4.1.2 Cargo Movement

(1) Cargo Movement through Cebu Baseport

1) Total Cargo Volume

Table 4.1.2-1 shows total cargo throughput of Cebu Baseport from 1990 to 1999. The data shows domestic and foreign cargo volume handled at Cebu Baseport and Outports in Cebu province, including both government and private. Statistical data of Mandaue is included in Outport. More details is described in Appendix Table A 4.1.2-1.

Table 4.1.2-1 Total Cargo Volume throughput at Cebu Baseport and Outports

Unit: Metric Tons

Year	1) Baseport			2) Out Ports			Total
	Domestic	Foreign	Total	Domestic	Foreign	Total	
1990	3,574,541	516,301	4,090,842	4,497,327	993,016	5,490,343	9,581,185
1991	4,210,956	343,498	4,554,454	4,000,933	985,469	4,986,402	9,540,856
1992	4,160,438	487,802	4,648,240	4,065,191	1,027,357	5,092,548	9,740,788
1993	4,078,625	351,704	4,430,329	4,293,513	1,185,814	5,479,327	9,909,656
1994	4,321,730	491,738	4,813,468	4,648,018	947,979	5,595,997	10,409,465
1995	4,751,771	646,419	5,398,190	3,855,394	1,040,334	4,895,728	10,293,918
1996	4,457,863	562,831	5,020,694	5,141,861	1,012,363	6,154,224	11,174,918
1997	4,555,357	930,430	5,485,787	4,111,295	1,389,058	5,500,353	10,986,140
1998	5,732,777	822,471	6,555,248	3,344,141	1,148,064	4,492,205	11,047,453
1999	6,567,406	884,561	7,451,967	4,365,115	1,213,793	5,578,908	13,030,875
Growth Rate	7.0%	6.2%	6.9%	-0.3%	2.3%	0.2%	3.5%

Following points are main features of cargo handling of ports:

Total cargo volume handled by all ports in Cebu Province in 1999	13,030,875 metric tons
Cargo volume throughput at Cebu Baseport in 1999	7,451,967 metric tons (57% of the total)
Cargo volume throughput at Outports in 1999	5,578,908 metric tons (43% of the total)
Average yearly growth rate of cargo throughput of Cebu Baseport for 10 years	6.9%
Average yearly growth rate of cargo throughput of Outports for 10 years	0.2%

2) Containerization Cargo Volume at Cebu Baseport

Table 4.1.2-2 shows the tendency and degree of containerization of Cebu Baseport. Details are in Appendix Table 4.1.2-2.

Table 4.1.2-2 Containerized and Non-Containerized Cargo throughput at Cebu Baseport

Unit: Metric Tons

Year	1) Domestic Cargo			2) Foreign Cargo		
	Non Container	Container	Container Ratio	Non Container	Container	Container Ratio
1990	2,138,914	1,435,627	40%	333,752	182,549	35%
1991	2,240,322	1,970,634	47%	88,406	255,092	74%
1992	2,297,820	1,862,618	45%	309,543	178,259	37%
1993	2,234,317	1,844,308	45%	126,564	225,140	64%
1994	2,382,176	1,939,554	45%	215,090	276,648	56%
1995	2,619,218	2,132,553	45%	282,749	363,670	56%
1996	2,693,940	1,763,923	40%	290,751	272,080	48%
1997	2,817,952	1,737,405	38%	372,618	557,812	60%
1998	3,990,400	1,742,377	30%	416,353	406,118	49%
1999	4,458,382	2,109,024	32%	317,121	567,440	64%
Growth Rate						
1990-1999	8.5%	4.4%	-2.5%	-0.6%	13.4%	6.8%

Source: Cebu Port Authority

Following points are main features of containerization of cargo handling of the ports:

a. Containerization of Domestic cargo in 1999

Total throughput of domestic cargo in 1999	6,567,406 metric tons
Volume of containerized cargo volume	2,109,024 metric tons
Containerization ratio	32%
Containerization in 1990	40%

Thus, containerization is not progressing.

b. Containerization of Foreign cargo in 1999

Total throughput of Foreign cargo in 1999	884,561 metric tons
Volume of containerized cargo volume	567,440 metric tons
Containerization ratio	64%
Containerization in 1990	35%

Growth rate of containerization of foreign cargo per year is 6.8%.

3) Cargo Types at Cebu Baseport

Table 4.1.2-3 and Figure 4.1.2-1 shows the component of cargo types at Cebu Baseport in 1999. Total amount is slightly different from Table4.1.2-1 due to different data processing. Table 4.1.2-4 shows number of container for cargo transport and occupancy ratio. Details of list of cargo is shown in Appendix Table 4.1.2-3.

Table 4.1.2-3 Cargo Types at Cebu Baseport in 1999

Unit: Metric Tons

1) Domestic Cargo						
Cargo Type	Inbound	%	Outbound	%	Total	%
1) Container	1,203,963	36%	659,604	39%	1,863,567	37%
3) Break Bulk	1,005,824	30%	963,902	57%	1,969,726	39%
2) Bulk	1,132,982	34%	53,272	3%	1,186,253	24%
Total	3,342,769	100%	1,676,778	100%	5,019,547	100%
2) Foreign Cargo						
Cargo Type	Import	%	Export	%	Total	%
1) Container	312,485	50%	183,714	89%	496,198	60%
3) Break Bulk	14,889	2%	8,269	4%	23,158	3%
2) Bulk	299,407	48%	14,757	7%	314,163	38%
Total	626,781	100%	206,739	100%	833,520	100%

Source: Cebu Port Authority

Note: The total volume in this table does not correspond to the figures in other tables such as Table 4.1.2-2. The ratio of cargo types are used as a reference.

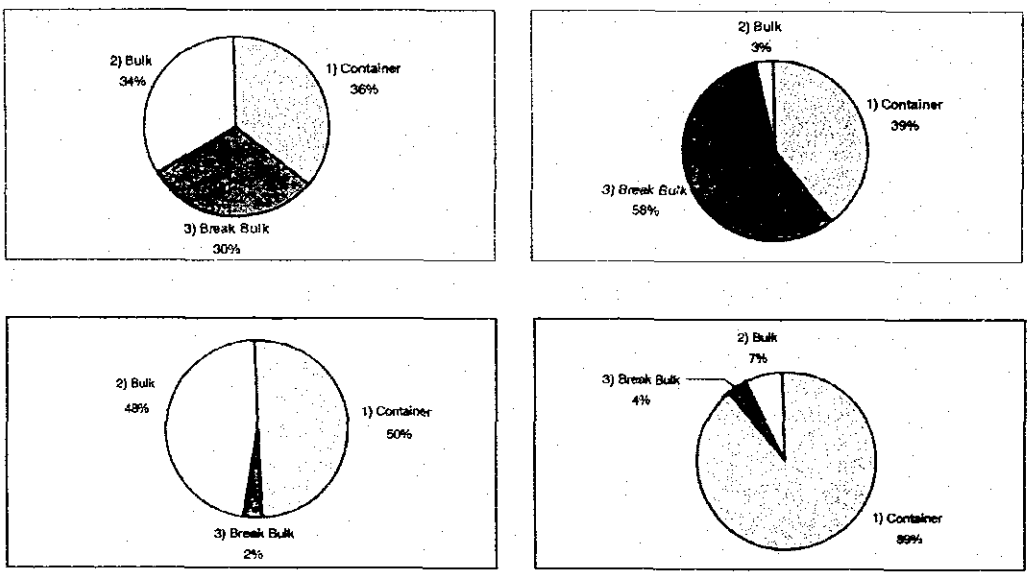


Fig. 4.1.2-1 Cargo Types at Cebu Baseport

Types and Kinds of Commodity at Cebu Baseport:

- Containerized foreign cargo 60%
- Containerized domestic cargo 37%
- Crude minerals such as stone, sand, salt, gravel, sulfur and iron pyrites, salt amounts to 23% of total domestic cargo.
- Iron and steel (ingots, plates, wire, and pipes) and chemicals (medical, plastic, coloring) amount to 30% of total foreign cargo.

Table 4.1.2-4 shows the ratio of full container occupancy out of the total containerized cargo throughput at Cebu Baseport between 1990 to 1999.

Table 4.1.2-4 Number of Full and Empty Container Handled at Cebu Baseport

Unit: TEU

Year	1) Domestic Container Cargo				2) Foreign Container Cargo			
	Total	Empties	Full	Ratio	Total	Empties	Full	Ratio
1990	136,493	23,949	112,544	82%	48,805	9,126	39,679	81%
1991	166,711	33,823	132,888	80%	47,375	6,996	40,379	85%
1992	169,717	31,534	138,183	81%	49,544	7,190	42,354	85%
1993	168,808	28,527	140,281	83%	54,680	8,198	46,482	85%
1994	192,334	36,111	156,223	81%	66,122	10,568	55,554	84%
1995	206,728	44,541	162,187	78%	67,339	7,581	59,758	89%
1996	201,150	60,345	140,805	70%	70,404	13,922	56,482	80%
1997	207,531	40,819	166,712	80%	63,206	12,595	50,611	80%
1998	275,350	80,348	195,002	71%	62,439	11,209	51,230	82%
1999	327,636	100,456	227,180	69%	79,064	14,761	64,303	81%

Source: Cebu Port Authority

4) Cargo Volume Transported from Cebu Baseport to Other Regions

Table 4.1.2-5 shows the interrelation of domestic cargo movement between region 7 and neighboring regions. The percentage was obtained by calculating the result of the origin and destination statistics by water transportation for 4 years between 1995 and 1998.

For the analysis of the future cargo demand forecast, this statistics will be used along with following additional data:

a. Figures of origin and destination survey by commodity items.
b. Past trend of interrelation between region 7 and related regions.
c. Economic activities and change in future relations with neighboring regions.
d. Similar data on the flow of foreign commodity.

Table 4.1.2-5 Cargo Flow by Ship To and From Region 7, 1999

Unit: Metric Tons

No.	Region No.	Name of region	O-D Cargo	Share in Cebu	
1	Region 10	N. Mindanao	5,481	21.3%	1,397,493.1
2	NCR	National Capital R.	4,655	18.1%	1,186,769.9
3	Region 7	C. Visayas	2,871	11.1%	731,955.9
4	Region 8	E. Visayas	2,673	10.4%	681,497.0
5	Region 12	C. Mindanao	2,130	8.3%	543,002.4
6	Region 11	S. Mindanao	2,026	7.9%	516,481.0
7	Region 6	W. Visayas	1,654	6.4%	421,575.2
8	Region 3	C. Luzon	1,182	4.6%	301,274.4
9	Region 9	W. Mindanao	766	3.0%	195,253.8
10	Region 4	S. Tagalog	624	2.4%	159,002.1
11	Region.13	Caraga	614	2.4%	156,667.7
12	Region 5	Bicol	533	2.1%	135,924.3
13	Region 2	Cagayan Valley	416	1.6%	106,100.3
14	ARMM	ARMM	124	0.5%	31,676.7
15	Region 1	Ilocos	11	0.0%	2,732.2
Total			25,759	100.0%	6,567,406.0

Source: National Statistics Office

More than 40% of cargo was transported by boat between region 7 and Mindanao area, especially north Mindanao. Following points are the main feature of cargo movement.

Total cargo throughput at Cebu Baseport	7,451,967 M tons	:	100%
Domestic cargo	6,567,006 M tons	:	88%
- To North Mindanao (Region 10)	1,397,000 M tons	:	21%
- To National Capital Region	1,187,000 M tons	:	18%
- To coastal of Cebu (Region7)	732,000 M tons	:	11%
- To East Visayas (Region 8)	681,000 M tons	:	10%
Foreign cargo	884,561 M tons	:	12%

(2) Cargo Movement in Outport

1) Management Office and Main Outport

Cargo and Passenger statistics are collected at four Management Offices. According to CPA's port list, there are 118 ports in total, 10 primary government ports, 42 secondary government port and 66 private port. Actually statistical data were collected from 26 Outports; 6 from Danao, 4 from Santa Fe, 5 from Toledo and 11 from Argao Management Office. Table 4.1.2-6 shows name of ports and their ownership by management office in 1999.

Table 4.1.2-6 Name of Outport Collected for Cargo and Passenger Data

Name of Port	Ownership	Cargo	Passenger	Status
1. Danao Management Office				
1 Danao	P. Government	O	O	
2 Dunguan	Private	O	O	
3 Carmen	P. Government	O	O	
4 Compostela	Government	O		
5 Camotes (Poro)	P. Government	O	O	
6 Mandaue	Private	O	O	
2. St. Fe Management Office				
1 Santa Fe	P. Government	O	O	
2 Bantayan	P. Government	O	O	
3 Hagnaya	Government	O	O	
4 Baigad	Private	O	O	
3. Toledo Management Office				
1 Toledo	P. Government	O	O	
2 AFC	Private	O		
3 THI	Private	O		
4 TPC	Private	O	O	
5 Tuburan	P. Government		O	Operation Stopped
4. Argao Management Office				
1 Argao	Government		O	Operation Stopped
2 Alcoy	Private	O		
3 Apocemco	Private	O		
4 Gnd. Cement	Private	O		
5 NPC	Private	O		
6 Taloot (Luvimin)	Private	O	O	
7 Trigon	Private	O	O	
8 Dalaguete	Government	O		Operation Stopped
9 Dumamgug	Private		O	
10 Santander	Private		O	
11 Sibonga	Private	O		

Note : P. Government means Primary Government Port
O : Data available

2) Total Cargo Volume at Outport

Table 4.1.2-7 shows total cargo volume throughput in 26 Outport, and Table 4.1.2-8 shows total handling volume by 4 management offices.

Table 4.1.2-7 Domestic & Foreign Cargo Throughput at Outport, 1990-1999

Unit: Metric Tons

Year	Domestic Cargo				Foreign Cargo			Total
	Inbound	Outbound	Total	%	Import	Export	Total	
1990	2,411,522	2,085,805	4,497,327	82%	556,096	436,920	993,016	5,490,343
1991	2,186,642	1,814,291	4,000,933	80%	417,343	568,126	985,469	4,986,402
1992	2,363,105	1,702,086	4,065,191	80%	335,431	691,926	1,027,357	5,092,548
1993	2,450,603	1,842,910	4,293,513	78%	461,452	724,362	1,185,814	5,479,327
1994	2,643,561	2,004,457	4,648,018	83%	531,692	416,287	947,979	5,595,997
1995	2,356,241	1,499,153	3,855,394	79%	495,018	545,316	1,040,334	4,895,728
1996	2,248,950	2,892,911	5,141,861	84%	551,741	460,622	1,012,363	6,154,224
1997	1,825,415	2,285,880	4,111,295	75%	511,729	877,329	1,389,058	5,500,353
1998	1,017,156	2,326,985	3,344,141	74%	732,017	416,047	1,148,064	4,492,205
1999	1,094,843	3,270,272	4,365,115	78%	678,295	535,498	1,213,793	5,578,908
Growth Rate								
1990-1999	-8.4%	5.1%	-0.3%		2.2%	2.3%	2.3%	0.2%

Source: Cebu Port Authority

Table 4.1.2-8 Cargo Volume Throughput at Outport by Management Offices, 1998-1999

Unit: Metric Tons

Management Office	Year	Domestic Cargo				Foreign Cargo				Grand Total
		Inbound	Outboun	Total	%	Inbound	Outboun	Total	%	
1) Danao	1998	321,014	385,252	706,266	21%	50,624	0	50,624	4%	756,890
	1999	447,459	970,626	1,418,08	32%	3,543	2,022	5,565	0%	1,423,65
2) Sta. Fe	1998	150,661	68,540	219,201	7%	0	0	0	0%	219,201
	1999	140,942	61,442	202,384	5%	0	0	0	0%	202,384
3) Toledo	1998	255,069	289,677	544,746	16%	251,729	340	252,069	22%	796,815
	1999	232,231	360,511	592,742	14%	382,778	0	382,778	32%	975,520
4) Argao	1998	290,412	1,583,51	1,873,92	56%	429,664	415,707	845,371	74%	2,719,29
	1999	274,211	1,877,69	2,151,90	64%	291,974	533,476	825,450	68%	2,977,35
Total	1998	1,017,15	2,326,98	3,344,14	100%	732,017	416,047	1,148,06	100%	4,492,20
	1999	1,094,84	3,270,27	4,365,11	100%	678,295	535,498	1,213,79	100%	5,578,90

Source: Cebu Port Authority

(3) Cargo Volume Handled by Management Offices

The ratio of total cargo handling volume (1998+1999) of Outport by management office is as follows:

Argao management Office	57%
Danao Management Office	22%
Toledo Management Office	18%
Santa Fe Management Office	4%

Fig. 4.1.2-2 shows the classified domestic and foreign cargo volume of 1999 handled by government ports and private ports. The private ports handles 71% of total domestic cargo volume of Outport. Foreign cargo is handled 100% by private ports, but the amount is small, which is 22% of the total Outport cargo. The government owned ports mainly handle passenger transport.

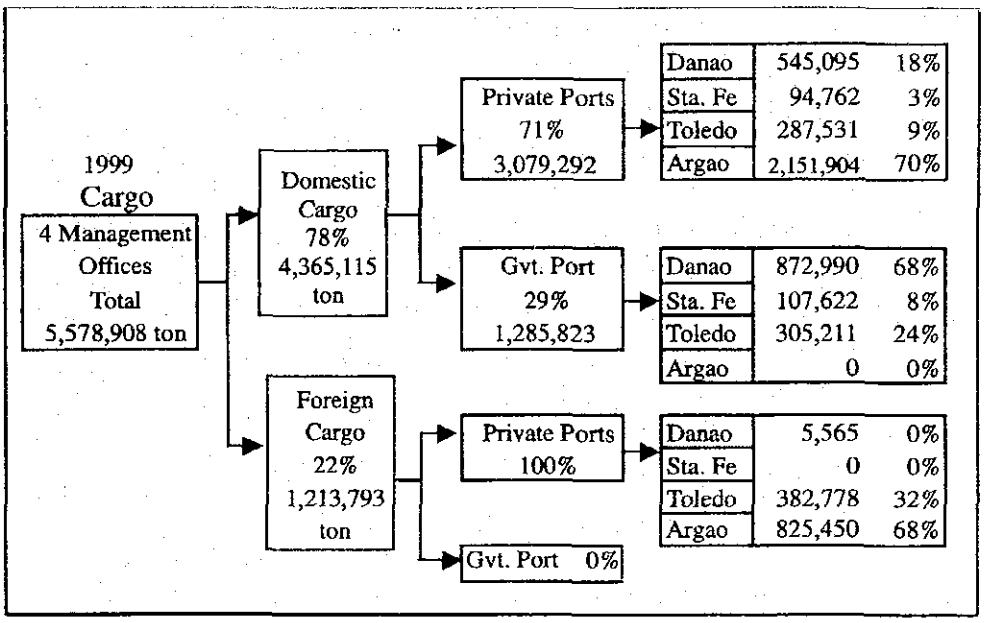


Fig. 4.1.2-2 Cargo Throughput at Outport by Management Office

4) Characteristics of Ports Under the Danao Management Office

a. Name of ports and Location

There are 6 ports under the Office. Four ports, Compostela, Danao, Dunguan and Carmen have direct hinterland of Danao City and Carmen town. These ports are located 20km to 40km north from Cebu City. Camotes (Poro) port is located at eastern Camotes Island and Mandaue port is located beside Cebu Baseport.

b. Service Area

Ports serve mainly local sea transport to Camotes Island and Western coast of Leyte island. There is no cargo movement by sea transport between these ports and Cebu Baseport. But, the coastal road is congested and average traveling speed by car is 30km/h between Danao City and Cebu City.

c. Mandaue Port

Management of Mandaue port was moved from Danao Management Office to Cebu Baseport Head Office in 1997 since Mandaue city expanded to the same economic activity zone. Therefore statistical data up to 1996 is not included, but after 1997 it was included as parts of the Cebu Baseport

d. Cargo Throughput

Total cargo throughput by 6 ports in 1999 is 1,423,650 metric tons, or 3,900tons per day. The order of port in the volume of throughput is as follows:

Compostela Government port	34 %
Dunguan Private port	36 %
Carmen Government port	18 %
Camotes Government port	2 %
Danao government port	11 %

e. Kinds of Commodity

Main cargo is copra, cement, and empty bottles, rice and daily goods. Sugarcane factory, cement factory, computer parts factory, plywood factory are the main business activities in this area. Collected copra and empty bottles are transported by commission merchants to Cebu City by land.

5) Ports Under the Santa Fe management Office

a. Name of ports and Location

Santa Fe and Bantayan ports are on Bantayan Island. Hagnaya and Baigad port are located at the northwestern end of San Remigio in Cebu Island. Hagnaya port is located 11km northwest from Bogo district center. All ports are 100km north from Cebu Baseport.

b. Service Area

Near Bogo there are Bogo port for fishing center and Polambato port for cargo transport. Polambato port is under construction. Two ports are located closely. Those ports are not included in the office data at present.

c. Cargo Throughput

Following is the cargo throughput between two groups in 1999.

Santa Fe port	103,216 metric tons, 280metric tons/day
Baigad private ports	95,120metric tons, 260tons /day

d. Kinds of Commodity

Cargoes transported are mainly daily goods such as sugar, meat, eggs, vehicles, and rice, etc.

6) Ports Under the Toledo Management Office

a. Name of ports and Location

Four ports are located close to Toledo City and Tuburan port is located far north from Toledo City. Toledo city on the western coast is connected by 50km Trans Cebu central highway with Cebu city. Besides Toledo government port, there are three private ports; THI port for ship rehabilitation of Tsuneishi Heavy Industry, AFC port of Atlas Fertilizer Corporation and TPC port of Toledo Power Company.

b. Service Area

The Toledo port is gate port to the Negros Island and towards to Panay Island through the RORO services

c. Cargo Throughput

Total cargo throughput of Toledo management office is 975,520 in 1999. Private ports handle about 70% of the total cargo. Details are as follows. Table 4.1.2-9 shows kinds of commodity throughput in 1999. Toledo port handles mainly daily commodities between Cebu and Negros Island

Toledo government port

Outbound of domestic cargo	175,400 metric tons
Inbound of domestic cargo	129,811 metric tons

THI, AFC port and TPC private ports

Outbound of domestic cargo	185,111 metric tons
Inbound of domestic cargo	102,420 metric tons
Import of foreign cargo	382,778 metric ton

d. Kinds of Commodity

Outbound cargo by private ports amounts to 185,112 metric tons of which 90% is fertilizer to be transported nation wide, and 10% is sulfuric acid to Leyte. The main commodities are

Coal	291,119 metric tons	60 %
Sulfuric acid, Gypsum	97,040 metric tons	20 %
Material for ship repair	97,040 metric tons	20 %
Total	485,198 metric tons	100 %

Table 4.1.2-9 Commodity of Cargo Throughput at Toledo Port in 1999

Unit : Metric Tons

Cargo Inbound	%	Volume	Cargo Outbound	%	Volume
Passenger Buses	45%	58,415	Passenger car	55%	96,470
Empty Bottle	15%	19,472	Bottles	25%	43,850
Rice	10%	12,981	Rice	10%	17,540
Dried Product	8%	10,385	Vegetable and Fruit	10%	17,540
Private Car	7%	9,087			
Fruit & Vegetables	5%	6,491			
Corn	5%	6,491			
Sugar	5%	6,491			
	100%	129,811		100%	175,400

Source: Interview Survey by JICA Team , January 2001

(7) Ports under Argao Management Office

a. Name of ports and Location

There are 11 ports under the management office, which are scattered along the coast of 100km southeastern coast, except Santander port on southern end and Dumamjug on west coast.

b. Service Area

Most ports in Argao management office are private ports and handle cargo only. These ports are connecting points of the southern parts of the Visayas region between the Negros Island and Bohol, through the Cebu Island

c. Cargo Throughput

Total cargo throughput under Argao management office is 2,977,354 metric tons in 1999. Table 4.1.2.10 shows name of ports and inbound/outbound cargo volume of main private ports.

d. Kinds of Commodity

Main commodities handled through these private ports are bulk cargo like cement, sands, gravel, etc. Mainly cement cargo is transported from private ports of Apocemco, Grand Cement and NPC.

Table 4.1.2-10 Cargo Throughput Port under Argao Management Office

Name of Private Port	Types	Volume (Metric tons)
1 Apocemco port	Inbound	112,558
(Cement Factory)	Outbound	1,188,447
	Import	174,514
	Export	44,600
2 Gnd. Cement port	Inbound	334,535
(Cement Factory)	Outbound	67,453
3 NPC	Inbound	21,134
(National Power Cooperation)	Outbound	39,407
4 Alcoy port	Export	449,476
(Mining)		
5 Taloot port	Inbound	62,688
(General cargo)	Outbound	76,256
Total (86% of Total 2,977,354 Metric tons)		2,571,068

4.1.3 Passenger Movement

(1) Passenger Movement at Cebu Baseport

1) Total Number of Passenger Transported

Number of passenger traffic has increased at very high rate every year. But the total number of passenger that have passed through the Outports is 1,560,000, which is still 15% of the total of Cebu Baseport, 10,612,000 in 1999. Table 4.1.3-1 shows the number of passengers who used Cebu Baseport and Outports.

Table4.1.3-1 Number of Passenger Handled at Cebu Baseport and Outport

Unit: Passenger

Year	A. Cebu Base Port			B. Outport		
	Disembark	Embark	Total	Disembark	Embark	Total
1997	4,936,680	4,580,758	9,517,438	619,399	560,808	1,180,207
1998	5,248,964	5,030,840	10,279,804	753,843	721,985	1,475,828
1999	5,283,770	5,328,152	10,611,922	801,516	759,258	1,560,774
Growth Rate	13%	13%	13%	14%	16%	15%

Source: Cebu Port Authority

2) Trip Destination of Cebu Baseport Passenger

Table 4.1.3-2 is the estimation of number of passenger transported to neighboring regions and Table 4.1.3-3 is number of passenger transported to neighboring islands based on the share rate of O-D survey result.

Total number of O-D passenger that originated from Cebu Baseport is 2,639,664. It means that 2,639,664 x 2 is the total number of passengers that have traveled between Cebu and Neighboring Regions. Therefore, one half of sample data of the O-D is applicable to estimate passenger volume for the destination of Cebu Baseport originated passenger.

3) Number of Passenger transported in Region 7

Passengers from Cebu City do not use sea transport to go to south or north end of Cebu Island. Instead they use land transportation.

Table 4.1.3-2 Passengers Transported by Ship Between Regions, 1999

Unit: Passenger

Region	Name	O-D Passenger	Share	Cebu Baseport
Region 7	C. Visayas	829,857	31.4%	3,336,174
Region 8	E. Visayas	659,521	25.0%	2,651,393
Region 10	N. Mindanao	323,775	12.3%	1,301,633
NCR	National Capital R.	232,909	8.8%	936,336
Region 12	C. Mindanao	223,022	8.4%	896,588
Region 13	Caraga	182,042	6.9%	731,841
Region 6	W. Visayas	115,683	4.4%	465,066
Region 5	Bicol	47,026	1.8%	189,053
Region 9	W. Mindanao	18,816	0.7%	75,644
Region 11	S. Mindanao	7,013	0.3%	28,194
Total		2,639,664	100.0%	10,611,922

Table 4.1.3-3 Passengers Transported by Ship Between Islands, 1999

Unit: Passenger

Area	O-D Passenger	%	Cebu Baseport
Origin : Cebu City	2,639,664	100.0%	10,611,922
Destination:			
Mindanao	754,668	28.6%	3,033,901
Bohol	651,979	24.7%	2,621,072
Southern Leyte	338,407	12.8%	1,360,457
Northern Leyte	281,882	10.7%	1,133,216
NCR	232,909	8.8%	936,336
Negros Oriental	110,792	4.2%	445,404
Panay Island	107,477	4.1%	432,077
Masbate Island	47,026	1.8%	189,053
Western Samar	39,232	1.5%	157,720
Camotes Island	26,535	1.0%	106,675
Bantayan Island	24,825	0.9%	99,801
Siquijor Island	15,726	0.6%	63,221
Negros Occidental	8,206	0.3%	32,990
Total	2,639,664	100.0%	10,611,922

Following is the number of passenger transported to islands within Region 7 in 1999.

-	Total Cebu Baseport		10,611,922
-	Region 7	31%	3,336,174 passenger
-	To Bohol (East of Cebu)	25%	2,868,066 passenger
-	To Camotes Island (East of Cebu)	1.0%	116,728 passenger
-	To Bantayan Island (North of Cebu)	0.9%	109,206 passenger
-	To Siquijor Island (South of Cebu)	0.6%	69,179 passenger
-	To Negros Oriental (West of Cebu)	0.3%	36,098 passenger

(2) Passenger at Outport

1) Passenger Transport under Management Office of Outport

Table 4.1.3-4 shows the number of passenger transported by each Management Office, and Fig. 4.1.3-1 shows the usage of government port and private port.

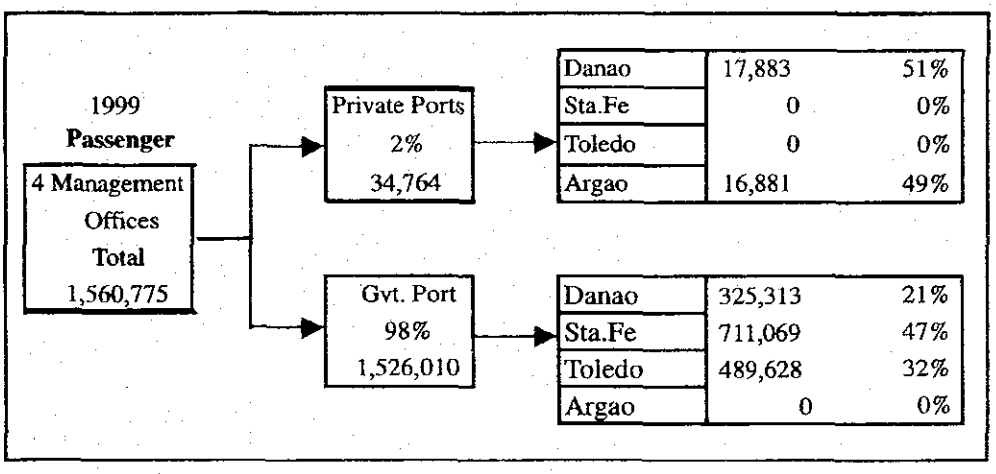


Fig. 4.1.3-1 Passenger Traffic at Outports under Management Offices, 1999

Generally speaking, Santa Fe management office handles more passenger traffic among the other four management offices, and Argao Management Office handle more cargo volume among the four management office (Total average of 1998 and 1999). The ratio of cargo and passengers traffic through each management office in 1999 is shown below.

	Cargo Transport	Passenger Transport
Danao Management Office	22 %	20 %
Santa Fe Management Office	4 %	47 %
Toledo Management Office	18 %	32 %
Argao Management Office	57 %	1 %

The passenger traffic of each out ports management office in 1998-1999 is shown in Table 4.1.3-4.

Table 4.1.3-4 Passenger Transport at Outports 1998-1999

Unit: Passenger

	Year	Disembark			Embark			Total
		Gov.	Private	Total	Gov.	Private	Total	
Danao	1998	128,722	10,969	139,691	121,636	5,562	127,198	266,889
	1999	175,178	8,801	183,979	150,135	9,082	159,217	343,196
Santa Fe	1998	365,718	0	365,718	348,757	0	348,757	714,475
	1999	356,305	0	356,305	354,764	0	354,764	711,069
Toledo	1998	241,545	0	241,545	237,671	0	237,671	479,216
	1999	253,916	0	253,916	235,712	0	235,712	489,628
Argao	1998	0	6,889	6,889	0	8,359	8,359	15,248
	1999	0	7,316	7,316	0	9,565	9,565	16,881
Total	1998	735,985	17,858	753,843	708,064	13,921	721,985	1,475,828
	1999	785,399	16,117	801,516	740,611	18,647	759,258	1,560,774

Source: Cebu Port Authority

6) Passenger Traffic of Each Port of Management Office

Table 4.1.3-5 shows number of passenger through Outports in 1999. Data used in the tables is estimated based on applying share of total number of Management office, because data of some ports were unavoidable. For example, the port of Danao and Argao are estimated by share allocation ratio of 1999 and for Santa Fe and Toledo it is used by that of 1997.

Table 4.1.3-5 Disembarkation and Embarkation of Passenger at Outport in 1999

Danao Management Office				
	Name of Port	Ownership	Passenger	%
1	Danao	P. Government	195,576	57%
2	Dunguan	Private	38,525	11%
3	Carmen	P. Government	Stop Operation	
4	Camotes (Poro)	P. Government	109,095	32%
Total			343,196	100%
Santa Fe Management Office				
	Name of Port	Ownership	Passenger	%
1	Sta. Fe	P. Government	366,818	52%
2	Bantayan	P. Government	64,630	9%
3	P. Hagnaya	Government	276,618	39%
4	Baigad	Private	3,004	0%
Total			711,070	100%

Toledo Management Office				
	Name of Port	Ownership	Passenger	%
1	Toledo	P. Government	286,426	59%
2	TPC	Private	49,313	10%
3	Tuburan	P. Government	153,889	31%
Total			489,628	100%
Argao Management Office				
	Name of Port	Ownership	Passenger	%
1	Argao	Government	Operation Stopped	
2	Trigon	Private	Operation Stopped	
3	Dumamgug	Private	Operation Stopped	
4	Santander	Private	Operation Stopped	
5	Taloot	Private	16,881	100%
Total			16,881	100%

Source: Based on the Hearing and Data from CPA, December, 2000

The features of passenger traffic through each outport under the management office is summarized below:

a. Ports under Danao Management Office

Three ports serve transport passenger to Camotes Island and West Coast of Leyte. Almost 60% of the total passenger use Danao port. Embarking passengers from Danao port is counted as disembarking passengers at Camotes port.

b. Ports under Santa Fe Management Office

The main port in Bantayan island is Santa Fe port and main port in Cebu island is Hagnaya port. Total number of passenger is 366,818 at Santa Fe port in 1999, of which 99,801 passenger traveled from Cebu Baseport according to the O-D analysis.

c. Ports under Toledo Management Office

The main port in the Office is Toledo port, which handles 60 % of the total passenger. Passenger originated from San Carlos of Negros Island cross Tanon strait and arrives at Toledo port. They continue to travel to Cebu City by bus on Trans Cebu highway. The passenger ratio of RORO ferry and Fast Craft ferry is around 70: 30.

d. Ports under Argao Management Office

No passenger service by government port exists at present in this area. Taloot private port serves passenger transport because Argao government port stopped its operation due to damage of facility. Number of passenger is small and their destination is Bohol Island.

4.1.4 Calling Vessels

(1) Cebu Baseport

1) Shipping Statistics

The cargo and passenger traffic, total vessel calls, dimensions of vessels and service times have been summarized annually by PPA and CPA from 1990 to 1999 as shown in Tables 4.1.4 -1 and 2.

Table 4.1.4-1 shows that average deadweight tonnage (DWT) of foreign vessels have increased about 25% in the last 10 years and their service time became almost half in 1999 compared with the data in 2000 while the draft and number of vessel calls are almost unchanged or slightly decreased. It is presumed that as the cargo throughput increased, both vessels and the volume of cargo carried by each vessel became larger in addition that the cargo handling became more efficient, which reduced the average service time.

Table 4.1.4-1 Cargo Throughput and Vessel Traffic Data of Foreign Vessels

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
1 Cargo Throughput (1,000 ton)	516	343	488	351	492	646	563	930	822	884
2 Number of Vessels	380	336	423	396	410	n/a	485	548	428	392
3 Gross Registered Tonnage	5,810	5,847	6,262	6,286	7,423	n/a	6,811	6,923	7,714	8,065
4 Net Registered Tonnage	3,297	2,950	3,209	3,386	3,958	n/a	3,448	3,284	3,754	4,272
5 Deadweight Tonnage	8,454	7,824	8,698	8,686	10,482	n/a	10,506	8,483	9,814	10,509
6 Length of Vessel (m)	122.6	117.9	118.8	118.5	126.5	n/a	127.8	113.8	120.2	120.3
7 Beam of Vessel (m)	19.4	19.2	20.1	19.4	20.5	n/a	19.0	16.5	16.9	18.0
8 Draft of Vessel (m)	7.0	6.0	5.3	4.4	4.6	n/a	4.7	5.2	5.4	5.4
9 Waiting Time (hr)	15.7	0.5	0.0	0.3	10.2	n/a	4.0	8.2	8.5	1.8
10 Service Time (hr)	53.3	24.7	28.7	30.7	35.5	n/a	43.9	36.5	37.3	26.6

Source: PPA and CPA
Note: n/a - data not available

As for domestic vessels, number of vessel calls, average gross registered tonnage (GRT) and DWT have increased by 50 to 60% in ten years while average draft and service time are unchanged.

Table 4.1.4-2 Cargo and Passenger Throughput and Vessel Traffic Data of Domestic Vessels

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
1 Cargo Throughput (1,000 ton)	3,574	4,211	4,160	4,079	4,322	4,752	4,458	4,555	5,733	6,567
Total Passengers (1,000)	4,099	3,891	4,142	4,276	5,246	5,833	6,421	9,517	10,280	10,433
2 Number of Vessels	13,021	13,960	14,515	16,080	17,717	n/a	18,592	19,077	19,166	20,941
3 Gross Registered Tonnage	833	896	831	864	1,000	n/a	1,172	1,208	1,215	1,232
4 Net Registered Tonnage	429	482	450	463	514	n/a	609	642	585	673
5 Deadweight Tonnage	564	788	769	865	879	n/a	982	1,053	1,065	925
6 Length of Vessel (m)	51.4	57.3	51.4	50.7	51.3	n/a	54.8	54.2	55.7	53.0
7 Beam of Vessel (m)	10.3	10.2	9.2	8.8	8.9	n/a	9.3	9.2	9.8	9.8
8 Draft of Vessel (m)	2.6	2.4	2.5	2.3	2.4	n/a	2.5	2.6	2.6	2.7
9 Waiting Time (hr)	0.0	0.0	0.0	0.0	0.0	n/a	0.0	0.0	0.0	0.0
10 Service Time (hr)	24.7	32.1	33.6	29.1	27.7	n/a	25.0	27.7	28.5	22.6

Source: PPA and CPA
Note: Passenger vessels are not included.

These data can show overall trend of the vessel dimensions. However, in port planning, more detailed data are needed. Therefore, the study team reviewed the data on individual vessels and analyzed the past trend by vessel type.

2) Foreign Vessels

The study team analyzed the trends and characteristics of vessels based on the vessel traffic data between October and December from 1996 to 2000. The results of the analysis for container and conventional cargo vessels are shown in Table 4.1.4-3 and 4 respectively.

Table 4.1.4-3 Statistics of Foreign Container Cargo Vessel

Year	Container Throughput	Average Load	Vessel Calls[1,2]	Vessel Size (DWT)[3]		Productivity	Service Time
	TEU[1]	TEU/vessel		Average	Max	(teu/hr)[5]	(hr)[3]
1996	70,000	268	263	10,412	27,468	12.8	20.9
1997	63,000	233	270	9,983	14,310	17.4	13.4
1998	62,000	268	231	12,354	23,508	21.0	12.8
1999	79,000	361	219	11,144	29,213	26.7	13.5
2000	104,000	362	287	12,516	29,213[4]	35.0	9.1

Note 1: CPA traffic data
2: The numbers in *Italic* letter are estimated from three month record.
3: Average and maximum of the three month record.
4. The maximum vessel size in twelve months.
5. (Productivity) = (Average Load) / (Service Time)

Table 4.1.4-4 Statistics of Foreign Conventional Cargo Vessel

Year	Conventional Cargo Throughput	Average Load	Vessel Calls [1,2]	Vessel Size (DWT) [3]		Productivity	Service Time
	ton [1]	ton/vessel		Average	Max	(ton/hr) [5]	(hr) [3]
1996	375,694	1,692	222	9,832	41,820	33	52.0
1997	248,711	1,054	236	10,056	60,552	36	29.6
1998	416,000	2,521	165	8,735	26,605	42	60.2
1999	314,000	1,880	167	7,060	18,693	44	42.5
2000	459,000	2,961	155	8,423	45,222	33	89.0

Note 1: CPA traffic data
2: The numbers in *Italic* letter are estimated from three month record.
3: Average and maximum of the three month record.
4. The maximum vessel size in twelve months.
5. (Productivity) = (Average Load) / (Service Time)

From the above analysis, the present condition of foreign vessel traffics are rationalized as follows. Currently the average vessel sizes are about 12,000 DWT for container cargoes and 9,000 DWT for conventional cargoes. It can be observed that all average load, vessel size and productivity of container vessel/handling are increasing. Therefore in last 5 years despite that the container throughput increased by about 50 %, number of vessel call remained almost the same, and average service time decreased greatly. As for conventional vessels, the average size slightly decreased, however, the average load per vessel increased, and as a result, the number of vessel calls decreased.

Particulars of the large vessels are summarized in Table 4.1.4-5.

Table 4.1.4-5 Particulars of Largest Vessels

Name of Vessel	Shipping Lines	Port of Call		GRT	DWT	Beam (m)	Loa (m)
		Last	Next				
Container Vessel							
Eagle Excellence	APL Co Pte..	Manila	Manila	15,700	22,148	26.50	174.00
Ye Lan	Ye Lan Maritime	Manila	Taiwan	18,638	29,213	27.60	172.68
Conventional Cargo Vessel							
Royal Viking Sun	Jardine Davies Trans	Manila	Indonesia	37,845	60,552	28.04	214.84
Lucky Marine	Uni Ship	Vietnam	China	26,040	45,222	31.00	188.33
Pacific Venus	NYK Filjapan	Indonesia	Japan	26,518	40,202	-	183.40
Average of Largest vessels [1]		-	-	-	24,940	23.10	161.50

Note 1: Average of the monthly maximum vessels in 2000.

The largest container vessel found in the record is Ye Lan from Taiwan with 29,213 DWT. This vessel called at the port regularly for several months in 1999 and 2000. Some very large conventional cargo vessels between 40,000 and 60,000 DWT have been found in the record. However, they are tramper vessels and the frequency of call is very rare. Average of the monthly largest vessels are calculated. This is more meaningful to assess the maximum size

of the regular vessels. The dimensions of the largest vessel expected every month are about 25,000 DWT, beam 23 m and Loa 160 m.

The full draft of the vessels are not shown in the record. Since the deepest berth of the existing port is -8.5m, normally the draft, when the vessels are berthed, is at most -7 to -8m. Generally the full draft of the above size vessels are:

Container Vessel	20,000 DWT :	10 m - 11 m
	30,000 DWT :	11 m -12 m
Conventional Vessel	25,000 DWT :	10 m - 11 m
	40,000 DWT :	11 m - 12 m
	60,000 DWT :	12 m - 13 m

3) Domestic Vessels

Based on the field observations, the study team classified the vessels into 7 types, which is different from the classification of the CPA's statistics.

Table 4.1.4-6 Classifications of Domestic Vessels

Type of Vessel	Descriptions	Type of Cargo
Large RORO	RORO ferries larger than 7,000 GRT such as "Superferry" of WGA and "Princess of Paradise" of Sulpicio Lines. Mostly berth at MO1 (Cebu International Port), Side-ramp.	Container Cargoes and Passengers
Middle RORO	RORO ferries smaller than 7,000 GRT. Mostly stern-ramp	Container, Conventional Cargoes and Passengers
Container	Container vessels mostly with shipgears	Container
Conventional	Breakbulk and bulk cargo vessels (cargo only)	Conventional Cargo
Passenger/Cargo	Vessels carrying passengers (mainly) and cargoes	Conventional Cargo and Passengers
Fast Craft	Fast catamaran passenger vessels such as "Oceanjet" and "Supercat"	Passengers
Metro Bus Ferry	The small boats connecting Lapu-Lapu City and Cebu City	Passengers

The vessel traffic data of November 2000, comprising of 1260 vessels, have been sorted according to the vessel classifications. The cargo and passenger throughput by vessel type, vessel size, average load, productivity, etc. are estimated. Based on the result together with other traffic data from CPA, the past traffic data are grouped together according to the above classifications and shown in Tables 4.1.4-7 through 4.1.4-13.

Table 4.1.4-7 Statistics of Large RORO Vessels

Year	Container Throughput by Large RORO	Share of Container Traffic by RORO[1]	Average Load	Vessel Calls[1]	Vessel Size (GRT)[3]		Productivity	Service Time
	TEU[2]	(%)	TEU/vessel		Average	Max	(teu/hr)[4]	Hour
1998	91,000	33	119	766				
1999	131,000	40	156	841				
2000	113,000	38	138	816	11,210	15,223	28	5

Note 1: Estimated from the vessel traffic record of November 2000 and monthly summary by MO between 1998 and 2000.
2: Total throughput from CPA traffic data.
3: Average and maximum of the one month record.
4: (Productivity) = (Average Load) / (Service Time)

Table 4.1.4-8 Statistics of Middle RORO Vessels

Year	Throughput by Middle RORO (ton)[2]		Share of traffic by M. RORO[1] (%)		Average Load	Vessel Calls[1]	Vessel Size (GRT)[3]		Productivity	Service Time
	Container	Conventional	Cont.	Conv	ton/vessel		Average	Max	(teu/hr)[4]	Hour
1998	1,028,000	1,029,000	43	30	343	6,004				
1999	865,000	870,000	31	30	305	5,681				
2000	901,000	882,000	35	30	502	3,553	2,022	6,090	42	12

Note: Refer to the footnotes of Table 4.1.4-7.

Table 4.1.4-9 Statistics of Container Cargo Vessels

Year	Container Throughput by Container Vessel	Share of Container Traffic by Container Vessel[1]	Average Load	Vessel Calls[1]	Vessel Size (DWT)[3]		Productivity	Service Time
	TEU[2]	(%)	TEU/vessel		Average	Max	(teu/hr)[4]	hour
1998	66,000	24	201	328				
1999	95,000	29	198	480				
2000	82,000	27	238	344	4,683	7,276	26	9

Note: Refer to the footnotes of Table 4.1.4-7.

Table 4.1.4-10 Statistics of Conventional Cargo Vessels

Year	Conventional Cargo Throughput by Cargo Vessel	Share of Conv. Cargo Traffic by Cargo Vessel[1]	Average Load	Vessel Calls[1]	Vessel Size (DWT)[3]		Productivity	Service Time
	ton[2]	(%)	ton/vessel		Average	Max	(ton/hr)[4]	hour
1998	1,372,000	40	1066	1,286				
1999	1,160,000	40	797	1,455				
2000	1,177,000	40	788	1,492	847	6,745	14.9	53

Note: Refer to the footnotes of Table 4.1.4-7.

Table 4.1.4-11 Statistics of Passenger / Cargo Vessels

Year	Conventional Cargo Throughput by P/C Vessel	Share of Conv. Cargo Traffic by P/C Vessel[1]	Average Load	Vessel Calls[1]	Vessel Size (GRT)[3]		Productivity	Service Time
	ton[2]	(%)	ton/vessel		Average	Max	(ton/hr)[4]	hour
1998	1,029,000	30	83	12,423				
1999	870,000	30	62	14,020				
2000	882,000	30	61	14,559	314	4,000	6.1	10

Note: Refer to the footnotes of Table 4.1.4-7.

Table 4.1.4-12 Statistics of Passenger Vessels

Year	Fast Craft			Metro Bus		
	Passenger[1]	Average Load Pass/Vessel	Vessel Calls[1]	Passenger[1]	Average Load Pass/Vessel	Vessel Calls[1]
1998	2,093,966	216	9,704	2,752,978	133	20,667
1999	2,010,671	270	7,448	2,934,141	112	26,269
2000	1,799,617	295	6,099	2,288,979	134	17,122

Note 1: CPA passenger data and shipping traffic data.

Table 4.1.4-13 Passenger Statistics of Cargo Vessels

Year	Large RORO			Middle RORO			Passenger/Cargo		
	Passenger[1]	Average Load Passenger /Vessel	Vessel Calls[1]	Passenger[2]	Average Load Passenger /Vessel	Vessel Calls[1]	Passenger[2]	Average Load Passenger /Vessel	Vessel Calls[1]
1998	641,011	837	766	1,927,303	321	6,004	2,890,954	233	12,423
1999	669,979	797	841	1,927,165	339	5,681	2,890,747	206	14,020
2000	668,575	819	816	2,120,751	597	3,553	3,181,126	218	14,559

Note 1: CPA passenger data and shipping traffic data
2: Composition of passengers by conventional vessels are assumed as Middle RORO : Passenger Cargo = 40% : 60%.

(2) Toledo Port

1) Shipping Statistics

The cargo and passenger traffic and vessel data of Toledo port are shown in Table 4.1.4-14. From the table it is found that the vessel size have not been changed for 10 years.

Table 4.1.4-14 Cargo Throughput and Vessel Traffic Data at Toledo Port

		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	Cargo Throughput (1,000 ton)	31.9	64.1	63.3	39.9	37.7	42.3	47.8	111.0	240.7	303.8	233.7
	Total Passengers (1,000)	226	225	238	212	224	230	235	280	333	286	286
2	Number of Vessels	668	722	728	686	922	n/a	960	n/a	1036	951	747
3	Gross Registered Tonnage	482	479	478	483	485	n/a	472	n/a	484	491	481
4	Net Registered Tonnage	246	247	225	226	229	n/a	211	n/a	225	n/a	272
5	Deadweight Tonnage	n/a	n/a	509	663	702	n/a	944	n/a	664	n/a	652
6	Length of Vessel (m)	48	44	45	45	45	n/a	42	n/a	45	n/a	43
7	Beam of Vessel (m)	11.0	10.8	10.8	10.9	11.3	n/a	n/a	n/a	10.9	n/a	11.0
8	Draft of Vessel (m)	2.9	2.8	3.0	3.1	3.1	n/a	n/a	n/a	3.3	n/a	2.5
9	Waiting Time (hr)	0.0	0.7	0.4	0.5	0.0	n/a	n/a	n/a	0.1	n/a	0
10	Service Time (hr)	2.7	7.5	7.0	4.4	2.4	n/a	n/a	n/a	1.6	n/a	1.5
	Average cargo per vessel (ton)	47.8	88.8	86.9	58.2	40.9	n/a	49.8	n/a	232.3	319.5	312.8
	Average passenger per vessel	382.5	312.2	326.3	308.8	243.4	n/a	245.1	n/a	321.6	301.2	382.3

Source: PPA and CPA
Note: n/a - data not available

2) Current Operation

Currently, 4 RORO and 8 fast crafts are operating daily between Toledo and San Carlos and tramper vessels are calling at the port a few times a month to transport outgoing bagged fertilizers. The vessel particulars are as shown in Table 4.1.4-15.

Table 4.1.4-15 Particulars of Regular Vessels at Toledo Port

	Type of Vessel	GRT	DWT	Breadth	LOA
				m	m
MV Danilo I	RORO	480.0	652.3	11.6	44.0
MV Danilo II	RORO	489.6	671.7	11.0	45.2

Particulars of fast craft are unknown. Approximately 150 GRT

3) Vessel data between April and July 1999

Vessel data of Toledo Port between April and July 1999 are summarized as shown in Table 4.1.4-16.

Table 4.1.4-16 Average Particulars of Vessels calling at Toledo Port between April and July 1999

	No of Vessel	GRT	DWT	B	L	Draught (m)		Total Cargo Handled	Passengers
				m	m	arrive	depart	Ton	
Conventional	11	665	1,229	10	60	3.0	8.0	9,491	
RORO	306	485	662	11	45	2.9	2.9	89,910	106,140

Approximately 10% of cargoes (fertilizer in bags) are carried by Conventional Vessels. It is found that Fast Craft are not included in the statistics. It is presumed that large number of passengers are carried by the fast crafts and those passengers are not included in the statistics.

4) Comparison of traffic data between San Carlos and Toledo

Since most of the vessels leaving or arriving at Toledo Port are for/from San Carlos Port, traffic data of the two ports are compared and shown in Table 4.1.4-16. It is found that in 1999 the cargo throughputs are almost the same, however, the difference in passengers, vessel calls and total GRT are quite large. It is presumed that the difference, is due to the data of traffic by fast craft.

Table 4.1.4-17 Comparison between San Carlos Port and Toledo Port

		1996	1997	1998	1999
Cargo	San Carlos	237,550	203,223	307,813	317,720
	Toledo	47,814	110,984	240,674	303,798
	SC/Toledo	20%	55%	78%	96%
Passenger	San Carlos	476,137	504,272	513,804	500,090
	Toledo	235,307	280,355	333,190	286,426
	Difference	240,830	223,917	180,614	213,664
Vessel Calls	San Carlos	2,501	3,627	3,499	3,171
	Toledo	960	n/a	1,036	951
	Difference (1)	1,541	-	2,463	2,220
Total GRT	San Carlos	728,848	975,223	823,136	804,149
	Toledo	452,851	n/a	501,648	466,656
	Difference (2)	275,997	-	321,488	337,493
(2)/(1)		179	-	131	152

Assuming that the difference in the data between San Carlos Port and Toledo Port comes from the data of fast craft, the fast craft statistics are estimated as shown below. The passenger share of fast craft in 1999 is also estimated at 213,664/500,090 = 43%.

Table 4.1.4-18 Statistics of Fast Craft at Toledo Port

	1996	1997	1998	1999
Number of Passengers	240,830	223,917	180,614	213,664
Vessel calls	1,541	-	2,463	2,220
Number of passenger per vessel	156	-	73	96
Size of Fast Craft Vessel	150 GRT			

(3) Hagnaya Port (The New San Remigio Port)

1) Shipping Statistics

The cargo and passenger traffic and vessel data of Hagnaya port are shown in Table 4.1.4-18. Although the available data are incomplete, it is observed that the vessel call was increased

from approximately 3 trip/day before 1994 to 4 - 5 trips/day in the recent years and the vessel size have also increased for the last 5 to 10 years.

Table 4.1.4-19 Cargo Throughput and Vessel Traffic Data at Hagnaya Port

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1 Cargo Throughput (1,000 ton)	13.1	8.8	10.0	5.4	0.4	3.1	5.7	8.4	1.7	5.0	5.4
Total Passengers (1,000)	150	157	166	135	141	163	185	207	305	277	271
2 Number of Vessels	1,109	1,029	1,019	824	1,100	n/a	n/a	n/a	1,690	1,625	n/a
3 Gross Registered Tonnage	60.5	58.9	57.9	58.0	59.3	n/a	n/a	n/a	134.9	182.5	n/a
4 Net Registered Tonnage	33.9	31.5	30.8	30.1	28.3	n/a	n/a	n/a	n/a	n/a	n/a
5 Deadweight Tonnage	68.0	61.6	71.8	69.8	82.4	n/a	n/a	n/a	n/a	n/a	n/a
6 Length of Vessel (m)	22.6	23.6	24.7	23.8	24.6	n/a	n/a	n/a	n/a	n/a	n/a
7 Beam of Vessel (m)	5.0	5.3	5.4	5.3	5.6	n/a	n/a	n/a	n/a	n/a	n/a
8 Draft of Vessel (m)	3.8	2.2	1.9	1.6	1.1	n/a	n/a	n/a	n/a	n/a	n/a
9 Waiting Time (hr)	0.0	0.0	0.0	0.0	0.0	n/a	n/a	n/a	n/a	n/a	n/a
10 Service Time (hr)	33.6	15.7	17.6	16.7	7.2	n/a	n/a	n/a	n/a	n/a	n/a
Average cargo per vessel (ton)	11.8	8.6	9.8	6.6	0.4	n/a	n/a	n/a	1.0	3.1	n/a
Average passenger per vessel	135	153	163	164	128	n/a	n/a	n/a	180	170	n/a

Source: PPA and CPA

2) Current Operation

There are 2 or 3 passenger vessels traveling between Hagnaya port and Santa Fe port, 4 to 5 times a day, transporting passengers and very small amount of cargoes. The vessel particulars are as shown in Table 4.1.4-19.

Table 4.1.4-20 Particulars of Regular Vessels at Hagnaya Port

	Type of Vessel	GRT	DWT	Breadth	LOA
				M	m
Island Express 1	Passenger	91.5	114	6.0	24.5
Island Express 3	Passenger	192.43	240.5	7.0	28.8
Island Express 5	Passenger	219.39	275.0	7.2	26.1

4.1.5 Container User Survey

(1) Data Collection, Validation, and Processing

Data collection relies heavily on raw information from the Cebu Port Authority's foreign manifests of October 2000. These foreign manifests document the incoming and outbound vessels and their corresponding cargo as it leaves or enters the main Cebu Baseport. The Outward Foreign Manifest (OFM) represents the export data while those shown on the Inward Foreign Manifest (IFM) denote the import data.

The study has a total of 47 foreign manifests; 24 of which are OFMs and the other 23 manifests are IFMs. For the OFMs, 1189 export data are present while for the IFMs, 743 import data are found.

Based on these data, matrices were produced representing (export and import) container traffic, delivery of export products to Cebu Baseport, and orders of imported goods. Each data was then entered into each zone classification. The container boxes were classified according to size (40-footer, 20-footer, and 45-footer) and type (DC, 20FR, and 40HREEF). Total container boxes for the import section is 1349 while that for the export section numbers 1061.

For purposes of validation, telephone interviews with the listed company or enterprises were done to confirm the location of the company as well as the (export and import) product delivery and origin site. The telephone interviewees were usually secretaries or managers of the firms. The data was also cross-checked by reviewing the export firm directory provided by the Department of Trade and Industry-VII Regional Office.

The time span of the data is from October 1, 2000 to October 31, 2000.

(2) Zone Classification

Zone classification is based on geographical and political boundaries (e.g. separation of Metro Cebu from Cebu Provincial Areas). The entire province of Cebu is classified into seven (7) distinct zones; namely, Central Metropolitan Cebu, Mactan Island, Northern Metropolitan Cebu, Southern Metropolitan Cebu, Northern Provincial Areas, Southern Provincial Areas, and Western Provincial Areas.

Cebu City and Mandaue City belong to the Central Cebu Metropolitan Area but each city is further subdivided to make the data presentation more specific and to enable one to have a clearer understanding of container traffic in the Central Metro Cebu Zone. Mactan Island represents Lapu-lapu City and the Municipality of Cordova. The municipalities of Liloan, Compostela, and Consolacion comprise the Northern Metropolitan Cebu area while the Southern Metropolitan Cebu is composed by the municipalities of Minglanilla, Naga and

Talisay.

Northern Provincial Area is chiefly represented by the City of Danao while the Southern Provincial Area encompasses the municipalities located south of Metro Cebu (e.g. Argao, Samboan, etc.). The municipality of Balamban mainly serves as the focal point of the Western Provincial Area.

(3) Findings

1) Frequency of the Delivery of Export Products and Container Box Traffic per Zone

The frequency of the firm's delivery of export products signifies the number of times the firm exports to a foreign market via Cebu Baseport. Since each firm is located in a zone (as classified), export product delivery traffic is counted per number of deliveries from the zone of origin to Cebu Baseport (destination).

Container box traffic, on the other hand, counts the number of container boxes delivered from where the export product originates (zone origin) to the destination (Cebu Baseport).

a) Cebu City

Cebu City is the capital of Cebu province and is where Cebu Baseport is located. In October 2000, export product delivery from Cebu Baseport to Cebu City-based firms reached 114 deliveries or 9.59% of the entire export delivery total of 1189. The bulk of the products exported were furnitures, handicrafts, and accessories. Some of the products exported were dried mangoes, salago bark, floppy disks, seaweed flour, and carageenan.

Exporting firms, especially those engaged in handicraft and furniture production, are usually located along the outskirts of the city. Linea Fina, Inc., for example, is located in Bacayan, Talamban—a barrio that is much nearer to Mandaue and Consolacion than the central part of the city (i.e. downtown Cebu City). Perhaps this could be attributed to the availability of skilled labor in the area and lesser vehicle traffic in these areas which would facilitate a speedier transport of imported and exported products.

Container cargo traffic (export) is relatively low as compared to Mactan Island and Mandaue City. In October 2000, the total container boxes used reached 118 or 11.12% of the total container used of 1061. Majority of the boxes were 20-foot container vans with an individual count of 62 or 52.54% of the city's total of 118. This was followed by the 40-foot boxes with 55 or 46.61% of the 118 total container used (Cebu City). One (1) 45-foot container box was also used in the delivery of export products.

b) Mandaue City

In October 2000, exporting firms basing in Mandaue City accounted for almost half of the exported products delivered to Cebu Baseport. Five hundred nine (509) deliveries were made in October alone accounting for 42.81% of the total 1061. Almost all of the products exported were furniture and handicrafts. Some products sold to the foreign market were foodstuffs, dried marine products, marble, abaca ropes, and coco charcoal.

Exporting firms are located intermittently at the outlying districts of the city as well as at the city's core areas. Some of the exporting firms are in Subangdaku, Jagobiao, and Alang-alang while other firms are located in Banilad.

The container boxes flowing from the city to Cebu Baseport reached 378 or 35.63% of the entire total of 1061 boxes. More than half (74.60%) of the container boxes used were 40-footer with 282 while the 20-foot container boxes accounted for 16.67% of Mandaue's total container used or 63 individual container boxes. Twenty (20) 40H-type containers were also used in October while the 45-foot container boxes numbered 13.

c) Mactan Island

Export product delivery from the Municipality of Cordova was absent. Only firms located in the City of Lapu-lapu, mainly from the Mactan Export Processing Zone Area, have deliveries.

Deliveries from the Mactan Island Area ranked second to Mandaue City in terms of container traffic and export product deliveries. It accounts for 295 deliveries or 24.60% of the entire deliveries made (1189). As to its contribution to container box traffic, it also has a substantial number of container boxes delivered to Cebu Baseport. It accounted for 341 or 32.14% of the total 1061 container boxes delivered to Cebu Baseport.

The highest number of container traffic in Mactan Island is the delivery of 40-foot container boxes to Cebu.Baseport. It has a total 227 40-foot container boxes or 66.57% of the boxes delivered from Mactan Island. This was followed by the delivery of 20-foot container boxes with 66—19.35% of the total 341. Forty-two (42) boxes are 40H-type while six (6) boxes are 45-foot container boxes.

d) Northern Metropolitan Cebu

The municipalities covered by the Northern Metropolitan Cebu (NMC) Consolacion, Liloan, and Compostela. These municipalities have firms which exports their finished products via Cebu Baseport. For October 2000, NMC-based firms have a total of 85 deliveries or 7.15% of the total deliveries of 1189. These export products are contained in 53 container boxes, which accounted 5.00% of the entire container box traffic in Cebu Baseport (1061).

Most of the export products are loaded in 40-foot container boxes. Forty-six (46) container boxes have been used during delivery while only seven (7) 20-foot container boxes have been utilized.

e) Southern Metropolitan Cebu

The areas of Talisay City, Minglanilla, and Naga have its own share of exporting firms located within their vicinity. Much of the exporting firms in Southern Metro Cebu (SMC) are located in Talisay City while a few are in Minglanilla and Naga. Although it only ranks fifth in export delivery with 43 or 3.62% of the total 1189 (next to NMC), firms located in these areas ranks 4th in terms of the number of container boxes used. SMC-based firms used 61 container boxes or 5.75% of the total 1061.

Most of the time, the container boxes used are 40-foot container boxes with a count of 57. Three (3) 20-foot container boxes was also used during delivery while only one (1) 40H-container type has been used by the exporting firms in the delivery of their products.

f) Northern Cebu Provincial Area

Exporting firms in the Northern Cebu Provincial Area (NCPA) are mainly located in the City of Danao. In October 2000, Danao City-based firms, chiefly Cebu Mitsumi Inc., were the sole exporters and users of container boxes in the area. A total of 26 deliveries were made for October 2000 or 2.19% of the total 1189 deliveries. Twenty-five (25) container boxes were used for the said delivery.

Of the 25 container boxes, eight (8) are 20-footer while 17 boxes have a length of 40 feet.

g) Southern Cebu Provincial Area and Western Cebu Provincial Area

Export product delivery is absent in these areas from October 1, 2000 to October 31, 2000.

h) Unknown Location

One hundred and two (102) export product deliveries via Cebu Baseport have been recorded to be from an unknown location. These accounted for 8.58% of the entire 1189 export deliveries. Container box traffic for this section was relatively high with 85 container boxes: 42 were 20-foot container box, 41 were 40-foot container box, 2 were 45-container boxes, and one (1) was a 40H-type container box.

i) NA (Not Applicable) data

NA data are vessels that have no cargo at all or did not unload its cargo in Cebu Baseport. Most

of these vessels were merely docking in Cebu Baseport.

2) Frequency of Imported Product Orders/Delivery and Container Box Traffic per Zone

The frequency of the firm's order of imported products signifies the number of times the firm imports these imported goods via Cebu Baseport. Since each firm is located in a zone (as classified), imported product delivery traffic is counted per number of deliveries from Cebu Baseport (i.e. entry point of the imported product) to its final destination.

Container box traffic for import, on the other hand, counts the number of container boxes delivered from the entry point of the imported product, in this case Cebu Baseport, to the final destination. Final destination here means the zone where the imported products are delivered (i.e. importing firm or warehouse location).

a) Cebu City

Cebu City-based firms were the top importers for October 2000. Imported product orders reached 251 or 33.78% of the total orders of 743. Most of the products imported were automobile and truck parts and accessories. Some of the products imported were raw materials (e.g. chinese herbs, rattan derivatives, and timber) for production while others were food items and capital equipment.

Most of the importing firms are located in downtown Cebu and in the north reclamation area. Firms located in these areas are usually engaged in automotive repair, spare part retailers, and car/truck/bus operators.

Total container boxes delivered to Cebu City-based firms is at 628 or 46.55% of the total containers used in import (1349). 53.36% of the 628 or 337 were 40-foot container boxes while 45.38% or 285 were 20-foot container boxes. Four (4) 40HREEF-type boxes were also used in the import delivery while only two (2) 20FR-type were used.

b) Mandaue City

Mandaue City ranked third in the imported products ordered but 2nd in terms of container cargo used (i.e. import cargo) in October 2000. One hundred eighty seven (187) imported product orders were made during this month. This accounted for 25.17% of the total imported product order of 743.

Most of the imported products ordered were used automotive/truck replacement parts and engines and electronic parts. A substantial number of orders comprised of orders for needed raw materials for furniture production such as fiberboard, lacquer, and paints. Other imported materials were machines, metals, chemicals, tiles, and livestock feed ingredients (e.g. oats).

Container cargo traffic (for import) in the area was relatively high in October 2000 with 366 container boxes flowing from Cebu Baseport to Mandaue City or 25.17% of the 743 total boxes used. 55.46% of these boxes (203 units) were 20-foot container boxes while 43.44% or 159 were 40-foot container boxes. Only four (4) 40HREEF-type container boxes were used in imported product delivery.

c) Mactan Island

Basically, Lapu-lapu City is the sole location of importing firms in Mactan Island and in Cordoba. It ranked 2nd to Cebu City in terms of import product orders/delivery and ranked next to Mandaue City and Cebu City in terms of container traffic (import). In October 2000, Mactan Island-based firms have a frequency of import product delivery of 207 or 27.86% of the provincial total of 743.

Container boxes used during these deliveries numbered 199 boxes or 14.75% of the total 1340. Most of the boxes used were 40-footer which numbered at 143 while fifty-four (54) 20-foot container boxes were used for imported product delivery. 45-footer container box, 40HREEF-type container box, and 20FR-type container box have all been used once for October 2000.

d) Southern Metropolitan Cebu

Importing firms located in Southern Metro Cebu have relatively fewer imported product requests as compared with firms found in other zones. In October 2000, there were only 13 imported product orders/deliveries or 1.75% of the provincial total of 743.

Sixteen (16) container boxes were used during the delivery of imported products from Cebu Baseport to the firms located in Southern Metro Cebu. Of the 16 container boxes, 11 are 20-foot container boxes and 5 are 40-footers.

e) Northern Metro Cebu

Northern Metro Cebu (NMC) includes the municipalities of Consolacion, Liloan, and Compostela. Only one (1) imported product order had been made in October 2000. This was loaded in five (5) 40-foot container boxes.

f) Northern Cebu Provincial Area

Danao City-based companies, mainly Cebu Mitsumi, have been regularly importing foreign inputs. Seventeen (17) imported product orders/deliveries or 2.29% of the provincial total of 743 have been recorded to have occurred during October 2000. These deliveries were loaded in

20 container boxes; 10 were 40-foot container boxes while another 10 were 20-foot container boxes.

g) Western Cebu Provincial Area

The Municipality of Balamban is the sole western Cebu town, which has firms that regularly imports in October 2000. Tsuneishi Heavy Industries, a ship repair and ship building firm, is the principal importer of the municipality.

Frequency of imported product order/delivery for October 2000 numbered at 14 or 1.88% of the provincial total of 743. These orders were loaded in 36 container boxes or 2.67% of the provincial total of 1340 boxes. Of the 36 boxes, 30 are 20-foot container boxes while 6 are 40-footers.

h) Southern Cebu Provincial Area

Imported product delivery/order is relatively few during October 1, 2000 to October 31, 2000. It only had one (1) import delivery accounting for 0.13% of the 743 total imported product orders. Container boxes used in the delivery were two (2) 20-foot container boxes.

i) Visayas Provinces

Three Visayas provinces have recorded imported product delivery/order. The Province of Bohol has six (6) imported product orders contained in seven (7) container vans. Of the seven container boxes, five (5) are 40-foot container boxes and 2 are 20-foot container boxes.

The municipality of Malinta, a town of Masbate Province, has one imported product order contained in one (1) 20-foot container box. Although Kabankalan, Negros has one (1) imported product order, no container box was used in the delivery process.

j) Mindanao Areas

In October 2000, three (3) Mindanao areas have used Cebu Baseport as the entry point of their imported product order. These Mindanao areas were, namely, Bukidnon, Tagoloan, Misamis, and Cagayan de Oro City.

Cagayan de Oro City has 12 imported product order loaded in 24 container boxes—20 are 20-footer container boxes and four (4) are 40-foot container boxes. Much of the orders were from Nestle Philippines. Bukidnon has one (1) import product order loaded in one (1) 20-foot container box while Tagoloan, Misamis has one order but no container box was used in the delivery.

k) Metro Manila

Metro Manila-based firms have 19 imported product orders loaded in 21 container boxes. Of the 21 container boxes, 8 were 20-footer while 11 were 40-footer. 40HREEF-type box and 45-footer container box has one (1) each.

l) Unknown Destination

Nine (9) import product orders were made with Cebu Baseport as the entry point and the destination is of an unknown location. These accounted for 1.21% of the entire 743 import orders. Container box traffic for this section is relatively high with 23 container boxes: 21 are 20-foot container boxes and 2 are 40-foot container boxes.

Table 4.1.5-1 Deliveries From Each Zone/Area (Export) to Cebu Baseport

Zone/Area	**Frequency**	**Percentage**
Mandaue City	509	42.81%
Cebu City	114	9.59%
Mactan Island **Lapu-lapu City and Cordova	295	24.81%
Northern Cebu **Consolacion, Liloan, Compostela	85	7.15%
Southern Cebu **Talisay, Minglanilla, Naga	43	3.62%
Northern Island **Danao City	26	2.19%
Southern Island **Southern Cebu provincial area	0	0.00%
Western Island **Balamban	0	0.00%
UNKNOWN	102	8.58%
NA	15	1.26%
TOTAL	1189	100.00%

Table 4.1.5-2 Number and Percentage of Container per Zone/Area and Kind of Container (Export)

Zone/Area	20'	40'	45'	40H	TOTAL	%
Mandaue City	63	282	13	20	378	35.63%
Cebu City	62	55	1	0	118	11.12%
Mactan Island **Lapu-lapu City and Cordova	66	227	6	42	341	32.14%
Northern Cebu **Consolacion, Liloan, Compostela	7	46	0	0	53	5.00%
Southern Cebu **Talisay, Minglanilla, Naga	3	57	0	1	61	5.75%
Northern Island **Danao City	8	17	0	0	25	2.36%
Southern Island **Southern Cebu provincial area	0	0	0	0	0	0.00%
Western Island **Balamban	0	0	0	0	0	0.00%
UNKNOWN	42	41	2	0	85	8.01%
NA	0	0	0	0	0	0.00%
TOTAL	251	725	22	63	1061	100.00%
PERCENTAGE	23.66%	68.33%	2.07%	5.94%	100.00%	

Table 4.1.5-3 Orders per Zone/Area (Import)

Zone/Area	Frequency	Percentage
Mandaue City	187	25.17%
Cebu City	251	33.78%
Mactan Island **Lapu-lapu City and Cordova	207	27.86%
Southern Cebu **Talisay, Minglanilla, Naga	13	1.75%
Northern Cebu **Consolacion, Liloan, Compostela	2	0.27%
Northern Island **Danao City	17	2.29%
Southern Island **Southern Cebu Provincial Areas	1	0.13%
Western Island **Balamban	14	1.88%
Bohol	6	0.81%
Bukidnon	1	0.13%
Tagoloan, Misamis	2	0.27%
Cagayan de Oro City	12	1.62%
Metro Manila Areas	19	2.56%
Malinta, Masbate	1	0.13%
Kabankalan City, Negros	1	0.13%
UNKNOWN	9	1.21%
TOTAL	743	100.00%

Table 4.1.5-4 Number and Percentage of Container per Zone/Area and Kind of Container (Import)

Zone/Area	40'	20'	45'	20FR (FlatRack)	40HREEF	TOTAL	%
Mandaue City	159	203	0	0	4	366	27.13 %
Cebu City	337	285	0	2	4	628	46.55 %
Mactan Island **Lapu-lapu City and Cordova	142	54	1	1	1	199	14.75 %
Southern Cebu **Talisay, Minglanilla, Naga	5	11	0	0	0	16	1.19%
Northern Cebu **Consolacion, Liloan, Compostela	5	0	0	0	0	5	0.37%
Northern Island **Danao City	10	10	0	0	0	20	1.48%
Southern Island **Southern Cebu Provincial Areas	0	2	0	0	0	2	0.15%
Western Island **Balamban	6	30	0	0	0	36	2.67%
Bohol	5	2	0	0	0	7	0.52%
Bukidnon	0	1	0	0	0	1	0.07%
Tagoloan, Misamis	0	0	0	0	0	0	0.00%
Cagayan de Oro City	4	20	0	0	0	24	1.78%
Metro Manila Areas	11	8	1	0	1	21	1.56%
Malinta, Masbate	0	1	0	0	0	1	0.07%
Kabankalan City, Negros	0	0	0	0	0	0	0.00%
UNKNOWN	2	21	0	0	0	23	1.70%
TOTAL	686	648	2	3	10	1349	100.00 %
PERCENTAGE	50.85 %	48.04 %	0.15 %	0.22%	0.74%	100.00 %	

4.2 Port Facilities and Equipment

4.2.1 Port Facilities and Layout

(1) Cebu Baseport

Cebu Baseport is located at the center of the east coast of the Cebu Island and it is the largest port in Cebu Province. This port handles 60 % of domestic cargoes and 42 % of the foreign cargoes out of total cargoes in Cebu province. The share of Cebu Baseport in passenger traffic of Cebu province reaches 87 %. Cebu Baseport is the center of the cargo and passenger traffic.

1) Approach Channels

Cebu Baseport is located along the sea-lane between Cebu City and the Mactan Island It is well protected and easily accessible to ocean-going vessels. There are two approach channels, the north channel and the south channel. But due to the clearance of the second Mactan bridge (22.82 m above mean water level) over the north channel, large vessels, such as RORO vessels connecting Cebu and Manila, can use only south channel. Therefore south channel is main approach channel for Cebu Baseport. But it has a problem of water depth. The maximum draft of the vessel of the south channel is only 8.5 m. Moreover, the narrowest point is about 150 m wide. Cebu Baseport can't accommodate modernized large vessels (See Fig. 4.2.1-1).

2) Port Facilities

The port area, owned and managed by CPA, is only waterfront areas, which include piers, berths, working aprons, sheds, roads and Cebu International Port (CIP). This area is about 40 ha. The port zone consists of this CPA-owned port area and adjacent private area. Within the port zone, the land use including private area is restricted only for port related purposes (See Fig 4.2.1-2). The land use of the port zone as of March 2001 is shown in

The port area is divided into five areas and each area is managed by port management office (PMO) from 1 to 5. Cebu Baseport has 33 berths and the jurisdiction of each PMO is as follows:

PMO 1	:	Berth No. 1	- 7
PMO 2	:	Berth No. 8	- 17
PMO 3	;	Berth No. 18	- 23north
PMO 4	:	Berth No. 23tip	- 27
PMO 5	:	Berth No. 28	- 33

Length of each berths are shown in Fig. 4.2.1-4.

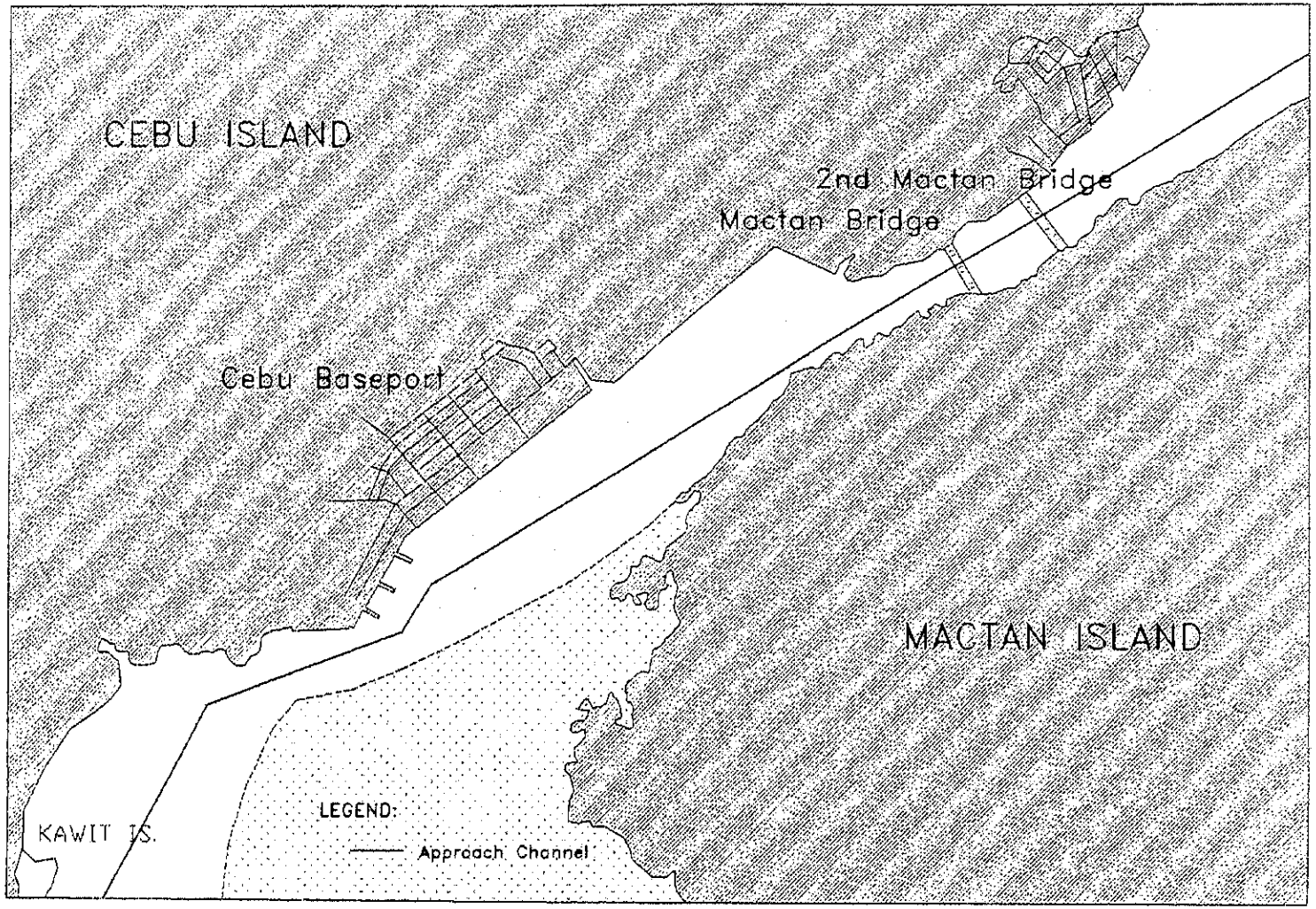
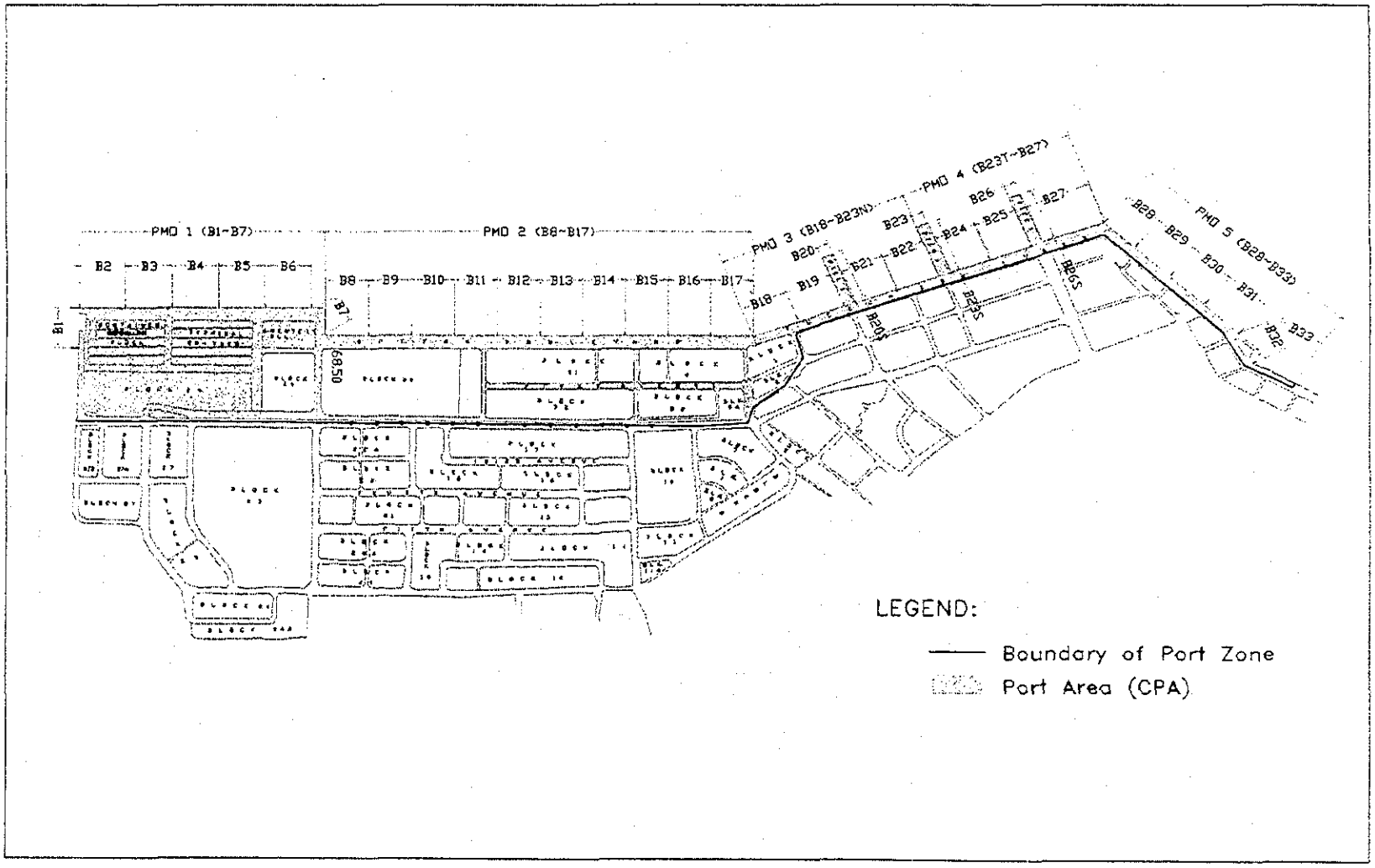


Fig. 4.2.1-1 Approach Channel for Cebu Baseport



Fig, 4.2.1-2 Port Zone and Port Area of Cebu Baseport

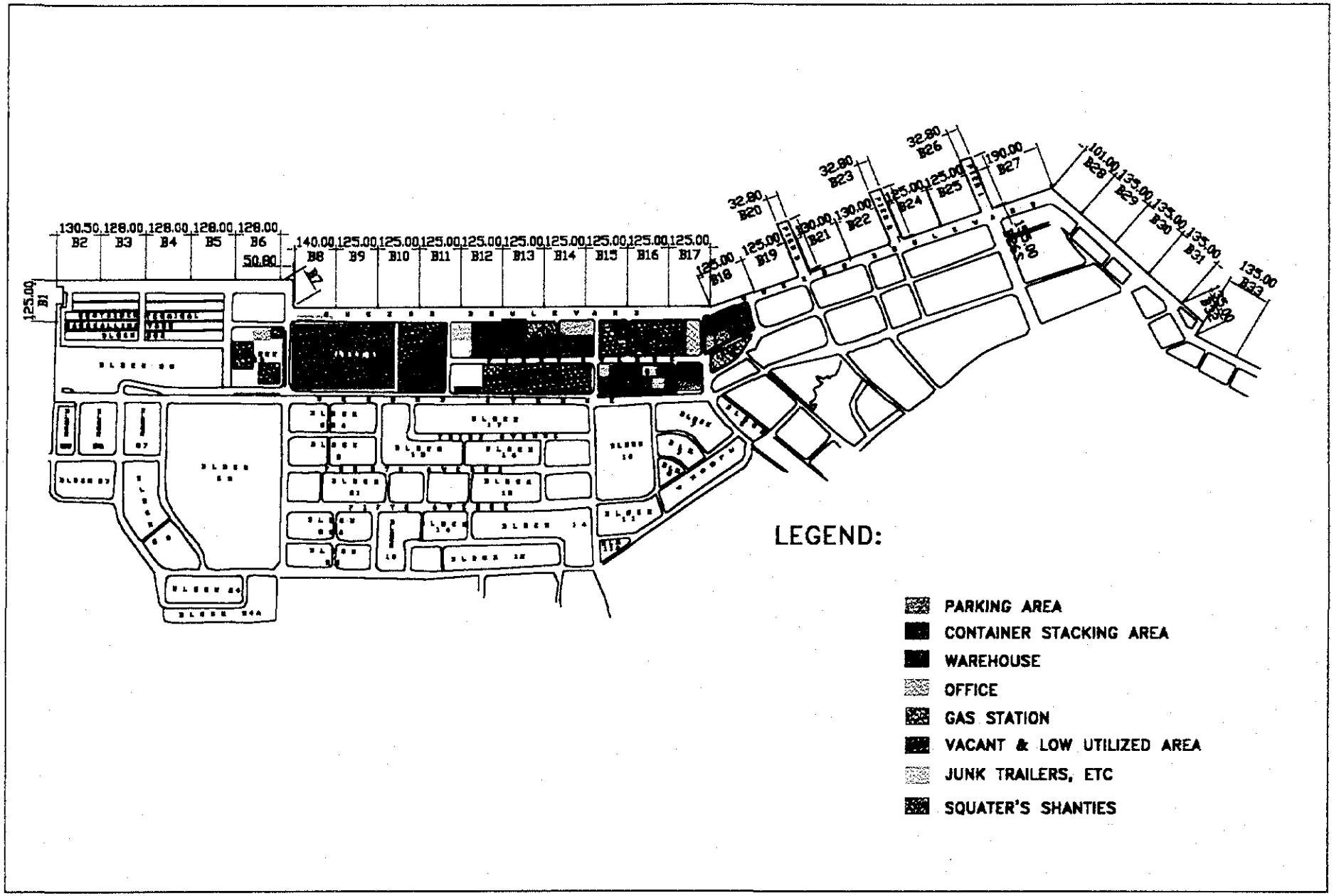


Fig.4.2.1-3 Land Use at Port Zone

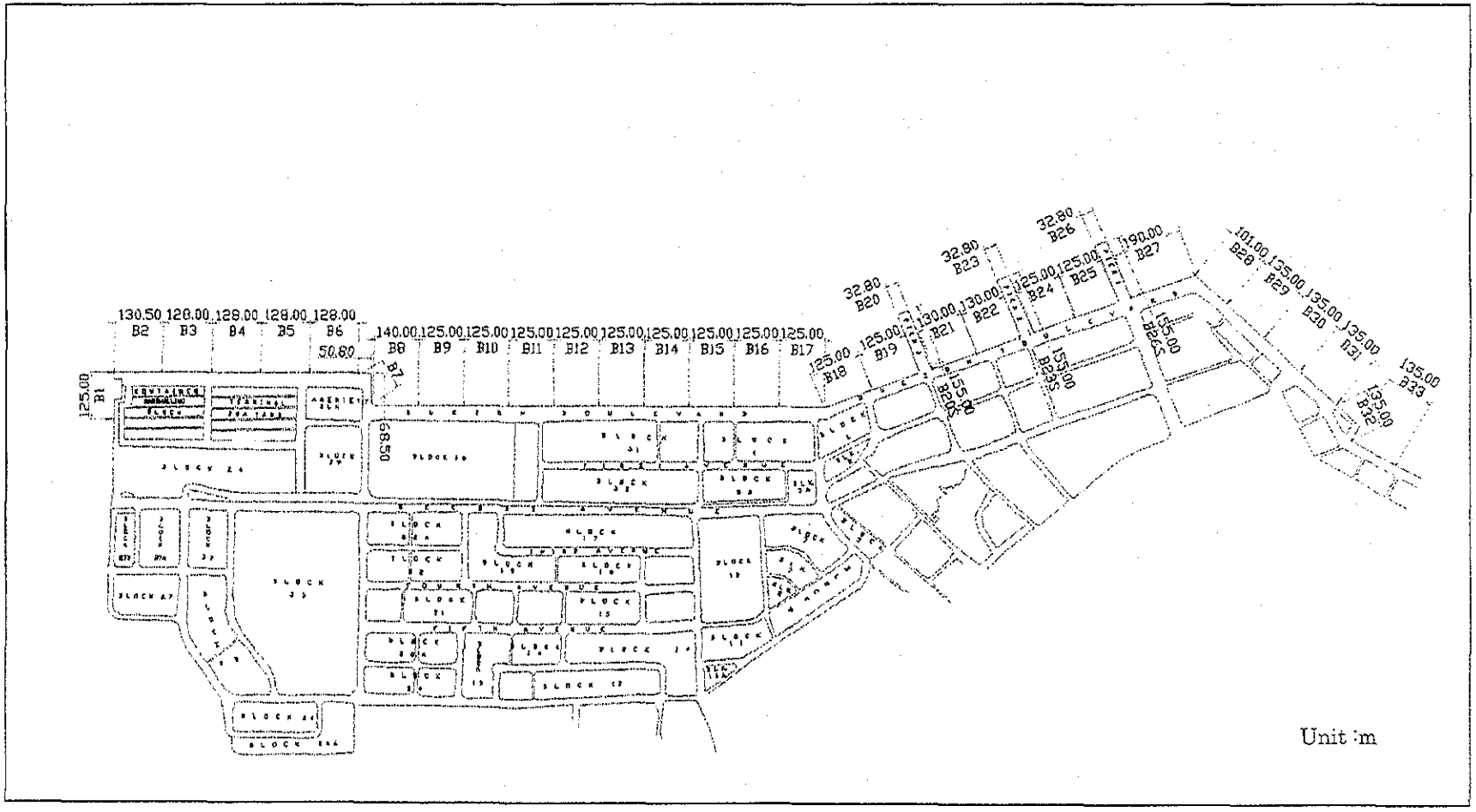


Fig. 4.2.1-4 Berth Length of Cebu Baseport

The area of PMO1 is called Cebu International Port (CIP). CIP was constructed under the 3rd IBRD Port Project and fully operational in 1985. CIP is used by international shipping and long distance RORO vessels for Manila and Cagayan De Oro. Basic utilization of the berths is that northern part of the CIP (berth No.2–4) is used for foreign vessels (container, bulk and break bulk) and southern part of CIP (berth No.5–7) is used for RORO vessels. At quayside, there are two level lifting cranes (LLC: OECF loan) and two gantry cranes. CIP has container yard (86,600 m^2) and container freight station (CFS: 6,480 m^2 (60m x 108m)). Passenger terminal building (720m^2) and catwalks are available for passengers (See Fig. 4.2.1-5).

The area of PMO2 is the general-purpose berth area characterized by a long marginal berth, 1,265m long. This berth was constructed in 1960s. The 30m offshore expansion project of working aprons is being carried out from berth No.8 to No.10 (354m length: Phase 1). After the completion of this work, Phase 2 (berth No.10–12, 301m length) will start. Out of total quay length 354m, the existing marginal wharf of 221m length will be converted for RORO ramps. Berth No.13 and 14 area dedicated to passenger fast crafts with the passenger terminal building and pontoons. This area is used exclusively for the passengers and domestic cargoes, which includes containers and break bulk cargoes.

The area of PMO 3 and 4 is the domestic terminal with berthing facilities, 1,982m long with sustained damages at some places. Three piers (pier 1–3) including their sheds are seriously damaged by deterioration; even pier 1 has fast craft berths with passenger terminal in the shed. This area is used by many kinds of vessels including inter-island ferry vessels. However, this terminal area is very narrow. Many vehicles are waiting for cargo deliveries. Despite this limitation, this terminal handles the containers and break bulk cargoes as well as passengers. CPA has started rehabilitation work of pier2 with the demolition of the deteriorated shed since this year, in order to expand cargo handling areas.

The area of PMO5 is also general purpose berth area and used many kinds of vessels at present. But half of this area is included in Cebu South Coastal Road Project and the close of berth No.31-33 is scheduled in 2002.

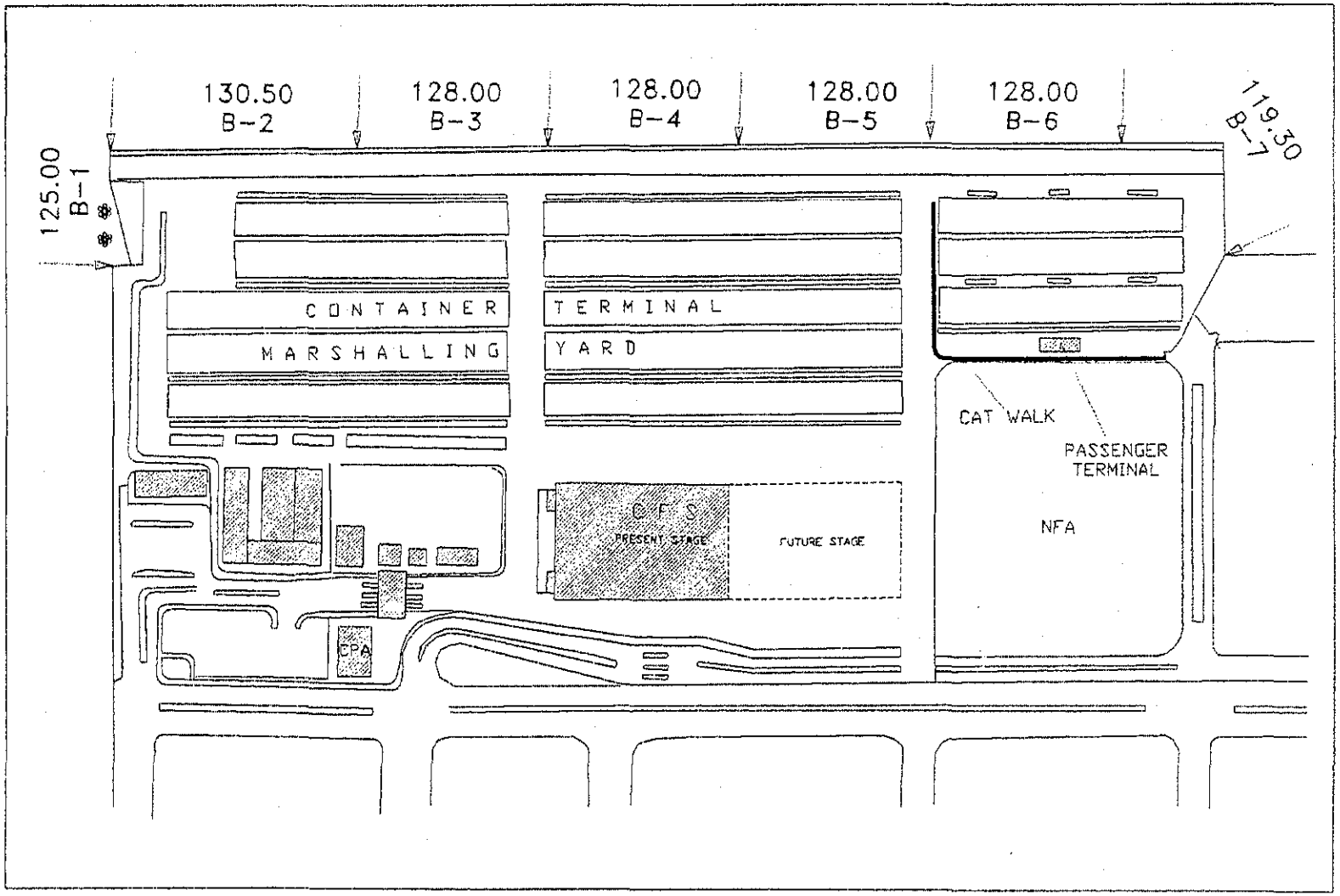


Fig. 4.2.1-5 Layout of Cebu International Port

Table. 4.2.1-1 List of the Berths of Cebu Baseport

Management Office	Berth Number	Length of Berth (m)	Depth of Berth (m)	Major Function
PMO 1	B-1	125.0	-	Not Operational
	B-2	130.5	8.5	Bulk/Break Bulk
	B-3	128.0	8.5	Container
	B-4	128.0	8.5	Container/Passenger (RORO Ferry)
	B-5	128.0	8.5	Container/Passenger (RORO Ferry)
	B-6	128.0	8.5	Container/Passenger (RORO Ferry)
	B-7	119.3	8.5	Container/Passenger (RORO Ferry) (available length is 50.8m)
PMO 2	B-8	140.0	3.0-4.0	Under Rehabilitation (future water depth 7-8m)
	B-9	125.0	3.0-4.0	Under Rehabilitation (future water depth 7-8m)
	B-10	125.0	3.0-4.0	Under Rehabilitation (future water depth 7-8m)
	B-11	125.0	6.0-7.0	Bulk/Break Bulk
	B-12	125.0	4.0	Bulk/Break Bulk
	B-13	125.0	7.0	Container
	B-14	125.0	5.0	Passenger (Fast Craft)
	B-15	125.0	6.0-7.0	Break Bulk/Container/RORO
	B-16	125.0	6.0-7.0	Break Bulk/Container/RORO
	B-17	125.0	6.0-7.0	Break Bulk/Container/RORO
PMO 3	B-18	125.0	5.1	Container/ Break Bulk /Passenger
	B-19	125.0	3.8	Break Bulk/Passenger
	B-20N	155.0	5.6	Break Bulk/Passenger
	B-20T	32.8	6.8	Break Bulk/Passenger
	B-20S	155.0	5.1	Break Bulk/Passenger
	B-21	130.0	3.2	Break Bulk/Passenger
	B-22	130.0	3.4	Under Rehabilitation (available length for conventional cargo 40m)
	B-23N	155.0	7.6	Break Bulk/Passenger
PMO 4	B-23T	32.8	5.0-7.0	Break Bulk
	B-23S	155.0	5.0-7.0	Break Bulk/RORO
	B-24	125.0	5.0-7.0	Break Bulk/RORO
	B-25	125.0	5.0-7.0	Break Bulk/RORO
	B-26N	155.0	5.0-7.0	Passenger (Fast Craft)
	B-26T	32.8	5.0-7.0	Break Bulk/Passenger
	B-26S	155.0	5.0-7.0	Break Bulk/Passenger
	B-27	190.0	6.0-7,0	RORO
PMO 5	B-28	101.0	5.0-7.0	Break Bulk
	B-29	135.0	5.0-7.0	Break Bulk
	B-30	135.0	5.0-7.0	RORO
	B-31	135.0	5.0-7.0	Break Bulk
	B-32	135.0	5.0-7.0	Bulk/Break Bulk/RORO
	B-33	135.0	5.0-7.0	Break Bulk/Passenger

Source: CPA

Note : March 2001

(2) Major Outports in the Cities and Province of Cebu

As ferry port connection in the Cebu Province, the general observations of the port facilities of the major out ports are described as follows.

There are 12 ferry routes connecting through the Cebu Island to neighbor islands. These ferry routes are connecting the Cebu island and neighbor islands in the shortest distance. The Cebu provincial government office prepared the "Provincial Physical Framework/Comprehensive Provincial Land Use Plan for 1993 to 2002." In this Report the RORO type of infrastructures for Visayas region, which is considered as the most practical means of communications for the regional economy and cargo/passenger movement, is recommended to develop.

The observations of port facilities of the major out ports from the site reconnaissance survey are described as follows.

The berthing facilities of the major ports which are pier type of structure constructed with reinforced concrete slab supported by concrete square piles are damaged in general its fenders of berth and beam and slabs of the pier mainly due to roughly ship berthing operation, and

The access road, berthing facilities are worn out for long time service without periodical rehabilitation and maintenance and,

They are locating at the shallower water depth area, which caused to accommodate limited size of ships, and required a long distance of access by causeway.

Due to strong demands from the region particularly in the southern parts of the Island, RORO service and fast ferry for passengers had operated services without berthing facilities but by using the sand beach for ship ramp placement.

Under such recommendation and recognition of the function of RORO transport services in the region, the existing port facilities of the major out ports at least shall be improved and upgraded their function of RORO ferry services for transporting vehicles with cargo to meet the minimum required function for regional economy and direct communications and delivery of goods and passengers.

1) Port of Toledo

The port is located on the western side of the Island and recognized as an industries supporting port of the region.

The port has 228m long and 12m wide of the access R.C. pile supported pier. The both sides of the pier were damaged by ferry ship berthing some of which were repaired. In order to protect the pier from the damages caused by RORO ferry berthing, 12 mooring dolphins with R.C. concrete plies with rubber tier as fender system were constructed along the pier in 2000 by CPA own budget.

The RORO ferry landing stage is located at the tip of the Pier with water depth of -4.0m. The area of landing stage is not wide enough to make a big bus coming from the ferry circle. CPA plans to extend the Pier and to construct additional landing stage and to allow speedboats to berth for passenger transport from San Carlos in Negros Occidental.

A new port operation office is required. A land reclamation is recommended along the pier near the beach to have vehicle parking, passenger waiting building with utility supply so as to minimize the traffic congestion caused by ferry users and city public market area around the entrance of the pier.

Berthing facilities	Pier	228m
	RORO Ramp	11m x 18m
Draft along side		-4m
Other facility		None

Port facility plan is shown in Fig. 4.2.1-6.

2) Port of Balamban

The port and city is located 16km north from the Toledo and defined as industrial supporting port of the region where a private owned ship repair yard is located.

There is a 100m long x 6 m wide of rock mound causeway extending from the beach at Pondol in the Balamban city for exporting rock and sands with RORO type barges, which was constructed by the city municipality, but operated by private company. The road on the causeway is partly concrete paved and other parts are gravel paved.

The municipality is plans to construct a new port facility along the beach at Nangka about 3km north from the Balamban city or at Buanoy. Present rock mound causeway in which foundation rocks is corrupted and spread around the

causeway is not adequate shape and strength as public port service facilities. It needs to develop adequate berthing facilities for cargo ships and passenger ships. Alternative sites for a new port are planned along the sandy beach, which will cause sedimentation or changing beach alignment by the reclamation for port development.

Berthing facilities	Causeway	100m
Draft along side		-4m
Other facility		None

Port facility plan is shown in Fig. 4.2.1-7.

3) San Remegio (Port of Hagnaya)

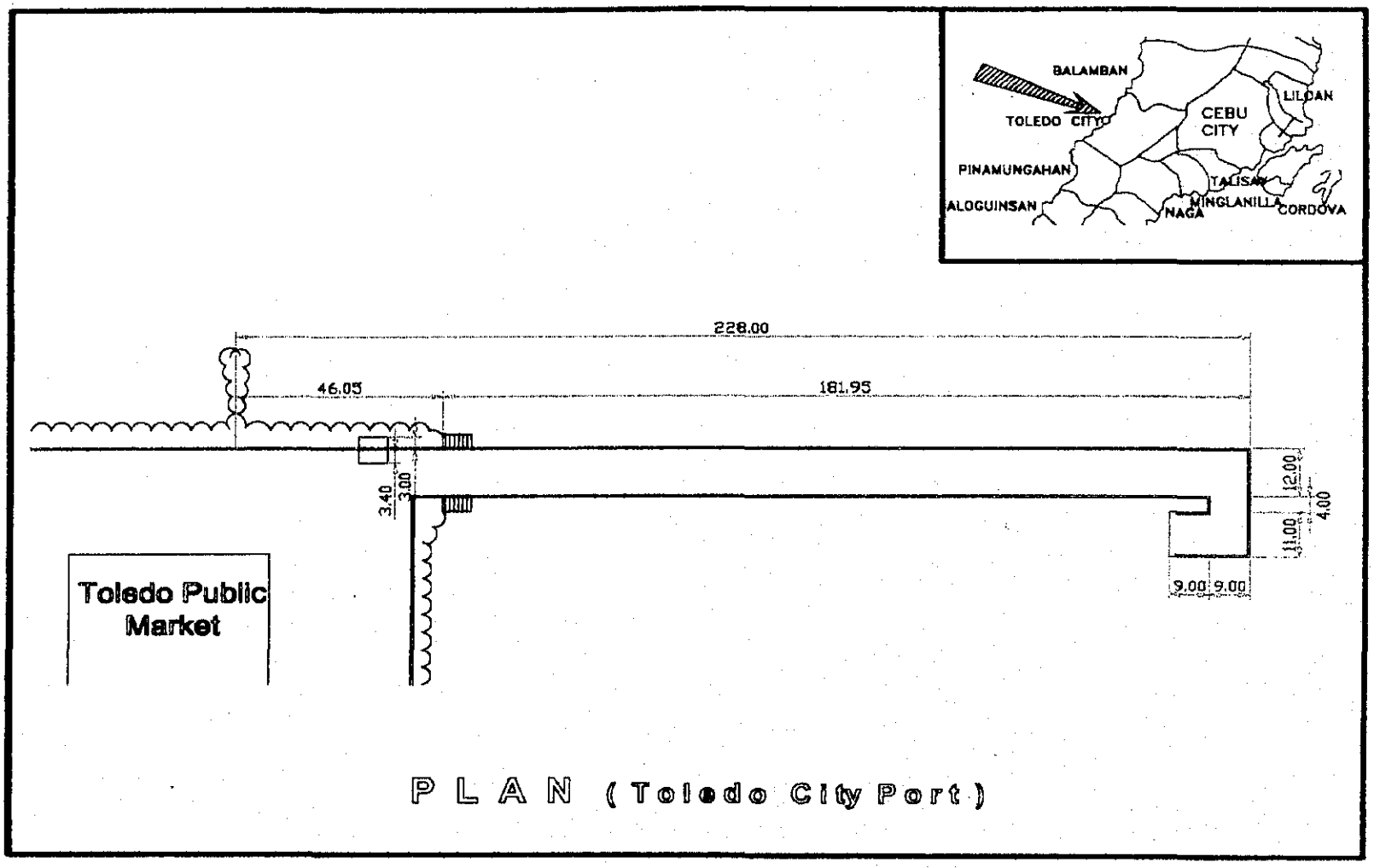
The Hagnaya port, which is terminal port of Santa Fe in Bantayan Island, is located deep inside of the bay.

The access channel from Santa Fe has very shallow water depth around –1.0m at LW and at HWL about –2.0m. During the LW a large ship can not come to the port, passengers have to sail with shallow draft ship to a big ferry waiting at the entrance of the channel for changing the ship to Santa Fe. The sea conditions during southwest monsoon (Sept. to Dec.) got rough weather with strong wind and waves. The area of public vehicle parking and landing deck is limited, the berthing deck which has 18m long x 8m wide and is heavily damaged its concrete slab and piles is just enough for one ship presently operation to berth and congested with cargo and passengers. From the viewpoint of efficient and safe operation, the port is required improvement of facility.

CPA plan to construct a new berthing facility instead of Hagnaya around the entrance of the access channel called Puanta so as to provide regular and all weather ferry services. A new site, which is flat topographic condition and rose from the sea level, is located at the tip of the same peninsular as Hagnaya located. The new site is observed better location than the present port site.

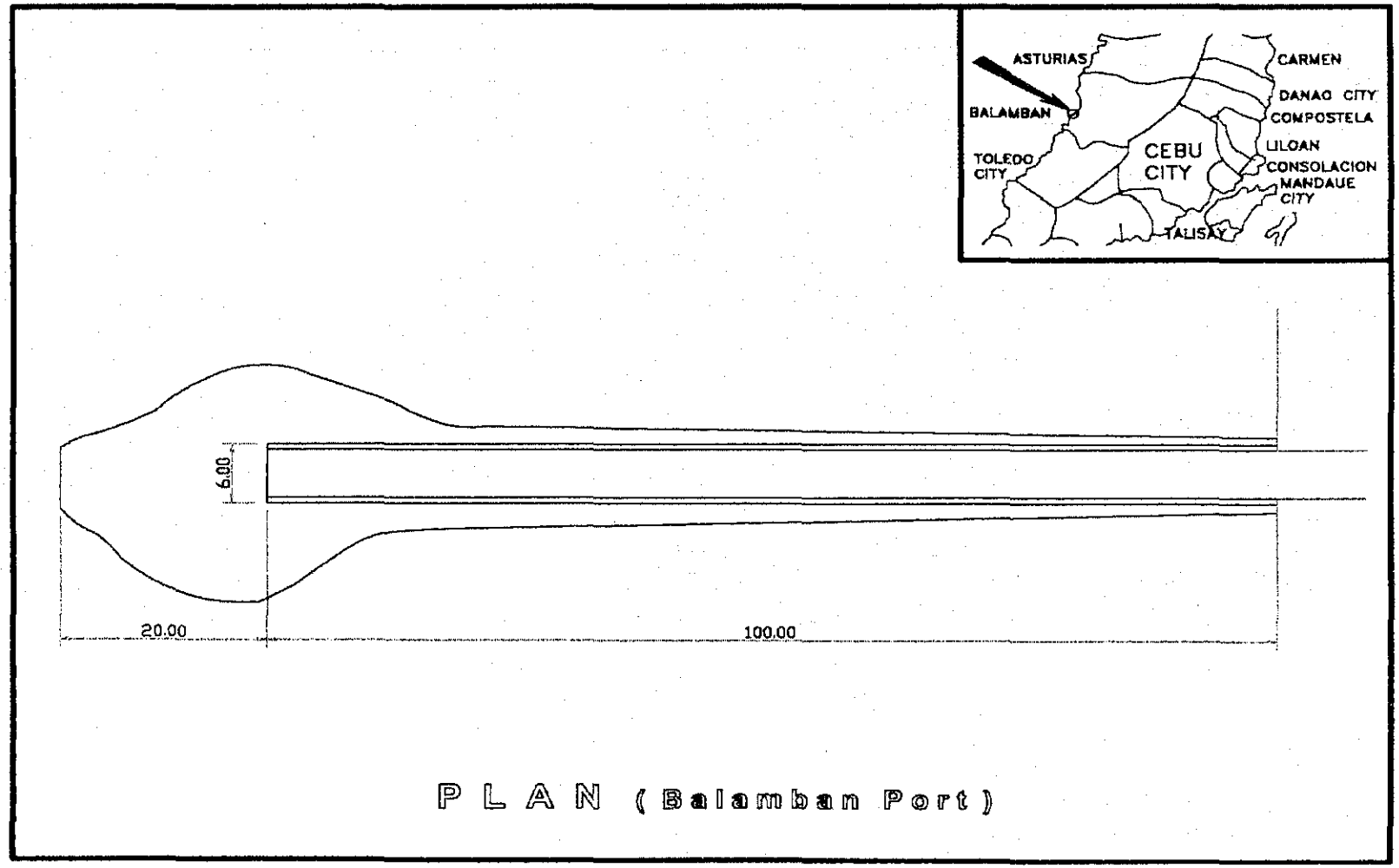
Berthing facilities	Wharf	18m x 18m
	RORO Ramp	1 unit
Draft along side		-3m
Other facility		None

Port facility plan is shown in Fig. 4.2.1-8.



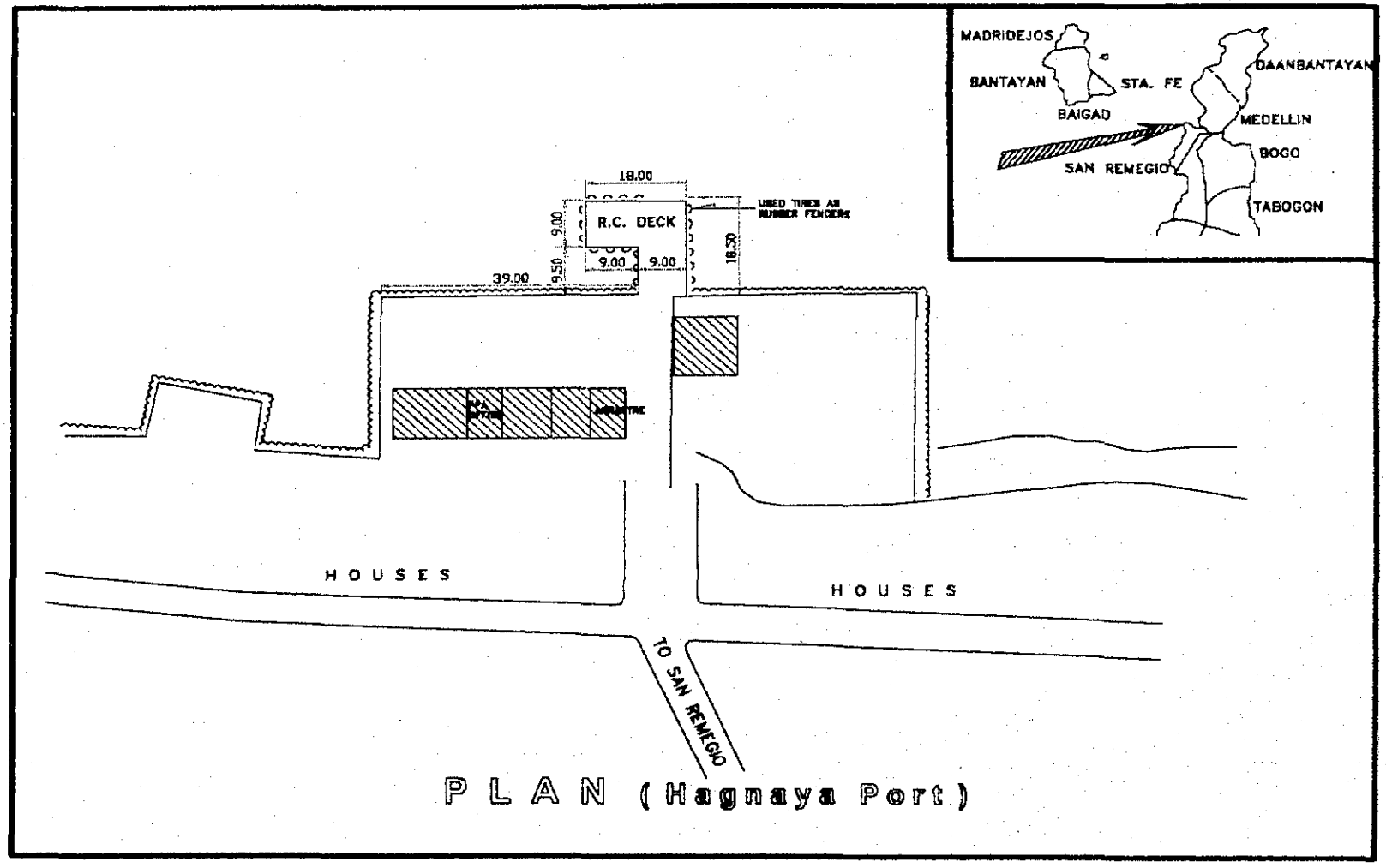
Source: CPA

Fig. 4.2.1-6 Plan - Port of Toledo



Source: CPA

Fig. 4.2.1-7 Plan - Port of Balamban



Source: CPA

Fig. 4.2.1-8 Plan - San Remegio (Port of Hagnaya)

4) Port of Sta. Fe
The port is located at the southeast tip of the Bantayan Island.

There are two terminals at Santa Fe area (one for using industrial cargo by private and other having two berths for using general cargo and RORO ferry service by CPA management). The cargo berth is located at the tip of the pier, which is 35m long and 12m wide concrete pile supported. The cargo berth was heavily damaged its concrete slab, beams and concrete pile connection. It is not allowed to use vehicles for cargo loading /unloading from ships on the berth. The RORO berth, which is about 60m long and 9m wide was constructed newly at the water depth of 3 to 4.5m by extending to southeast direction from the pier. There is a passenger-waiting house along the pier about 50m from the entrance.

The proper passenger-waiting hall and port operation office combined with utility supply may be required with public vehicle parking area at the entrance of the pier area. The cargo berth shall be rehabilitated with sufficient reinforcement to accommodate large cargo ships coming from Cebu city.

Berthing facilities	Pier	35m
	RORO Ramp	9m x 60m
Draft along side		-3 to -4.5m
Other facility		Passenger shed

Port facility plan is shown in Fig. 4.2.1-9.

5) Port of Argao
There is a landing jetty constructed with concrete pile supported slab which is 10m x 10m, RORO ramp which is 10m x 12m, and 93 m long x 7 m wide of rock mound causeway. Out of 93 m, 45 m from the seaside is protected with armor stones placed along the sloe of causeway to function as breakwater.

This landing jetty is under the management of CPA and not is used by RORO services due to shallow depth and fast current speed around the berthing area. The RORO services are operated at the private owned land without berthing facility but using natural beach for ship ramp landing. There is a rock mound causeway for speedboats berthing operated by private companies. This terminal is functioning as the gate of RORO to Tagbilaran in Bohol, Siquijor Island and Dapitan in Mindanao.

Berthing facilities	Causeway	93m
	R.C. Deck	10m x 10m
	RORO Ramp	10m x 12m
Draft along side		-3m
Other facility		None

Port facility plan is shown in Fig. 4.2.1-10.

6) Port of Oslob

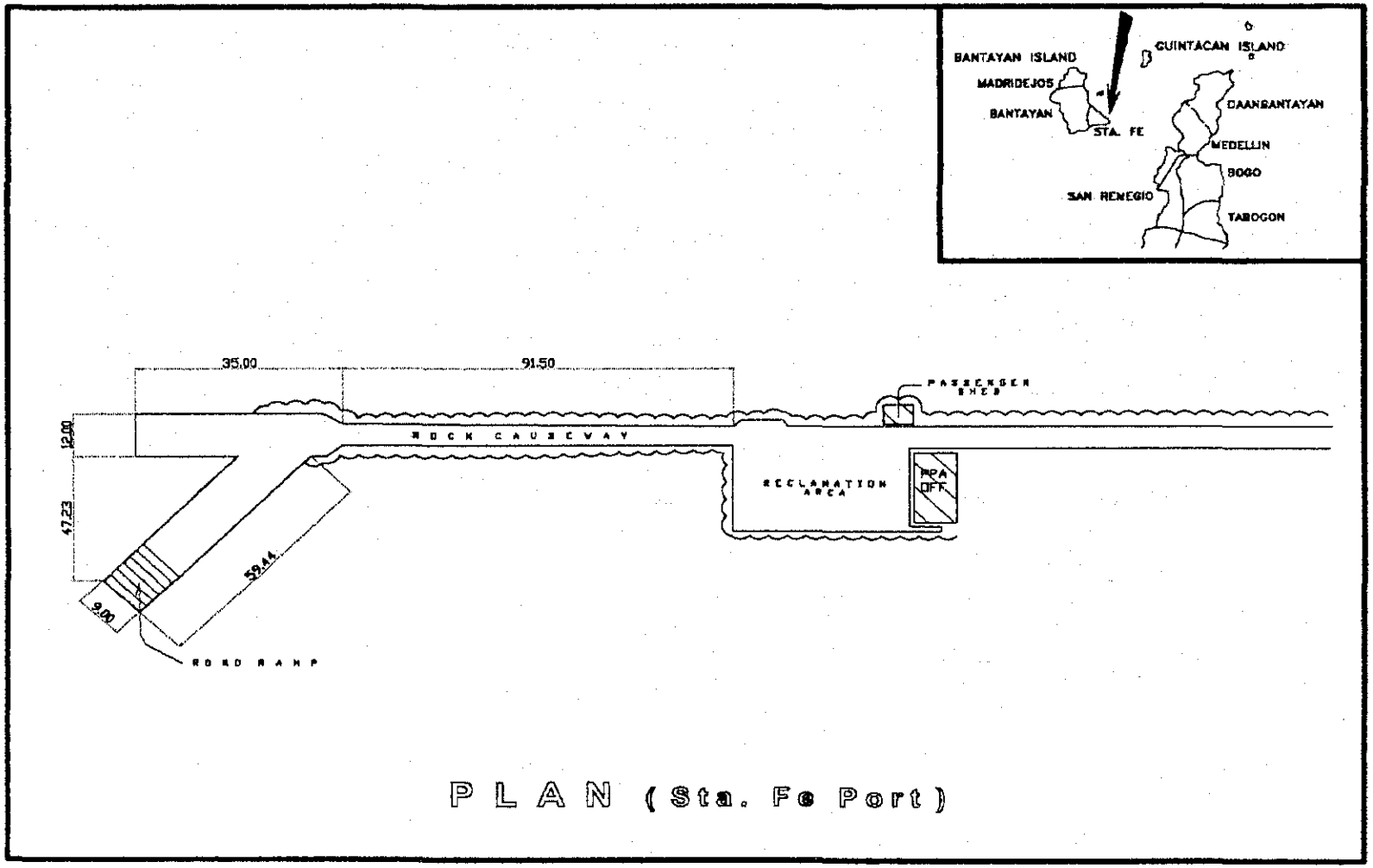
There is no landing facility of CPA or of municipality. Up on the demands of RORO services from the southern region of the Cebu Island, a private company started operation of RORO service at Tanawan of Oslob municipality to Dumaguete in Negros, to Tagbilaran in Bohol by using the natural beach for LCT, RORO ferry without landing facility and passenger services by speed boat to Siquijor in Siquijor Island with the causeway jetty for speed boat berthing.

This terminal play as the gate of RORO transport coming from Iloilo, Negros Islands through the Bais in Negros and Marubuyo in west side of Cebu to Siquijor and Mindanao. Considering the regional requirements of this terminal, since present facilities are container house for RORO ferry ticketing and temporally house for passenger waiting hall, which are not properly arranged.

The adequate berthing facility shall be developed by the public fund like CPA or municipality for accommodating safe and regular RORO ferry service with land reclamation for public vehicle parking, passenger terminal with utility supply.

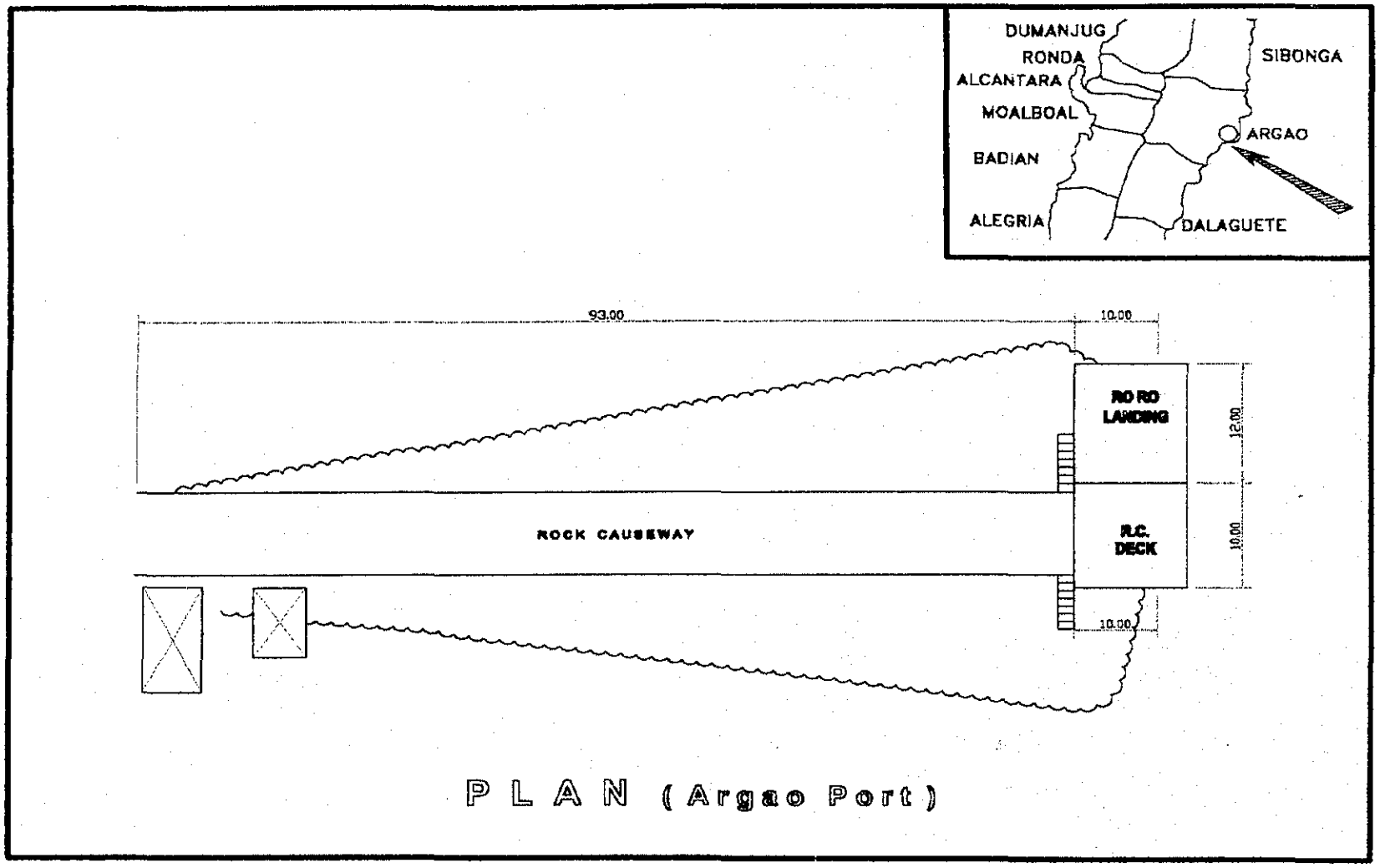
Berthing facilities	Causeway	53.5m
	RORO Ramp	15m x 12.5m
Draft along side		-3m
Other facility		Passenger Shed

Port facility plan is shown in Fig. 4.2.1-11.



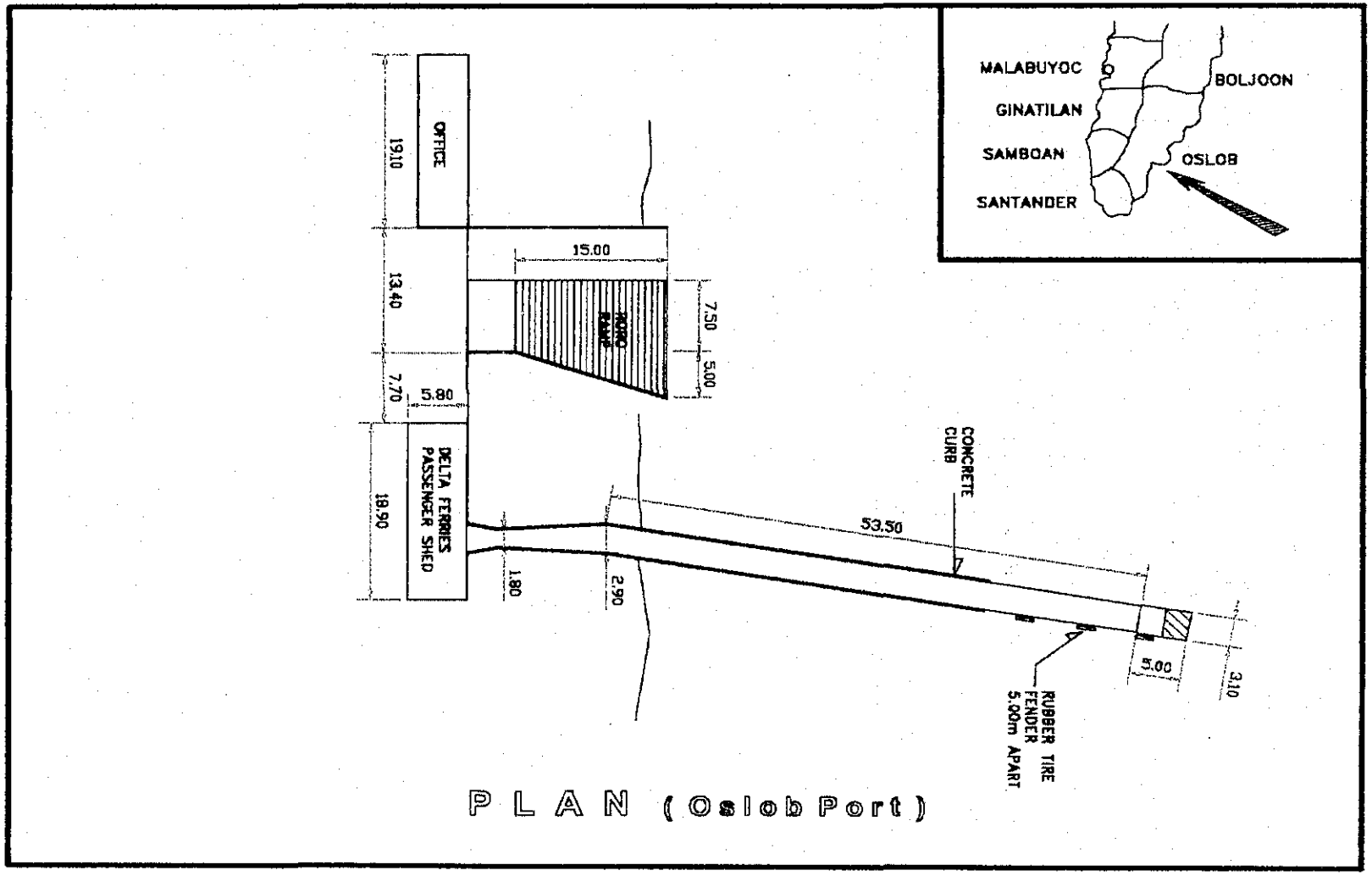
Source: CPA

Fig. 4.2.1-9 Plan - Port of Sta. Fe



Source: CPA

Fig. 4.2.1-10 Plan - Port of Argao



Source: CPA

Fig. 4.2.1-11 Plan - Port of Oslob

7) Port of Carmen

There are private owned jetty for cargo ship, RORO jetty, dock for speedboat facilities and shipyard in Carmen beside of the CPA terminal.

The CPA owned berthing facilities which is located about 126m away connecting by the 6 m wide of rock mound causeway is constructed with concrete pile support concrete slab of 30m x 17m. Some parts of which are damaged and holed.

The sloped RORO ramp is under construction and damaged parts of the landing deck are repaired. CPA plans to pave the gravel surface of causeway with concrete and road on the causeway is paved with concrete. The landing facilities are narrow and danger for cargo handling and passengers passing.

The damaged parts shall be rehabilitated. The passenger's pump boats and cargo ships are anchored in parallel due to the shortage of the berthing length of the present landing jetty.

Berthing facilities	Causeway	126.75m
	R.C. Deck	30m x 17m
Draft along side		-3m
Other facility		None

Port facility plan is shown in Fig. 4.2.1-12.

8) Port of Danao

The port managed by CPA is a gate port to the Poro Island of Camotes Islands. The berthing facility is located at the shallow depth of beach by extending the rock mound type causeway of 100m long x10m wide from the national road, which is very narrow for passing a large truck, and pick-up trucks. One side of the road on the causeway is occupied by the private tenants, which cause additional congestion. As a result of such congested conditions cargo ships are rarely calling the port, mainly passenger pump boats use the port. The slope of causeway was protected with mortar cover.

The RORO ramp was repaired. Step landing along the causeway was constructed in 1998.CPA extended the causeway by constructing the wooden pile supported jetty of 30m long x 10m wide from the tip of the concrete blocks of the causeway. But the upper structure of jetty was up lifted and damaged by high waves caused by one of typhoon.

CPA plan to construct a new CPA office combined with a passenger terminal at the entrance of the causeway in 2001.

Berthing facilities	Causeway	100m
	RORO Ramp	1 unit
Draft along side		-2m
Other facility		None

Port facility plan is shown in Fig. 4.2.1-13.

9) Port of Bantayan

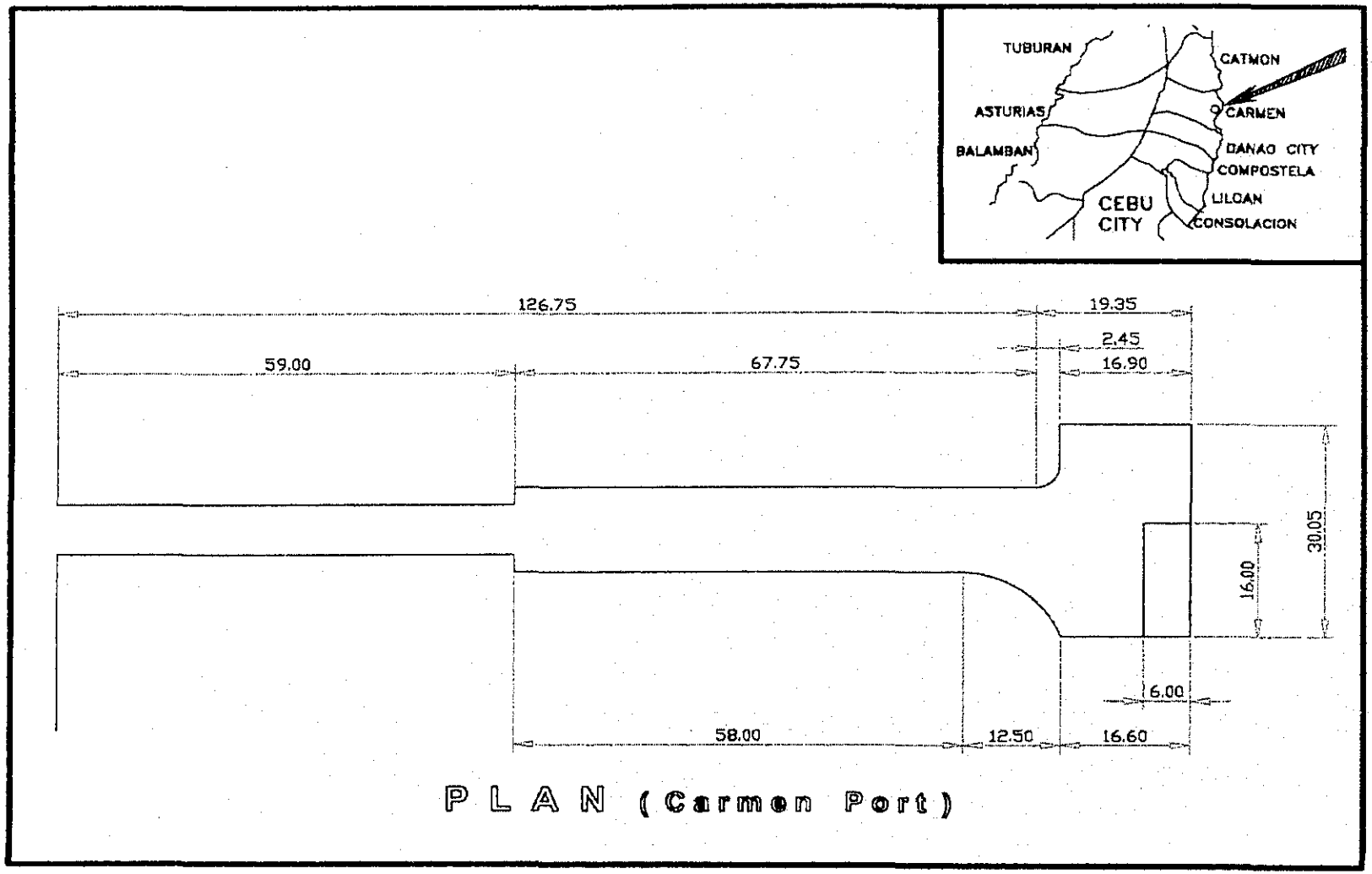
The port is located at the west side of the Bantayan Island. The road of about 11km from the Santa Fe is paved with concrete. The port function as gate way to neighbor islands and Negros for exporting eggs to Negros Island. The port has 314m long and 7m wide of rock mound type causeway from the public market on the land to connect the concrete pile supported jetty of 20m long and 7m wide at the water depth of 4m.

The jetty is used for cargo ships from Cadiz in Negros and passenger pump boats. Along the causeway number of fishery pump boats are using for anchorage. The port is under the management of Bantayan municipality. They plan to develop a new port at Bantige close to the city, where has proper water depth of cargo ships sailing from Negros.

A new site is required a new access road from the city and reclamation for a new port facility development from the beach.

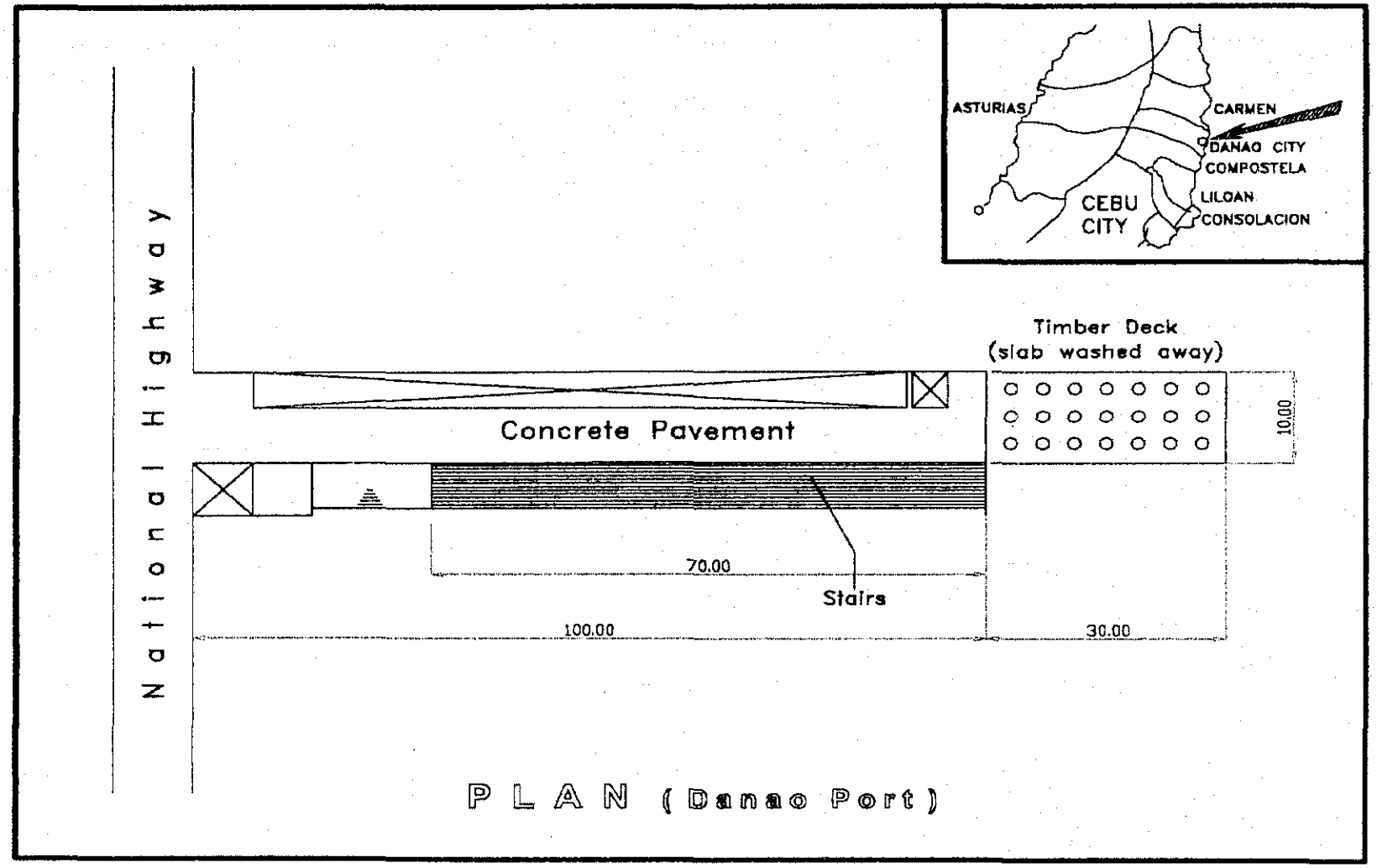
Berthing facilities	Causeway	314m
	R.C. Deck	20m x 7m
Draft along side		-4m
Other facility		Passenger Shed

Port facility plan is shown in Fig. 4.2.1-14.



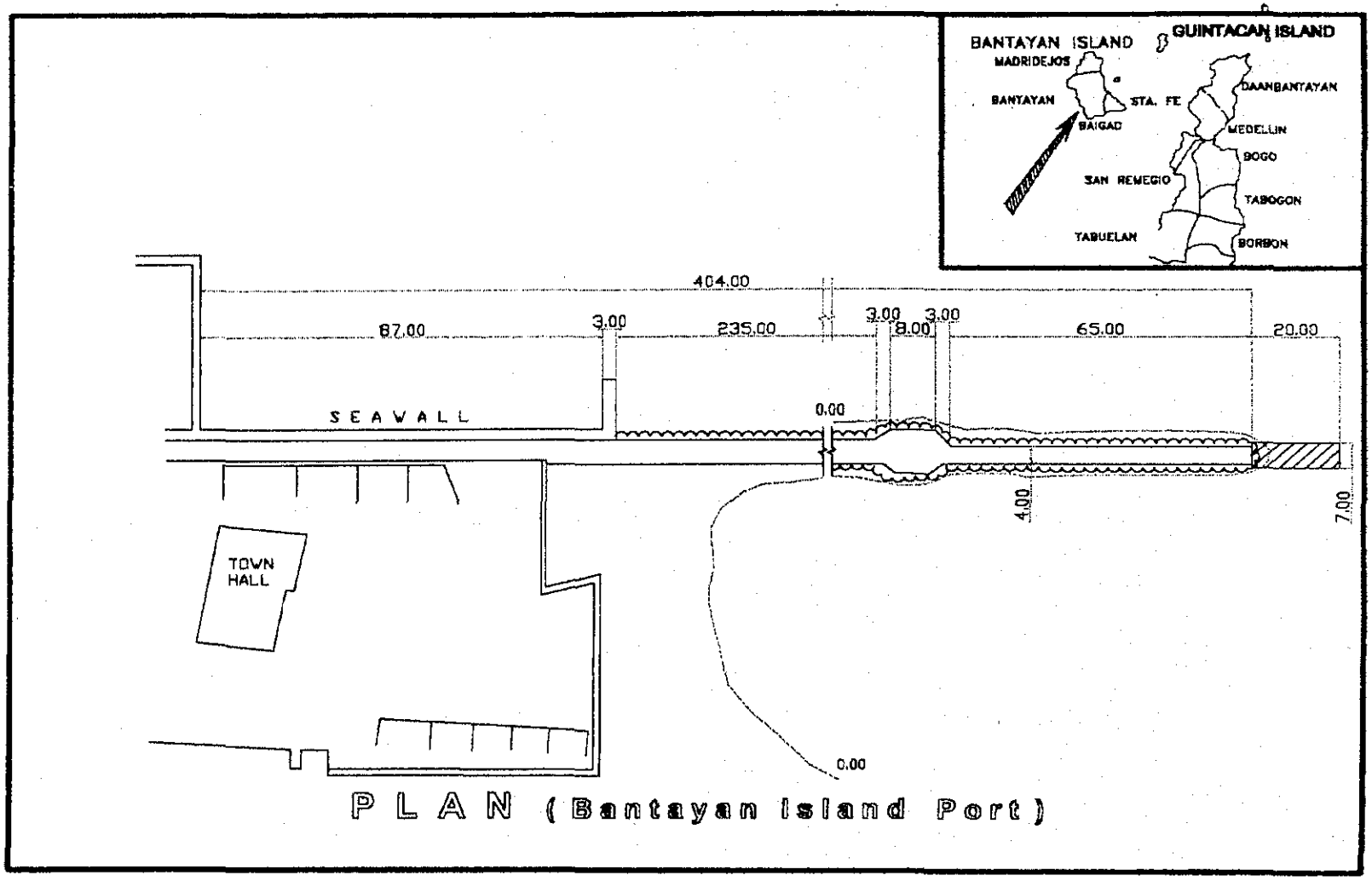
Source: CPA

Fig. 4.2.1-12 Plan - Port of Carmen



Source: CPA

Fig. 4.2.1-13 Plan - Port of Danao



Source: CPA

Fig. 4.2.1-14 Plan - Port of Bantayan

10) Port of Tuburan

The port, which is located about 45 km north from Toledo port, has 97.5m long x 7.5m wide of rock mound causeway. RORO ferry landing facilities of 33m x 11m long was constructed in 1998.

CPA plans to repair the existing road pavement by concrete pavement in 2001. CPA plans to extend berthing facilities of 15m x 6m for cargo ships. This terminal serves for the gate of passengers, vehicles and passengers by RORO transport from Escalante in Negros Occidental.

The present facility is reasonable conditions and necessary berthing facility is planned to develop, but additional facilities like passenger terminal, public transport service area should be developed.

Berthing facilities	Causeway	97.5m
	RORO Ramp	33m x 11m
Draft along side		-4m
Other facility		None

Port facility plan is shown in Fig. 4.2.1-15.

11) Port of Tabuelan

There is a 5m long x 5m wide of landing stage and passenger waiting hall at the tip of the rock mound causeway extending from the beach in the bay located at north from the Tabuelan City for RORO services of transporting vehicles with cargo, passengers between the Escalante in Negros and this port.

Inside of the Bay it is very calm protecting by both sides of the peninsula. The water depth around the berthing area is – 5.0m. The seabed soil is observed sand and gravel. The natural environmental conditions surround the port is very good. The berthing facilities are not deteriorated.

Berthing facilities	Causeway	30m
	RORO Landing	1 unit
Draft along side		-5m
Other facility		Passenger shed

Port facility plan is shown in Fig. 4.2.1-16.

12) Port of Poro

The port is located at the entrance of the Poro city. The port facility is a rock mound causeway for pump boat berthing coming from the Danao port, and 30m x 9m pile supported R.C. deck.

CPA plans to develop a new R.C. wharf which is 55m long x 11m wide, RORO ramp which is 11m x 9m and reclamation area for open storage, amenity and multipurpose shed which is 30m x 40m.

Berthing facilities	Wharf	30m
	RORO Ramp	7.2m x 8.95m
Draft along side		-4m
Other facility		None

Port facility plan is shown in Fig. 4.2.1-17.

13) Port of Santander

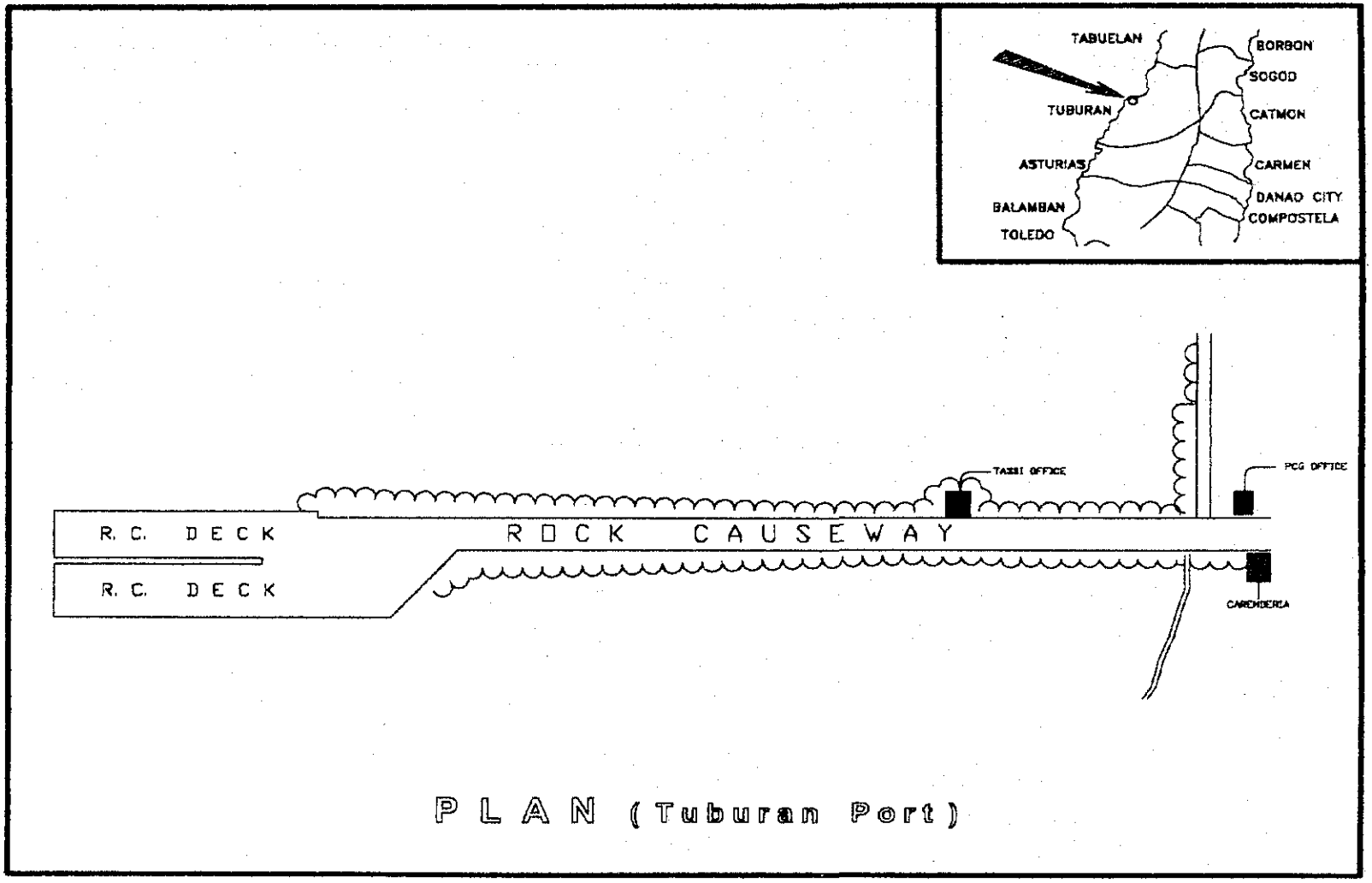
There is no landing facility of CPA or of Municipality in the city area of Santander located at the most southern tip of Cebu Island. Upon the demands of the local residents of sea transport going to Dumaguete, and some cities of north along the coast of Negros Oriental, a private company constructed landing jetty with concrete slab of 16m long x 6m long at Talisay area and started sea transport service of cargo and passengers by cargo ships between Tampi of Negros Oriental. Passengers from Negros go to Cebu city, Bohol Island, Siquijor Island by ferry and land transport.

The proper berthing facility and on land facility shall be developed by CPA or municipality to provide safe services to users of sea transport.

Berthing facilities	Pier	16m
	RORO Ramp	1 unit
Draft along side		-3m
Other facility		None

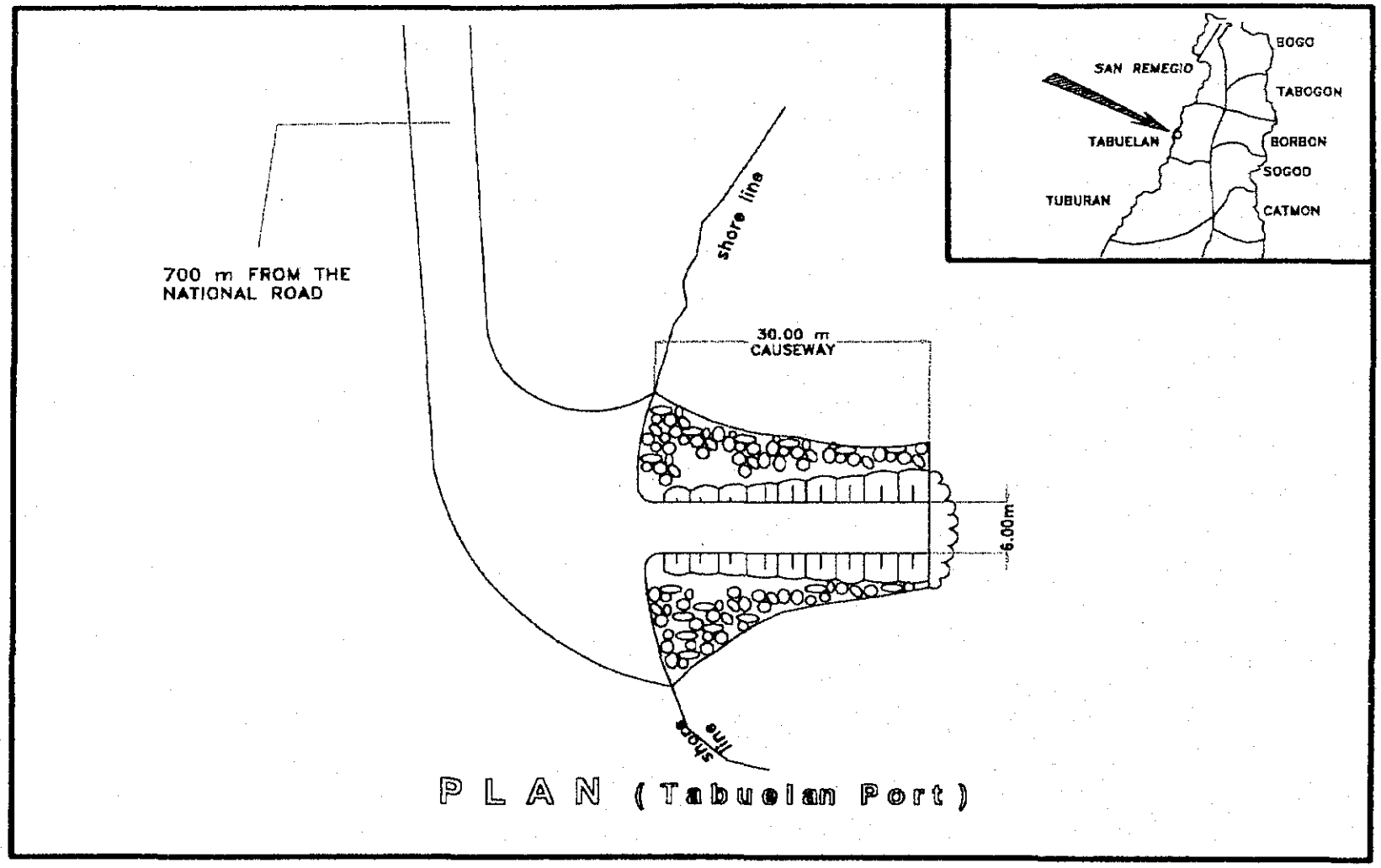
RORO ramp is still under construction and vessels are using wooden deck only.

Port facility plan is shown in Fig. 4.2.1-18.



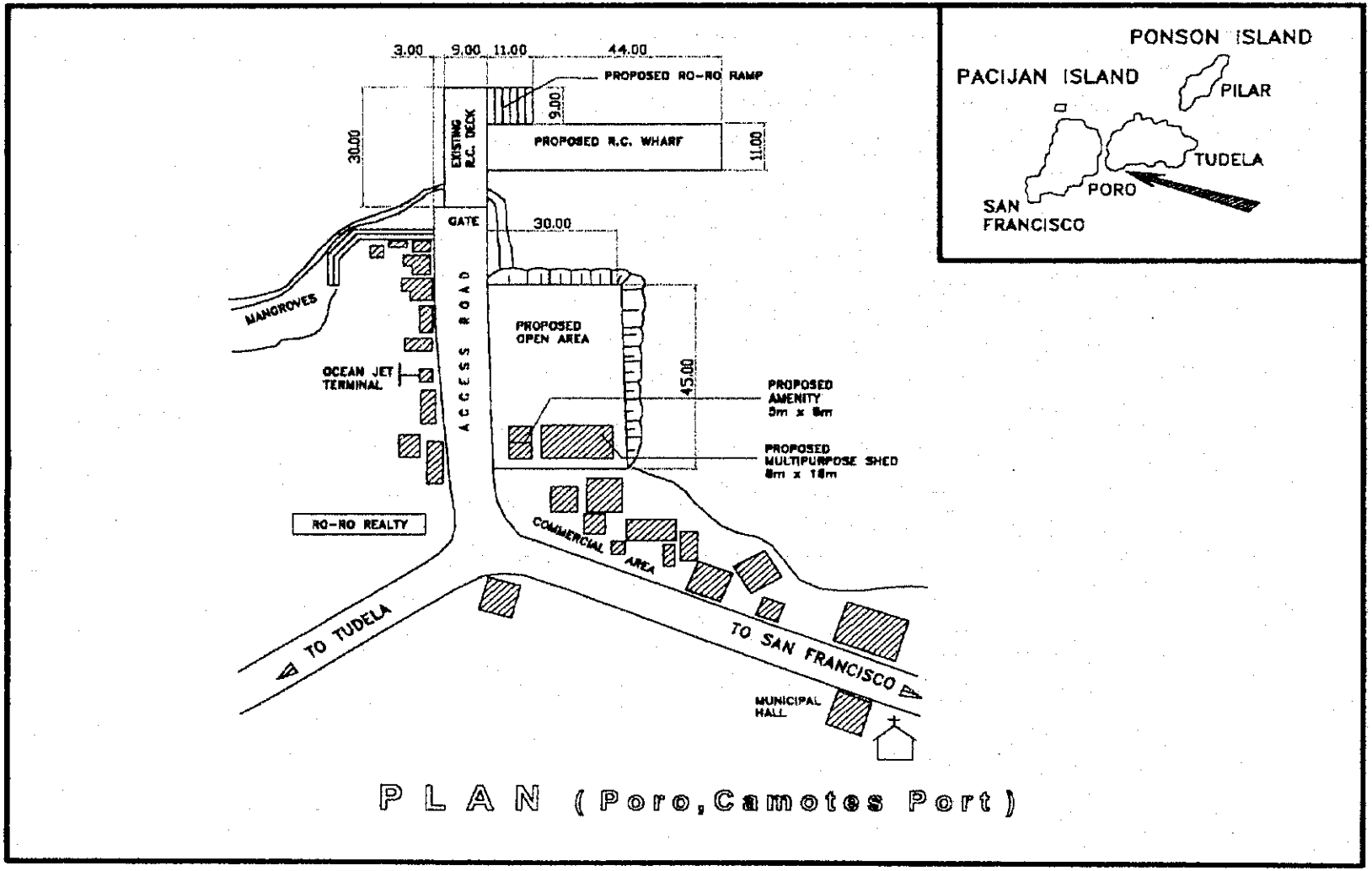
Source: CPA

Fig. 4.2.1-15 Plan - Port of Tubulan



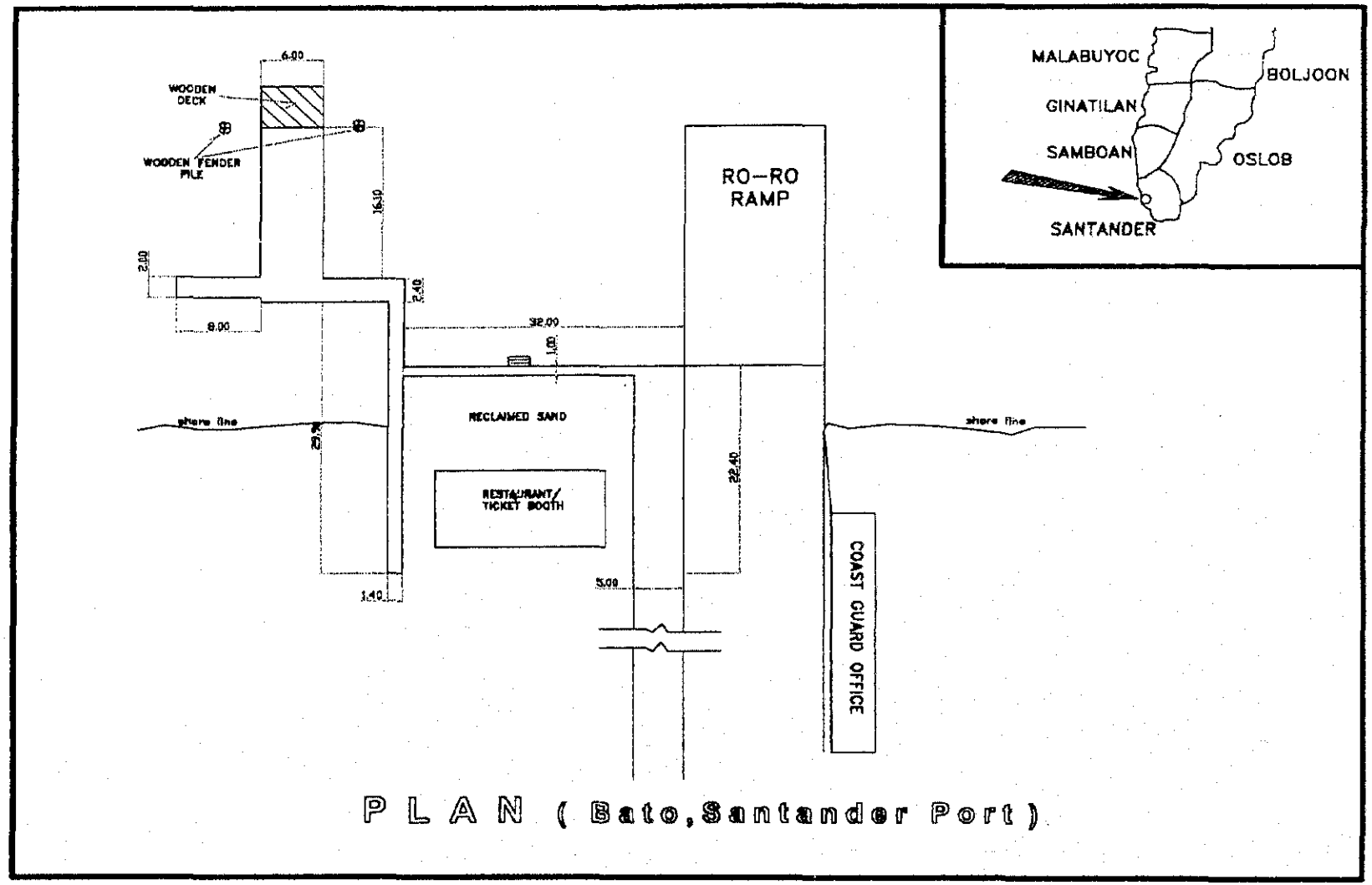
Source: CPA

Fig. 4.2.1-16 Plan - Port of Tabuelan



Source: CPA

Fig. 4.2.1-17 Plan - Port of Poro



Source: CPA

Fig. 4.2.1-18 Plan - Port of Bato (Santander)