	
b: Number of peak hour landside transfer passengers		0	
c: Number of peak hour departing passengers		140	
d: Number of peak hour terminating passengers		140	
g: Time of first passenger at gate lounge (mins. before STD)		50	
m: Maximum number of seats on largest aircraft handled at gate in question		141	
o: Number of visitors - Originating passengers		1.8	
o: Number of visitors - Terminating passengers		1.8	
p: Proportion of passengers using car/taxi - Originating passengers		56%	
p: Proportion of passengers using car/taxi - Terminating passengers		56%	
q: Proportion of passengers arriving by wide-body aircraft during peak hour		0%	
r: Proportion of passengers arriving by narrow-body aircraft during peak hour		100%	
s: Maximum number of seats on largest aircraft handled at airport		141	
t1: Average processing time per passenger at check-in desk (mins.)		2.0	
		Required	
1. Departure Curb	L = (0.095 a p) 1.1 =	8	m
2. Departure Concourse	A = 0.75 [a (1 + o) + b] =	294	sq.m
3. Security Check (Check-in Baggage)	N = (a + b) / 300 =	0.5	
4. Check-in Queuing Area	A = [0.25 (a + b)] 1.1 =	39	sq.m
5. Check-in Counters	N = [(a + b) t1 / 60] 1.1 =	5.1	
6. Security Check (Gate Lounge)	N = 0.2 m / (g - 5) =	0.6	
7. Gate Lounge	A = 1.375 a x 0.5 x 1.3 =	125	sq.m
8. Baggage Claim Area	A = (0.9 d) 1.1 =	139	sq.m
9. Number of Baggage Claim Devices - Narrow Body	N = d r / 300 =	0.5	
10. Arrival Concourse Waiting Area	A = [0.375 (d + b + 2 d o)] 1.1 =	266	sq.m
11. Arrival Curb	L = (0.095 d p) 1.1 =	8	m

REQUIRED ASPHALT OVERLAY THICKNESS FOR TACLOBAN AIRPORT

1) Existing Pavement (PCN39R/B/W/U)

Asphalt Overlay: 10cm
Asphalt Overlay: 7cm
PCC Slab: 23cm
Base Course: 25cm

2) ACN of Typical Aircraft Operating at the Airport

B737-300 at Maximum Ramp Weight (56,470kg) : ACN = 35
A320 at Maximum Ramp Weight (68,400kg) : ACN = 42
A300-B4 at 140ton : ACN = (52 - 23) / (157,000 - 87,826) x (140,000 - 87,826) +23 = 45

3) Overlay Required for A320 Operations
(The study on pavement for Bacolod Airport indicates A320 is critical rather than A300, for more details refer to Appendix 5.5.1.)

Assumed CBR = 10%
Assumed K on Top of Subgrade = 80MN/m^3
Assumed Concrete Flexural Strength: 650 psi
Assumed Equivalent Annual Departure: 3,000
K on Top of Base Course: 360pci
Thickness of New Rigid Pavement: h_d = 13 inches = 33 cm
F-Factor: 0.89
Condition Factor of Existing Rigid Pavement: C_b = 0.9
Thickness of Asphalt Overlay: $t = 2.5 \times (F \times h_d - C_b \times h_e) = 2.5 \times (0.89 \times 33 - 0.9 \times 23) = 22$ cm
Effective Thickness of Existing Asphalt Overlay: 14 cm
Required Overlay Thickness: 22 - 14 = 8 cm

Appendix 7.4.2 Economic Benefits by the Project for Tacloban Airport

Year	Air Passenger Traffic			Time Savings Benefit						Tourism Earnings Benefit									Benefit from Cargo					Total
	Passengers in WP Case	Passengers in WOP Case	Incremental Passengers in WP Case	Incremental Business Passengers in WP Case	Time Value of Business Passengers	Cost of Travel by Bus Transport	Cost of Travel by Air Transport	Time Savings Benefit per Business Passenger	Time Savings Benefit by the Project	Incremental Tourist Passengers in WP Case	Incremental Tourists in WP Case	Incremental Foreign Tourist in WP Case	Incremental Domestic Tourist in WP Case	Tourism Earnings Benefit per Foreign Tourist	Tourism Earnings Benefit per Domestic Tourist	Tourism Earnings Benefit from Foreign Tourist	Tourism Earnings Benefit from Domestic Tourist	Tourism Earnings Benefit by the Project	Cargo in WP Case	Cargo in WOP Case	Incremental Cargo in WP Case	Cargo Benefit per ton of Cargo	Cargo Benefit by the Project	Benefit by the Project
	(1)	(2)	(3)=(1)-(2)	(4)=(3)x48.6%	(5)	(6)=(5)x20.4 hours +506	(7)=(5)x2.5 hours +1,640	(8)	(9)=(4)x(8)	(10)=(3)X15.6%	(11)=(10)/2	(12)=(11)x14.5%	(13)=(11)x85.5%	(14)	(15)	(16)=(12)x(14)	(17)=(13)x(15)	(18)=(16)+(17)	(19)	(20)	(21)=(19)-(20)	(22)	(23)=(21)x(22)	(24)=(9)+(18)+(23)
					(PHP/hour)	(PHP)	(PHP)	(PHP)	(PHP '000)					(PHP)	(PHP)	(PHP '000)	(PHP '000)	(PHP '000)	(ton)	(ton)	(ton)	(PHP/ton)	(PHP '000)	(PHP '000)
1995	258,190	258,190	0	0					0	0	0	0	0	2,700	800	0	0	0	2,881	2,881	0		0	0
1996	292,000	292,000	0	0	50	1,526	1,765	-239	0	0	0	0	0	2,865	849	0	0	0	3,100	3,100	0		0	0
1997	292,000	292,000	0	0	54	1,608	1,775	-167	0	0	0	0	0	3,039	901	0	0	0	3,100	3,100	0		0	0
1998	292,000	292,000	0	0	58	1,689	1,785	-96	0	0	0	0	0	3,225	956	0	0	0	3,100	3,100	0		0	0
1999	292,000	292,000	0	0	63	1,791	1,798	-6	0	0	0	0	0	3,422	1,014	0	0	0	3,100	3,100	0		0	0
2000	292,000	292,000	0	0	68	1,893	1,810	83	0	0	0	0	0	3,630	1,076	0	0	0	3,100	3,100	0		0	0
2001	292,000	292,000	0	0	73	1,995	1,823	173	0	0	0	0	0	3,844	1,139	0	0	0	3,100	3,100	0		0	0
2002	545,000	292,000	253,000	122,958	79	2,118	1,838	280	34,441	39,468	19,734	2,861	16,873	4,071	1,206	11,650	20,354	32,003	4,800	3,100	1,700	4,930	8,381	74,825
2003	580,000	292,000	288,000	139,968	85	2,240	1,853	388	54,238	44,928	22,464	3,257	19,207	4,312	1,277	14,044	24,536	38,580	5,000	3,100	1,900	4,930	9,367	102,185
2004	617,000	292,000	325,000	157,950	90	2,342	1,865	477	75,342	50,700	25,350	3,676	21,674	4,566	1,353	16,783	29,322	46,105	5,200	3,100	2,100	4,930	10,353	131,800
2005	655,000	292,000	363,000	176,418	98	2,505	1,885	620	109,414	56,628	28,314	4,106	24,208	4,835	1,433	19,851	34,683	54,534	5,600	3,100	2,500	4,930	12,325	176,274
2006	682,000	292,000	390,000	189,540	104	2,628	1,900	728	137,909	60,840	30,420	4,411	26,009	5,087	1,507	22,437	39,200	61,637	5,800	3,100	2,700	4,930	13,311	212,857
2007	710,000	292,000	418,000	203,148	111	2,770	1,918	853	173,265	65,208	32,604	4,728	27,876	5,351	1,586	25,298	44,199	69,498	6,000	3,100	2,900	4,930	14,297	257,059
2008	740,000	292,000	448,000	217,728	118	2,913	1,935	978	212,982	69,888	34,944	5,067	29,877	5,629	1,668	28,524	49,835	78,359	6,200	3,100	3,100	4,930	15,283	306,623
2009	771,000	292,000	479,000	232,794	126	3,076	1,955	1,121	261,055	74,724	37,362	5,417	31,945	5,922	1,755	32,083	56,054	88,137	6,400	3,100	3,300	4,930	16,269	365,462
2010	803,000	292,000	511,000	248,346	134	3,240	1,975	1,265	314,058	79,716	39,858	5,779	34,079	6,230	1,846	36,007	62,908	98,915	6,800	3,100	3,700	4,930	18,241	431,214
2011	828,000	292,000	536,000	260,496	141	3,382	1,993	1,390	362,063	83,616	41,808	6,062	35,746	6,498	1,925	39,392	68,823	108,216	7,000	3,100	3,900	4,930	19,227	489,506
2012	854,000	292,000	562,000	273,132	149	3,546	2,013	1,533	418,739	87,672	43,836	6,356	37,480	6,777	2,008	43,079	75,265	118,344	7,200	3,100	4,100	4,930	20,213	557,295
2013	881,000	292,000	589,000	286,254	157	3,709	2,033	1,676	479,848	91,884	45,942	6,662	39,280	7,069	2,094	47,090	82,272	129,363	7,400	3,100	4,300	4,930	21,199	630,409
2014	909,000	292,000	617,000	299,862	166	3,892	2,055	1,837	550,966	96,252	48,126	6,978	41,148	7,373	2,185	51,450	89,889	141,339	7,600	3,100	4,500	4,930	22,185	714,491
2015	938,000	292,000	646,000	313,956	175	4,076	2,078	1,999	627,441	100,776	50,388	7,306	43,082	7,690	2,278	56,184	98,161	154,346	8,000	3,100	4,900	4,930	24,157	805,944
2016	938,000	292,000	646,000	313,956	184	4,260	2,100	2,160	678,019	100,776	50,388	7,306	43,082	7,990	2,367	58,376	101,990	160,365	8,000	3,100	4,900	4,930	24,157	862,542
2017	938,000	292,000	646,000	313,956	193	4,443	2,123	2,321	728,598	100,776	50,388	7,306	43,082	8,301	2,460	60,652	105,967	166,619	8,000	3,100	4,900	4,930	24,157	919,374
2018	938,000	292,000	646,000	313,956	202	4,627	2,145	2,482	779,176	100,776	50,388	7,306	43,082	8,625	2,556	63,018	110,100	173,118	8,000	3,100	4,900	4,930	24,157	976,451
2019	938,000	292,000	646,000	313,956	213	4,851	2,173	2,679	840,994	100,776	50,388	7,306	43,082	8,962	2,655	65,475	114,394	179,869	8,000	3,100	4,900	4,930	24,157	1,045,020
2020	938,000	292,000	646,000	313,956	223	5,055	2,198	2,858	897,192	100,776	50,388	7,306	43,082	9,311	2,759	68,029	118,855	186,884	8,000	3,100	4,900	4,930	24,157	1,108,233
2021	938,000	292,000	646,000	313,956	233	5,259	2,223	3,037	953,390	100,776	50,388	7,306	43,082	9,637	2,855	70,410	123,015	193,425	8,000	3,100	4,900	4,930	24,157	1,170,972
2022	938,000	292,000	646,000	313,956	243	5,463	2,248	3,216	1,009,588	100,776	50,388	7,306	43,082	9,974	2,955	72,874	127,321	200,195	8,000	3,100	4,900	4,930	24,157	1,233,940
2023	938,000	292,000	646,000	313,956	254	5,688	2,275	3,413	1,071,406	100,776	50,388	7,306	43,082	10,323	3,059	75,425	131,777	207,202	8,000	3,100	4,900	4,930	24,157	1,302,765
2024	938,000	292,000	646,000	313,956	266	5,932	2,305	3,627	1,138,844	100,776	50,388	7,306	43,082	10,685	3,166	78,065	136,389	214,454	8,000	3,100	4,900	4,930	24,157	1,377,455
2025	938,000	292,000	646,000	313,956	278	6,177	2,335	3,842	1,206,282	100,776	50,388	7,306	43,082	11,059	3,277	80,797	141,163	221,960	8,000	3,100	4,900	4,930	24,157	1,452,398
2026	938,000	292,000	646,000	313,956	278	6,177	2,335	3,842	1,206,282	100,776	50,388	7,306	43,082	11,446	3,391	83,625	146,103	229,728	8,000	3,100	4,900	4,930	24,157	1,460,167

Notes: Column (5): Average time value of business passengers in 1996 are estimated to be PHP50 per hour.
Minimum income for choosing air transport over surface transport is estimated to be PHP45, PHP40 and PHP61respectively for Bacolod-Manila, Iloilo-Manila and Tacloban-Manila. PHP50 is determined as average of those values.
This value is assumed to increase at the same rate as the projected GDP per capita annual growth rates, i.e., 6.1% (1996-2000), 5.9% (2000-2005), 5.2% (2005-2010), 4.3% (2010-2015), 3.9% (2015-2020) and 3.5% thereafter.

Columns (6) and (7): Travel time and passenger fare by sea and air are estimated as weighted average of Manila and Cebu routes using the number of passengers in 2005 as a weight, 86.2% for Manila and 13.8% for Cebu.
Travel time of Tacloban-Manila is 2.6 hours by air and 22.5 hours by bus and ferry. That of Tacloban-Cebu is 2.0 hours by air and 7.0 hours by bus and boat from Ormoc City. Those include waiting time of 1.5 hours for air and 1.0 hour for boat.
Travel fare of Tacloban-Manila is PHP1,768 by air and PHP555 by bus. That of Tacloban-Cebu is PHP838 by air and 200 by bus and boat.

Columns (14) and (15): Tourism earnings per foreign tourist in 1995 are estimated as PHP 2,250 (daily expenditure) x 4 days (average length of stay) x 30% (rate of value added) based on the data from the Department of Tourism.
Tourism earnings per domestic tourist in 1995 are estimated as PHP 2,000 (daily expenditure) x 2 days (average length of stay) x 20% (rate of value added) based on the data from the Department of Tourism.
Those values are assumed to increase at the same rate as GDP per capita growth rate.

Column (22): Cargo airfare is estimated based on the present airfare on each routes weighted by the projected number of passengers in 2005. Cargo airfare per one kilogram of air cargo from Tacloban is PHP10.63 for Manila and PHP5.04 for Cebu.
Cargo benefit per unit weight of cargo is estimated as 50% of the cargo airfare.
This is based on the consideration that consumers' surplus per unit weight of cargo is 50% of the cargo airfare when a straight line demand curve with a price axis intercept (demand=0) being the twice the airfare is assumed.

Columns (4), (10), (12) and (13) Percentage of business passengers, tourist passengers and their breakdown into foreign and domestic passengers is based on the air passenger interview survey conducted by the Study Team. See Appendix A for details.

Appendix 7.4.3 Incremental Revenues by the Project for Tacloban Airport

Year	Landing Fee					Operational Charge					Aircraft Parking Charge			Passenger Service Charge					Passenger Terminal Space Rental				
	WP		WOP		Incremental	WP		WOP		Incremental	WP	WOP	Incremental	WP		WOP		Incremental	WP		WOP		Incremental
	Total Weigh (ton)	Total Fee ('000 PHP)	Total Weigh (ton)	Total Fee ('000 PHP)	Revenue ('000 PHP)	Aircraft Landings	Total Fee ('000 PHP)	Aircraft Landings	Total Fee ('000 PHP)	Revenue ('000 PHP)	('000 PHP)	('000 PHP)	Revenue ('000 PHP)	Departing Passengers	Total Fee ('000 PHP)	Departing Passengers	Total Fee ('000 PHP)	Revenue ('000 PHP)	Rent Space (sq. m)	Total Fee ('000 PHP)	Rent Space (sq. m)	Total Fee ('000 PHP)	Revenue ('000 PHP)
	(1)	(2)	(3)	(4)	(5)=(2)-(4)	(6)	(7)	(8)	(9)	(10)=(7)-(9)	(11)	(12)	(13)=(11)-(12)	(14)	(15)	(16)	(17)	(18)=(15)-(17)	(19)	(20)	(21)	(22)	(23)=(20)-(22)
1995	75,210	1,805	75,210	1,805	0	1,525	915	1,525	915	0	72	72	0	129,095	1,291	129,095	1,291	0	160	96	160	96	0
1996	86,420	2,074	86,420	2,074	0	1,490	894	1,490	894	0	83	83	0	146,000	1,460	146,000	1,460	0	160	96	160	96	0
1997	86,420	2,074	86,420	2,074	0	1,490	894	1,490	894	0	83	83	0	146,000	1,460	146,000	1,460	0	160	96	160	96	0
1998	86,420	2,074	86,420	2,074	0	1,490	894	1,490	894	0	83	83	0	146,000	1,460	146,000	1,460	0	160	96	160	96	0
1999	86,420	2,074	86,420	2,074	0	1,490	894	1,490	894	0	83	83	0	146,000	1,460	146,000	1,460	0	160	96	160	96	0
2000	86,420	2,074	86,420	2,074	0	1,490	894	1,490	894	0	83	83	0	146,000	1,460	146,000	1,460	0	160	96	160	96	0
2001	86,420	2,074	86,420	2,074	0	1,490	894	1,490	894	0	83	83	0	146,000	1,460	146,000	1,460	0	160	96	160	96	0
2002	201,250	38,640	86,420	2,074	36,566	2,160	10,368	1,490	894	9,474	1,546	83	1,463	272,500	21,800	146,000	1,460	20,340	960	4,608	160	96	4,512
2003	215,655	41,406	86,420	2,074	39,332	2,270	10,896	1,490	894	10,002	1,656	83	1,573	290,000	23,200	146,000	1,460	21,740	960	4,608	160	96	4,512
2004	231,710	44,488	86,420	2,074	42,414	2,390	11,472	1,490	894	10,578	1,780	83	1,697	308,500	24,680	146,000	1,460	23,220	960	4,608	160	96	4,512
2005	248,010	47,618	86,420	2,074	45,544	2,505	12,024	1,490	894	11,130	1,905	83	1,822	327,500	26,200	146,000	1,460	24,740	960	4,608	160	96	4,512
2006	259,070	49,741	86,420	2,074	47,667	2,585	12,408	1,490	894	11,514	1,990	83	1,907	341,000	27,280	146,000	1,460	25,820	1,160	5,568	160	96	5,472
2007	271,490	52,126	86,420	2,074	50,052	2,670	12,816	1,490	894	11,922	2,085	83	2,002	355,000	28,400	146,000	1,460	26,940	1,160	5,568	160	96	5,472
2008	284,490	54,622	86,420	2,074	52,548	2,760	13,248	1,490	894	12,354	2,185	83	2,102	370,000	29,600	146,000	1,460	28,140	1,160	5,568	160	96	5,472
2009	296,910	57,007	86,420	2,074	54,933	2,650	13,680	1,490	894	12,786	2,280	83	2,197	385,500	30,840	146,000	1,460	29,380	1,160	5,568	160	96	5,472
2010	311,025	59,717	86,420	2,074	57,643	2,955	14,184	1,490	894	13,290	2,389	83	2,306	401,500	32,120	146,000	1,460	30,660	1,160	5,568	160	96	5,472
2011	321,795	61,785	86,420	2,074	59,711	3,030	14,544	1,490	894	13,650	2,471	83	2,388	414,000	33,120	146,000	1,460	31,660	1,160	5,568	160	96	5,472
2012	332,565	63,852	86,420	2,074	61,778	3,105	14,904	1,490	894	14,010	2,554	83	2,471	427,000	34,160	146,000	1,460	32,700	1,160	5,568	160	96	5,472
2013	344,450	66,134	86,420	2,074	64,060	3,190	15,312	1,490	894	14,418	2,645	83	2,562	440,500	35,240	146,000	1,460	33,780	1,160	5,568	160	96	5,472
2014	356,045	68,361	86,420	2,074	66,287	3,270	15,606	1,490	894	14,802	2,734	83	2,651	454,500	36,360	146,000	1,460	34,900	1,160	5,568	160	96	5,472
2015	368,220	70,698	86,420	2,074	68,624	3,365	16,152	1,490	894	15,258	2,828	83	2,745	469,000	37,520	146,000	1,460	36,060	1,160	5,568	160	96	5,472
2016	368,220	70,698	86,420	2,074	68,624	3,365	16,152	1,490	894	15,258	2,828	83	2,745	469,000	37,520	146,000	1,460	36,060	1,160	5,568	160	96	5,472
2017	368,220	70,698	86,420	2,074	68,624	3,365	16,152	1,490	894	15,258	2,828	83	2,745	469,000	37,520	146,000	1,460	36,060	1,160	5,568	160	96	5,472
2018	368,220	70,698	86,420	2,074	68,624	3,365	16,152	1,490	894	15,258	2,828	83	2,745	469,000	37,520	146,000	1,460	36,060	1,160	5,568	160	96	5,472
2019	368,220	70,698	86,420	2,074	68,624	3,365	16,152	1,490	894	15,258	2,828	83	2,745	469,000	37,520	146,000	1,460	36,060	1,160	5,568	160	96	5,472
2020	368,220	70,698	86,420	2,074	68,624	3,365	16,152	1,490	894	15,258	2,828	83	2,745	469,000	37,520	146,000	1,460	36,060	1,160	5,568	160	96	5,472
2021	368,220	70,698	86,420	2,074	68,624	3,365	16,152	1,490	894	15,258	2,828	83	2,745	469,000	37,520	146,000	1,460	36,060	1,160	5,568	160	96	5,472
2022	368,220	70,698	86,420	2,074	68,624	3,365	16,152	1,490	894	15,258	2,828	83	2,745	469,000	37,520	146,000	1,460	36,060	1,160	5,568	160	96	5,472
2023	368,220	70,698	86,420	2,074	68,624	3,365	16,152	1,490	894	15,258	2,828	83	2,745	469,000	37,520	146,000	1,460	36,060	1,160	5,568	160	96	5,472
2024	368,220	70,698	86,420	2,074	68,624	3,365	16,152	1,490	894	15,258	2,828	83	2,745	469,000	37,520	146,000	1,460	36,060	1,160	5,568	160	96	5,472
2025	368,220	70,698	86,420	2,074	68,624	3,365	16,152	1,490	894	15,258	2,828	83	2,745	469,000	37,520	146,000	1,460	36,060	1,160	5,568	160	96	5,472
2026	368,220	70,698	86,420	2,074	68,624	3,365	16,152	1,490	894	15,258	2,828	83	2,745	469,000	37,520	146,000	1,460	36,060	1,160	5,568	160	96	5,472

Year	Cargo Terminal Space Rental					Concession Privilege Fee			Aviation Fuel Surcharge					Utilities Services			Traffic Related Services	Commercial Services	Miscellaneous Revenue	Total Incremental Revenue
	WP		WOP		Incremental	WP	WOP	Incremental	WP		WOP		Incremental	WP	WOP	Incremental				
	Rent Space (sq. m)	Total Fee ('000 PHP)	Rent Space (sq. m)	Total Fee ('000 PHP)	Revenue ('000 PHP)	('000 PHP)	('000 PHP)	Revenue ('000 PHP)	Fuel Suppl (KL)	Total Fee ('000 PHP)	Fuel Suppl (KL)	Total Fee ('000 PHP)	Revenue ('000 PHP)	('000 PHP)	('000 PHP)	Revenue ('000 PHP)	('000 PHP)	('000 PHP)	('000 PHP)	('000 PHP)
	(24)	(25)	(26)	(27)	(28)=(25)-(27)	(29)	(30)	(31)=(29)-(30)	(32)	(33)	(34)	(35)	(36)=(33)-(35)	(37)	(38)	(39)=(37)-(38)	(40)=(5)+(10)+(13)+(18)	(41)=(23)+(28)+(31)+(36)	(42)=(39)	(43)=(40)+(41)+(42)
1995	0	0	0	0	0	23	23	0	0	0	0	0	0	0	0	0	0	0	0	0
1996	0	0	0	0	0	23	23	0	0	0	0	0	0	0	0	0	0	0	0	0
1997	0	0	0	0	0	23	23	0	0	0	0	0	0	0	0	0	0	0	0	0
1998	0	0	0	0	0	23	23	0	0	0	0	0	0	0	0	0	0	0	0	0
1999	0	0	0	0	0	23	23	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	23	23	0	0	0	0	0	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	23	23	0	0	0	0	0	0	0	0	0	0	0	0	0
2002	840	2,419	0	0	2,419	3,226	23	3,203	9,044	2,171	0	0	2,171	618	0	618	67,843	12,304	618	80,765
2003	840	2,419	0	0	2,419	3,226	23	3,203	9,850	2,364	0	0	2,364	618	0	618	72,647	12,498	618	85,763
2004	840	2,419	0	0	2,419	3,226	23	3,203	10,657	2,558	0	0	2,558	618	0	618	77,909	12,691	618	91,218
2005	840	2,419	0	0	2,419	3,226	23	3,203	11,463	2,751	0	0	2,751	618	0	618	83,236	12,885	618	96,739
2006	1,200	3,456	0	0	3,456	3,898	23	3,875	11,764	2,823	0	0	2,823	684	0	684	86,908	15,626	684	103,218
2007	1,200	3,456	0	0	3,456	3,898	23	3,875	12,065	2,896	0	0	2,896	684	0	684	90,916	15,698	684	107,299
2008	1,200	3,456	0	0	3,456	3,898	23	3,875	12,366	2,968	0	0	2,968	684	0	684	95,144	15,771	684	111,599
2009	1,200	3,456	0	0	3,456	3,898	23	3,875	12,667	3,040	0	0	3,040	684	0	684	99,296	15,843	684	115,823
2010	1,200	3,456	0	0	3,456	3,898	23	3,875	12,969	3,112	0	0	3,112	684	0	684	103,898	15,915	684	120,498
2011	1,200	3,456	0	0	3,456	3,898	23	3,875	13,425	3,222	0	0	3,222	684	0	684	107,409	16,025	684	124,118
2012	1,200	3,456	0	0	3,456	3,898	23	3,875	13,882	3,332	0	0	3,332	684	0	684	110,960	16,134	684	127,778
2013	1,200	3,456	0	0	3,456	3,898	23	3,875	14,338	3,441	0	0	3,441	684	0	684	114,821	16,244	684	131,749
2014	1,200	3,456	0	0	3,456	3,898	23	3,875	14,795	3,551	0	0	3,551	684	0	684	118,640	16,353	684	135,678
2015	1,200	3,456	0	0	3,456	3,898	23	3,875	15,251	3,660	0	0	3,660	684	0	684	122,687	16,463	684	139,834
2016	1,200	3,456	0	0	3,456	3,898	23	3,875	15,251	3,660	0	0	3,660	684	0	684	122,687	16,463	684	139,834
2017	1,200	3,456	0	0	3,456	3,898	23	3,875	15,251	3,660	0	0	3,660	684	0	684	122,687	16,463	684	139,834
2018	1,200	3,456	0	0	3,456	3,898	23	3,875	15,251	3,660	0	0	3,660	684	0	684	122,687	16,463	684	139,834
2019	1,200	3,456	0	0	3,456	3,898	23	3,875	15,251	3,660	0	0	3,660	684	0	684	122,687	16,463	684	139,834
2020	1,200	3,456	0	0	3,456	3,898	23	3,875	15,251	3,660	0	0	3,660	684	0	684	122,687	16,463	684	139,834
2021	1,200	3,456	0	0	3,456	3,898	23	3,875	15,251	3,660	0	0	3,660	684	0	684	122,687	16,463	684	139,834
2022	1,200	3,456	0	0	3,456	3,898	23	3,875	15,251	3,660	0	0	3,660	684	0	684	122,687	16,463	684	139,834
2023	1,200	3,456	0	0	3,456	3,898	23	3,875	15,251	3,660	0	0	3,660	684	0	684	122,687	16,463	684	139,834
2024	1,200	3,456	0	0	3,456	3,898	23	3,875	15,251	3,660	0	0	3,660	684	0	684	122,687	16,463	684	139,834
2025	1,200	3,456	0	0	3,456	3,898	23	3,875	15,251	3,660	0	0	3,660	684	0	684	122,687	16,463	684	139,834
2026	1,200	3,456	0	0	3,456	3,898	23	3,875	15,251	3,660	0	0	3,660	684	0	684	122,687	16,463	684	139,834

Notes: The following prices of airport charges are used for calculation based on the present conditions.
The above table assumes 300% increases in the prices of airport charges in 2001 when the new facilities are completed, and further 100% increases in 2006 when those facilities are expanded.

a) Landing Charges: PHP 24 per ton of landing aircraft. MTOW of MJ, SJ and TP is assumed to be 165 tons, 58 tons and 21 tons respectively.
b) Operational Charges: PHP 600 per landing.
c) Parking Charges: Estimated as 4% of the total landing charges based on the past financial records.
d) Passenger Service Charges: PHP 10 per departing passenger.
e) Passenger Terminal Space Rent: PHP 50 per sq.m per month. It is assumed 20% of the total floor area is rentable.
f) Cargo Terminal Space Rent: PHP 30 per sq.m per month.
g) Concession Fee: Estimated as 70% of the space rent revenues of the passenger terminal building based on the past financial records.
h) Aviation Fuel Surcharge: PHP 30 per kilo liter of aviation fuel sales.
i) Utility Charges: Estimated as 110% of actual anticipated cost.