

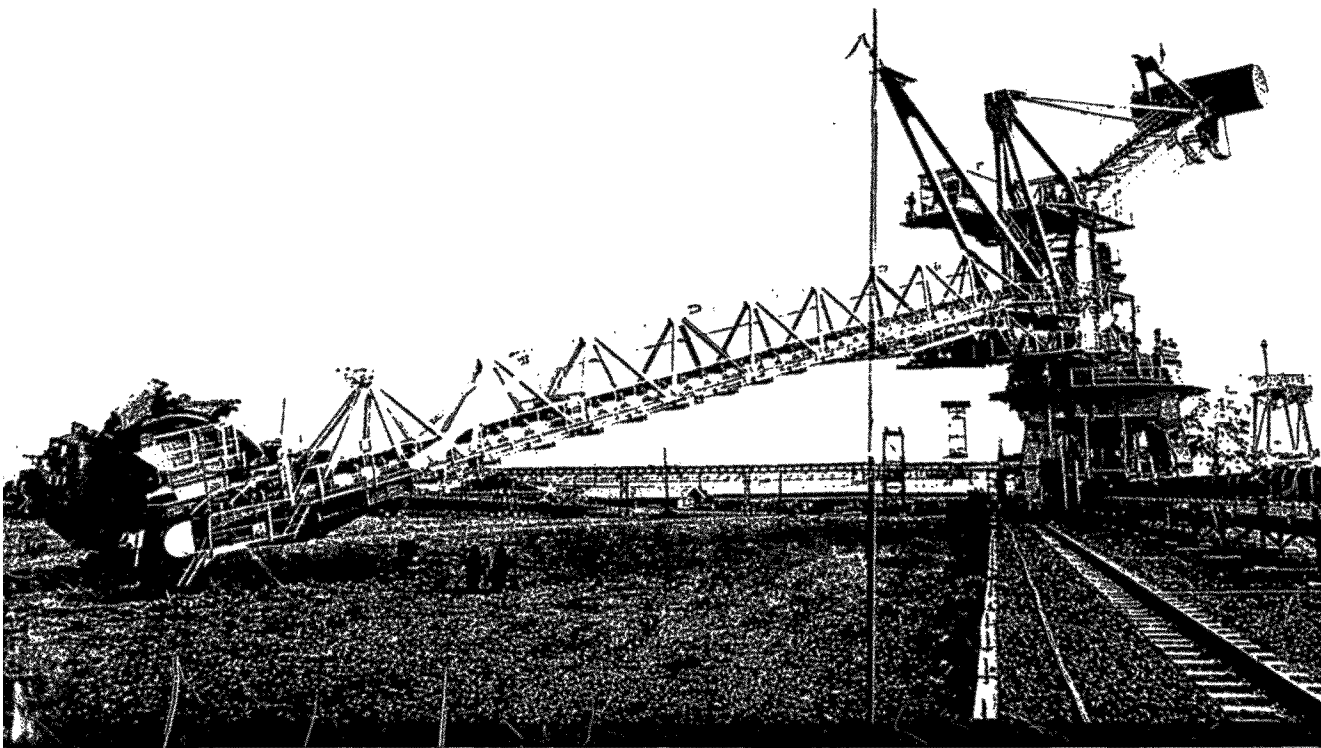
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**URBAN EXPANSION THROUGH
LAND RECLAMATION**

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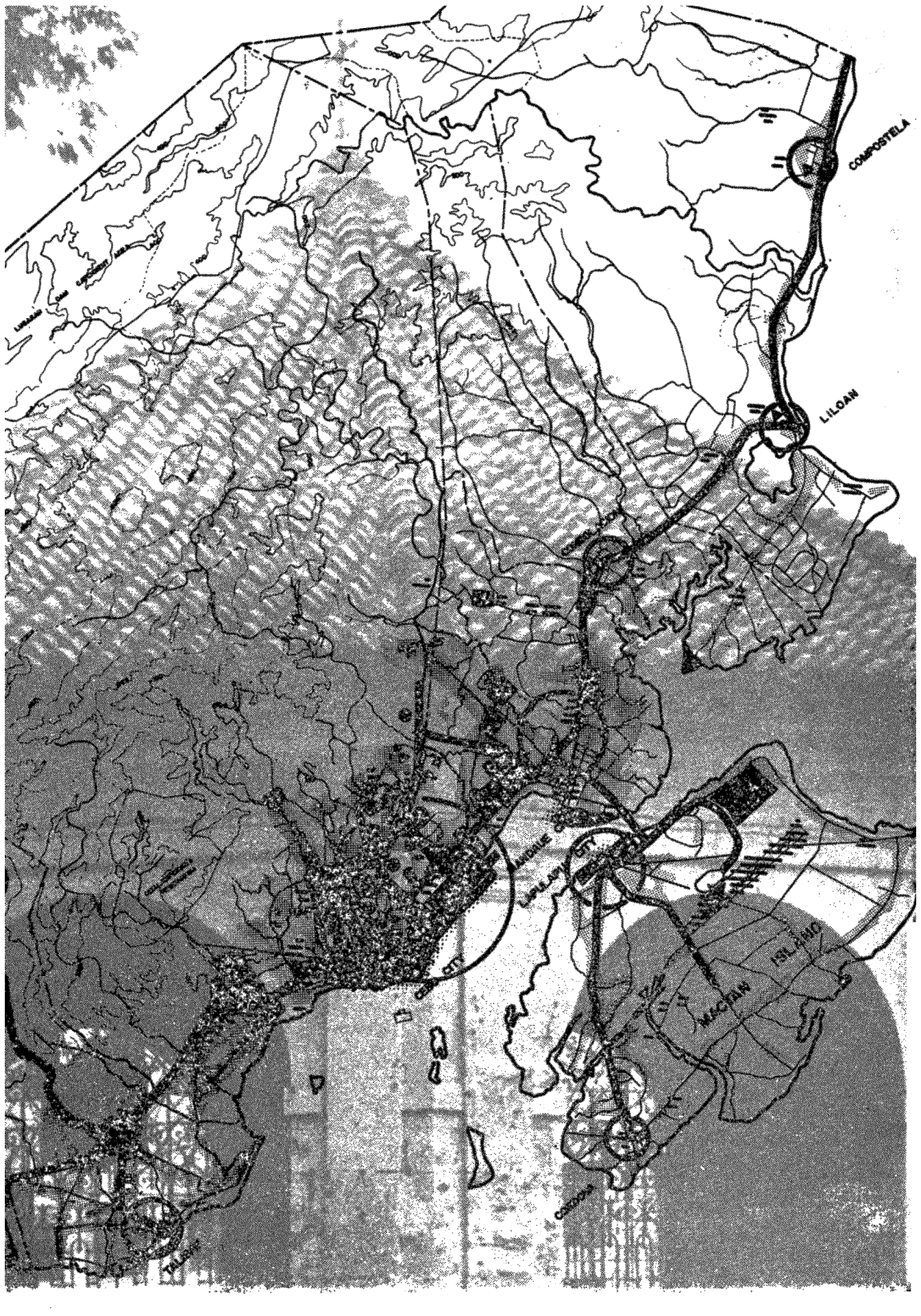
Delia R. Alcalde

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URBAN EXPANSION THROUGH RECLAMATION: THE CASE OF CEBU CITY*

Bancom Realty Corporation

Background of the Project

In the early 1960s, the Essel, Inc., a company composed mainly of local businessmen, entered into a contract with the City of Cebu to undertake the reclamation of the foreshore area between Pier 3 of the Cebu Port and the Subangdaku River. Essel contracted various foreign companies, among them the Dillingham International, to do the reclamation work. To finance the undertaking, a new corporation, the Cebu Development Corporation (CDC), was formed and to which Essel assigned all its rights and obligations regarding the contract.

The actual reclamation started in late 1962 and was completed in 1967. A total area of 169 hectares was reclaimed. About 30 per cent of the reclaimed land was to be owned by the City in consideration for the authority given to CDC to reclaim within city limits. The rest was to be retained by CDC which financed the reclamation work. Shortly before the completion of the work, CDC started to presell its portion of the land to various private owners to raise additional capital to complete the project.

In 1969, a court order suspended the selling and construction in the reclaimed area. Due to the prevailing political conditions at that time CDC was unable to complete the land development and those who had bought land refrained from constructing in view of the court proceedings regarding the legality of the reclamation done by CDC.

In February 1977, the President issued Presidential Decree No. 1084 creating the Public Estates Authority. Shortly after, in April 1978, the 169-hectare area reclaimed by CDC in Cebu was placed under the ownership of the Public Estates Authority by virtue of Presidential Decree 1346.

The PEA was to reimburse CDC up to the extent of its paid-in capital and to liquidate CDC's outstanding obligation to Dillingham.

The source of repayment to CDC and Dillingham was to be the collection of outstanding balances of the previous lot buyers and collection of premia from all lot buyers. The titles and claims of all who previously bought land from CDC were declared null and void, *ab initio*, as a result of Presidential Decree 1346. However, all these claims and titles would be recognized or re-awarded to the original buyers upon payment of premia equivalent to 50 per cent of the original purchase price for partially-paid lots, and 33 1/3 per cent of the original purchase price for fully-paid lots. PEA appointed SGV as the collection agent for these balances and premia payments.

*Excerpted from CNRP:—² *Cebu North Reclamation and Port Redevelopment* report submitted by the Bancom Realty Corporation to the Philippine Estates Authority, n.d.

In July of 1978, PEA signed a Memorandum of Agreement with Bancom Realty Corporation (BRC), appointing BRC as developer and general manager for the redevelopment and sale of the Cebu North Reclamation Area. Under the Agreement, BRC was to design a redevelopment plan of the entire area, and upon approval of such redevelopment plan, develop and sell the land for PEA within eight years from the date of the Agreement.

This report presents the redevelopment plan as prepared by BRC in fulfillment of the above memorandum of agreement. It also presents the related studies on the economic and marketing and financial aspects of the Redevelopment Project which is hereinafter called the Cebu North Reclamation and Port Redevelopment Project. (CNRP⁻²).

Location of the Project

CNRP⁻² lies along the foreshore area between Pier 3 of the Port of Cebu and the Subangdaku River. This area lies north of Cebu City's Central Business District (CBD) and is accessible by land from the rest of the City by means of several major thoroughfares. From the Central Business District, MacArthur Avenue and M.J. Cuenco Avenue; from the Cebu uptown area (which includes the Cebu Provincial Capitol), General Maxilom Avenue (formerly Mango Avenue); from the northern suburbs part of Cebu City, San Jose de la Montaña; and, from Mandaue City, M.J. Cuenco.

The Subangdaku River, which defines the common boundary between the City of Cebu and Mandaue City also forms the northern boundary of CNRP⁻². The extensions of General Maxilom and San Jose de la Montaña are in fact part of the major road network within the project.

The Project Area is roughly rectangular in shape, about 1.9 kilometers long and .9 kilometers wide. The port berthing length of 1.9 kilometers is longer than the berthing length of the existing Port of Cebu (from Pier 3 southwards).

By virtue of its location and accessibility, CNRP⁻² would become the next natural catchbasin for commercial and trading activities in the Metro Cebu area in the next decade. It is towards this end that the redevelopment thrust of the area is addressed.

THE PHYSICAL DEVELOPMENT OF CEBU CITY: PAST AND PRESENT

The Historical Physical Development of Cebu

The 1750's-1800

The mid-18th century saw the Spanish settlement "ZUBU", founded by Legaspi in 1565, to be a well-established settlement with streets of grid iron pattern forming a triangle, a two sides of which faced the sea and the third faced land. The settlement had three distinguishable nodes: the town proper, built around the "Catedral" and the "Obispado" (Bishop's Palace), the arrabal of the Parian along Colon and the arrabal of San Nicholas. Some light commercial activity established along Colon, while the institutional strip was along Calle de Palacio (now P. Burgos) which strung such prominent places as the Municipio, the Yglesia del Santo Niño, the Catedral and Obispado, and the Plaza of the Parian across the Parian estero. Landmarks included the cotta de San Pedro, which was built in 1738 and which still exists; the Municipio, where the present Cith Hall stands; the Yglesias y convento del Sto. Niño (1735, existing), the Catedral (existing), the Obispado, and the Yglesia y Colegio de la Compañia de Jesus.

1900-1940s.

By the early 1900s, Cebu had filled out the area circumscribed by the Calle de Manalili and had slowly spilled out in three directions: to the north, along Calle de los Martires to the Arrabal of Mabolo, to the south along Calle de Tres de Abril, and to the west along Calle de Juan Luna (now Jones Avenue) which had opened new areas up to what is now Fuente Osmeña. The area around the "Catedral" remained as the recognized institutional center and town proper but commercial houses had moved to Calle de Magallanes and the port area behind the Municipio, leaving Parian to be a genteel residential area. Plaza Libertad, which is now Plaza Independencia, became the proper setting for social intercourse when the town's populace turned out for late afternoon strolls.

The 1950s.

Although the war had virtually razed Cebu to the ground, reconstruction had been rapid and by the mid-1900s, the areas up to San-
ciangko had been filled out to become part of the central business district. Residential suburbs were fast establishing in the newly opened frontiers of Lahug, Camputhaw and Guadalupe. Strip development blossomed along Martirez (now M.J. Cuenco Avenue), the north arterial road connecting Cebu to Mandaue, and along C. Padilla, the South arterial road. Magallanes retained its position as the City's premier retail commercial strip, but commercial activity had sprung up along many of the central district's streets, notable among which were Juan Luna, the Carbon Area, and Colon which lost its residential ambience during the war. Jones Avenue had pushed the City's edge farther west to its present terminus at the Capitol and opened large new tracts to residential use in that area. Cebu had also earned new prominence as the educational centre for the Visayas and Mindanao and new schools established in Cebu's uptown areas.

The 1960s.

The most striking development during the 1960s was the transformation of Cebu's coastline. The North Cebu Reclamation Project was started in 1962 and by 1969 part of the City's shorelines had been pushed out and 169 hectares of new land had been added to its land mass. The City's central business district had continued to grow and by now had filled in the area enclosed by T. Padilla and P. del Rosario. Magallanes had declined somewhat as the prime commercial area with the invasion of several banking establishments along the street. Juan Luna, meanwhile, and the minor streets perpendicular to it quickly compensated for its decline. Colon had now become prominent as a night strip, where Cebu's best cinemas and restaurants are located. Some uptown commercial activity had also started to establish, notably Jones Avenue, F. Ramos St., and Mango Avenue. In the suburbs, development took the form of subdivisions which were now slowly bringing the city's built-up area generally northward and up into the foothills of Capitol.

The Present Image of the City

Limits of the City's Built-up Area

Cebu's built-up area extends up to the Subangdaku boundary to the north, the Bulacao boundary to the south and the coastline to the east. To the west, it is limited by hills that are part of the mountain range that form the spine of the island. The northern and southern boundaries are rather ambiguous as they are the interfaces of the northern and southern urban centers of Mandaue and Talisay respectively.

Districts

The city may be perceived as being composed of six distinct areas:

- a. The central business district, which includes one of the oldest areas of the city, dates back to the Spanish era. This district consists of the area bounded by the port area on the east, and circumscribed by the T. Padilla-P. del Rosario-South Expressway chain of streets. It is characterized by a mix of commercial establishments, government and private institutions, and residential structures that have been transformed into dormitories and multi-family dwellings. Congestion is evident in many parts of this district and with it, blight. Some areas, however, have reestablished their prominence despite congestion through the infusion of investments in new commercial activity. A prime example is Colon street whose glory during the Spanish era was overshadowed in the 1940s and 1950s by Magallanes and the port area. It had its comeback in the 1960s as a cinema and restaurant strip and has recently seen the frantic building activity of a series of one-stop shopping centers. Other areas have retained their delightful ambience, presumably through three centuries. An example is the plaza of the Sto. Niño Basilica.
- b. The Port Area—This district consists of the areas east of M.J. Cuenco Avenue beginning at the vicinity of the City Hall, through the three piers which were built in the 1930s, to the relatively new areas up to General Maxilom Avenue. The older part of this district behind the

City Hall still retains many of the pre-war commercial houses and warehouses. It is cut at mid-section by the expanse of the Plaza Independencia and the historic Fort San Pedro.

- c. Uptown District—This district consists of the areas beyond P. del Rosario up to the predominantly residential areas of Lahug, Capitol and Guadalupe. The area is characterized by pleasant streets, single detached structures amidst greens, and a smattering of attractive buildings. The last decade has seen increasing commercial activity along Jones Avenue, F. Ramos, and General Maxilom Avenue. Quite recently, bigger and better quality stores have opened along these corridors in a continuing trend of movement toward the less congested areas in the City. Many pockets of land remain undeveloped in this district mainly because they have not been penetrated by roads. An example is the tract defined by Gorordo, Maxilom Avenue, Juana Osmeña, and N. Escario. Filling-in of these pockets has started but is seen to take some time.
- d. Northern Suburbs—The northern suburban district commences right after the golf course of the Club Filipino—a refreshing expanse of green which, together with the Third Military Area Reservation, the Lahug Airport and the Country Club greens, has effectively disrupted the inexorable push of the City's edge. After these, the city's built-up area dissipates into low density residential subdivisions. A slum area exists just beyond the Club Filipino greens but this quickly gives way to an almost countryside ambience.
- e. The Southern Suburbs—The southern suburban district starts approximately beyond V. Rama Avenue and includes the areas around Labangon, Banawa, Mambaling, Tisa, Punta Princesa, and San Nicholas, an old "arrabal" or suburb that dates back to the Spanish times. These areas together with Labangon, Mambaling and Punta Princesa are thickly populated and contain some of the city's densest residential areas. The area east of the South Expressway at

the mouth of the Fagina River contains the city's oldest and largest slum districts that compare with Manila's worst blighted areas. This part is also the location of Cebu's largest industrial installations—the Ludo and Lu Ym Factories. Banawa, which is located in the foothills south of Guadalupe, is a more pleasant residential area of very much lower density. Its remaining open areas and that of Tisa are fast giving way to new subdivisions. Bulacao, Pardo and Ynayawan have a countryside atmosphere with large areas still devoted to agriculture. Uncontrolled strip development runs all along the Cebu South Expressway and South road and one may observe a motley of uses: residences, cheek by jowl against factories, repair shops, motels, stores, etc.

- f. The Hillside Subdivisions—Quite apart from the suburban residential areas already described above are the hillside subdivisions of Capitol and Banilad. These developments stand out from among ordinary subdivisions in their impressive beauty as exclusive enclaves for the more privileged.

A seventh district, distinct from all already mentioned, may rise soon in the foreshore area immediately north of the central business district on land reclaimed from the sea during the 1960s—the Cebu North Reclamation and Port Redevelopment Project.

Nodes

- a. There are two major extra-territorial nodes that influence the City:
 - 1. Mandaue—which has become, in recent years, an industrial adjunct to Cebu, a source of both employment and labor; and
 - 2. Talisay—of which is a recreational town and a source of agricultural produce.
- b. The intra-city nodes are:
 - 1. Capitol—the western terminus of Cebu's most travelled thoroughfare—the Osmeña Boulevard-Jones Avenue stretch;

2. Fuente Osmeña—the junction of two major paths, Jones Avenue and Maxilom Avenue;
3. Colon;
4. Carbon—food market/terminus of regional influence;
5. Lahug (Camp Lapu-Lapu)—serving the residential population of Lahug and the Military Installation;
6. Guadalupe—a terminus serving the residential area of Guadalupe and the agricultural areas of Guadalupe hills and Napo;
7. Labangon;
8. San Nicholas;
9. Mabolo; and
10. General Maxilom—the area around foodarama and the Redemptorist Church.

Paths

- a. Extra-territorial
 1. North Arterials—M.J. Cuenco Avenue Banilad Road
 2. South Arterials—South Expressway-Cebu South Road
- b. Intra-City
 1. Osmeña Avenue-Jones Avenue-Juan Luna
 2. Gorordo-Maxilom
 3. F. Ramos-Junquera-Colon
 4. V. Rama Avenue
 5. Banawa-M. Velez
 6. D. Jakosalem

Landmarks

- a. Major
 - Capitol
 - Port San Pedro
 - Plaza Independencia
 - Santo Niño Church
 - Cebu Cathedral
 - Magellan's Cross
 - City Hall
 - San Jose Recoletos
 - Fuente Osmeña
- b. Minor
 - Lahug Airport
 - Magellan Hotel
 - Colegio de Immaculada Concepcion
 - Colegio de San Jose Recoletos

Sacred Heart
 St. Theresa's College
 Southern Islands Hospital
 Velez Hospital
 Southwestern University
 Cebu Institute of Technology

PRESENT LAND USE: PRIMARY PLANNING SURVEYS

Metro Cebu Land Use

A detailed, medium intensity survey of Metro Cebu comprising the cities of Cebu, Mandaue, Lapu-Lapu and the municipalities of Talsay, Talamban, Consolacion and Liloan have been mapped out. The survey clearly indicates that the commercial districts eat up portions of the residential areas and grow in a very undefined linear pattern emanating from the town centers. Industrial areas cluster along the shoreline but are noticeably booming in Mandaue City. Metro Cebu remains provincial in character and agricultural land dominates the land use while some areas like Mactan have the potential of being developed into a tourist-oriented zone.

Cebu Commercial District Land Use

The Field Survey Index method of land use survey of the Central Business District (CBD) showed that the very high density commercial units in the downtown area resulted in spillover to the Uptown area. Difference in ambience rather than natural barriers define the Uptown Area (UA) from the Downtown Area (DA) with both areas interspersed with residential zones. Retail commercial dominates the overall land use, taking 58.36% of the DA and 48% of the UA. It is followed by Mixed Uses, having 12.3% of the DA and 17.4% of UA with retail commercials occupying the ground floor. Industries and manufacturing are confined to the Port Area of the DA, and due to the absence of intra-city bus services, transportation only had 1% of the combined DA-UA land use. As earlier noted, the CBD transgressed into the residential area thus, the residential land use has 11.5% of the DA and 15.3% of the UA. Institutional areas complete the entire land use of the CBD taking 2.7% of the DA and 9.5% of the UA.

Environmental Survey

Cebu City is webbed with ribbon patterned streets, undefined skyline and heterogenous building character. A series of five-intersecting streets punctuates the CBD which results in a number of pedestrian-vehicular bottlenecks necessitating rerouting or conversion of the streets into one-way thoroughfares. Loading/unloading points are located too near the intersections, messing up further the overloaded street width. Interprovincial roads are in dire need of expansion and decongestion. Building character likewise blots Cebu's image as building heights are undefined and buildings are wanting in maintenance. Parking also adds to the environmental problems in the city as the ratio of parking vis-a-vis building use is already below the desired level considering the uptrend in Cebu's car owner population. Lack of parking areas has resulted in on-street parking, overloading the already congested carriage ways. The building condition survey showed that old structures comprise 63.8% of the buildings in the DA and 43.5% in the UA. Of the total number of commercial buildings, 51% in the DA and 4.25% in the UA are not properly maintained.

Vehicular/Pedestrian Count and Survey

A detailed land use survey of Metro Cebu gave first hand information on the origin and destination points of vehicular traffic and pinpointed strategic station points for the traffic count. Extra-territorial city routes like Mandaue in the north and Talisay in the south as well as the intra-city routes like Capitol Site, Banawa, Guadalupe, Labangon, Lahug, Mabolo and San Nicolas form the points of origin of Cebu's vehicular traffic with the eventual destination point in Carbon Market. Of these vehicular O-D points the most used thoroughfare in the Jones-Osmeña Avenue, it being used by routes from four origin points.

M.J. Cuenco follows with routes from the origins using the road. Other streets with particular roles in the replanning of the project area were assigned station points as a take-off point in the planned rerouting of public utility vehicles and cargo trucks.

Environmental Survey: Project Site

An intensive assessment of the project site was undertaken and the results were formu-

lated into planning parameters. As the reclaimed land was virtually left idle for a number of years, it has become blighted. Settling of the land fill has caused many areas to become flood-prone while the clogged esteros and the conversion of the northeastern portion of the area into a garbage dump presents an unsightly and malodorous setting. As expected, the garbage as well as the mud and the slime have penetrated the existing sewer lines and contributed to the stagnation of Subangdaku River and the other canals. Squatter shanties belonging to both the low and the medium income groups dot the entire area. Some of these enjoying big backyards and well-delineated lot boundaries, forming ordered pattern of settlement. Squatters belonging to the low income group are generally scattered around the pier areas while those of the middle income group line the northeast portion near the Pepsi-Cola boundary. At project inception there was a total of 2,418 squatter families in the project site. To date, 429 of these families have transferred from the site, some through legal ejection procedures and others voluntarily. Meanwhile, negotiations have been completed for a relocation site in Consolacion and site preparation is targeted to start on the first week of June so that the rest of the remaining squatter families may eventually be relocated.

As the study of the immediate areas around the site has a bearing on the proper planning perspective, the social as well as aesthetic problems posed by the squatters and the deteriorating condition of the buildings along the approach roads were also looked into. The planning group noted that M.J. Cuenco Avenue is too narrow for its present vehicular load and the buildings alongside it are too cramped and poorly maintained. The same observation holds true along the streets of General Maxilom and San Jose de la Montaña as well as T. Padilla.

Most of the existing buildings in the project area violate the restrictions that were previously imposed by the Cebu Development Corporation especially with regard to setback requirements. Because many of these buildings were constructed without benefit of proper surveying and lot monumenting, structures are misaligned and not a few of these have extended beyond lot boundaries. Use restrictions were disregarded and as a

result, there is a disorganized grouping of structures and activities such as the warehouse-temple-residential area near T. Padilla. Roadways, which have been left unattended for years, are potholed and littered with dirt and garbage.

Despite the present physical state of the site, one cannot miss the obvious potential that it possesses. Its views of the mountains and harbor alone can inspire the framework for its redevelopment. It is easy to see that environmental well-being can be achieved through proper development.

THE REDEVELOPMENT PLAN

The Redevelopment Approach

The need for replanning is basically prompted by the following factors:

1. The old CDC plan was based on a set of premises which no longer exist or have since changed in terms of these general considerations:
 - a. Ownership,
 - b. General and individual needs, and
 - c. Government policies and institutions
1. The presence of an opportunity to improve the old plan makes possible a more attractive approach which shall be responsive to the present and future needs of Cebu, is creative, and particularly consistent with the government's goals.
3. The necessity to rationalize the present land values, the land uses and the zoning of the property.

Planning Limitations and Constraints

Replanning in this case assumes a pragmatic position and is cognizant of limitations that govern the basic direction of the framework plan. The constraints are as follows:

- a. Existing titled and sold lots;
- b. Minimum lot swapping arrangement;
- c. Existing permanent structures of bona fide buyers and infrastructure components;
- d. Port Area requirements; and
- e. Physiographic qualities of the site and development cost implications.

Significance of the Project

Despite the limitations, the urge to innovate is strong because of the project's significance on the following levels:

a. National

1. Strengthening of a major urban center in terms of expanded and better urban services;
2. Narrowing of the gap between Metro-Manila as the primate city and other urban centers of the country;
3. A step toward a nationwide distribution of urban services;
4. Redirection of present migration patterns; and
5. Presentation of a prototype for other urban expansion projects demonstrating public and private participation in urban development.

b. Regional

1. Creation of a strong regional center to service the needs of its catchment; and
2. A push toward regional dispersal and development.

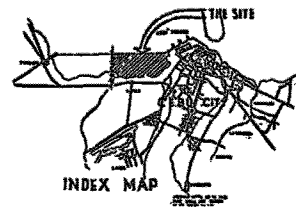
c. Local

1. Revival of a potentially valuable area that has been left to neglect and blight;
2. Stimulation of private investment, building activity and generation of employment opportunities.
3. Upgrading of the port, commercial and institutional facilities similar to those in major centers; and
4. Strengthening of community image and character of an old and historical city.

Concept of Redevelopment

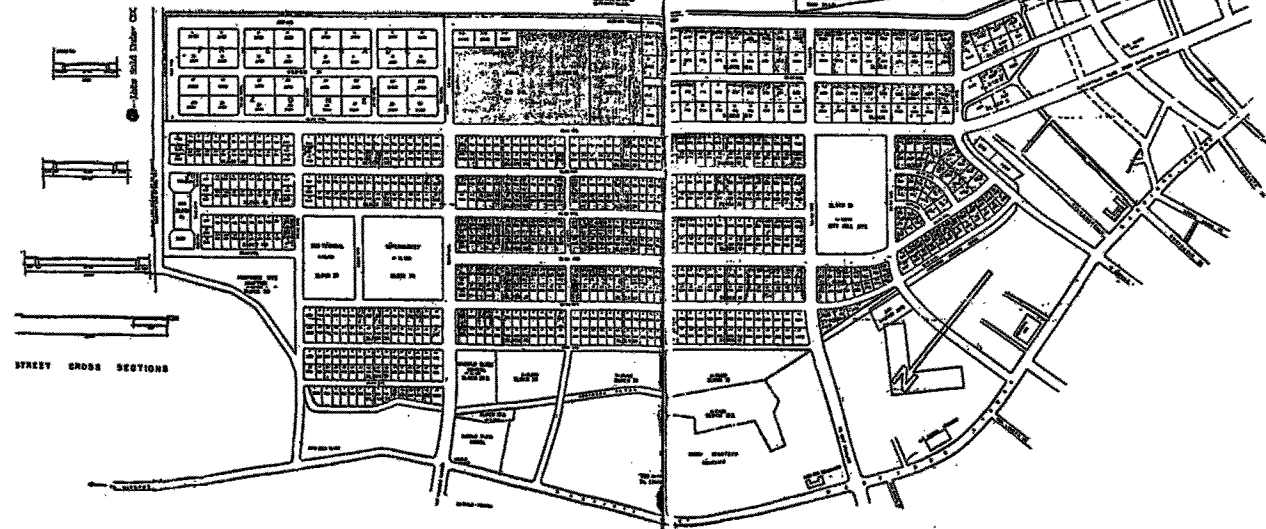
The spatial organization of uses conform to a general pattern of intentions directed at being able to achieve a unified agglomeration of activities.

1. A *hierarchical circulation system* is interspersed with a green-open space net which utilizes whenever practicable T-junctions, loop streets and service turnabout.



CEBU PORT DEVELOPMENT AND RECLAMATION PROJECT

GENERAL DEVELOPMENT PLAN

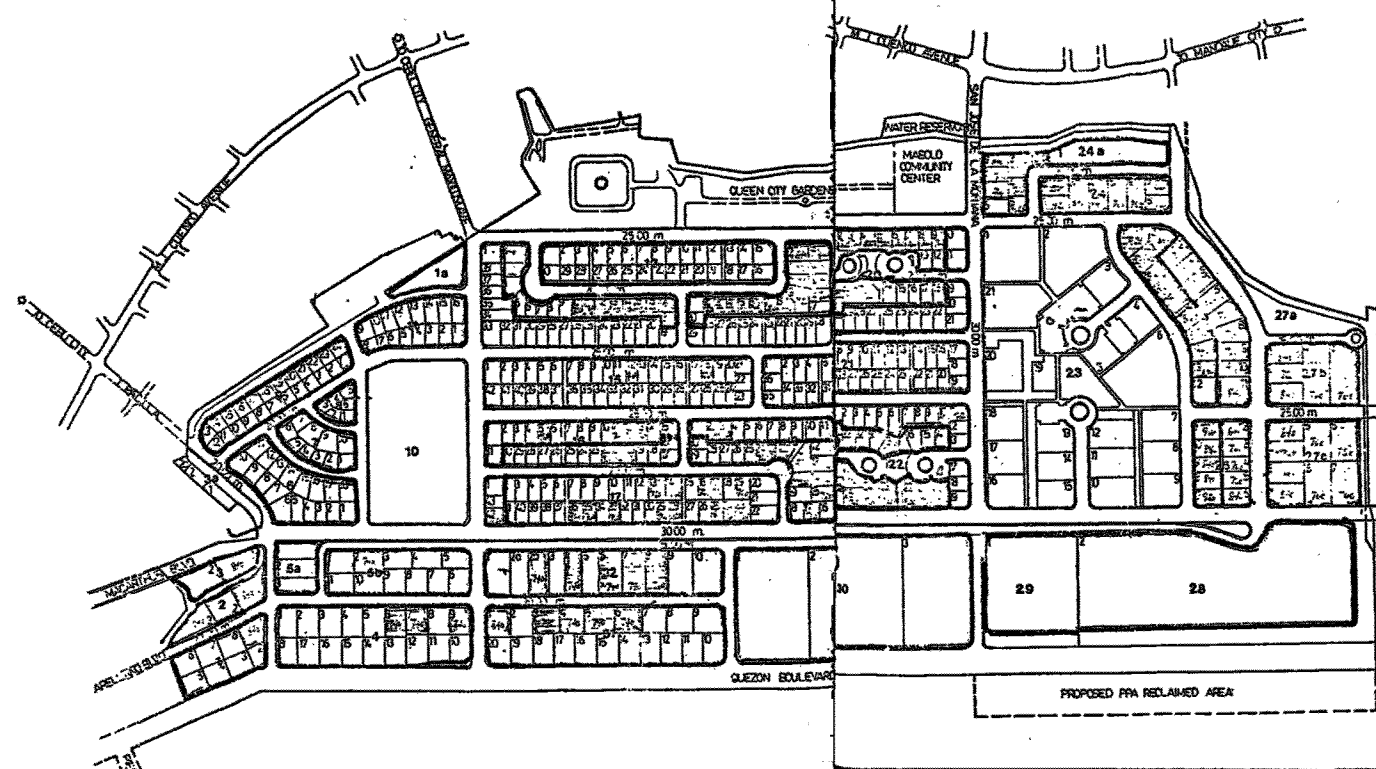


SCALE 1:1000 M

CEBU DEVELOPMENT CORPORATION
INSULAR LIFE BLDG., CEBU CITY
(INCORP. 1962)

MANOSA BROTHERS
ARCHITECTS-PLANNERS

CEBU PORT CENTRE



SITE DEVELOPMENT PLAN

SCALE 1:1000 M

- LEGEND:
- ① - ARCADED RETAIL COMMERCIAL
 - ② - MIXED COMMERCIAL
 - ③ - WHOLESALE COMMERCIAL
 - ④ - WAREHOUSE/CONTAINER YARD
 - ⑤ - OFFICE/APARTMENT STRIP
 - ⑥ - OFFICE-WAREHOUSE STRIP
 - ⑦ - SALEABLE LOTS

2. *Two magnets* located on both extremes of the site serve as foci of activities which shall generate customer movement through a dual arcaded retail commercial strip and keep the entire development in dynamic equilibrium by acting as a corridor and distribution area.
3. *The Port Area* shall be dedicated exclusively to port-related activities to meet the growing needs of the port of Cebu and to help enhance trading activities in the area. Land use allocation in this respect shall seek to reinforce its being a transshipment point and hence capitalize on its expanded requirements for services such as warehousing.
4. *A mixed-use commercial development* shall accommodate varying but mutually reinforcing revenue generating use. Two major MUD buffer strips shall contain the retail corridor that shall be in-between the major foci of the plan.
5. *A superblock concept* of blockbuster stores, cluster cinemas, and office parks for an integrated work-play environment with specific pedestrian orientation shall unify the overall image of the project and shall henceforth be known as the Superblock.
6. Implementing restrictions, zoning guidelines and protective covenants shall ensure adherence to the objectives and intentions of the general plan to assure operationalization of the development concept.

Land Use Components

1. Component Distribution

The 169.3-hectare project site as replanned can be distinctly classified into two major categories of use namely: the *mixed unit development blocks* and the *port area*, sharply divided by a 30-meter road right of way (MacArthur Avenue) that runs parallel to the port, 250 meters from the bulkhead line.

The port delineation is basically influenced by governmental provisions affecting port planning and the projected increasing demand of space by the port of Cebu.

These major uses are intended to be mutually reinforcing as well as self-propelling in terms of activating the expansion thrust of the Central City. Planning standards differ, however, in both cases, hence, it is required that evaluation of use allocation and distribution be done always relative to the specific nature of inherent activities in their designated areas.

a. Mixed Unit Development Blocks

Approximately 67.6% of 169.3 hectares is dedicated to MUD, comprising of saleable commercial/office/institutional area, circulation networks, parks and open spaces, utilities, waterways and easements.

The saleable commercial area has a mix of uses namely:

- a.1 An arcaded retail commercial block along two parallel 25-meter roads provided with public parking and lane separators.
- a.2 A superblock cluster having areas for:
 - theaters
 - department stores
 - supermarket/shopping center
 - food and entertainment center
 - office park
- a.3 Wholesale commercial
- a.4 Mixed commercial
- a.5 Warehousing
- a.6 Office strip.

b. Port Area

About 54.9 hectares or 32.4% of 169.3 are devoted to port-related activities, 33.26 hectares of which are considered as disposable or saleable earmarked for bonded warehouses, and container yards. The remaining 21.6 hectares are roadways and back-up areas.

Viewed in totality, the overall area for circulation is about 49.6 hectares or 29.3% of the total area, 16.5% in the MUD and 12.8% in the port.

The park system of malls and pathways is 6.2 hectares or 3.6%, 2.5 hectares of which are situated in the superblocks at the center of

projected clustered structures. The rest are spread over as pathways and small contained mini-parks in the mixed-use wholesale blocks at the end of turnabouts.

Areas reserved for utilities such as water reservoir/pumping section and sewage treatment plant total to 1.2 hectare or .7%.

Also within the property as found out in the boundary survey are areas under water, canals and necessary easements aggregating to a significant 3.65 hectare area comprising 2.2%.

Classified under one whole category of open spaces the preceding areas total to 35.8% substantially meeting requirements of government planning bodies.

Table 1—Summary of Land Use Distribution

	Area (m ²)	%
A. Saleable Area		
1. Mixed Unit Development	588,711	
2. Port Area	<u>332,570</u>	
	<u>921,281</u>	<u>54.39%</u>
B. Circulation System		
1. MUD (road + parking)	279,038	
2. Port Road, Parking	<u>216,820</u>	
	<u>495,858</u>	<u>29.3%</u>
C. Open Space & Park System		
1. Plaza Mall	25,249	
2. Pathways	<u>36,412</u>	
	<u>61,661</u>	<u>3.64%</u>
D. Utilities		
1. Water Reservoir & Pumping Station	3,260	
2. Sewage Treatment Plant	<u>7,310</u>	
	<u>10,570</u>	<u>.8%</u>
E. Waterways & Easements		
1. Canal	16,360	
2. River	<u>15,020</u>	
	<u>31,380</u>	<u>1.9%</u>

F. Others		
1. City Hall	47,750	2.8
2. Mabolo Community Center	13,490	.8
3. Unverified	13,240	.8
4. Cemetery	<u>91,750</u>	<u>5.4</u>
	<u>166,230</u>	<u>9.8%</u>

Table II—Detailed Land Use Distribution

	Area (m ²)	%
A. Saleable Area		
1. Arcaded Retail Commercial	146,697	8.7
2. Wholesale Commercial	188,038	11.1
3. Mixed Commercial	38,741	2.3
4. Office/Apartment Strip	41,385	2.4
5. Warehouse (Port Area)	244,670	14.4
6. Warehouse (MUD)	80,547	4.8
7. Container Yards	87,900	5.19
8. Superblock Cluster	93,303	5.5
a. Office Park	— 42,834	
b. Theaters	— 9,000	
c. Department Store	— 7,550	
d. Supermarket/ Shopping Center	— 11,854	
e. Food Center	— 12,245	
f. Recreation Center	— 9,820	
Total Saleable Area	<u>921,281</u>	<u>54.39%</u>
B. Non-Saleable Areas		
City Hall	47,750	2.8
Mabolo Community Center	13,490	.8
Unverified	13,240	.8
Cemetery	91,750	5.4
	<u>166,230</u>	<u>9.8%</u>
C. Circulation System	511,528	30.2
D. Open Space & Park	52,920	3.12
E. Utilities	10,570	.6
a. Water Reservoir	3,260	
b. Sewage Treatment Plant	7,310	
F. Waterways & Easements	31,360	1.9
	<u>1,693,909</u>	<u>100.00%</u>

Table III— Comparative Breakdown of Areas of New Plan vs. Old CDC Plan.

	<i>New</i>	<i>Old</i>
Total Area Within Project Boundary	1,693,909m ²	1,693,909
Project Area		
Less: Roads Parking	384,313	418,935
Port Apron & Back-up Area	127,215	31,115
Open Space & Park	52,920	—
Utilities	10,570	—
Waterways & Easements	31,380	31,380
City Hall	47,750	47,750
Mabolo Community Center	13,490	13,490
Cemetery	91,750	91,750
Unverified	13,240	13,240
	<u>772,628</u>	<u>647,660</u>
Saleable Lots	921,281	1,046,249
Sold Lots	473,784	462,339
Net Saleable	<u>447,497*</u>	<u>583,910</u>

* Adjustment due to changes in sold lots:

$$447,497 + 11,445 = \underline{\underline{458,942}}$$

FRAMEWORK FOR LAND USE CONTROL

Regulations, Institutions, Codes and Ordinances

Land use control, in general, proceeds through the implementation of codes, rules and regulations, and ordinance that emanate from various government agencies. In general, building activity and land use entities are seen to exercise some control over land development in varying degrees.

1. Government Institutions:

- a. The Ministry of Public Works, Transportation and Communication through the Building Official in implementing the National Building Code.
- b. The Office of the City Engineer in implementing the Zoning Ordinance.
- c. The Ministry of Human Settlements in implementing the land use plan (still in the process of approval).
- d. The Philippine Ports Authority in the management and control of the port area.

- e. The National Housing Authority in implementing its rules and regulations on subdivision and condominiums.
- f. The National Pollution Control Commission in implementing various codes and presidential decree on pollution control.

2. National Codes, Ordinances, Presidential Decrees and Documents:

Among these documents, the most pertinent are:

- a. The National Building Code as contained in PD 1096 and all its appended codes.
- b. The Zoning Ordinance of Cebu City. The building code deals quite adequately with such aspects in land and building development as architectural, structural, mechanical, electrical, safety and sanitation standards. The zoning ordinance treats such aspects as use separation, building bulk and densities particular to Cebu.

Other government sponsored documents, although of less general application, are important and find pertinence from case to case. These are:

- c. Rules and Regulations of the National Pollution Control Commission and other Presidential Decrees on pollution control.
- d. Rules and Regulations of the National Housing Authority and PD 957, the Subdivision and Condominium Buyers' Decree.
- e. PD 296 prohibiting obstructions on waterways.

Deed Restrictions

Within this broad framework of control, the deed restrictions fit in and go into fine details to close gaps left by generalities in the above mentioned documents. The use and value of the deed restrictions lie primarily in its being a major tool in implementing the development plan. As such, it finds basis in the development plan as its framework—the very objective it must fulfill. Since rules,

regulations and other documents of this kind are subjective to a degree; they are open to interpretation, the flexibility of which is dependent on the intentions of the owners and developers.

In a sense, the restrictions go beyond implementing the development plan. It attempts to create the ambience set forth in the concept but which is not quite enunciated in the development plan.

The restrictions seek to accomplish all these by controlling two basic factors that are closely interrelated to each other: *use and building*. The first has to do with land/building use or occupancy and necessarily determines types of activity generated. The latter treats building and architecture in terms of its physical limits and possibilities. Because activities determine building requirements and conversely, because built spaces affect activities, the relationship between use and building is dynamic and both have great consequences on pattern of development and overall environment. Control of both factors substantially assure realization of the desired environment.

There are other considerations such as convenience, safety, sanitation, etc. but these are better taken care of by other tools as previously mentioned (i.e., existing rules, regulations and codes). To be sure, some miscellaneous provisions on safety and sanitation that support the more basic provisions on use and building, are incorporated in the restrictions. All these taken together, if implemented with the proper degree of firmness, will assure the final outcome of development in the desired manner.

For the particular project, there are eight sets of deed restrictions that correspond to eight areas of use classifications.

1. Features:

- a. Vendors' Intentions
- b. Use Restrictions
- c. Building Architecture Restrictions (introduced by a brief description of the ambience that the vendor wishes to establish).
- d. Miscellaneous Provision on parking, landscaping, signs and utilities

- e. Terms of the Restrictions
- f. Enforcement

2. Implementing Auxiliary Provisions:

Aside from the provisions on use and architecture, other important features of the deed restrictions include:

- a. A provision requiring compliance with government rules and regulations which allows the vendor to cite these documents.
- b. A provision for building time limits which is deemed necessary to prevent speculation and to assure development on schedule.
- c. Enforcement provisions providing for the rescindment of the sale as the sanction against non-compliance.

In the eight sets of deed restrictions, differences in parts may be seen in both use and architecture restrictions (See Appendix A). There are, however, also provisions common to all sets (See Appendix B).

Management of Common Areas.

As these restrictions become binding only when appended to deeds of sale, their geographic area of coverage is limited only to the sold areas. They cannot control such public use areas as streets and sidewalks, pathways, malls, parks, etc. The development of these areas are to be controlled by the Site Development Plan (which will include specifications and construction details for all structures that are to be built in these areas) and the General Landscaping Plan. Responsibility for maintenance and regulation of use of these public use areas belong to the vendor as well as the responsibility for implementing the deed restrictions, unless it transfers ownership of these areas to the City Government or to some other entity. It is desirable, however, that PEA retain ownership of these areas as it is to its interests that development maintenance proceed according to the plan. □

THE CEBU PORT CENTRE DEED RESTRICTIONS IN RELATION TO THE CEBU CITY ZONING ORDINANCE: A CRITICAL ANALYSIS*

Susan B. Uybengkee

Introduction

The purpose of this paper is to study and examine the Cebu Port Centre (CPC) Land-Use-Building and Architecture Restrictions in the context of and in relation to the 1979 Cebu City Zoning Ordinance. Through this paper conflicting issues which may have been overlooked or taken lightly will be brought to the attention of authorities concerned. Hopefully, appropriate steps will be taken by them to resolve these issues, in order to realize what its planners conceived or hoped it would be: a well-planned commercial and light industrial complex.

To gain a clearer perspective on the Cebu Port Centre Project and its land use policies, Part I presents an overview of the entire project, the allowable representative establishments per land use, the Use-Building and Architecture Restrictions and other details related to land use in the project area.

The 1979 Zoning Ordinance is no longer reproduced here except for a few salient features cited in some portions of this paper which have a bearing on the Cebu Port Centre Project.

Part II contains the critique which relates the Cebu Port Centre Restrictions with the

Cebu City Zoning Ordinance. An evaluation of the conformance of some existing structures with the Cebu Port Centre restrictions and to applicable provisions of the city zoning ordinance is made and the problems and constraints in enforcing these restrictions are also discussed.

Part III presents the writer's humble recommendations which management may adopt to carry out the plan successfully.

PART I

THE CEBU PORT CENTRE PROJECT

The Cebu Port Centre Project is a completely replanned port commercial complex designed to stimulate the business and trade for the city as well as for the region. The project area is a sprawling 169.4 hectare tract of reclaimed land located strategically beside the existing Port of Cebu.

The plan to expand port and storage facilities along the marginal wharf of the reclaimed area is expected to increase the flow of trade to Cebu. A commercial and mixed commercial zone including a 9.2 hectare Superblock of high-rise commercial buildings will be fenced off from the port area and is projected to generate even greater business activity within the city.

Project Proponents

The Cebu Port Centre Project is a joint undertaking of the Public Estates Authority which is the owner, the City of Cebu which was the main proponent of the original port

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and commercial complex design, and Port Centre Development Corporation (PCDC), formerly Bancom Estates Development Corporation (BEDCO) which is the general manager for the project. In this capacity, PCDC is responsible for the development of the reclaimed area, the financing of the project and the marketing and disposition of the remaining saleable lots.

Land Development

The cost of land development is expected to reach ₱200 million upon completion. The land development includes the basic civil work components such as roadway system, drainage system, water system, sewage system and electrical and telecommunication systems. In addition, the development includes landscaping of common areas, and provision of common parking areas and a wastewater treatment plant. The horizontal development is expected to be completed in early 1983.

Concepts of Redevelopment

The spatial organization of uses follows a general pattern aimed at achieving an agglomeration of activities and displays the following features:

1. A hierarchical circulation system interspersed with a green open space net which utilizes whenever practicable T-junctions, loop streets and service turnabouts.
2. Two magnets (Superblock and City Hall Complex) located at both extremes of the site which serve as foci of activities which shall generate customer movement through a dual arcaded retail commercial strip.
3. A mixed use commercial development to accommodate varying but mutually reinforcing uses.
4. A superblock concept of blockcluster stores, cluster cinemas and office parks for an integrated work-play environment to unify the overall image of the project.
5. The port area devoted exclusively to port-related activities to meet the growing needs of the port of Cebu and reinforce Cebu's role as a transshipment point.
6. Imposed restrictions, zoning guidelines and protective covenants to en-

sure adherence to the objectives and intentions of the general plan.

Significance of the Project

The project falls within the national strategy of strengthening alternative urban centers to serve as counter-magnets to Metro Manila. By expanding and improving the urban services in these alternative centers, the gap between Metro Manila as primate city and other urban centers in the country can be narrowed down and the direction of migration hopefully diverted towards the emerging regional centers.

The project also serves as a prototype for demonstrating public and private participation in urban development.

At the local level the following benefits of the project are foreseen:

1. Revival of a potentially valuable area that has been left to neglect and light;
2. Stimulation of private investment, building activity, and generation of employment opportunities;
3. Upgrading of port, commercial and institutional facilities similar to those in Metro Manila;
4. Strengthening of the community image and the character of an old historical city;
5. Reduction in fire risks, crime and other social consequences of slum living;
6. Improved road traffic; and
7. Increased revenues to the City Government in the form of growing real estate tax collection, indicative of land value escalation and building activity in the city.

Land Use Components

A. Component Distribution

The 169.4 hectare project site as replanned can be distinctly classified into two major categories of use, namely: the mixed unit development blocks and the port area, sharply divided by a 30-meter road right-of-way (MacArthur Boulevard) that runs parallel to the port, 250 meters from the bulkhead line.

The port delineation is basically influenced by governmental provisions affecting port planning and the projected increasing demand of space by the Port of Cebu.

B. Mixed Unit Development (MUD) Blocks

Approximately 68.5 percent of 169.4 hectares or a total of 116.1 hectares are dedicated to MUD, made up of commercial/office/institutional areas, circulation networks, parks and open spaces, utilities, waterways and easements.

The commercial area has a mix of the following uses:

1. Arcaded retail commercial strips along two parallel 25 meter roads provided with public parking and lane separators;
2. A superblock cluster with areas for theatre, department stores, super-market, shopping center, food and entertainment center and office park;
3. Wholesale commercial;
4. Mixed-use commercial;
5. City Hall and Civic Center.

C. Port Area

About 31.4 percent of the 169.4 hectares or 53.3 hectares are devoted to port-related activities, 38.1 hectares of which are earmarked for bonded warehouses, container yards and back-up areas. The remaining 15.2 hectares are for roadways and canals.

Representative Establishments Per Land Use

A. Arcaded Retail Commercial

This lot shall be used primarily for commercial purposes. Only the following uses shall be allowed at ground floor level:

1. Eating and drinking establishments:
Restaurants and cafeterias; coffee and tea shops; ice cream and pizza parlor/refreshment shops; bakery/pastry shop/delicatessen; beer pubs/cocktail lounges.
2. General retail establishments:
Dry goods and textiles; light hardware and electrical supplies; footwear stores; flower shops; watch and jewelry shops; book and stationery shops; RTW clothing stores; sporting goods shop; art and novelty shops; curio and antique shops; pet and hobby stores; retail drug stores; household equipment and appliance stores.
3. Service shops:
Tailor/dress shops; beauty parlors/barber shops; offices that have as an essential function some retail activity

such as shipping and airline ticketing and travel offices.

4. Banks and investment houses
5. Recreational centers

Mini-theaters of not more than 500 seats; bowling, billiard and pool rooms, fun centers with electronic games.

In addition to the above uses, the following shall be allowed on the floors beyond ground floor level:

- a. A short term special schools like dance studios, schools for self-defense, driving schools and speech clinics.
- b. Health gymnasias.
- c. Radio broadcasting, television and recording studios.
- d. Offices.

B. Wholesale Commercial

This lot shall be used primarily for wholesale commercial establishments and subject to approval by PEA, compatible light industries classified by the Ministry of Human Settlements as non-pollutive and non-hazardous like:

1. repair shops for home appliances, furnitures, bicycles, etc.
2. photoengraving, lithographics and commercial and job printing shops.
3. garment factories
4. steel drum and tin can factories
5. cardboard and wood box factories
6. pollution-free assembly of semi-finished components into finished products.

Only the above-listed uses and their necessary auxiliary areas such as offices, display rooms, storage and utility rooms shall be allowed at ground floor level, except that retail activity which forms part of predominantly wholesale establishments and carried on primarily for public relations and display of products shall be allowed. Subsequent floors may be used for offices unrelated to the primary wholesale activity.

C. Mixed Commercial

1. Wholesale and retail establishments
2. Offices
3. Hotels, residential condominiums, or multi-storey apartment buildings.
4. Restaurants, canteens and other food establishments dedicated to serving meals and snacks provided these estab-

lishments shall not be located at ground floor level and provided further that strict sanitary and health regulations are observed and implemented, particularly the adoption of pest control measures.

D. Warehouse/Container Yard

This lot shall be used primarily for a container yard or the construction thereon of a storage/warehouse building; no structure unrelated to the abovementioned primary uses shall be allowed and only the following shall be erected thereon:

1. That which is necessary for an administration office; but in no case shall it exceed 20% of the lot area.
2. Consolidation sheds
3. That which is necessary for housing security and management or maintenance personnel provided that the area shall in no case exceed 5% of the lot area.
4. That which is necessary for housing machinery or storage of maintenance tools and equipment and for parking.

Other Restrictions

The land use, building and architectural restrictions are summarized in Table I. Also, resale of lots before the required building is constructed is subject to the following restrictions:

1. the resale of transfer is registered with PEA;
2. Any performance bond previously paid by the lot owner shall be forfeited in favor of PEA;
3. The buyer or transferee undertakes to construct the required building or improvement in accordance with the restrictions of the district where the lot is located;
4. The buyer or transferee undertakes to start the construction of the required building or improvement within one year from notice of availability of water, electric and sewage facilities in the premises or from the date of resale/transfer whichever is later;
5. The new buyer or transferee further undertakes to complete the construction of the required building or improve-

ment within two (2) years from start of construction;

6. The new buyer or transferee shall put up a cash bond in favor of PEA in an amount equivalent to sixty pesos (P60.00) per square meter.

Other Relevant Information

1. The uses and type of structure allowed in specific lots depend on the district or area where the lot is located. Refer to Table I.
2. Upon notice of availability of water, electric and sewage facilities in the area and after the building plans have been reviewed and approved by PCDC and the Office of the Building Official, the lot owner may start the construction of his building. A time limit is set for the construction of the required building on the lot. Construction should start within four (4) years from the date of notice of availability of electric, water and sewage facilities and should be completed within 2 years from the start of construction.
3. Those existing non-conforming uses and structures in the area like the motels shall be allowed to continue to exist only up to the time when the permanent structure has to be put up and thereafter, the new building has to conform strictly with all the requirements and conditions for the area where the lot is located.
4. The City Government is responsible for the maintenance of the roads and common areas since these roads and common areas with a 4.6 hectare lot for the City Hall Complex shall have all been donated to the City by May 1981.
5. The PCDC, during the effectivity of its management contract with PEA, is responsible for implementing the deed restrictions and conditions of sale. Afterwards, the CPC lot owners association to be organized upon completion of land development, with the assistance of the Office of the Building Official will take over.
6. If the lot owner fails to comply with any of the deed restrictions/conditions, the

deed of conveyance/sale shall be rescinded and the lot owner will be refunded without interest of the amounts received by Public Estates Authority, excluding the performance bond which shall be forfeited in favor of PEA. The lot and whatever remaining improvements there would be after thirty (30) days from notice of rescission, shall automatically become the property of Public Estates Authority.

PART II CRITIQUE

On July 30, 1979, the Sangguniang Panlungsod of the City of Cebu through Resolution No. 631 approved Ordinance No. 1035, otherwise known as the 1979 Zoning Ordinance of the City of Cebu which established comprehensive zoning regulations for the city and provided for the administration, enforcement and amendment thereof, and for the repeal of all ordinances in conflict therewith.

This ordinance was properly published and subjected to public hearing on January 14-15, 1979 and subsequent editions incorporated all the views and recommendations of the various sectors represented.

In contrast to the Zoning Ordinance, the land-use building and architecture restrictions of the Cebu Port Centre were formulated by Port Centre Development Corporation/Bancom Estates Development Corporation without consultation with the existing lot owners or the benefit of citizen participation through public hearings.

The Zoning Ordinance however, takes cognizance of the presence of the reclamation project by classifying it as part of the Urban Section of the City of Cebu under the Commercial-2 District.

Under the use regulation in C-2 District of the Zoning Ordinance, a special provision on the North Reclamation Area states:

Except when in conflict with the provisions of this ordinance the rules and regulations, restrictions, use, building design standards, architecture, etc. prescribed by the Public Estates Authority in the North Reclamation Area shall be binding and valid.

In the Zoning Ordinance Development Strategy though, no mention is made of the

Cebu Port Centre or reclamation area as a Development Priority Area (DPA) unlike the Banilad-Talamban and Pardo districts which have been zoned independently to act as counter magnets to decongest the Central Business District. The planning approach as described by the zoning ordinance is to induce development towards the hinterlands to accommodate future population overspill. No mention is made of the Cebu Port Centre area as a proposed commercial and industrial complex, nor does it offer any incentives to investors or businessmen to put up business establishments in the area.

However, Hon. Florentino Solon, City Mayor of Cebu, is quoted in a recent interview with a major newspaper as saying: "One of the strategies involved as a matter of the city government's policies is to decongest the central business district and the urban core through the reclamation project. The Cebu Port Centre will become a new growth point area that will act as a counter magnet to the present business center. Although, we intend to enhance and strengthen the present business centers."

Policy statements subsequent to the enactment of the Zoning Ordinance indicate that the CPC is to be considered another development priority area to be planned and developed as a planned unit development. As such the developer has full and final authority over all land uses and constructions within the estate, through the use of deed restrictions. The absence of an explicit provision to this effect has put the CPC developer in a quandary as to which body has the final authority, the PCDC or the Zoning Administrator or the Building Official of Cebu City. It appears that the limits of authority of these bodies having control over developments in the CPC are not clearly drawn.

While the Zoning Ordinance, on one hand, specifies the type of land use by dividing the city into "districts" or zones, the CPC area under the Zoning Ordinance is classified as C-2 District for Commercial and Compatible Industrial Uses. The CPC deed restrictions, on the other hand, specifies the allowable land use for specific blocks and lot areas, depending on its location on the CPC Development Plan. With these restrictions, PCDC can control the use of land effectively as similar activities will be grouped together.

The first restriction states that property especially the smaller ones in the retail commercial and wholesale areas, cannot be subdivided from the date of sale until December 31, 2030. This would ensure against the re-subdivision of lots which could result in substandard size and shape of lots, and problems in easements and compliance with open space requirements.

The second restriction lists the allowable uses of land within the port center.

LAND USE

Comparing the uses allowed in C-2 District of the Zoning Ordinance and CPC's representative establishments allowed per land uses, the following were noted:

1. **ARCADED RETAIL COMMERCIAL (ARC)**
Most establishments allowed in the Arcaded Retail Commercial (ARC) area belong to uses allowed in C-1 District of the Zoning Ordinance. Only a few are actually classified under C-2 District.
2. **WHOLESALE COMMERCIAL (WC)**
Most establishments allowed in the wholesale commercial section either belong to uses allowed in I-1 and C-2 Districts of the Zoning Ordinance.
3. **MIXED COMMERCIAL (MC)**
Establishments allowed in the mixed commercial area belong to the uses allowed in R-3 and C-1 Districts of the Zoning Ordinance.
4. **CITY HALL BLOCK**
Government offices are classified under IN-1 in the Zoning Ordinance. However, the Cebu Port Centre (CPC) Site Development Plan does not specify its use probably because it is intended for government offices. The area was utilized temporarily during the Sinulog Celebration as a carnival site and has since been turned into a conglomeration of small government offices. Due to revisions of the plan, land uses have also changed. The effects of these changes are discussed in the latter part of this critique.

HEIGHT REGULATION

On the building and architecture aspect, the Cebu Port Centre restrictions for height limitations reveal the following:

1. **ARC, WC, MC Areas**
Maximum height = 20 meters or 6 storeys
Minimum height = 8 meters or 2 storeys

2. **W/CY Areas**
Maximum height for W/CY = 14 meters

The Zoning Ordinance however, allows the following maximum height limitations of commercial and industrial buildings:

- A. For structures facing main roads of:
30 meters Right-of-way (ROW) = 45 mts. maximum
25 meters Right-of-way = 37.5 mts. maximum
- B. For structures facing secondary roads of:
20 mts. ROW = 30 meters maximum
15 mts. ROW = 22.5 meters maximum

Hence, the maximum height of buildings allowable within the Cebu Port Centre is 20 meters (except for warehouses/yards) compared to that of the City Ordinance which is 22.5 meters.

To provide an unbroken vista of the port, Cebu Port Centre's height restrictions sound more logical.

AREA REGULATION

The maximum area to be occupied by the building as set by the Cebu Port Centre restrictions is 80 percent of the lot area for ARC, WC and MC and 80 percent of the lot area for warehouses and 20 percent of the lot area for container yards. The Zoning Ordinance, however, sets the following limits for the maximum area to be occupied by the building per land use:

- R-3 District— All buildings, including accessory buildings—should cover not more than 60 percent of the total area of the lot.
- C-1 District— not more than 90 percent of the lot area for corner lots.
— not more than 85 percent of the lot area for inner lots.
- C-2 District— not more than 90 percent of the lot area for corner lots.
— not more than 80 percent of the lot area for inner lots.
- I-1 District — not more than 90 percent of the lot area for corner lots.
— not more than 85 percent of

Table 1
LAND USE BUILDING AND ARCHITECTURE RESTRICTIONS

	<i>Acadec Retail Commercial</i>	<i>Wholesale Commercial</i>	<i>Mixed Commercial</i>	<i>Warehouse/Container Yard</i>
I. ALLOWABLE USES				
A. Ground floor				
General retail establishments; eating & drinking establishments; service shops; banks and investment houses; recreational centers	Wholesale shops & auxiliary areas (e.g. office, display room, storage & utility) and subject to approval by vendor, certain light, non-pollutive industries	Wholesale & retail shops; offices; hotels; condominiums, multi-storey apartments	Storage/warehouse buildings or container yards with limited office space and living quarters	
B. Subsequent floors	Health gymsnasia; offices; TV, radio and recording studios; short term special schools	Offices and storage	Restaurants, canteens; and other food-serving establishments	
II. BUILDING AND ARCHITECTURE				
A. Height Limitations				
1. Minimum	8 meters (2 storeys)	8 meters (2 storeys)	8 meters (2 storeys)	6 meters
2. Maximum	20 meters (6 storeys)	20 meters (6 storeys)	20 meters (6 storeys)	14 meters
B. Maximum Area to be occupied by the building	80% of lot area	80% of lot area	80% of lot area	For warehouses, 80% of lot area; for container yards, 20% of lot area
C. Setbacks				
1. Front	For lots with front parking bay, 5 meters for parking, plus another 4 meters for arcade.	5 meters minimum	5 meters minimum	3 meters minimum
2. Rear	3 meters minimum	3 meters minimum	3 meters minimum	3 meters minimum
3. Sides	None (must be built flush to property line)	May be built flush to lot line; if not, 3 meters minimum	May be built flush to lot line, if not, 3 meters minimum	May be built flush to lot line, if not 3 meters minimum
D. Parking	Shop front parking of 5 meters for lots with front parking bays; for lots without shop front parking bays, 20% of lot area	One parking space (inside the property) of 15 square meters per 100 square meters of gross floor area; loading docks should be located inside the property and away from the streets.	One parking space (inside property) of 15 square meters per 100 sq. m. of gross floor area; for hotels, 1 parking space per 4 rooms; for residential condominiums or apartments, one parking space per unit; loading docks should be located away from streets.	One parking space of at least 15 sq. m. for every 100 sq. m. of floor area of buildings allotted to office space or administration; adequate parking space must also be provided within the property for cargo trucks, trailers and vans.

the lot area for inner lots. All buildings including accessory buildings shall cover not more than 80 percent of the entire area of the lot.

The maximum area to be occupied by the building as set by Cebu Port Centre is relatively smaller than that allowed by the Zoning Ordinance. Again, the CPC regulation appears to be more desirable as it seeks to avoid the cramping of buildings in a small area and allow some space for open courts; parks and parking areas—in short, more air to breathe in.

BUILDING SETBACKS REGULATION

For commercial and industrial buildings, the Zoning Ordinance specifies setbacks according to the road right-of-way while the Cebu Port Centre restrictions specifies setbacks for buildings according to land use as ARC, WC, MC and WCY. While the Zoning Ordinance gives provision for abutments on front yards and rear and side yards, no mention is made of similar abutments in the Cebu Port Centre restrictions. One presumes therefore, that abutments are not allowed. The minimum setback for the rear in the Cebu Port Centre restrictions is 3 meters for all types of buildings. For side setbacks for WC, MC and WCY uses, unless the building is built flush to the lot line, the minimum is 3 meters except for the ARC use which must be built flush to the lot line.

There are no provisions for patio and open space in the Cebu Port Centre restrictions but these are presumed to be carried by the regulation that only a maximum of 80 percent of the area is allowable for buildings. In as much as there are differences between the requirements of the Cebu Port Centre restrictions and those of the Cebu City Zoning Ordinance the question as to which restriction should take precedence crops up.

Since the Arcaded Retail Commercial area is located right in the center of the Superblock and City Hall Block chances are that the area will turn into a pedestrian mall between the two magnets.

In issuing deed restrictions, buildings with conflicting uses are excluded outright and the heights of buildings regulated. Thus, the possibility of one building totally blocking

another building's view is prevented. Buildings competing in height with other buildings will be discouraged. An unbroken vista of the port will be the result.

In effect, the environment would be controlled and the desired effect of harmony and balance achieved. If the restrictions will be strictly implemented, the Cebu Port Centre will rise as the most modern, well-planned commercial and industrial complex outside Metro Manila.

However, an assessment of the developments in the area has proven that the restrictions have not been fully carried out as planned. Revisions have been made. The plan, alone, has been revised twice. The original CDC Plan had a strictly grid-iron pattern. See Figure 1. The second BEDCO PLAN revised in 1978 upon the takeover by PCDC and PEA, was characterized with cul-de-sacs and turning points. See Figure 2. The final PCDC plan of the Cebu Port Centre is the one that has been proposed for its land development works. See Figure 3.

The revision of plans has brought about the jumbling of some lots. Lot owners, like the Liat San Temple, constructed before 1978, found their lots in the middle of the road or else found that their lots have violated the restrictions on setbacks due to the revision on setbacks in plans. Fortunately, most land owners had not started building structures on the lots they had bought. Due to these changes, PCDC arranged for the reshuffling of lots already paid for. Those who were allocated smaller areas than what they paid for were reimbursed by PCDC while those who were allotted bigger areas had to pay for the additional lot areas. As for the non-conforming structures, PCDC does not intend to pay the lot owners who are obstructing the roads. Later on, when fully developed, they shall not be given their deeds of conveyance until they will have provided the required setbacks.

In an interview with the PCDC personnel, this writer was able to gather some facts about the existing structures on the lot and compare them with CPC's proposed land uses and devised Table 2 below.

Based on the preceding table, the predominant violations to the Cebu Port Centre Use-Building and Architecture Restrictions are:

Table 2
INVENTORY OF LOTS WITH EXISTING STRUCTURES

Block No./Lot No.	Owner/Occupant/ Structure	Existing Land Use Per Zoning Ordinance Classification	CPC Proposed Land Use Per Dev. Plan	Conforming (C) or Non-Conform- ing (NC) as to CPC Land Use Classification	Violation to CPC Restrictions	Remarks
1. BLK 6— 5 & 6	Gas Station	Filling Station (R ₂)	WC	NC	Non-conforming land use	*
7 & 8	Cebu Carthage	Trucking Area (C ₂)	WC	NC	—do—	
10	Friendship Store	Warehouse (C ₁)	WC	NC	—do—	*
11	Pentax Hardware	Warehouse (C ₁)	WC	NC	—do—	
14 & 15	Huasing Hardware	Warehouse (C ₁)	WC	NC	—do—	
2. BLK 7—						
3	Simon Enterprises	Warehouse (C ₁)	WC	NC	—do—	*
4	Paulino Enterprises	Warehouse (C ₁)	WC	NC	—do—	*
3. BLK 9—						
7 & 8	Mancao/BLT/BOT	Gov't. Offices (IN-1)	WC	NC	Non-conforming land use, Deficiency in setbacks, En- croachment of Ele- vator in Sidewalk	//
10 & 11	Cebu Pacific Ent.	Warehouse (C ₁)	WC	C	Front setback less than 5 meters; Deficiency in setbacks	*
12, 13, 14 16	CENAPRO Cebu Liberty Lumber	Warehouse (C ₁) Office/Warehouse (C ₁)	WC WC	C NC	Non-conforming land use are for office over 20% or Deficiency in setbacks	*
19 & 20	Buddha Laht	Temple (R ₂)	WC	NC	Non-conforming land use; Deficiency in setbacks	*
4. BLK 11—						
1, 2, 3, 4 & 1 (R), 2 (R) 3 (R), 4 (R)	White Gold Department Store	Department Store (C ₁)	WC	C	Deficiency in set- backs & encroach- ment on sidewalk	//
5. BLK 11-A						
2A, 2B, 2C	White Gold Restaurant	Restaurant (C ₁)	WC	NC	Non-conforming land use; Deficiency in setbacks; Encroachment on sidewalk	//

Block No./Lot No.	Owner/Occupant/ Structure	Existing Land Use Per Zoning Ordinance Classification	CPC Proposed Land Use Per Dev. Plan	Conforming (C) or Non-Conform- in (NC) as to CPC Land Use Classification	Violation to CPC Restrictions	Remarks
1, 3, 5	Queensland	Motel (R ₂)	WC	NC	Non-conforming land use; Encroachment on sidewalk; Deficiency in setbacks	
6. BLK 10	CPC Donated/City Hall	(IN-1)		NC	Non-conforming land use	//
7. BLK 14— 5, 6, 7 & 29, 30, 31	Traveller's Inn	Motel (R ₂)	MC ARC	C NC	Non-conforming land use of other half of lot	*
8. BLK 15— 42 31	D'INN Liat San Temple	Motel (R ₂) Church (R ₂)	ARC ARC	NC NC	Non-conforming land use, encroach- ment on sidewalk i.e., Temple located in the middle of Road (4th Avenue)	* *
9. BLK 16— 2 & 30	Rogan Motel	Motel (R ₂)	ARC WC	NC	Non-conforming land use Encroachment on sidewalk no front setback; bldg. line built until curb and gutter	*
10. BLK 17— 5	Phil. Tuna Venture	Warehouse (C ₁)	WC	NC	Non-conforming land use	*
7 & 8 11 & 12	Oversea Hardware	Warehouse (C ₁)	WC	NC		*

Note: Table excludes lots within the port area.

LEGEND:

C ₁ — Commercial 1 District	ARC — Arcaded Retail Commercial
C ₂ — Commercial 2 District	WC — Wholesale Commercial
I ₁ — Industrial 1 District	MC — Mixed Commercial
IN-1 — Institutional District	WCY — Warehouse/Container Yard

// — constructed after 1979 after PEA/PCDC was created.
* — building constructed before creation of PEA and PCDC.

1. Non-conformance as to land use.
2. Deficiency in setbacks—particularly front setbacks.
3. Encroachment on sidewalk or no provision of sidewalk and parking space.

Factors which may have influenced or caused non-compliance with the Cebu Port Centre restrictions are:

1. Limited dissemination of information with clarifications on the Use-Building and architecture restrictions to lot owners and building designers, architects, engineers, and other concerned parties.
2. Limited or non-dissemination of information on the procedure for implementing building restrictions to lot owners. The Office of the Building Official, Cebu City also suffers from limited personnel.
3. By-passing of PCDC's rights to review and approve building plans prior to actual construction.
4. Lack of manpower or personnel technically qualified to:
 - a) check the building plans of lot owners for conformance to restrictions.
 - b) check lines and grades, setbacks, easements and alignments during the stake-outs.
 - c) verify the site of construction.
 - d) check periodically if construction is proceeding according to the approved plans.
5. Laxity in the enforcement of these restrictions.
6. Political power and financial control of influential lot owners.
7. Hesitation of responsible personnel to implement the regulations for fear of gaining unpopularity.
8. Change of ownership.
9. Revision of plans or replanning of the entire area.
10. Construction of building prior to the formulation of the restrictions by the developer.

PART III

SUMMARY AND RECOMMENDATIONS

Except for a few, most existing buildings have not conformed with the prescribed land

use as stipulated in the Cebu Port Centre Development Plan.

Almost all lot owners have not implied with the deed restrictions on setbacks. If this practice is tolerated, the number of non-complying structures will surely increase through the years. Although construction in the area is still proceeding at a slow pace, once the horizontal land development works are completed, construction works in the area will be gaining momentum. Unless PCDC starts strict enforcement of the restrictions specifically on setbacks, it might wake up one day and find the Cebu Port Centre much like Cebu City's present Central Business District—a potpourri of lot owners haggling for variances.

To prevent further illegal encroachment, the following measures are recommended:

1. Immediate and extensive dissemination of information on restrictions to lot owners and Office of the Building Official personnel as well as to the general public through mass media.
2. Strict implementation and enforcement of the policies and restrictions for the construction of buildings in the future.
3. Hiring of qualified technical personnel to:
 - a) check building plans for conformance to restrictions and land use.
 - b) verify site of construction.
 - c) check lines, grades, setbacks, easements, and alignments during the stake out.
 - d) check if construction is going on according to approved plans.
4. Create an independent and technical committee to review, assess and process building plans prior to construction and check conformance during actual construction. It shall be composed of the following:
 - 1 — PCDC representative
 - 1 — Urban planning representative
 - 1 — President of the lot owner's association
 - 1 — Office of the Building Official representative
 - 1 — PEA representative

After review by the committee, plans shall be subject to the final approval of the Port Centre Development Corporation.

Above all, the basic issue of who has the final authority to approve or disapprove developments in the estate must be put to rest. One alternative is to amend the Zoning Ordinance to include the CPC among the identified development priority areas of Cebu City thereby conferring on the developer full autonomy subject only to the superior demands of the public interest. The other option is to place the final authority in the Zoning Ordinance and that in case of conflicts

between the provisions of the deed restrictions and those of the Zoning Ordinance, the latter should take precedence. Anything less than these would only give rise to ambiguities and confusion.

Whether the fully developed Cebu Port Centre will turn out to be the commercial and industrial Shangri-la envisioned by its planners rests on the hands of those directly involved in its transformation now—"for what they sow, the next generation shall reap." □

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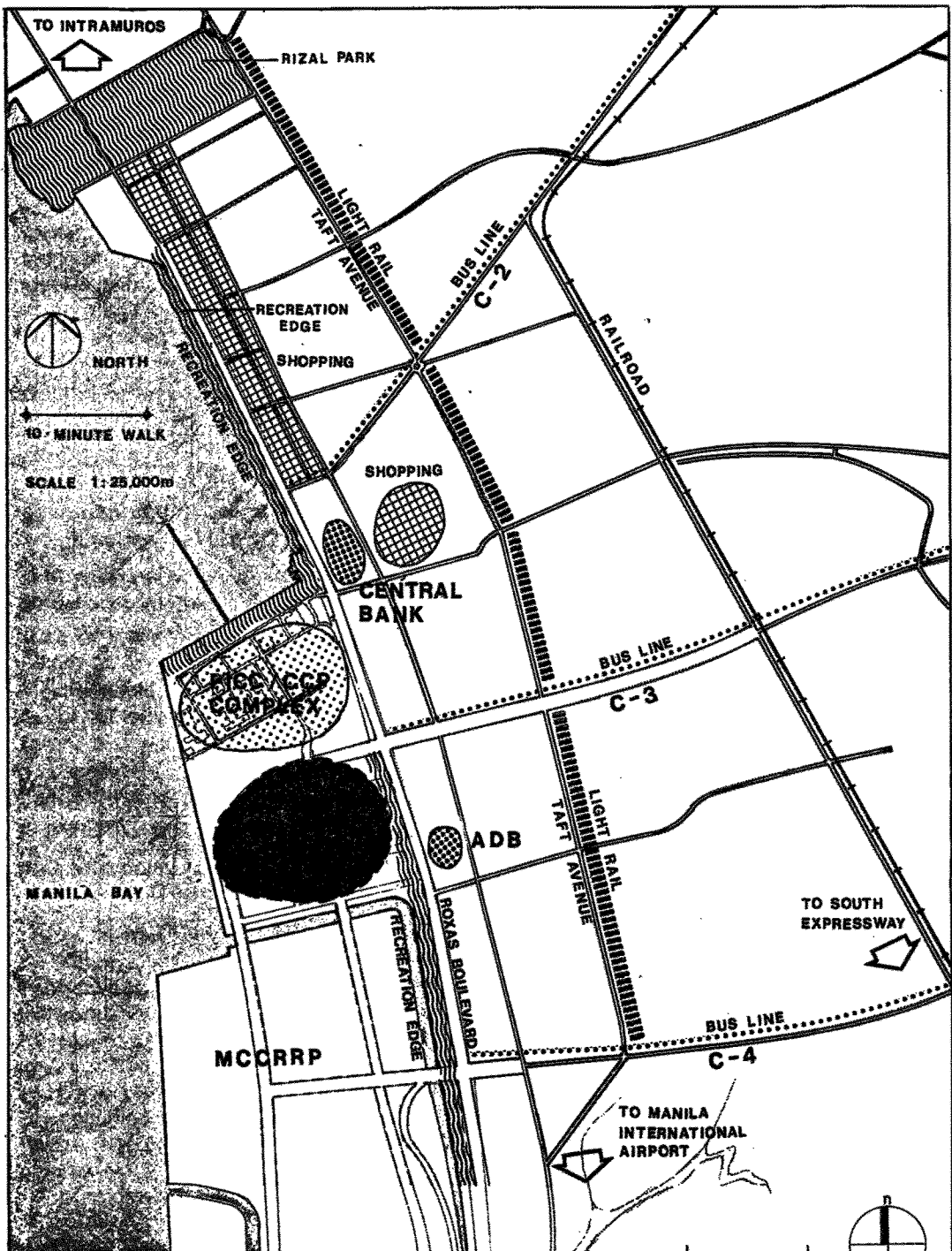
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*The Financial Center Master Plan was formulated under the guidance and direction of the Financial Center Building Owners Association (FCBOA), assisted by the Financial Center Technical Committee and by the consulting architects of the FCBOA.

FINANCIAL CENTER PROJECT*

Construction and Development Corporation of the Philippines

The Financial Center represents a significant new component of Metro Manila: as an activity center of national importance, as an urban development project, as a major center of employment, as a commercial center, as a recreational facility and as an amenity serving the residents of the area. The new development project which is being constructed on lands reclaimed from Manila Bay, is expected to affect future conditions in the region. To a large extent, the planning criteria and physical development standards adopted for the project will likewise affect planning in the country in general.

The Financial Center Master Plan will establish the framework for the design and construction of the headquarters of some of the major financial institutions in the Republic of the Philippines. The plan will include criteria and guidelines for orderly growth and development promoting compatibility among land uses, activities, and physical forms located within the site as well as harmony between the site and adjacent areas.

The Financial Center site is an approximately 80-hectare tract of reclaimed land located at the Manila Bay coastline adjacent to the PICC/CCP Complex on the north, the Libertad Channel on the south, and Roxas Boulevard on the east. The net developable land area, excluding public rights-of-way and land areas dedicated to public parks, is 46 hectares. The location affords major amenities such as broad vistas of the bay, sight of the sunset, and exposure to refreshing sea breezes.

The physical dimensions of the site are approximately 800 meters from north to south and 1000 meters from east to west. Walking across the site at a regular rate in a straight line, it would take about 15 minutes to reach the shore from Roxas Boulevard. The physical dimensions of the site compare with developed urban places of identical area in

Paris, San Francisco, Honolulu, and Manila. An area equivalent to the Financial Center site would cover the entire Champs Elysee from the Arc de Triomphe to the Rond Point in Paris, all of downtown San Francisco from Nob Hill to the Embarcadero, a large portion of the hotel development along Waikiki Beach in Honolulu, and the area enclosed between Recto Street and the Post Office Building in downtown Manila.

The Regional Context

The immediate regional context of the Financial Center is Metropolitan Manila. Metro Manila is the capital and the largest metropolis of the Republic of the Philippines with an estimated population of 6 million. Its harbor handles most of the imports into the country. It provides over 50 percent of all the output in the manufacturing and construction sectors of the national economy and 30 percent of commerce. Since 1948 Metro Manila has been producing an increasingly larger share of the Gross National Product. This share increased from 23 percent in 1948 to 32 percent in 1974. Consequently, in 1971, the average annual income of 7,785 pesos for a family of six in Metro Manila was approximately twice the national average of 3,736 pesos.

The population of Metro Manila grew at the rate of 4.2 percent per year between 1970-75. This rate is equal to one and one-half times the population growth rate for the entire country. While a bit older than in the rest of the country, the Metro Manila population is young, 40 percent of all persons being under 15 years of age (1970 Census). Fifty percent of the annual growth is attributable to immigration into the city. Gross urban density is about 150 persons per hectare. The most heavily settled area of the metropolis is the City of Manila which had a density of 380 persons per hectare in 1975. The average household size is 5.9 persons.

The high rate of population growth has placed high levels of pressure on the urban services provided by the metropolis. The city, which was devastated during the Second World War, has been growing very rapidly

* Excerpted from the Financial Center Master Plan submitted by the Construction and Development Corporation of the Philippines in collaboration with the Architects Collaborative Inc. and Planning Resource and Operations Systems, Inc.)

since 1947, and has not been able to catch up with the growing demand. In addition to a housing shortage, urban problems include inadequate water and power supply, air and water pollution, flooding, lack of sanitary sewerage, inefficient public transportation, and traffic congestion.

Land uses in Metro Manila are very mixed and the physical development pattern is dominated by one and two storey high structures in residential areas and five and six storey high structures in commercial areas. Exceptions are Makati and the Roxas Boulevard frontage where concentrations of ten storey and higher buildings occur.

The traditional Central Business District is the Escolta area and around Rizal Avenue. However, with urban expansion, some of this activity has shifted to the Ermita area and more recently, to Makati. Commercial activity is generally spread out. Major concentrations occur along main thoroughfares and at a number of suburban or district centers. Cubao is the largest suburban center while Makati and Greenhills are among the most recent and significant areas. Industrial uses are concentrated along the Pasig and Marikina Rivers and along the South Super Highway and the Pamplona Road. The supply of open space is very limited. Rizal park is the only public open space which is easily accessible to a large percentage of the population and is free to the public. Residential areas occupy approximately 50 percent of the total land area. The poorer neighborhoods are located in the northern and the inner zones which are located within the arc defined by Epifanio delos Santos Avenue (EDSA) or Circumferential Road 4, while the richer areas are located to the south and the east.

Traffic congestion is one of the more obvious problems. The existing road network is organized into a series of circumferentials; C-1, C-2, and C-4 or EDSA, and several radials. The North Expressway and South Super Highway are high capacity toll roads. The rest are narrow and irregular streets that weave through densely developed residential areas. Traffic on these roads is mixed and intense; it includes pedestrians, private vehicles, taxis, jeepneys, buses, and trucks. Major roads are lined with dense commercial uses ranging from individual shops and covered markets to street vendors and stalls. Frequent bus stops and jeepney terminal points occur

along the way. Combined with the lack of enforced traffic regulations, undisciplined driving habits, and high levels of private automobile usage, these conditions result in heavy traffic congestion throughout the metropolis.

Urban development objectives adopted by the Metropolitan Government, and as stated in *Manila: Toward the City of Man*, the framework plan for the metropolis, call for the following:

1. 'decentralization of concentration' by encouraging growth around new centers and along growth corridors.
2. 'expansion and distribution of opportunities' to make available a wide choice of housing, employment, social services and educational and cultural facilities to the people of Metro Manila.
3. 'improved accessibility' by providing improved transportation facilities.

Existing plans for Metro Manila indicate that the major directions for urban expansion will be northward and southward. Since the northern areas are limited by topography, the southern expansion is likely to be more significant in the long range. Easterly development along Laguna de Bay should be limited until effective pollution and flood control measures can be completed. The Mangahan Floodway into Laguna Bay, the Marikina Multipurpose Dam on the north, together with the cleaning up of esteros, construction of floodgates and pumping stations, and raising the banks of the Pasig River are among flood control measures that will be undertaken in Metro Manila. One additional project, the Paranaque Spillway, is also under consideration. The recently adopted transportation plan for Metro Manila calls for the improvement of the existing system of radials and circumferentials. Circumferential road C-3 will be completed and bus service will be provided along all the circumferentials. Light rail transit will be built to form a Central Area Network and four radials. Light rail transit will be located within reserved rights of way along Rizal Avenue, España/Quezon Boulevard, Shaw Boulevard, and Taft Avenue. The plan urges the improvement and completion of the North Highway and the South Super Highway to encourage and direct urban expansion along these channels. This network will thus serve the most heavily developed areas of Metro Manila. An additional new express-

way, R-1, will be built along the eastern edge of the Reclamation Project and will serve the southern areas of the metropolis. This road will tie into the south super Highway via the Pamplona-Alabang Road, and into C-4, or EDSA, at the north. Another coastal roadway, R-10, skirting the northern portion of the urban area, is under consideration. Also underway is a study for effecting improvements to traffic conditions on the existing urban collector along Manila Bay, Roxas Boulevard.

The Financial Center site is located on the coast near the southern edge of the densely populated zones of Metro Manila. It is bounded by Roxas Boulevard on the east and Buendia Extension, or C-3 on the south. The site is within a distance of approximately one kilometer from the R-1 expressway, from EDSA and from Taft Avenue. Taft Avenue is scheduled to receive a branch of the planned light rail transit line. Given the emphasis for major urban expansion towards the south and the planned traffic improvements, the site appears to have a well-placed location in the present and will gain increasing significance with the continued growth of Metro Manila.

The Sub-Regional Context

The area bounded by Rizal Park on the north, Circumferential Road C-4 (EDSA) on the south, and Taft Avenue on the east represents the sub-region for the Financial Center site. Existing and future conditions within this area are likely to interact closely with the proposed development.

The sub-region generates high levels of activity during the day as well as at night. The population includes local residents, employees of commercial offices and of banking and finance institutions, tourists, and regional population attracted by programs at the Philippine International Convention Center and the Cultural Center of the Philippines (PICC/CCP). A wide variety of social groups and income levels, in effect almost a cross section of the Metro Manila population, is represented in this area.

It is expected that the Financial Center will add to, and also share in, this service population. Employment opportunities, commercial and entertainment facilities, recreational and outdoor space amenities provided at the Financial Center should respond to the needs and activity patterns of these

diverse groups represented in the service area. Physical development standards adopted for the Financial Center should encourage compatibility and interaction with the existing urban environment and establish effective means for pedestrian and vehicular access to the site.

The sub-region occupies the southwestern corner of the densely developed portion of Metro Manila, and it includes several commercial and institutional centers of national and regional significance. The Ermita business areas as well as the headquarters of the Central Bank and of the Asian Development Bank are in the sub-region and close to the site. The traditional Central Business District at Escolta and the new Makati Center are also within convenient distance. Major commercial and entertainment facilities include the Ermita shopping district, Harrison Plaza, and strip development along Roxas Boulevard. The PICC/CCP Complex is adjacent to the site on the north. The area also includes several historic and touristic spots such as the Quezon House, Intramuros, and modern hotels of international standard.

Future developments planned for the sub-region include the construction of the R-1 expressway, improvements on Roxas Boulevard, and the establishment of a new community on the reclaimed lands along the coast. The reclamation project, referred to as the Manila-Cavite Coastal Road and Reclamation Project (MCCRPP), is part of the policy to decentralize the metropolis and to encourage urban expansion along traffic corridors towards to the south. The MCCRPP will ultimately cover about 2,700 hectares of land and will become a significant part of Metro Manila. Land uses proposed for the project include a variety of residential areas clustered around shopping, recreational, and educational facilities. A complete range of urban services and amenities will be provided. A medical center, a university center, waterfront recreational facilities, a sports center, and high-density housing are among the land uses of regional significance which will be part of this development. Roxas Boulevard will become the interface between the new urban area and the existing city. At present, Roxas Boulevard forms an arc along the Manila waterfront, and it is one of the best known landmarks of the city. It acts as a major organizer for the city, and frontage on

the Boulevard is highly valued. This is evidenced by the presence along the road of several international banking establishments, luxury hotels, modern condominium apartments, and several elegant villas that have survived from the prewar era. Roxas Boulevard is also a significant recreational and outdoor space amenity for the residents of densely developed areas of Metro Manila which lack such facilities. The tree-lined walkway along the coast is heavily used for strolling, jogging, picnicking, viewing the sunset or merely watching the day pass by agreeably. Fishing and light boating along the waterfront also add to the local color. Future changes contemplated for this zone should be so planned as to safeguard and maintain these very important functions of the boulevard, both as a landmark and as an amenity. Well designed walkways shielded by landscaping and planting, including seating areas, bike paths, and jogging lanes should be developed along the entire western edge of the road and tied into the Luneta and Rizal Park at its northern end. The development on reclaimed lands west of Roxas Boulevard, including the Financial Center, should be so designated as to respect the rights of the existing buildings and of the casual stroller for views of the harbor and for refreshing sea breezes. Visual and pedestrian easements as well as convenient and safe pedestrian crossings should be provided.

Planning Assumptions and Preconditions

The planning context imposes certain preconditions on the Financial Center Master Plan and requires the formulation of several assumptions. Taken together, the planning context and the assumptions constitute the operational parameters of the proposed Master Plan. The planning assumptions are as follows:

1. The guiding principle of the Financial Center Project is to establish a functional, well designed, and visually satisfying environment which will provide economies of scale in the daily operations of the facilities and will extend social benefits in the form of the physical setting. 'Enhancing the quality of life' will be the key to effective planning.
2. The legal framework in the Republic of the Philippines allows the regulation of land uses including imposition of

controls on locations, bulk, and height of buildings; pedestrian, vehicular and visual easements through private property; and qualitative design requirements.

3. The appropriate organizational structure for the effective implementation of the Master Plan will be established by the FCBOA and will be empowered to enforce and carry out the Master Plan requirements.
4. The Financial Center is part of the MCCRRP and is subject to basic development standards required by the General Development Plan for this project.
5. Land uses at the Financial Center will be restricted to financial offices, banks, accessory uses, and the mix of office/residential/commercial uses specified for the CDCP Parcel by the MCCRRP General Development Plan which classifies this parcel as a Central Business District-A Zone.
6. Public outdoor space and passive recreational facilities will be provided at the site for the free use of the residents of Metro Manila.
7. The Financial Center Master Plan will be designed to accommodate the following parcels and land area requirements:

PNB	9.99 hectares
SSS	5.01 hectares
LBP	5.00 hectares
GSIS	5.71 hectares
DBP	7.51 hectares
CDCP	13.00 hectares
Public park	2.30 hectares

8. The location of the PNB and SSS parcels as indicated in the subdivision plan surveyed for the Department of Public Highways and dated December 10, 1974-November 15, 1975, lots number 2 and number 1, respectively, will remain unchanged.
9. The locations of Central Boulevard and of the Buendia Extension between Roxas Boulevard and Central Boulevard as indicated in the subdivision plan noted under item 8, will be maintained.

MCCRRP Development Plan Requirements

The July 1977 Development Plan defines

general space and density standards for the site. Floor area ratio is limited to 1.5 for the Financial institution and to 3.0 for the Financial Center Mall, or Central Business Park A zone. The most recent marketing projections for the Mall development indicate that an FAR of 2.3 and the following mix of land uses would be feasible:

General office	50 percent
Retail establishments	17 percent
Entertainment	5 percent
Restaurants	10 percent
Permanent Residences	18 percent

Building height is restricted to 150 feet, or about 46 meters, from mean lower low water level, establishing an approximately ten-story height limitation. The plan also calls for the complete separation of vehicular and pedestrian circulation. All parking and vehicular service areas are to be accommodated within a 'podium' which may include up to three levels, depending on the selected floor-to-floor height. The maximum elevation of the top-of-podium is set at elevation plus ten meters. Ground level elevation is at elevation plus three meters. The podium level is to include pedestrian activities and landscaped outdoor areas and should establish a continuous pedestrian zone throughout the entire site. The Libertad Channel is 100 meters wide and it separates the Financial Center site from the rest of the MCCRR Project area. The land across from the site is scheduled to be developed into a Central Business Park B zone which will be similar to the Financial Center Mall and will contain similar land uses. The Channel provides an outlet to the Bay from the inland waterway between Roxas Boulevard and the eastern edge of the reclamation area. It is to act as a drainage channel for the trunk sewer lines coming down Libertad Street and along Roxas Boulevard from the north. A pumping station and flood gates will be located east of the Central Boulevard Bridge to insure proper drainage, regulate flood conditions, and control pollution. The station will be about twelve meters high and include four flood gates. It is expected to generate noise, vibration, and noticeable odors during operation. Estimated operation time for the pumps is 400 hours per year.

Circulation

Major vehicular roads affecting the site are Roxas Boulevard, Central Boulevard and Buendia Extension or C-3. Peak traffic volume projections for the year 2000 indicate that 14,200; 3,700 and 6,000 vehicles per hour on each of these roads, respectively, may be expected to occur in the vicinity of the site. These conditions are likely to generate noise and air pollution and to create barriers preventing easy vehicular and pedestrian movements within the site. Most critical, perhaps, is the location of Buendia Extension which would prevent access from the site to Manila Bay.

Pedestrian circulation within the site is likely to be generated from inner zones towards Manila Bay and towards the western portions of the Libertad Channel, since these locations represent the major existing visual amenities. Existing pedestrian circulation outside the site is concentrated along the coastal sidewalk of Roxas Boulevard, down Libertad Street and along the narrow streets which feed into Roxas Boulevard from the east. At present, these streets lead to a market area, Cartimar, which is a busy node of pedestrian activity. It is expected that the creation of new commercial facilities and of recreational amenities at the Financial Center will generate pedestrian traffic between Cartimar and the Financial Center. The Financial Center will thus become an arrival zone collecting existing pedestrian paths in the vicinity. The directives of the Presidential Letter of Instruction, the principles which have created the Financial Center Building Owners Association, and the influences that existing and future conditions are likely to exert on the project indicate that the planning problem includes the following aspects:

1. Assessment of internal program requirements and linkages between the components of the Financial Center.
2. Definition of the image or physical character desired for the Financial Center;
3. Establishment of a location and phasing pattern that will encourage compatibility and mutual support among the various land uses and activities.
4. Realization of the visual/physical amenities offered by the location. The master plan is developed on the basis

of planning goals and objectives which have been formulated in response to the planning problem. It is postulated that, while objectives may be revised or changed in response to changing conditions from time to time, goals will remain constant. Planning goals and objectives of the Financial Center Master Plan are as follows:

Goal One

To establish a physical development pattern which will accommodate growth and change requirements and which will have a sense of completion at any phase of the development.

- Objective 1.1:
To establish a growth and phasing pattern which will integrate the project into the existing developed areas surrounding the site.
- Objective 1.2:
To establish criteria and guidelines for built forms that will encourage non-discrete geometry; open ended, flexible forms; and integration of outdoor spaces and buildings.
- Objective 1.3:
To so define exterior spaces that at any given stage they will appear architecturally complete and indicate locations and forms for connecting and leading into future spaces.

Goal Two

To develop a land use pattern which will promote compatibility among the various activities, encourage clarity and orientation within the site, and be appropriate to the desired image.

- Objective 2.1:
To establish a land use pattern according to existing and future characteristics of primary vehicular channels; secondary vehicular channels; edge conditions surrounding the site; internal adjacency requirements; and outdoor spaces.
- Objective 2.2:
To establish a vertical zoning pattern of land uses according to type and intensity of activity, characteristics of the service population or user-group, and desired image.

Goal Three

To establish a safe and adequate vehicular circulation pattern which will be efficient and economical, and which will be compatible with and reinforce the land use pattern.

- Objective 3.1:
To increase the efficiency and cost effectiveness of vehicular roads by double loading the roadways and increasing the population and land-areas served by each road as much as possible.
- Objective 3.2:
To so design the public rights-of-way as to avoid the creation of physical barriers.
- Objective 3.3:
To reduce potential conflict with pedestrian circulation and hazard to pedestrians by physically separating the two systems as much as possible.
- Objective 3.4:
To encourage the establishment and effective use of public transportation.

Goal Four

To establish a safe and convenient pedestrian circulation system which will establish continuous pedestrian access with the site and tie into the existing and future pedestrian paths arriving into the site; reinforce the commercial land uses; and encourage a high level of awareness and personal involvement with the physical environment.

- Objective 4.1:
To provide grade separation between vehicular and pedestrian channels.
- Objective 4.2:
To avoid on-grade parking and to contain all parking within the two-level podium with controlled interchange areas between pedestrian and vehicular arrival points.
- Objective 4.3:
To establish a shared vehicular arrival and pedestrian distribution facility (i.e., transit terminal) which will be central to the development.
- Objective 4.4:
To provide the commercial uses with as much exposure to pedestrian traffic as possible.
- Objective 4.5:
To coordinate the pedestrian circulation system with the distribution of activity nodes and landmarks so as to develop sequences of visual experiences and provide minor and major destinations which

- will articulate, and add interest, to the path.
- Objective 4.6:
To integrate the pedestrian circulation system with the outdoor space system.
- Objective 4.7:
To maintain approximately seven minutes, or not more than 560 meters walking distance between all major pedestrian destinations on the site.
- Objective 4.8:
To provide protection from excessive weather conditions by means of arcades, building overhangs, galleries, trellises, landscaping and similar devices.

Goal Five

To formulate an outdoor space system that will establish clarity and good orientation; realize and make full use of the existing amenities offered by the site; and provide outdoor space and opportunities for passive recreation to Metro Manila residents.

- Objective 5.1:
To establish a series of outdoor spaces ranging from public to semi-public to private.
- Objective 5.2:
To emphasize the waterfront location by introducing a variety of water into the site development, encouraging the establishment of water-related activities, and maximizing views of the water from the edges of the site and from within the site.
- Objective 5.3:
To develop a formal vocabulary and criteria for building orientation that will encourage penetration of cooling sea breezes into the site.
- Objective 5.4:
To establish criteria and standards for the landscaping and design of outdoor spaces that will provide adequate protection from excessive sun, wind, and rain.

Goal Six

To establish building envelopes that will be appropriate to the desired image, that will define and contain outdoor spaces, and that will reinforce the activity pattern.

- Objective 6.1:
To identify critical sight lines and visually significant locations that will influence building forms and locations.

- Objective 6.2:
To coordinate building heights and setbacks with image requirements.
- Objective 6.3:
To develop a formal vocabulary that will enclose and define outdoor spaces and that will provide protection from excessive sun, wind and rain.

Program Requirements

Allowable land uses and gross population and building density standards for the Financial Center and the Financial Center Mall, denoted Central Business Park A, are specified by the July 1977 General Development Plan for the MCCRRP. The Plan limits land uses to office, retail, entertainment, permanent residences and accessory facilities. A floor area ratio of 1.5 is specified for the Financial Center and a floor area ratio of 3.0 for the Central Business Park. Building height is restricted to 150 feet or approximately 46 meters above mean lower low water level elevation because the site is within the flight paths serving the Manila International Airport. Gross floor area requirements per employee for each use are as follows:

Office	20 square meters
Retail	20 square meters
Entertainment	200 square meters
Restaurant	10 square meters

Permanent residences may be provided, not exceeding 150 dwelling units per hectare, and apartment-hotels, not exceeding 272 dwelling units per hectare. All parking and vehicular service facilities should be located within a podium. The top-of-podium elevation is set at plus 10.00 meters or seven meters above grade, allowing the construction of two parking levels below. The podium is to serve in lieu of a basement and to protect the buildings from flooding that might occur during major storms. The podium level should be designed as an 'elevated ground' and include landscaped pedestrian zones connecting the entire project area. Thus, safe and convenient pedestrian circulation would be provided and conflict between vehicular and pedestrian traffic would be minimized.

As stated under 'Planning Assumptions and Pre-Conditions', the Financial Center Master Plan study will be based on the general standards and requirements of the

MCCRRP General Development Plan. In this section, detailed program requirements for the project based on the specific needs of the FCBOA members, the Presidential Letter of Instruction, and site conditions are investigated.

Land Use

Land uses in the Financial Center will include offices, commercial and recreational uses, cultural facilities, public outdoor spaces, residences and accessory uses.

Three types of offices will be represented. These are: commercial and development banks, insurance offices, and professional and business offices. Banks include the PNB, DBP, and LBP. Both PNB and DBP are heavily involved in the financing of development projects throughout the country. The PNB is one of the oldest financial institutions and the largest commercial bank in the Philippines. DBP provides credit facilities for the accelerated development and expansion of agriculture and industry. The institution also promotes the establishment of private development banks in the provinces and cities. The Land Bank is a more recent institution which is also involved in the economic development of the country. On the other hand, GSIS and SSS are governmental insurance institutions and engaged in the processing, administration, and settlement of claims. The GSIS serves government employees while SSS implements the social security program of the country. Due to cultural and economic conditions, clients of these institutions prefer to conduct their business personally. The majority of the claimants do not have checking accounts and prefer to be compensated in cash, directly. Consequently, GSIS and SSS receive thousands of business callers everyday and require specialized spaces for accommodating their clients. The sixth member of the FCBOA, CDCP, is one of the largest construction companies in the Philippines and is engaged in the private financing and construction of large-scale public works projects. The major fields of activity of the company are construction, design and engineering services, materials processing, urban development, equipment rental, management services, manufacturing, and international operations.

All six members will be locating their national headquarters at the Financial Center.

Available information indicates that PNB, GSIS, and CDCP will be the first ones at the site. Phase Two may include SSS and DBP; LBP may not move into the site until Phase Three. The following dates have been assigned for each phase:

Phase One	1980-1985
Phase Two	1990-1995
Phase Three	2000 +

It is expected that additional commercial office space in the project area will be required for businesses and professional offices who work with the financial institutions and CDCP. Various business services are also likely to be attracted into the area.

The concentration of these activities would, in turn, generate a need for shopping, entertainment and recreational facilities, housing, and various other services. Available market information indicates that the waterfront location and proximity to other prestigious institutions, such as the Cultural Center, the Central Bank, and the Asian Development Bank, will generate demand for high quality housing in the area.

The Financial Center Mall is envisioned as a mixed-used development serving the demand for additional services and facilities generated by the project. The principal uses will be office, commercial, and residential. Central services that would create economies-of-scale in the daily operations of the center will also be provided. The Mall program includes a variety of retail and service establishments, eating and drinking places, restaurants, night clubs, public outdoor spaces, cultural facilities, landscaped recreational areas, a sports complex and various other amenities. Shared parking and central transportation terminal will be key elements establishing an interface between the project and Metro Manila.

Zoning and location requirements of the master plan will safeguard compatibility among these uses and, at the same time, encourage the establishment of a 24-hour activity pattern that will attract and hold the service population on the site. Final building programs and tenant lists should be designed to create a balanced mix of uses and a lively environment that will re-inforce the financial viability of the project.

The diversity of the daily population attending the site, the socio-economic characteristics of the resident and employee population in adjacent areas, and the possible

Interaction with the activities at the PICC/CCP Complex should be considered in the selection of establishments to be included in the Mall. A wide range of prices and tastes should be represented in order to appeal to and capitalize on the service population. At the same time, it will be necessary to include non-commercial and free-of-charge facilities to serve the public and to establish a good image in the community.

Tables 1 and 2 provide lists of land uses and the 24-hour activity pattern usually associated with each use, for weekdays and for weekends. The tabulation is ordered to range from quiet and low-person-density activities at the top to noisy, bright and high-person-concentration activities at the bottom. Each of these uses, if poorly located, may interfere with and become a nuisance to the others. A balanced mix and proper location of the same land uses, on the other hand, would create mutual support and compatibility. The desirable pattern is one that would provide opportunities and incentives to the daily population on the site to work, shop, play, relax and remain within the project area.

Table 3 describes the types of shared facilities that would be provided in the Mall development. The estimated gross building areas for each type are based on daily participating population estimates (presented in Table 6) and do not reflect market demand. Final detailed building programs are needed to refine these estimates according to financial feasibility and market analysis studies. The facilities to be provided are grouped into commercial, public services, private clubs, central services, and developed outdoor space.

Employee services refer to facilities usually provided as an employee benefit by each individual employer. Inclusion of these in the mall development would generate economies of scale by avoiding duplication of facilities and savings would be achieved not only in construction but also in daily operations and maintenance expenses. The detailed development of building programs for these facilities will depend on specific requirements of each member and on the agreed method for sharing the cost and benefits.

Table 1: 24-hour Activity Schedule—Weekdays

Table 2: 24-hour Activity Schedule—Weekends

Table 3
GROSS FLOOR AREA REQUIREMENTS BASED ON PARTICIPATING
POPULATION ESTIMATES
(square meters)

Type of Facility:	PNB	GSIS	DBP	SSS	LBP	TOTAL
Commercial, retail and service ⁽¹⁾	23,453	6,114	2,088	3,855	—	35,510
Employees services:						
Co-ops, training centers, canteens	16,204	3,275	2,277	1,115	—	22,871
Day care centers	811	—	64	616	—	1,491
Tot-lots	—	350	90	175	—	615
Clinic ⁽²⁾	700	440	460	400	—	2,000
Public services:						
Library	1,860	1,270	403	241	—	3,774
Exhibit space(s)	586	400	40	76	—	1,102
Chapel	507	345	26	—	—	878
Information center(s)	88	60	10	—	—	158
Transportation terminal ⁽³⁾	477	300	313	273	—	1,363
Outdoor auditorium	280	176	184	160	—	800
Public toilets	7	4	5	4	—	20
Active sports & recreational	7,000	4,400	4,600	4,000	—	20,000
Central services:						
Fire station & central security	165	103	108	94	—	470
Mechanical/electrical plants						
Central maintenance	NA	NA	NA	NA	—	NA
Developed outdoor space	13,588	13,400	8,434	15,496	—	50,918

Notes

¹Based on participating population estimates and experience formulas only, does not necessarily reflect Market Demand.

²Represents a 25-bed hospital.

³For peak hour traffic.

'Developed outdoor space' denotes landscaped and furnished public or semi-public outdoor areas devoted to passive recreational activities. It is assumed that the area should be large enough to accommodate 50 percent of the employees and 80 percent of the visitors at any one time. Appropriate areas of developed outdoor space should be provided on each parcel of the Financial Center.

Planning and Design Requirements

External factors and internal functional requirements that influence site development, taken together, constitute the physical planning and design requirements that should be satisfied by the Master Plan. These requirements are derived from the planning goals and objectives and establish the physical parameters of the project.

Growth Pattern and Phasing

The selected growth pattern will be most critical for the realization of Planning Goal One which calls for accommodating growth and change requirements while maintaining a sense of completion at any phase of the development. The Financial Center will serve not only Metro Manila but the entire country. The image and character of the physical development should be appropriate to this function. The site is adjacent to the PICC/CCP Complex which is also of national significance. Moreover, the development represents the initial phase of a major urban development project on reclaimed lands. It is recommended that the physical development should be an extension of the existing urban areas and relate equally to Metro Manila represented by the Roxas Boulevard frontage, to the PICC/CCP Complex, and to the rest of the future MCCRR Project.

At present, only the Roxas Boulevard frontage is developed. An extensive undeveloped zone of land is located between the site and the PICC/CCP Complex, while the MCCRR Project lies in the plus-or-minus 20-year future. Given conditions within the site include Buendia Extension or C-3, located along the northern property line and along the bay, and the Central Boulevard which extend into the PICC/CCP Complex on the north and will serve all of the reclaimed land to the south.

Ideally, the development should be oriented towards these roadways which link the site to Metro Manila. Thus, the initial phase should be located in the north eastern quadrant of the site close to existing developed areas. Expansion should occur along a generally north-south axis. At any one phase, buildings should be concentrated so as to establish a viable architectural framework, to form well defined outdoor spaces, and to establish an urban atmosphere appropriate to the physical context. The architectural vocabulary of buildings and orientation of spaces should be informal and open-ended to enable the development to expand and change gracefully. Each space, and building, even though appearing complete at any time, should provide forms and openings which can easily receive additional increments in the future.

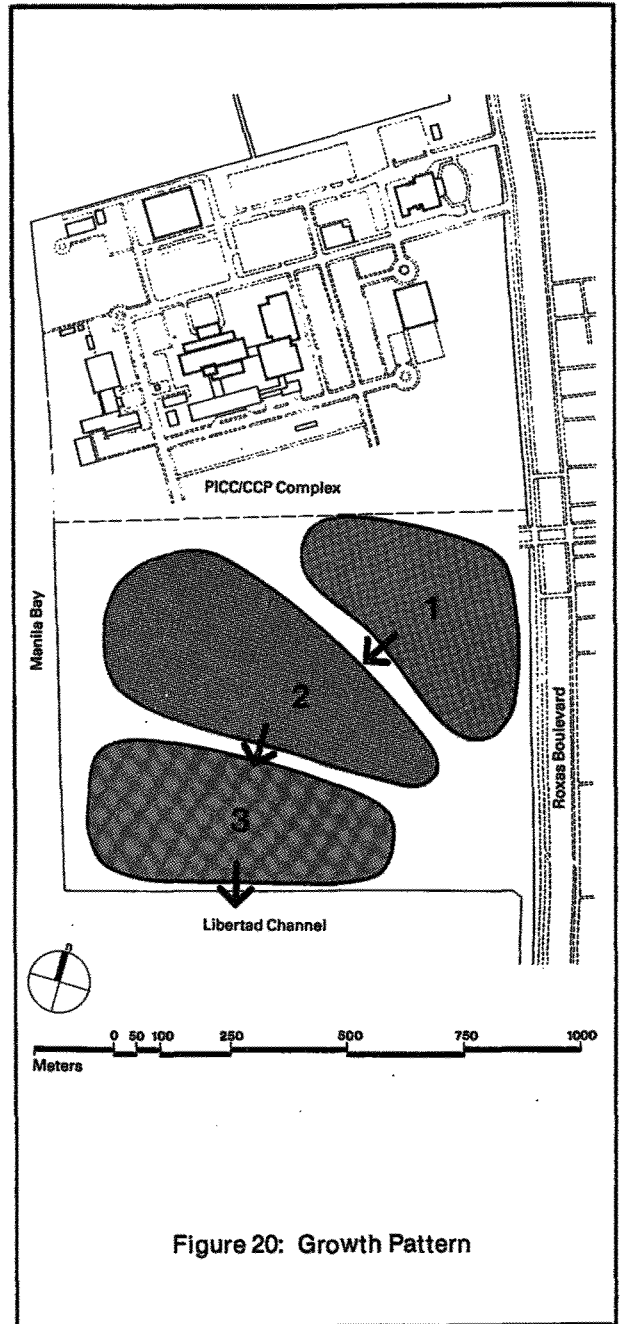


Figure 20: Growth Pattern

Image Requirements

The concept of 'image' refers to physical appearance and to the symbolic associations created by the physical setting and architectural forms. An effective image is one that will fit into the existing visual/physical context and that will contribute to and enrich the environment. A well designed

image will establish visual clarity and orientation and will generate visual memories that will act as points of reference, or landmarks. For example, Rizal Park has an effective image because it is easily recognizable, it can be viewed from several different directions, it generates a clear sense of arrival, it is associated with numerous activities and functions, and it is used as a landmark in describing how-to-get-to, or the address of, various buildings and spaces in the vicinity. It is necessary to analyze existing image elements and assess their influence on the sitting and physical design of buildings in order to make positive contributions to the existing environment and to encourage compatibility. These elements include sight lines, landmarks, movement patterns, concentration of activities or nodes, and visual characteristics of physical forms.

Existing physical forms in the vicinity of the site include several regional landmarks. These are the Philippine Plaza Hotel, the Folk Arts Theatre and Cultural Center of the Philippines on the north; the Central Bank, Asian Development Bank, and several slab apartment buildings along Roxas Boulevard; and the Frederick Hotel at the corner of Harrison Avenue and Buendia Extension. The ruins of the Quezon House along Roxas Boulevard is a potentially significant landmark even though at the present it is not so established.

The banks and modern apartment buildings form physical barriers along the road. They cut off the areas to the east from Roxas Boulevard by establishing high walls parallel to the road. The lower scale developments fitted into the narrow blocks between these buildings, however, afford opportunities to the inner areas to reach Roxas Boulevard. These narrow blocks act as a filter for pedestrian and small scale vehicular traffic. The physical development of the site should collect and attract the pedestrian movements into the project area by establishing convenient crossing points and avoid the creation of physical barriers.

Arrival into the site from the north or south will be from Roxas Boulevard and arrival from the east will be along Buendia Extension and numerous other streets feeding into Roxas Boulevard. Of these, Libertad is one of the most important. Significant sight lines into the site, thus, will occur through the streets intersecting Roxas Boulevard,

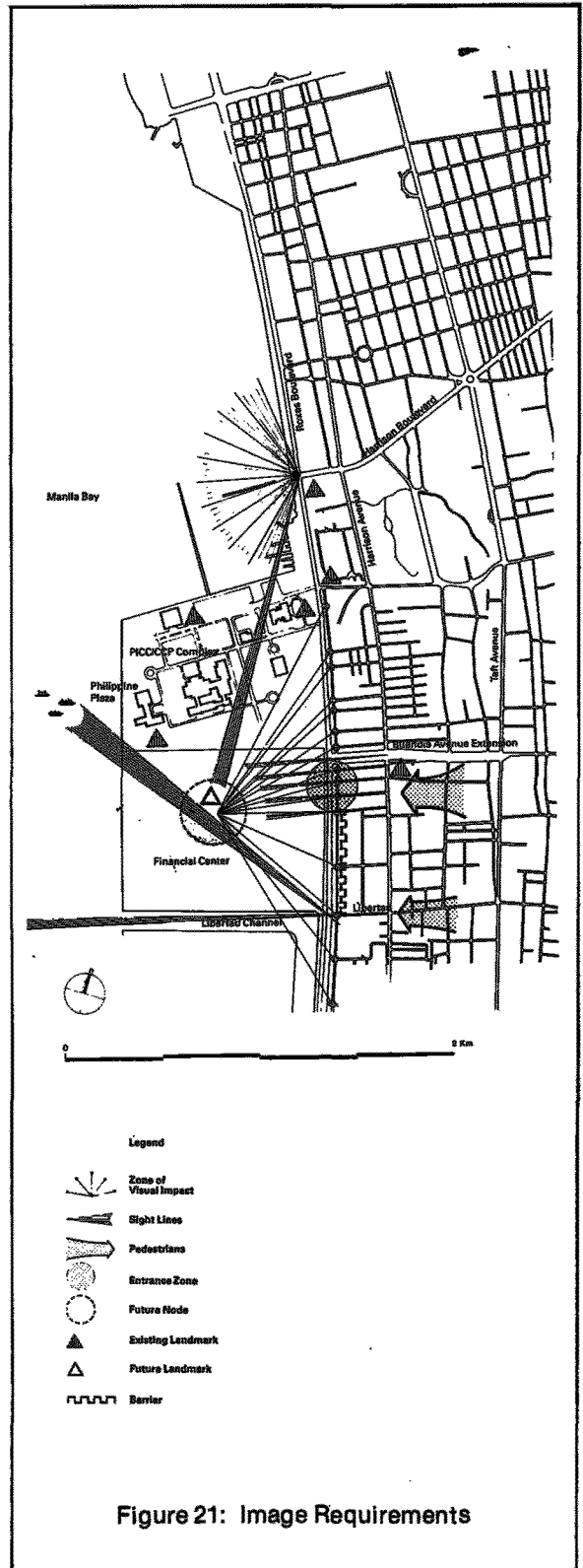


Figure 21: Image Requirements

namely: Buendia Extension, Sta. Monica, Antipolo, San Luis, Sta. Escolastica, and Libertad Streets. These will present long, framed views of the area and establish a visual goal for pedestrians and motorists proceeding in a westerly direction. Sight lines into the site from the north or south will present a wider picture of the development. A very significant view will be available from the intersection of Harrison Boulevard and Roxas Boulevard north of the site. This view would be framed by the buildings in the PICC/CCP Complex. From a point near the corner of Libertad Street and Roxas Boulevard, another long sight line will establish an important connection by offering the view of the Philippine Plaza Hotel and ocean-going vessels anchored in the South Harbor. From several vantage points along Roxas Boulevard, between Sta. Cruz and Figueras streets, it will be possible to have continuous views of the project area.

Taken together, the sight lines from Roxas Boulevard define the zone of visual impact at the local scale and the long views describe the range of visual impact at the sub-regional scale.

The place at which these sight lines converge represents the area which would be most suitable for establishing a major activity node and landmarks in the Financial Center site. Buildings and physical forms that act as landmarks should be visible along all sight lines and should be associated with an activity concentration shared by the majority of the on-site population. The transportation terminal and shopping facilities would be the most appropriate use for the node. Pedestrian as well as vehicular arrival points should be directed into this area. This is further reinforced by the confluence of pedestrian sight lines near the south-eastern corner of the site, defining a location that should be developed into a major pedestrian arrival point.

External Edges

The physical design of the perimeter of the site will be critical for the integration of the project into the existing environment. The site development pattern should extend to the perimeter and establish interfaces with existing activities surrounding the site. The creation of rigid buffer zones and isolation of the project should be avoided. Primary vehicular access into the site is from Buendia

Extension and from Central Boulevard. These two roads also serve the PICC/CCP Complex and will be routed through future urban development on the reclaimed lands to the south. These roads and adjoining canals should be designed not as boundaries but as connectors between the project and surrounding lands. At appropriate locations, buildings and spaces should be bridged over the rights-of-way to establish continuity among the parts.

At present, the land parcel in the PICC/CCP Complex which adjoins the Financial Center is not developed and its future use is not determined. While the Financial Center project should provide opportunities to tie into this zone, the physical pattern should not preclude any of the development options that might be available for this site.

Roxas Boulevard is the most active existing edge and is a major channel for both pedestrian and vehicular traffic. A viable pedestrian zone should be developed and maintained along the western edge of the boulevard. This zone should include a landscaped buffer along the travel lanes and should be provided

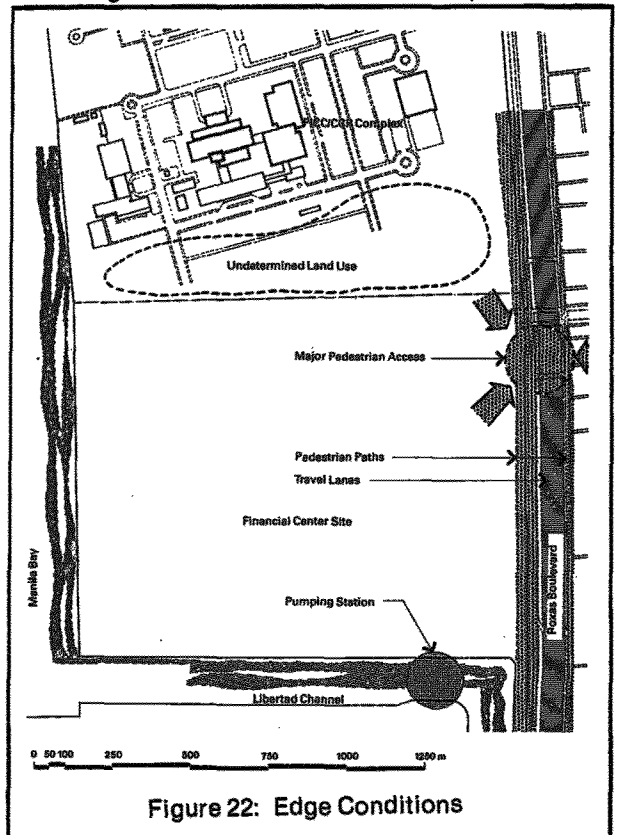


Figure 22: Edge Conditions

with frequent overhead and on-grade pedestrian connections leading to the eastern side of the road. The design should include walkways articulated with intermediate spaces furnished with benches, seats, built-in gameboards, trash receptacles, lights, and similar amenities. Separate jogging and biking lanes should also be considered. This walkway, which may be called the Roxas Boulevard Promenade, should extend to the Luneta on the north and continue along the new inland channel formed by the reclamation project on the south. Thus, the existing recreational activities along the coast, which will be displaced by road improvements and land reclamation, would be maintained and amenities would be made available to Metro Manila residents. Libertad Channel poses particular problems for the site. The primary function of the channel is to divert the flood waters of the estero Tripa De Gallina. It also provides an outlet for major sewer mains carrying untreated sewerage. A pumping station and flood gates will be installed near the eastern end of the canal. The station is expected to be in operation for an average of 400 hours a year and generate high levels of noise, vibration and unpleasant odors during operation. Present plans for the pumping station include several pollution control measures. Noise and vibration will be kept to reasonable levels by the use of special mounting pads and vibration isolators. Of the six pumps to be installed, two will be reversible. Thus, during the dry season, when unpleasant odors would be more likely to occur, the inland channel will be flushed out with fresh water induced by the reversed pump action. Additional precautions include the use of floating aerators installed at strategic locations. These devices are designed to appear like spray-fountains and to blend into the environment.

A major asset of the site is the edge along Manila Bay which provides wide and pleasing views, exposure to cooling breezes, and a refuge from the noise and pollution of heavy traffic and urban activities. These qualities should be preserved and opportunities for articulating this edge with water-oriented activities should be explored.

Adjacency Requirements

The preferences for location in the Financial Center site expressed by each landowner

together with functional linkages among the land uses constitute the adjacency requirements. Functional requirements and interaction among land uses are more critical for the location of the shared facilities and commercial activities, while adjacency to the services that will be provided in the Mall Parcel and non-quantitative desires for certain locations are among the decisive factors for siting the Financial Institutions.

In Table 4, site selection factors and location requirements for each major land use have been listed. These reflect desires for specific locations, views, adjacencies, security and service requirements, and preferences for public image and ambience that have been expressed by the landowners during interviews and in their answers to questionnaires.

Site selection factors have been rated the highest score, 3, if required strongly; 2, if desired but not required; and 1, if considered not important. Then, the total score as well as the number of stronger requirements have been summed up vertically for each land use. In Figure 23, the total score has been plotted into a graph where the vertical scale represents the number of strong orientation and proximity to Roxas Boulevard towards the left hand side and proximity to Manila Bay towards the right.

Observation of this graph and of the priority scores for the site selection factors, summed up horizontally in Table 4, indicates the following conclusions:

- The highest priority factors influencing site selection are adjacency to transit terminal, retail and service, employee services, cultural and religious, and sports and recreation facilities. Special security and dignified/quiet appearance are most strongly desired.
- Second priority factors are orientation and views; adjacency to public outdoor space, to housing and to boating; and the preference to low-rise buildings.
- Third priority factors are adjacencies among the financial institutions and to the heliport, special service requirements, and the preference for high rise buildings and a noisy/active/bright ambience.
- Retail and service facilities, including the transportation terminal, represent the land use with the highest number of

Table 4: Site Location Requirements

Site Location Factors	PNB	GSIS	DBP	SSS	LBP	CDCP & Other Offices	Retail & Service	Recreational & Entertainment	Cultural & Religious	Residential	Priority Score
Orientation and views											
EW-Manila Bay	1	3	3	1	1	3	1	3	3	3	22
NS-Roxas Blvd.	3	2	2	3	3	1	3	3	1	1	22
Adjacency to:											
Transit terminal	2	3	2	3	2	3	3	3	3	2	26
Retail and service	3	2	3	2	3	3	3	3	1	2	25
Employee services	3	3	2	3	2	3	3	3	1	1	24
Public outdoor	2	3	2	3	1	3	3	3	3	1	21
Cultural/religious	3	3	3	2	3	3	2	2	3	3	27
Sports/recreation	3	3	3	3	3	3	2	2	1	3	26
PNB	—	3	2	3	2	1	3	1	2	1	18
DBP	3	1	—	1	1	1	3	1	2	1	14
LBP	2	1	1	1	—	1	3	1	2	1	12
GSIS	3	—	1	3	1	1	3	3	2	1	18
SSS	3	3	1	—	1	1	3	3	2	1	18
Housing	2	1	3	3	3	3	2	2	3	—	21
Boating	2	3	1	2	1	3	2	3	1	3	20
Heliport	3	1	3	2	3	3	1	1	1	1	19
Requires:											
Special security	3	2	3	2	3	3	2	2	1	3	24
Special service	1	1	1	1	1	2	3	3	2	1	16
Prefers:											
Low rise	1	3	1	3	1	2	3	3	3	2	22
High rise	3	1	3	1	3	2	1	1	1	2	18
Noisy/active/bright	1	2	1	2	1	1	3	3	1	1	16
Dignified/quiet	3	2	3	2	3	2	2	1	3	3	24
No. strong requirements	12	10	9	9	9	11	14	12	7	6	—
Total score	50	46	44	46	42	43	55	50	42	37	—

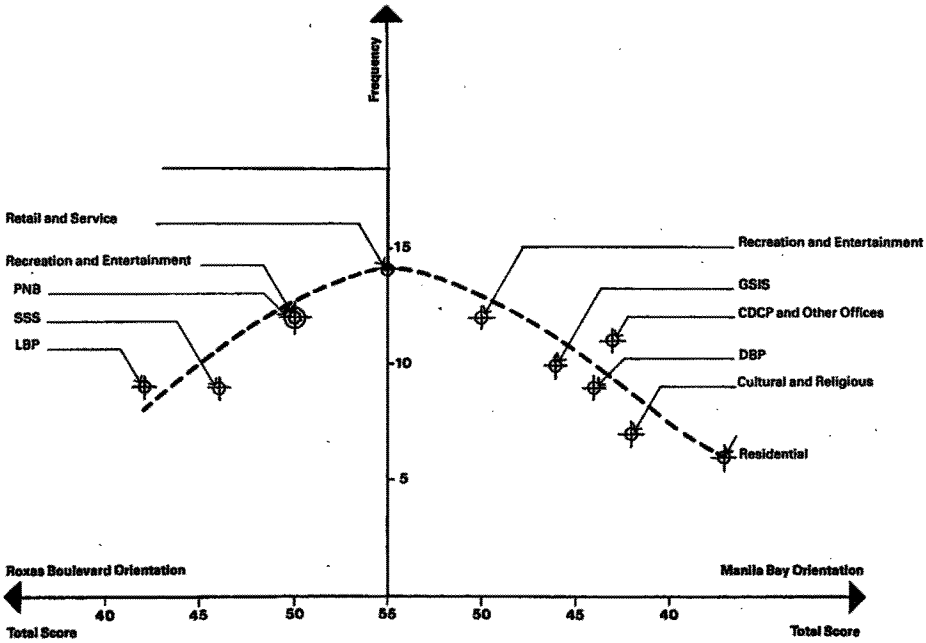


Figure 23: Site Location Requirements

strong requirements and should occupy a central location in the site.

- Recreation and entertainment facilities have the next highest number of strong requirements and should be adjacent to the retail and service facilities. This group may be oriented towards Roxas Boulevard, or towards Manila Bay, or both.
- PNB has the highest number of strong requirements among the financial institutions. It prefers to be adjacent to the retail, service and to recreational/entertainment facilities. A Roxas Boulevard location is required.
- CDCP prefers views of Manila Bay and adjacency to the retail, service and to recreational/entertainment facilities.
- GSIS prefers views of Manila Bay and proximity to the retail, service and to recreational/entertainment facilities.
- SSS prefers to be near Roxas Boulevard and adjacent to the PNB.
- DBP prefers views of Manila Bay; adjacency to the housing and to cultural/religious facilities; and convenient access to the retail, service and to recreational/entertainment facilities.
- It is assumed that the requirements of LBP will be similar to DBP, except that a Roxas Boulevard location will be preferred.
- Cultural/religious facilities prefer a Manila Bay Orientation and adjacency to housing.
- Housing seems to be the most independent use and requires a Manila Bay orientation dignified and quiet ambience, and adjacency to cultural/religious facilities.

The study indicates that the location of the retail, service, recreation and entertainment facilities is the most critical and should be central to the project. The land use pattern, circulation system, and 24-hour activity schedule should be designed to accommodate and reinforce these uses. The following criteria are recommended:

1. Activities should be so grouped as to form a series of nodes with distinctive characteristics.

2. A mix of activities ranging from very active, bright, and noisy to passive and peaceful should be provided. In general "bright and noisy" is identified with the areas close to Roxas Boulevard and to Central Boulevard, while "passive and peaceful" is identified with the Manila Bay frontage.

3. Two major nodes are identified:

- Bright and noisy: transit terminal; restaurant, night clubs and entertainment; and shared parking.
- Passive and peaceful: church, auditorium, housing, and bay-side promenade.

4. The following activities or uses are considered to be generators of pedestrian traffic:

- Transportation terminal or arrival point(s)
- Office buildings

5. The following activities or uses are considered to be magnets for pedestrian traffic:

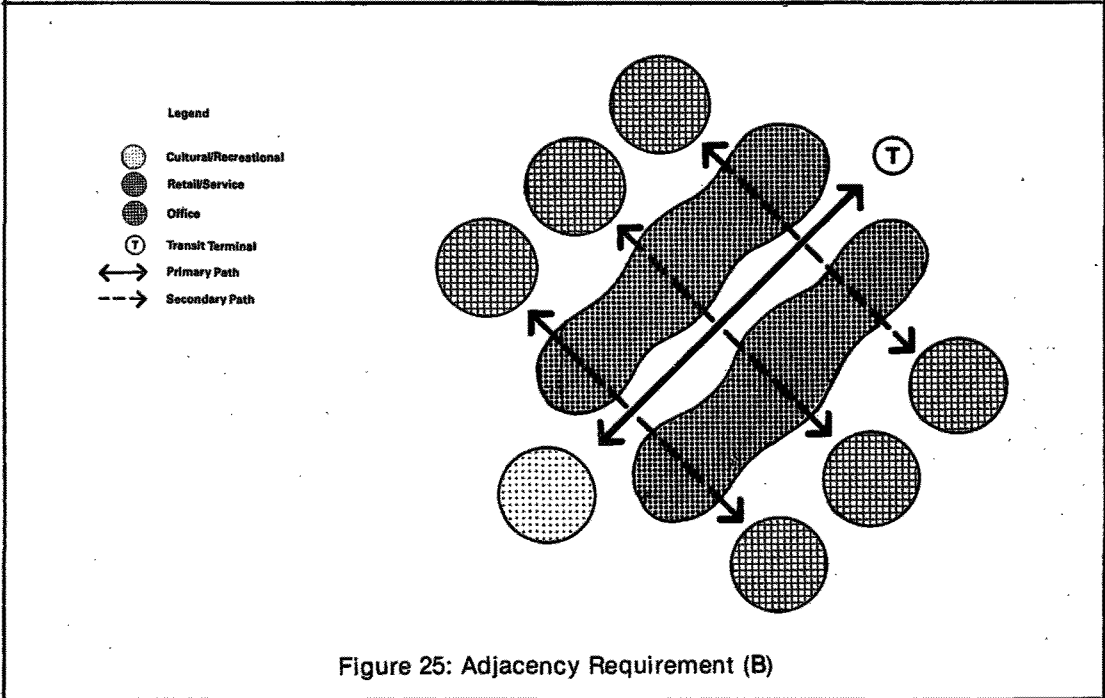
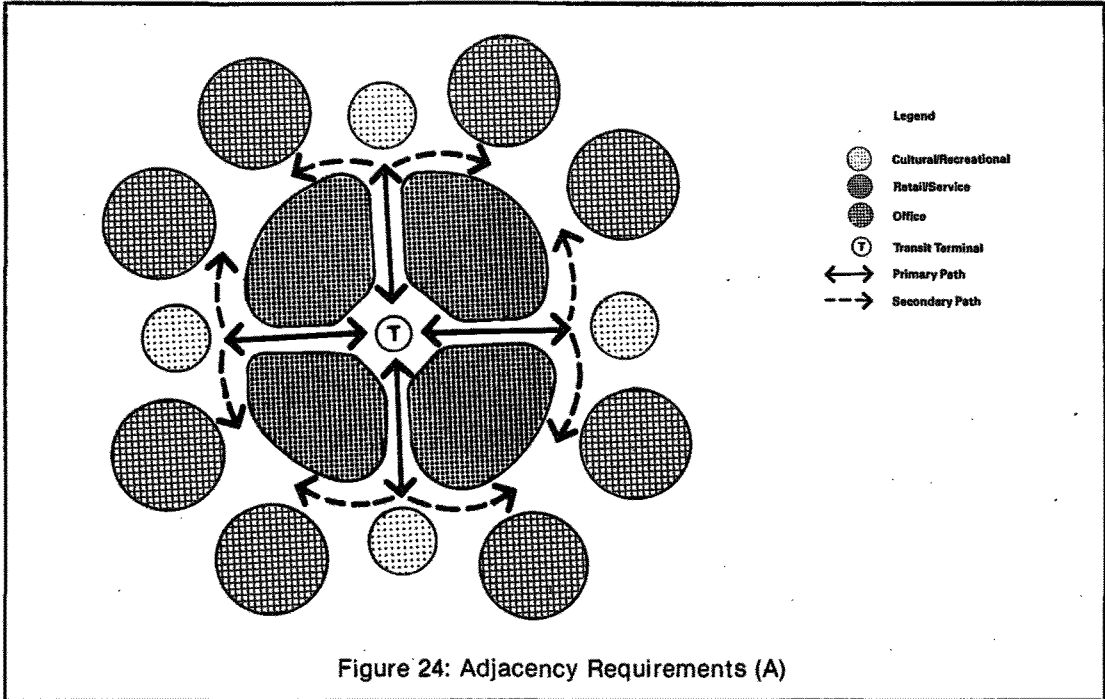
- Transportation terminal
- Major department stores
- Church
- Cultural activities
- Sports
- Recreation

6. Pedestrian traffic generators and/or magnets should be so located as to provide the greatest possible exposure to commercial facilities.

Figures 24 and 25 illustrate two basic adjacency patterns that could be developed on the basis of the guidelines. The first pattern is radial concentric. The bright/noisy focus containing the transit terminal is located at the center of the scheme and it is connected to several cultural/recreational foci by means of primary pedestrian paths. These foci, in turn, become central points for the office uses and are connected by secondary paths along the perimeter.

Commercial uses are located in between so as to have maximum exposure to both the primary and secondary paths. In the second scheme, the primary paths forms a central spine linking the bright/active focus at one end to the quiet/dignified, cultural/recreational

center at the other. Commercial uses flank either side of the primary path. Access to the office uses is provided by secondary paths that intersect the primary and pass through the commercial uses.



Vehicular Circulation

Major roads serving the project have been predetermined. Buendia Extension, or C-3, and Roxas Boulevard are the major vehicular roads connecting the site to Metro Manila. Access will be limited to one-grade separated intersection between these two roads. Central Boulevard intersects C-3 and ties into the PICC/CCP Complex and into the Reclamation Project. It is expected that with the development of the Reclamation Project and the projected transformation of Roxas Boulevard into a limited-access freeway, the function and prestige associated with Roxas Boulevard will be transferred to Central Boulevard. It should be noted that much of the traffic volume carried by these roads will have origins and destinations outside the project area. The master plan should integrate these roadways into the physical design and ameliorate the potential barrier effect that might be created.

The right-of-way allocated to C-3 is 67 meters and Central Boulevard is 45 meters. Both roads include bus lines on exclusive rights-of-way. Traffic projections indicate that, in the future, it may be necessary either to increase the width of Central Boulevard, or to establish a second parallel road to supplement the capacity of the Boulevard. An additional 25-meter wide right-of-way may be required. Existing plans locate C-3 at the edge of Manila Bay, effectively preventing access from the site to the shore. This road should be moved eastwards in order to provide a reasonable dimension for the appropriate use and development of the lands along the Bay. The least dimension between the road and bulkhead line should be not less than 50 meters.

Roads serving the Financial Center site should form a hierarchy by function. Central Boulevard will act as the major collector road and will tie into Buendia Extension and Roxas Boulevard by means of local roads located between individual parcels. These should be public rights-of-way. Private service roads should intersect the local roads and provide access to each parcel. Service roads should terminate at parking facilities or cul-de-sacs to avoid through traffic within each parcel. It is recommended that local roads should have 20 meter wide rights-of-way

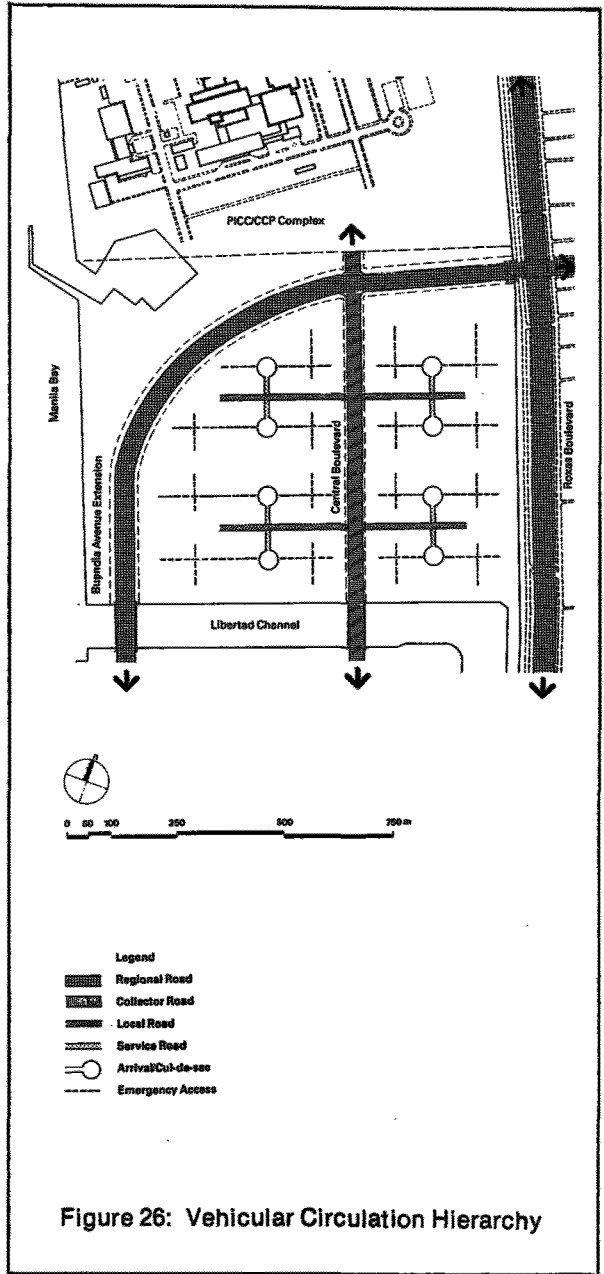


Figure 26: Vehicular Circulation Hierarchy

providing for two lanes of traffic and landscaped sidewalks. Service roads should be 13.50 meters wide and include two lanes of traffic. Emergency access should be provided throughout the site. Outdoor spaces should be so designed and built as to provide a path not less than three meters wide, which will allow passage of maintenance, fire, and security vehicles.

Pedestrian Circulation

Safe and convenient pedestrian areas should be provided throughout the site. The podium level at elevation plus 10.00 meters should be designed as an elevated ground providing continuous pedestrian paths which connect all facilities. Major entrances to all buildings and facilities should occur at this level. Pedestrian circulation within the site should respond to and collect the existing peripheral path along Roxas Boulevard and incoming pedestrian movements from Pasay City.

Weather protected pedestrian overhead crossings should be provided at all bus or transit stops on Buendia Extension, Central Boulevard, and Roxas Boulevard. These

paths should lead into a major pedestrian spine along which the Financial Center Transit Terminal and the majority of the services, shopping facilities and other amenities would be located. The pedestrian circulation system should be designed to provide the greatest possible exposure to commercial facilities and to maintain an average of seven-minute walking distance between major destinations on the site. Pedestrian circulation should be coordinated with the outdoor space system and land use pattern in order to establish clear sequence of movements articulated by major and minor arrival points that would help maintain a high level of awareness and involvement with the physical environment.

Table 5: Estimated Daily Population at the Financial Center

	Phase 1: Total	Employees/ Residents Visitors	Phase 2: Total	Employees/ Residents Visitors	Phase 3: Total	Employees/ Residents Visitors
PNB	4,751	3,007 1,744	7,371	4,665 2,706	10,270	6,500 3,770
GSIS	7,110	3,160 3,950	7,110	3,160 3,950	9,000	4,000 5,000
DBP	—	— —	4,322	2,736 1,586	6,460	4,216 2,244
SSS	—	— —	6,900	2,500 4,400	9,405	3,405 6,000
LBP	—	— —	—	— —	—	— —
CDCP ⁽¹⁾	2,280	1,425 855	2,736	1,710 1,026	3,424	2,140 1,284
Other Office ⁽¹⁾	—	— —	3,360	1,188 1,172	4,270	1,281 2,989
Commercial Recreational ^(1,2)	1,388	260 1,128	2,526	548 1,978	4,017	1,002 3,015
Residential ⁽¹⁾	—	— —	1,370	927 443	1,370	927 443
TOTAL	22,591	7,852 9,421 ⁽²⁾	35,692	17,434 18,258 ⁽²⁾	48,216	23,471 24,745 ⁽²⁾

NOTES:

(1) Based on projections by CDCP, PROS, and standards of the July 1977 MCCRRP Development Plan.

(2) Visitors to commercial uses do not include the participating Financial Center employee population; estimated number refers to visitors from outside the project area only.

(3) All population figures are based on estimates prepared by FCBOA members.

Population

Land uses which are expected to occur at the Financial Center indicate that the daily population will be composed of office employees, sales and service workers, shoppers, business visitors, clients of GSIS and SSS, permanent residents, foreign tourists, and casual visitors representing a cross section of the Metro Manila population. Table 5 presents the estimated daily population by phase. Population that would be generated by the LBP has not been included due to lack of information. It is assumed that the number of visitors (i.e., shoppers) to the

commercial/recreational facilities indicated in the table refers to 'outside visitors' and does not include the participating population comprising the office employees working at the Financial Center.

The numbers of Financial Center employees who may be expected to 'participate' in the commercial, recreational, and other services provided in the project area are presented in Table 6. These figures are based on information provided by each institution and are for Phase Three. Again, figures for LBP have been omitted due to unavailability of information. It is estimated that out of a total of

Table 6: Shared Facilities—Phase Three Estimated Daily Participating Population Generated by the Financial Institutions Number Persons⁽¹⁾

Type of Facility	PNB	GSIS	DBP	SSS	LBP	TOTAL
Commercial, retail and service	6,121	1,937	1,452	652	—	10,162
Employee services:						
Co-ops, training centers, canteens	3,933	1,150	759	385	—	6,227
Day care centers	541	—	32	308	—	881
Tot-lots	—	40	8	21	—	69
Clinic	146	100	7	—	—	266
Public services:						
Library	293	200	32	38	—	563
Exhibit space(s)	293	200	32	38	—	563
Chapel	390	266	20	—	—	676
Information center(s)	146	100	20	—	—	266
Transportation terminal ⁽³⁾	5,960	1,720	3,030	2,315	—	13,025
Outdoor auditorium	146	100	53	19	—	318
Public toilets	—	666	333	43	—	1,042
Active sports & recreational	767	546	129	140	—	1,582
Central services:						
Fire station & central security	NA	NA	NA	NA	—	NA
Mechanical/electrical plants Central maintenance	6,500	4,000	4,216	3,846	—	18,562
Developed outdoor space	6,794	6,700	4,217	7,748	—	25,459

NOTES:

¹Based on information derived from the 'Shared Facilities Questionnaire', dated December 14, 1977.

²NA—not applicable.

³Peak hour participation.

23,471 employees, approximately 10,000 persons may be patronizing the commercial establishments every day, while about an additional 3,000 shoppers may be attracted to the facilities on the site from areas outside the site area. Thus, the onsite employee population would represent approximately 77 percent of the service population supporting the commercial facilities.

At present the distribution of the employees of the Financial Institutions and the CDCP, by occupation group, is presented in Table 5.

Personnel categories have been organized into selected occupation groups in order to compare the employee characteristics at the Financial Center with those existing in the Metro Manila Region. The distribution in Metro Manila is, therefore, derived from the total represented by the selected groups and from total employed. The tabulation indicates that the average proportions of proprietors, managers and administrators and of service workers are lower in the Financial Center than in the Metro Manila region. However, the average proportions of professional/technical and clerical groups are higher. The following table illustrates the percentage distribution of persons employed in the selected occupation groups in the country since 1960.

This distribution is fairly close to the 1975 Metro Manila distribution illustrated in the previous tabulation. It appears that the relative proportion of proprietors and other top-level within the groups has been declining while the proportions of professional, technical and clerical groups have been increasing. The growth rate of this occupation group has been high, approximately 10 percent, during 1965-1971, but has declined to less than one percent during 1971-1975. At the same time, the population of Metro Manila grew at the rate of 4.2 percent per year between 1970-1975. The proportion of service employment has remained relatively steady. Assuming that these trends will continue, it can be inferred that the relative proportions of professional, technical and clerical personnel employed in the Financial Center may increase slightly while service employment may decrease during the 20-year planning period.

This indicates that the majority of those employed in the project area may be in the middle and upper middle-income brackets,

and that the relative proportion of middle and upper middle-income earners at the Financial Center may be higher than that in Metro Manila. However, since the relative proportions of the top income earning group, (i.e. proprietors, managers and administrators), is smaller, the proportion of upper-income earners in the project may be less than the regional average for Metro Manila.

These inferences are supported by the existing average annual income of approximately 10,000 pesos earned by the FCBOA employees. At the present, this figure is higher than the 1971 average family income of 7,785 pesos in Metro Manila, and falls just short of the 10,079 pesos income earned by the top 20 percent bracket of families in the entire country. For comparison, the annual family income of the 5 percent bracket in 1971 was 18,518 pesos.

It is expected that, as the relative proportion of professional/technical personnel increases while the proportion of persons employed in service occupations decreases, the average income earned at the Financial Center will rise over the 20-year planning period. On the other hand, according to the information provided in the 1977 Philippine Statistical Yearbook, the income distribution pattern in the country has remained steady since 1961, and real income has increased only slightly. In Manila and its suburbs, cash incomes have increased by 4.9 percent annually between 1956 and 1971. When adjusted to 1965 pesos, however, real income appears to have increased by only 0.7 percent every year during the same period. It is therefore assumed that, while average incomes at the Financial Center will rise, purchasing power will very likely remain fairly constant.

As the permanent residences planned for the area are aimed at the luxury housing market, it is assumed that not more than 2 percent of the employees will be living at the site. The majority will be commuting to work from middle class districts located mainly to the east and south of central Manila. Given the relative income levels, and the cost of owning and maintaining a private vehicle, it is assumed that the automobile ownership rate among the employees will be lower than the Metro Manila average.

Commercial and entertainment facilities planned for the site will offer services and

Table 7: Rate of Change-Percent Number of Motor Vehicles Registered According to Use

	1960-65/1965-70/1970-72/1972-74/1974-75/1970-75
Private passenger automobiles	+ 75 + 93 + 14.8 + 27.7 (-1) + 46.4
Government owned cars	(-3) + 141 (-12) + 5 + 52.3 + 40
Public utility vehicles (bus., etc.)	+ 9 + 32 + 7 + 29.6 (-3.6) + 33.3

Source:

Philippine Statistical Year Book, 1977

Table 8: Private Automobile Ownership Rates Among Families in the Top Ten Percent Income Bracket Republic of the Philippines

	1960	1965	1970	1975
Number of registered Private automobiles	73,048	127,586	243,795	356,566
Percent change	—	+ 74.7	+ 91.1	+ 46.3
Estimated number of families in top ten percent bracket	121,275	256,299	317,337	—
Number of registered private automobiles per family	.33	0.50	.77	—
Percent change	—	+ 51.5	+ 54.0	—

amenities to the employees, the visitors, and the permanent residents. This population represents high, middle and low income levels. However, by far the greater majority will be middle and low income. The low income levels and the large numbers of the GSIS and SSS clients who are expected to attend the site every workday, together with the presidential directive to make public amenities available to residents of outlying areas, further underline the need for facilities for low income persons. Thus, low and medium priced goods and services should be emphasized and free public services and amenities should be provided.

Commercial facilities should include major department stores as well as traditional markets. Since the average length of stay of the GSIS and SSS clients at the site may be as long as four hours, and a 24-hour activity cycle should be encouraged, comfortable public amenities and ample opportunities for passive recreation should be provided. Shady walkways, sheltered seating areas, pools and fountains, concerts and dances should be made available to all. It would also

be desirable to establish places for setting up sales booths and stalls to encourage small-scale business ventures in the area.

Parking Requirements

In order to estimate the reasonable and adequate number of parking spaces that should be provided, existing and future employee parking estimates prepared by the FCBOA members and existing patterns of automobile registration and private vehicle usage in the Philippines were reviewed.

Table 7 describes the rate at which the number of registered motor vehicles has been increasing in the country. Registered private passenger vehicles and public utility vehicles in the Philippines have been increasing since 1960. However, a slight decline has occurred in 1974-75. Given the cost of owning a private automobile and income distribution patterns in the country, it is assumed that mainly those in the upper ten percent income bracket can afford to own an automobile. In Table 8, the number of registered private automobiles and the estimated number of families in the top 10 per-

Table 9: Number of Persons Travelling by Motor Vehicles by Type

	1960		1965		1970		1975	
	Number	%	Number	%	Number	%	Number	%
Total	1,614,849	100	1,262,975	100	1,609,947	100	2,238,337	100
Private passenger cars	138,791	8.6	242,413	19.2	463,211	28.8	677,475	30.3
Jeepneys	187,068	11.6	345,012	27.3	519,336	32.3	682,812	30.5
Buses	1,288,900	79.8	675,550	53.5	627,400	38.9	878,050	39.2

Notes:

Assume 1.9 persons per private passenger car
 12.0 persons per jeepney
 50.0 persons per bus

Source: Derived from Table 9.3
 Philippine Statistical Year Book,
 1977

cent income bracket are compared. Between 1960-65 and 1965-70 the number of registered private automobiles has increased at a faster rate than the number of families in the group.

However, the rate of increase of registered private vehicles has declined during 1970-75. At the same time, the number of private automobiles for each family in the group has increased from 0.33 in 1960, to 0.50 in 1965, and to 0.77 in 1970. In other words, it can be inferred that approximately 77 percent of the families in the top ten percent bracket owned an automobile in 1975. It is assumed that, while everyone who can possibly afford to own a private automobile will continue to acquire one, the majority of those in the market already own a private vehicle. It is therefore estimated that even though the real number of private vehicles will continue to increase, the relative proportion of the increase over the previous period will decline to about 23 percent every five years. (See Figure 27).

Table 9 indicates that the distribution of persons travelling by private passenger vehicles, jeepneys, and buses has changed from 8.6 percent, 11.6 percent, and 79.8 percent in 1960, to 30.3 percent, 30.5 percent, and 39.2 percent in 1975, respectively.

Assuming that the introduction of safe, convenient, and comfortable public transportation throughout Metro Manila and the continued high cost of owning and operating a private vehicle will influence these trends, (Figure 28), it is estimated that the distribution of persons travelling by motor vehicle by type during the planning period will be:

	Private passenger vehicles	Jeepneys	Buses
1980 +	32 percent	29 percent	39 percent
1985 +	33 percent	27 percent	40 percent
2000 +	35 percent	20 percent	45 percent

At present, the FCBOA owners provide employees parking in the following ratios:

	Number of parking space per employee (1975)
PNB	0.02
GSIS	0.12
DBP	0.08
SSS	0.08
CDCP	0.07
Average	0.07

The average number of parking spaces for each employee is 0.07; that is, parking is provided for 7 percent of the employees. If this figure were to be increased at the rate of 23 percent every five years, a ratio of about 16 percent would be derived for the year 2000. From another point of view; it can be assumed that by the year 2000, not more than 40 percent i.e., the combined managers, administrators and professional/technical groups) of employees will own a private vehicle and that 35 percent of those would require all-day parking. Following this projection, parking would be required for 14 percent of the employees.

Assuming that 35 percent of business visitors would arrive by private automobile

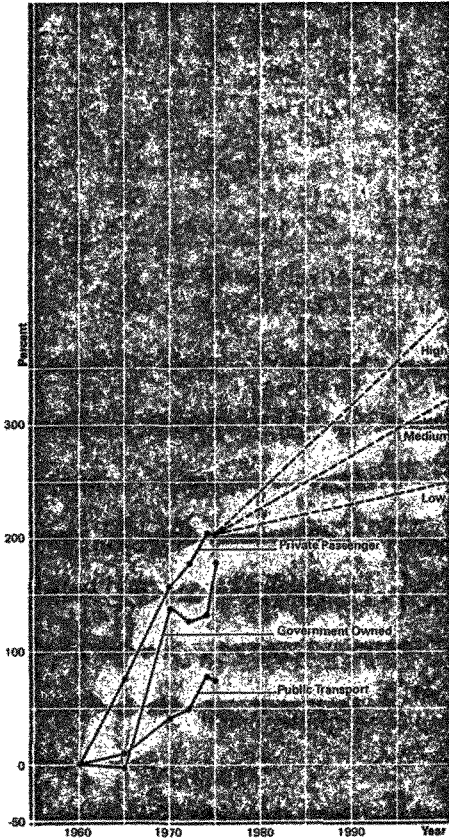


Figure 27: Rate of Change, Number of Registered Motor Vehicles by Type.

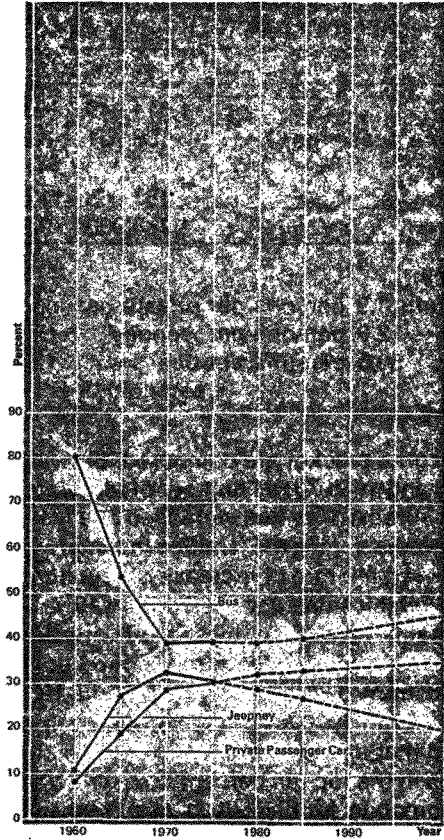


Figure 28: Proportions of Persons Travelling by Motor Vehicle According to Type.

Table 10: Land Area Requirements Financial Center Phase Three⁽¹⁾

	PNB	GSIS	DBP	SSS	LBP	CDCP & Commercial other Office & Residential	Residential	TOTAL
Total net parcel area	9.99	5.71	7.49	5.00	5.06	6.50	4.16	46.25
Land absorption								
o Buildings	1.63	1.00	1.05	0.85	—	1.07	1.75	8.81
o Parking	1.40	0.86	0.90	0.73	—	0.73	0.54	5.71
o Outdoor space	1.18	1.10	0.74	1.12	—	0.94	0.33	5.93
Total land in use	4.21	2.96	2.69	2.70	—	2.74	2.81	20.45
Percent of parcel area	42.00	52.00	36.00	54.00	—	42.00	67.50	100.00
Phase 3 FAR	1.30	1.40	1.12	1.36	—	1.05	1.68	2.50
Reserve land area	5.78	2.75	4.80	2.30	5.06	3.76	1.35	25.80
Additional building area	115.60	55.00	96.00	46.00	101.20	75.20	10.80	499.80
Additional employed	6,800	3,235	5,647	2,705	5,953	4,423	284	29,047
Resultant building area	245.60	135.00	180.32	114.10	101.20	143.62	80.90	1059.24
Resultant future FAR	2.46	2.36	2.41	2.28	2.00	2.21	1.94	2.29

NOTES:

(1) All land areas in hectares; all building areas in '000 square meters.

and that there will be 0.58 business visitor for every employee everyday, there would be a need for 0.20 visitor parking space for each employee for all-day parking. Assuming an average length of stay of two hours, or a turnover rate of four in an eight-hour workday, the number required visitor parking spaces for every employee everyday would become 0.05. Added to the estimated range of employee parking requirement (i.e. 0.16-0.14) this would indicate a need for 0.21 to 0.19 parking spaces for each employee (i.e., 21.0 to 19.0 percent of employees). Taking the middle figure of 0.2 space for every employee, and at 20 square meters of gross building area for every employee, this number would translate into one space for every 100 square meters of gross building area.

It is, therefore, recommended that at least one parking space for every 100 square meters of gross building area, or a total number of spaces equal to at least 20 per cent of the employees, should be provided. In case of conflict, the higher of the two figures should be used.

Development Options

Given employee and visitor population estimates, parking requirements, and space standards, it is possible to generate land area requirements for each land use. Table 10 illustrates estimated land area requirements for Phase Three on the basis of the following assumptions:

1. Office buildings at 20 square meters for every employee, 8-storey high.
2. Commercial facilities at 38 square meters for every employee, 4-storey high.
3. Residential at maximum FAR = 2.5 and 4-storey high.
4. Parking at 33 square meters for each space, 4-storey garage, plus 30 percent access roads.
5. Parking ratio at one space for every 100 square meters of gross building area, or a total equal to at least 20 percent of employees.
6. Outdoor space at two square meters for every person for 50 percent of employees and 80 percent of visitors.
7. Future building area at 20 percent ground coverage of remaining site area and 8-storey buildings.

Land area requirements derived by the application of these assumptions indicate that by Phase Three the financial institutions will use only 36 to 54 percent of the total net parcel area, while the office component of the mall will cover 42 percent of its land allocation, commercial/recreational, 67.5 percent, and residential, 100 percent. Under these conditions, the combined average floor area ratio for the entire project will be 1.2 in Phase Three. In the distant future, beyond the year 2000, if the remaining land were to be developed with similar land uses and on the basis of the assumed density standards, gross floor areas of buildings and the number of employees would be almost double the Phase Three estimates and the average Floor Area Ratio would become 2.29.

Table 11 provides comparative information between recent mixed used developments and the Financial Center Project. All of the examples listed in the comparison are located in central zones of major metropolitan areas and include offices, permanent residences, hotels, and shopping and entertainment facilities. Parking is generally provided in basements, in podiums, or in parking structures within the project area. The number of parking spaces provided for every 100 square meters of gross building area ranges from 0.35, Illinois Center, to 1.75, City Post Oak. The recommended ratio of 1.00 for the Financial Center, even though on the high side, compares well with the examples. It is observed that among projects completed to date, total land area in each project varies from 1.3 hectares, Marina City, to 36 hectares, Century City. The Financial Center, with 46 hectares of net developable area, will range among the largest land users. In general, projects with similar land areas appear to have higher Floor Area Ratios. The FAR varies from a low of 2.3 (Crown Center and Crystal City), to a high of 18.8 (Illinois Center). The average Phase Three FAR of 1.2 at the Financial Center indicates that the intensity of development would be less than that any of the selected examples.

Considering the advantageous location of the Financial Center in Metro Manila, expansion requirements of the financial institutions, adjacency requirements among the land uses, and the scarcity of land that will be felt more strongly as the areas surrounding the site reach ultimate development, it is recom-

Table 11: Comparative Information on Mixed Use Development

Name of development	Land area (Hectares)		Floor area ratio		Parking per 100 sq.m. gross floor area		Metropolitan area Population (millions)
	Present	Future	Present	Future	Present	Future	
Crown Center Kansas City, MO	12.0	34.0	2.3	2.2	1.23	0.98	1.25
Crystal City Washington, DC	28.8	32.0	2.3	2.9	0.65	0.74	2.86
City Post Oak Houston, TX	14.0	18.0	3.0	3.7	1.75	1.35	1.98
Century City Los Angeles, CA	36.0	72.0	3.7	4.0	1.49	1.53	7.63
Watergate Washington, DC	4.0	—	4.2	—	0.70	—	2.86
Charles Center Atlanta, GA	8.1	—	5.3	—	0.91	—	2.07
Colony Square Atlanta, GA	3.2	4.8	5.9	—	1.04	—	1.39
Westmount Square Montreal, Quebec	1.8	2.2	6.7	7.2	0.66	0.60	3.45
Illinois Center Chicago, IL	4.0	33.2	18.8	9.1	0.35	0.52	6.92
Marina City Chicago, IL	1.3	—	11.3	—	0.74	—	6.92
Embarcadero Center San Francisco, CA	2.7	3.4	13.0	12.4	0.52	0.47	3.10
Financial Center Manila, R.P.	46.2	46.2	1.2 ⁽¹⁾	2.5 ⁽²⁾	1.00	1.00	5.30
NOTES:							
(1) Refers to Phase 3 building program							
(2) Refers to Master Plan recommendation for ultimate growth							

mended that the initial density standards and land utilization criteria be revised. It would be advisable to reevaluate the restrictions imposed on intensity of land use by the FAR recommended in the Development Plan for the MCCRRP in order to conserve scarce and valuable land and to safeguard the future use of the site. The following development options outlined below should be considered:

Development Option One

To spread the building program and use up the entire site area by Phase Three. This option would generate a dispersed physical pattern, excessively long utility distribution lines, a high proportion of land area devoted to vehicular circulation and parking, and poorly defined outdoor spaces. Walking distances among the various facilities would be prohibitive and adjacency requirements hard to realize, especially in the early stages. Land would be fully utilized and options for future growth highly limited.

Development Option Two

To concentrate the building program into a portion of the parcel area which will be designated by the Master Plan according to growth pattern and phasing requirements, and to conserve the remaining land as landscaped outdoor areas. This approach would allow the creation of an urban scale and architectural ambience appropriate to the development. Concentration of buildings would make it possible to have shorter and more economical distribution of utility lines, less land area taken over by paved surfaces, convenient walking distances, and effective weather protection in the developed outdoor space areas. It would be possible to design the buildings so as to provide adequate protection from excessive weather conditions; while in a dispersed development pattern, additional freestanding structures would have to be built to achieve the same effect. The remaining land area would be held in reserve for future expansion requirements of the owners. In the interim period, the reserved lands would be used as landscaped outdoor spaces serving Metro Manila. It is desirable to postpone the intensive development of the land at present, while establishing a pattern which will allow intensive development in the future in order to avoid overburdening the capability of Metro Manila to

provide urban services such as power, water, sewage and garbage collection, and adequate vehicular access. As the quality and quantity of these services are improved, then the intensity of development may be increased.

Development Option Three

To adopt Option Two, but instead of holding the land as landscaped conservation zones, to develop the entire site with higher density office and commercial facilities. These would be so designed that each land owner would be able to take over the structures to accommodate expansion requirements in the future. This option would be subject to market demand which may not be strong enough to justify this type of development at early stages. Also, complete construction in the early stages may become a problem by committing the land to existing development patterns and building forms which may become obsolete as the state-of-the-art develops. It should also be noted that adopting this approach may result in inadequate urban services in the area due to the increased demands that will be placed by additional population on the site.

RECOMMENDED MASTER PLAN

Planning preconditions, which require that the locations of the PNB and SSS parcels indicated in the original subdivision plan must be kept unchanged, preclude the adoption of alternative four as the final recommended option. Therefore, the final recommended Master Plan is designed to satisfy the planning preconditions and to incorporate the best solutions to adjacency requirements, pedestrian circulation patterns, edge treatment, and physical image requirements developed during the study of Master Plan alternative.

General Description

The recommended Master Plan relocates Buendia Extension to form a useable parcel of land along Manila Bay. Central Boulevard is maintained in its original location as required by the preconditions. An additional road, called Parallel Boulevard, is located between Central Boulevard and Buendia Extension to supplement the capacity of Central Boulevard. These two central roadways act as urban collectors and are linked

to Regional Roads on the west (Buendia Extension) and on the east (Roxas Boulevard via a service road) by means of local roads located between the parcels of land allocated to the Financial Institutions. The LBP, PNB, and SSS are located in their original positions to the east of Central Boulevard. Both DBP and GSIS are located on the west of Parallel Boulevard. The Mall Development is located on the east of Parallel Boulevard and fans out towards the northwest to include the triangular land area between Buendia Extension, Manila Bay, and the PICC/CCP Complex.

Buildings and Developed Zones

Buildings and developed zones are concentrated on either side and between Parallel and Central Boulevards. These roads will become the most important address locations in the area. The physical appearance of Road Boulevard will undergo extensive changes due to traffic improvements planned for the roadway. The right-of-way will be widened, multi-level intersections will be built, and a mass transit system in a central reserved right-of-way will be introduced. Consequently, the prestige and quality presently associated with Roxas Boulevard will be transferred to Central Boulevard in the reclamation area. The proposed Master Plan recognizes these potential changes that are likely to occur and orients the Financial Center towards the Central Boulevard and towards Manila Bay.

Shared Facilities

Shared facilities including public outdoor space, public services, shopping facilities, eating and drinking places, restaurants, entertainment and recreational facilities, and the transit terminal are located between Central and Parallel Boulevards to be equally accessible to all the Financial Institutions. Central mechanical/electrical plants will be located in the utility zone across from the Libertad Channel. The central portion of the Mall which includes services and shared facilities is arranged on either side of an outdoor space focused on a central pool at the edge of the Libertad Channel. The Central Pool should be designed to act as an informal outdoor auditorium and stage for holding dance performances, band concerts, and similar functions. The transit terminal is located halfway between the Libertad Lagoon and the Manila Bay Marina proposed for the

zone across from Buendia Extension. This area is devoted to residences, marina, sports club, and may include a church and market area. Between these two foci, the transit terminal represents the most important generator and destination of pedestrian traffic.

The primary pedestrian path, or central spine, connects the Central Pool at the Libertad Channel to the transit terminal and it is flanked at either side by commercial, recreational, and service facilities. A central park including a long reflecting pool, landscaped and shady areas, and pedestrian spaces further emphasizes the functional and symbolic significance of the primary path. Additional office uses including the CDCP offices, as well as commercial facilities, will be located between the transit terminal and the curve of Buendia Extension. Secondary paths radiating from the transit terminal will connect the Mall to the activities and spaces located on the northwest of Buendia Extension.

Pedestrian Circulation

Pedestrian walkways are located within pedestrian easements; they join the Mall to the Financial Institutions and extend to the perimeter of the site. The walkways continue across Roxas Boulevard and Buendia Avenue Extension as pedestrian overpasses and tie into bus or other mass transit stops to be located along these roads. Thus, they act as collectors and conveyors of pedestrian traffic into the site. They should be designed to provide shelter from excessive weather conditions and to give access to the mezzanine and grade levels of the structures flanking each path. Ramps and stairways should be located to provide convenient means of reaching these areas. On-grade walkways should be so located and designed as to be sheltered by buildings along the way.

The edge of the Libertad Channel is designed as an on-grade pedestrian space which links the outdoor auditorium and related places to the landscaped areas along Roxas Boulevard at one end, and to an aquarium proposed to be built at Manila Bay at the other. The path should be routed under Central and Parallel Boulevards and the Buendia Extension bridges and be continuous along the Channel. This edge will be free of

vehicular traffic except for emergency vehicles.

Massing

Building masses are located to comply with image requirements and to maintain critical sight lines. Sight lines from the southerly approach along Roxas Boulevard to the Philippine Plaza Hotel, which is a regional landmark, and from near the corner of Libertad Street and Roxas Boulevard to Manila Bay are maintained and reinforced. Within these sight lines buildings are set back and building heights are restricted. In general buildings on either side of the Mall should be not more than five storeys high. Building forms which are six to eight storeys high should be set back from Central and Parallel Boulevards by 80 meters. Six- to eight-storey high building forms should be located along an east-west axis to permit penetration of sea breezes and to avoid blocking the view of the bay from inner zones.

Parking

Parking is located within the podium or first two levels of each building. The podium is to be integrated into the design of the main building. Parking areas should relate to landscaped edges or inner courtyards which lead out to major pedestrian activity zones. Pedestrian paths should tie into the podium levels.

Shared parking will be provided in the Mall as well as in each parcel. Fifty percent of the Mall parking and 30 percent of the office parking should be shared. Shared parking should be located along Central and Parallel boulevards in all cases.

Level Three, or the top of the podium, will be landscaped and will include entrances to all major facilities provided on the parcel. This arrangement will induce the use of the podium pedestrian levels as outdoor lobby areas supplementing the interior spaces. Public-oriented activities and related functions should be housed in up to five-storey high

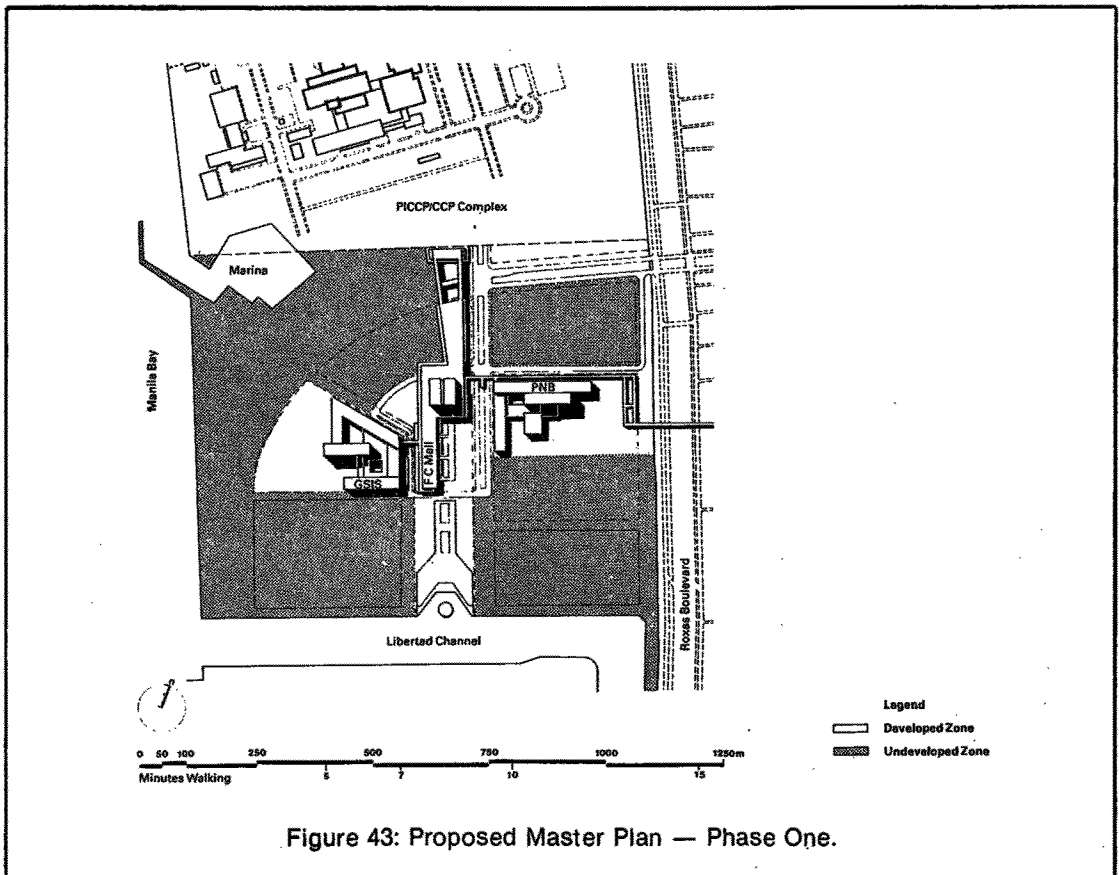


Figure 43: Proposed Master Plan — Phase One.

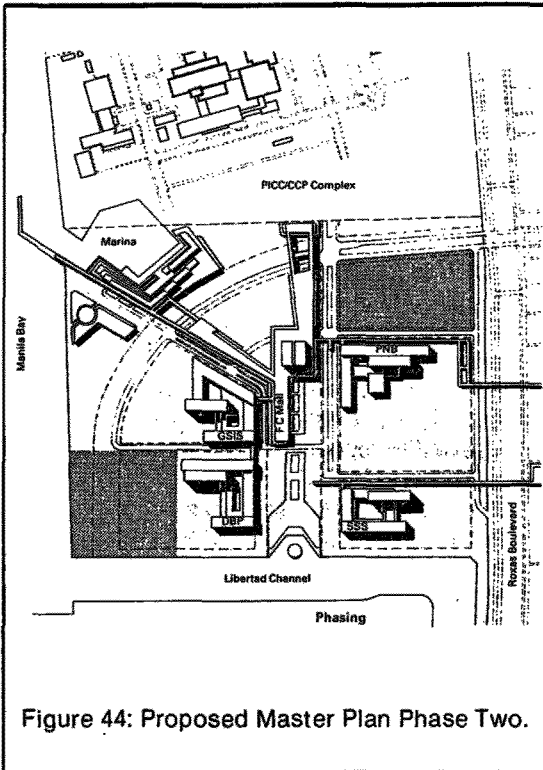


Figure 44: Proposed Master Plan Phase Two.

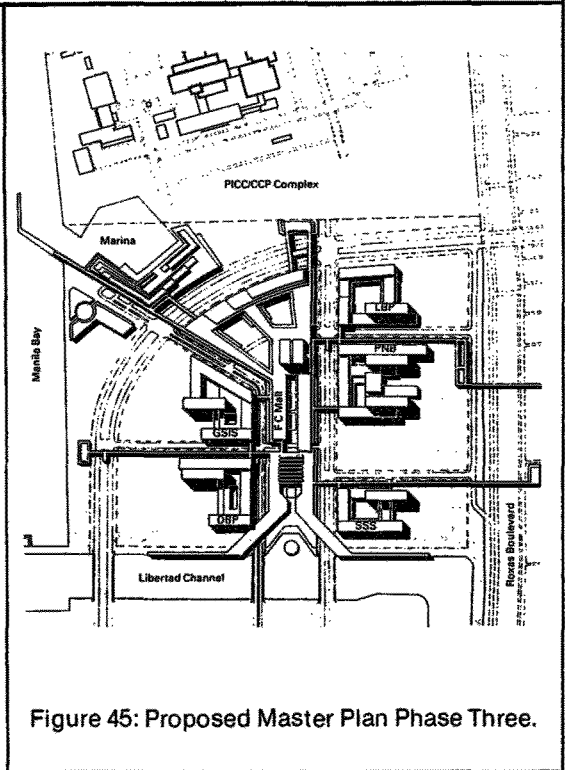


Figure 45: Proposed Master Plan Phase Three.

structures which will defined the critical edges required to form the exterior spaces at each phase. The more restricted activities will be housed in structures built within the inner courts which will be not more than eight storeys high.

Phasing

During the first phase of the development, the GSIS, the CDCP office building, the transit terminal, some of the commercial uses, and the portion of the PNB parallel to the pedestrian walk leading from Roxas Boulevard to the Mall will be built. The long reflecting pool, Libertad Pool, Outdoor Auditorium, and associated landscaping should also be built and maintained as a public park until market conditions will justify expansion of the Mall facilities. The bayside marina, permanent residences, a sports club, and commercial facilities, additional office spaces as well as

the DBP and SSS are expected to be built during the second phase. Buildings at all phases should be located and designed to comply with critical edge requirements and to form the outdoor spaces called for by the Master Plan. It is expected that by Phase Three the entire development, including the commercial recreational, and entertainment facilities, the LBP, and the later phases of the rest of the Financial Institutions will be built.

During all phases of construction, buildings should be concentrated in 'applicable site areas' so as to maintain in FAR of 2.5 in the developed zones. The rest of the land should be landscaped and earth mounds be located to pre-load the soil and prepare the site for future construction. The total or gross FAR, which is the ratio of total gross building area to total parcel area, is restricted to 1.92 for the duration of the planning period. □

Planning News

Three Received MURP Degree

The UP Institute of Environmental Planning graduated three students under the Master in Urban and Regional Planning Program this October 1980. They are Jovencio M. Braga, Raidis S. Jose, and J. Andres A. Limcaoco.

Philippine Fish Marketing Authority, Bureau of Soils, Bureau of Lands, Human Settlements Regulatory Commission, National Power Corporation, Isabela State University and City Planning and Development Staff, Cadiz. Focus of the training is on Land Use Planning.

SCURP V

SCURP V started in September 1980 and will run through March 1981. Forty-six (46) participants representing 18 government agencies and two representatives from the private sector make up this year's training class. The participants represent the following government agencies: Ministries of Human Settlements, Public Highways, Agrarian Reform, National Economic and Development Authority, Public Works, Education and Culture, City Engineer's Office, Manila, Bureau of Forest Development,

Public Service Lecture Series

Sponsored by the Institute, U.P. PLANADES (Planning and Development Research) and the Philippine Institute of Environmental Planners (PIEP), the Public Lecture Series revolved around the themes "Institutional Framework for the Planning and Management of Human Settlements, Spatio-Economic Study of Laguna Sub-Regional Growth, Metro Cebu Land Use and Transportation Study and Measuring Urban Malnutrition and Poverty: A Case Study of Bogota and Cali, Colombia."



Participants to the Fifth Special Course in Urban & Regional Planning (SCURP V).

About the Contributors

Bancom Realty Corporation (BRC), one of the subsidiaries of Bancom Group, Inc., provides the traditional construction services for residential and commercial structures for the private sector. As the corporate entity responsible for the Civil Engineering Divisions building systems, BRC have sustained efforts to develop its expertise in the domestic marketing and project management for real estate properties.

Other BRC major projects aside from the 162-hectare Cebu Reclamation Area includes the management project in Davao and the management of Harrison Plaza, the country's first all-under-one-roof shopping complex.

Susan Bacayo Uybengkee holds a Bachelor's degree in Architecture from the University of San Carlos. She is at present connected with the Philippine Ports Authority undertaking studies on development of ports within Cebu port districts.

Construction and Development Corporation of the Philippines (CDCP) introduced the vital partnership between private contractor and the government, first in building the express ways and now in the country's infrastructure development program.

CDCP continually contributes to the attainment of national goals by delivering projects of international standards.

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