9.3 Mole (Amador Causeway)

37. The Amador causeway was constructed as a causeway to a pilot base on Isla Naos and also to a navigational control station of Panama Canal at Isla Flamenco. The causeway connects three islands with the main land, namely Isla Naos, Isla Perico and Isla Flamenco. There is also a fishery institute facilities of Smithsonian Institute on Isla Naos, which is assured to continue its research after all the canal facilities are reverted to Panama. See Figure 5-4-1.

38. However, its functions are more than the causeway from a technical view point: it provides the navigational safety by preventing the currents from crossing the canal, it also protects the canal from sediments which generally drift from east to west along the coast of the Panama Bay. The causeway also minimizes sedimentation debauched from the canal itself by training the streams along the navigational channel.

39. The causeway is about 2.2 km long overall having an about 22 m top width. It has a two lane asphalt-paved carriage road of an about 5.7 m width and a pedestrian path of an about 1.5 m width. The dike is made of rock of basalt, granite, etc. covered with sodding on the top. Each piece of rock is not so large as "amour" protecting the dike from waves. The causeway is well maintained and no damages are found. This indicates that no high waves intrude the Bay of Panama.

40. In case a port development takes place at Farfan, the Amador causeway will prevent waves from invading the future port basin as well as preventing sedimentation there.

9.4 Back-up Yard

9.4.1 Container and Car Storage

41. Concessionaires has developed container terminals and import car storage in the vicinity of the port. At Diablo, the storage yard of the railway between the previous railway shunting yard and Gaillard Avenue is leased out to concessionaires who use this area as storage yards of containers and cars. At Albrook Airstrip, there are also a container yard and car storage. Parts of these areas were subjected to the topographic survey that the Study Team conducted in November to December, 1996.

42. APN has completed container storage yards of about 7,700 m2 behind

Pier No. 7 and about 6,100 m2 at Pier No. 15. The completed container storage behind Pier No. 7 is being used not only for container storage but also for imported car storage.

9.4.2 Railway Container Terminal

43. Panama Railway has a container terminal at Balboa about 2.5 km east of the Port of Balboa. The terminal is 9,275 m2, approximately 180 m long and 70 m wide and has a capacity of 164 TEU ground units and double track railway of shunting. The container handling equipment are three toplifters; two of them are capable of two tire stacking and one capable of three loaded tire and four tire empty stacking.

44. Almost all the containers loaded on railcars at Pier No. 16 of the Port of Balboa will directly move to the Port of Cristobal without moving to the railway terminal. The containers collected from the Pacific Coast of Panama to the railway terminal, mainly containing export products, move to the Port of Cristobal. Meanwhile, about 80 % of the containers from the Port of Cristobal by the railway will move to the railway terminal and consequently to the destinations on the Pacific Coast. The remaining 20 % will move to the Port of Balboa.

9.4.3 Building Facilities

45. APN has several buildings for administration and operation. They are; administration building of 1,752 m2, supply warehouse of 208 m2, mechanical workshop of 1,865 m2, central warehouse of 885 m2, abandoned merchandise storage of 610 m2, engineers office of 1,290 m2 and shed on Pier No. 18 of 16,618 m2.

9.5 Main Access to the Port Area

9.5.1 Road

46. The Port of Balboa is well connected with three relatively population dense areas; namely Panama City, Colon and David. The port has a direct access from the main gate to Panama City by way of Calle Puerto (Port Road) and Gaillard Avenue, a principal road to the downtown of Panama City. To Colon, Route No. 3 is connected to Simon Avenue which is connected through another principal road to Gaillard Avenue. To David, Route No. 1 is connected to Calle Balboa which is the extension of Calle Diablo running in front of the main port gate.

47. It should be noted that the access to the Piers No. 6 and No. 7 is Roosevelt Avenue which crosses the Calle Diablo about 300 m down to the south from the main gate. This separation of the access to the port is due to the existence of the workshops and dry-docks between the Piers No. 6 to 7 and Piers No. 13 to 19.

48. As it will be mentioned in 9.7 of this chapter, the roads in Panama are all designed and constructed in compliance with AASHTO standards. Therefore, their dimensions and pavement are of US standards.

9.5.2 Railway

49. The Port of Balboa is directly connected with the railway. Even though many railway tracks exist, only three tracks are used at present as the access to the port; one extends along the Piers No. 15 to No. 16, and other two extend along each side of the Pier No. 18. Besides these three railway tracks, one track is used to access the railway workshops located behind the Pier No. 16 for the railcar maintenance and repair. Railway tracks extended into the workshop yard of PCC and the dry-dock yard are not being used at present. Figure 9-5-1 shows the active railway tracks at the Port of Balboa.

50. All the three railway tracks active in the Port of Balboa are extended from the shunting yard at Diablo, where only two tracks are being used and the adjoining storage yard is leased to private companies for container and car storage. At the Piers No. 15 and No. 16, containers are loaded on rail cars and moved to the shunting yard where train assembling is made to leave for the Port of Cristobal. Meanwhile, activities are seldom on the railway tracks at the Pier No. 18.

51. Panama Railway is operating the railway, which main line is 76.5 km between Panama and Colon. Main technical data of the railway tracks of the Panama Railway are summarized below. It should be noted that the rail gauge is 60", which is not standard in the world at present. The rehabilitation of the railway will be, therefore, more costly than that of a standard gauge railway.

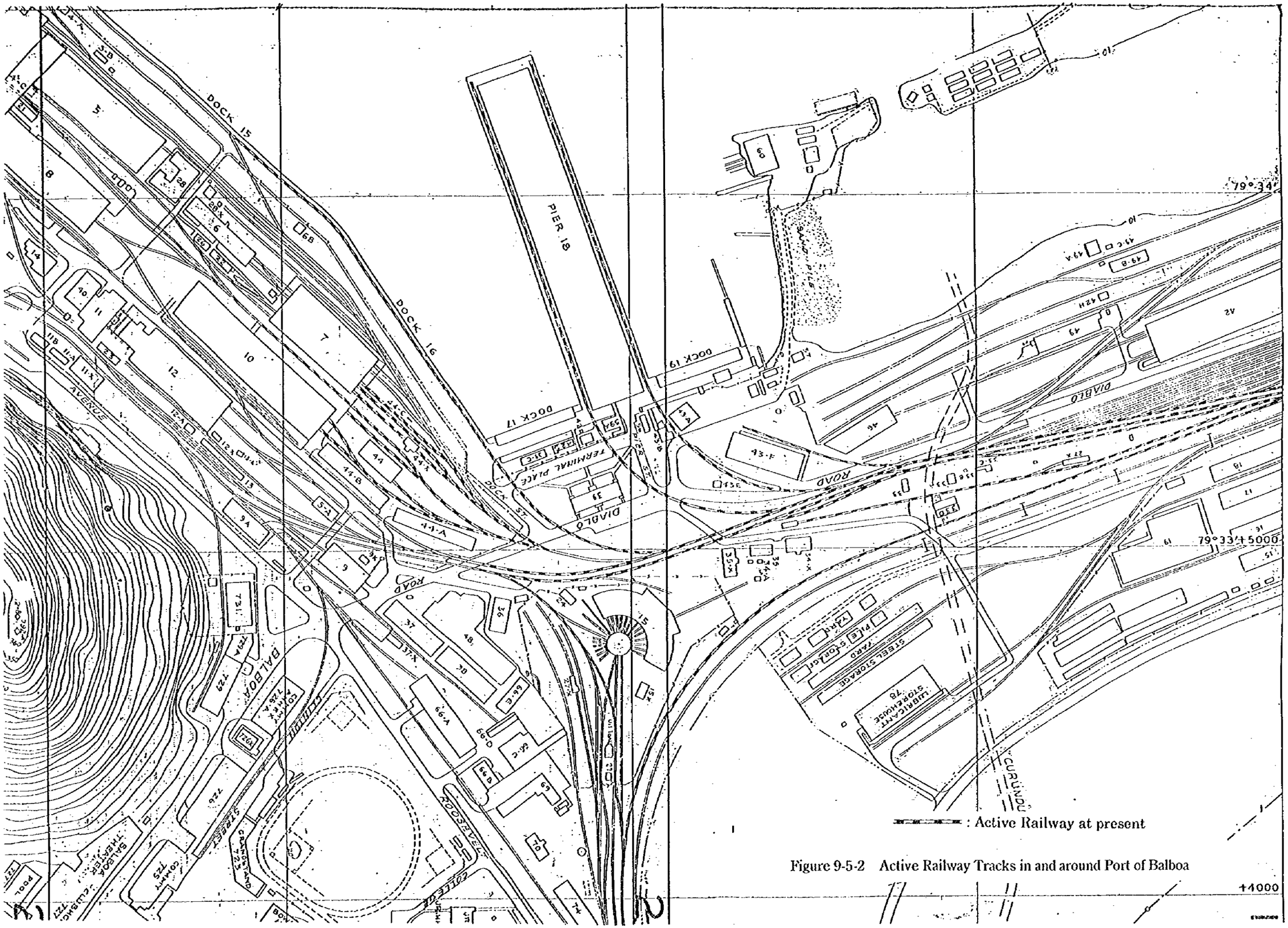


Figure 9-5-2 Active Railway Tracks in and around Port of Balboa

- Main Track Colon - Panama: 76.5 km
- Siding: 5.0 km
- Yard and Auxiliary Tracks: 175.0 km
- Rail Gauge: 1.524 m (60")
- Rail: 90 lb./yd x 33' and 39', A.S.C.E. (29.1 miles)
  100 lb./yd x 39', A.R.E.A (14.7 miles)
  115 lb./yd x 39' A.R.E.A. (3.8 miles)
- Wooden Sleepers, standard: 6" x 8" x 8'6", 2070/km
- ditto, turnout: 7" x 9" x 9' to 16'
- ditto, bridge: 8" x 10" x 10'
- Ballast, crushed stone #3: 25 mm -63 mm (1650 yds 3/km)
- Fastening, standard: 9/16" x 51/2"
- Minimum Radius of Curve: 250 m
- Maximum Radius of Curve: 5240 m
- Maximum gradient: 1.3 %

9.6 Other Major Facilities

52. The Port of Balboa inherited all the utilities from PCC when it was reverted to Panama. This is not exception regarding the power supply and water supply. Electric power and potable water to the port is respectively supplied from the PCC's power plant and water treatment plant at Miraflores. Therefore, the electric power supply system of the port is not connected with the national power supply networks. The water supply is not either connected to the city supply line.

53. The port receives the electric power, 12 kv in 3 phases, at the main substation near Dry-Dock No. 1. This substation transforms the current to 2400 v / 1200 A in 3 phases and distributes it to secondary substations installed within the port premises. From these secondary substations the power are distributed in several kinds of currents for each purpose, 120/240 v or 115/230 v in a single phase, 480 v in 3 phases for example. To be noted is that APN is responsible for maintenance of the power supply to all the concessionaires which are operating within the port premises like the dry dock operator, workshop operators, etc. However, APN sublets all the maintenance works to IRHE according to the regulations.

9.7 Rules and Regulations on Structural Design in Panama

9.7.1 General Information

54. An official journal called "GACETA OFICIA No. 22,661" was issued on March 15, 1994 by the Committee on Engineering and Architecture (Junta Technica de Igneieria y Arquitectura) of Ministry of Public Works (Ministerio de Obras Publicas, MOP) for providing the design standards and criteria of structures of public works. This journal covers the standards and criteria for small size structures. It covers dead, live and seismic loads, soil mechanics, small buildings, reinforced and prestressed concrete, steel, wooden and masonry works. Particulars of the journal are the following:-

- Live Loads: The journal refers to US references and provides tables of unit live loads acting on public work structures, mostly of buildings.
- Wind loads: The design codes of US, Canada, Switzerland and Australia are referred to. The minimum design wind velocity and pressure on the Pacific side are to be 22.5 m/s and 0.31 kPa at the 10 m height from the ground respectively, while on the Atlantic side they are 27.0 m/s and 0.45 kPa. The journal provides tables of coefficients and graphs mostly for design of buildings.
- Seismic force: The journal refers to the coefficients of the lateral force to the gravity used for the Panama canal as 0.22 for Bayano Dam, 0..20 for Portuna Dam, 0.15 for Madden Dam, Miraflores Locks, Pedro Miguel Locks and Gatun Locks. However, the description is mostly for buildings.
- Soil mechanics: The journal provides many tables and graphs for the design of foundations, retaining wall, etc.
- Small buildings: Details of columns and beams are provided.
- RC concrete: The journal describes that the design should comply with ACI 318-89 (revised in 1992) and several formulae of combination of loads which are particular in Panama and different from ACI Codes.
- PC concrete: The journal describes that the prestressed concrete shall comply with AASHTO specifications.
- Steel works: The journal describes that the steel works shall comply with AISC codes.

55. In the field of construction works, as suggested from the previous information, the design codes and standards of USA are prevailing in Panama. The following codes and standards are, for example, employed by MOP:

a) A Policy on Geometric Design of Highways and Streets 1990, AASHTO (for roads).
b) ACI Committee 318, "Building Code Reinforcements for Reinforced Concrete 318-89, ACI (for pedestrian path).
c) Standard Specifications for Highway Bridges, 15th Edition, AASHTO (for bridges and pedestrian path).

56. Meanwhile, MOP has published the general technical specifications for the construction of the roads and bridges (Especificaciones Tecnicas General para la Construccion de Carreteras y Puentes, Primera Edicion Pma. 1992).

57. Regarding the seismic force, contours of the maximum acceleration coefficient with respect to the gravity for the case of a 10%-in-50-years probability in Panama is prepared as shown in Figure 9-7-1. Accordingly, the design acceleration around Balboa is defined 0.10. From the same figure, it can be seen that the seismic force at the borders with Costa Rica and Columbia are about 0.25.

9.7.2 Design Criteria and Standards for Piers

58. For the design of the port facilities in more detail, APN sets forth the following design criteria and standards in "Study and Design of Improvement of Piers of Port of Balboa",:

(1) Reinforced and Prestressed Concrete
a) All the works shall follow the code ACI-318.
b) Reinforced Concrete: Compression strength at 28 days shall be 280 kg/cm2.
c) Prestressed Concrete: Compression strength at 28 days shall be 350 kg/cm2.
d) Reinforcing Steel Bars: All the reinforcing steel bars shall be deformed and comply with the specifications of AASHTO M 31 Grade 400, ASTM Grade 60 or equivalent.
e) All the reinforcement of steel mesh shall comply with ASTM A-82.

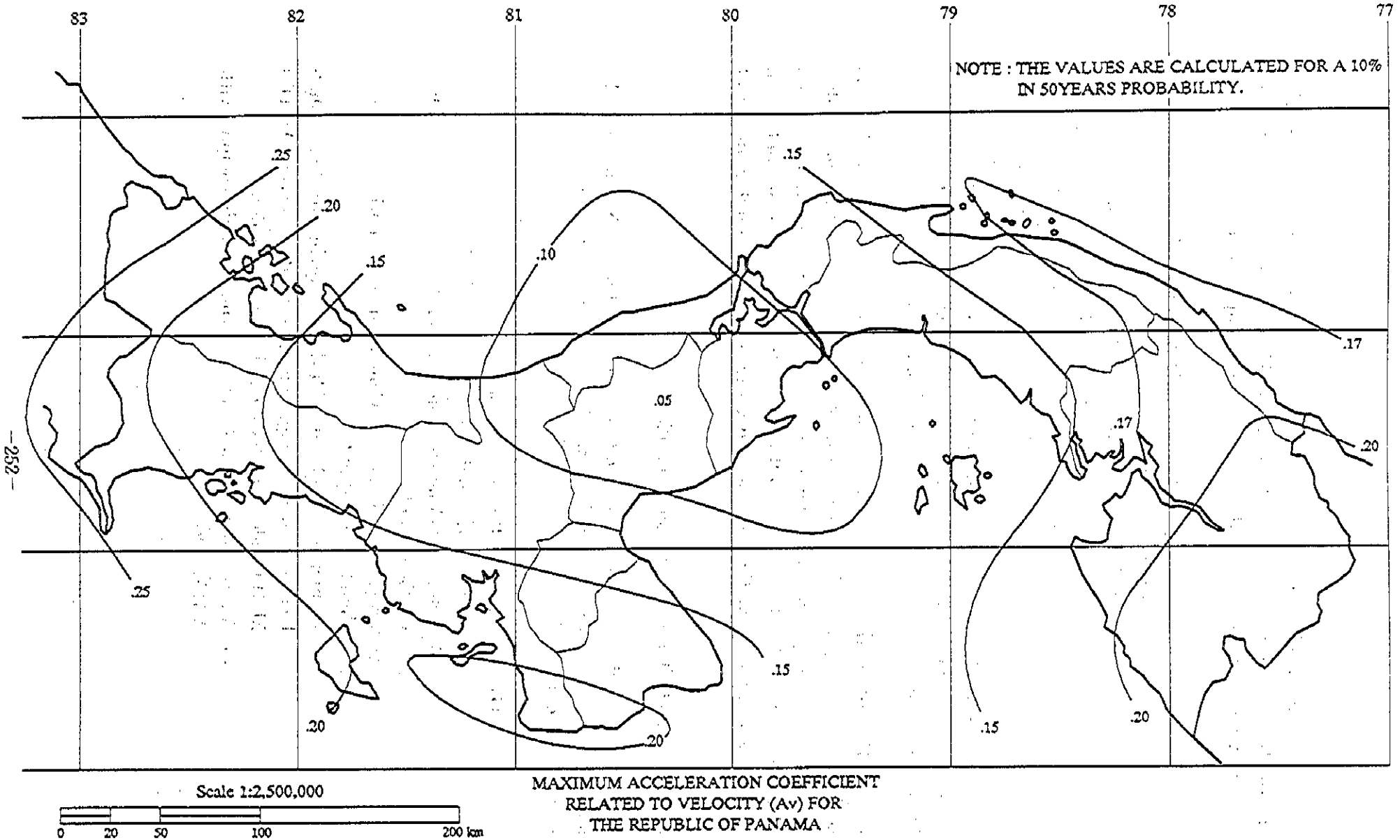


Figure 9-7-1 Design Seismic Force in Panama

f) The minimum cover of the reinforcing bars shall be 70 mm and 50 mm for the reinforced concrete and prestressed concrete respectively unless otherwise indicated.

g) PC Cables: All the cables for the prestressing the concrete shall be of 7 wires and comply with the requirements of ASTM A416 and Grade 270 (the ultimate strength of 1860 MPa for the nominal sectional area of the cable) or equivalent.

(2) Structural and Miscellaneous Steelworks

a) All the specifications below shall be applied to all cases unless otherwise indicated.

b) The steel shall be of Type ASTM A30.

c) The anchor bolts shall comply with ASTM A307.

d) All the welding shall conform to ASTM A500.

(3) Riprap Revetment

a) The riprap revetment shall be made of sound rock having the minimum specific gravity of 23 KN/m^3 (150 Lbs/ft2).

b) The rock shall be durable, of a rectangular shape and free from foreign substances, covering of refusals and organic materials. The width or breadth of the rock shall not be smaller than 1/3 of the length and conform to ASTM D4992.

c) The gradation of the rock shall be as shown below:

Size of Rock	% of the total weight of the rock smaller than the size
110 Lbs (490 N)	100
90 Lbs (400 N)	90
60 Lbs (267 N)	80
20 Lbs (90 N)	50
10 Lbs (45 N)	40
1 Lbs (5 N)	20
0.25 Lbs (1 N)	10

(4) Loads on the Container Berths

a) Uniform load: 5000 Kg/m^2

b) Load specified as AASHTO HS 20-44

c) Load of a toplifter as shown below:

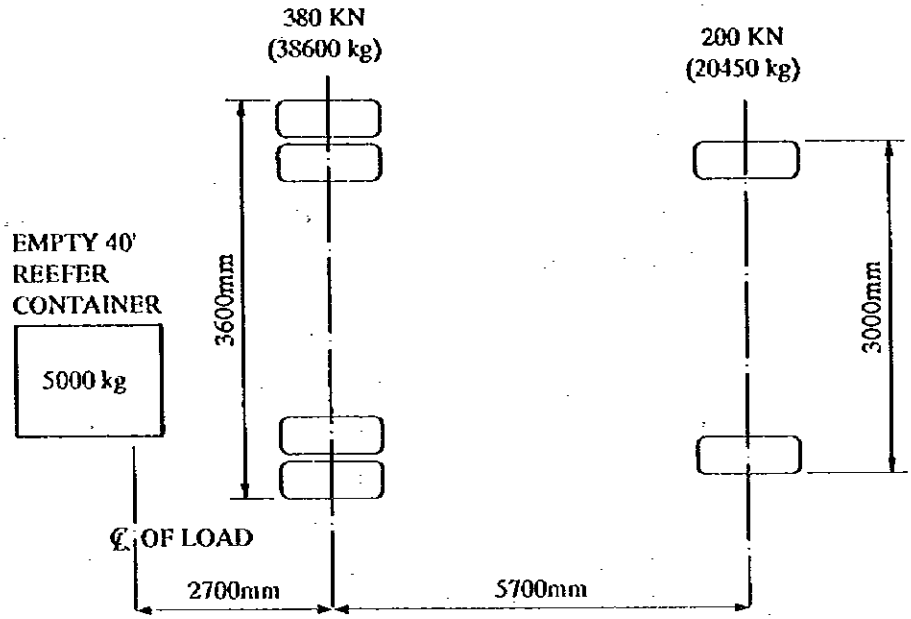


Figure 9-7-2 Load of Toplifter

(5) Tractor and chassis with two 20 ft loaded containers as shown below:

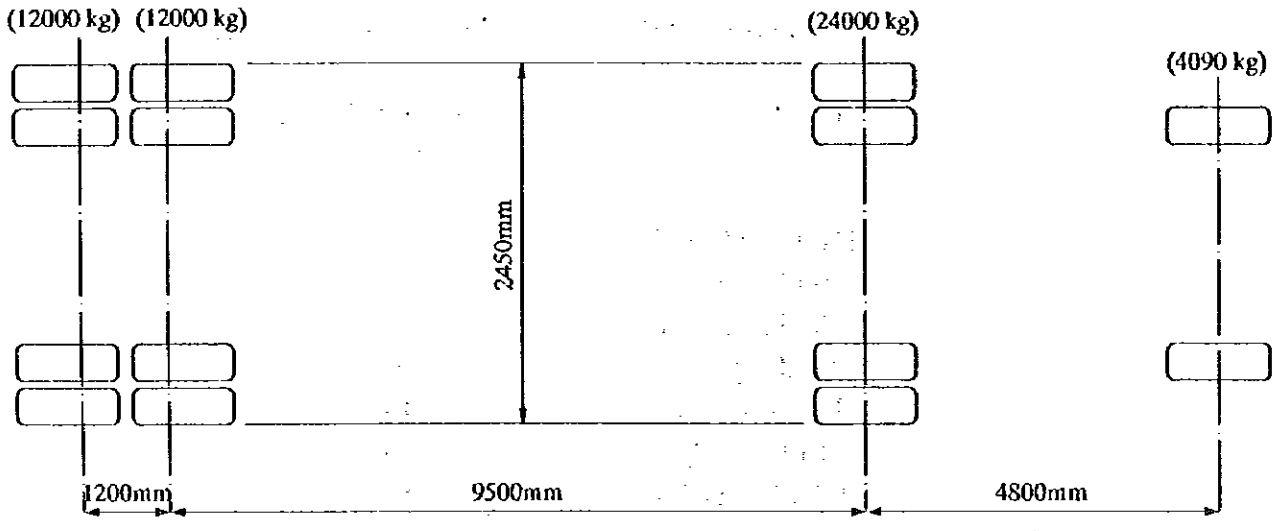


Figure 9-7-3 Load of Tractor and Chassis with tow 20ft Loaded Containers

(6) Storage of containers - 1 layer

a) Maximum gross load: 40' container 40 metric ton

b) Maximum gross load: 20' container 20 metric ton

For the arrangement of alternate storage, the maximum load concentration generated by 4 corner blocks of the adjacent containers will not exceed the total load of 40 ton. This load of 40 ton shall be the maximum load acting on the area "A" (see the illustration below).

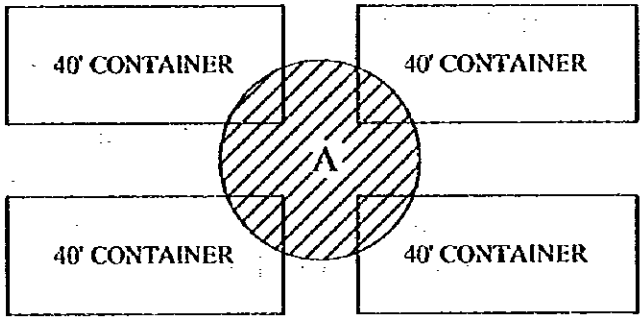


Figure 9-7-4 Maximum Load for Container Storage (area "A")

(7) Crane Beam

W = 8 - (62000 kg) concentrated loads, at an interval of 1.50 m. Reaction force acting on each stopper: 750 KN at 1 m above the rail.

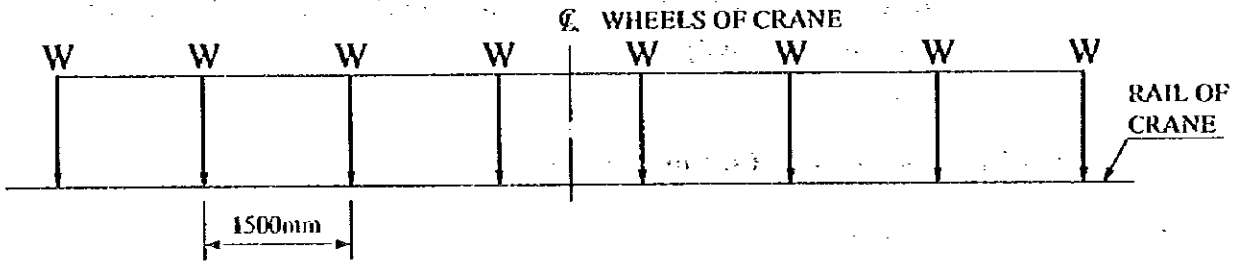


Figure 9-7-5 Bearing Capacity of Crane Bearn

(8) PC Pile

Design axial load: Compression (all the piles): 160 metric ton

(9) Design Ship

Table 9-7-1 Design ship

Class	Tonnage (Gross Tonnage)	Total Length (m)	Beam (m)	Loaded Draft (m)
A- 65000 DWT Container Ship	65000	250	32.3	12

* 65000 DWT ship = 109.86 Tf

Approaching angle = 10 degree

(10) Berthing Force

The berths shall be designed to resist the berthing forces resulted from the velocity below of the approximation (normal at the approaching load) of the design ship.

Container berths: 0.15 m/sec

(11) Mooring Force

Mooring bitts of the container berths: 90 metric ton

(12) Winds - Structures and Miscellaneous

The structures shall be designed for the following basic pressures of winds including the factors of gust regardless of the form, sunshade or direction.

Elevation	kg/m^2
0 - 10	71
10 - 20	82
20 - 30	102
30 - 40	122

(13) Earthquake

The superstructures shall be designed to resist the forces resulted from horizontal acceleration of the earthquake equal to 10 % of the gravity.

9.8 Major Unit Construction Cost in Panama

9.8.1 General Information

59. There is a civil non-lucrative organization, called the Panamanian Chamber of Construction or CAPAC. This organization was created in 1961 and its objectives are promotion, development, protection and defense of the construction industry of Panama. Besides the other services, CAPAC negotiates collective working agreements with construction workers for its members and issues periodicals like a price list of construction materials and wages, a list of rental equipment, etc.

60. At present, the issuance of No. 51 of CAPAC dated on May 30, 1995 is referred to by contractors in Panama for estimating their tender prices. Despite this issuance, however, actual construction prices are likely lowered by the

contractors because of competitive bidding commonly taking place in Panama. The issuance contains the following:

a) Rental Fee of Heavy Equipment
b) Minimum Legal and Unionized Salaries for the Construction Works
c) Indexes of Salaries and Several Construction Materials
d) Glossary of Suppliers

61. Besides the CAPAC's issuance, the Ministry of Public Works has a list of prices of several construction works mainly connected with road construction for evaluation of public work contracts.

9.8.2 Unit Prices of Construction Works

62. The CAPAC's issuance mainly covers the prices of building works while MOP's list covers the road works. Work items are selected from MOP's list and tabulated for the study purpose in Table 9-8-1.

Table 9-8-1 Unit Prices of Main Construction Works

Item No.	Description	Unit	Unit Price (US$)
1	Structural Steel A-36	kg	2.75
2	Reinforcement Steel G-28 for Box Culvert Prolongation	kg	2.60
3	Reinforcement Steel G-42	kg	1.60
23	Base Course	m3	28.00
24	Asphaltic Concrete Pavement	ton	50.00
63	River-bed Excavation	m3	10.00
64	Waste Material Excavation	m3	5.00
65	Spoil Material Excavation	m3	5.00
66	Non-classified Material Excavation	m3	7.00
67	Excavation for Box Culvert	m3	30.00
68	Excavation for Structure	m3	35.00
78	Gravel for Pipe Base	m3	35.00
79	Class-A Concrete for Box Culvert Enlargement	m3	500.00
80	400 psi Concrete	m3	400.00
81	281 kg/cm2 Reinforced Concrete	m3	420.00
82	210 kg/cm2 Reinforced Concrete	m3	285.00
101	Access Slab	m2	100.00
102	Vehicular Entrance Slab	m2	80.00
104	River-bed material Type "B"	m3	45.00
105	Material for Slab Injection	m3	90.00
106	Material for Slab Injection	m3	125.00
107	Additional Selected Material	m3	16.00
108	Compacted Selected Material	m3	15.00

109	Leveling of Asphalt Concrete Carpet Layer	ton	50.00
113	Concrete Pavement of 0.20 m, 550 psi	m^2	35.00
117	Steel Piles 10 x 42	lm	120.00
118	HP Steel Piles 10 x 57	lm	163.00
119	Concrete Piles of 0.25 m dia.	lm	200.00
213	Post-tensioned Beam T-III of 15 m	each	10,000.00
214	Post-tensioned Beam T-III of 18.65 m	each	9,500.00
215	Post-tensioned Beam T-III of 21 m	each	13,000.00
216	Post-tensioned Beam T-V of 34.13 m	each	18,350.00
217	Post-tensioned Beam T-V of 30.15 m	each	15,000.00
218	Post-tensioned Beam T-III of 22.80 m	each	11,400.00
219	Concrete Apron of 0.30 m	lm	40.00
220	Masonry Apron of 0.10 m to 0.20 m thick	m^3	35.00
221	Masonry Apron of 0.10 m thick.	m^3	20.00

Source: Ministry of Public Works

9.8.3 Equipment Costs

63. The CAPAC's equipment rental fees of heavy equipment are proposed by the National Association of Heavy Equipment and Industrial Machinery Owners (ANPEP). Among those listed by CAPAC, rental fees likely to be concerned with the short-term development of the Port of Balboa are selected and tabulated in Table 9-8-2.

Table 9-8-2 Rental Fees of Heavy Equipment

	Description	Maker	Fee (US$/hour)
1.	Bulldozer with Blade		
	D4	Caterpillar	35.00
	D5	Caterpillar	40.00
	D6	Caterpillar	45.00
	D7-P	Caterpillar	50.00
	D8K	Caterpillar	80.00
	D9G	Caterpillar	100.00
2.	Bulldozer with Ripper		
	D4	Caterpillar	25.00
	D5	Caterpillar	45.00
	D8K	Caterpillar	85.00
	D9	Caterpillar	110.00
3	Bulldozer with Sheepfoot and Blade		
	D4	Caterpillar	40.00
	D5	Caterpillar	45.00
	D6	Caterpillar	50.00
	D7 17A, D7A	Caterpillar	50.00
	D8 2U, D8 14A	Caterpillar	50.00
4	Bulldozer with Scraper		

	D8 2U, D8 13A	Caterpillar	50.00
	D8 14A, D8 36A	Caterpillar	60.00
	D8 46A	Caterpillar	65.00
5	Motorized Scraper		
	619	Caterpillar	55.00
	721	Caterpillar	70.00
	631	Caterpillar	80.00
6	Pay Loader (Track)		
	933A 941	Caterpillar	35.00
	977 20A and 53A	Caterpillar	45.00
	977D, 977L	Caterpillar	50.00
	983	Caterpillar	80.00
7	Pay Loader (Fire)		
	922	Caterpillar	40.00
	944	Caterpillar	45.00
	950	Caterpillar	50.00
	966	Caterpillar	55.00
	980	Caterpillar	65.00
8	Backhoe		
	480	Case	27.50
	680	Case	75.00
9	Excavator		
	HC90	Poclain	55.00
	HC150	Poclain	85.00
	HC200	Poclain	95.00
	HC300	Poclain	125.00
	TCB with tires	Poclain	38.00
	LC-80 (Track)	Poclain	60.00
	LC-90 (Track)	Poclain	70.00
	LC-115 (Track)	Poclain	80.00
10	Grader		
	8T, 9K, 12F, 112F, 120F, 80C	Caterpillar	35.00
11	Motorized Roller with Blade		
	815	Caterpillar	60.00
12	Trucks		
	Dump Truck		2.50 - 10.00
	Dump Truck (10 wheels)		45.00
	Lowboy (60 tons)		400.00 (daily)
	Flat bed		200.00 (daily)
13	Shovels		
	LY-80, LC-80		65.00
	CL-90		85.00

	SC-150		95.00
	HC-300		135.00
14	Transportation Equipment		
	Tractor only		60.00
	Small truck with flat bed		65.00
	Tractor 30 ton lowboy included		95.00
	Tractor 60 ton lowboy included		135.00
	Truck head and trailer		60.00
	Concrete truck mixer		100.00
	Trailer		95.00
	Winch	Wichham	65.00
	Winch	Corcoha	85.00
15	Cranes		
	P.P.M. 20 ton Poclain		80.00
	Telescopic A.W. 410 Senior of 12 ton		80.00
	Pingon 3000 lbs	(monthly)	1,500.00
	Dorcoa 1000 lbs	(monthly)	1,750.00
	Potain 3000 lbs	(monthly)	2,000.00

Note: Prices include operator and fuel.
Source: CAPAC, Lista de Precios de Materiales de Construccion, No.51

9.8.4 Manpower Costs

64. As it has established the collective working agreement with the construction workers union, the CAPAC's indexes of salaries are shown in Table 9-8-3.

Table 9-8-3 Minimum Salary for Construction Workers

Minimum Salary (US$/hour) Collective Agreement CAPAC-SUNTRACS from the date below:			
Occupation	Oct. 1, '95	Aug. 1, '96	Jun. 1, '97
A. Mason, Tile-maker, Carpenter and Steel bender			
1 Labor or helper	1.90	1.95	2.00
2 Apprentice	2.10	2.15	2.20
3 Qualified	2.51	2.63	2.72
B. Formworker			
1 Labor or helper	1.90	1.95	2.00
2 Apprentice	2.05	2.10	2.15
3 Qualified	2.30	2.39	2.48

C. Electrician			
1 Labor or helper	1.90	1.95	2.00
2 Apprentice	2.10	2.15	2.20
3 Qualified	2.59	2.68	2.77
D. Plumber			
1 Labor or helper	1.90	1.95	2.00
2 Apprentice	2.10	2.15	2.20
3 Qualified	2.59	2.68	2.77
E. Painter			
1 Labor or helper	2.05	2.10	2.15
2 Qualified	2.34	2.43	2.52
F. Plasterer	2.10	2.15	2.20
G. Watchman or Guard	1.30	1.35	1.40
H. Surveyor			
1 Instrumentman	2.94	3.03	3.12
2 Chainman	2.08	2.13	2.18
3 Rodman	1.98	2.03	2.08
I. Operators			
1 Operator of mixer up to 7.5 ft3 (0.21 m3)	2.14	2.23	2.32
2 Operator of mixer greater than 7.5 ft3 (o.21 m3)	2.19	2.28	2.37
3 Hoist Operator	2.19	2.28	2.37
4 Motorized buggy and others operator	2.09	2.18	2.27
5 Fixed crane operator	2.54	2.63	2.72
6 1st class heavy equipment operator	3.56	3.65	3.74
7 2nd class heavy equipment operator	3.14	3.23	3.32
8 Light equipment operator	2.69	2.78	2.88
J. Drivers			
1 Heavy truck driver	2.70	2.79	2.88
2 Light truck driver	2.36	2.45	2.54
3 Light vehicle driver	2.09	2.18	2.27
K. Mechanics			
1 1st class mechanic	3.14	3.23	3.32
2 2nd class mechanic	2.38	2.38	2.56
3 The repariman or oilman	2.03	2.03	2.13
L. Steel worker(*)			
1 1st class steel worker	3.57	3.66	3.75
2 2nd class steel worker	3.06	3.15	3.24

M. Welder(*)			
1 1st class steel worker	4.84	4.93	5.02
2 2nd class steel worker	3.82	3.91	4.00
N. Pipeman(*)			
1 1st class pipeman	4.21	4.30	4.39
2 2nd class pipeman	3.44	3.53	3.62
O. Welder(&)			
1 1st class welder	2.77	2.86	2.95
2 2nd class welder	2.54	2.63	2.72
P. Steel worker (&)			
1 General helper	1.90	1.95	2.00
2 Apprentice	2.10	2.15	2.20

(*) Workers on site.

(&) Workers in shop for steel structures and maintenance.

Source: CAPAC, Lista de Precios de Materiales de Construccion, No.51

X PORT ADMINISTRATION, MANAGEMENT AND OPERATION

10.1 Outline of Port Administration, Management and Operation

10.1.1 National Port Authority (APN)

1. The National Port Authority (hereinafter referred to as APN), established in 1974 by Law # 42, aiming at:

a) Promoting maritime activities, planning the national port system and developing ports and harbors through implementation of adequate policies.
b) Building, improving, expanding and maintaining port facilities and equipment.
c) Providing port services and supervising the ports management and operations.

2. APN is responsible for the construction, maintenance, management and operation of ports and harbors in the Republic of Panama. APN as a national autonomous institution controls seventeen ports, including the international ones that handle container cargo, such as the Port of Balboa and the Port of Christobal. Panama has four other ports, including private ones. APN is under concession contract with private sectors on the development of the port of Manzanillo and the Port of Coco Solo Norte.

In order to attain its objectives, APN will carry out the following:

a) To elaborate and implement a plan for the development of the national port system.
b) To operate national ports and their facilities, except the ones which were granted concessions to private companies.
c) To plan, design, construct, and improve the national ports. The construction of port facilities should be done by APN or other institutions, including private companies.
d) To grant concessions for the development of existing and future ports.
e) To provide mooring facilities, services for cargo handling to vessels entering the port, and regulate these activities within the port area.
f) To load, unload, transfer, store the cargo and hand them over to the consignee.
g) To obtain or transfer its property, and engage in loans and contracts.

h) To charge rates and fees for service provided.
i) To manage its capital and economic resources.
j) To carry out administrative duties and supervise ports on concession.
k) To grant concessions through contract for the construction and exploitation of the ports and maritime installations at the following State treasure:
    a. Sea coast, bottom and banks,
    b. Bed of river, sea coast and estuary
l) Other applicable laws and regulations.

10.1.2 Ministry of Planing and Economic Policy (MIPPE)

3. APN is under control of the Planning and Economic Policy Ministry , (hereinafter refereed to as MIPPE), which is in charge of the national economy and development plan through coordination with different ministries and institutions.
APN should coordinate with MIPPE on the matter of port development, planning, budgeting, and budget implementation, etc.

4. Under the Minister and Vice Minister, MIPPE has several divisions. For example, Economic and Social Division, asseses APN's investment budget, while the National Budget Division handles and controls the operational budget of APN.

5. MIPPE is responsible for the execution of :

a) "Strategy of National Development & Economic Modernization"

b) "Action plan of National Development and Economic Modernization."

6. In order to carry out these policies, MIPPE has a special board headed by the Vice President of the Republic. Therefore, APN, which is the management authority of national ports and harbors, must work in cooperation with MIPPE.

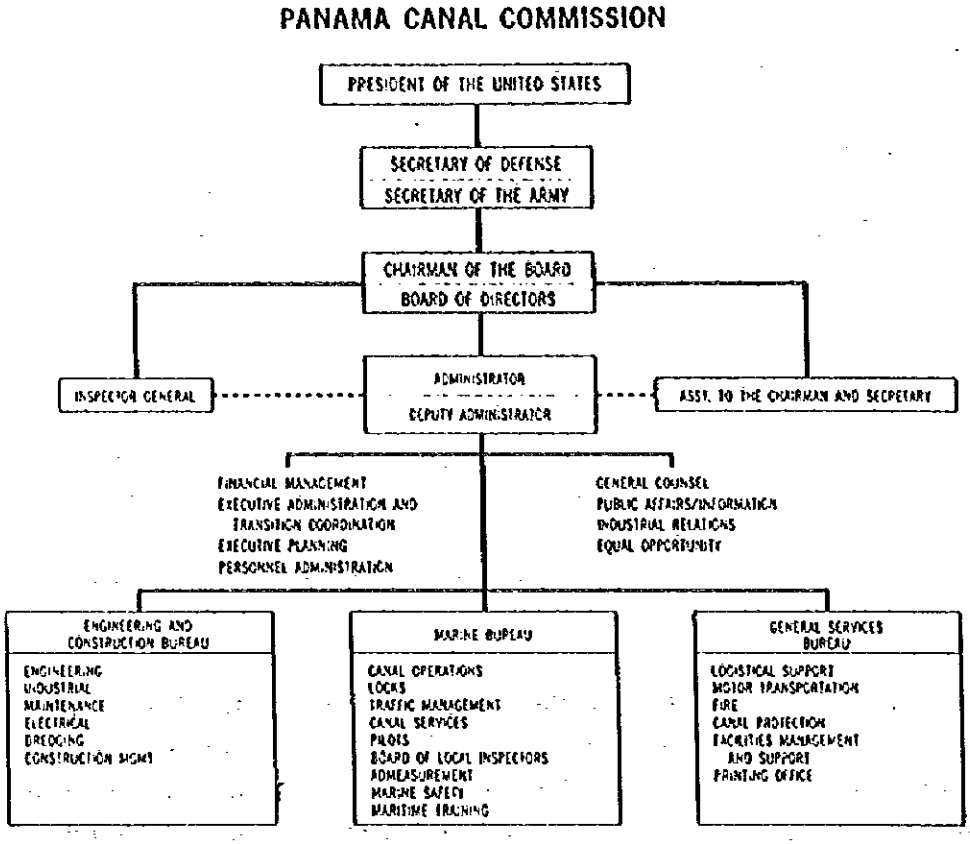
10.1.3 Panama Canal Committee (PCC)

7. Two of the main ports, Balboa and Cristobal are located at both entrances of the Panama Canal. Panama Canal Committee (hereafter refers to as PCC) has exclusive control over these areas. PCC is a special commission where the

U.S. and Panamanian governments work together, replacing the former Panama Canal Company. PCC is responsible for the whole management and operation at the Canal Zone until December 31,1999 when the Commission will gradually transfer its right of management and operation to the Panamanian government from the United States. Toward 1999, the number of Panamanian employees working at PCC will gradually increase in comparison with the number of Americans. Figure 10-1-1 shows the organization of the Panama Canal Commission.

8. In order to carry out the responsibilities of the United States with respect to the Panama Canal, the Commission manages, operates, and maintains the Canal, and provides for the orderly transit of vessels through the Canal. Under the Panama Canal Treaty, the Commission is to perform these functions until the time of December 31, 1999. After that, the Republic of Panama will suppose to have full responsibility for the Canal.

9. In accordance with the Panama Canal Treaty, the Canal operation is conducted on a self-financing basis. The Commission should recover all costs of operating and maintaining the Canal through its tolls and other miscellaneous revenues. All revenues are deposited in the U.S. Treasury account which is known as the Panama Canal Revolving Fund. The resources in the fund are available for continuous use and serve to finance the Canal operating and capital programs which are reviewed annually by the Congress.



Source: Panama Canal Commission

Figure 10-1-1 Organization of Panama Canal Commission

10. The Interoceanic Regional Authority (ARI) was established in 1979. ARI is in charge of the development plan for transfer of the Canal Zone which surrounds the Balboa and Christobal Ports. In regard to the development and management through privatization, APN has to work in cooperation with the ARI.

10.2 Organization

10.2.1 Organization of APN

11. In order to survive competition with other international containerized ports outside of Panama and to become a "Container Load Center of the Americas", APN is being reorganized. APN is seeking ways for efficient management and operation toward the privatization.

12. The organization chart as shown in Figure 10-2-1 is still under adjustment at this stage.

13. APN has an Executive Committee as the superior decision maker, at the highest position of its organization.

14. The Executive Committee consists of seven members:

a) Minister of Commerce and Industry (President)
b) Minister of Public Works
c) Minister of Finance and Treasury
d) Minister of Planning and Economic Policy
e) A representative of the port workers
f) A representative of the users of the port
g) APN General Director (Secretary)

15. The functions of the Executive Committee are as follows:

a) To establish port development policies to the State general transport plans.
b) To coordinate port services.
c) To approve annual program and project budget.
d) To allow the studies, design and to execute works related to the construction, expansion, improvement and maintenance of ports and port facilities and equipment.
e) To establish the entity organization and functions.
f) To determine internal rules.
g) To regulate, alter and impose tariff for port services.
h) To propose to the Executive Organization the delimitation of the land and maritime area.
i) To grant contracts for more than one hundred thousand Balboas.
j) To decide over obligations, claim agreement and lawsuit for less than ten thousand Balboas.
k) To allow extra judicial compensation payment upon verified responsibility of APN.
l) To request the Executive Organization to obtain the right to use or expropriate a particular parcel of land.
m) To settle claims from port users.
n) Other functions in conformity with the law and regulation.

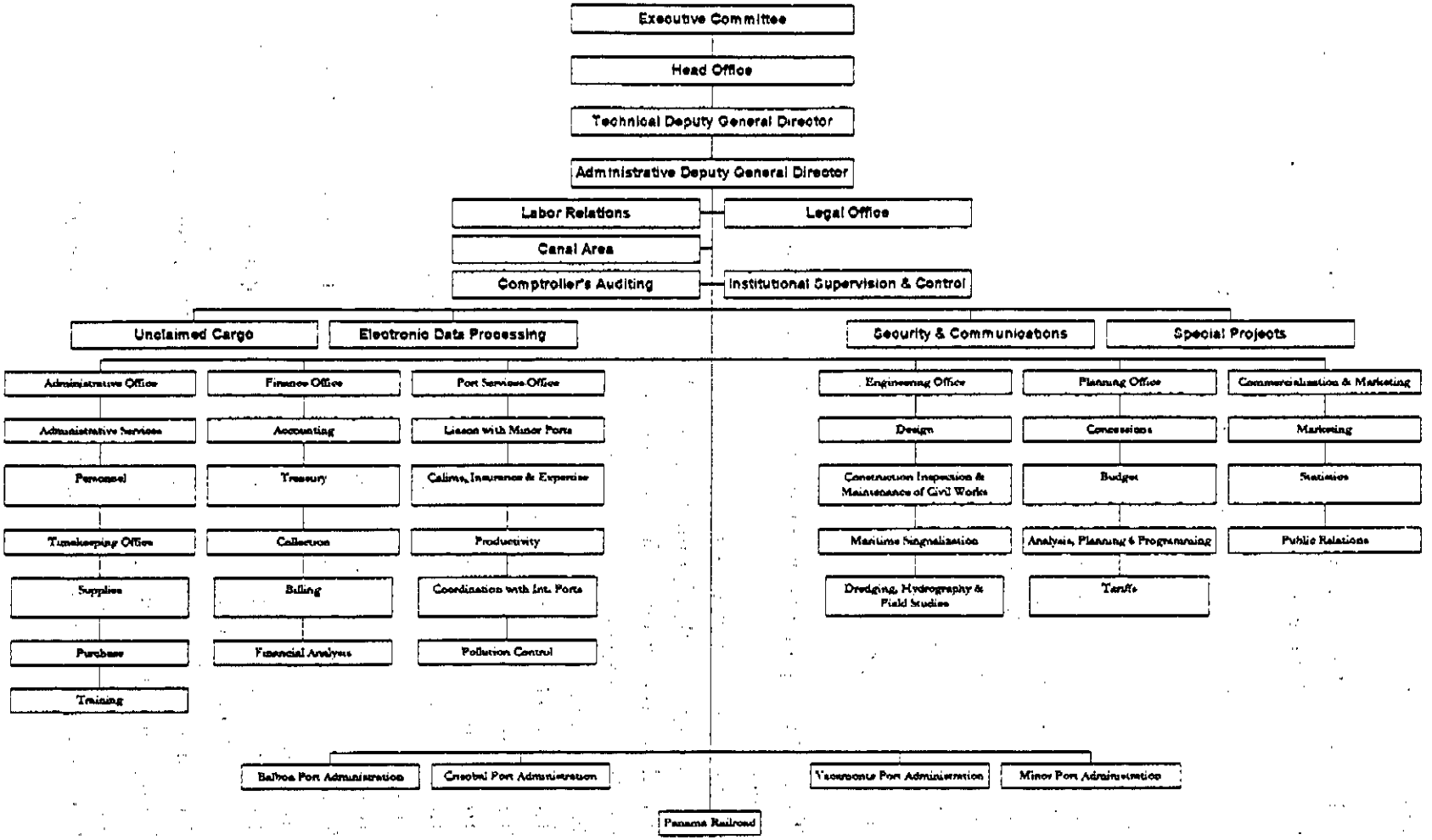


Figure 10-2-1 Organization of APN

16. APN General Director, shown just under the Executive Committee is the legal representative of APN and practically administrates APN. The Technical Sub-Director and the Administrative Sub-Director support the General Director through efficient direction, supervision and coordination.

17. In order to provide the General Director and General Sub-Directors with supporting services, there are several divisions and departments with specialized purposes such as, Labor Relations, Legal Consultants, Audit, Computer, and Public Relations, etc.

18. Additionally, ther are six main divisions, Administration Division, Finance Division, Port Services Division, Engineering Division, Planning Division and Marketing and Commerclalization. The Administration Division has seven departments concerning general administration and personnel matters, Organization, Personnel, Training, Purchase, etc. The Finance Division has five departments concerning financial and fiscal matters. The Port Service Division has five departments concerning provision of port services. The Engineering Division has four departments related to technical matters. The Planning Division has four departments related to port investment concession, budget, planning, and tariff. The Marketing and Commercialization Division has three departments for Marketing, Statistics, and Public Relations.

19. The administration offices of Port of Balboa, Cristobal, Vacamonte, Coco Solo Norte and minor ports are under supervision of APN Central Office. The Port of Balboa and Christobal were transferred from the United States to APN in 1979 in keeping with the Panama Canal Treaty.

20. Panama Railway, which is shown at the bottom of the chart, remains a part of APN. But Panama Railway is actually separated from APN according to the settings established by the President in 1991 as an independent organization. It has its own budget and establishes personnel management although it is under the same Executive Committee as APN.

10.2.2 Organization of the Port of Balboa

21. The organization of Balboa Port is shown in Figure 10-2-2. The Port Administrator represents the APN General Director at the premises of the port. He is responsible for planning, coordinating, supervising and controlling port activities.

22. In order to achieve more efficient management and operation, the Port Administrator cooperates with directors of each department within the port, and has to participate in meetings with the union to find solutions to any labor problems.

23. With regard to the general policies toward port activities, APN has to consult with the General Director and Operations Department. Two units, Support Unit and Linkage Unit, are supervised by APN. They are established in coordination with APN central office, thus management of port activities are carried out.

24. In addition, the Port of Balboa has six operational departments, as an executive level, engaged in cargo management. The main functions and duties of each department are given below: * each ( ) shows the number of staff

1) Support Unit

a) General Service (10): Give support to the administration and other departments. Supply merchandise and all necessities for the departments.

b) Internal Auditor (2): Monitor activities to ensure all is functioning well.

c) Claim Office (7): Put in all claims such as cargo damage, accident of vehicles of the institutions.

d) Port Security (54): Guarantee the security, protection of employee, facilities, installation and goods of APN. Four groups working 24 hours by rotary shift Attempt to curtail drug trafficking and stowaways.

e) Pollution Control (9): Keep the water of the port precinct free of garbage, avoid spill of hydrocarbon and any other contaminated substance. Investigate the cause of the pollution accident, give the necessary control and clean up right immediately.

2) Linkage Unit

a) Purchase Department (8): Receive the request for materials from all the departments and take it to the presupposed office for its entry. After distribution between the clerks specified for quoting, three commercial

firms evaluate it. Three sections are in charge of this, Maintenance, General Service, Mechanic.

b) Training Center (3): Organize and give courses related to the work atthe port. Analyze the port activities, and give employees proper course of planning, container handling, stevedore, etc.

c) Budget Section (2): In charge of the budget and related matters.

d) Public Relations (3): Provide the various business circles with information of port activities and related matters, creating a positive image of the Port of Balboa.

e) Personnel Department (7): In charge of personnel affairs for both administrative and operation workers. Also responsible for allocating vacation time and imposing disciplinary sanctions. Coordinate with central office for necessary steps in terms of appointment, license, intern courses, reclassification, transfer, promotion and evaluation of employees.

f) Accounting Office (4): Responsible for petit and rotary cash.

h) Time-keeping Office (10): Make up the time-keeping sheet to control working time of the employees.

i) Labor Relations (3): Maintain the discipline of employees at the port. Mediate and maintain harmonious relations between the union and the administration.

j) Social Welfare (3): In charge of the improvement of health, welfare and human relations of employees at the port.

3) Departments at Executive Level

a) Cargo Verification Dept. (41): Supervise all cargo that moves on the deck brought in and out by vessels and railroad. In charge of taking care of cargoes to and from the Port of Balboa, and ensuring that cargo is accompanied by the correct documentation.

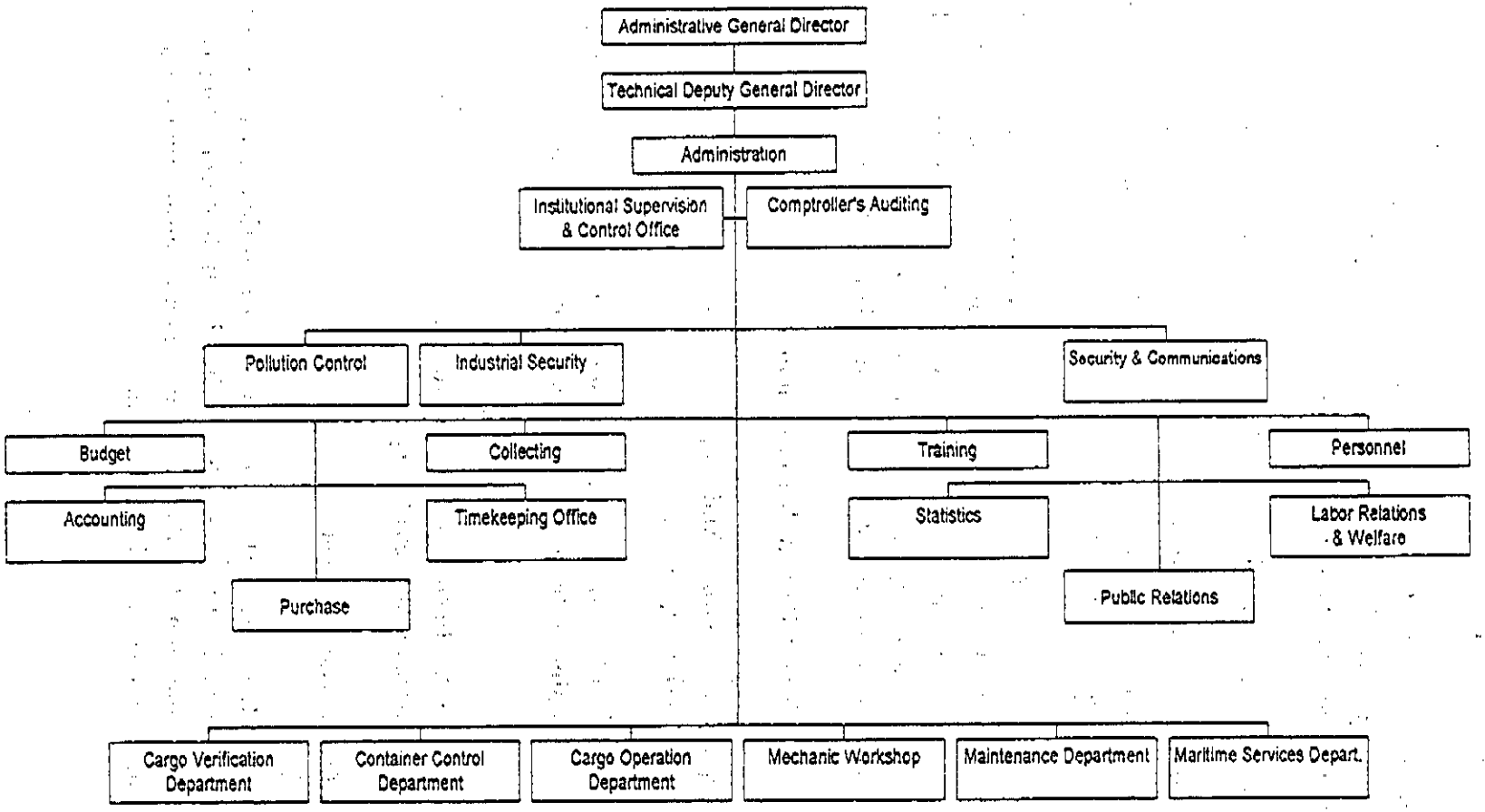


Figure 10-2-2 Organization of the Port of Balboa

b) Local Section (9): Coordinate and plan to deliver the local cargo to the different consignees and carriers according to the information from the Cargo Verification Department.

c) Cargo Operation Dept.(192): In charge of all necessary activities for cargo handling operations, for example, arrangement of gangs, keeping close contact with other related departments.

d) Container Dept. (22): Make classified cards according to the disposition with numbers of container cargo loading/unloading from the local agencies.

e) Maritime Service (82): Offer the vessels services, such as water supply, anchoring, launch and others during their stay at the port area.

f) Maintenance Dept.(29): In charge of a general maintenance service of the port facilities. 6 sections in the department, Plumbing, Carpenters, Painters, Refrigeration, Welding, Electricity and Bricklayer.

g) Mechanic Workshop (34): 7 sections in the Workshop, General Mechanic, Sheet Metal Work, Electrical Mechanic, Greasing/Lubrication, Welding, Heavy and Light Mechanic.

10.2.3 Personnel, Working Condition, Union

(1) Personnel

1) Number of personnel

25. Table 10-2-1 shows the number of APN employees by age in 1995. APN Central Office has less than 700 people, which is about 30% of the total of APN employees. It should be noted that the Administration Office of Balboa Port and Christobal Port have a large number of employees. The former has about 500 people and the latter approximately 900. The reason, as aforementioned, is that the both offices hold their own personnel to conduct cargo handling services, as was the custom before they were transferred to Panama.

26. As seen in the table, the number of employees over the age of 41 at Balboa represents 60.4 % and at Cristobal 71.5 %. The same age group at APN Central Office represents 42.5 %. In comparison with APN Central Office

employees, those at the Ports of Balboa and Christobal are considerably older.

27. Table 10-2-2 shows movement of the number of APN employees, during the period of 1989 to 1995. The total number of employees was reduced by only 4.6 % during this period, Partly because it was necessary to hire 187 employees from the former Defense Forces as Port Security Guards. The Administration Office of Balboa shows the highest reduction of personnel, 30.7%, followed by Cristobal Port with 17.9%. The number of personnel at APN Central Office in 1995 is almost twice as that of 1989. This was the result of the transfer of most employees to the Port of Balboa in 1988. Nevertheless, employment at APN Central Office has been slightly increasing during the following year.

2) Contracting, Transferring and Promotion of Personnel.

28. The Personnel Department of Central Office is in charge of the hiring of new employees. APN decides upon hiring new staff after an interview. They examine the skills and abilities of the candidate for a specific position at the department he/she will be applied for.

29. In regard to personnel at the Balboa and Christobal Ports, the Recruiting and Selection Unit chose some candidates of employees who passed an exam, consequently some may be employed by the approval of The Selection Committee. The Committee is composed of Port Administration representatives, the chief of the department in question, and representatives from the Personnel Department and the Union of workers.

3) Transfer and Promotion

30. When a certain position becomes vacant due to retirement or transfer among others, the Personnel Department (Recruiting Unit) makes the announcement that new staff is needed for the position. This announcement is set by what is called a "Contest", where the candidates are interviewed and their personal history is reviewed in terms of their skills, experience, etc.
Final approval will be made by the General Director.

31. In some cases, the employees are appointed from private companies or outside of APN.

Table 10-2-1 Number of APN Employees by Age Group in 1995

	Total	-30	31-40	41-50	51-60	61-
APN Central Office	633	103	261	179	83	7
share(%)	100%	16%	41%	28%	13%	1%
Port of Balboa	513	10	188	212	95	8
share(%)	100	2%	37%	41%	19%	2%
Port of Cristobal	852	26	218	397	188	27
share(%)	100%	3%	26%	47%	22%	3%
Port of Bahia Las Minas	6	2	0	2	2	0
share(%)	100%	33%	0%	33%	33%	0%
Port of Vacamonte	158	14	49	63	27	5
share(%)	100%	9%	31%	40%	17%	3%
Other Ports	72	10	26	16	15	5
share(%)	100%	14%	36%	22%	21%	7%
Total	2234	165	742	869	410	52
share(%)	100%	7%	33%	39%	18%	2%

Table 10-2-2 Number of APN Employees in 1989-1995

	1989	1990	1991	1992	1993	1994	1995
APN Central Office	366	658	663	649	601	626	689
Share(%)	100%	180%	181%	177%	164%	171%	188%
Port of Balboa	723	514	493	504	470	487	501
Share(%)	100%	71%	68%	70%	65%	67%	69%
Port of Cristbal	1082	855	917	902	866	892	888
Share(%)	100%	79%	85%	83%	80%	82%	82%
Port of Coco Solo	18	16	15	15	14	17	3
Share(%)	100%	89%	83%	83%	78%	94%	17%
Port of Bahia Las Minas	3	2	2	3	2	2	5
Share(%)	100%	67%	67%	100%	67%	67%	167%
Port of Vacamonte	184	167	174	170	165	165	153
Share(%)	100%	91%	95%	92%	90%	90%	83%
Other Ports	63	59	71	75	70	80	87
Share(%)	100%	94%	113%	119%	111%	127%	138%
Total	2439	2271	2335	2318	2188	2269	2326
Share(%)	100%	93%	96%	95%	90%	93%	95%

32. In regard to promotions at the port, the operation staff is evaluated based on experience, skills, and training.

33. Generally, a newly recruited member of the staff begins with the position of stevedore or manual worker. Afterward, following the aforementioned evaluation, the worker could become the Chief of pier, Crane operator on board.

4) Exchange of Personnel between the Central Office and Balboa Port.

34. Due to the difference in working conditions, such as different wage levels, exchange of personnel between APN central office and the Balboa Port could not be carried out.

35. On the other hand, the Personnel Department at the Central Office has a close relationship with the Personnel Section of the Port Administration Office on personnel management. For example, instead of being under the supervision of the Administration of the Balboa Port, Personnel Section is directly connected to the Central Office. Therefore, contracting, transfer and promotion are directed from Central Office, with the exception of additional workers, which the Administrator of the Port establishes through the Central Office.

36. In general, Personnel Section at the Port of Balboa is in charge of handling such routine matters as attendance, permission for vacations, etc.

5) Personnel Training System

37. The personnel training for employees is mainly provided to the operation workers. The Training Department of the Administrative Division is in charge of preparing the necessary materials and implementing the training. The operation staff can also participate in training courses held by the National Institute of Professional Formation (INAFORP), the Panamanian official institute for labor training, besides receiving internal training. The employees who complete the courses usually become trainers for APN internal training courses aforementioned.. Additionally, the operation staff may join training courses held at the International Labor Organization (OIT) and arranged by APN Training Department. These courses are regularly held in Central and North America.

(2) Working Conditions

38. APN has two types of wage system. One is for the port employees at the

port of Balboa and Christobal, and the other is for the rest of the workers.

39. The former system was established in 1986. At the port of Balboa and Cristobal, APN adopted the dual payment system for 8 years from 1979, when both ports were transferred to the Republic of Panama form PCC, until 1986. The one is for reverted employees who started their careers before 1979 and used to be paid according to the US payment system. The other is for workers employed after 1979. In order to equalize their working condition, APN and the Unions of both ports came to the agreement in 1986 after long negotiations. An efficient independent wage system has not yet been introduced.

40. According to the law, the age for retirement is fixed at 62 years for male, and 57 years for female. No early retirement allowance is prepared at all.

41. Salaries are fixed according to the entry level position, which means that experience at APN, age and other factors are not taken into account. However, wages vary depending on the type of job, such as administration and operation. Even wages for the same position are sometimes different depending on importance. For example, there is a difference in wages between Balboa and Cristobal Ports because the latter is more modernized.

(3) Labor Union

42. There are two port Labor Unions in APN. One is at the Port of Christobal, the other one is the "Balboa Syndicate" at the Port of Balboa. In Panama, union activities of public officials are basically prohibited. However, these two unions are exceptionally allowed to organize the union by the Law #39 and #40, because they were authorized by the Panama Canal Treaty in 1979. The government used to subsidize them, but that practice has been stopped.

43. Other employees at APN organized a Worker's Association, not to handle labor disputes, but for promoting mutual friendship.

44. Agreements between APN and the Labor Unions were concluded in 1982 and 1986, stipulating some working conditions, such as some kinds of allowances, social welfare, etc.. Since these two agreements regulate basic working conditions for the employees at both ports, items at the agreement should be adhered to, even if the port management system is changed.

45. The Labor Relations Division was established in APN Central Office to

facilitate coordination between APN and the Unions. Requests from the Unions are transferred to the Labor Relation Division through the Administrative Unit of each Port. Meeting with the General Director and General Secretary of each unions is regularly held once a month to discuss various issues including the requests from unions. As an issue of the privatization is one of the greatest concern for both sides, it has recently been on the agenda at many meetings. In addition to the organized meeting of the upper levels, the Labor Relations Division sometimes holds a meeting of practical level for the same purpose.

46. At the Port of Balboa, almost all workers, except for only eighteen employees, are union members. Table 10.2.3 shows the number of union members in 1989-1995.

Table 10-2-3 Number of Union Members in 1989-1995

	1989	1990	1991	1992	1993	1994	1995
Balboa Sindicate	689	496	475	483	450	469	483
Share(%)	100%	72%	69%	70%	65%	68%	70%
Cristobal Sindicate	1016	822	889	881	847	876	872
Share(%)	100%	81%	88%	87%	83%	86%	86%

*Including both permanent and contract employees

10.3 Port Management and Operations at the Port of Balboa

10.3.1 Present Condition

(1) Management of Water Area

47. PCC controls the water area within the Panama Canal Zone. Permission of PCC is requested for activities in this area. PCC strictly controls navigation of vessels into/around the area. The navigation controlled areas include the port areas of Balboa. Therefore, all vessels entering the port areas of Balboa have to take pilotage from PCC with the exception of small ships. Every vessel passing through the Canal must follow the navigation rule without exceptions.

48. The port activities inside of the boundary of the ports are under control of APN administration. Law #42 regulates management of the port area.

According to the regulation, business companies are obliged to sign contracts with APN when engaged in some activities at the water area of the port. They are requested to follow the procedure and to submit the required documents to the Concession Dept. of APN, where the documents are examined by the corresponding divisions. After being referred to the Executive Committee, the contract is fixed. If someone breaks the rule, APN can take appropriate measures through the police.

49. The managing system for other areas outside of the Panama Canal Zone, including the port area, is complicated. APN is in charge of the installation of maritime facilities such as the lighthouse, buoy in this area. Ministry of Finance and Treasury is in charge of navigation control through the Consular & Vessel Division. Ministry of Justice is in charge of security.

50. In regard to the water area usage, the competent authority varies according to the activities. For example, the Ministry of Commerce and Industry administrates water area usage if the activity concerns port activities. For exclusive use, and for construction work in the area, permission is necessary from the corresponding Authority.

51. According to Law #42, APN administrates the coastal area of the country except for the Panama Canal Zone. Although APN does not possess any land at the coastal area, anyone who intends to carry out any types of port activity must close a concession contract with APN. For example, if someone would like to construct a port facility at the port area, he has to submit the required official documents to APN to ask for permission. But this procedure is not necessary for non-port related activities, and the area administrated by APN is only ten meters wide from the coast line.

(2) Management of Vessels and Cargo Handling

52. Vessels entering the port must follow procedures in order to make a safe stay at the port area. Following are the regulations concerning the entry, departure, safe usage of the port, port services and cargo handling.

1) Management of Berthing and Departure of Vessels

53. As the Port of Balboa is located at the entrance of the Panama Canal, pilotage service by PCC is offered to the vessel entering the breakwater at the port. For safety in the port area, the pilot advises on navigation speed limit. Port

Administrator decides the number of tug boats needed. Vessels entering into the port area must hoist both their national flags and Panamanian flags, and maintain appropriate illumination in the ports. If necessary, the Port Administrator can indicate vessels to shift to another place. When vessels do not comply, the Port Administrator can take proper measures to remove them. The law also regulates the procedures or measures to be taken in case of handling of dangerous cargo.

54. The information from the calling vessel could be provided to PCC through the Port Administration Office for pilotage. The Shipping Lines that intend to make their vessel call at the Balboa Port must submit the entering application form directly or through their local agency to the Port Administrator 48 hours in advance. The details of time and date of the arrival/departure, previous/next port to call, types of cargo loading/unloading, its volume and services needed, etc. are included.

55. Maritime Service of the Port Administration Office receive the application and gets in touch with PCC for pilotage. As aforementioned, the towing service is offered by the private sector at the Balboa Port, following the information from PCC.

2) Berth and Shed Allotment

56. According to the information from the Shipping Agency, the Port Administration Office will set a berth and shed allotment. Cargo Handling Department is in charge of this for cargo vessels in collaboration with Maritime Section and the Maritime Services Department handles the other types of ships.

57. The rule of the berth allotment is generally on a "first come, first serve" basis. At the port of Balboa, the rule is basically the same. Berthing site schedule for vessels is decided at a regular meetings for berth allotment.

3) Operation System

58. The Cargo Operation Department arranges all activities necessary for loading/unloading cargoes onto/ from the vessel berthing, and assigns the crews to work on it in consideration of the labor force and equipment needed. Afterward, they give instructions to the foreman in order to ease the procedures.
Cargo handling in yard is executed by heavy operational equipment which locate containers and set them on chassis moving on to the vessel or the backyard.

59. In addition, they keep close contact with the Maritime Control Traffic, Bunkering (Fuel Supply), Water Supply, Immigration, Custom Clearance, Quarantine and Port Security. Now, at this stage, Balboa Port does not have any other groups of operations besides Cargo Operation Dept. of Port Office, APN.

60. Until 1993, there used to be one gantry crane equipped on Pier No.15 for container handling operated by a private company. The company made contract with shipping lines, and its employees were in charge of the operation of the crane. However, because of its decrepit facility and reduction of cargo volume, the company gave up the operation and withdrew the crane from the port.

4) Mooring, Water Supply and Bunkering

61. At the Port of Balboa, the Port Administration Office provides mooring and water supply service. The Maritime Service Dept. is in charge of these services independently. Bunkering service is offered by a private company at Balboa Port. The details of bunkering service are introduced later.

5) Custom Clearance, Immigration and Quarantine

62. The Finance Ministry is in charge of Custom Clearance in Panama including cargoes handled at the Port of Balboa. The Colon Free Trade Zone is the final destination of approximately 75% of container cargoes handled at the Balboa Port. The custom clearance procedure for these cargoes is extremely simple, which is an outstanding advantage of this area. The inventory checking system used here is not as strict as other areas of the world. Importers can draw out the cargo from the Port of Balboa to Colon Free Trade Zone by only submitting the simple form to the Custom Office which is on the 1st floor of the Port Administration Office.

63. The Ministry of Government is in charge of the entry formalities. The Immigration Office at the Port of Balboa is close to its administration office.

64. The Ministry of Agriculture is responsible of the quarantine for cargoes loading/unloading at the Port of Balboa. Its office is in the same building of the Immigration Office.

10.3.2 Present Condition of Privatization at the Port of Balboa

(1) The Outline of the Concession Procedure

65. When it comes to making concession contract with private companies, the procedure must be completed as follows:

a) The applicant has to submit to APN application documents containing required information.
b) APN examines the application documents submitted, and negotiates the concession fee. The Concession Department of Central Office, APN is in charge of this procedure.
c) The Concession Department and Legal Office make the draft of the concession contract and refer it to the monthly meeting of Executive Committee, which makes a decision on the contract.

(2) Port Activities Already Privatized

1) Bunkering Service

66. Fuel supply service for vessels has been already privatized. APN used to own the pipeline and be in charge of its maintenance, but since it cost a lot to maintain it, APN decided to transfer its right through a lease contract to a private company "Atlantic Pacific S.A."(hereinafter referred to as APSA). Although APSA must execute maintenance and pay a premium for each barrel of fuel, it keeps exclusive right to make use of the pipeline. As the fuel companies such as ESSO, SHELL, TEXACO are eager to use the pipeline connecting the fuel tanks with the berth, to provide fuel to vessels, then these companies pay the charge for using the facility.

67. In regard to bunkering services, vessels anchoring off shore receive fuel through barges connecting with the shore. This service is also offered by a private company.

68. APN receive a premium from APSA and anchoring charges from the shipping lines ($150,000 per month) , which is now an important source of its finance.

2) Towing Service

69. A private company "Smith International Harbour Towage Inc." provides towing services to the vessels berthing. This company has worked with PCC prior to the transfer of the Balboa Port to the Republic of Panama. The company is under a contract with APN, but it is not an exclusive one. Now, some other companies are interested in participating in this service, but the cargo volume handled at the Port of Balboa is not enough to welcome newcomers.

70. Although the number of tug boats needed for towing depends on the size of the vessels and weather condition, in most cases two are enough. This company owns 10 boats covering Balboa port and 4 ports in the Atlantic side including two privatized ones, Manzanillo and Coco Solo Norte. At Balboa, they have three tug boats, two of 2,000 hp and one of 3,000 hp. The company is in charge of maintenance of those in order to be ready for service at any time. The service charge is $1,250 per tug boat.

3) Dry Dock Service

71. A vessel in need of maintenance or repairs could receive services at dry docks owned by the private company "Braswel Ship Yard" at the Balboa Port. The company has three different-sized docks, and the largest one usually used for container vessels is as wide as the locks of Panama Canal. They are under lease contract with APN.

4) Inland Deposit Service

72. Five private companies are providing storage service at the Port of Balboa on a lease contract with APN. Two of them handle container cargo, and the other three are for car storage.

5) Grains Unloading Services

73. There are four private companies in competition to take care of the handling of grains.

(3) Port Activities Under Negotiation for Concession

1) Launch Service

74. APN is in charge of the launch service. It picks up the crews and convey them to the land for some shopping, meals and enjoying short tours etc. during anchoring time. An agreement with a Spanish private company "Trans Iberia" was reached. It will start providing this service in July 1996. The number of staff of the Port Administration Office engaged in this service is thirty nine. APN has already started the negotiation with Trans Iberia and decided to transfer twenty seven members to the new company, although the selection is still under consideration. The remaining twelve employees are estimated to remain in APN and be appointed to the Mechanical Dept., Cargo Operation Dept. or others.

2) Water Supply Service

75. Negotiations between APN and the Private Sector on the lease contract are now under way. The contract is estimated to take the same pattern as that of the bunkering service aforementioned. After an agreement is reached, consultations between APN and the union "Balboa Syndicate" would begin as a second stage in order to carry out the plan.

10.4 Comparison of Port Management and Operation at Other Ports

10.4.1 Ports in Panama

(1) Port of Manzanillo

1) Outline of Concession

76. Development of the Port of Manzanillo facing Manzanillo Bay began on December 5, 1993 when APN and Manzanillo International Terminal (hereafter referred to as MIT) agreed on a "Blanket Contract" granting the right to develop container terminals and port facilities, administrate and direct the terminal operations. MIT, joint venture of the automobile trading company of Colon and the stevedoring company of USA, has carried out operations, transactions, negotiations, and related port activities with private, public and both sectors according to the contract.

77. The joint venture signed a 20-year renewable concession and quickly installed RoRo berths and container facilities. Now the $100 million port handles so much traffic that expansion plans are already being considered.
This is so called "Built, Operate and Transfer(hereinafter referred to as BOT)" Project.

78. Furthermore, MIT is planning to construct the bridge connecting the Colon Free Trade Zone over the Manzanillo Bay.

2) Present Condition

79. In accordance with the contract, they developed the port facilities needed, and started temporary operations in May, 1994. They handled 10,000 TEU of container coargoes in the same year, and construction of facilities to accommodate berthing of four over-Panamax container vessels simultaneously was completed. The 600 meter container berth has a 84 ha Container Yard and is equipped with 2 gantry cranes and 4 super gantry cranes.

80. When a part of the Container Yard became available in October, 1995, MIT signed a contract with Alliance Group for berthing. Now, 10 Shipping Lines, such as APL, NEDL, OOCL, Maersk, Panamanian and others, have vessels calling at the port of Manzanillo.

81. MIT employs more than 600 people at this stage, but twice that number is guaranteed to come to work in the future when it wins the concession.

3) Concession Payment Received by APN.

82. MIT has an obligation to pay $6 per each container handled. Loading and unloading is counted as one movement. The Republic of Panama receives, through APN, tariff for docking, anchoring, lighthouse and buoys as follows:

a) Docking: There will be a $6.00 charge per disembarked vehicle. It is understood that no charges will be made for re-shipping of an unloaded vehicle.
b) Casting anchor: One cent of a dollar($0.01) per gross registered ton per whole or fraction of a day.
c) Lighthouse and buoys: Three cents of a dollar($0.03) per gross registered ton.

(2) Port of Coco Solo Norte

1) Outline of the Concession

83. The concession at the Port of Coco Solo Norte is owned by the Taiwanese container shipping line Evergreen, the world's largest container operator. In September 1995, Evergreen signed a 20-year concession to build a $100 million port in Coco Solo Norte on the Atlantic side of the Canal. The port is expected to move 200,000 TEU containers annually in the first four years.

84. The Port of Coco Solo used to be a domestic port, where MIT used to lease out its yard from APN for the merchandise. Evergreen started operations at pier No.1 and its northern back yard from July, 1996. The pattern of the concession is almost the same as that of MIT, which is also on the blanket contract.

85. While the concession at the Port of Manzanillo covers all areas of the port, the contract at the Port of Coco Solo Norte allows the company to execute the development limited at pier No. 1 and its northern backyard.

2) Present Condition

86. All the services offered to the vessels and those for cargo handling are supplied by private companies through concessions or the operational permit system. This condition is going to ease the privatization of the port, which soon will be converted into a modern container terminal thanks to the Colon Container Terminal Project by Evergreen. Development on Pier No.1 is almost ready. At the time of opening, two gantry cranes on 2 berths, 612 meters for container vessels, CFS, warehouses, maintenance and repair house and other port facilities are ready to begin cargo handling at the port.

87. Sea Land, the world famous American shipping line, has been making their vessels call at pier No.1 since December, 1991 renting approximately 4,000 square meters of land form APN. Sea Land is now negotiating with Evergreen on the possibility of continual calling at the berth even after July, 1996.

3) Concession Payment Received by APN

88. As aforementioned, this is the same type of concession as that at the Port of Manzanillo, APN will receive the same payment from Evergreen.

(3) Port of Cristobal

89. The Port of Cristobal is located at the Atlantic entrance of the Panama Canal. Because of its strategic location, the port is going to be privatized shortly, in order to develop its competitive position and to become the distribution cargo center of the area, offering services at competitive prices.

90. Both Cargo Operation Dept., APN and the private company "Delcargo" offer operational services to the vessels. Delcargo handles 25% of the volume of container cargo through agreements with APN, which will terminate by the end of 1996. APN has started negotiations with some other stevedore companies to conclude contracts.

91. The privatized port activities at the Port of Cristobal are the maritime service, towing service, fuel storage installation handling, launch service, chemical inspection service, operation(stevedore) service and vehicle storage.

10.4.2 Examples of Port Administration in the World

92. There are several types or systems of port administration in the world. The general trend, however, is more for private participation rather than direct government involvement. Some examples of port administration systems are as follows:

(1) The Ports in Japan

93. A characteristic point of the system of Japanese port management and operation is that a cargo handling operation is quite privatized, for "the Port and Harbor Law" prohibits a public sector from participating in this field.

94. Port authority, usually the local government, grants a license to private sectors to use the yard for their operation. On the other hand, public corporation with 100 percent capital share from the local government leases its terminal to specific shipping lines by contract.

95. The central government is responsible for overall control of Japanese ports, introducing basic policies, concrete planning criteria and technical standards for port development. Therefore the government ensures that the individual port plans prepared by the port authority are in full coordination with it. The port authority is in charge of port planning, asset, construction of port

facilities and its management. Additionally, it is responsible for allotment of public berths, short and long term use of facilities by private operators, thus, it collects port charges, such as port dues, wharfage, rental fee for cranes, storage shed, yard, etc.

96. Although there are still many regulations set by the central government and the port authority in order to control the cargo handling business, those regulations are gradually being relaxed.

(2) The Ports in Argentine Republic

97. The Central Government used to have the executive rights of port administration in Argentina, but those have been transferred to the local governments, which grant concessions to private companies for port management and operation. The local government as a new port authority is responsible for its personnel, financial affairs, and investments in port facilities.

98. The remaining port activities that the central government is concerned with are matters which essentially only the central government is able to manage, such as marine safety in the port area, port planning, negotiation with other public sectors on the matter of traffic problems, and sensitive matters directly related to the national interest.

99. Thanks to the adoption of this system, the port of Buenos Aires has an efficient port management and operation.

(3) The Ports in New Zealand

100. Since 1988, New Zealand has promoted at each port the establishment of joint ventures with private sectors, which are responsible for overall management and operation activities of the ports.

101. This project has made it possible to provide users with port related services which are actually needed. The government succeeded in reducing port charges, especially stevedore fees, by reducing the number of workers.

102. This is regarded as the ultimate pattern of privatization, which is also introduced at the ports in the United Kingdom.

(4) The Port of Hong Kong

103. The Government of Hong Kong granted concession for the building of port facilities, management and operation to the private sectors. According to this concession, there exist four independent joint-stock companies in charge of terminal management and operation in H.K.

104. Due to the fact that land is limited in H.K., the Government is only responsible for the reclamation of water area and its distribution among terminal operators.

105. This system of port management and operation can be seen at the final stage of the privatization process.

XI PRESENT FINANCIAL CONDITION

11.1 Accounting System of APN

(1) Fiscal Year

1. The fiscal year of APN is from January 1 to December 31.

(2) Regulation

2. The financial procedures are regulated by the Fiscal Code, which was established in 1924. It is the only law regarding the public finance that has been passed by the Diet. Concerning the details of the financial procedure, APN has to follow the regulations established by the General Control Office (GCO).

(3) Organization of Accounting System in APN

3. The organization of accounting system in APN is as follows:

1) Planning Division
   Financial planning activity of APN is made by this office.
   a) Budget Department: drafts and evaluates budget
   b) Tariffs Department: sets and revises tariffs
   c) Concessions Department: estimates the value of the concession fee

2) Purchase Department of Administrative Division
   To implement the public tender

3) Financial Division
   a) Treasury Department: takes the necessary steps for payment and payroll
   b) Billing Department: calculates the billing account
   c) Collection Department: collects the charges
   d) Accounting Department: records financial activity

(4) Making of the Financial Statement

4. According to the Fiscal Code and the regulations established by GCO, APN has to make the balance sheet, the profit and loss statement and the budget enforcement statement monthly. The statements of the previous month must be made for fifteen days. They are presented to GCO and MIPPE.

11.2 Budget

5. The budget of APN is classified into an operational budget and investment budget. There are further classifications related to port allocation and purpose.

11.2.1 Operational Budget

(1) APN

6. Table 11-2-1 and Figure 11-2-1 outline the operational budget of APN from 1990 to 1996. The total budget averaged about 45,000 million Balboas until 1991, after which it rose to a level of 60,000 million Balboas and beyond.

7. Items for personnel expenses and transfer expenditure including contribution to the treasury account for a large portion of the total budget. They cover 47.0% and 36.4% of the total budget in 1996. The personnel expenses increased greatly during the period between 1991 and 1992, because of compensating workers for the bonus which was not paid in the 1980's. The expenses of temporary workers increased abruptly from 1993 to 1995.

8. The transfer expenditure, especially transfer to the Government, in 1995 was twice the level of 1994. The reason for the increase of transfer to the Government is explained in 11.3.4.

Table 11-2-1 Operational Budget of APN

(1,000 B.)

year	1990	1991	1992	1993	1994	1995	1996
Personnel Services	23,224	24,688	29,143	28,021	28,758	31,364	28,934
Non Personnel	4,380	4,303	3,009	3,995	3,586	3,672	2,875
Materials & Supplies	3,260	3,952	3,023	3,923	2,809	3,168	2,228
Machinery and Equip.	108	477	460	685	257	452	168
Current Transfer	7,766	5,617	14,147	18,717	12,262	26,355	22,406
Debt	6,031	6,729	9,862	8,870	9,934	4,652	4,800
Other	83	60	60	185	170	155	120
Total	44,852	45,826	59,704	64,396	57,776	69,818	61,531

Source: APN

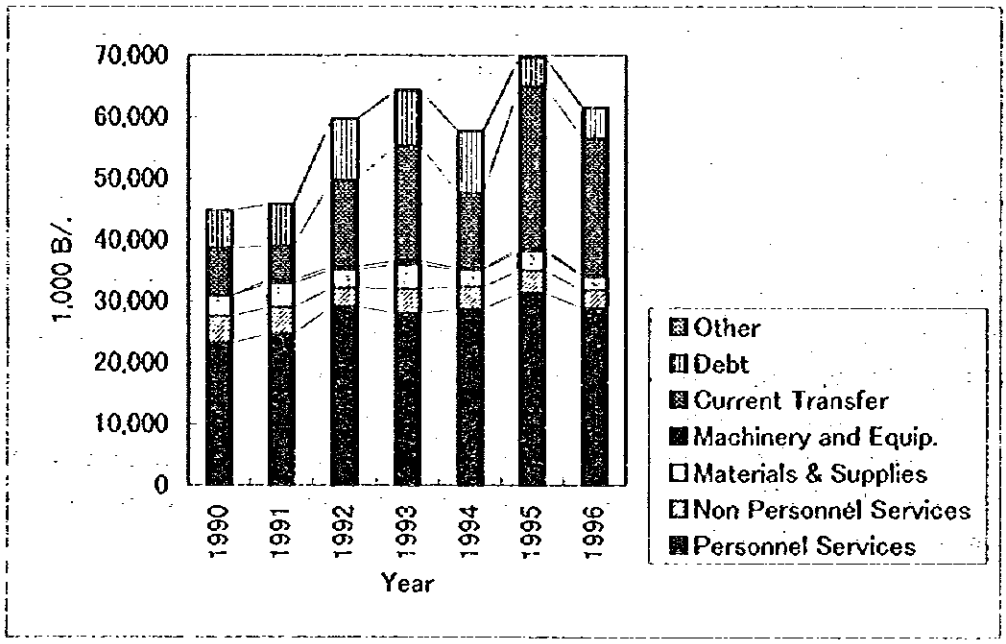


Figure 11-2-1 Operational Budget of APN

(2) Balboa Port

9. Table 11-2-2 and Figure 11-2-2 outline the operational budget of Balboa port from 1990 to 1996. The total budget increased gradually from 1990 to 1995. The major part of the budget is occupied by personnel expenses. This item increased greatly in alternate years, namely, in 1992 and 1994. The reason is that salaries are raised in alternate years. On the assumption that privatization will be introduced to port operation, personnel expenses are forecast to decrease in 1996.

Table 11-2-2 Operational Budget of Balboa Port

(1,000 B.)

year	1990	1991	1992	1993	1994	1995	1996
Personnel Services	5,031	5,175	6,221	6,061	6,926	7,049	6,682
Non Personnel	666	607	437	606	648	613	466
Materials & Supplies	869	979	739	1,045	633	864	589
Machinery and Equip.	5	82	94	173	119	50	2
Current Transfer	704	742	837	732	852	948	921
Other	30	30	30	92	97	89	60
Total	7,305	7,615	8,358	8,709	9,275	9,613	8,720

Source: APN

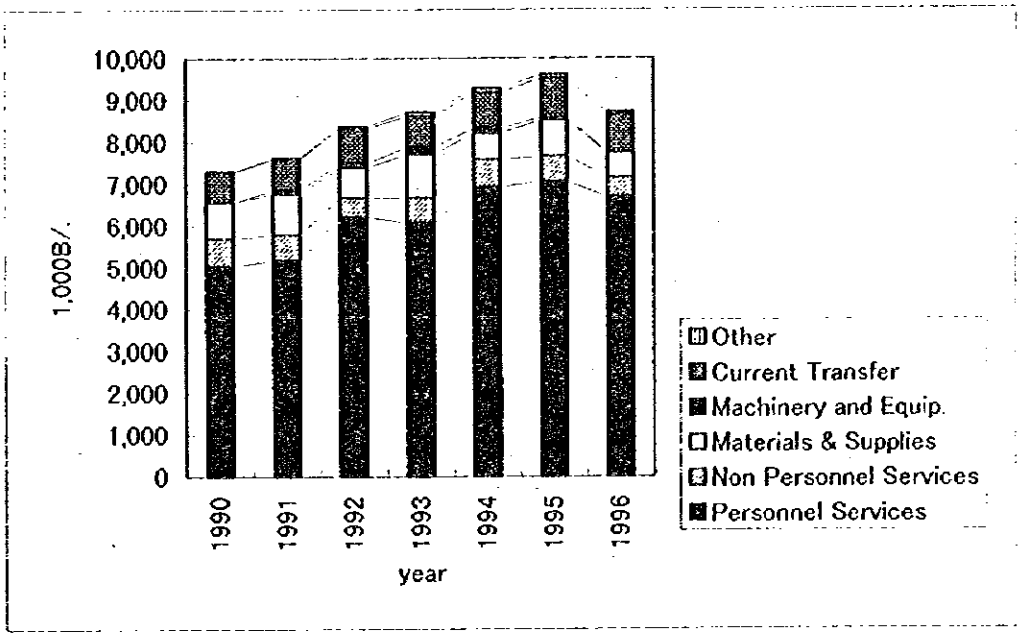


Figure 11-2-2 Operational Budget of Balboa Port

11.2.2 Investment Budget

(1) APN

10. Table 11-2-3 and Figure 11-2-3 outline the investment budget of APN from 1992 to 1996. The total investment budget has been decreasing with the exception of 1993, when the dredging budget was included. On the assumption that privatization is introduced to port operations, the total investment budget in 1996 will be reduced drastically.

11. For the period 1991 to 1995, APN proposed its second Five Years investment Plan. Since the Plan is an internal decision of APN, it is not supported officially by the Budget Law. However, each year's budget of APN is made on the basis of this Five years Investment Plan. Assuming that privatization would be introduced, the third Five Years Investment Plan was not proposed.

12. The investment condition was drastically changed in 1989 and 1990, when economic and political conditions were confused. In those years, investment budget was not approved completely. In 1992, the investment budget recovered to the same level as before 1990.

Table 11-2-3 Investment Budget of APN

(1,000 B.)

year	1992	1993	1994	1995	1996
Civil Works	1,615	1,465	4,515	1,900	1,500
Equipment	1,701	3,005	990	2,776	95
Rehabili. & Maintain.	3,768	7,363	3,720	3,875	575
Maritime Signal	245	315	650	250	100
Dredging	2,650	2,000	0	0	0
Other	1,800	557	375	215	400
Total	11,779	14,705	10,250	9,016	2,670

Source: APN

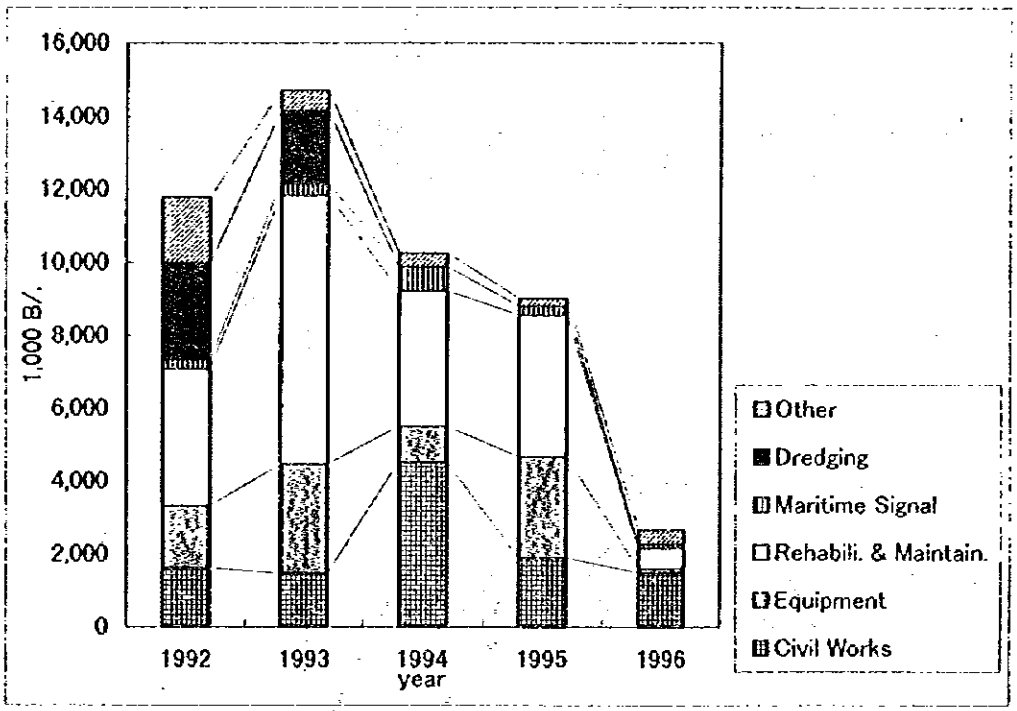


Figure 11-2-3 Investment Budget of APN

13. Table 11-2-4 and Figure 11-2-4 show the investment budget by port. The port of Balboa had the highest investment budget of all ports in Panama. The budget of Balboa port was about 3.8 million Balboas in 1995, but is only 1.4 million Balboas in 1996. Judging from the limited budget, it would be difficult to perform sudden large scale repairs and maintenance.

Table 11-2-4 Investment Budget by Port

(1,000 B.)

year	1990	1991	1992	1993	1994	1995	1996
Balboa	2,045	4,395	3,983	6,544	3,335	3,830	1,425
Cristobal	1,454	3,250	5,330	3,977	3,035	1,485	0
Vacamonte	278	1,245	687	1,049	1,580	1,285	450
Coco Solo	50	100	1,188	2,230	1,150	985	0
Other	1,180	386	590	905	1,150	1,431	795
Total	5,007	9,376	11,778	14,705	10,250	9,016	2,670

Source: APN

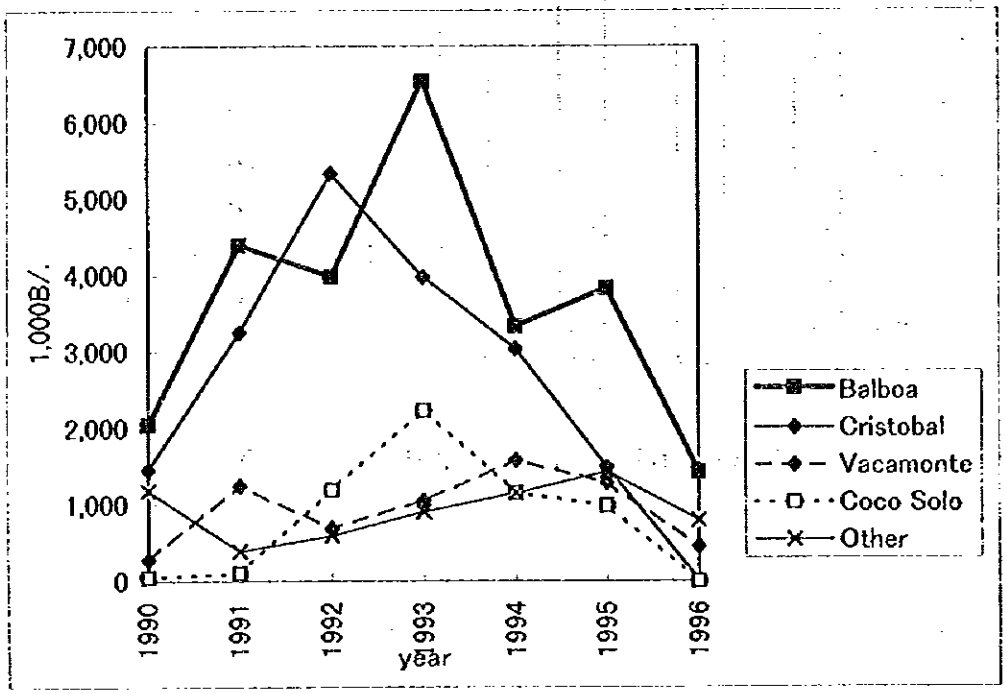


Figure 11-2-4 Investment Budget by Port

(2) Balboa Port

14. Table 11-2-5 and Figure 11-2-5 show the change of the investment budget of the Balboa port from 1990 to 1995. The table and Figure show two distinct periods, namely, the first period of the rehabilitation from 1990 to 1992 and the second period of the new construction from 1993 to 1995. In the first period, the core of the investment budget was the rehabilitation, the maintenance and the dredging. The core of the investment budget of the second period was the civil works and the equipment. However, the rehabilitation and maintenance continued in the second period.

Table 11-2-5 Change of the Investment Budget of Balboa Port

(1,000 B.)

year	1990	1991	1992	1993	1994	1995	1996
Civil Works	0	0	400	500	1,990	1,200	1,300
Equipment	0	0	401	1,662	35	1,130	0
Rehabili. & Maintain	2,045	1,438	1,350	3,265	1,310	1,500	125
Dredging	0	2,957	867	1,110	0	0	0
Other	0	0	965	7	0	0	0
Total	2,045	4,395	3,983	6,544	3,335	3,830	1,425

Source: APN

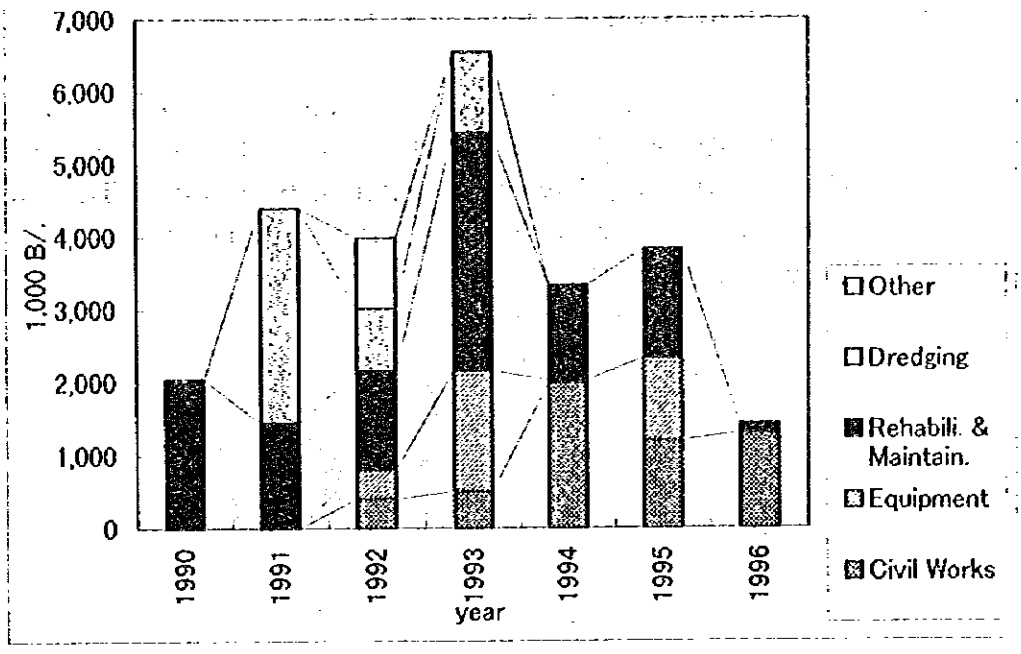


Figure 11-2-5 Change of the Investment Budget of the Balboa port

11.2.3 Budget-making Procedure

15. The budget of APN is fully controlled by MIPPE. From the beginning of budget preparation APN has to follow the guidelines set by MIPPE for the next year. After APN prepares the draft budget, MIPPE assesses the draft and then submits it to the Parliament for approval. Therefore, APN has no autonomy as far as its budget decision is concerned.

11.3 Present Financial Condition of APN

11. 3.1 Revenues and Expenses

16. The revenues recorded in the statement of income of APN reflect only port operations in 1995. The expenses recorded are the operating expenses and the financial expenses in 1995. The financial expenses are explained in 11.4.2.

(1) Revenues

17. Table 11-3-1 and Figure 11-3-1 show revenues of APN from1990 to 1995. APN gets no subsidy from the National Government in principle. The total revenues gradually increased from 1990 to 1994. There was a big fall from 73.9 million Balboas in 1994 to 64.6 million Balboas in 1995.

18. It appears that cargo handling services account for the greatest part of revenues in every year. The services to ships and concessions have been increasing steadily. The services to the cargo have fluctuated from 1993 to 1995. There was an especially big fall of 11.4 million Balboas from 1994 to 1995. As a result, total revenue has also fluctuated recently.

Table 11-3-1 Revenues of APN

(1,000 B.)

year	1990	1991	1992	1993	1994	1995
Services to Ships	8,404	8,956	9,578	9,871	10,624	11,757
Services to the Cargo	36,758	47,890	52,478	50,065	54,843	46,479
Concession	5,029	5,362	5,869	6,327	6,621	7,055
Other	1,456	2,417	1,646	1,651	1,828	2,328
Total	51,647	64,625	69,571	67,914	73,916	67,619

Source: APN

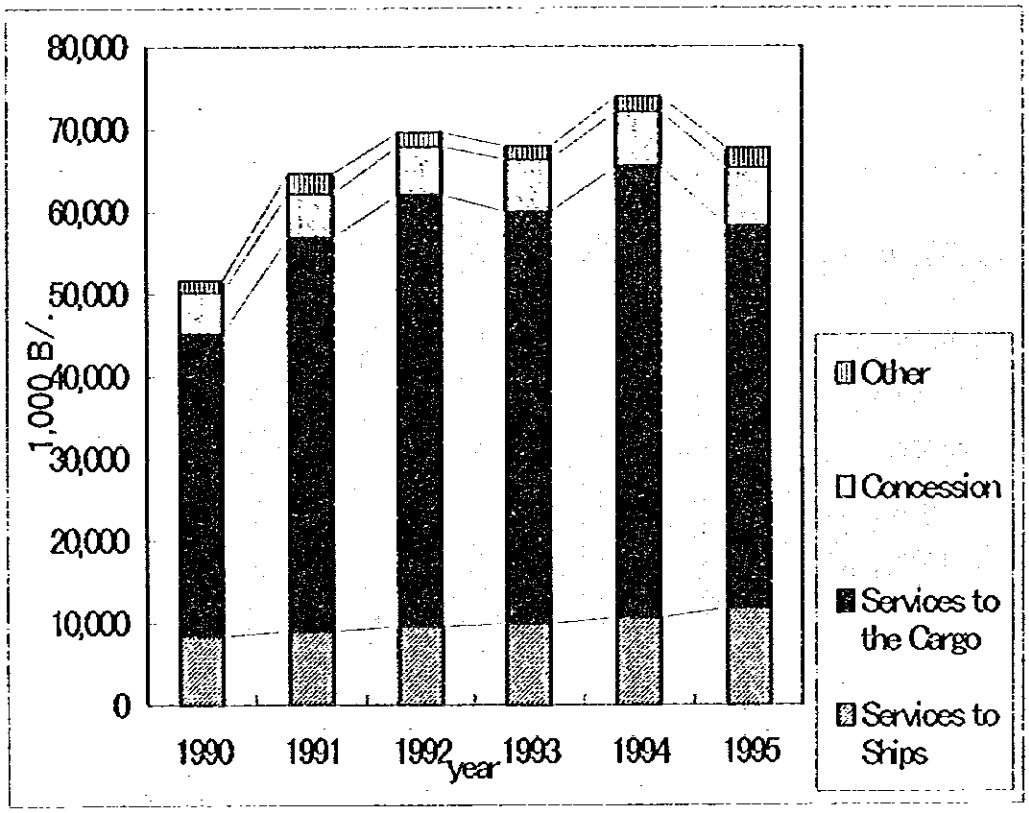


Figure 11-3-1 Revenues of APN

(2) Operating Expenses

19. Table 11-3-2 and Figure 11-3-2 show the operating expenses of APN from 1990 to 1995. (Note; Classification of the financial statement is different from the budget, thus a comparison of the two cannot be made.) The total operating expenses gradually increased from 38.8 million Balboas in 1990 to 49.2 million Balboas in 1995. It appears that personnel expenses cover a large part of operating expenses every year.

Table 11-3-2 Operating Expenses of APN

(1,000 B.)

year	1990	1991	1992	1993	1994	1995
Personnel Expenses	28,199	29,505	31,194	31,110	32,030	33,573
Repairs & Maintenance	898	1,505	1,296	2,126	3,991	4,122
Depreciation of Fixed Assets	5,827	5,998	6,714	6,113	6,216	6,251
Other	3,928	4,993	5,979	4,915	5,150	5,282
Total	38,852	42,001	45,183	44,264	47,387	49,228

Source: APN

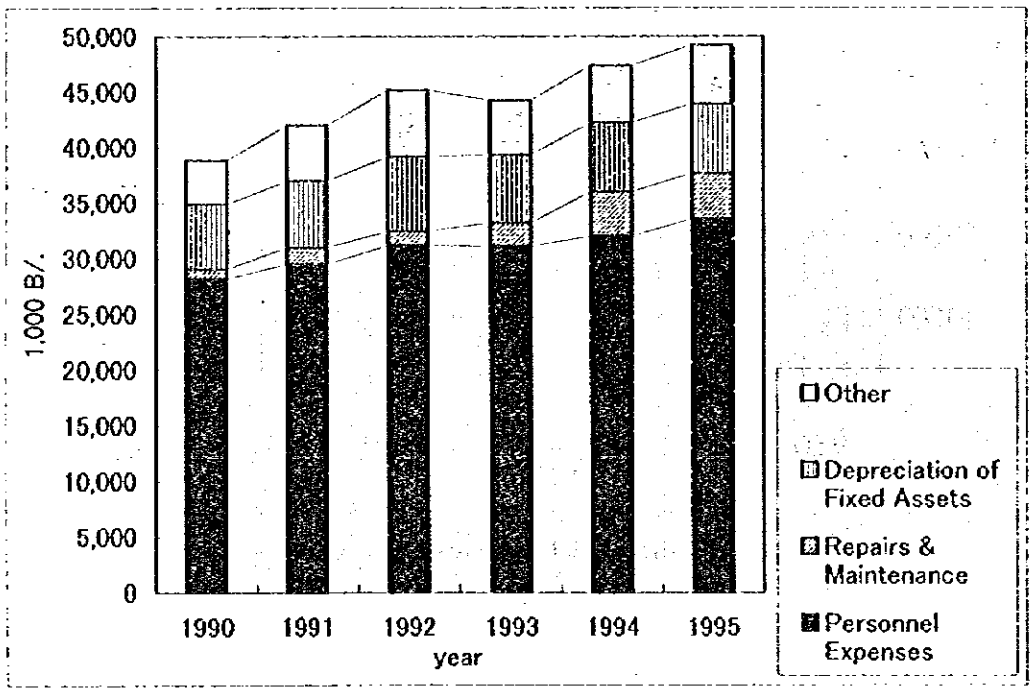


Figure 11-3-2 Operating Expenses of APN

11.3.2 Debts and Interest on loans

(1) Present Condition of Debts

20. Table 11-3-3 shows the present condition of the debts on the loans during the last ten years of APN.

Table 11-3-3 Present Condition of Debts of APN

(%) (1,000 B.) (March 30,1996)

Description	Financial Institute	Type	Int. rate	Day of borrowing	Total Loan	Amortization	Day of Payment
Second Port Project	IBRD	External	11.6	Sept.15,1982	13,974	12,534	
Container Yard (1)	Colon Free Zone	External	8.5	July 7,1980	3,000	2,100	
Container Yard (2)	Colon Free Zone	External	9.0	March 3,1982	9,000	1,300	
Fishing Proj. Vacamonte Port	IBRD	External	8.5	May 27,1975	24,000	24,000	March,1995
Preinvestment Fund	MIPPE	Domestic	7.0	June 16,1981	954	951	April 15,1993

Source: APN

21. APN has three external loans in which total amount borrowed was 26 million Balboas. As of March 30, 1996, the balance of the principal was 10 million Balboas, meaning that 16 million Balboas have been repaid. At the end of 1995, unpaid interest on the loan including currency fluctuation was 25.9 million Balboas.

22. APN had five debts in the last ten years, out of which repayment on two loans has been completed. Three remaining loans were borrowed during 1980 to 1982. The total loan amount was 51 million Balboas. Two of the loans are from the World Bank and account for 75 % of the total, or 38 million Balboas.

23. APN has not borrowed money since 1983 and has no plan to incur any new debts in future. At any rate, there are no new projects and it would be difficult to obtain the approval of MIPPE.

24. Loan history can be summarized as follows;

a) "Second Port Project" was the rehabilitation project of the port of Cristobal and Coco Solo using World Bank loan. Repayment has been satisfactory.

b) "Container Yard (1) and (2)" was the maintenance project of container yard of the Cristobal Port. Funds were provided by various international financial institutions and raised through the Colon Free Zone. Repayment had stopped from 1988 to 1991, but a part of the debt was repaid in 1992. However, repayment again stopped in 1993.

c) "Fishing Port Project, Vacamonte Port" was the construction project of the Vacamonte Port. Using a World Bank loan, repayment was completed in

1995.

d) "Pre-investment Fund" was for a study on port development and rehabilitation. Using a loan of MIPPE, repayment was completed in 1993.

(2) Repayment Condition

25. Table 11-3-4 and Figure 11-3-3 show the amortization and the balance of loans from 1990 to 1995. Because APN has not borrowed further, the balance of loans decreased gradually following the amortization. The amortization ranged from 2 to 3 million Balboas every year with the exception of 1992.

Table 11-3-4 Amortization and Balance of Loans

(1,000 B.)

Year	1989	1990	1991	1992	1993	1994	1995
Amortization		1,980	2,897	9,818	3,247	3,447	2,272
Balance on Dec.	33,700	31,720	28,823	19,005	15,758	12,311	10,039

Source: APN

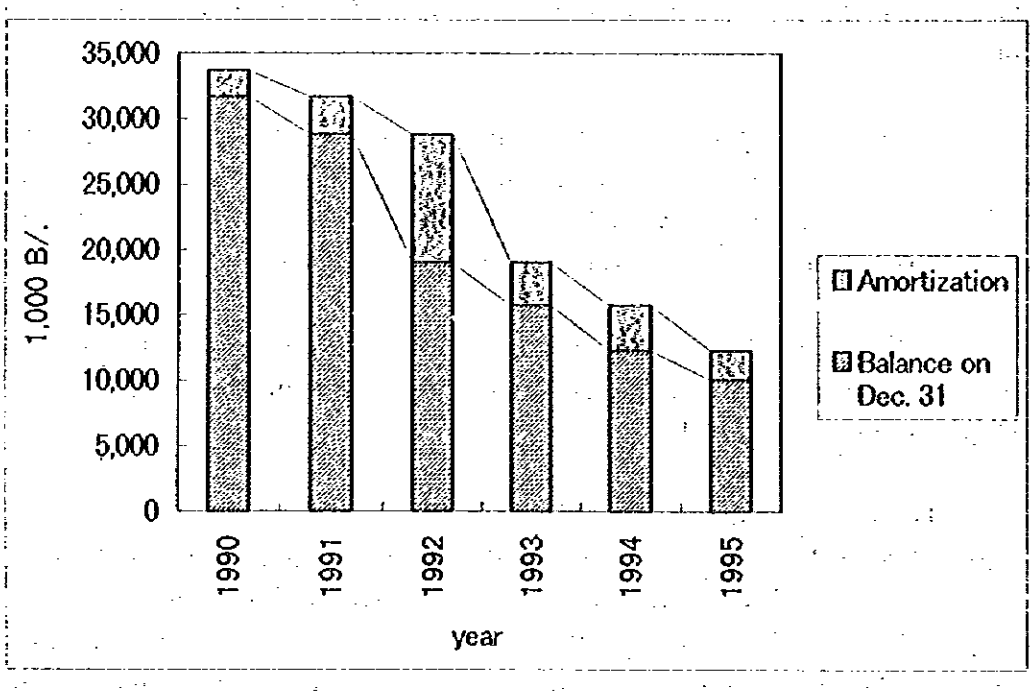


Figure 11-3-3 Amortization and Balance of Loans

26. Table 11-3-5 and Figure 11-3-4 show the repayment of the capital, the interest, and the currency fluctuation from 1990 to 1995. The total repayment in 1992 was exceptionally large because that was the last year to repay outstanding debts of the 1980's.

Table 11-3-5 Repayment of the Capital and the Interest

(1,000 B.)

year	1990	1991	1992	1993	1994	1995
Amortization	1,980	2,897	9,818	3,247	3,447	2,272
Payable Interest	2,641	2,016	9,506	1,080	766	527
Currency Fluctuat.	757	1,673	6,383	2,728	3,191	1,997
Total	5,378	6,586	25,707	7,055	7,404	4,796

Source: APN

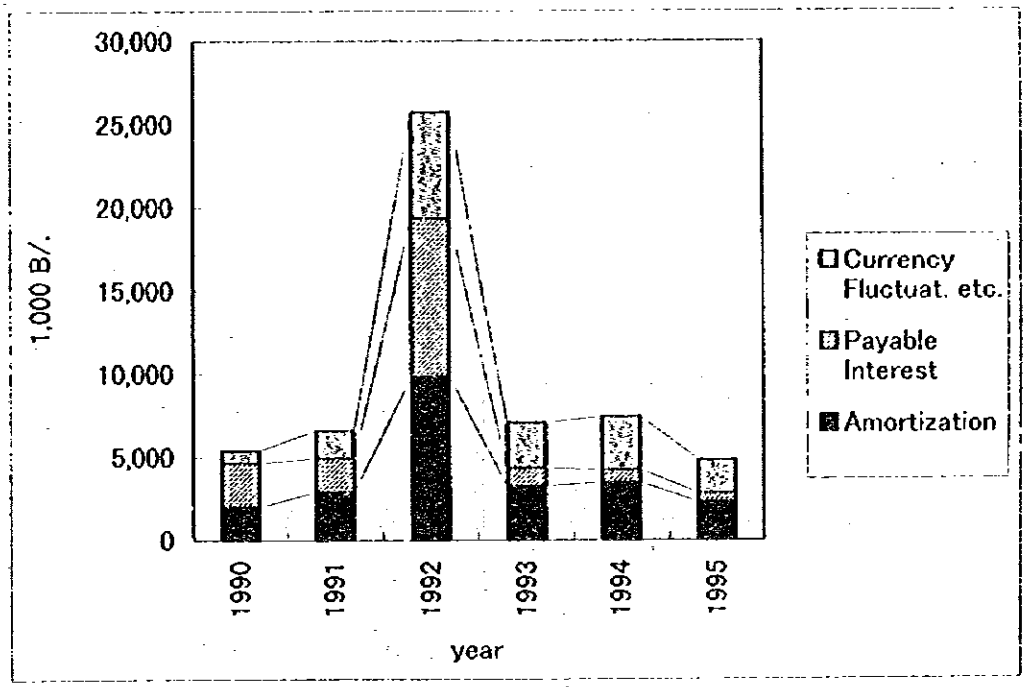


Figure 11-3-4 Repayment of the Capital and the Interest

27. At the end of 1995, the current amount of the loan was 8.9 million Balboas. Unpaid interest on the loan (from the Colon Free Zone) including currency fluctuation was 25.9 million Balboas at that time. The repayment plan is made by MIPPE rather than APN.

11.3.3 Fixed Assets (Property and Equipment)

(1) Outline of the Fixed Assets

28. Table 11-3-6 shows the present book value and outline of the fixed assets of APN as of December 31, 1995. Land is the most important asset with a value of 806 million Balboas, or 82% of all fixed assets of APN.

Table 11-3-6 Present Book Value of the Fixed Assets of APN
(December 31, 1995)

(1,000 B/.)

Assets	Value (Total of APN)	Outline	
		Port	Main Facilities etc.
TOTAL	976,541		
Lands	806,159	Balboa	161ha
		Cristobal	139ha
		Vacamonte	101ha
Buildings (including facilities)	147,697	Balboa	Pier 14 and 15 9,531m2
			Pier 18 17,139m2
			Administration 1,752m2
			Mechanic Workshop 1,865m2
			Pier 18 Shed 16,618m2
		Cristobal	Pier 6 24,552m2
			Pier 7 26,132m2
			Pier 8 21,038m2
			Pier 6 Shed 12,790m2
			Pier 8 Shed 14,170m2
			Freight House 5,292m2
		Vacamonte	Tuna Pier 3,256m2
			Administration 1,122m2
Cargo Handling Equipment	13,521	Balboa	Crane (40t) 1
			Reach Stacker 2
			Front Lifter 1
			Forklift(heavy lifter) 6
		Cristobal	Gantry Crane 2
			Transtainer 2
			Forklift(heavy lifter) 11
Other	9,164		

Source: APN

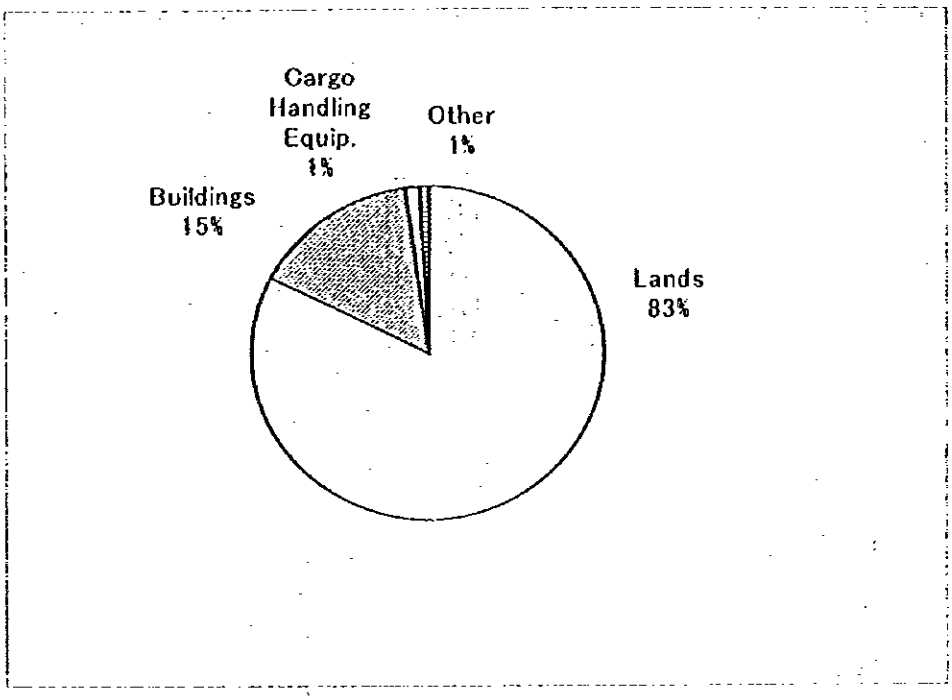


Figure 11-3-5 Present Book Value of the Fixed Assets of APN
(December 31, 1995)

29. Depreciation is calculated using the straight line method. APN determines the ratio of depreciation of all facilities and equipment. The facilities and equipment returned by PCC, however, are evaluated separately.

30. Table 11-3-7 and Figure 11-3-6 show the present book value and depreciation by items of fixed assets of APN as of December 31, 1995. The depreciation of the total excluding lands expresses the average depreciation of the fixed assets. The average rate of depreciation excluding lands is 45.1%, which is larger than 39.3% for the rate of buildings. The rate of depreciation for cargo handling equipment and others is more than the average. Especially, the rate for cargo handling equipment is exceedingly high, more than 85%. This is partly due to the short depreciation period which is set for the cargo handling equipment but also is related to the superannuation of the facility.

Table 11-3-7 Present Book Value and Depreciation of Fixed Assets of APN
(December 31, 1995)

(1,000 B)

	Present Value	Depreciation	Rate of Dep.
Lands	806,159	0	0.0%
Buildings	147,697	58,099	39.3%
Cargo Handling Equipment	13,521	11,565	85.5%
Other	9,164	7,184	78.4%
Total (excluding Lands)	170,382	76,848	45.1%
total	976,541	76,848	

Source: APN

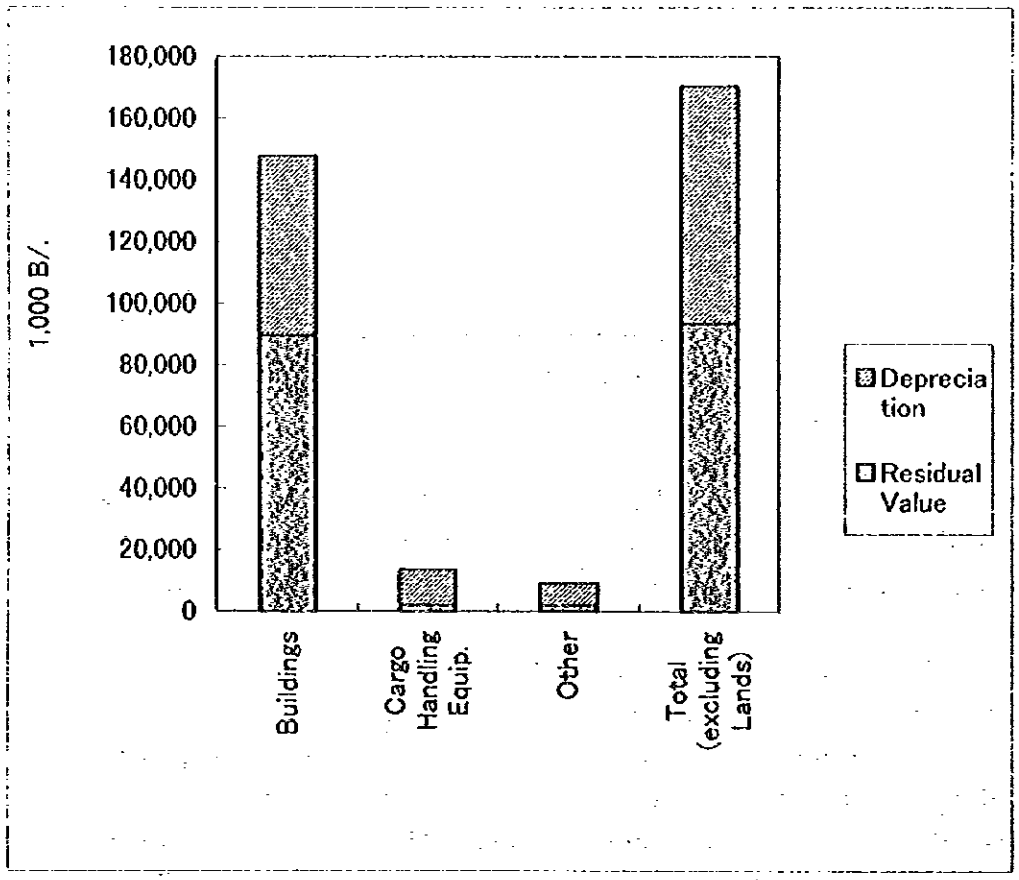


Figure 11-3-6 Present Book Value and Depreciation of Fixed Assets of APN
(December 31, 1995)

(2) Cargo Handling Equipment as the Fixed Assets

31. Table 11-3-8 shows the change in the present value of cargo handling equipment and the total excluding lands. Figure 11-3-7 shows the ratio-of-change in present value from 1990 to 1995. The value of the total excluding land increased steadily from 124 million Balboas in 1990 to 170 million Balboas in 1995.

32. On the other hand, the value of cargo handling equipment rose only 1.2 million Balboas from 1990 to 1995.

Table 11-3-8 Change of the Present Value

(1,000 B)

year	1990	1991	1992	1993	1994	1995
Cargo Handling Equipment	12,304	12,952	13,327	14,708	12,842	13,521
Total excluding Lands	124,157	126,412	154,068	162,859	165,911	170,381

Source: APN

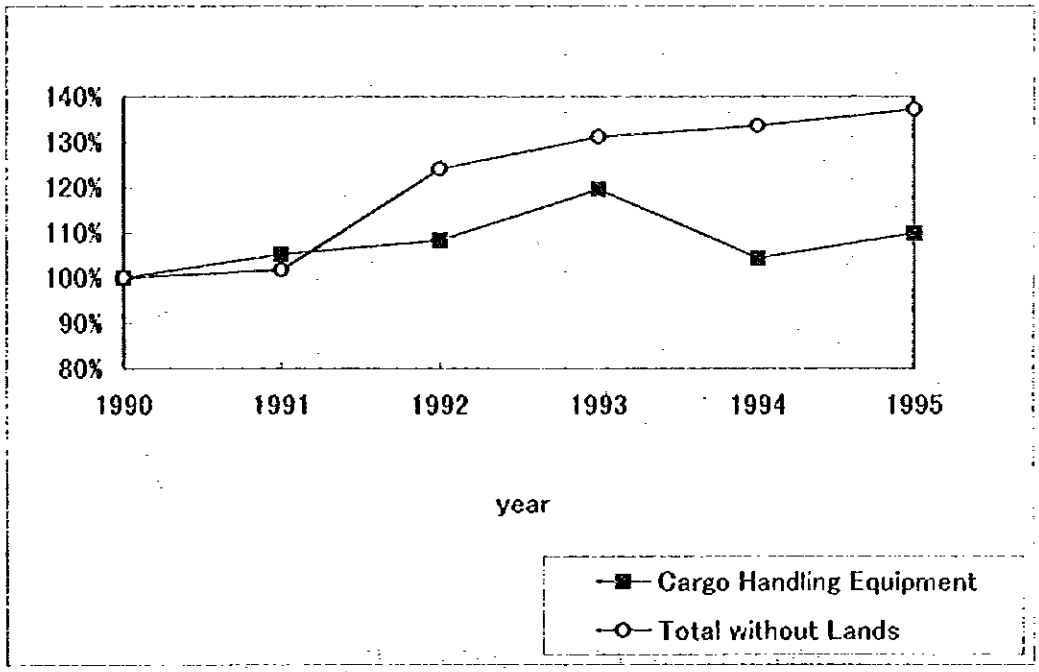


Figure 11-3-7 Ratio-of-change in Present Value (based 1990)

33. Table 11-3-9 and Figure 11-3-8 show the change in the rate of depreciation of the cargo handling equipment and the average excluding lands. Decrease in the rate of depreciation means that gain of the present value is more than gain of the depreciation cost.

34. The average rate of depreciation increment has been small during the period of 1990 to 1995. The rate of depreciation of cargo handling equipment fluctuated from 85 - 90 %, but historically this represents a very highest level.

Table 11-3-9 Change in Rate of Depreciation

year	1990	1991	1992	1993	1994	1995
Cargo Handling Equipment	86.9%	88.2%	91.8%	86.3%	86.2%	85.5%
Total excluding Lands	40.1%	40.1%	39.2%	40.9%	42.5%	45.1%

Source: APN

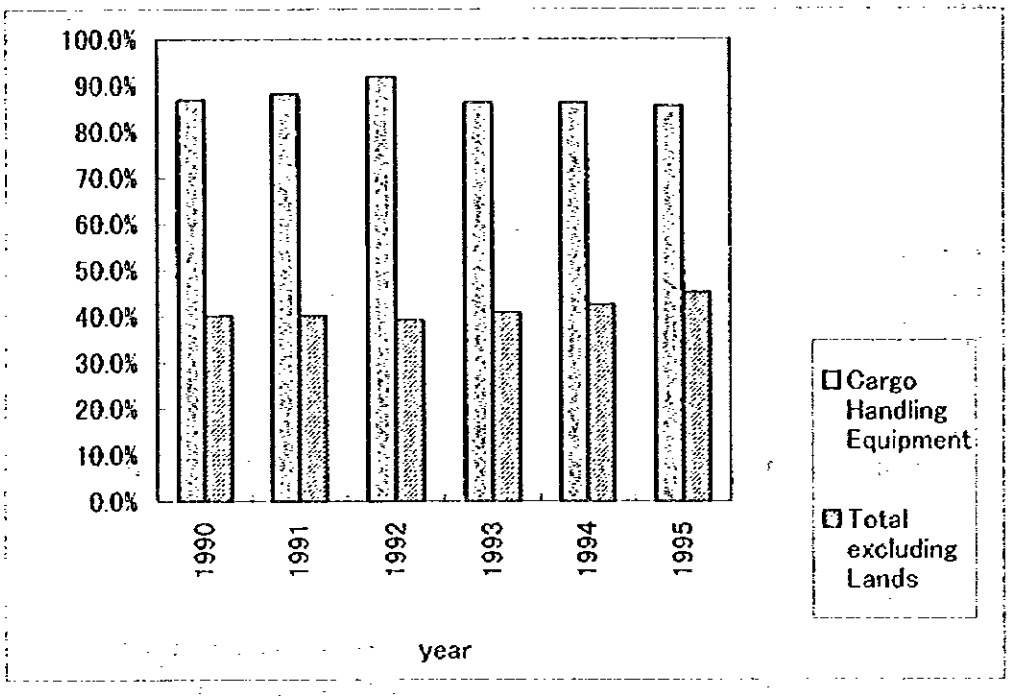


Figure 11-3-8 Change in Rate of Depreciation

11.3.4 Capital and Income

(1) Income and its Distribution

35. Net income and its accumulation of APN are distributed to the transfer costs to the National Government and the other adjustment costs. Table 11-3-10 shows net income of APN and contribution to the National Government in a recent seven- year period. In 1989, net income was in the red. However, it has been in the black since 1990, peaking at 18.4 million Balboas in 1994.

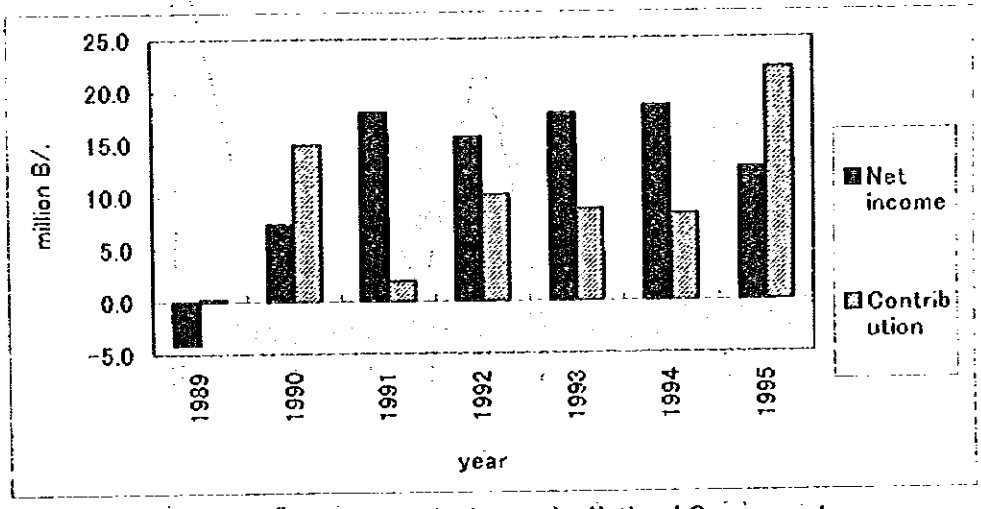
36. National Government collects contribution from APN as well as other public entities. This is the only prescribed contribution from the income of APN. Figure 11-3-9 shows the change of net income and contribution to the National Government in a recent seven year period. It can be observed that the contribution is not linked to the income level of APN. The contribution was sometimes high when APN's net income was low and vice versa.

Table 11-3-10 Net Income and Contribution

(million B.)

year	1989	1990	1991	1992	1993	1994	1995
Net income	-4.1	7.3	18.0	15.6	17.8	18.5	12.6
Contribution	0.2	14.9	1.9	10.1	8.7	8.2	22.1

Note: "Contribution" means contribution to the National Government
Source: APN



Note: "Contribution" means contribution to the National Government

Figure 11-3-9 Change of Net Income and Contribution to the National Government

37. Table 11-3-11 and Figure 11-3-10 show the change of the contribution to the National Government since 1982. The total contribution reached 70 million Balboas. In the 1980's the contribution was below 1 million Balboas excluding the payment in 1985. In the 1990's it was more than 1 million Balboas, and in 1990, 1992 and 1995 it exceeded 10 million Balboas, peaking at 22million Balboas in 1995.

Table 11-3-11 Contribution to the National Government

(1,000 B.)

year	
1982	1,000
1985	3,167
1986	456
1988	100
1989	175
1990	14,950
1991	1,869
1992	10,061
1993	8,700 *
1994	8,207
1995	22,149
total	70,834

*: Including the contribution to the IFHARU
Source: APN

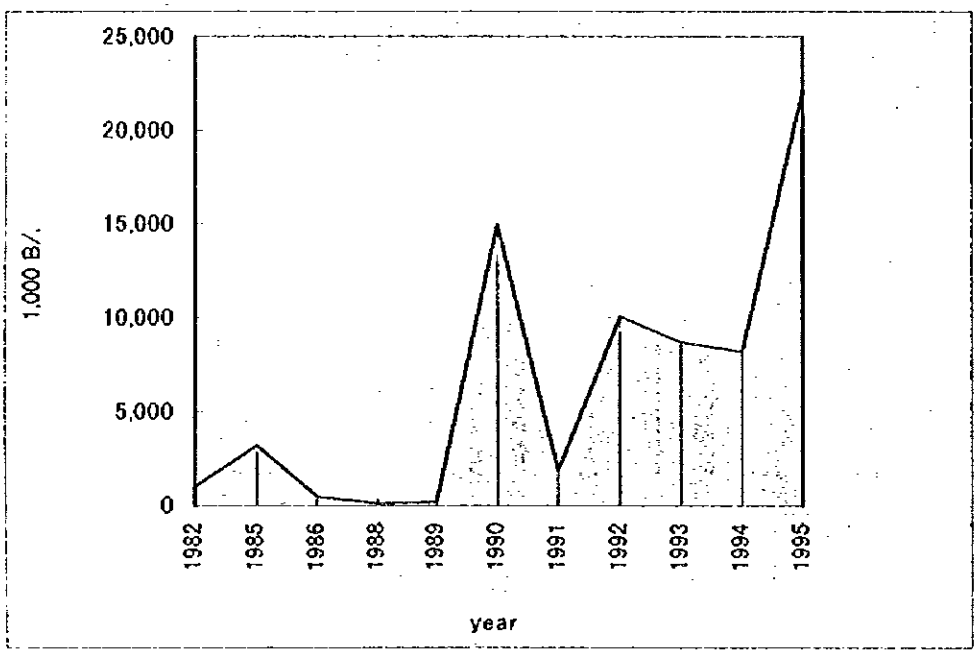


Figure 11-3-10 Change in the Contribution to the National Government

(2) Capital and Internal Reserve

38. Table 11-3-12 shows the change of the total patrimony of APN from 1991 to 1995. It shows that the total patrimony stayed unchanged during the period. This level nearly equaled the "public finance", namely, the basic capital invested by the National Government, 865 million Balboas. That is to say, there was almost no increase in the internal reserve.

Table 11-3-12 Change of the Total Patrimony of APN

(million B.)

year	1991	1992	1993	1994	1995
Total Patrimony	878	871	876	883	876

Source: APN

39. Table 11-3-13 shows the change of the total internal reserve from 1992 to 1995. The internal reserve has been permitted to be used only for the purpose of dredging by the National Government. The total internal reserve was only 6.7 million Balboas in December 31,1995.

40. APN conducted dredging in 1992 and 1993. Its temporary expenses were 8.9 million Balboas, dredging the ports of Balboa, Cristobal, Vacamonte and Coco Solo.

Table 11-3-13 Change of the Internal Reserve

(1,000 B/.)

year	1992	1993	1994	1995
Balance on Jan. 1	6,546	3,852	1,257	3,770
Plus	2,915	741	2,513	2,892
Minus (expenses)	5,609	3,336	0	0
Balance on Dec. 31	3,852	1,257	3,770	6,662

Source: APN

11.3.5 Operational Efficiency

41. Table 11-3-14 shows the balance sheet of APN from 1991 to 1995 and Table 11-3-15 shows the profit and loss statement in the same period.

Table 11-3-14 Balance Sheet of APN

(1,000 B/.)

year	1991	1992	1993	1994	1995
Assets	941,606	923,166	927,132	940,968	931,558
Current Assets	35,006	19,444	19,282	35,070	26,000
Cash & Cash equivalents	20,967	5,337	3,205	17,819	8,758
Accounts Receivable	10,629	11,097	12,074	13,272	13,193
Other Receivable	252	255	473	257	284
Inventories	3,102	2,691	3,180	3,625	3,646
Prepaid Expenses	56	64	350	97	119
Other Assets	906,600	903,722	907,850	905,898	905,558
Investments	9	9	2,430	1,580	1,580
Fixed Assets	881,687	899,567	902,236	901,429	899,694
Machin. & Equip. in Transit	0	0	0	679	0
Construction in Progress	24,904	4,146	3,184	2,210	4,284
Liabilities & Patrimony	941,606	923,166	927,132	940,968	931,558
Current Liabilities	46,101	39,823	44,023	53,675	27,356
Account Payable	4,904	5,216	5,467	6,136	5,765
Other Payable	28,815	27,207	29,599	38,582	12,634
Current Portion from Long-term Debt	12,382	7,400	8,957	8,957	8,957
Long-term Debt	16,794	11,959	7,158	3,711	27,364
Deferred Income	602	235	272	277	255
Patrimony	878,109	871,149	875,679	883,305	876,583
Government Funds	865,406	865,408	866,015	865,408	865,408
Additional Government Fund	6,690	-6,873	-2,576	617	658
Reserves	6,546	3,852	1,257	3,770	6,662
Accrued Results	-533	8,762	10,983	13,510	3,855

Source: APN

Table 11-3-15 Profit and Loss Statement of APN

(1,000 B/.)

year	1990	1991	1992	1993	1994	1995
Operating Revenue	50,191	62,208	67,925	66,263	72,088	62,291
Service to Ships	8,404	8,956	9,578	9,871	10,624	11,757
Service to the cargo	36,758	47,890	52,478	50,065	54,843	43,479
Concession	5,029	5,362	5,869	6,327	6,621	7,055
Operating Expenses	38,852	42,001	45,183	44,264	47,387	49,228
Personal Expenses	28,199	29,505	31,194	31,110	32,030	33,573
Repair and Maintenance	898	1,505	1,296	2,126	3,991	4,122
Material Consumption	935	1,041	1,459	804	833	829
Transportation Service	77	77	56	350	434	423
Other Operation Service	1,517	2,307	2,866	1,444	1,553	1,515
Administration Expenses	1,228	1,218	1,393	2,254	2,197	2,112
Special Expenses	145	350	205	63	133	403
Depreciation	5,827	5,998	6,714	6,113	6,216	6,251
Tugboats & Launch	26	0	0	0	0	0
Operating Income	11,339	20,207	22,742	21,999	24,701	13,063
Non-Operating Revenue	1,457	2,417	1,646	1,651	1,828	2,328
Other	1,456	2,417	1,646	1,651	1,828	2,328
Non-Operating Expenses	5,487	4,664	8,807	5,856	8,064	2,813
Interests	4,100	2,335	2,510	2,108	2,522	2,341
Currency Fluctuation	1,387	2,329	6,297	3,748	5,542	472
Non-Operating Income	-4,030	-2,247	-7,161	-4,205	-6,236	-485
Net Income	7,309	17,960	15,581	17,794	18,465	12,578

Source: APN

42. The operational efficiency is determined by the working ratio. The working ratio is defined as follows.

(Operation expense - Depreciation)/Operation revenue × 100 (%)

When this ratio is less than 50-60 %, the operations of APN are efficient.

43. Table 11-3-16 shows the working ratio of APN from 1990 to 1995. In 1990, it was more than 60 %, thus operations of APN were inefficient. From 1991 to 1994, the working ratios were less than 60% and more than 50%. This means that APN maintained efficiency but with difficulty. In 1995, the ratio was more than 60%. The operation of APN was inefficient again.

Table 11-3-16 Working Ratio of APN

year	1990	1991	1992	1993	1994	1995
Working Ratio	65.8%	57.9%	56.6%	57.6%	57.1%	69.0%

11.4 Port Tariff

11.4..1 Present Tariff System

44. The APN ports have two different tariff systems, one is the International Port Tariff and the other is the Domestic Port Tariff. International Port Tariff is mainly adapted to the ports of Cristobal and Balboa.

45. The former tariff before the ports of Cristobal and Balboa were transferred to Panama was in effect until 1982. Now, port tariff is decided on the basis of operational cost of APN. Table 11-4-1 shows the outline of the International Port Tariff. Pilotage is not included, because the pilotage service must be provided by PCC in the ports of Cristobal and Balboa.

46. The tariff system was changed in February, 1996. (Table 11-4-2) Formerly, when APN employees performed the cargo handling, the cargo handling fee (loading or unloading) was charged in addition to the wharfage. If additional cargo handling equipment of APN, for example forklift and crane, was requested, a rental fee was charged.

47. Under this system, charges for cargo handling in a Panamanian Port was not clear. The new system solved this problem. APN decided this change, because it had been losing ground to Manzanillo. The system of the Movement is the same style employed at Manzanillo, that is to say, one container movement is one charge. Only break bulk cargo and bulk cargo is still handled under the old system.

48. The old system was favorable for the transit cargo. Namely, the wharfage was exempted for transit and export cargo. In the new system, this exception is applied to break bulk cargo and bulk cargo. On container and automobile for transit, the Movement is taken between about 50 % and 70 % off. The favorable treatment for transit cargo continues.

Table 11-4-1 Main Tariffs of APN (for International Port)

(B/.)

Item	Kind of Tariff	Tariff
Lighthouses & Buoys	Vessels that carry out loading/unloading operation	0.05/GRT
	Vessels that do not carry out loading/unloading operation	0.02/GRT
Anchorage		0.01/GRT
Dockage	Vessels that carry out loading/unloading operation	First period of 24 hours 0.06/GRT
		Second period of 24 hours 0.005/GRT
		Subsequent hour 0.0075/GRT
Mooring/Unmooring(*)		Up to 9,000 GRT 75/Maneuver
		Up to 15,000 GRT 115/Maneuver
		Over 15,000 GRT 150/Maneuver
Launch Service(**)		60/hour
Water supply	Installation	50/installation
	Water	International traffic vessels 8/1,000 gallons
		Coastal traffic vessels 5/1,000 gallons
Movement	Containers	Full and with Gantry Crane 270/movement
		Full and without Gantry Crane 235/movement
		Empty and with Gantry Crane 175/movement
		Empty and without Gantry Crane 140/movement
	Containers In-transit	75/movement
	Vehicles	Automobiles 105/unit
		Buses, trucks 210/unit
		Equipment of Construction etc. 315/unit
	Vehicles In-transit	Automobiles 55/unit
		Buses, trucks 110/unit
		Equipment of Construction etc. 165/unit

(B/.)

Item	Kind of Tariff	Tariff	
Stowage/Unstowage	Break bulk cargo		3/ton
Wharfage	Unloaded break bulk cargo and bulk cargo	Liquid in bulk	0.75/ton
		Solid in bulk	1/ton
		Industrial input	1.5/ton
		Food and Medicines	1.5/ton
		Not Specified	3/ton
	Export & In-transit cargo		Exempt
Handling	Break bulk cargo		5/ton
Storage After the free-time period (***) expires	Break bulk cargo (Warehouse)	On 1st week	2/day. ton
		On 2nd week	3/day. ton
		On 2nd week	3/day. ton
		On 3rd week	4/day. ton
		Subsequent period	5/day. ton
	Break bulk cargo (Yard)	On 1st week	1/day. ton
		On 2nd week	1.5/day. ton
		On 3rd week	2/day. ton
		Subsequent period	2.5/day. ton
	Vehicles		10/unut
	Containers	Full	25/day. TEU
		Empty	15/day. TEU
	Containers (in container yard)	Empty, Up to 20'	4/day
		Empty, Over 20'	6/day
		Empty on chassis, Up to 20'	11/day
		Empty on chassis, Over 20'	14/day
Rental of Equipment	Gantry Crane		450/hour

(*) After regular hours, a 100% surcharge over the regular tariff.
(**) After regular hours, a 50% surcharge over the regular tariff.
(***) Free time: Unloaded cargo 5 working days
Cargo to be loaded 5 working days
In-transit cargo 30 calendar days
Empty containers 4 working days
Labor Force Service: For services rendered outside of regular working hours, additional charge will be as follows
Regular days: 15 - 23 hours +50%
23 - 7 hours +100%
Sunday, holiday: 7 - 15 hours +100%
15 - 23 hours +125%
23 - 7 hours +150%

Source: APN

Table 11-4-2 New and Old Tariffs of APN (Case of Container)

NEW TARIFFS (B/.)

Item	Kind of Tariff	Tariff
Movement	Containers	Full and with Gantry Crane 270/movement
		Full and without Gantry Crane 235/movement
		Empty and with Gantry Crane 175/movement
		Empty and without Gantry Crane 140/movement
	Containers In-transit	75/movement

OLD TARIFFS (B/.)

Item	Kind of Tariff	Tariff	
Stowage/Unstowage Not include cargo handling Equipment	Containers	Full	60/TEU
		Empty	15/TEU
	Containers In-transit	20' 100/movement	
		40' 175/movement	
Wharfage(*) Cargo transiting over the wharf from or to the vessels	Full containers	Industrial input	40/TEU
		Food & medicines	Exempt
		Not specified	80/TEU
		Empty	25/TEU
Handling The Moving of cargo from the cleared slings of vessels to the yard or freight house or vice versa	Containers	Full	130/TEU
		Empty	12.5/TEU
	Containers When the shipping agencies rent private equipment	Full	90/TEU
		Empty	8.6/TEU
Rental of Equipment	18 ton truck crane		75/hour
	30 ton truck crane		150/hour
	Gantry Crane		450/hour 75/hour
	Lifts less than 20 tons		75/hour
	Lifts more than 20 tons		150/hour

(*) In-transit and export cargo are exempted

Source: APN

11.4.2 Revenues from Tariffs

49. Table 11-4-3 and Figure 11-4-1 show the change in revenues from the port tariffs of APN from 1990 to 1995. (Note: the reason for the difference between

the data of Table 11-3-2 and Table 11-3-5 is due to the unsuitable account code. In the strict sense, the data of Table 11-3-5 include the date of other revenues.) These data are only revenues from tariffs except the revenues from other sources. Consequently these data are not identical with the data of the financial statement. The total revenues from the tariffs increased steadily from 44.8 million Balboas in 1990 to 65.1 million Balboas in 1994. However, in 1995, it suddenly fell by about 10 million Balboas.

50. The greatest part of the revenues from the tariffs involved the service to the cargo which accounted for 84% of all revenues in 1994. The service to ships represented only a small portion of the total, but it increased slightly during the period. The reason for the great decrease in total revenues in 1995 was due to the shift of cargo to Manzanillo and the establishment of the new tariff system Movement. The revenues per one container from this system was not more than the revenues from the old system.

Table 11-4-3 Change of Revenues from the Tariffs of APN

(1,000 B.)

year	1990	1991	1992	1993	1994	1995
Service to Ships	8,264	8,599	9,223	9,825	10,337	11,382
Service to the Cargo	36,608	47,711	52,457	50,005	54,843	43,428
Total	44,872	56,310	61,680	59,830	65,180	54,810

Source: APN

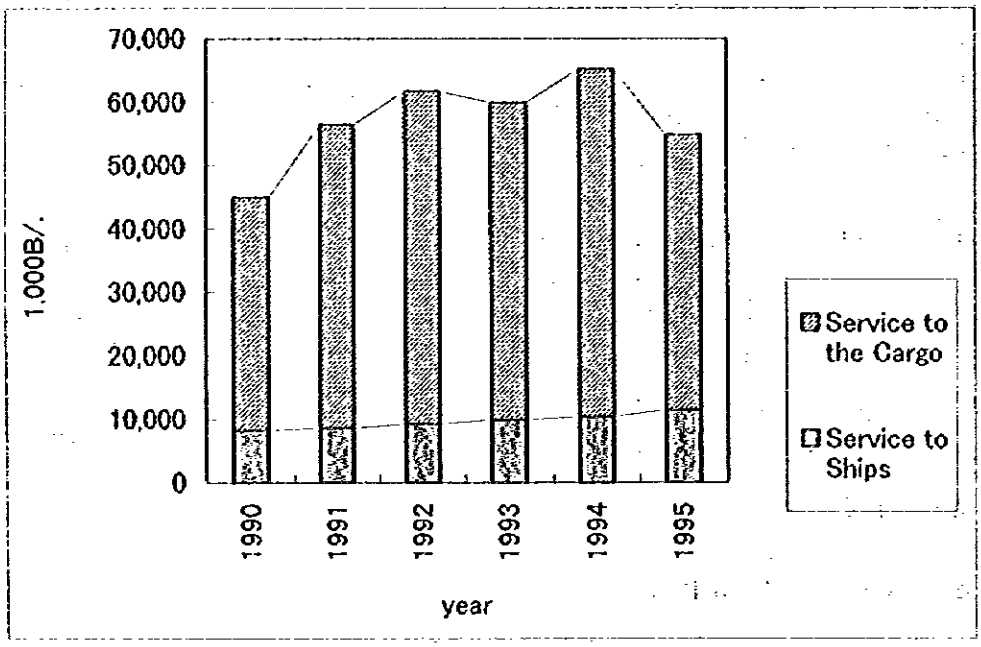


Figure 11-4-1 Change of Revenues from the Tariffs of APN

11.5 Financial Activity from Concession of APN

11.5.1 Outline

(1) Concession

51. The concession is the revenues that APN earns from the Contract of Lease and the Contract of Concession.

52. The Contract of Lease pertains to lands, buildings and facilities. The lessee under the contract of rent does not engage in physical port activities. The land, buildings and facilities rented by the lessee are used as yards, warehouses, storage tanks and office etc.

53. Under the Contract of Concession, the party of the contract does engage in actual port activities. According to circumstances, the contract of concession may be accompanied by the lease of lands, buildings and facilities. The definite activities of the party of the contract are fuel and lubricant supply, launch service and cargo handling service etc.

(2) Number of Concessions

54. Table 11-5-1 shows the number of the contract of concession by main ports in 1995. The lease was 80.8 % of all concession contracts in the main four ports.

Table 11-5-1 Number of Concession Contract by Main Ports (1995)

PORT	Balboa	Cristobal	Vacamonte	Coco Solo
Concession	18	13	10	2
Lease	82	46	21	32
TOTAL	100	59	31	34

Source: APN

55. The port activities of the concession of main four ports were as follows.

a) Cargo Handling Services (1 contract)
b) Repair and Maintenance Service to Ships (2 contracts)
c) Chemical Inspection Service to Ships (3 contracts)
d) Fuel and Lubricant services - including the care of the oil tube (3 contracts)
e) Fuel and Lubricant Services (7 contracts)

f) Connection Service for refrigerator container (1 contract)
g) Maritime Service - example; food supply (8 contracts)
h) Launch service (10 contracts)
i) Tug boat service (2 contracts)
j) Ferryboat (2 contracts)
k) Others (4 contracts)

(3) Charge of the Concession

56. The charge system of the concession is as follows;

a) Lease

If the party of the contract leases lands, buildings and facilities, a rental fee is charged. The amount is determined by APN based on the estimated value of the land or facility in question. The lease increases 5 % per year.

b) The charge according to income

Under the contract of the Concession, the party of the contract has to pay a charge according to its income. This charge is applied not only to income from activities performed without using lands, buildings and facilities (e.g. launch service) but also to some port services performed using lands, buildings and facilities (e.g. repair and maintenance).

c) Investment

If the party of the contract leases lands, buildings and facilities, it has to invest its using lands, building and facilities. The amount of the investment is stipulated in the contract. If the party of the contract is a small company, the amount of the investment is the extent of the amount of maintenance. But if the party is big, APN can request additional investment under the contract.

d) Deposit

Under the contract of the Concession, the party of the contract has to deposit caution money. But it is taken charge of by the GCO.

11.5.2 Revenues from the Concession of APN

57. Table 11-5-2 and Figure11-5-1 show the change of the revenues from the concession and lease of APN from 1992 to 1995. The total revenues increased steadily during the period. Fee of the lease increased 5% per year. But this increase was more than 5%. The increase of the revenues from the rent was larger than the increase of the revenues from the concession.

58. There are many cases in which the concession was renewed, when the term of the contract expired.

Table 11-5-2 Change in the Revenues from the Concession of APN

(1,000 B.)

y e a r	1992	1993	1994	1995
Concession	2,265	2,310	2,298	2,555
Lease	2,258	2,531	2,829	2,941
Total	4,523	4,841	5,127	5,496

Note: Oil tank rental charge is included in the concession
Source: APN

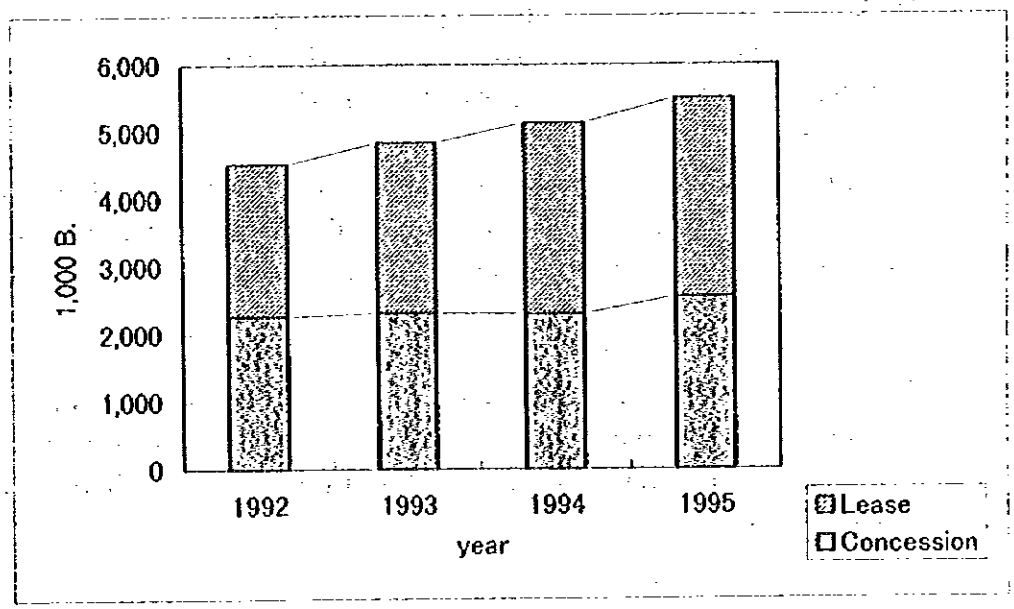


Figure 11-5-1 Change in the Revenues from the Concession of APN

11.5.3 Recent Movement of the Concession

(1) New Style Concession

59. Recently, a new type of concession contract has been concluded by the National Government. It authorized the development of the wharves and its operation. At first, the National Government made the contract regarding the port of Manzanillo with MIT in 1993. Secondly, APN made the contract regarding the port of Coco Solo Norte with Evergreen.

60. According to the contract related to Manzanillo, the details of the payment from MIT are as follows.

a) Investment
The total investment is US$ 51 million over the first five years. After the project period, twenty years, additional facilities and equipment invested in by MIT will be transferred APN.

b) Tariffs
The payment to APN is as follows.

-Movement	6 US$ per movement
-Docking	6 US$ per disembarked vehicle
-Casting Anchor	0.01 US$ per TRB per day
-Lighthouse and Buoys	0.03 US$ per TRB

c) Security Bond
MIT must pay the security bond to the National Government to ensure the building of facilities invested in by MIT. The amount is US$ 500 thousand, but this is not a revenue of APN; it is taken charge of by the GCO.

d) Guarantee Bond
MIT must pay the guarantee bond (US$ 500,000) to the National Government to respond, without exception, for any damage to the environment and for resulting detriment. But it is also taken charge of by the GCO.

(2) Revenues from Manzanillo

61. Table 11-5-3 and Figure 11-5-2 show the change of the revenues from MIT. Until March 1995, it was less than 50 thousand Balboas. However, it increased suddenly from June, 1995, because of the progress of the operation. According to this table, the total yearly revenues are about 1.4 million Balboas or 25 % of all concession revenues.

Table 11-5-3 Change of the Revenues from MIT

(1,000 B.)

Period	Revenues
1994/May to June	39
1994/July to Sep.	47
1994/Oct. to Dec.	29
1995/Jan. to Mar.	30
1995/Apr. to Jane	185
1995/July to Sep.	303
1995/Oct. to Dec.	355
1996/Jan. to Mar.	484
1996/Apr. to May	261

Source: APN

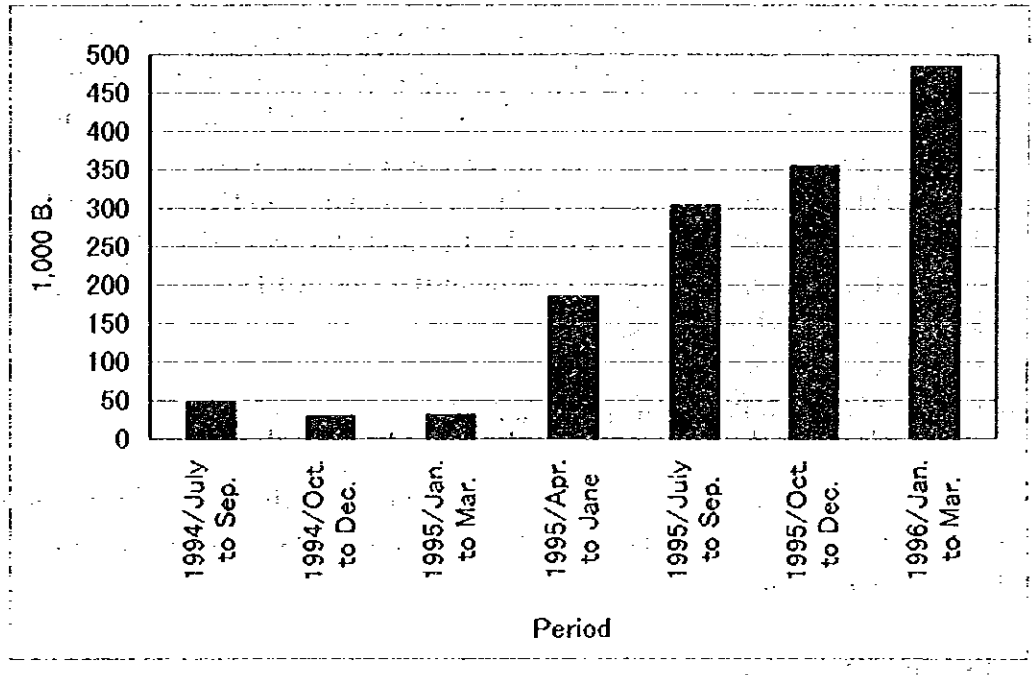


Figure 11-5-2 Change of the Revenues from MIT

11.6 Procurement System

11.6.1 Procurement Procedure

62. Procurement procedure is strictly regulated by the Fiscal Code, which stipulates a public tender system. The present procurement procedure is as follows;

63. Firstly the procurement request is submitted from each section to the Purchase Section of APN central office. The Purchase Section must follow the prescribed procedure when the price of the sought articles exceeds 10,000 Balboas.

64. APN notifies potential suppliers by putting information concerning the required articles in newspapers for three days. The applicants submit an estimate to the Purchase Section within 30 days. On the basis of the estimates, the Purchase Section can enter into a contract in accordance with six different procedural guidelines defined by price level of procurement objectives. The most complicated case of procurement is the case of the highest price level, where the total price of procurement objectives is 500 thousand Balboas or more. The procedures of this case are as follows;

The Purchase Section appoints the most appropriate supplier in the presence of the Ministry of Finance and Treasury and GCO. The Technical Committee organized by the specialist among the people and APN must evaluate its appointment. After examination by the Executive Committee of APN ,the Economic Committee organized by Ministry of Finance and Treasury, MIPPE, Ministry of Public Works, GCO and APN and the Executive Cabinet, the contract becomes effective upon signing of the General Director of APN and General Comptroller.

11.6.2 Problem of the Procurement System

65. Generally, the public tender system is highly transparent. In terms of value, it can be an advantageous choice. However, its rigorous application produces some problems.

(1) Pressing Application

66. It takes at least about 120 days to complete the strict series of complicated procurement procedures. If cargo handling equipment does not work, it takes 120 days to get the parts in order to repair the equipment, which means that a part of port operation will stop for 120 days.

(2) High Maintenance Costs

67. It often happens that low-priced equipment requires a lot of maintenance. In APN, the Technical Committee evaluates this problem. As part of the amendment to the Fiscal Code in 1994, two specialists among the people were added to the Technical Committee. This amendment has helped to solve the problem.

11.7 Present Financial Condition of Balboa Port

11.7.1 Revenues, Expenses and Income of Balboa Port

(1) Revenues

1) Outline

68. Table 11-7-1 shows the revenues of each port operated by APN in 1995. And Figure 11-7-1 shows the total revenues by ports in 1995. Cristobal port generated the most revenue, followed by Balboa port. Figure 11-7-2 shows the component ratio of the item of the revenues in 1995. The revenues of Balboa and Cristobal comprised most of the total revenues, most of which were generated from services to the cargo.

Table 11-7-1 Revenues of Each Port in APN (1995)

(1,000 B.)

Ports	Balboa	Cristobal	Coco Solo	Vacamonte	Other	total
Services to ships	5,900	3,558	959	781	559	11,757
Services to the cargo	10,436	27,771	3,113	234	1,927	43,481
Concessions	2,548	2,201	437	575	1,294	7,055
Other	562	1,288	65	206	47	2,168
Total	19,446	34,818	4,574	1,796	3,827	64,461

Source: APN

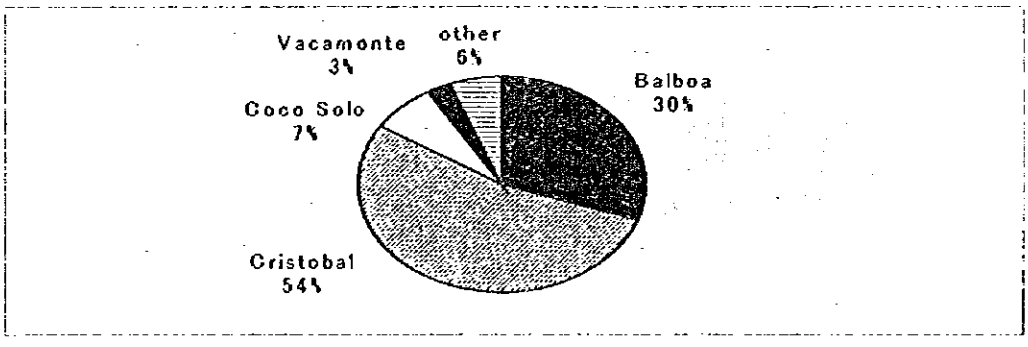


Figure 11-7-1 Revenues Component by Ports (1995)

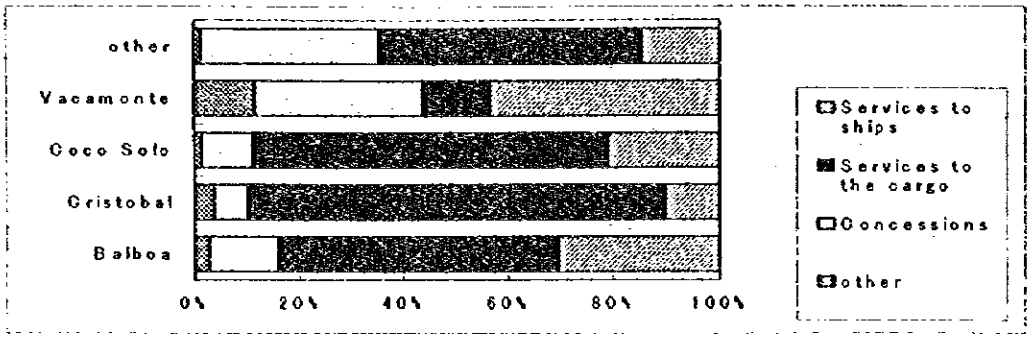


Figure 11-7-2 Component Ratio of the Revenues (1995)

69. Table 11-7-2 and Figure 11-7-3 shows the change in revenues of Balboa port from 1990 to 1995. The total revenue was less than 15 million Balboas from 1990 to 1993. In 1994, it, however, increased suddenly, and it was over 20 million Balboas. In 1995, revenue decreased but still maintained a high level of 19 million Balboas. The services to ships and concession increased smoothly.

Table 11-7-2 Change in the Revenues of Balboa Port

(1,000 B.)

year	1990	1991	1992	1993	1994	1995
Services to ships	3,563	3,716	4,171	4,519	4,700	5,900
Services to the cargo	4,830	6,159	7,364	7,085	12,675	10,436
Concessions	2,012	2,147	1,820	1,901	2,293	2,548
Other	561	1,111	652	499	425	562
Total	10,966	13,133	14,007	14,004	20,093	19,446

Source: APN

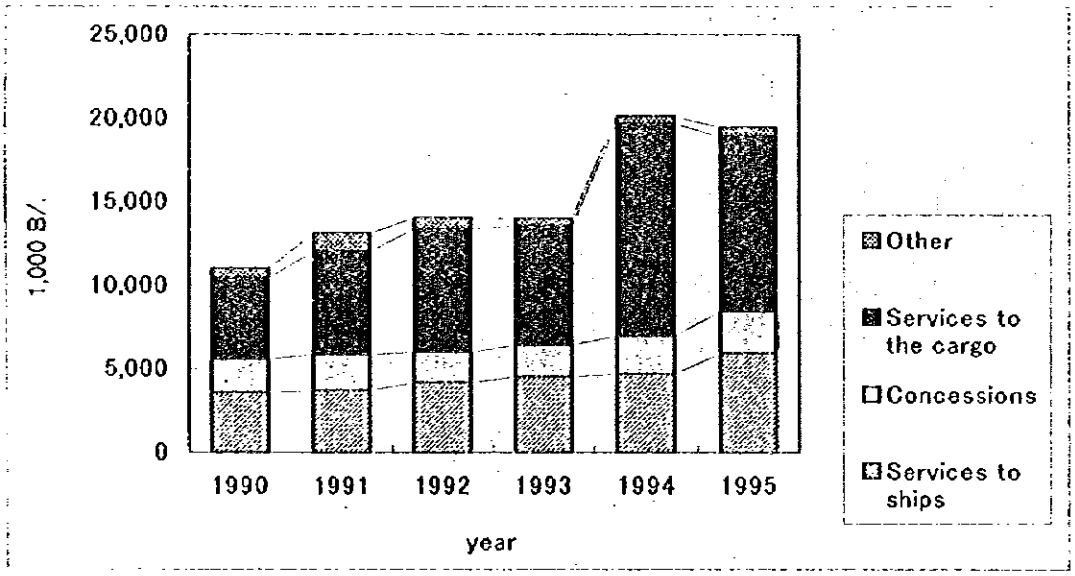


Figure 11-7-3 Change in the Revenues of Balboa Port

2) Revenues from the Port Tariff

70. Table 11-7-3 and Figure 11-7-4 show the components of the revenues from the service to ships at Balboa from 1990 to 1995. The total revenues from service to ships increased steadily during the period due to increase of the anchorage.

Table 11-7-3 Components of the Revenues from the Service to Ships at Balboa

(1,000 B.)

year	1990	1991	1992	1993	1994	1995
Anchorage	331	497	897	1141	1294	1,854
Launch Service	1263	1,348	1448	1219	1216	1,580
Dockage	949	964	862	953	1004	1,139
Mooring/Unmoorong	455	413	377	550	557	575
Lighthouses & Buoys	243	263	286	330	343	409
Water Supply	173	224	295	311	286	343
Other	93.6	6	6	16		
Total	3,508	3,715	4,171	4,520	4,700	5,900

Source: APN

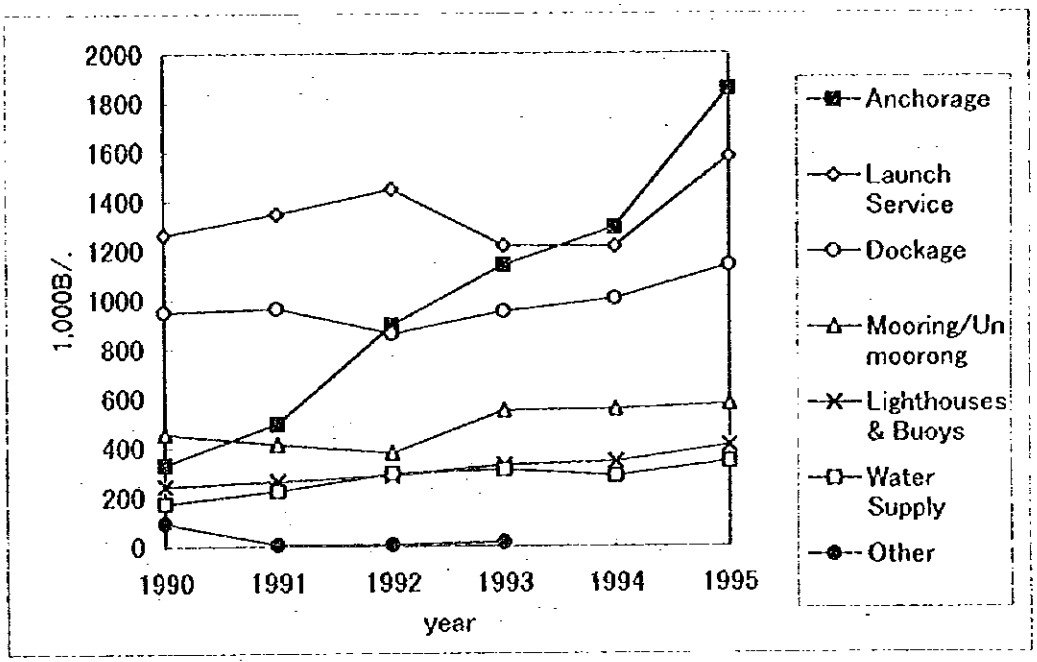


Figure 11-7-4 Components of the Revenues from the Service to Ships at Balboa

71. Compared with the increase of the anchorage, the revenues of the dockage increased slightly. The following reasons may explain this stagnancy.

a) A special part or whole facilities or services corresponding to the demand of ships entering ports were insufficient.
b) The services requested by ships entering ports did not require the dock.

72. The revenues of the launch increased from 1990 to 1993. But in 1993, it decreased suddenly because the new concession for the launch service started.

73. Table 11-7-4 and Figure 11-7-5 show the components of the revenues from the service to the cargo at Balboa from 1990 to 1995. The service to the cargo has a large part of the revenues on the tariffs during the same period. In 1994, the revenues of this category increased suddenly, because of the increase in the cargo volume.

Table 11-7-4 Components of the Revenues from the Service to the Cargo at Balboa

year	1990	1991	1992	1993	1994	1995
Movement						3,002
Handling	1786	2,279	2728	2767	4968	2,467
Wharfage	960	1,238	1421	1439	2763	1,605
Stowage/Unstowage	890	1,152	1363	1359	2510	1,357
Waiting time charge	610	1,132	1199	1038	1463	992
Storage	331	250	375	217	782	706
Transshipment	189	58	271	251	156	220
Other	16	1	2	13	33	38
Total	4,782	6,110	7,359	7,084	12,675	10,387

Source: APN

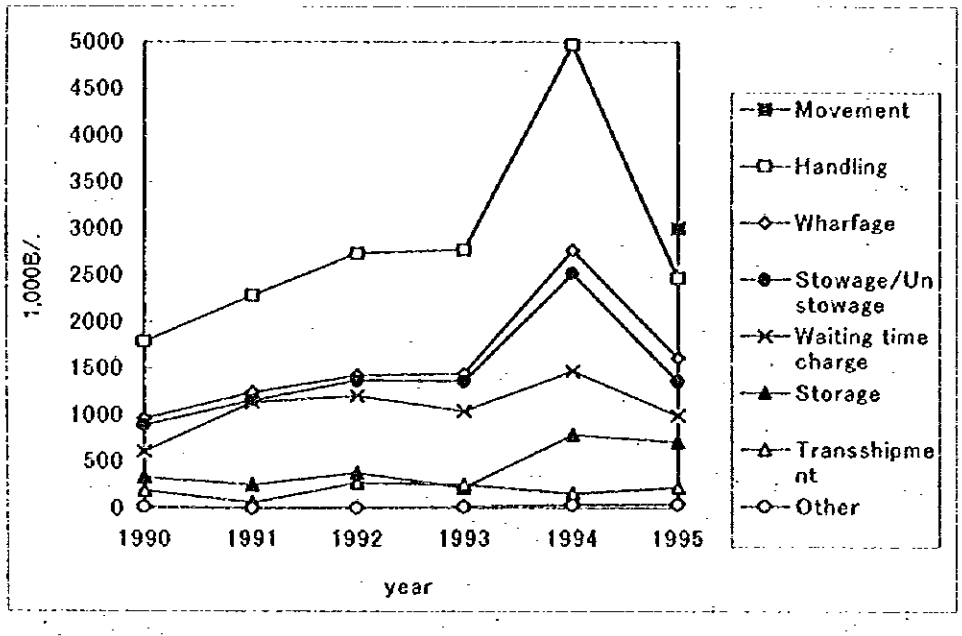


Figure 11-7-5 Components of the Revenues from the Service to the Cargo at Balboa

74. From July, 1995, the tariff system was changed. Consequently, the movement was established which resulted in the sudden decrease of the handling, the wharfage and the stowage/unstowage.

3) Revenues from the Concession

75. Table 11-7-5 and Figure 11-7-6 show the comparison of the revenues from the concession by ports in 1995. The total revenues of Balboa and Cristobal were larger than the revenues of other ports.

Table 11-7-5 Comparison of the Revenues from the Concession by Ports (1995)

(1,000 B.)

Port	Balboa	Cristobal	Vacamonte	Coco Solo	Other
Concession	1,120	1,307	93	21	14
Lease	1,226	584	483	367	281
Total	2,346	1,891	576	388	295

Note: Oil tank rental charge is included in the concession
Source: APN

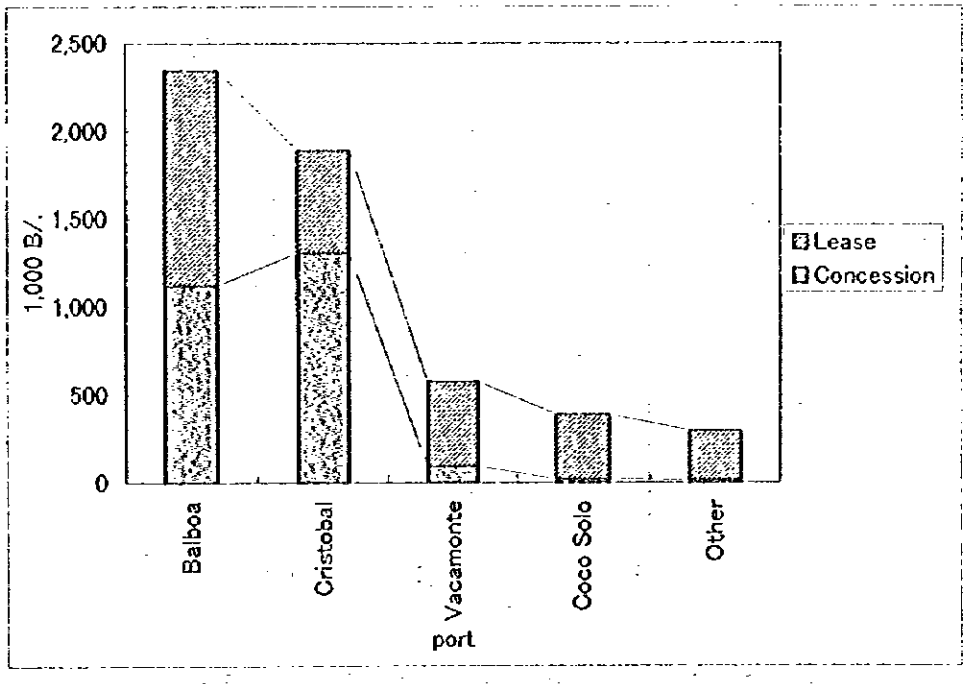


Figure 11-7-6 Comparison of the Revenues from the Concession by Ports (1995)

76. The total revenues from concession, excluding the lease of these two ports, represented 94.9% of all revenues from concession of all ports, that is, almost all

concessions are concentrated in these two ports.

77. The total revenues from the concession of Cristobal was the highest among others, while the revenues from the lease of Balboa was highest.

78. Table 11-7-6 and Figure 11-7-7 show the change of the revenues from concession of Balboa port from 1992 to 1995. The total revenues increased during the period. The revenues from the lease increase steadily during the period. The revenues from the concession excluding the lease decreased in 1993, because of the decrease of the revenues from the dry dock of Astillero.

Table 11-7-6 Change of the Revenues from Concession of Balboa Port

(1,000 B.)

y e a r	1992	1993	1994	1995
Concession	1,109	943	1,026	1,120
Rent	606	755	1,047	1,226
Total	1,715	1,698	2,073	2,346

Note: Oil tank rental charge is included in the concession
Source: APN

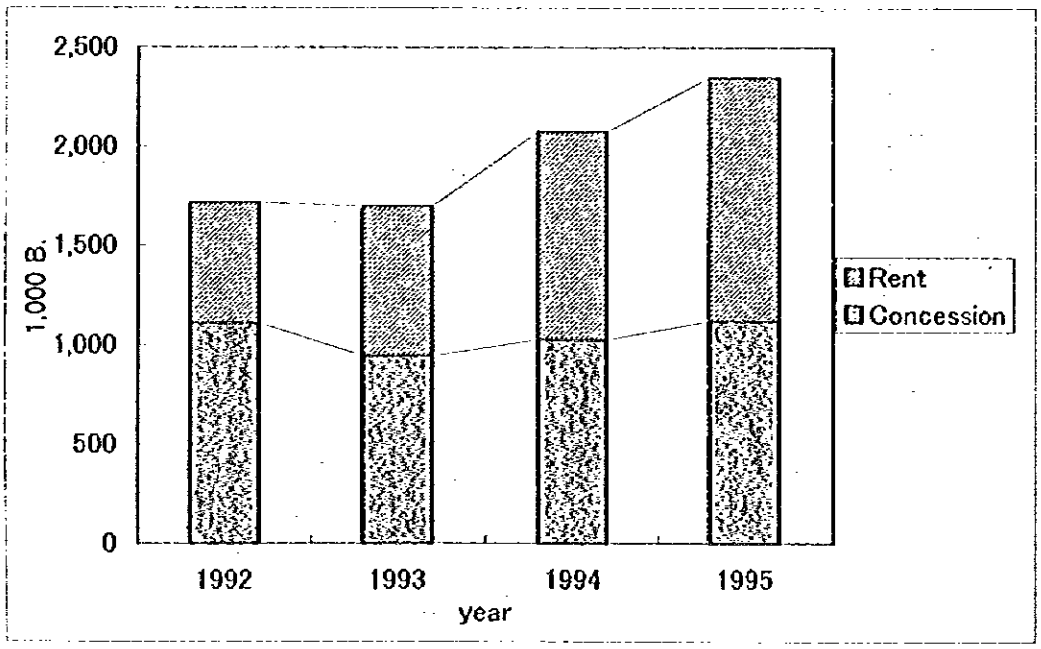


Figure 11-7-7 Change of the Revenues from Concession of Balboa Port

(2) Expenses

79. Table 11-7-7 shows the expenses of each port operated by APN in 1995, and Figure 11-7-8 shows the total expenses by ports in 1995. Like the revenues, Cristobal had the biggest expenses followed by Balboa. The expenses of these two ports account for 87 % of the total. Figure 11-7-9 shows the component ratio of the items of the expenses. Personnel expense was the most significant item. The repair and maintenance expenses of Balboa were greater than Cristobal's.

Table 11-7-7 Expenses of Each Port (1995)

(1,000 B.)

year	Balboa	Cristobal	Coco Solo	Vacamonte	other	total
Personnel Expenses	8,712	16,244	324	1,298	587	27,165
Repairs & Maintenance	1,644	883	152	1,341	4	4,024
Other	1,003	2,080	55	397	153	3,688
Total	11,359	19,207	531	3,036	744	34,877

Note: excluding Depreciation of Fixed Assets
Source: APN

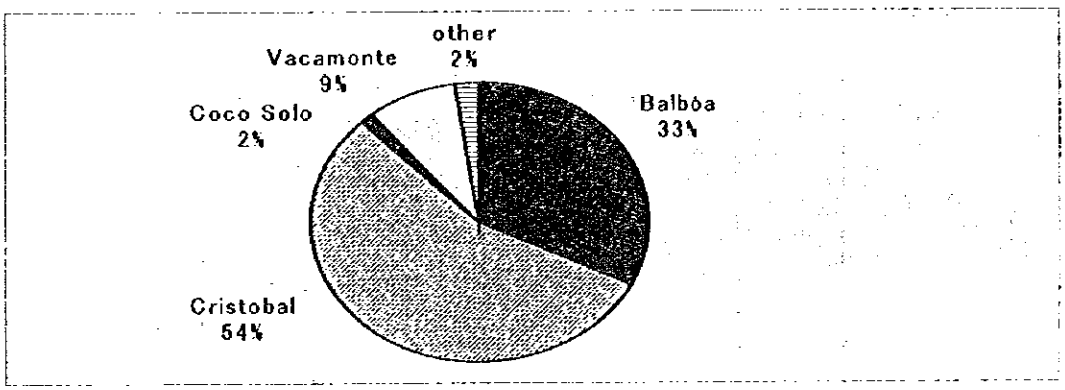


Figure 11-7-8 Total Expenses by Ports (1995)

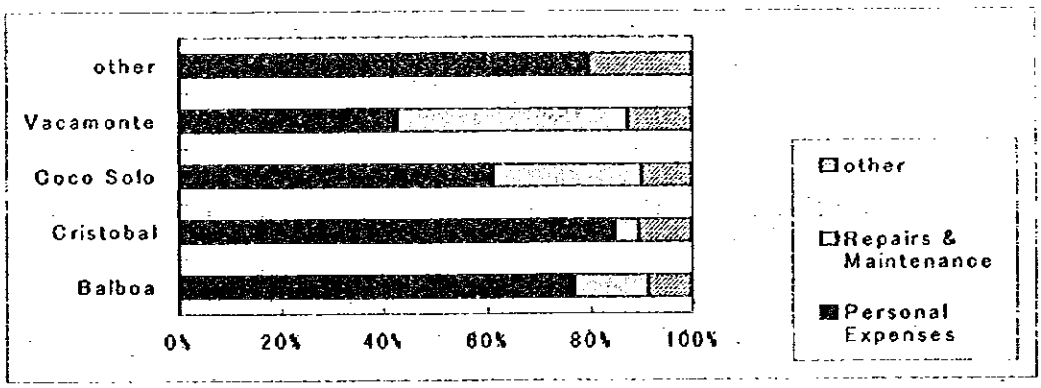


Figure 11-7-9 Component Ratio of Expenses (1995)

80. Table 11-7-8 and Figure 11-7-10 show the change of the personnel expenses by ports from 1990 to 1995. The total personnel expenses increased steadily. Personal expenses at the port of Cristobal accounted for 48% of the total, followed by Balboa at 25 %.

Table 11-7-8 Personnel Expenses by Ports

(1,000 B.)

year	1990	1991	1992	1993	1994	1995
Balboa	7,972	8,035	8,503	7,956	8,314	8,712
Cristobal	14,257	15,332	16,075	16,262	16,427	16,244
Vacamonte	1,233	1,122	1,164	1,163	1,208	1,298
Other Ports	541	533	652	862	703	911
Cent. Office	4,196	4,483	4,801	4,866	5,378	6,407
total	28,199	29,505	31,195	31,109	32,030	33,572

Source: APN

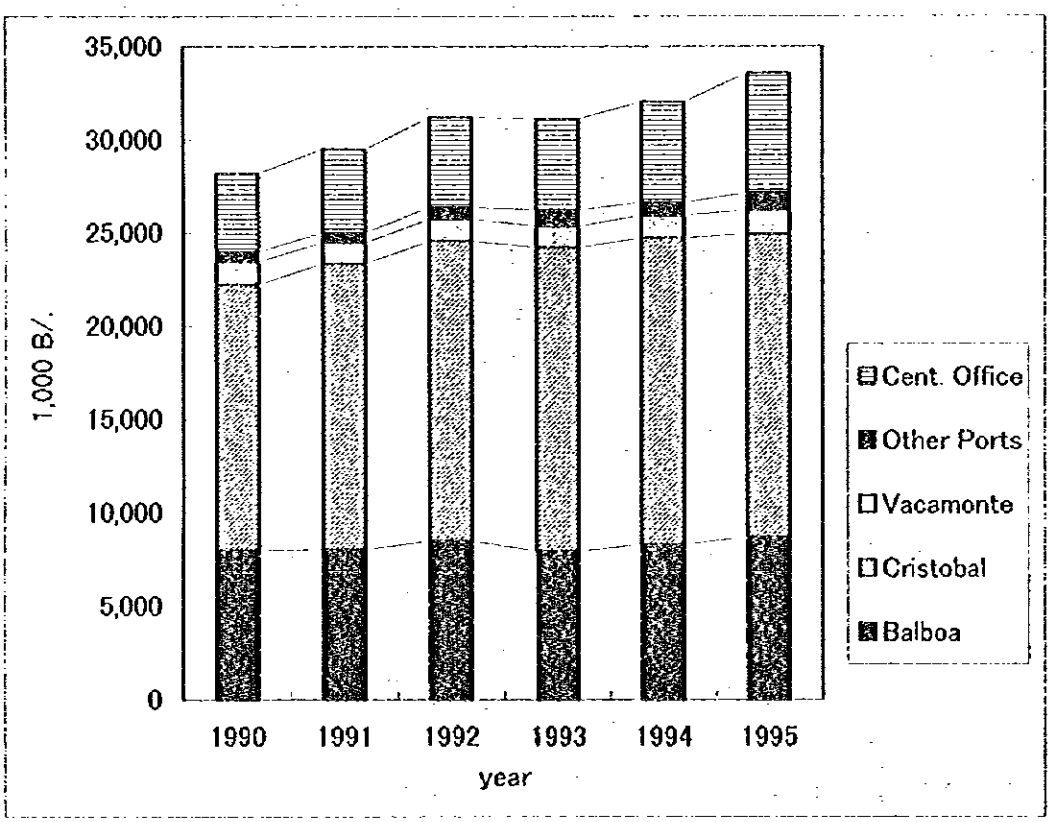


Figure 11-7-10 Change of the Personnel Expenses by Ports

81. Table 11-7-9 shows the change of the average personnel expenses by ports from 1990 to 1995. The Table and Figure classify the ports into two types, namely, Balboa and Cristobal on one side and all other ports on the other. The

reason for the high personnel expenses of Balboa and Cristobal comes not only from the number of workers but also from the high expenses for each worker.

Table 11-7-9 Change of the Average Personnel Expenses by Ports

(B.)

year	1990	1991	1992	1993	1994	1995
Balboa	15,510	16,298	16,871	16,928	17,072	17,389
Cristobal	16,675	16,720	17,822	18,778	18,416	18,293
Vacamonte	7,383	6,448	6,847	7,048	7,321	8,484
Other Ports	7,026	6,057	7,011	10,023	7,101	9,589
Cent. Office	6,377	6,762	7,398	8,097	8,591	9,299
Ave.	12,417	12,636	13,458	14,218	14,116	14,433

Source: APN

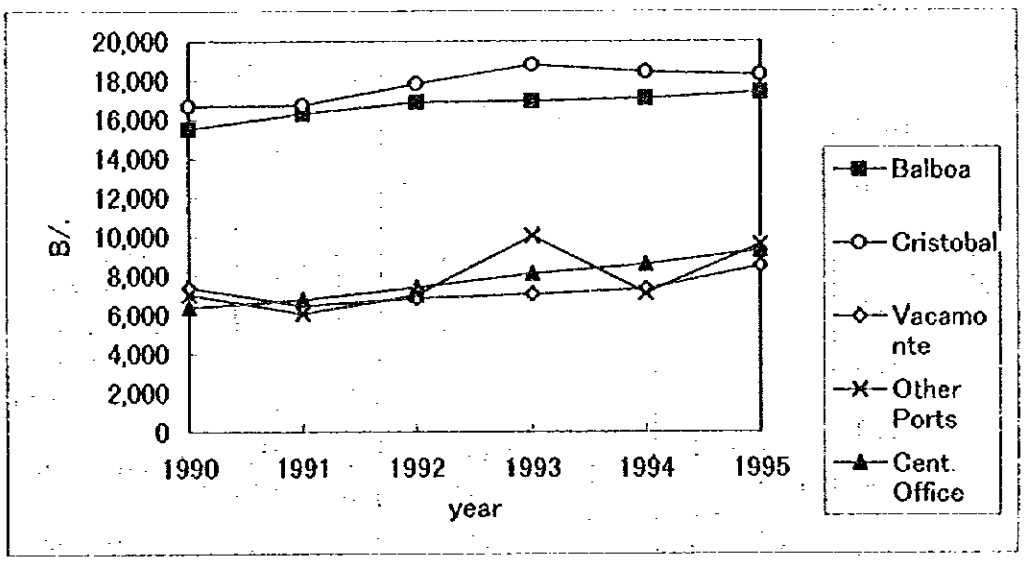


Figure 11-7-11 Change of the Average Personnel Expenses by Ports

82. Table 11-7-10 and Figure 11-7-12 show the change of repairs and maintenance expenses by ports from 1990 to 1995. Till 1992, total expenses were almost less than 1.5 million Balboas. It increased in 1993, and in 1994, it was more than about 3 million Balboas. Till 1992, the expenses were the highest at Cristobal but Balboa has had the highest expense since 1993. It was more than 1.6 million Balboas in 1994 and 1995.

83. It is desirable that the investment is executed for the port whenever necessary. However, because of shortage of budget, APN allotted fund to the ports in sequence. From 1990 to 1992, investment was concentrated to Cristobal. Investment to Balboa and Vacamonte started from 1993. Expenditures of Balboa

in 1995 represented 89 % of the total budget.

Table 11-7-10 Change in Repairs & Maintenance Expenses by Ports

(1,000 B.)

year	1990	1991	1992	1993	1994	1995
Balboa	252	345	320	957	1,650	1,644
Cristobal	379	839	597	421	488	883
Vacamonte	94	108	141	599	1,515	1,341
Other Ports	37	114	45	18	52	156
Cent. Office	163	100	192	131	287	97
total	925	1,506	1,295	2,126	3,992	4,121

Source: APN

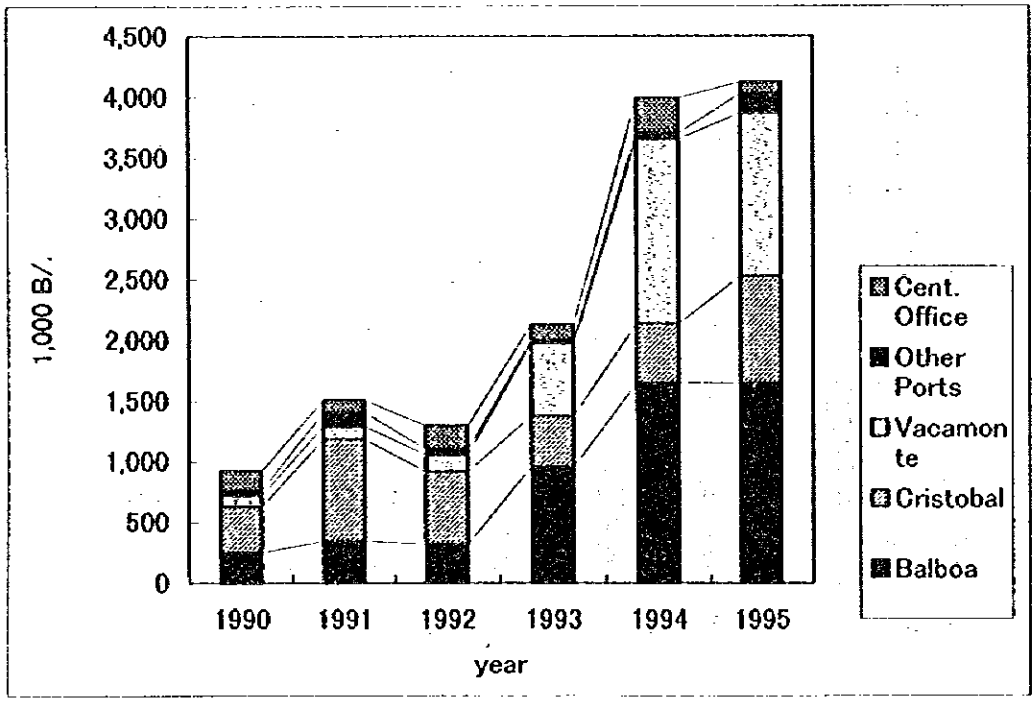


Figure 11-7-12 Change in Repairs & Maintenance Expenses by Ports

84. Table 11-7-11 and Figure 11-7-13 show the change of expenses of Balboa Port from 1990 to 1995. Its total increased steadily during the period. The great part of the expenses was the personnel expenses, representing 76.6 % of the total in 1995. Personnel expenses increased steadily excluding 1993, when the number of workers decreased. From 1993, the repairs and maintenance expenses increased, but this represented only 14.4% of the total in 1995.

Table 11-7-11 Change in Expenses of Balboa Port

(1,000 B.)

year	1990	1991	1992	1993	1994	1995
Personnel Expenses	7,972	8,035	8,503	7,956	8,314	8,712
Repairs & Maintenance	252	345	320	957	1,650	1,644
Other	684	901	757	1,133	1,175	1,003
Total	8,908	9,281	9,580	10,046	11,139	11,359

*) excluding depreciation of Fixed Assets
Source: APN

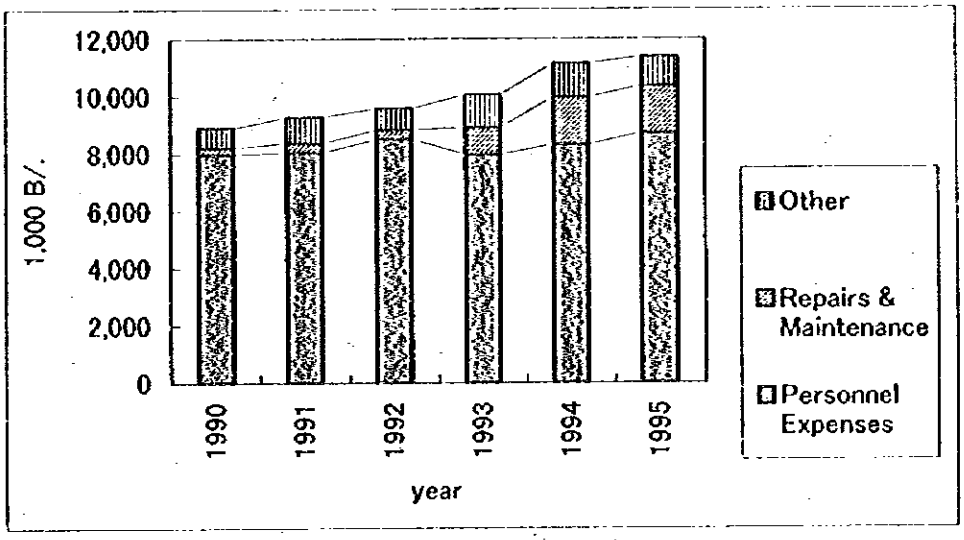


Figure 11-7-13 Change in Expenses of Balboa Port

(3) Balance of the Revenues and the Expenses

85. Table 11-7-12 and Figure 11-7-14 show the change of the balance of revenues and expenses by ports from 1990 to 1995. The large part of the income of APN was surplus from Cristobal. Its share was 62.1 % of the total revenue of APN in 1994. Though revenue at Cristobal decreased suddenly in 1995 and its share dropped to 52.5 %, Cristobal still maintained the highest share in APN.

86. Surplus from Balboa increased suddenly in 1994. The share of Balboa was 14.5 % of the total in 1995. Vacamonte registered a minus figure because the investment expenses increased.

Table 11-7-12 Change of the Balance of the Revenues and the Expenses by Ports

(1,000 B/.)

year	1990	1991	1992	1993	1994	1995
Balboa	1,497	2,741	3,775	3,458	8,529	7,524
Cristobal	16,078	24,226	24,711	24,721	23,598	14,322
Vacamont	418	142	88	-887	-1,597	-1,447
Coco Solo	ND	ND	ND	2,772	2,980	3,977
Other	4,429	4,819	7,002	4,303	4,477	3,035
Total	22,422	31,928	35,576	34,367	37,987	27,411

Source: APN

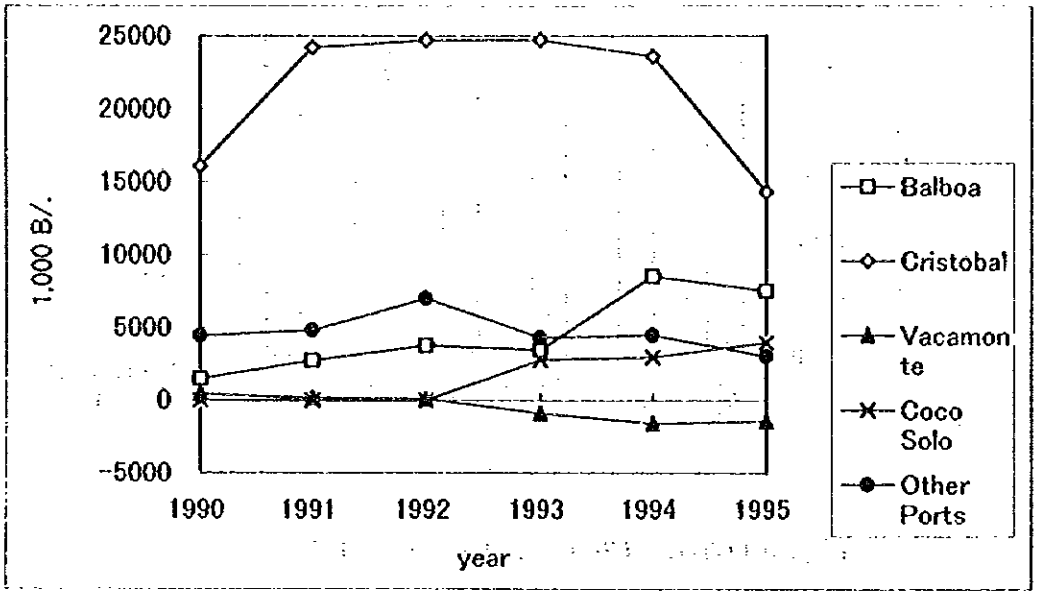


Figure 11-7-14 Change of the Balance of the Revenues and the Expenses by Ports

(4) Operational Efficiency

87. Table 11-7-13 and Figure 11-7-15 show the working ratio by ports operated by APN from 1990 to 1995. The working ratios shown in the Table and the Figure, however, do not represent the total efficiency, because they do not include the administrative expenses.

88. The working ratio of Vacamonte was higher than other ports from 1993, due to high investments. The working ratio of Balboa was the highest among other ports in 1990 (85.6%). In 1994, it was improved to 56.6 %, because of higher revenues. With the decline of revenue in 1995, the working ratio of Balboa became

a little higher, but it still fell within the range of efficiency. However, compared to the working ratio of Coco Solo and other ports, Balboa was not efficient.

Table 11-7-13 Working Ratio by Ports

year	1990	1991	1992	1993	1994	1995
Balboa	85.6%	77.2%	71.7%	74.4%	56.6%	60.2%
Cristobal	50.1%	43.5%	45.0%	43.0%	44.6%	57.3%
Vacamonte	79.5%	91.7%	94.9%	173.5%	211.1%	191.0%
Coco Solo				13.5%	9.4%	11.8%
Other Ports	19.9%	14.2%	11.2%	13.8%	12.8%	19.7%

Source: APN

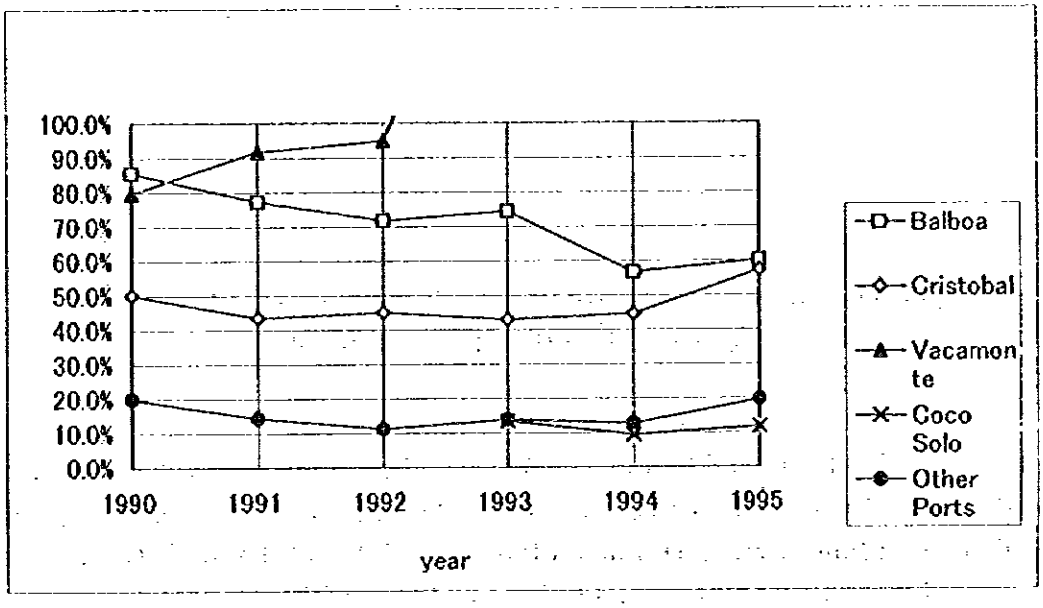


Figure 11-7-15 Working Ratio by Ports

11.7.2 Fixed Assets and Investment

(1) Fixed Assets

89. Figure 11-7-16 shows the composition of the present book value of the fixed assets of Balboa port on December 31, 1995. The great part of it was the value of lands, which represented 94 % of the total.

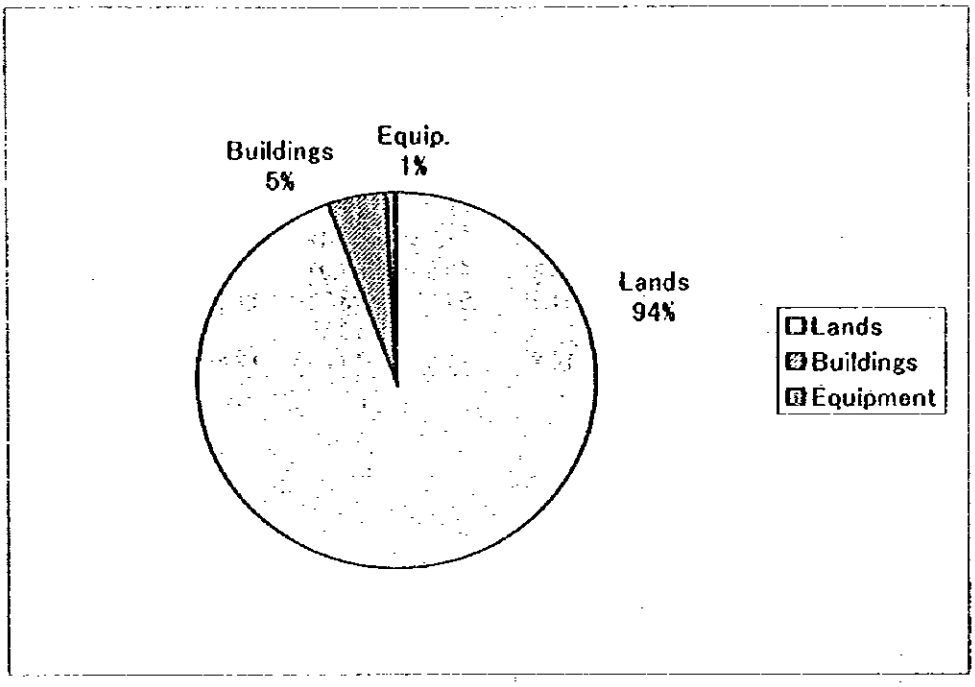


Figure 11-7-16 Composition of Present Book Value of the Fixed Assets of Balboa Port (December 31, 1995)

90. Table 11-7-14 and Figure 11-7-17 show the present book value of the port of Balboa and Cristobal on December 31, 1995. The value of the buildings and equipment of Balboa was 25.6 million Balboas or 5.4 % of the total. The value of assets at Cristobal was 72.1 million Balboas or 18.3 % of the total.

Table 11-7-14 Present Book Value (December 31,1995)

(1,000B.)

port	Balboa	Cristobal
Lands	443,790	321,557
Buildings	21,388	59,285
Equipment	4,349	12,995
total	469,527	393,837

Source: APN

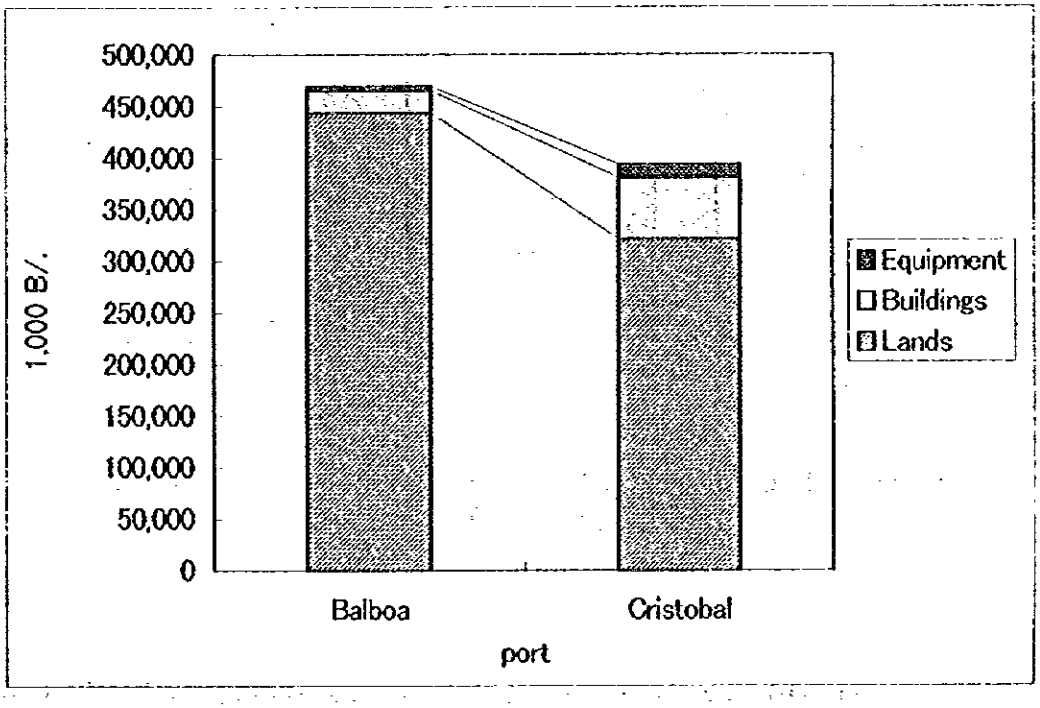


Figure 11-7-17 Comparison of the Present Book Value (December 31,1995)

91. Table 11-7-15 and Figure 11-7-18 show the change of the book value of the fixed assets excluding lands of Balboa port. The value increased steadily from 1992 to 1994, because of the addition of new assets. The value of the depreciation also increased. So the ratio of the depreciation did not change. The ratio was about 50 % throughout the period.

Table 11-7-15 Change in the Value of the Fixed Assets excluding Land at Balboa Port

(1,000 B/.)

year	1990	1991	1992	1993	1994	1995
Value of Depreciation	9,796	8,752	9,739	10,774	13,404	13,404
Residual Value	7,612	8,860	8,456	11,268	12,333	12,333

Source: APN

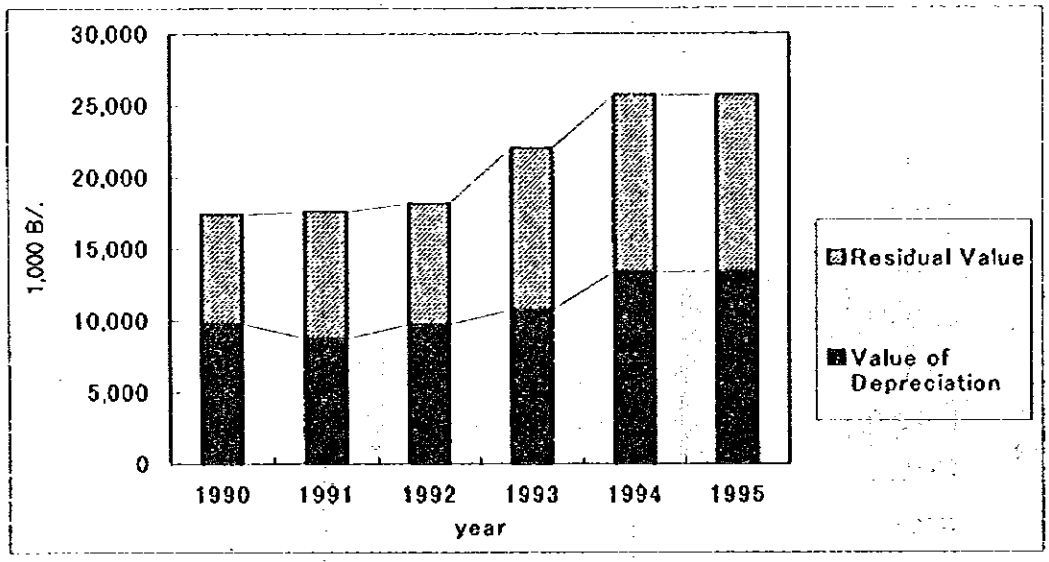


Figure 11-7-18 Change in the Value of the Fixed Assets excluding Land at Balboa Port

(2) Investment

92. Table 11-7-16 shows the execution of the main works of the rehabilitation, maintenance and other construction in Balboa port from 1993 to 1996.

Table 11-7-16 Execution of the Main Construction Works in Balboa Port

(1,000 B/.)

Year	Value	Works
1993	1,566	Rehabilitation of the defense system
	335	Rehabilitation of the structure Dock 15-A
	268	Rehabilitation of the sub-structure Dock 15-C
	1,242	Rehabilitation of the sub-structure Dock 15-B
	519	Rehabilitation of the defense system Dock 18
1994	262	Improvements to the water system
	1,260	Rehabilitation of the defense system Dock 18
1996	439	Rehabilitation of the sub-structure Dock 16
	405	Corrective maintenance Dock 17

Source: APN