

Table 2 Interview Sheet

CIVIL AVIATION ADMINISTRATION OF VIETNAM
INTERVIEW SURVEY FOR SOCIAL ENVIRONMENT

No.	Date: '95. / Time: :	Interviewer Name:																		
1	How many residents at your house hold?	Age							Occupation											
		Less than 10	10's	20's	30's	40's	50's	More than 60	Agriculture	Manufacturing	Service /Sales	Government	Education	Professional	Housewife	Student	Before school	Retired	Others	
		Husband																		
		Wife																		
		Son/Daughter																		
		Son/Daughter																		
		Son/Daughter																		
		Son/Daughter																		
		Grandfather																		
		Grandmother																		
		Others()																		
		Others()																		
		Others()																		
Others()																				
TOTAL()																				
2	How much area of land do you have ?	Items	Area				Items	Area												
		Agriculture	m2				House	m2												
		Manufacturing /Factory	m2				Garden	m2												
		Office/Shops	m2				Others	m2												
		TOTAL						m2												

3	How much income did you earn during 1994?	Items	Earnings																
		Agriculture	<table border="1"> <tr><td data-bbox="676 215 938 264">Paddy</td><td data-bbox="938 215 1423 264">%</td></tr> <tr><td data-bbox="676 264 938 313">Vegetable</td><td data-bbox="938 264 1423 313">%</td></tr> <tr><td data-bbox="676 313 938 362">Beans</td><td data-bbox="938 313 1423 362">%</td></tr> <tr><td data-bbox="676 362 938 412">Industrial crops</td><td data-bbox="938 362 1423 412">%</td></tr> <tr><td data-bbox="676 412 938 461">Fruits</td><td data-bbox="938 412 1423 461">%</td></tr> <tr><td data-bbox="676 461 938 510">Livestocks</td><td data-bbox="938 461 1423 510">%</td></tr> <tr><td data-bbox="676 510 938 560">Others</td><td data-bbox="938 510 1423 560">%</td></tr> <tr><td data-bbox="676 560 938 591">SUB TOTAL</td><td data-bbox="938 560 1423 591">VN Dong</td></tr> </table>	Paddy	%	Vegetable	%	Beans	%	Industrial crops	%	Fruits	%	Livestocks	%	Others	%	SUB TOTAL	VN Dong
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Others	%																		
SUB TOTAL	VN Dong																		
		Manufacturing /Factory	<table border="1"> <tr><td data-bbox="676 591 938 640">()</td><td data-bbox="938 591 1423 640">%</td></tr> <tr><td data-bbox="676 640 938 689">()</td><td data-bbox="938 640 1423 689">%</td></tr> <tr><td data-bbox="676 689 938 734">SUB TOTAL</td><td data-bbox="938 689 1423 734">VN Dong</td></tr> </table>	()	%	()	%	SUB TOTAL	VN Dong										
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SUB TOTAL	VN Dong																		
		Others	() VN Dong																
		TOTAL VN Dong																	
4	In an event of resettlement, what type of assistance would you prefer ?	<ul style="list-style-type: none"> - Financial compensation or - Other compensation (You can select as much as you wish.) - Land <ul style="list-style-type: none"> - For agriculture - For manufacturing - For shop - For office - For others () - House <ul style="list-style-type: none"> - Building <ul style="list-style-type: none"> - For manufacturing - For shop - For office - For others () - Training 																	
5	What location is better for resettlement ?	<ul style="list-style-type: none"> - In Soc Son District - Near Soc Son District - Out of Soc Son District - Anywhere 																	

Table 3 Item, Area, Time and Method of Survey on Cultural Property

Item	Description
Survey Item	<ul style="list-style-type: none"> - Kinds of cultural property - Location of cultural property - Value of cultural property
Survey Area	6 Communities; Mai Dinh, Quang Tien, Phu Cuong, Phu Minh, Hien Ninh, Thanh Xuan
Survey Time	20th May, 1995 ~ 30th June, 1995
Survey Method	<ul style="list-style-type: none"> - Field survey - Data collection

Table 4 Item, Area, Time and Method of Survey on Water Rights and Rights of Common

Item	Description
Survey Item	<ul style="list-style-type: none"> - Existing condition of water use - Existing condition of fishery - Regulation of water rights, rights of common and fishery - Related development plan
Survey Area	Rivers and ponds in the surrounding area of the existing airport
Survey Time	30th May, 1995 ~ 5th June, 1995
Survey Method	<p>Interview:</p> <ul style="list-style-type: none"> - Local authorities - Experienced persons living in the area <p>Data Collection:</p> <ul style="list-style-type: none"> - Data restored in communities and the district - Scientific reports on the area

Table 5 Item, Area, Time and Method of Survey on Waste

Item	Description
Survey Item	<ul style="list-style-type: none"> - Existing treatment system of Airport - Volume of waste - Collection points /ability /methods and frequency - Location, scale and capacity of final disposal site - Habitation and propagation of small mammals (e.g. rats), and insects (e.g. flies) - Regulation on waste
Survey Area	<p>Survey area: within the existing airport and final disposal site</p> <p>Survey points: Based on the typical activity of each area of the airport, the following areas have been chosen for surveying of solid waste generation</p> <ul style="list-style-type: none"> - Existing passengers terminal buildings - Commercial and service shops such as restaurant No. 1 and No.2 and Airport Hotel - Airside Complex - Cargo Building - Inflight Catering Facilities
Survey Time	1st June, 1995 ~ 20th June, 1995
Survey Method	<p>Interview:</p> <ul style="list-style-type: none"> - Authority of the Airport Medical Center - Airport staff who have directly concern to the sanitary aspects <p>Data Collection:</p> <ul style="list-style-type: none"> - The data are provided by the Medical Center of the Northern Airport Region and Vietnam Airlines Office

Table 6 Item, Area, Time and Method of Survey on Hydrological Situation

Item	Description
Survey Item	- Existing condition of hydrological situation
Survey Area	Rivers and ponds in the surrounding area of the existing airport
Survey Time	30th May, 1995 ~ 5th June, 1995
Survey Method	Interview: - Local authorities - Experienced persons living in the area Data Collection: - Data restored in communities and the district - Scientific reports on the area

Table 7 Item, Area, Time and Method of Survey on Fauna and Flora

Item	Description
Survey Item	- Location of fauna and flora - Existing condition of vegetation - Ecological condition of plants and animals - Endangered and rare species listed in the Red Data Books - Possibility of relocation of endangered and rare species
Survey Area	The proposed site and its surroundings in Mai Dinh, Quang Tien, Phu Cuong, Phu Minh Community.
Survey Time	30th May, 1995 ~ 5th June, 1995
Survey Method	- Field survey - Data collection

Table 8 Item, Area, Time and Method of Survey on Air Quality

Item	Description
Survey Item	<ul style="list-style-type: none"> - SPM, CO, SO₂, NO₂, O₃ - Microclimate at the airport - Volume of vehicles
Survey Area	<p>Survey area: within a circle with the radius 10 km from the center of the existing airport</p> <p>Survey points: 8 survey points chosen in survey area</p> <ul style="list-style-type: none"> - A1: Inside the fence of the existing airport, point for exhaust gas from vehicles and aircraft in the airport - A2: On the yard of domestic terminal building, point for exhaust gas from vehicles in the parking area - A3: agricultural area of Quang Tien Community, 4 km north from the airport, point for background air quality - A4: agricultural area of Tan Trai Village in Phu Cuong Community, 2 km south from the airport, point for near the airport - A5: on the Thang Long - Noi Bai Expressway in front of the airport, point for exhaust gas from vehicles - A6: on the Thang Long - Noi Bai Highway of Nam Hong Village, 7 km southwest from airport, point for exhaust gas from vehicles - A7: agricultural area of Nam Hong Community in Dong Anh District, 7 km south from the airport, point for background air quality - A8: on the NR No.2 of Nguyen Khe Community in Dong Anh District, 7 km southwest from airport, point for exhaust gas from vehicles
Survey Time	<ul style="list-style-type: none"> - Stage1: 29th May, 1995 ~ 5th June, 1995: A1, A2, A3, A5 - Stage2: 5th June, 1995 ~ 12th June, 1995: A4, A6, A7, A8
Survey Method	<ul style="list-style-type: none"> - Field survey: Survey methods and sampling are conformed to Vietnamese Standard TCVN 5293-1995 and referred to ISO Standards. Each stage lasted for 7 days. Every two hours of sampling per day with the criteria of SPM, CO, SO₂, NO₂, O₃, especially data on microclimate, the survey work were conducted every hour per day. - Measurement Instruments: <ul style="list-style-type: none"> - Microclimate digital instruments (temperature, wind, humidity): Thermohydrometer type 4500 - Testo term (French), Thermohydrometer type 4510 - Testo term (French), Ditectors are from Testo term (French) - Instruments for dust measurement: Digital dust indicator - model P 542 - SIBATA Co. (Japan), Dust and gas inspiring instrument - model 822 (Russian), Dust inspiring head, Gelman Co. (USA), Glass inspiring head, Gelman Co. (USA), Glass fiber of Gelman Co. (USA) - Toxic gas equipments (Chemical analysis): Corning colorimeter 252 (UK), Rapid instruments for measurement CO, SO₂ (Model GX -86 Manufactureer, Riken Co. (Japan))

Table 9 Item, Area, Time and Method of Survey on Water Quality

Item	Description
Survey Item	<ul style="list-style-type: none"> - Existing conditions of water quality - Existing conditions of well (Depth, water level, volume of pumping up)
Survey Area	<p>Survey area is chosen the area within Noi Bai Canal and its surroundings. The following survey points are chosen in this survey area.</p> <ul style="list-style-type: none"> - For water quality: six points: S1; S2; S3; S4; S5 and S6 where waste water will expose, in the surrounding area of the existing airport - For deep wells, six points: G1; G2; G3; G4; G5; G6 - For volume of river /channels: six points: <ul style="list-style-type: none"> - H1: in the north of Noi Bai Lake - H2: in the south of Noi Bai Lake - H3: at Noi Bai Equalization Pond (service area) - H4: in the north of Noi Bai Canal - H5: in the north of Noi Bai Swamp - H6: in the south of Noi Bai Canal
Survey Time	<ul style="list-style-type: none"> - 25th May, 1995 ~ 30th May, 1995: Site visit - 21st June, 1995 (after raining of date of 17 ~ 19th June, 1995): Sampling at the site
Survey Method	<ul style="list-style-type: none"> - Field trip to determine the sampling locations - Data collection from the scientific reports on the survey area - Analyzing of the samples, the method for analyzing of water are indicated in Table 10

Table 10 Analyzing Method

Parameter	Examination Method	Analyzing Equipment
pH	-	pH meter: UC-203 (Japan)
Conductivity and Total Dissolved Solids (TDS)	Conductivity cell	Conductivity/TDS meter: HACH 44600 (USA)
COD	by K ₂ Cr ₂ O ₇	COD Instrument: COD HC-307 (Japan)
SS	Total SS dried at 103-105°C	Muffle France
BOD ₅	Biochemical Oxygen Use after 5th incubation days at 20°C	BOD incubator WTW (Germany)
DO	Indometric method /Membrane electrode methods	Oxygen meter WTW (Germany)
Turbidity	Nephelometric method	Turbidity Meter 2100P HACH (USA)
Total Coliforms	Membrane filter	Incubator 35°C-50°C (England)

Note: Standard Methods for the Examination of Water and Waste Water, Sixteenth Edition, APHA, AWWA, WPCP, 1985

Table 11 Item, Area, Time and Method of Survey on Noise

Item	Description
Survey Item	<ul style="list-style-type: none"> - Aircraft noise from taking off, landing - Noise from vehicles on the transportation roads - Noise from activities of the people
Survey Area	<p>Survey area: within a circle with the radius 10 km from the center of the existing airport</p> <p>Survey points: 8 survey points chosen in survey area</p> <ul style="list-style-type: none"> - N1: residential area of Tan An Village in Hien Ninh Community, 10 km west from airport, under landing route, point for landing noise - N2: residential areas of Thanh Nhan Village in Thanh Xuan Community, 4.5 km west from airport, under landing route, point for landing noise - N3: on the road of Bac Ha Village in Quang Tien Community, 500 m north from airport, , point for landing and taking off noise - N4: residential area of Mai Noi Village in Mai Dinh Community, 4.5 km east from airport, under taking off route, point for taking off noise - N5: on the Thang Long - Noi Bai Expressway in front of the airport, point for vehicles noise - N6: on the Thang Long - Noi Bai Highway of Nam Hong Village, 7 km southwest from airport, point for vehicles noise - N7: agricultural area of Nam Hong Community in Dong Anh District, 7 km south from the airport, point for background noise - N8: on the NR No.2 of Nguyen Khe Community in Dong Anh District, 7 km southwest from airport, point for vehicles noise
Survey Time	<p>Survey time have been lasted from 29th May, 1995 to 12th June, 1995 and divided into two stages:</p> <ul style="list-style-type: none"> - Stage 1: 29th May, 1995 ~ 5th June, 1995: N2, N3, N4, N5 - Stage 2: 5th June, 1995 ~ 12th June, 1995: N1, N6, N7, N8 <p>Measuring Methods:</p> <ul style="list-style-type: none"> - On the first day of each stage, noise level have been measured continuously for 24 hours. Sampling were taken for every 6 times per hour. - On six later days: <ul style="list-style-type: none"> - From 6:00 to 18:00: Sampling were taken 6 times for every hour - From 18:00 to 6:00 next day: Sampling were taken for every hour
Survey Method	<p>Instruments for measurement noise level : Integrating sound level meter - Model NI 04 - Rion Manufacturer, Japan</p>

Table 1 Results of Measurement of Air Quality (mg/cu. m)

Survey Point	Average Noise Level (dB(A))					Remarks
	SPM	CO	SO2	NO2	O3	
A1	0.381	9.11	0.045	0.023	ND	point for exhaust gas from vehicles and aircraft in the airport
A2	0.357	8.39	0.038	0.017	ND	point for exhaust gas from vehicles in the parking area
A3	0.116	7.65	0.050	0.019	ND	point for background air quality
A4	0.298	6.26	0.048	0.013	ND	point for near the airport
A5	0.462	9.35	0.041	0.016	ND	point for exhaust gas from vehicles on Expressway in front of airport
A6	0.288	4.47	0.035	0.009	ND	point for exhaust gas from vehicles on Expressway
A7	0.078	3.81	0.041	0.008	ND	point for background air quality
A8	0.358	4.43	0.047	0.011	ND	point for exhaust gas from vehicles on NR No.2

Note: Data is average volume of 1 week
 ND: None detected

Table 2 Results of Measurement of Traffic Volume

No.	A5					A6					A8				
	I	II	III	IV	Total	I	II	III	IV	Total	I	II	III	IV	Total
1st	348	2082	52	155	2490	300	1814	251	302	2782	300	1177	352	452	2457
2nd	304	1745	248	203	2500	375	2530	181	312	3398	326	2436	242	419	3423
3rd	231	1729	136	178	2274	366	2766	308	434	3874	196	2327	384	438	3345
4th	154	1526	186	155	2021	477	2701	309	353	3840	354	2271	349	487	3461
5th	274	1876	66	130	2346	474	2440	165	351	3430	414	2149	295	506	3364
6th	288	1844	43	189	2364	419	3479	127	212	4237	377	2312	282	453	3424
7th	184	1470	78	150	1882	284	2541	130	353	3308	233	1555	234	474	2496
To.	1783	12272	809	1090	15877	2695	18271	1162	2317	24869	2200	12907	2278	3299	22750
Av.	235	1753	116	156	2268	385	2610	166	331	3553	314	1844	325	471	3250

Note: I: Morning (6:00-8:00), II: Afternoon (8:00-18:00), III: Evening (18:00-21:00), IV: Night (21:00-6:00)
 Vehicles are divided into three categories: Trucks: Bus, gasoline vehicles, crane vehicles, tricycle pedicabs; Cars: Minibus, cars, Motorcycles

Table 3 Maximum Permissible Concentration for Toxic Chemicals in Ambient Air (mg/cu. m)

Pollutant	Average 1 hour	Average 8 hours	Average 24 hours
SPM	0.30	-	0.20
CO	40.00	10.00	5.00
SO2	0.50	-	0.10
NO2	0.40	-	0.10
O3	0.20	-	0.06

Result of Water Quality Survey

Table 12 Result of Water Quality Survey of Waste water

Parameter	Sampling Point							Standard
	Time	S1	S2	S3	S4	S5	S6	
Water Temperature (°C)	Dry Season	33.9	35.0	33.0	32.0	31.5	33.8	
	Rainy Season	30.7	34.0	30.8	31.9	30.6	31.5	
Color	Dry Season	Green	Brown	Brown	app. Black	app. Black	Green	
	Rainy Season	Brown	Brown	Brown	Brown	Brown	Brown	
SS (mg/l)	Dry Season	293	120	190	109	140	-	50
	Rainy Season	127	183	407	210	71	169	
pH	Dry Season	7.5	7.5	7.0	6.8	6.7	7.3	5-8
	Rainy Season	6.3	7.6	6.9	6.9	7.1	6.7	
DO (mg/l)	Dry Season	5.4	6.5	7.0	3.9	3.8	5.3	
	Rainy Season	4.6	6.0	6.0	5.0	5.0	6.4	
Conductivity (µS/cm)	Dry Season	80	86	65	96	104	95	
	Rainy Season	100	54	56	105	188	85	
TDS (mg/l)	Dry Season	40.0	43.0	32.5	48.0	52.0	47.5	
	Rainy Season	50.0	26.9	28.0	522.5	94.4	42.5	
Turbidity (mg/l)	Dry Season	314	320	215	240	265	230	
	Rainy Season	240	360	495	395	140	285	
COD (mg/l)	Dry Season	40.0	40.7	80.0	113.0	102.0	42.0	160
	Rainy Season	48.0	36.0	80.0	80.0	96.0	30.0	
BOD ₅ (mg/l)	Dry Season	11.4	18.0	17.5	52.0	45.5	12.1	80
	Rainy Season	7.7	25.0	18.5	26.5	38.2	6.8	
Total Coliforms (MPN/100ml)	Dry Season	250	7x10 ⁵	5x10 ⁵	17x10 ⁵	25x10 ⁵	460	5x10 ³
	Rainy Season	330	6x10 ⁵	6x10 ⁵	27	66	400	
Total Anaerobic Bacteria (/10ml)	Dry Season	N/A	500	1,000	55x10 ⁵	340x10 ⁵	N/A	
	Rainy Season	-	-	-	-	-	-	

Note: Sampling Date: Dry Season; 1st June, 1995, Rainy Season; 21st June, 1995

Table 13 Result of Water Flow

Sampling Points	Time	Area of Section (m ²)	Velocity of Flowing (m/s)	Amount of Flowing (m ³ /s)
S2	Dry Season	1.7	0.046	0.078
	Rainy Season	2.8	0.054	0.151
S3	Dry Season	1.0	0.109	0.109
	Rainy Season	2.9	0.116	0.336
S4	Dry Season	1.0	0.095	0.095
	Rainy Season	1.4	0.101	0.141
S5	Dry Season	1.1	0.103	0.113
	Rainy Season	1.7	0.109	0.185
S6	Dry Season	1.1	0.240	0.264
	Rainy Season	2.8	0.600	1.680
H4	Dry Season	1.2	0.200	0.240
	Rainy Season	2.3	0.390	0.890

Table 14 Water Quality in Canals and Lakes in the Existing Airport

Parameter	Sampling Point							Standard
	Time	H1	H2	H3	H4	H5	H6	
Water Temperature (°C)	Dry Season	35.2	34.0	33.5	34.0	31.9	34.2	
	Rainy Season	31.6	32.0	33.0	32.0	31.9	33.6	
Color	Dry Season	Green	Green	Green	Green	Green	Green	
	Rainy Season	Nil	Brown	Brown	Brown	Brown	Brown	
SS (mg/l)	Dry Season	127.0	183.0	407.0	210.0	71.0	169.0	50
	Rainy Season	17.0	86.0	77.0	60.0	105.0	86.0	
pH	Dry Season	7.1	9.3	9.0	7.8	7.4	8.4	5-8
	Rainy Season	6.5	6.6	8.8	6.5	6.9	6.8	
DO (mg/l)	Dry Season	4.7	7.6	4.2	5.9	4.8	6.6	
	Rainy Season	4.8	6.2	6.4	4.2	5.3	4.8	
Conductivity (µS/cm)	Dry Season	70	80	96	90	85	70	
	Rainy Season	80	48	119	80	192	100	
TDS (mg/l)	Dry Season	35.0	40.0	48.0	45.0	42.5	35.0	
	Rainy Season	40.0	24.2	59.4	40.0	96.0	50.0	
Turbidity (mg/l)	Dry Season	137	250	180	135	171	1,422	
	Rainy Season	66	74	120	178	192	182	
COD (mg/l)	Dry Season	20.0	35.6	83.2	28.0	31.0	36.0	160
	Rainy Season	N/A	49.0	72.0	65.0	63.0	48.0	
BOD ₅ (mg/l)	Dry Season	4.4	20.4	23.7	6.1	8.1	8.6	80
	Rainy Season	6.2	23.0	25.0	6.6	7.1	8.4	
Total Coliforms (MPN/100ml)	Dry Season	140	2x10 ⁴	3x10 ⁵	348	460	230	5x10 ³
	Rainy Season	110	2x10 ⁴	24x10 ⁵	221	430	150	
Total Anaerobic Bacteria (/10ml)	Dry Season	N/A	50	2,450	N/A	N/A	N/A	
	Rainy Season	-	-	-	-	-	-	

Note: Sampling Date: Dry Season; 1st June, 1995, Rainy Season; 21st June, 1995

Table 15 Result of Characteristics of Deep Well

Sampling Point	Time	Depth of well (m)	Dynamic Water Level (m)	Pumping Capacity (m ³ /h)
G2	Dry Season	78	4.17	75
	Rainy Season		5.40	72
G4	Dry Season	76	4.77	63
	Rainy Season		-	-
G5	Dry Season	75	4.57	72
	Rainy Season		4.10	75
G6	Dry Season	80	4.29	-
	Rainy Season		7.50	72

Table 16 Water Quality in Deep Wells and Water Treatment Plant in the Existing Airport

Parameter	Sampling Point					Standard
	Time	G2	G4	G5	G6	
Water Temperature (°C)	Dry Season	29.2	26.7	26.3	-	
	Rainy Season	25.0	-	24.0	23.0	
Color	Dry Season	app. Yellow	app. Yellow	app. Yellow		
	Rainy Season	app. Yellow	-	app. Yellow	app. Yellow	
SS (mg/l)	Dry Season	49.5	255.0	25.3	-	100
	Rainy Season	220.0	-	256.0	108.0	
pH	Dry Season	7.7	7.6	7.4	-	6.0-8.0
	Rainy Season	6.6	-	6.5	6.3	
DO (mg/l)	Dry Season	7.5	4.4	7.1	-	
	Rainy Season	7.1	-	5.1	4.2	
Turbidity (mg/l)	Dry Season	25.0	49.0	20.0	-	
	Rainy Season	125.0	-	140.0	120.0	
COD by K ₂ Cr ₂ O ₇ (mg/l)	Dry Season	19.8	12.4	17.6	-	
	Rainy Season	18.0	-	8.8	19.5	
COD by KMnO ₄ (mg/l)	Dry Season	1.2	1.1	1.3	-	
	Rainy Season	0.9	-	1.3	2.2	
BOD ₅ (mg/l)	Dry Season	5.6	5.6	5.2	-	
	Rainy Season	4.8	-	2.9	8.7	
Total Coliforms (MPN/100ml)	Dry Season	2x10 ⁴	3.5x10 ⁴	5x10 ⁵	-	3
	Rainy Season	1x10 ⁴	-	3x10 ⁴	5x10 ⁴	
Total Anaerobic Bacteria (/10ml)	Dry Season	5	N/A	5	-	
	Rainy Season	-	-	-	-	

Note: Sampling Date: Dry Season; 1st June, 1995, Rainy Season; 21st June, 1995

Appendix 15.A.1 Incremental Maintenance Cost by the Project - Medium-term Development Plan

Year	Airport Civil Works (1)	Building Works (2)	Special Equipment (3)	Airport Utilities (4)	Fuel Supply System (5)	Fire Fighting Vehicles (6)	Airport Mainte. Equipment (7)	Air Navigation System (8)	Total (9)=(1)+...+(8)
1995									
1996									
1997									
1998									
1999									
2000									
2001									
2002									
2003									
2004									
2005									
2006	1,751	852	620	187	1,050	54	19	885	5,418
2007	1,751	852	620	187	1,050	54	19	885	5,418
2008	1,751	852	620	187	1,050	54	19	885	5,418
2009	1,751	852	620	187	1,050	54	19	885	5,418
2010	1,751	852	620	187	1,050	54	19	885	5,418
2011	1,751	852	620	187	1,050	54	19	885	5,418
2012	1,751	852	620	187	1,050	54	19	885	5,418
2013	1,751	852	620	187	1,050	54	19	885	5,418
2014	1,751	852	620	187	1,050	54	19	885	5,418
2015	1,751	852	620	187	1,050	54	19	885	5,418
2016	1,751	852	620	187	1,050	54	19	885	5,418
2017	1,751	852	620	187	1,050	54	19	885	5,418
2018	1,751	852	620	187	1,050	54	19	885	5,418
2019	1,751	852	620	187	1,050	54	19	885	5,418
2020	1,751	852	620	187	1,050	54	19	885	5,418
2021	1,751	852	620	187	1,050	54	19	885	5,418
2022	1,751	852	620	187	1,050	54	19	885	5,418
2023	1,751	852	620	187	1,050	54	19	885	5,418
2024	1,751	852	620	187	1,050	54	19	885	5,418
2025	1,751	852	620	187	1,050	54	19	885	5,418

Note: Maintenance cost is estimated by the following percentage rates on the construction cost of each airport facility.

Airport Civil Works	1%
Building Works	1%
Special Equipment	5%
Airport Utilities	1%
Fuel Supply System	3%
Fire Fighting Vehicles	3%
Airport Maintenance Equipment	3%
Air Navigation System	5%

Appendix 16.4.2 Incremental Personnel Cost, Overhead and Other Labor Costs by the Project

Year	Cost Estimate for Whole Airport Facilities						Cost Estimate for Existing Airport Facilities						Incremental Cost (000 US\$)			
	Unit Staff Cost (US\$/Year)	Passengers	Cargo (ton)	Traffic Units	Traffic Unit Growth (%)	Productivity Improvement (%)	Staff Growth Rate (%)	Number of Staff	Personnel Cost (000 US\$)	Overhead Cost (000 US\$)	Other Cost (000 US\$)	Number of Staff		Personnel Cost (000 US\$)	Overhead Cost (000 US\$)	Other Cost (000 US\$)
	(1)	(2)	(3)	(4)=(2)/100	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(1)x(8)	(10)	(11)	(12)	(13)=(1)x(12)	(14)	(15)	(16)=(9)-(10)-(11)
1995	1,500	1,422,000	22,200	1,644	26.8%	7.5%	19.3%	433	650	331	149	433	650	331	149	0
1996	1,610	1,789,000	29,600	2,085	22.2%	7.5%	14.7%	520	837	427	193	520	837	427	193	0
1997	1,730	2,168,000	38,000	2,548	18.1%	7.5%	10.6%	600	1,038	529	239	600	1,038	529	239	0
1998	1,860	2,547,000	46,300	3,010	15.0%	7.5%	7.5%	680	1,228	626	282	680	1,228	626	282	0
1999	2,000	2,915,000	54,500	3,460	12.5%	7.5%	5.0%	710	1,420	724	327	710	1,420	724	327	0
2000	2,150	3,267,000	62,600	3,893	11.2%	7.2%	4.0%	750	1,613	822	371	750	1,613	822	371	0
2001	2,300	3,619,000	71,000	4,329	11.2%	7.2%	4.0%	780	1,794	915	413	780	1,794	915	413	0
2002	2,470	4,010,000	80,400	4,814	11.2%	7.2%	4.0%	810	2,001	1,020	460	810	2,001	1,020	460	0
2003	2,650	4,443,000	91,200	5,355	11.2%	7.2%	4.0%	840	2,226	1,135	512	840	2,226	1,135	512	0
2004	2,840	4,924,000	103,100	5,955	11.3%	7.2%	4.1%	870	2,471	1,260	568	870	2,471	1,260	568	0
2005	3,040	5,453,000	116,700	6,625	9.7%	6.3%	3.4%	910	2,766	1,411	636	910	2,766	1,411	636	0
2006	3,230	5,966,000	130,200	7,268	9.7%	6.3%	3.4%	940	3,036	1,548	698	940	3,036	1,548	698	169
2007	3,430	6,521,000	145,400	7,975	9.7%	6.3%	3.4%	970	3,327	1,697	765	970	3,327	1,697	765	358
2008	3,650	7,129,000	162,200	8,751	9.7%	6.3%	3.4%	1,000	3,650	1,862	840	1,000	3,650	1,862	840	572
2009	3,890	7,794,000	181,000	9,604	9.7%	6.3%	3.4%	1,030	3,996	2,038	919	1,030	3,996	2,038	919	810
2010	4,120	8,520,000	202,400	10,544	9.5%	6.3%	3.5%	1,070	4,408	2,248	1,014	1,070	4,408	2,248	1,014	1,147
2011	4,340	9,317,000	222,100	11,378	7.9%	5.4%	2.5%	1,100	4,774	2,435	1,088	1,100	4,774	2,435	1,088	1,435
2012	4,570	9,842,000	243,700	12,279	7.9%	5.4%	2.5%	1,130	5,164	2,634	1,188	1,130	5,164	2,634	1,188	1,749
2013	4,820	10,579,000	267,500	13,254	7.9%	5.4%	2.5%	1,160	5,591	2,852	1,286	1,160	5,591	2,852	1,286	2,097
2014	5,080	10,579,000	267,500	13,254		5.4%		1,160	5,893	3,065	1,355	1,160	5,893	3,065	1,355	2,210
2015	5,350	10,579,000	267,500	13,254		5.4%		1,160	6,206	3,165	1,427	1,160	6,206	3,165	1,427	2,327
2016	5,620	10,579,000	267,500	13,254		5.0%		1,160	6,519	3,325	1,499	1,160	6,519	3,325	1,499	2,445
2017	5,900	10,579,000	267,500	13,254		5.0%		1,160	6,844	3,490	1,574	1,160	6,844	3,490	1,574	2,567
2018	6,200	10,579,000	267,500	13,254		5.0%		1,160	7,182	3,668	1,654	1,160	7,182	3,668	1,654	2,697
2019	6,510	10,579,000	267,500	13,254		5.0%		1,160	7,552	3,851	1,737	1,160	7,552	3,851	1,737	2,832
2020	6,840	10,579,000	267,500	13,254		5.0%		1,160	7,934	4,047	1,825	1,160	7,934	4,047	1,825	2,975
2021	7,180	10,579,000	267,500	13,254		5.0%		1,160	8,329	4,248	1,916	1,160	8,329	4,248	1,916	3,123
2022	7,540	10,579,000	267,500	13,254		5.0%		1,160	8,745	4,461	2,012	1,160	8,745	4,461	2,012	3,280
2023	7,920	10,579,000	267,500	13,254		5.0%		1,160	9,187	4,685	2,113	1,160	9,187	4,685	2,113	3,445
2024	8,320	10,579,000	267,500	13,254		5.0%		1,160	9,651	4,922	2,220	1,160	9,651	4,922	2,220	3,619
2025	8,740	10,579,000	267,500	13,254		5.0%		1,160	10,138	5,171	2,332	1,160	10,138	5,171	2,332	3,802

Note 1: Personnel cost includes basic salaries, bonuses, pension and insurance.
 The average cost is estimated to increase at the same rate GDP per capita growth rate as follows:
 1995-2000 7.5% per annum 2005-2010 6.3% per annum 2015-2020 5.0% per annum
 2000-2005 7.2% per annum 2010-2015 5.4% per annum 2020-2025 5.0% per annum

Note 2: Traffic unit is defined as 1/1000 of annual number of passengers plus 1/100 of annual tonnage of cargo.
 Note 3: The number of staff is assumed to increase in proportion with the growth of traffic units less productivity improvement of the staff, which is equal to the increase in their real income.
 Note 4: The number of staff in 1995 is the indicative staffing target by the organizational study in Section 13.6.3, in stead of the actual number of 856.
 It is recommended in Section 13.7.5 that the current overstuffed situation be corrected to these staffing targets in 4 years after a decision to proceed is made.
 Note 5: Overhead cost includes professional management expenditure, travel cost, stationary supply, telephone charge, uniform, land tax and training cost.
 It is estimated as 51% of personnel cost based on the financial statement of the NAR in 1994.
 Note 6: Other labor cost includes payments to workers for cleaning and gardening of terminal area, etc. It is estimated as 20% of personnel cost based on the financial statement of the NAR in 1994.

Appendix 16.A.3 Incremental Utilities Cost by the Project

Year	Cost Estimate for Whole Airport Facilities				Cost Estimate for Existing Airport Facilities				Incremental Utility Expenses (000 US\$)
	Electricity Consump. (MWH)	Electricity Cost (000 US\$)	Fuel Cost (000 US\$)	Total Cost (000 US\$)	Electricity Consump. (MWH)	Electricity Cost (000 US\$)	Fuel Cost (000 US\$)	Total Cost (000 US\$)	
	(1)	(2)	(3)	(4)=(2)+(3)	(5)	(6)	(7)	(8)=(6)+(7)	(9)=(4)-(8)
1995	5,500	275	14	289	5,500	275	14	289	
1996	5,500	275	14	289	5,500	275	14	289	
1997	5,500	275	14	289	5,500	275	14	289	
1998	5,500	275	14	289	5,500	275	14	289	
1999	5,500	275	14	289	5,500	275	14	289	
2000	5,500	275	14	289	5,500	275	14	289	
2001	20,100	1,005	50	1,055	20,100	1,005	50	1,055	
2002	20,100	1,005	50	1,055	20,100	1,005	50	1,055	
2003	20,100	1,005	50	1,055	20,100	1,005	50	1,055	
2004	20,100	1,005	50	1,055	20,100	1,005	50	1,055	
2005	20,100	1,005	50	1,055	20,100	1,005	50	1,055	
2006	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2007	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2008	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2009	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2010	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2011	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2012	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2013	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2014	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2015	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2016	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2017	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2018	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2019	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2020	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2021	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2022	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2023	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2024	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446
2025	28,600	1,430	72	1,502	20,100	1,005	50	1,055	446

Note 1: Annual consumption of electricity is calculated from the receiving capacity by multiplying the use rate of 33.3%.

Note 2: The rate of electricity is US\$0.05 per KWH

Note 3: Fuel cost is 5% of electricity expenses.

Appendix 16.1.1 Air Traffic at Noi Bai International Airport in the WP Case

Year	Passengers						Cargo (ton)						Aircraft Movements									
	Dom.		Int'l		Total	Total	Dom.		Int'l		Total	International					Domestic					
	(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)			
1995	472,000	960,000	1,422,000	6,600	15,600	22,200	180	690	340	2,400	510	630										
1996	587,000	1,202,000	1,789,000	8,400	21,200	29,600	250	860	430	2,920	620	1,190										
1997	713,000	1,455,000	2,168,000	10,700	27,300	38,000	330	1,050	520	3,460	740	1,870										
1998	849,000	1,698,000	2,547,000	13,400	32,900	46,300	440	1,250	620	4,020	850	2,590										
1999	992,000	1,923,000	2,915,000	16,400	38,100	54,500	560	1,460	730	4,580	960	3,320										
2000	1,141,000	2,126,000	3,267,000	19,700	42,900	62,600	710	1,690	840	5,120	1,070	4,070										
2001	1,282,000	2,337,000	3,619,000	23,200	47,800	71,000	860	1,900	950	5,610	1,160	4,920										
2002	1,441,000	2,569,000	4,010,000	27,200	53,200	80,400	1,040	2,150	1,070	6,120	1,260	5,900										
2003	1,620,000	2,823,000	4,443,000	31,900	59,300	91,200	1,260	2,420	1,210	6,650	1,360	6,860	90									
2004	1,821,000	3,103,000	4,924,000	37,300	65,800	103,100	1,530	2,730	1,360	7,200	1,460	7,320	540									
2005	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	7,810	1,110									
2006	2,257,000	3,709,000	5,966,000	50,000	80,200	130,200	2,190	3,410	1,700	8,220	1,630	8,290	1,700									
2007	2,489,000	4,032,000	6,521,000	57,300	88,100	145,400	2,580	3,770	1,890	8,660	1,690	8,780	2,400									
2008	2,745,000	4,384,000	7,129,000	65,500	96,700	162,200	3,040	4,180	2,090	9,080	1,750	9,320	3,220									
2009	3,027,000	4,767,000	7,794,000	74,900	106,100	181,000	3,580	4,620	2,310	9,470	1,790	9,890	4,200									
2010	3,337,000	5,183,000	8,520,000	85,800	116,600	202,400	4,210	5,120	2,560	9,810	1,810	10,490	5,330									
2011	3,616,000	5,541,000	9,157,000	96,100	126,000	222,100	4,810	5,570	2,790	10,030	1,810	10,960	6,390									
2012	3,917,000	5,925,000	9,842,000	107,500	136,200	243,700	5,490	6,060	3,030	10,200	1,790	11,450	7,590									
2013	4,244,000	6,335,000	10,579,000	120,400	147,100	267,500	6,270	6,590	3,300	10,290	1,750	11,950	8,940									
2014	4,244,000	6,335,000	10,579,000	120,400	147,100	267,500	6,270	6,590	3,300	10,290	1,750	11,950	8,940									
2015	4,244,000	6,335,000	10,579,000	120,400	147,100	267,500	6,270	6,590	3,300	10,290	1,750	11,950	8,940									
2016	4,244,000	6,335,000	10,579,000	120,400	147,100	267,500	6,270	6,590	3,300	10,290	1,750	11,950	8,940									
2017	4,244,000	6,335,000	10,579,000	120,400	147,100	267,500	6,270	6,590	3,300	10,290	1,750	11,950	8,940									
2018	4,244,000	6,335,000	10,579,000	120,400	147,100	267,500	6,270	6,590	3,300	10,290	1,750	11,950	8,940									
2019	4,244,000	6,335,000	10,579,000	120,400	147,100	267,500	6,270	6,590	3,300	10,290	1,750	11,950	8,940									
2020	4,244,000	6,335,000	10,579,000	120,400	147,100	267,500	6,270	6,590	3,300	10,290	1,750	11,950	8,940									
2021	4,244,000	6,335,000	10,579,000	120,400	147,100	267,500	6,270	6,590	3,300	10,290	1,750	11,950	8,940									
2022	4,244,000	6,335,000	10,579,000	120,400	147,100	267,500	6,270	6,590	3,300	10,290	1,750	11,950	8,940									
2023	4,244,000	6,335,000	10,579,000	120,400	147,100	267,500	6,270	6,590	3,300	10,290	1,750	11,950	8,940									
2024	4,244,000	6,335,000	10,579,000	120,400	147,100	267,500	6,270	6,590	3,300	10,290	1,750	11,950	8,940									
2025	4,244,000	6,335,000	10,579,000	120,400	147,100	267,500	6,270	6,590	3,300	10,290	1,750	11,950	8,940									

Appendix 16.1.2 Air Traffic at Noi Bai International Airport in the WOP Case

Year	Passengers										Cargo (ton)										Aircraft Movements																			
	Int'l					Dom.					Total					Int'l					Dom.					Total					International					Domestic				
	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)								
1995	472,000	950,000	1,422,000	6,600	15,600	22,200	180	690	340	2,400	510	4,120	630	630	630	5,920	3,500	10,680																						
1996	587,000	1,202,000	1,789,000	8,400	21,200	29,600	250	860	430	2,920	620	5,080	1,190	1,190	1,190	6,660	3,530	12,570																						
1997	713,000	1,455,000	2,168,000	10,700	27,300	38,000	330	1,050	520	3,460	740	6,100	1,870	1,870	1,870	7,180	3,340	14,260																						
1998	849,000	1,698,000	2,547,000	13,400	32,900	46,300	440	1,250	620	4,020	850	7,180	2,590	2,590	2,590	7,510	2,970	15,660																						
1999	992,000	1,923,000	2,915,000	16,400	38,100	54,500	560	1,460	730	4,580	960	8,290	3,320	3,320	3,320	7,720	2,470	16,690																						
2000	1,141,000	2,126,000	3,267,000	19,700	42,900	62,600	710	1,690	840	5,120	1,070	9,430	4,070	4,070	4,070	7,360	2,480	17,980																						
2001	1,282,000	2,337,000	3,619,000	23,200	47,800	71,000	850	1,900	950	5,610	1,160	10,470	4,920	4,920	4,920	6,730	2,620	19,190																						
2002	1,441,000	2,569,000	4,010,000	27,200	53,200	80,400	1,040	2,150	1,070	6,120	1,260	11,640	5,900	5,900	5,900	5,870	2,770	20,440																						
2003	1,620,000	2,823,000	4,443,000	31,900	59,300	91,200	1,260	2,420	1,210	6,650	1,360	12,900	6,860	6,860	6,860	5,080	2,910	21,800																						
2004	1,821,000	3,103,000	4,924,000	37,300	65,800	103,100	1,530	2,730	1,360	7,200	1,460	14,280	7,320	7,320	7,320	5,240	3,060	23,480																						
2005	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2006	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2007	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2008	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2009	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2010	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2011	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2012	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2013	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2014	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2015	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2016	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2017	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2018	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2019	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2020	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2021	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2022	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2023	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2024	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						
2025	2,047,000	3,411,000	5,458,000	43,600	73,100	116,700	1,860	3,080	1,540	7,760	1,550	15,790	7,810	7,810	7,810	5,320	3,210	25,260																						

Appendix 16.1.3 Incremental Air Traffic at Noi Bai International Airport by the Project

Year	Passengers						Cargo (ton)						Aircraft Movements													
	Int'l		Dom.		Total		Int'l		Dom.		Total	International						Domestic								
	(1)-(19)	(2)-(20)	(3)-(21)	(4)-(22)	(5)-(23)		(6)-(24)	(7)-(25)	(8)-(26)	(9)-(27)	(10)-(28)	(11)-(29)	Total	JJ	LJ	MJ	SJ	TP	Total	JJ	LJ	MJ	SJ	TP	Total	
1995																										
1996	210,000	298,000	508,000	6,400	7,100	13,500	330	330	160	460	80	1,360	590	480	480	•10	130	1,670	590	480	480	•10	130	1,670		
1997	442,000	621,000	1,063,000	13,700	15,000	28,700	720	690	350	900	140	2,900	1,290	970	970	-140	250	3,340	1,290	970	970	-140	250	3,340		
1998	698,000	973,000	1,671,000	21,900	23,600	45,500	1,180	1,100	550	1,320	200	4,350	2,110	1,510	1,510	-390	380	5,120	2,110	1,510	1,510	-390	380	5,120		
1999	980,000	1,356,000	2,336,000	31,300	33,000	64,300	1,720	1,540	770	1,710	240	5,930	3,090	2,090	2,090	-800	490	6,940	3,090	2,090	2,090	-800	490	6,940		
2000	1,290,000	1,772,000	3,062,000	42,200	43,500	85,700	2,350	2,040	1,020	2,050	260	7,720	4,220	2,690	2,690	-1,390	580	8,780	4,220	2,690	2,690	-1,390	580	8,780		
2001	1,589,000	2,130,000	3,699,000	52,500	52,900	105,400	2,950	2,490	1,250	2,270	260	9,220	5,290	3,150	3,150	-1,930	680	10,330	5,290	3,150	3,150	-1,930	680	10,330		
2002	1,970,000	2,514,000	4,384,000	63,900	63,100	127,000	3,630	2,980	1,490	2,440	240	10,780	6,480	3,640	3,640	-2,620	780	11,920	6,480	3,640	3,640	-2,620	780	11,920		
2003	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2004	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2005	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2006	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2007	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2008	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2009	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2010	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2011	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2012	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2013	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2014	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2015	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2016	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2017	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2018	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2019	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2020	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2021	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2022	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2023	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2024	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		
2025	2,197,000	2,924,000	5,121,000	76,800	74,000	150,800	4,410	3,510	1,760	2,530	200	12,410	7,830	4,140	4,140	-3,460	870	13,520	7,830	4,140	4,140	-3,460	870	13,520		

Appendix 16.1.4 Annual Requirements of Capital Investment Cost - Medium-term Development Plan

Unit: US\$ '000

Year	Airport Civil Works	Building Works	Special Equipment	Airport Utilities	Fuel Supply System	Fire Fighting Vehicles	Airport Maint. Equipment	Air Navigation System	Diversion and Relocation	Land Acquisition and Compens.	Consulting Services	Contingencies	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13) = (1) + (2) + (3) + (4) + (5) + (6) + (7) + (8) + (9) + (10) + (11) + (12)
1995													
1996												130	1,426
1997										1,286	1,756	1,212	13,356
1998										10,368	10,533	2,090	22,991
1999										2,592	2,458	505	5,555
2000										1,296	2,458	1,434	15,776
2001	8,757			535					896		4,564	7,030	77,328
2002	43,785	8,521		3,740	7,000				2,688		4,564	10,476	115,234
2003	52,542	25,563	2,478	4,675	10,500			3,540	896		4,564	10,476	136,699
2004	52,542	34,084	6,195	5,610	10,500	900	315	8,850			3,160	5,870	64,568
2005	17,514	17,042	3,717	3,740	7,000	900	315	5,310			351	35	386
2006													
2007													
2008													
2009													
2010													
2011													
2012													
2013													
2014													
2015													
2016													
2017													
2018													
2019													
2020													
2021													
2022													
2023													
2024													
2025													
Total	-58,380	-28,403											-86,783
Medium-term	175,140	85,210	12,390	18,700	35,000	1,800	630	17,700	4,480	25,920	35,110	40,920	453,000

Total cost of each work is distributed by the following percentage distribution rates based on the anticipated implementation schedule of the Project

Year	Civil		Building		Special Eq.		Utilities		Fuel		FFV		Navals		Other		Compen.		Conting.		
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	
1997																					
1998																					
1999																					
2000																					
2001																					
2002																					
2003																					
2004																					
2005																					
2006																					

Note 2: Contingencies (10% of each work) are assumed to be used at each time of construction/insulation/compensation/consulting work.

Note 3: Residual values are considered for airport civil facilities and buildings with 30 year depreciation period.

Appendix 16.1.5: Table A Incremental Maintenance Cost by the Project - Medium-term Development Plan (Reproduction of Appendix 16.4.1)

Year	Airport Civil Works (1)	Building Works (2)	Special Equipment (3)	Airport Utilities (4)	Fuel Supply System (5)	Fire Fighting Vehicles (6)	Airport Maintenance Equipment (7)	Air Navigation System (8)	Total (9)=(1)+...+(8)
1995									
1996									
1997									
1998									
1999									
2000									
2001									
2002									
2003									
2004									
2005									
2006	1,751	852	620	187	1,050	54	19	885	
2007	1,751	852	620	187	1,050	54	19	885	
2008	1,751	852	620	187	1,050	54	19	885	
2009	1,751	852	620	187	1,050	54	19	885	
2010	1,751	852	620	187	1,050	54	19	885	
2011	1,751	852	620	187	1,050	54	19	885	
2012	1,751	852	620	187	1,050	54	19	885	
2013	1,751	852	620	187	1,050	54	19	885	
2014	1,751	852	620	187	1,050	54	19	885	
2015	1,751	852	620	187	1,050	54	19	885	
2016	1,751	852	620	187	1,050	54	19	885	
2017	1,751	852	620	187	1,050	54	19	885	
2018	1,751	852	620	187	1,050	54	19	885	
2019	1,751	852	620	187	1,050	54	19	885	
2020	1,751	852	620	187	1,050	54	19	885	
2021	1,751	852	620	187	1,050	54	19	885	
2022	1,751	852	620	187	1,050	54	19	885	
2023	1,751	852	620	187	1,050	54	19	885	
2024	1,751	852	620	187	1,050	54	19	885	
2025	1,751	852	620	187	1,050	54	19	885	

Note: Maintenance cost is estimated by the following percentage rates on the construction cost of each airport facility.

Airport Civil Works	1%
Building Works	1%
Special Equipment	5%
Airport Utilities	1%
Fuel Supply System	3%
Fire Fighting Vehicles	3%
Airport Maintenance Equipment	3%
Air Navigation System	5%

Appendix 16.1.6: Table B Incremental Personnel Cost, Overhead and Other Labor Costs by the Project (Reproduction of Appendix 16.A.2)

Year	WIP										WOP					Incremental Cost (000 US\$)
	Unit Staff Cost (US\$/Year)	Passengers	Cargo (ton)	Traffic Units	Traffic Unit Growth	Productivity Improvement	Staff Growth Rate	Number of Staff	Personnel Cost (000 US\$)	Overhead Cost (000 US\$)	Other Cost (001 US\$)	Number of Staff	Personnel Cost (000 US\$)	Overhead Cost (000 US\$)	Other Cost (001 US\$)	
	(1)	(2)	(3)	(4)=(2)/1000 + (3)/100	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(1)x(8)	(10)	(11)	(12)	(13)=(1)x(12)	(14)	(15)	(16)=(9)+(10)+(11)-(13)-(14)-(15)
1995	1,500	1,422,000	22,200	1,644	26.8%	7.5%	19.3%	433	650	331	149	433	650	331	149	0
1996	1,610	1,789,000	29,600	2,085	22.2%	7.5%	14.7%	520	837	427	193	520	837	427	193	0
1997	1,730	2,168,000	38,000	2,548	18.1%	7.5%	10.6%	660	1,038	529	239	600	1,038	529	239	0
1998	1,860	2,547,000	46,300	3,010	15.0%	7.5%	7.5%	710	1,420	626	282	660	1,420	626	282	0
1999	2,000	2,915,000	54,500	3,460	12.5%	7.5%	5.0%	750	1,613	822	371	750	1,613	822	371	0
2000	2,150	3,267,000	62,800	3,893	11.2%	7.2%	4.0%	760	1,784	915	413	760	1,784	915	413	0
2001	2,300	3,618,000	71,000	4,329	11.2%	7.2%	4.0%	810	2,001	1,020	460	810	2,001	1,020	460	0
2002	2,470	4,010,000	80,400	4,814	11.2%	7.2%	4.0%	840	2,226	1,135	512	840	2,226	1,135	512	0
2003	2,650	4,443,000	91,200	5,355	11.2%	7.2%	4.0%	870	2,471	1,260	568	870	2,471	1,260	568	0
2004	2,840	4,924,000	103,100	5,955	11.2%	7.2%	4.0%	910	2,766	1,411	636	910	2,766	1,411	636	0
2005	3,040	5,458,000	116,700	6,625	11.3%	7.2%	4.1%	940	3,036	1,543	708	940	3,036	1,543	708	169
2006	3,230	5,965,000	130,200	7,268	9.7%	6.3%	3.4%	970	3,327	1,697	785	970	3,327	1,697	785	358
2007	3,430	6,521,000	145,400	7,975	9.7%	6.3%	3.4%	1,000	3,650	1,862	840	1,000	3,650	1,862	840	572
2008	3,650	7,129,000	162,200	8,751	9.7%	6.3%	3.4%	1,030	3,996	2,038	919	1,030	3,996	2,038	919	810
2009	3,880	7,794,000	181,000	9,604	9.7%	6.3%	3.4%	1,070	4,405	2,248	1,014	1,070	4,405	2,248	1,014	1,147
2010	4,120	8,520,000	202,400	10,544	9.8%	6.4%	3.5%	1,100	4,774	2,435	1,098	1,100	4,774	2,435	1,098	1,435
2011	4,340	9,157,000	222,100	11,378	7.9%	5.4%	2.5%	1,130	5,164	2,634	1,188	1,130	5,164	2,634	1,188	1,749
2012	4,570	9,842,000	243,700	12,279	7.9%	5.4%	2.5%	1,160	5,591	2,852	1,286	1,160	5,591	2,852	1,286	2,087
2013	4,820	10,579,000	267,500	13,254	7.9%	5.4%	2.5%	1,160	5,993	3,005	1,355	1,160	5,993	3,005	1,355	2,210
2014	5,080	10,579,000	267,500	13,254	5.4%	5.4%	0.0%	1,160	6,206	3,165	1,427	1,160	6,206	3,165	1,427	2,327
2015	5,350	10,579,000	267,500	13,254	5.4%	5.4%	0.0%	1,160	6,519	3,325	1,489	1,160	6,519	3,325	1,489	2,445
2016	5,620	10,579,000	267,500	13,254	5.0%	5.0%	0.0%	1,160	6,844	3,480	1,574	1,160	6,844	3,480	1,574	2,567
2017	5,900	10,579,000	267,500	13,254	5.0%	5.0%	0.0%	1,160	7,192	3,668	1,664	1,160	7,192	3,668	1,664	2,687
2018	6,200	10,579,000	267,500	13,254	5.0%	5.0%	0.0%	1,160	7,562	3,851	1,737	1,160	7,562	3,851	1,737	2,832
2019	6,510	10,579,000	267,500	13,254	5.0%	5.0%	0.0%	1,160	7,934	4,047	1,825	1,160	7,934	4,047	1,825	2,975
2020	6,840	10,579,000	267,500	13,254	5.0%	5.0%	0.0%	1,160	8,323	4,248	1,916	1,160	8,323	4,248	1,916	3,123
2021	7,180	10,579,000	267,500	13,254	5.0%	5.0%	0.0%	1,160	8,746	4,461	2,012	1,160	8,746	4,461	2,012	3,280
2022	7,540	10,579,000	267,500	13,254	5.0%	5.0%	0.0%	1,160	9,187	4,685	2,113	1,160	9,187	4,685	2,113	3,445
2023	7,920	10,579,000	267,500	13,254	5.0%	5.0%	0.0%	1,160	9,651	4,922	2,220	1,160	9,651	4,922	2,220	3,619
2024	8,320	10,579,000	267,500	13,254	5.0%	5.0%	0.0%	1,160	10,138	5,171	2,332	1,160	10,138	5,171	2,332	3,802
2025	8,740	10,579,000	267,500	13,254	5.0%	5.0%	0.0%	1,160	10,650	5,435	2,456	1,160	10,650	5,435	2,456	4,000

Note 1: Personnel cost includes basic salaries, bonuses, pension and insurance.

The average cost is estimated to increase at the same rate GDP per capita growth rate as follows:

1995-2000	7.5%	per annum	2005-2010	6.3%	per annum	2015-2020	5.0%	per annum
2000-2005	7.2%	per annum	2010-2015	5.4%	per annum	2020-2025	5.0%	per annum

Note 2: Traffic unit is defined as 1/1000 of annual number of passengers plus 1/100 of annual tonnage of cargo.

Note 3: The number of staff is assumed to increase in proportion with the growth of traffic units less productivity improvement of the staff, which is equal to the increase in their real income.

Note 4: The number of staff in 1995 is the indicative staffing target by the organizational study in Section 13.6.3, in stead of the actual number of 856.

Note 5: Overhead cost includes professional management expenditure, travel cost, stationary supply, telephone charge, uniform, land tax and training cost.

Note 6: Other labor cost includes payments to workers for cleaning and gardening of terminal area, etc. It is estimated as 23% of personnel cost based on the financial statement of the NAR in 1994.

Appendix 16.1.5: Table C. Incremental Utilities Cost by the Project (Reproduction of Appendix 16.4.3)

Year	WP			WOP			Incremental Utility Expenses ('000 US\$)		
	Electricity Consump. (MWH)	Electricity Cost ('000 US\$)	Fuel Cost ('000 US\$)	Total Cost ('000 US\$)	Electricity Consump. (MWH)	Electricity Cost ('000 US\$)		Fuel Cost ('000 US\$)	Total Cost ('000 US\$)
	(1)	(2)	(3)	(4)=(2)+(3)	(5)	(6)	(7)	(8)=(6)+(7)	(9)=(4)-(8)
1996	5,500	275	14	289	5,500	275	14	289	
1996	5,500	275	14	289	5,500	275	14	289	
1997	5,500	275	14	289	5,500	275	14	289	
1998	5,500	275	14	289	5,500	275	14	289	
1999	5,500	275	14	289	5,500	275	14	289	
2000	5,500	275	14	289	5,500	275	14	289	
2001	20,100	1,005	50	1,055	20,100	1,005	50	1,055	
2002	20,100	1,005	50	1,055	20,100	1,005	50	1,055	
2003	20,100	1,005	50	1,055	20,100	1,005	50	1,055	
2004	20,100	1,005	50	1,055	20,100	1,005	50	1,055	
2005	20,100	1,005	50	1,055	20,100	1,005	50	1,055	
2006	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2007	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2008	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2009	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2010	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2011	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2012	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2013	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2014	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2015	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2016	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2017	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2018	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2019	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2020	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2021	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2022	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2023	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2024	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446
2025	28,600	1,430	72	1,502	28,600	1,005	50	1,055	446

Note 1: Annual consumption of electricity is calculated from the receiving capacity by multiplying the use rate of 33.3%.

Note 2: The rate of electricity is U.S.\$0.05 per KWH

Note 3: Fuel cost is 5% of electricity expenses.

Appendix 16.1.6 Environmental Mitigation Costs

Year	Environmental Mitigation Costs (000 US\$)
1996	
1997	
1998	
1999	
2000	
2001	
2002	
2003	
2004	
2005	
2006	240
2007	240
2008	240
2009	240
2010	240
2011	
2012	
2013	
2014	
2015	
2016	
2017	
2018	
2019	
2020	
2021	
2022	
2023	
2024	
2025	

Note: The environmental mitigation costs of US\$12 million in Section 15.3 are assumed to be spent equally over 5 year period from the inauguration of the medium-term development plan.

Appendix 16.1.7 Incremental Landing Charges and Parking Charges by the Project

Unit: '000 US\$

Year	WP Case			WOP Case			Incremental Revenue		
	Landing Charges (1)	Parking Charge (2)	Total (3)=(1)+(2)	Landing Charges (4)	Parking Charge (5)	Total (6)=(4)+(5)	Landing Charges (7)=(1)-(4)	Parking Charge (8)=(2)-(5)	Total (9)=(7)+(8)
1995	1,483	130	1,612	1,483	130	1,612			
1996	1,982	170	2,152	1,982	170	2,152			
1997	2,538	214	2,751	2,538	214	2,751			
1998	3,315	274	3,589	3,315	274	3,589			
1999	3,957	324	4,281	3,957	324	4,281			
2000	4,628	374	5,003	4,628	374	5,003			
2001	5,300	425	5,724	5,300	425	5,724			
2002	6,094	483	6,577	6,094	483	6,577			
2003	6,980	548	7,527	6,980	548	7,527			
2004	7,976	619	8,596	7,976	619	8,596			
2005	9,138	702	9,839	9,138	702	9,839			
2006	10,273	781	11,054	9,138	702	9,839	1,135	80	1,215
2007	11,547	870	12,416	9,138	702	9,839	2,409	168	2,577
2008	13,001	970	13,970	9,138	702	9,839	3,863	268	4,131
2009	14,643	1,082	15,725	9,138	702	9,839	5,506	380	5,886
2010	16,497	1,207	17,704	9,138	702	9,839	7,360	505	7,865
2011	18,184	1,320	19,504	9,138	702	9,839	9,048	619	9,665
2012	20,048	1,444	21,492	9,138	702	9,839	10,910	743	11,653
2013	22,111	1,581	23,692	9,138	702	9,839	12,973	879	13,853
2014	22,111	1,581	23,692	9,138	702	9,839	12,973	879	13,853
2015	22,111	1,581	23,692	9,138	702	9,839	12,973	879	13,853
2016	22,111	1,581	23,692	9,138	702	9,839	12,973	879	13,853
2017	22,111	1,581	23,692	9,138	702	9,839	12,973	879	13,853
2018	22,111	1,581	23,692	9,138	702	9,839	12,973	879	13,853
2019	22,111	1,581	23,692	9,138	702	9,839	12,973	879	13,853
2020	22,111	1,581	23,692	9,138	702	9,839	12,973	879	13,853
2021	22,111	1,581	23,692	9,138	702	9,839	12,973	879	13,853
2022	22,111	1,581	23,692	9,138	702	9,839	12,973	879	13,853
2023	22,111	1,581	23,692	9,138	702	9,839	12,973	879	13,853
2024	22,111	1,581	23,692	9,138	702	9,839	12,973	879	13,853
2025	22,111	1,581	23,692	9,138	702	9,839	12,973	879	13,853

Note 1: Landing charges and parking charges are calculated based on the present rates in the AIP.

Note 2: No discrimination of foreign carriers from Vietnam Airlines is assumed from 1998 based on the IATA's recommendation.

(20% discount until 1997 for Vietnam Airlines' international flights, which accounts for 50% of all international flights.)

The rates of charges for respective class of aircraft are as follows: (Unit: US\$)

	JJ (intl)	JJ (intl)	LJ (intl)	MJ (intl)	SJ (intl)	TP (intl)	JJ (dom.)	LJ (dom.)	MJ (dom.)	SJ (dom.)	TP (dom.)
Landing	350 ton	200 ton	140 ton	425	210	20 ton	350 ton	200 ton	140 ton	60 ton	20 ton
Parking	2,075	1,225	760	582	228	65	1,038	813	213	105	33
	1,330	760	582	228	65	76	380	266	114	38	38

It is assumed that 10% of arriving aircraft park 8-12 hours, which gives the parking charges in the above table.

Appendix 16.1.8 Incremental Passenger Service Charge, Terminal Equipment Charge, Concession Fee and Car Parking Charge by the Project

Unit: '000 US\$

Year	W/P Case				WOP Case				Incremental Revenue						
	Passenger Service Charge (1)	Terminal Equipment Charge (2)	Concession Fee (3)	Car Parking Charge (4)	Total (5)=(1)+(2)+(3)+(4)	Passenger Service Charge (6)	Terminal Equipment Charge (7)	Concession Fee (8)	Car Parking Charge (9)	Total (10)=(6)+(7)+(8)+(9)	Passenger Service Charge (11)=(1)-(6)	Terminal Equipment Charge (12)=(2)-(7)	Concession Fee (13)=(3)-(8)	Car Parking Charge (14)=(4)-(9)	Total (15)=(5)-(10)
1996	2,185	1,493	3,031	259	2,443	2,185	1,493	3,031	259	2,443					
1996	2,730	1,667	3,396	325	3,056	2,730	1,667	3,396	325	3,056					
1997	3,313	1,861	3,805	394	3,707	3,313	1,861	3,805	394	3,707					
1998	7,039	1,019	2,038	926	11,022	7,039	1,019	2,038	926	11,022					
1999	8,146	1,178	2,369	1,060	12,752	8,146	1,178	2,369	1,060	12,752					
2000	9,258	1,338	2,707	1,188	14,491	9,258	1,338	2,707	1,188	14,491					
2001	10,335	1,493	3,031	1,316	16,175	10,335	1,493	3,031	1,316	16,175					
2002	11,542	1,667	3,396	1,458	18,062	11,542	1,667	3,396	1,458	18,062					
2003	12,891	1,861	3,805	1,616	20,172	12,891	1,861	3,805	1,616	20,172					
2004	14,399	2,077	4,263	1,791	22,530	14,399	2,077	4,263	1,791	22,530					
2005	16,087	2,320	4,776	1,985	25,167	16,087	2,320	4,776	1,985	25,167					
2006	17,670	2,547	5,256	2,169	27,642	16,087	2,320	4,776	1,985	25,167	1,583	228	480	185	2,475
2007	19,411	2,798	5,784	2,371	30,364	16,087	2,320	4,776	1,985	25,167	3,324	478	1,008	387	5,196
2008	21,326	3,073	6,367	2,592	33,358	16,087	2,320	4,776	1,985	25,167	5,239	753	1,591	608	8,190
2009	23,429	3,375	7,007	2,834	36,646	16,087	2,320	4,776	1,985	25,167	7,343	1,055	2,231	849	11,478
2010	25,735	3,706	7,711	3,098	40,250	16,087	2,320	4,776	1,985	25,167	9,649	1,386	2,934	1,113	15,083
2011	27,789	4,001	8,340	3,330	43,460	16,087	2,320	4,776	1,985	25,167	11,703	1,681	3,564	1,345	18,293
2012	30,002	4,319	9,019	3,579	46,919	16,087	2,320	4,776	1,985	25,167	13,916	1,999	4,243	1,594	21,752
2013	32,398	4,662	9,755	3,847	50,662	16,087	2,320	4,776	1,985	25,167	16,311	2,342	4,979	1,862	25,494
2014	32,398	4,662	9,755	3,847	50,662	16,087	2,320	4,776	1,985	25,167	16,311	2,342	4,979	1,862	25,494
2015	32,398	4,662	9,755	3,847	50,662	16,087	2,320	4,776	1,985	25,167	16,311	2,342	4,979	1,862	25,494
2016	32,398	4,662	9,755	3,847	50,662	16,087	2,320	4,776	1,985	25,167	16,311	2,342	4,979	1,862	25,494
2017	32,398	4,662	9,755	3,847	50,662	16,087	2,320	4,776	1,985	25,167	16,311	2,342	4,979	1,862	25,494
2018	32,398	4,662	9,755	3,847	50,662	16,087	2,320	4,776	1,985	25,167	16,311	2,342	4,979	1,862	25,494
2019	32,398	4,662	9,755	3,847	50,662	16,087	2,320	4,776	1,985	25,167	16,311	2,342	4,979	1,862	25,494
2020	32,398	4,662	9,755	3,847	50,662	16,087	2,320	4,776	1,985	25,167	16,311	2,342	4,979	1,862	25,494
2021	32,398	4,662	9,755	3,847	50,662	16,087	2,320	4,776	1,985	25,167	16,311	2,342	4,979	1,862	25,494
2022	32,398	4,662	9,755	3,847	50,662	16,087	2,320	4,776	1,985	25,167	16,311	2,342	4,979	1,862	25,494
2023	32,398	4,662	9,755	3,847	50,662	16,087	2,320	4,776	1,985	25,167	16,311	2,342	4,979	1,862	25,494
2024	32,398	4,662	9,755	3,847	50,662	16,087	2,320	4,776	1,985	25,167	16,311	2,342	4,979	1,862	25,494
2025	32,398	4,662	9,755	3,847	50,662	16,087	2,320	4,776	1,985	25,167	16,311	2,342	4,979	1,862	25,494

Note 1: Passenger service charges are calculated with US\$12 per departing international passenger and US\$2.7 per departing domestic passengers. The current rates are US\$7 and US\$1.4 respectively. The significant increases of the service level of the new terminals will justify the increases, and the levels of charges are comparable with other major airports in Southeast Asia.

Note 2: The collection rate of 95% is used for calculation.

Note 3: Terminal equipment charges will be collected from airline companies for the use of passenger boarding bridges, check-in tables, baggage conveyors and baggage claim equipment. The charges are assumed to be US\$0.8 per international passengers and US\$0.2 per domestic passenger.

Note 4: Concession fee will be collected from business entities for commercial rights at the airport. US\$2.0 per international passengers and US\$0.1 per domestic passengers are reasonable estimates for the terminal buildings of comparative size.

Note 5: Charge per one time of car parking is assumed to be US\$0.9, twice the present rate. Based on the traffic survey conducted by the JICA Study Team in May 1995, the parking rate of 0.4 car/passenger is used to estimate the number of cars to be parked.

Appendix 16.1.9 Incremental Passenger Terminal Rent, Cargo Terminal Rent and Advertisement Revenues by the Project

Unit: '000 US\$

Year	W/P Case			W/O P Case			Incremental Revenue					
	Passenger Terminal Rent (1)	Cargo Terminal Rent (2)	Adver-tisement (3)	Total (4)=(1)+(2)+(3)	Passenger Terminal Rent (5)	Cargo Terminal Rent (6)	Adver-tisement (7)	Total (8)=(5)+(6)+(7)	Passenger Terminal Rent (9)=(1)-(5)	Cargo Terminal Rent (10)=(2)-(6)	Adver-tisement (11)=(3)-(7)	Total (12)=(4)-(8)
1995	524		48	572	524		48	572				
1996	524		48	572	524		48	572				
1997	524		48	572	524		48	572				
1998	524		48	572	524		48	572				
1999	524		48	572	524		48	572				
2000	524		48	572	524		48	572				
2001	1,650	1,188	200	3,038	1,650	1,188	200	3,038				
2002	1,650	1,188	200	3,038	1,650	1,188	200	3,038				
2003	1,650	1,188	200	3,038	1,650	1,188	200	3,038				
2004	1,650	1,188	200	3,038	1,650	1,188	200	3,038				
2005	1,650	1,188	200	3,038	1,650	1,188	200	3,038				
2006	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2007	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2008	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2009	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2010	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2011	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2012	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2013	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2014	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2015	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2016	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2017	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2018	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2019	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2020	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2021	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2022	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2023	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2024	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224
2025	2,549	2,403	310	5,262	1,650	1,188	200	3,038	899	1,215	110	2,224

Note 1: Terminal rent is calculated based on the following conditions.

	Percentage Rentable Area	Rent/sq.m/month
Int'l Passenger Terminal	15%	US\$25.0
Dom. Passenger Terminal	10%	US\$12.5
Int'l Cargo Terminal	80%	US\$15.0
Dom. Cargo Terminal	90%	US\$7.5

Note 2: Advertise revenue is estimated for US\$5 per sq.m per year for international passenger terminal building and US\$2.5 per sq.m per year for domestic passenger terminal building.

Appendix 16.1.10 Incremental Fuel Surcharge Revenue by the Project

Year	WP		WOP		Incremental Revenue ('000 US\$)
	Weekly Supply (KL)	Fuel Surcharge Revenue ('000 US\$)	Weekly Supply (KL)	Fuel Surcharge Revenue ('000 US\$)	
	(1)	(2)	(3)	(4)	(5) = (2)-(4)
1995	1,540		1,540		
1996	1,840		1,840		
1997	2,140		2,140		
1998	2,440		2,440		
1999	2,740		2,740		
2000	3,040		3,040		
2001	3,680		3,680		
2002	4,320		4,320		
2003	4,960		4,960		
2004	5,600		5,600		
2005	6,240		6,240		
2006	7,710	5,122	6,240	4,145	976
2007	9,180	6,098	6,240	4,145	1,953
2008	10,650	7,075	6,240	4,145	2,930
2009	12,120	8,051	6,240	4,145	3,906
2010	13,600	9,034	6,240	4,145	4,889
2011	14,900	9,489	6,240	4,145	5,354
2012	15,000	9,964	6,240	4,145	5,819
2013	15,700	10,429	6,240	4,145	6,284
2014	15,700	10,429	6,240	4,145	6,284
2015	15,700	10,429	6,240	4,145	6,284
2016	15,700	10,429	6,240	4,145	6,284
2017	15,700	10,429	6,240	4,145	6,284
2018	15,700	10,429	6,240	4,145	6,284
2019	15,700	10,429	6,240	4,145	6,284
2020	15,700	10,429	6,240	4,145	6,284
2021	15,700	10,429	6,240	4,145	6,284
2022	15,700	10,429	6,240	4,145	6,284
2023	15,700	10,429	6,240	4,145	6,284
2024	15,700	10,429	6,240	4,145	6,284
2025	15,700	10,429	6,240	4,145	6,284

Note 1: Fuel surcharge is set at US\$0.015 per liter.
 Note 2: The annual supply is 3107 of the weekly supply.

Appendix 16.1.11 Comparison of Costs and Revenues - Medium-term Development - Low Forecast of Air Traffic

Unit: US\$ '000 at 1995 Prices

Year	Costs						Revenues										Operating Profits	
	Construction Cost (1)	Maintenance Cost (2)	Personnel, Overhead & Other (3)	Utilities Cost (4)	Environ. Mitigation Cost (5)	Total Cost (6)=(1)-(5)	Landing Charges (7)	Parking Charge (8)	Passenger Service Charge (9)	Terminal Equipment Charge (10)	Concession Fee (11)	Car Parking Charge (12)	Passenger Terminal Rent (13)	Cargo Terminal Rent (14)	Advertisement (15)	Fuel Surcharge (16)		Total Revenue (17)=(7)-(16)
1995																		
1996																		
1997																		
1998																		
1999																		
2000	1,426					1,426												-1,426
2001	13,336					13,336												-13,336
2002	22,991					22,991												-22,991
2003	5,555					5,555												-5,555
2004	15,776					15,776												-15,776
2005	77,328					77,328												-77,328
2006	115,234					115,234												-115,234
2007	136,689					136,689												-136,689
2008	64,568					64,568												-64,568
2009	366	5,418	238	446	240	6,728	1,101	78	1,525	220	449	192	899	1,215	110	771	6,560	
2010		5,418	438	446	240	6,543	2,154	151	2,899	418	855	364	899	1,215	110	1,435	10,499	
2011		5,418	592	446	240	6,696	3,148	220	4,162	601	1,229	520	899	1,215	110	1,734	13,837	
2012		5,418	760	446	240	6,864	4,217	293	5,515	796	1,631	688	899	1,215	110	2,026	17,390	
2013		5,418	941	446	240	7,045	5,408	374	6,956	1,004	2,058	866	899	1,215	110	2,312	21,201	
2014		5,418	1,138	446	240	7,002	6,698	461	8,500	1,227	2,518	1,056	899	1,215	110	2,830	25,516	
2015		5,418	1,352	446	240	7,216	8,108	556	10,149	1,464	3,007	1,259	899	1,215	110	3,381	30,148	
2016		5,418	1,580	446	240	7,444	9,534	651	11,789	1,700	3,494	1,461	899	1,215	110	3,926	34,779	
2017		5,418	1,827	446	240	7,891	11,083	754	13,529	1,951	4,012	1,675	899	1,215	110	4,511	39,739	
2018		5,418	2,002	446	240	7,866	12,545	849	15,069	2,173	4,471	1,862	899	1,215	110	5,015	44,208	
2019		5,418	2,094	446	240	7,958	12,545	849	15,069	2,173	4,471	1,862	899	1,215	110	5,015	44,208	
2020		5,418	2,190	446	240	8,054	12,545	849	15,069	2,173	4,471	1,862	899	1,215	110	5,015	44,208	
2021		5,418	2,289	446	240	8,153	12,545	849	15,069	2,173	4,471	1,862	899	1,215	110	5,015	44,208	
2022		5,418	2,393	446	240	8,257	12,545	849	15,069	2,173	4,471	1,862	899	1,215	110	5,015	44,208	
2023		5,418	2,500	446	240	8,364	12,545	849	15,069	2,173	4,471	1,862	899	1,215	110	5,015	44,208	
2024		5,418	2,611	446	240	8,475	12,545	849	15,069	2,173	4,471	1,862	899	1,215	110	5,015	44,208	
2025		5,418	2,729	446	240	8,594	12,545	849	15,069	2,173	4,471	1,862	899	1,215	110	5,015	44,208	
2026		5,418	2,852	446	240	8,716	12,545	849	15,069	2,173	4,471	1,862	899	1,215	110	5,015	44,208	
2027		5,418	2,982	446	240	8,846	12,545	849	15,069	2,173	4,471	1,862	899	1,215	110	5,015	44,208	
2028	-86,775	5,418	3,116	446	240	-77,795	12,545	849	15,069	2,173	4,471	1,862	899	1,215	110	5,015	44,208	122,003

FIRR

NPV (at 2% discount rate)

NPV (at 8% discount rate)

2.0%

-520

-104,401

Appendix 16.1.12 Comparison of Costs and Revenues - Medium-term Development Plan - Construction Cost up by 20%

Unit: US\$ '000 at 1996 Prices

Year	Costs						Revenues										Operating Profits		
	Construction Cost (1)	Maintenance Cost (2)	Personnel, Utilities Overhead & Other Cost (3)	Utilities Cost (4)	Environ. Mitigation Cost (5)	Total Cost (6) = (1) + (2) + (3) + (4) + (5)	Landing Charges (7)	Parking Charge (8)	Passenger Service Charge (9)	Terminal Equipment Charge (10)	Concession Fee (11)	Car Parking Charge (12)	Passenger Terminal Rent (13)	Cargo Terminal Rent (14)	Advertisement (15)	Fuel Surcharge (16)		Total Revenue (17) = (7) + (8) + (9) + (10) + (11) + (12) + (13) + (14) + (15) + (16)	(18) = (17) - (6)
1995																			
1996																			
1997	1,711					1,711													-1,711
1998	16,003					16,003													-16,003
1999	27,589					27,589													-27,589
2000	6,666					6,666													-6,666
2001	18,931					18,931													-18,931
2002	92,794					92,794													-92,794
2003	138,281					138,281													-138,281
2004	164,027					164,027													-164,027
2005	77,481					77,481													-77,481
2006	463	5,418	169	446	240	6,736	1,155	80	1,583	228	450	185	899	1,215	110	976	6,890	154	
2007		5,418	358	446	240	6,462	2,409	168	3,324	478	1,006	387	899	1,215	110	1,953	11,950	5,488	
2008		5,418	572	446	240	6,676	3,863	268	5,239	753	1,591	608	899	1,215	110	2,930	17,475	10,799	
2009		5,418	810	446	240	6,914	5,506	380	7,343	1,055	2,231	849	899	1,215	110	3,906	23,494	16,580	
2010		5,418	1,147	446	240	7,251	7,360	505	9,649	1,386	2,954	1,113	899	1,215	110	4,839	30,061	22,810	
2011		5,418	1,435	446	240	7,299	9,046	619	11,703	1,681	3,564	1,345	899	1,215	110	5,354	35,536	28,237	
2012		5,418	1,749	446	240	7,614	10,910	743	13,916	1,999	4,243	1,594	899	1,215	110	5,819	41,447	33,834	
2013		5,418	2,097	446	240	7,961	12,973	879	16,311	2,342	4,979	1,862	899	1,215	110	6,284	47,955	39,894	
2014		5,418	2,210	446	240	8,074	12,973	879	16,311	2,342	4,979	1,862	899	1,215	110	6,284	47,955	39,781	
2015		5,418	2,327	446	240	8,191	12,973	879	16,311	2,342	4,979	1,862	899	1,215	110	6,284	47,955	39,663	
2016		5,418	2,445	446	240	8,309	12,973	879	16,311	2,342	4,979	1,862	899	1,215	110	6,284	47,955	39,546	
2017		5,418	2,567	446	240	8,431	12,973	879	16,311	2,342	4,979	1,862	899	1,215	110	6,284	47,955	39,424	
2018		5,418	2,697	446	240	8,561	12,973	879	16,311	2,342	4,979	1,862	899	1,215	110	6,284	47,955	39,293	
2019		5,418	2,832	446	240	8,696	12,973	879	16,311	2,342	4,979	1,862	899	1,215	110	6,284	47,955	39,159	
2020		5,418	2,975	446	240	8,840	12,973	879	16,311	2,342	4,979	1,862	899	1,215	110	6,284	47,955	39,015	
2021		5,418	3,123	446	240	8,987	12,973	879	16,311	2,342	4,979	1,862	899	1,215	110	6,284	47,955	38,867	
2022		5,418	3,280	446	240	9,144	12,973	879	16,311	2,342	4,979	1,862	899	1,215	110	6,284	47,955	38,711	
2023		5,418	3,445	446	240	9,309	12,973	879	16,311	2,342	4,979	1,862	899	1,215	110	6,284	47,955	38,545	
2024		5,418	3,619	446	240	9,483	12,973	879	16,311	2,342	4,979	1,862	899	1,215	110	6,284	47,955	38,371	
2025	-104,140	5,418	3,902	446	240	-94,474	12,973	879	16,311	2,342	4,979	1,862	899	1,215	110	6,284	47,955	142,329	

FIRR 2.0%
 NPV (at 2% discount rate) -2,781
 NPV (at 5% discount rate) -154,685

Appendix 16.1.13 Income Statement - Medium Term Development Plan - Low Forecast of Air Traffic

Financing Conditions	15% of the Total Construction Cost
State Subsidy:	85% of the Total Construction Cost
Soft Loan:	2.3% per annum
Interest Rate=	20 years (after grace period)
Repayment Period=	10 years
Grace Period=	Working Capital (for deficit financing)
Short-term Loan:	6% per annum
Interest Rate=	1 year
Repayment Period=	

Year	Operating Revenue (1)	Operating Cost (2)	Operating Profit/ Loss (3)=(1)-(2)	Depreciation (4)	Interest Payment		Current Profit/ Loss (7)=(3)-(4)-(5)-(6)	Accumulated Current Profit (8)
					Soft Loan	Short Loan		
1996								
1997								
1998								
1999								
2000								
2001								
2002								
2003								
2004								
2005								
2006								
2007					1,575		-1,575	-1,575
2008					4,225	94	-4,319	-5,894
2009	6,560	6,342	218	15,869	7,369	354	-7,722	-13,617
2010	10,459	6,543	3,917	15,869	8,654	817	-25,322	-38,938
2011	13,837	6,696	7,141	15,869	8,663	1,384	-22,159	-61,097
2012	17,390	6,664	10,726	15,869	8,663	1,762	-19,352	-80,449
2013	21,201	7,045	14,156	15,869	4,225	1,971	-11,539	-91,988
2014	25,516	7,002	18,514	15,869	8,663	1,711	-12,286	-104,274
2015	30,148	7,216	22,932	15,869	8,663	1,496	-7,714	-111,988
2016	34,779	7,444	27,335	15,869	8,420	1,006	-2,806	-114,794
2017	39,739	7,691	32,047	15,869	7,976	1,379	1,668	-113,126
2018	44,208	7,866	36,342	15,869	7,533	1,483	6,719	-106,407
2019	44,208	7,958	36,250	15,869	7,090	788	11,657	-94,750
2020	44,208	8,054	36,155	15,869	6,647	241	12,504	-82,247
2021	44,208	8,153	36,055	15,869	6,204		13,397	-69,850
2022	44,208	8,257	35,952	15,869	5,761		14,322	-40,545
2023	44,208	8,364	35,845	15,869	5,319		14,898	-25,687
2024	44,208	8,475	35,734	9,546	4,875		21,313	-4,574
2025	44,208	8,594	35,615	9,546	4,431		21,637	17,063
2026	44,208	8,594	35,615	9,546	3,988		22,081	39,144
2027	44,208	8,504	35,615	9,546	3,545		22,524	61,667
2028	44,208	8,504	35,615	9,546	3,102		22,967	84,634
2029	44,208	8,504	35,615	9,546	2,659		23,410	108,044
2030	44,208	8,504	35,615	9,546	2,216		23,853	131,897
2031	44,208	8,504	35,615	9,546	1,773		24,296	156,193
2032	44,208	8,504	35,615	9,546	1,329		24,739	180,933
2033	44,208	8,504	35,615	9,546	886		25,182	206,115
2034	44,208	8,504	35,615	9,546	443		25,626	231,741

Unit: US\$ '000 at 1995 Prices

Appendix 16.14 Fund Statement - Medium Term Development Plan - Low Forecast of Air Traffic

Financing Conditions		15% of the Total Construction Cost		Short-term Loan: Working Capital (for deficit financing)	
State Subsidy		65% of the Total Construction Cost		Interest Rate = 6% per annum	
Soft Loan:		2.3% per annum		Repayment Periods: 1 year	
Interest Rate =		20 years (after grace period)		Repayment Periods: 1 year	
Grace Periods:		10 years		Repayment Periods: 1 year	

Year	Cash Inflow				Cash Outflow				Total	Net Cash Inflow	Accumulated Net Cash Inflow	Short-term Loan Outstanding
	Operating Revenue	State Budget	Borrowing		Operating Cost	Investment		Debt Repayment				
			Soft Loan	Short-term Loan		Budget	Soft Loan					
1996												
1997												
1998												
1999												
2000												
2001												
2002												
2003												
2004	6,560											
2005	10,459											
2006	13,857											
2007	17,960											
2008	21,201											
2009	25,516											
2010	30,148											
2011	34,779											
2012	39,739											
2013	44,208											
2014	44,208											
2015	44,208											
2016	44,208											
2017	44,208											
2018	44,208											
2019	44,208											
2020	44,208											
2021	44,208											
2022	44,208											
2023	44,208											
2024	44,208											
2025	44,208											
2026	44,208											
2027	44,208											
2028	44,208											
2029	44,208											

Unit: US\$ '000 at 1995 Prices

Cover Ratio = 1.35
Maximum Short-term Loan Outstanding = 32,842

Appendix 16.1.15 Income Statement - Medium Term Development Plan - Construction Cost up by 20%

Financing Conditions	15% of the Total Construction Cost
State Subsidy:	85% of the Total Construction Cost
Soft Loan:	2.3% per annum
Interest Rate:	20 years (after grace period)
Repayment Period:	10 years
Grace Period:	Working Capital (for deficit financing)
Short-term Loan:	6% per annum
Interest Rate:	1 year
Repayment Period:	

Year	Operating Revenue	Operating Cost	Operating Profit / Loss	Depreciation	Interest Payment		Short Loan	Current Profit / Loss	Accumulated Current Profit
					Soft Loan	Short Loan			
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)=(3)-(4)-(5)+(6)	(8)	
1996									
1997									
1998									
1999									
2000									
2001									
2002									
2003									
2004									
2005									
1	6,890	6,273	617	19,389	1,890		113	-1,890	-1,890
2	11,950	6,462	5,488	19,389	5,070		424	-5,183	-7,073
3	17,475	6,676	10,799	19,389	8,843		980	-9,267	-16,340
4	23,494	6,914	16,580	19,389	10,625		1,640	-30,377	-46,717
5	30,061	7,251	22,810	19,389	10,635		2,047	-26,176	-72,893
6	35,536	7,299	28,237	19,389	10,635		2,047	-21,272	-94,165
7	41,447	7,614	33,834	19,389	10,635		2,160	-15,605	-109,769
8	47,855	7,961	39,894	19,389	10,635		1,933	-9,148	-118,917
9	47,855	8,074	39,781	19,389	10,635		1,318	-3,106	-122,023
10	47,855	8,191	39,663	19,389	10,635		341	3,468	-118,555
11	47,855	8,309	39,546	19,389	10,635		357	10,044	-108,511
12	47,855	8,431	39,424	19,389	10,104			10,820	-97,691
13	47,855	8,561	39,293	19,389	9,572			11,234	-86,457
14	47,855	8,696	39,159	19,389	9,040			11,648	-74,808
15	47,855	8,840	39,015	19,389	8,508			12,058	-62,750
16	47,855	8,987	38,867	11,455	7,976			12,460	-50,290
17	47,855	9,144	38,711	11,455	7,445			12,857	-37,434
18	47,855	9,309	38,545	11,455	6,913			13,245	-24,189
19	47,855	9,483	38,371	11,455	6,381			21,562	-2,626
20	47,855	9,665	38,189	11,455	5,849			21,937	19,311
21	47,855	9,666	38,189	11,455	5,318			22,304	41,615
22	47,855	9,666	38,189	11,455	4,786			22,662	64,277
23	47,855	9,666	38,189	11,455	4,254			23,011	87,288
24	47,855	9,666	38,189	11,455	3,722			23,343	110,830
25	47,855	9,666	38,189	11,455	3,191			24,074	134,904
26	47,855	9,666	38,189	11,455	2,659			24,606	159,511
27	47,855	9,666	38,189	11,455	2,127			25,138	184,648
28	47,855	9,666	38,189	11,455	1,595			25,670	210,318
29	47,855	9,666	38,189	11,455	1,064			26,201	236,519
30	47,855	9,666	38,189	11,455	532				

Appendix 16.1.16 Fund Statement - Medium Term Development Plan - Construction Cost up by 20%

Financing Conditions		15% of the Total Construction Cost		Short-term Loan: Working Capital (for deficit financing)	
State Subsidy:		85% of the Total Construction Cost		Interest Rate = 6% per annum	
Soft Loan:		2.3% per annum		Repayment Period = 1 year	
Interest Rate =		20 years (after grace period)		Repayment Period =	
Grace Period =		10 years			

Year	Cash Inflow				Total	Operating Cost				Total	Cash Outflow				Total	Net Cash Inflow	Accumulated Net Cash Inflow	Soft Loan Outstanding	Short-term Loan Outstanding				
	Operating Revenue		Borrowing			Interest		Investment			Soft Loan		Short-term Loan							Soft Loan		Short-term Loan	
	(1)	(2)	(3)	(4)		(5)=(1)+(4)	(6)	(7)	(8)		(9)	(10)	(11)	(12)						(13)=(6)+(12)	(14)=(13)-(5)	(15)	(16)
2001																							
2002		1,711			1,711																		
2003		16,003			16,003																		
2004		27,589			27,589																		
2005		6,666			6,666																		
2001		18,931			18,931																		
2002		10,640			10,640																		
2003																							
2004																							
2005																							
2006	6,890		82,153		89,043	6,273	10,635	980		6,273	10,635	980		16,340		82,153	27,328						
2007	11,960		138,281		150,241	6,462	10,635	1,640		6,462	10,635	1,640		27,328		462,406	34,115						
2008	17,475		164,027		181,502	6,976	10,635	2,047		6,976	10,635	2,047		34,115		482,406	35,998						
2009	23,494		77,481		100,975	6,914	10,635	2,160		6,914	10,635	2,160		35,998		482,406	32,213						
2010	30,061		463		30,524	7,251	10,635	1,933		7,251	10,635	1,933		32,213		482,406	21,972						
2011	36,536		463		37,000	7,299	10,635	1,918		7,299	10,635	1,918		21,972		482,406	5,689						
2012	41,447		463		42,010	7,614	10,635	341		7,614	10,635	341		47,369		439,285	5,952						
2013	47,855		463		48,318	7,961	10,104	357		7,961	10,104	357		47,484		361	416,165						
2014	47,855		463		48,318	8,074	9,572			8,074	9,572			40,766		7,089	393,045						
2015	47,855		463		48,318	8,191	9,040			8,191	9,040			40,352		7,503	369,924						
2016	47,855		463		48,318	8,309	8,508			8,309	8,508			39,937		7,917	346,804						
2017	47,855		463		48,318	8,431	7,976			8,431	7,976			39,527		8,327	323,684						
2018	47,855		463		48,318	8,561	7,445			8,561	7,445			39,126		8,728	300,564						
2019	47,855		463		48,318	8,696	6,913			8,696	6,913			38,729		9,125	277,443						
2020	47,855		463		48,318	8,840	6,381			8,840	6,381			38,341		9,514	254,923						
2021	47,855		463		48,318	8,987	5,849			8,987	5,849			37,957		9,897	231,203						
2022	47,855		463		48,318	9,144	5,318			9,144	5,318			37,562		10,273	208,083						
2023	47,855		463		48,318	9,309	4,786			9,309	4,786			37,166		10,639	184,962						
2024	47,855		463		48,318	9,483	4,254			9,483	4,254			36,758		10,997	161,842						
2025	47,855		463		48,318	9,666	3,722			9,666	3,722			36,341		11,346	138,722						
2026	47,855		463		48,318	9,666	3,191			9,666	3,191			35,927		11,678	115,601						
2027	47,855		463		48,318	9,666	2,659			9,666	2,659			35,510		12,009	92,481						
2028	47,855		463		48,318	9,666	2,127			9,666	2,127			35,093		12,341	69,361						
2029	47,855		463		48,318	9,666	1,595			9,666	1,595			34,676		12,672	46,241						
2030	47,855		463		48,318	9,666	1,064			9,666	1,064			34,260		13,003	23,120						
2031	47,855		463		48,318	9,666	532			9,666	532			33,844		13,334	0						
															Cover Ratio =	1.29							
															Maximum Short-term Loan Outstanding =	35,998							

Appendix 16.1.17 Income Statement - Medium Term Development Plan: Case 1A (Higher Soft Loan Interest Rate)

Financing Conditions
 State Subsidy: 15% of the Total Construction Cost
 Soft Loan: 85% of the Total Construction Cost
 Interest Rate= 3.0% per annum
 Repayment Period= 20 years (after grace period)
 Grace Period= 10 years
 Short-term Loan: Working Capital (for deficit financing)
 Interest Rate= 6% per annum
 Repayment Period= 1 year

Year	Operating Revenue (1)	Operating Cost (2)	Operating Profit / Loss (3)=(1)-(2)	Depreciation (4)	Interest Payment		Current Profit / Loss (7)=(3)-(4)-(5)-(6)	Accumulated Current Profit (8)
					Soft Loan (5)	Short Loan (6)		
1996								
1997								
1998								
1999								
2000								
2001								
2002								
2003								
2004								
2005								
1	6,890	6,273	617	15,869	11,549	1,066	-2,054	-2,054
2	11,950	6,462	5,488	15,869	11,560	1,785	-5,634	-7,688
3	17,475	6,676	10,799	15,869	11,560	2,257	-10,073	-17,761
4	23,494	6,914	16,580	15,869	11,560	2,438	-27,866	-45,627
5	30,061	7,251	22,810	15,869	11,560	2,283	-23,726	-69,353
6	36,536	7,299	29,237	15,869	11,560	1,745	-18,887	-88,240
7	41,447	7,614	33,834	15,869	11,560	949	-13,287	-101,528
8	47,855	7,961	39,894	15,869	10,982	720	-6,903	-108,430
9	47,855	8,074	39,781	15,869	10,404	184	-938	-109,368
10	47,855	8,191	39,663	15,869	9,826		5,555	-103,813
11	47,855	8,309	39,546	15,869	9,248		12,323	-91,490
12	47,855	8,431	39,424	15,869	8,670		13,323	-78,166
13	47,855	8,561	39,293	15,869	8,092		13,968	-64,198
14	47,855	8,696	39,159	15,869	7,514		14,429	-49,770
15	47,855	8,840	39,015	15,869	6,936		14,895	-34,895
16	47,855	8,987	38,867	9,546	6,368		15,332	-19,562
17	47,855	9,144	38,711	9,546	5,780		15,776	-3,777
18	47,855	9,309	38,545	9,546	5,202		16,210	12,433
19	47,855	9,483	38,371	9,546	4,624		22,963	35,396
20	47,855	9,666	38,189	9,546	4,046		23,384	58,780
21	47,855	9,666	38,189	9,546	3,468		23,797	82,577
22	47,855	9,666	38,189	9,546	2,890		24,201	106,776
23	47,855	9,666	38,189	9,546	2,312		24,596	131,375
24	47,855	9,666	38,189	9,546	1,734		25,174	156,549
25	47,855	9,666	38,189	9,546	1,156		25,732	182,301
26	47,855	9,666	38,189	9,546	578		26,330	208,632
27							26,908	235,540
28							27,486	263,026
29							28,064	291,091

Appendix 16.1.18 Fund Statement - Medium Term Development Plan: Case 1A (Higher Soft Loan Interest Rate)

Financing Conditions
 State Subsidy: 15% of the Total Construction Cost
 Soft Loan: 85% of the Total Construction Cost
 Interest Rate = 3.0% per annum
 Repayment Period = 20 years (after grace period)
 Grace Period = 10 years
 Short-term Loan: Working Capital (for deficit financing)
 Interest Rate = 6% per annum
 Repayment Period = 1 year

Year	Cash Inflow										Cash Outflow				Debt Repayment		Total	Net Cash Inflow (13)=(6)-(12)-(14)-(15)-(5)	Accumulated Net Cash Inflow (15)	Soft Loan Outstanding (16)	Short-term Loan Outstanding (17)
	Operating Revenue		State Budget		Borrowing		Total		Operating Cost		Interest		Investment		Short-term Loan						
	(1)	(2)	(3)	(4)	(5)=(1)+(2)+(3)+(4)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)=(6)-(11)-(12)	(14)=(13)-(5)							
2001					1,426																
2002					13,336																
2003					22,991																
2004					5,555																
2005					15,776																
2006					8,867																
2007					68,461																
2008					115,234																
2009					136,689																
2010					64,568																
2011					306																
2012					29,758																
2013					37,615																
2014					40,633																
2015					38,052																
2016					29,085																
2017					14,154																
2018					11,997																
2019					3,072																
2020																					
2021					47,855																
2022					47,855																
2023					47,855																
2024					47,855																
2025					47,855																
2026					47,855																
2027					47,855																
2028					47,855																
2029					47,855																
2030					47,855																
2031					47,855																

Cover Ratio = 1.42
 Maximum Short-term Loan Outstanding = 40,633

Appendix 16.1.19 Income Statement - Medium Term Development Plan; Case 1B (Shorter Repayment Period)

Financing Conditions	15% of the Total Construction Cost
State Subsidy:	85% of the Total Construction Cost
Soft Loan:	2.3% per annum
Interest Rate=	15 years (after grace period)
Repayment Period=	10 years
Grace Period=	Working Capital (for deficit financing)
Short-term Loan:	6% per annum
Interest Rate=	1 year
Repayment Period=	

Year	Operating Revenue (1)	Operating Cost (2)	Operating Profit/Loss (3)=(1)-(2)	Depreciation (4)	Interest Payment		Current Profit/Loss (7)=(3)-(4)-(5)-(6)	Accumulated Current Profit (8)
					Soft Loan (5)	Short Loan (6)		
1996								
1997								
1998								
1999								
2000								
2001								
2002								
2003								
2004								
2005								
1	6,890	6,273	617	15,869	8,854	817	-24,923	-38,539
2	11,950	6,462	5,488	15,869	8,863	1,360	-20,604	-59,143
3	17,475	6,676	10,799	15,869	8,863	1,644	-15,577	-74,720
4	23,494	6,914	16,580	15,869	8,863	1,627	-9,779	-84,499
5	30,061	7,251	22,810	15,869	8,863	1,261	-3,184	-87,683
6	35,536	7,299	28,237	15,869	8,863	500	3,005	-84,678
7	41,447	7,614	33,834	15,869	8,863		9,102	-75,576
8	47,855	7,961	39,894	15,869	8,272	43	15,710	-59,866
9	47,855	8,074	39,781	15,869	7,681		16,231	-43,636
10	47,855	8,191	39,663	15,869	7,090		16,704	-26,932
11	47,855	8,309	39,546	15,869	6,499		17,177	-9,754
12	47,855	8,431	39,424	15,869	5,909		17,646	7,892
13	47,855	8,561	39,293	15,869	5,318		18,107	25,989
14	47,855	8,696	39,159	15,869	4,727		18,563	44,562
15	47,855	8,840	39,015	15,869	4,136		19,010	63,572
16	47,855	8,987	38,867	9,546	3,545		25,776	89,348
17	47,855	9,144	38,711	9,546	2,954		26,210	115,558
18	47,855	9,309	38,545	9,546	2,363		26,636	142,194
19	47,855	9,483	38,371	9,546	1,773		27,063	169,246
20	47,855	9,666	38,189	9,546	1,182		27,481	196,707
21	47,855	9,666	38,189	9,546	591		28,052	224,759

Unit: US\$ '000 at 1995 Prices

Appendix 16.1.20 Fund Statement - Medium Term Development Plan: Case 1B (Shorter Repayment Period)

Financing Conditions		Short-term Loan: Working Capital (for deficit financing)	
State Subsidy:	15% of the Total Construction Cost	Interest Rate =	6% per annum
Soft Loan:	85% of the Total Construction Cost	Repayment Period =	1 year
	2.3% per annum		
	15 years (after grace period)		
	10 years		

Year	Cash Inflow			Cash Outflow			Total	Net Cash Inflow	Accumulated Net Cash Inflow	Soft Loan Outstanding	Short-term Loan Outstanding						
	Operating Revenue	State Budget	Borrowing	Operating Cost	Interest	Investment						Debt Repayment					
													Soft Loan	Short-term Loan	Soft Loan	Short-term Loan	
	(1)	(2)	(3)	(4)	(5) = (1) + (4)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13) = (6) + (12)	(14) = (13) - (9)	(15)	(16)	(17)
2001					1,426				1,426				1,426				
2002		1,426			13,336				13,336				13,336				
2003		13,336			22,991				22,991				22,991				
2004		22,991			5,555				5,555				5,555				
2005		5,555			15,776				15,776				15,776				
2001			68,461		8,867				8,867	88,461			88,461			68,461	1,575
2002			115,234							115,234			115,234			183,695	5,894
2003			136,689							136,689			136,689			320,384	13,617
2004			64,568							64,568			64,568			384,952	22,670
2005			386							386			386			385,338	27,405
1	6,890				29,946		817		6,273	8,854			13,617			385,338	21,023
2	11,950				39,356		1,360		6,462	8,853			22,670			385,338	8,338
3	17,475				44,588		1,644		6,676	8,853			27,405			385,338	718
4	23,494				44,517		1,627		6,914	8,853			27,113			385,338	
5	30,061				38,398		1,251		7,251	8,853			21,023			385,338	
6	35,536				35,536		500		7,299	8,853			8,338			385,338	
7	41,447				42,166				7,914	8,853			8,338			385,338	
8	47,855				47,855		43		7,961	8,272			718			385,338	
9	47,855				47,855				7,681	7,681			718			385,338	
10	47,855				47,855				8,074	7,681			718			385,338	
11	47,855				47,855				8,191	7,090			718			385,338	
12	47,855				47,855				8,309	6,499			718			385,338	
13	47,855				47,855				8,431	5,909			718			385,338	
14	47,855				47,855				8,561	5,318			718			385,338	
15	47,855				47,855				8,696	4,727			718			385,338	
16	47,855				47,855				8,840	4,136			718			385,338	
17	47,855				47,855				8,987	3,545			718			385,338	
18	47,855				47,855				9,144	2,954			718			385,338	
19	47,855				47,855				9,309	2,363			718			385,338	
20	47,855				47,855				9,483	1,773			718			385,338	
21	47,855				47,855				9,666	1,182			718			385,338	
2026	47,855				47,855				9,859	591			718			385,338	

Cover Ratio = 1.26
Maximum Short-term Loan Outstanding = 27,406

Appendix 16.1.21 Income Statement - Medium Term Development Plan: Case 1C (Shorter Grace Period)

Financing Conditions	15% of the Total Construction Cost
State Subsidy:	85% of the Total Construction Cost
Soft Loan:	2.3% per annum
Interest Rate=	20 years (after grace period)
Repayment Period=	5 years
Grace Period=	Working Capital (for deficit financing)
Short-term Loan:	6% per annum
Interest Rate=	1 year
Repayment Period=	

Year	Operating Revenue (1)	Operating Cost (2)	Operating Profit/Loss (3)=(1)-(2)	Depreciation (4)	Interest Payment		Current Profit/Loss (7)=(3)-(4)-(5)-(6)	Accumulated Current Profit (8)
					Soft Loan (5)	Short Loan (6)		
1996								
1997								
1998								
1999								
2000								
2001								
2002								
2003								
2004								
2005								
2006	6,890	6,273	617	15,869	8,854	817	-24,923	-38,539
2007	11,950	6,462	5,488	15,869	8,863	1,360	-20,804	-59,143
2008	17,475	6,576	10,799	15,869	8,420	2,800	-16,290	-75,433
2009	23,494	6,914	16,580	15,869	7,976	3,982	-11,247	-86,680
2010	30,061	7,251	22,810	15,869	7,533	4,860	-5,453	-92,133
2011	36,536	7,299	28,237	15,869	7,090	5,391	-114	-92,247
2012	41,447	7,814	33,634	15,869	6,647	5,602	5,715	-86,532
2013	47,855	7,961	39,894	15,869	6,204	5,463	12,358	-74,174
2014	47,855	8,074	39,781	15,869	5,761	4,925	13,225	-60,949
2015	47,855	8,191	39,663	15,869	5,318	4,396	14,141	-46,809
2016	47,855	8,309	39,546	15,869	4,875	3,691	15,111	-31,697
2017	47,855	8,431	39,424	15,869	4,431	2,986	16,135	-15,562
2018	47,855	8,561	39,293	15,869	3,988	2,224	17,212	1,650
2019	47,855	8,696	39,159	15,869	3,545	1,395	18,349	20,000
2020	47,855	8,840	39,015	15,869	3,102	498	19,546	39,545
2021	47,855	8,987	38,867	9,546	2,659		26,662	66,208
2022	47,855	9,144	38,711	9,546	2,216		25,949	93,156
2023	47,855	9,309	38,545	9,546	1,773		27,227	120,383
2024	47,855	9,483	38,371	9,546	1,329		27,496	147,878
2025	47,855	9,666	38,189	9,546	886		27,756	175,635
2026	47,855	9,856	38,189	9,546	443		28,199	203,834

Unit: US\$ '000 at 1995 Prices

Appendix 16.1.22 Fund Statement - Medium Term Development Plan: Case 1C (Shorter Grace Period)

Financing Conditions
 State Subsidy: 15% of the Total Construction Cost
 Short-term Loan: Working Capital (for deficit financing)
 Soft Loan: 85% of the Total Construction Cost
 Interest Rate = 2.3% per annum
 Repayment Period = 20 years (after grace period)
 Grace Period = 5 years
 Interest Rate = 6% per annum
 Repayment Period = 1 year

Year	Cash Inflow				Cash Outflow				Total	Net Cash Inflow	Accumulated Net Cash Inflow	Soft Loan Outstanding	Short-term Loan Outstanding			
	Operating Revenue	State Budget	Borrowing		Operating Cost	Investment		Interest Short-term Loan						Debt Repayment		
			Soft Loan	Short-term Loan		State Budget	Soft Loan									
(1)	(2)	(3)	(4)	(5) = (1) + (4)	(6)	(7)	(8)	(9)	(10)	(11)	(12) = (13) - (5) - (11) - (10)	(14) = (13) - (5)	(15)	(16)	(17)	
2001		1,426						1,426								
2002		13,336						13,336								
2003		22,991						22,991								
2004		5,555						5,555								
2005		15,776						15,776								
2006		8,867						8,867								
2007		68,461						68,461								
2008		115,234						115,234								
2009		136,689						136,689								
2010		64,568						64,568								
2011	6,890		386		29,946	6,273	8,854	817		19,267	13,617	29,946	0	365,338	22,670	46,672
2012	11,950				58,622	6,462	8,863	1,360		19,267	22,670	58,622	0	366,071	46,672	1,575
2013	17,475				83,835	6,676	8,420	2,800		19,267	46,672	83,835	0	348,804	66,360	66,360
2014	23,494				104,499	6,914	7,976	3,982		19,267	66,360	104,499	0	327,537	81,005	81,005
2015	30,051				119,917	7,251	7,533	4,860		19,267	81,005	119,917	0	308,270	89,856	89,856
2016	35,536				123,904	7,299	7,090	5,391		19,267	89,856	123,904	0	289,004	93,368	93,368
2017	41,447				132,498	7,614	6,647	5,602		19,267	93,368	132,498	0	269,737	91,051	91,051
2018	47,855				129,945	7,961	6,204	5,463		19,267	91,051	129,945	0	250,470	82,091	82,091
2019	47,855				120,118	8,074	5,761	4,925		19,267	82,091	120,118	0	231,203	72,263	72,263
2020	47,855				109,375	8,191	5,318	4,336		19,267	72,263	109,375	0	211,936	61,520	61,520
2021	47,855				97,662	8,309	4,875	3,691		19,267	61,520	97,662	0	192,669	49,807	49,807
2022	47,855				84,925	8,431	4,431	2,988		19,267	49,807	84,925	0	173,402	37,070	37,070
2023	47,855				71,110	8,561	3,988	2,224		19,267	37,070	71,110	0	154,135	23,256	23,256
2024	47,855				56,159	8,696	3,545	1,395		19,267	23,256	56,159	0	134,868	8,306	8,306
2025	47,855				47,855	8,840	3,102	488		19,267	8,305	40,011	7,843	7,843	0	0
2026	47,855				47,855	8,967	2,659			19,267	0	30,913	16,941	24,785	96,334	0
2027	47,855				47,855	9,144	2,216			19,267	0	30,627	17,228	42,013	77,068	0
2028	47,855				47,855	9,309	1,773			19,267	0	30,349	17,506	59,518	57,801	0
2029	47,855				47,855	9,483	1,329			19,267	0	30,080	17,775	77,293	98,534	0
2030	47,855				47,855	9,666	896			19,267	0	29,819	18,035	96,329	19,267	0
2031	47,855				47,855	9,856	443			19,267	0	29,376	18,479	113,807	0	0

Unit: US\$ '000 at 1995 Prices
 Cover Ratio = 1.23
 Maximum Short-term Loan Outstanding = 93,368

Appendix 16.1.23 Income Statement - Medium Term Development Plan; Case 2 (Higher Short-term Loan Interest Rate)

Financing Conditions
 State Subsidy:
 Soft Loan:
 Interest Rate: 15% of the Total Construction Cost
 85% of the Total Construction Cost
 2.3% per annum
 Repayment Period: 20 years (after grace period)
 Grace Period: 10 years
 Short-term Loan: Working Capital (for deficit financing)
 Interest Rate: 9% per annum
 Repayment Period: 1 year

Year	Operating Revenue (1)	Operating Cost (2)	Operating Profit/Loss (3)=(1)-(2)	Depreciation (4)	Interest Payment		Current Profit/Loss (7)=(3)-(4)-(5)-(6)	Accumulated Current Profit (8)
					Soft Loan (5)	Short Loan (6)		
1996								
1997								
1998								
1999								
2000								
2001								
2002								
2003								
2004								
2005					1,575		-1,575	-1,575
2006	6,890	6,273	617	15,869	4,225	142	-4,367	-4,367
2007	11,960	6,462	5,498	15,869	7,369	535	-7,904	-13,845
2008	17,475	6,676	10,799	15,869	8,664	1,246	-25,362	-38,197
2009	23,494	6,914	16,580	15,869	8,663	2,099	-21,343	-60,540
2010	30,061	7,251	22,810	15,869	8,663	2,592	-16,525	-77,065
2011	35,536	7,299	28,237	15,869	8,663	2,651	-10,803	-87,868
2012	41,447	7,614	33,834	15,869	8,663	2,196	-4,117	-91,985
2013	47,855	7,961	39,894	15,869	8,663	1,138	2,367	-89,618
2014	47,855	8,074	39,781	15,869	8,420		9,102	-80,516
2015	47,855	8,191	39,663	15,869	7,976		15,605	-64,911
2016	47,855	8,309	39,546	15,869	7,533		15,935	-48,976
2017	47,855	8,431	39,424	15,869	7,090		16,567	-16,128
2018	47,855	8,591	39,293	15,869	6,647		16,908	779
2019	47,855	8,696	39,159	15,869	6,204		17,221	10,000
2020	47,855	8,840	39,015	15,869	5,761		17,529	36,529
2021	47,855	8,987	38,867	15,869	5,318		17,828	53,357
2022	47,855	9,144	38,711	15,869	4,875		18,116	71,473
2023	47,855	9,309	38,545	15,869	4,431		18,393	89,866
2024	47,855	9,483	38,371	15,869	3,988		18,657	108,523
2025	47,855	9,666	38,189	15,869	3,545		18,908	127,431
2026	47,855	9,666	38,189	15,869	3,102		19,146	146,577
2027	47,855	9,666	38,189	15,869	2,659		19,371	165,948
2028	47,855	9,666	38,189	15,869	2,216		19,583	185,531
2029	47,855	9,666	38,189	15,869	1,773		19,781	205,312
2030	47,855	9,666	38,189	15,869	1,329		19,965	225,277
2031	47,855	9,666	38,189	15,869	886		20,135	245,412
2032	47,855	9,666	38,189	15,869	443		20,288	265,699

Appendix 16.1.24 Fund Statement - Medium Term Development Plan: Case 2 (Higher Short-term Loan Interest Rate)

Financing Conditions	Short-term Loan: Working Capital (for deficit financing)	9% per annum
State Subsidy:	Interest Rate =	1 year
Soft Loan:	Repayment Period =	1 year
Interest Rate =	15% of the Total Construction Cost	
Repayment Period =	85% of the Total Construction Cost	
Grace Period =	2.3% per annum	
	20 years (after grace period)	
	10 years	

Year	Cash Inflow			Operating Cost			Interest			Cash Outflow			Total	Net Cash Inflow	Accumulated Net Cash Inflow	Soft Loan Outstanding	Short-term Loan Outstanding	
	Operating Revenue	State Budget	Borrowing	Total	Operating Cost	Soft Loan	Short-term Loan	State Budget	Soft Loan	Short-term Loan	Investment	Soft Loan						Short-term Loan
2001				1,426			1,426							1,426				
2002		1,426		13,336			13,336							13,336				
2003		22,991		22,991			22,991							22,991				
2004		5,555		5,555			5,555							5,555				
2005		15,776		15,776			15,776							15,776				
2006		8,867	68,461	77,328			77,328				68,461			77,328		68,461		
2007		116,809	116,809	116,809			116,809				116,809			116,809		116,809		
2008		142,600	142,600	142,600			142,600			142	138,689			142,600		320,364	1,575	
2009		78,413	64,568	78,413			78,413			535	64,568			78,413		354,952	13,845	
2010	6,890		306	30,604	6,273		30,604	1,246		8,684	386			30,604		365,338	23,328	
2011	11,950			40,752	6,462		40,752	8,863		8,863				40,752		395,338	28,802	
2012	17,475			46,933	6,676		46,933	8,663		8,663				46,933		365,338	29,458	
2013	23,494			47,886	6,914		47,886	8,683		8,683				47,886		395,338	24,392	
2014	30,061			42,701	7,251		42,701	8,863		8,863				42,701		395,338	12,640	
2015	35,536			35,536	7,299		35,536	8,663	1,139	8,663				35,536	5,599	365,338		
2016	41,447			41,447	7,514		41,447	8,663		8,663				36,743	5,704	366,071		
2017	47,855			47,855	7,961		47,855	8,420		8,420				36,847	12,207	23,507	346,804	
2018	47,855			47,855	8,074		47,855	7,976		7,976				36,317	12,537	36,044	327,537	
2019	47,855			47,855	8,191		47,855	7,533		7,533				34,892	12,863	48,907	308,270	
2020	47,855			47,855	8,309		47,855	7,090		7,090				34,666	13,189	62,066	289,004	
2021	47,855			47,855	8,431		47,855	6,647		6,647				34,345	13,510	75,606	269,737	
2022	47,855			47,855	8,561		47,855	6,204		6,204				34,032	13,823	89,428	250,470	
2023	47,855			47,855	9,306		47,855	5,761		5,761				33,724	14,131	103,559	231,203	
2024	47,855			47,855	9,483		47,855	5,318		5,318				33,424	14,430	117,990	211,936	
2025	47,855			47,855	9,666		47,855	4,875		4,875				33,129	14,726	132,715	192,669	
2026	47,855			47,855	9,666		47,855	4,431		4,431				32,842	15,012	147,728	173,402	
2027	47,855			47,855	9,666		47,855	3,989		3,989				32,564	15,290	163,018	154,135	
2028	47,855			47,855	9,666		47,855	3,545		3,545				32,285	15,569	178,577	134,869	
2029	47,855			47,855	9,666		47,855	3,102		3,102				32,005	15,830	194,397	115,691	
2030	47,855			47,855	9,666		47,855	2,659		2,659				31,723	16,263	210,659	96,334	
2031	47,855			47,855	9,666		47,855	2,216		2,216				31,449	16,706	227,366	77,068	
	47,855			47,855	9,666		47,855	1,773		1,773				30,706	17,149	244,515	57,801	
	47,855			47,855	9,666		47,855	1,329		1,329				30,262	17,592	262,107	38,534	
	47,855			47,855	9,666		47,855	886		886				29,819	18,035	280,142	19,267	
	47,855			47,855	9,666		47,855	443		443				29,376	18,479	298,621	0	

Unit: US\$ '000 at 1995 Prices

Cover Ratio = 1.55
Maximum Short-term Loan Outstanding = 29,458

Appendix 16.2.1 Economic Cost of Construction Works - Medium-term Development Plan

Unit: US\$ '000

Year	Airport Civil Works	Building Works	Special Equipment	Airport Utilities	Fuel Supply System	Fire Fighting Vehicles	Airport Maintenance Equipment	Air Navigation System	Diversion and Relocation	Land Acquisition and Compens.	Consulting Services	Contin-gencies	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)=(1)+(2)+(12)
1995													
1996													
1997										1,296		130	1,426
1998										10,368	1,703	1,207	13,278
1999										10,368	10,217	2,059	22,644
2000										2,592	2,384	498	5,474
2001	8,494			907					869	1,296	2,384	1,395	15,345
2002	42,471	8,265		3,628	6,790				2,607		4,427	6,819	75,008
2003	50,966	24,796	2,404	4,535	10,185			3,434	869		4,427	10,162	111,777
2004	50,966	33,061	6,009	5,442	10,185	873	306	8,585			5,109	12,053	132,588
2005	16,989	16,531	3,605	3,628	6,790	873	306	5,151			3,065	5,694	62,631
2006											341	34	375
2007													
2008													
2009													
2010													
2011													
2012													
2013													
2014													
2015													
2016													
2017													
2018													
2019													
2020													
2021													
2022													
2023													
2024													
2025	-56,629	-27,551											-84,180

Note: Construction costs, excluding land acquisition and compensation, in economic prices are estimated as 97% of those in market prices by deducting 3% turnover tax.

Appendix 16.2.2: Table A Incremental Maintenance Cost at Economic Prices - Medium-term Development Plan

Year	Airport Civil Works (1)	Building Works (2)	Special Equipment (3)	Airport Utilities (4)	Fuel Supply System (5)	Fire Fighting Vehicles (6)	Airport Maintenance Equipment (7)	Air Navigation System (8)	Total (9)=(1)+...+(8)
1995									
1996									
1997									
1998									
1999									
2000									
2001									
2002									
2003									
2004									
2005									
2006	1,699	827	601	181	1,019	52	18	858	5,255
2007	1,699	827	601	181	1,019	52	18	858	5,255
2008	1,699	827	601	181	1,019	52	18	858	5,255
2009	1,699	827	601	181	1,019	52	18	858	5,255
2010	1,699	827	601	181	1,019	52	18	858	5,255
2011	1,699	827	601	181	1,019	52	18	858	5,255
2012	1,699	827	601	181	1,019	52	18	858	5,255
2013	1,699	827	601	181	1,019	52	18	858	5,255
2014	1,699	827	601	181	1,019	52	18	858	5,255
2015	1,699	827	601	181	1,019	52	18	858	5,255
2016	1,699	827	601	181	1,019	52	18	858	5,255
2017	1,699	827	601	181	1,019	52	18	858	5,255
2018	1,699	827	601	181	1,019	52	18	858	5,255
2019	1,699	827	601	181	1,019	52	18	858	5,255
2020	1,699	827	601	181	1,019	52	18	858	5,255
2021	1,699	827	601	181	1,019	52	18	858	5,255
2022	1,699	827	601	181	1,019	52	18	858	5,255
2023	1,699	827	601	181	1,019	52	18	858	5,255
2024	1,699	827	601	181	1,019	52	18	858	5,255
2025	1,699	827	601	181	1,019	52	18	858	5,255

Note: Maintenance costs in economic prices are estimated as 97% of those in market prices by deducting 3% turnover tax.

Appendix 16.2.2: Table B Incremental Personnel Cost, Overhead and Other Labor Costs at Economic Prices

Year	Unit Staff Cost (US\$/Year)	WIP										WOP					Incremental Cost (000 US\$)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
		Passengers	Cargo (ton)	Traffic Units	Traffic Unit Growth	Productivity Improvement	Staff Growth Rate	Number of Staff	Personnel Cost (000 US\$)	Overhead Cost (000 US\$)	Other Cost (001 US\$)	Number of Staff	Personnel Cost (000 US\$)	Overhead Cost (000 US\$)	Other Cost (001 US\$)	(13)-(14)-(15)	
1996	1,350	1,422,000	22,200	1,644	26.8%	7.5%	19.3%	433	585	321	145	433	585	321	145	0	
1996	1,449	1,789,000	29,600	2,048	22.2%	7.5%	14.7%	520	793	414	187	520	793	414	187	0	
1997	1,557	2,168,000	38,000	2,548	18.1%	7.5%	10.6%	660	934	513	232	660	934	513	232	0	
1998	1,674	2,547,000	46,300	3,010	15.0%	7.5%	7.5%	710	1,105	607	274	660	1,105	607	274	0	
1999	1,800	2,915,000	54,500	3,460	12.5%	7.2%	5.0%	750	1,278	702	317	710	1,278	702	317	0	
2000	1,935	3,267,000	62,600	3,893	11.2%	7.2%	4.0%	780	1,451	798	360	750	1,451	798	360	0	
2001	2,070	3,619,000	71,000	4,329	11.2%	7.2%	4.0%	810	1,615	887	400	780	1,615	887	400	0	
2002	2,223	4,010,000	80,400	4,814	11.2%	7.2%	4.0%	840	1,801	990	446	810	1,801	990	446	0	
2003	2,365	4,443,000	91,200	5,355	11.2%	7.2%	4.0%	870	2,003	1,101	497	840	2,003	1,101	497	0	
2004	2,556	4,924,000	103,100	5,955	11.2%	7.2%	4.0%	910	2,224	1,222	551	870	2,224	1,222	551	0	
2005	2,736	5,458,000	116,700	6,625	11.3%	7.2%	4.1%	940	2,490	1,369	617	910	2,490	1,369	617	0	
2006	2,907	5,966,000	130,200	7,268	9.7%	6.3%	3.4%	940	2,733	1,502	677	910	2,845	1,454	656	157	
2007	3,067	6,521,000	145,400	7,975	9.7%	6.3%	3.4%	970	2,994	1,646	742	910	2,809	1,544	696	333	
2008	3,265	7,129,000	162,200	8,751	9.7%	6.3%	3.4%	1,000	3,285	1,806	814	910	2,988	1,643	741	531	
2009	3,492	7,784,000	181,000	9,604	9.7%	6.3%	3.4%	1,000	3,597	1,977	892	910	3,178	1,747	785	753	
2010	3,708	8,520,000	202,400	10,544	9.8%	6.3%	3.5%	1,070	3,968	2,181	984	910	3,374	1,855	836	1,066	
2011	3,906	9,157,000	222,100	11,378	7.9%	5.4%	2.5%	1,100	4,297	2,362	1,065	910	3,554	1,964	891	1,334	
2012	4,113	9,842,000	243,700	12,279	7.9%	5.4%	2.5%	1,130	4,648	2,555	1,152	910	3,743	2,057	928	1,627	
2013	4,338	10,579,000	267,500	13,254	7.9%	5.4%	2.5%	1,160	5,032	2,766	1,247	910	3,948	2,170	979	1,949	
2014	4,572	10,579,000	267,500	13,254	5.4%	5.4%	5.4%	1,160	5,304	2,915	1,315	910	4,161	2,287	1,031	2,085	
2015	4,815	10,579,000	267,500	13,254	5.4%	5.4%	5.4%	1,160	5,585	3,070	1,385	910	4,382	2,408	1,096	2,164	
2016	5,058	10,579,000	267,500	13,254	5.0%	5.0%	5.0%	1,160	5,867	3,225	1,454	910	4,603	2,530	1,141	2,273	
2017	5,310	10,579,000	267,500	13,254	5.0%	5.0%	5.0%	1,160	6,160	3,396	1,527	910	4,832	2,656	1,196	2,396	
2018	5,560	10,579,000	267,500	13,254	5.0%	5.0%	5.0%	1,160	6,473	3,558	1,605	910	5,078	2,791	1,259	2,508	
2019	5,859	10,579,000	267,500	13,254	5.0%	5.0%	5.0%	1,160	6,796	3,736	1,685	910	5,332	2,931	1,322	2,633	
2020	6,156	10,579,000	267,500	13,254	5.0%	5.0%	5.0%	1,160	7,141	3,925	1,770	910	5,602	3,079	1,389	2,766	
2021	6,462	10,579,000	267,500	13,254	5.0%	5.0%	5.0%	1,160	7,496	4,120	1,856	910	5,890	3,232	1,456	2,904	
2022	6,766	10,579,000	267,500	13,254	5.0%	5.0%	5.0%	1,160	7,872	4,327	1,951	910	6,175	3,384	1,531	3,050	
2023	7,128	10,579,000	267,500	13,254	5.0%	5.0%	5.0%	1,160	8,268	4,545	2,050	910	6,486	3,565	1,608	3,203	
2024	7,488	10,579,000	267,500	13,254	5.0%	5.0%	5.0%	1,160	8,686	4,774	2,153	910	6,814	3,745	1,689	3,365	
2025	7,866	10,579,000	267,500	13,254	5.0%	5.0%	5.0%	1,160	9,125	5,015	2,262	910	7,158	3,935	1,774	3,535	

Note 1: Personnel costs in economic prices are estimated as 90% of market costs in consideration of 10% average income tax.

Note 2: Economic costs of overhead are estimated as 97% of nominal costs, by deducting turnover tax equivalent of 3%.

Note 3: Other labor costs are evaluated in economic prices as 97% of nominal costs, by deducting turnover tax equivalent of 3%.

Appendix 16.2.2: Table C Incremental Utilities Cost at Economic Prices

Year	W/P				WOP				Incremental Utility Expenses ('000 US\$)
	Electricity Consump. (MWH)	Electricity Cost ('000 US\$)	Fuel Cost ('000 US\$)	Total Cost ('000 US\$)	Electricity Consump. (MWH)	Electricity Cost ('000 US\$)	Fuel Cost ('000 US\$)	Total Cost ('000 US\$)	
	(1)	(2)	(3)	(4)=(2)+(3)	(5)	(6)	(7)	(8)=(6)+(7)	
1995	5,500	267	13	280	5,500	267	13	280	
1996	5,500	267	13	280	5,500	267	13	280	
1997	5,500	267	13	280	5,500	267	13	280	
1998	5,500	267	13	280	5,500	267	13	280	
1999	5,500	267	13	280	5,500	267	13	280	
2000	5,500	267	13	280	5,500	267	13	280	
2001	20,100	975	49	1,024	20,100	975	49	1,024	
2002	20,100	975	49	1,024	20,100	975	49	1,024	
2003	20,100	975	49	1,024	20,100	975	49	1,024	
2004	20,100	975	49	1,024	20,100	975	49	1,024	
2005	20,100	975	49	1,024	20,100	975	49	1,024	
2006	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2007	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2008	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2009	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2010	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2011	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2012	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2013	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2014	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2015	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2016	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2017	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2018	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2019	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2020	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2021	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2022	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2023	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2024	28,600	1,387	69	1,456	20,100	975	49	1,024	433
2025	28,600	1,387	69	1,456	20,100	975	49	1,024	433

Note: Utilities costs in economic prices are estimated as 97% of those in market prices by deducting 3% turnover tax.

Appendix 16.2.3 Environmental Mitigation Costs in Economic Prices

Year	Environmental Mitigation Costs (000 US\$)
1995	
1996	
1997	
1998	
1999	
2000	
2001	
2002	
2003	
2004	
2005	
2006	233
2007	233
2008	233
2009	233
2010	233
2011	
2012	
2013	
2014	
2015	
2016	
2017	
2018	
2019	
2020	
2021	
2022	
2023	
2024	
2025	

Note: Environmental mitigation costs in economic prices are estimated as 97% of those in market prices by deducting 3% turnover tax.

Appendix 16.2.4 Time Saving Benefits to Vietnamese Business Passengers on International Routes

Table A. Incremental Vietnamese Business Passengers on International Routes

Year	Percentage Vietnamese Business	Percentage Business	Incremental Passengers
1995	30%	43%	
1996	31%	45%	
1997	31%	48%	
1998	32%	48%	
1999	32%	48%	
2000	33%	48%	
2001	33%	48%	
2002	34%	48%	
2003	34%	48%	
2004	35%	48%	
2005	35%	48%	
2006	36%	48%	36,000
2007	36%	48%	76,000
2008	37%	49%	122,000
2009	37%	49%	174,000
2010	38%	49%	232,000
2011	38%	48%	288,000
2012	39%	48%	346,000
2013	39%	48%	411,000
2014	40%	48%	417,000
2015	40%	48%	422,000
2016	40%	48%	422,000
2017	40%	48%	422,000
2018	40%	48%	422,000
2019	40%	48%	422,000
2020	40%	48%	422,000
2021	40%	48%	422,000
2022	40%	48%	422,000
2023	40%	48%	422,000
2024	40%	48%	422,000
2025	40%	48%	422,000

Note 1: The percentage of Vietnamese is forecasted to increase from the present 30% to 40% by the year 2015 in the course of economic development as experienced in other developing countries in Asia. This rate is assumed to be maintained after the year 2015.

Note 2: The percentage of business passengers within Vietnamese passengers on international routes is assumed to remain at 48% based on the traffic survey conducted at Noi Bai Airport in May 1996 by the JICA Study Team.

Table B: Time Saving Benefit to Vietnamese Business Passengers on International Routes

Year	Time Value (US\$/hour)	Economic Cost before Boarding in the WOP Case				Economic Cost before Boarding in the VWP Case				Benefit per Passenger (US\$)	Incremental Passengers	Total Benefit (000 US\$)
		Time before Boarding via HCMC (hour)	Air Travel Cost (US\$)	Air Travel Time (hour)	Charge and Access Cost (US\$)	Time before Boarding at Noi Bai (hour)	Airport Charge and Access Cost (US\$)	Charge and Access Cost (US\$)	Total Cost before Boarding (US\$)			
1995	1.50	12.25	18.58	7.27	9.61	13.85	9.00	6.91	15.91	97.54		
1996	1.61	12.25	19.75	7.27	9.61	15.23	9.00	6.91	16.58	98.64		
1997	1.73	12.25	21.23	7.27	9.61	16.71	9.00	6.91	17.31	99.40		
1998	1.86	12.25	22.83	7.27	9.61	18.30	9.00	6.91	18.09	100.21		
1999	2.00	12.25	24.54	7.27	9.61	20.01	9.00	6.91	18.93	101.08		
2000	2.15	12.25	26.38	7.27	9.61	21.85	9.00	6.91	19.83	102.02		
2001	2.31	12.12	27.37	7.27	9.61	23.76	9.00	6.91	20.76	102.70		
2002	2.47	11.98	29.65	7.32	9.61	25.17	9.00	6.91	21.76	103.41		
2003	2.65	11.85	31.43	7.34	9.61	26.97	9.00	6.91	22.83	104.14		
2004	2.84	11.71	33.31	7.36	9.61	28.87	9.00	6.91	23.97	104.90		
2005	3.05	11.58	35.30	7.38	9.61	30.89	9.00	6.91	25.20	105.69		
2006	3.22	11.36	36.83	7.41	9.61	32.44	9.00	6.91	26.35	106.09	36,000	3,819
2007	3.44	11.15	38.40	7.44	9.61	34.05	9.00	6.91	27.58	106.47	76,000	8,091
2008	3.66	10.93	40.03	7.47	9.61	35.70	9.00	6.91	28.88	106.82	122,000	13,032
2009	3.89	10.72	41.71	7.50	9.61	37.41	9.00	6.91	30.26	107.15	174,000	18,644
2010	4.14	10.50	43.45	7.53	9.61	39.18	9.00	6.91	31.74	107.44	232,000	24,926
2011	4.36	10.45	45.65	7.55	9.61	41.42	9.00	6.91	33.08	108.34	286,000	30,966
2012	4.60	10.45	48.04	7.54	9.61	43.77	9.00	6.91	34.49	108.28	346,000	37,812
2013	4.85	10.43	50.51	7.54	9.61	46.25	9.00	6.91	35.98	110.27	411,000	45,371
2014	5.11	10.40	53.11	7.54	9.61	48.85	9.00	6.91	37.55	111.30	417,000	46,414
2015	5.38	10.38	55.84	7.55	9.61	51.59	9.00	6.91	39.20	112.39	422,000	47,427
2016	5.65	10.35	58.49	7.55	9.61	54.25	9.00	6.91	40.82	113.43	422,000	47,866
2017	5.93	10.33	61.27	7.56	9.61	57.03	9.00	6.91	42.51	114.51	48,324	48,324
2018	6.23	10.30	64.18	7.56	9.61	59.94	9.00	6.91	44.29	115.64	422,000	48,801
2019	6.54	10.28	67.22	7.56	9.61	62.99	9.00	6.91	46.16	116.82	422,000	49,299
2020	6.87	10.25	70.41	7.57	9.61	66.18	9.00	6.91	48.13	118.05	422,000	49,818
2021	7.21	10.25	73.33	7.57	9.61	69.70	9.00	6.91	50.19	119.51	422,000	50,434
2022	7.57	10.25	77.63	7.57	9.61	73.40	9.00	6.91	52.35	121.05	422,000	51,061
2023	7.95	10.25	81.51	7.57	9.61	77.28	9.00	6.91	54.62	122.65	422,000	51,760
2024	8.35	10.25	85.59	7.57	9.61	81.35	9.00	6.91	57.01	124.34	422,000	52,473
2025	8.77	10.25	89.87	7.57	9.61	85.63	9.00	6.91	59.51	126.12	422,000	53,272

Note 1: Average time value of Vietnamese business passengers in 1995 are estimated to be US\$1.5 per hour, which corresponds to US\$300 per month.

Note 2: Average time value of Vietnamese business passengers will increase at the same rate as GDP/capita growth rate as follows: 1995-2000 7.5% per annum 2005-2010 6.4% per annum 2000-2005 7.2% per annum 2010-2025 5.0% per annum

Note 3: The break down of the required time before boarding is as follows: The shortening of rail travel time up to the year 2010 is based on the JICA Study on the Rehabilitation and Improvement of the Railway in Vietnam, Interim Report (I), May 1995. The further shortening up to the year 2025 is projected by the JICA Study Team.

Note 4: The economic cost of rail travel is estimated as the same as the present railfare based on the 100% cost recovery rate of VNR at present.

Note 5: This cost is assumed to be increased at 2.02% for each one hour of travel time shortening based on the above-mentioned JICA Study.

Note 6: The economic cost of domestic air transport is estimated as 133% of the present airfare for Vietnamese in consideration of VNA's cost recovery rate of 75% with current airfare for Vietnamese.

Note 7: The economic cost of passenger service charge at the airport is estimated as US\$12 for international departing passengers and US\$2.7 for domestic departing passengers.

Year	WOP Cases (hours)				VWP Case (hours)			
	Waiting at Train Station	Rail Travel Hanoi-Vinh	Air Transfer in Vinh - HCMC	Air Travel Vinh - Tan Son Nhat	Transfer at Tan Son Nhat	Airport Acc. and Waiting	Boarding	Total before Boarding
1995	0.50	6.00	2.00	1.75	2.00	3.00	3.00	3.00
2000	0.50	6.00	2.00	1.75	2.00	3.00	3.00	3.00
2005	0.50	5.33	2.00	1.75	2.00	3.00	3.00	3.00
2010	0.50	4.25	2.00	1.75	2.00	3.00	3.00	3.00
2020	0.50	4.00	2.00	1.75	2.00	3.00	3.00	3.00
2025	0.50	4.00	2.00	1.75	2.00	3.00	3.00	3.00

Note 4: The economic cost of rail travel is estimated as the same as the present railfare based on the 100% cost recovery rate of VNR at present.

Note 5: This cost is assumed to be increased at 2.02% for each one hour of travel time shortening based on the above-mentioned JICA Study.

Note 6: The economic cost of domestic air transport is estimated as 133% of the present airfare for Vietnamese in consideration of VNA's cost recovery rate of 75% with current airfare for Vietnamese.

Note 7: The economic cost of passenger service charge at the airport is estimated as US\$12 for international departing passengers and US\$2.7 for domestic departing passengers.