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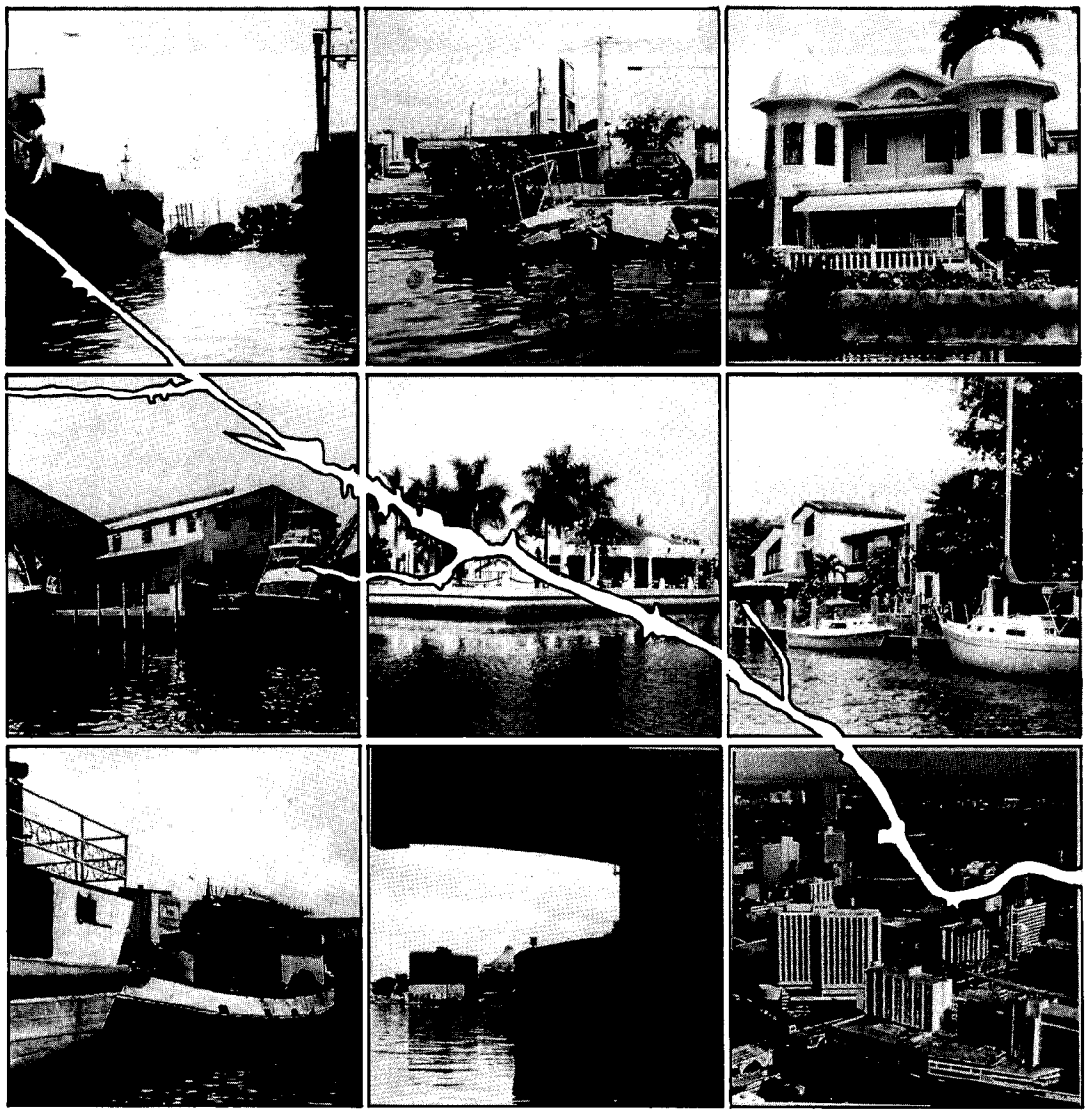

MIAMI RIVER

An Economic Study Prepared by

Zuchelli, Hunter and Associates

and

Bermello, Kurki and Vera

September 1986

[redacted]

Fl. Dept of Environmental Regulation

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MIAMI RIVER ECONOMIC STUDY

Prepared for

THE STATE DEPARTMENT OF ENVIRONMENTAL REGULATION
OFFICE OF COASTAL MANAGEMENT

Bob Graham
Governor

Victoria J. Tschinkel
Secretary

CITY OF MIAMI

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Mayor

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City Manager

DADE COUNTY

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James Redford
Harvey Ruvin
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Jorge Valdes
Sherman Winn

Sergio Pereira
County Manager

by
ZUCHELLI, HUNTER & ASSOCIATES, INC.
Annapolis, Maryland

Bermello, Kurki & Vera, Inc.
Coral Gables, Florida

September, 1986

Funding for the Miami River Economic Study was made possible by a grant from the State Department of Environmental Regulation Office of Coastal Management, U.S. Department of Commerce, Office of Ocean and Coastal Resource Management, under the Coastal Zone Management Act of 1972, as amended. Matching monies were made available from the City of Miami and Dade County.

HC107.F62 M53 1986

ZUCHELLI, HUNTER & ASSOCIATES, INC.

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EXECUTIVE SUMMARY

I. EXISTING PHYSICAL CONDITIONS

- Land Uses

  - Diverse public and private land uses currently exist along the Miami River within the study areas. For purposes of this analysis, marine-related commercial and industrial uses have been distinguished from non-marine uses.

  - Several parks, Jose Marti Park and Lummus Park for examply, are currently underutilized.

- Environmental Conditions

  - The physical condition of structures, properties, and shoreline improvements within the study area varies significantly. Structurally unsound and deteriorated conditions have been noted and classified.

  - The Miami River has one of the highest concentrations of pollutants in the State of Florida. Water quality, however, varies significantly throughout the length of the river.

- Infrastructure Survey

  - The study area is generally well served with telephone, electric, gas, water and sewer utilities.

  - Sanitary sewer overflows and storm sewer outflows which cause contamination and turbidity exist along the river. The locations of these conditions have been noted.

II. EXISTING ECONOMIC CONDITIONS

- Market Overview

  - The Miami/Dade County area has historically experienced significant growth and development resulting from in-migration and a growing international economy.

- Slower in-migration and economic problems in Latin America may result in a steady but relatively more modest growth in the future.

- Development Overview

  - Construction and development activity has resulted in a significant near-term surplus of residential and non-residential space, particularly in the office market, throughout the region.

  - The long-term outlook for additional residential and commercial development in Miami and along the river are excellent.

- Functional Analysis

  - Economic activity in the primary study area can be grouped into three major classifications: Water-dependent, water-related, and non-water-related activities.

  - Water-dependent business activities include marinas, boatyards, yacht builders, shipping, maritime product sales, and fisheries. Of these, the shipping function is the largest and most significant industry.

  - Based upon interviews, a conducted survey, and other research, the general business environment in the study area is positive. Businesses report a satisfactory business climate, a productive labor force, and a history of business success.

- Economic Opportunities:

  - Little competition for maritime activities;

  - A good market for products handled by the Miami River;

  - An improving public perception of the river and its quality;

- Excellent access to the airport, downtown and the rest of the region;
- Available public and private land;
- Favorable public policy supporting the river; and
- The river serves as a focal point for maritime businesses.

- Economic Constraints:
  - The market environment is variable and subject to national and international economic conditions;
  - The Miami River area has a negative image among many people;
  - Land availability in some areas limits expansion;
  - Relatively high land values discourage maritime business expansion;
  - Bridges constrain many types of maritime activities;
  - Government regulations have created difficulty for some firms; and
  - Security and crime issues continue to be a problem.

III. MARKET EVALUATION SUMMARY

- Commercial Marine
  - Shipping--Moderately strong growth over the next 20 years...a need for about 50 percent more space at major terminals.
  - Towing/Salvage--No new space needed.
  - Fisheries--Strategy should be to try to retain existing operations.

- Freight Forwarders and Marine Services--20,000 to 30,000 square feet of space required to 1995 and the same to 2005.

- Marine Industrial

  - Shipyards--Moderate growth on-site.

  - Boat Manufacturers--Enable Bertram to secure additional adjacent land.

  - Manufacturers of Marine Items--30,000 to 40,000 square feet of space in each of the two projection periods.

  - Marine Contractors--No demand for net new space ...consider moving Ebsary to a site elsewhere on the river.

- Recreational Boating

  - Marinas--Any slips that can be developed will be occupied...existing facilities should be upgraded ...facilities capable of accommodating larger yachts should be encouraged.

  - Boatyards--Long-term viability of existing yards ...reinvestment on site...possible relocation of some facilities to new, larger sites...little or no net new growth.

  - Boat Dealers--Two or three acres of land for each of the ten-year periods.

  - Marine Retailers/Wholesalers--30,000 to 40,000 square feet over 20 years.

  - Recreational Marine Services--20,000 to 30,000 square feet to 2005.

- General Industrial

  - Scrap Operations, Auto Repair Facilities, Etc. --Net reduction in facilities consistent with expansion of maritime activities.

- General Commercial

  - Office--Significant potential in the early 1990's in District A...limited office market potential elsewhere.

  - Retail, Entertainment, Eating and Drinking--Restaurants should be required as part of projects in District A...reasonable demand for waterfront eating and drinking facilities in District B.

- Residential

  - All Units--200 to 300 units per year in the study area.

IV. DEVELOPMENT PROGRAM

- Vacant land, under-utilized land and inconsistent or incompatible uses within the study area will generate development opportunities.

- Development potential includes the expansion of existing uses, new residential and mixed-use development, new maritime facilities and public and private recreational uses.

- The specific opportunities and constraints of future land utilization have been identified on a district-by-district and a site-by-site basis.

- Although residential areas and mixed-use development momentum should be recognized, an aggressive approach to creating internally consistent maritime land use areas adjacent to the river should be pursued.

- It is recommended that new development along the river be required to include maritime activities, particularly if the project is replacing an existing maritime use.

V. PUBLIC/INSTITUTIONAL CONTEXT

- There are a total of 15 river crossings within the study area. Traffic conditions would significantly improve if the older bascule bridges were replaced with new bridges. The replacement of the 57-year-old Brickell Avenue Bridge should receive high priority.
- The high contamination of the river's water quality is a serious concern. A comprehensive dredging program, clean-up efforts and drainage system improvements are necessary.
- Deteriorated bulkheads and unconsolidated conditions along the shoreline require improvement.
- Riverwalks, parks and roads are public/institutional amenities and facilities which can be managed and improved. Lummus Park, for example, could be be improved as a major recreational and cultural amenity in the area.
- Public/private joint venture possibilities within the study area also provide significant opportunities.
- The effective management of public/institutional resources within the study area can significantly affect the level of public access, utilization, and enjoyment of the river. A focused improvement program will also induce private investment and enhance the overall economic vitality of the study area.

VI. IMPLEMENTATION STRATEGY

- We recommend that a central quasi-public agency be created to act as an advocate and coordinator for riverfront improvement with a budget of approximately $500,000 to $600,000 over a three-year period.
- It is recommended that a marketing and promotion strategy be developed with two major thrusts: 1) a general public oriented overall promotion strategy, and 2) an industry targeted merchandising effort.

- The creation of individual development districts with special treatment and incentives is recommended. These could include: Tax increment financing districts, special overlay district zones, and enterprise zones.

- A variety of financing and funding techniques should be sought. Prime emphasis should be placed upon tax increment financing to create the needed infrastructure and support services to assist marine-related industries. Impact fees, loans, and grants are additional sources of funds.

- The implementation of "up-front" public sector planning and investment programs will enable existing and prospective marine uses to then obtain the bulk of their funding requirements from conventional private sector funding sources.

I. EXISTING PHYSICAL CONDITIONS

The field surveys conducted as part of the study consisted of both land and water side surveys to document existing conditions and characteristics along both banks of the Miami River, from the mouth of the river to the railroad bridge and Salinity structure just west of N.W. 37th Avenue.

A detailed set of "field notes" recorded on 1985 aerials and City of Miami plat maps complement this report. This data is on record with the City of Miami Planning Department. The field survey information which forms part of this report is of a more generalized nature. It is important to underline that future planning efforts will require cross-referencing with the more detailed "field notes" mentioned above.

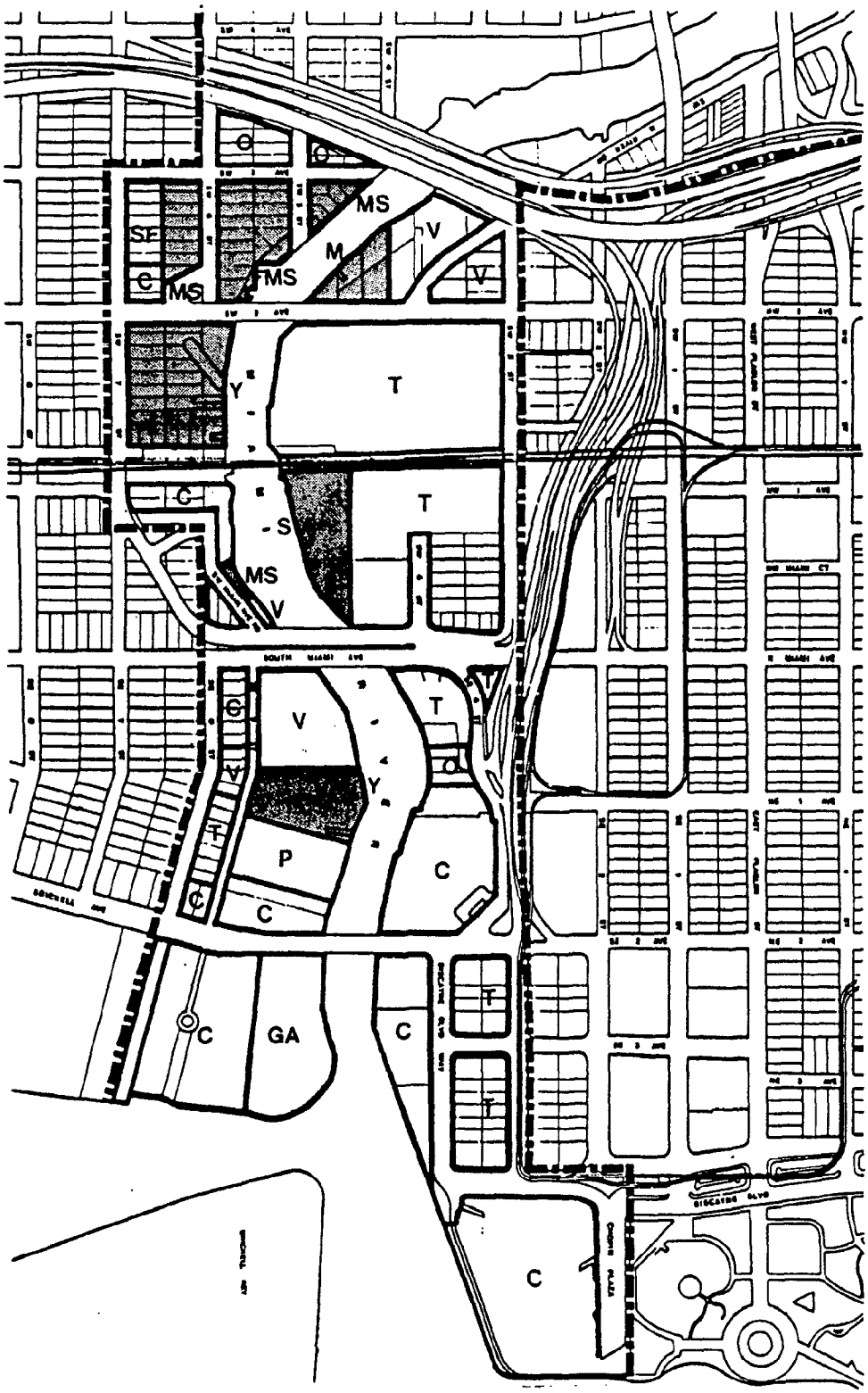
For analysis purposes the Miami River has been divided into distinct districts: the mouth of the river to I-95; I-95 to 5th Street Bridge; the 5th Street Bridge to the 12th Avenue Bridge; the 12th Avenue Bridge to the 17th Avenue Bridge; the 17th Avenue Bridge to 22nd Avenue Bridge; 22nd Avenue Bridge to the 27th Avenue Bridge; 27th Avenue Bridge to N.W. 32nd Avenue; and N.W. 32nd Avenue to the Salinity Dam west of N.W. 37th Avenue.

A. LAND USE

The land use survey identifies the various land use categories which exist along the river and surrounding study area. Particular attention has been given to the specific identification of marine-related commercial and industrial uses and their distinction from those land uses which are non-marine related. In the accompanying land use maps, the marine-related uses have been screened to graphically distinguish them from non-marine-related uses.

1. District A--Mouth of the River to I-95

District A, approximately .9 miles in length is primarily characterized by a number of large vacant and underutilized parcels along both banks of the river. The most distinguishing land use characteristics are the James L. Knight Convention/Conference Center, the Dupont Plaza Hotel and Cye's Rivergate, all adjacent to the S.E. 2nd Avenue/Brickell Avenue Bridge. The James L. Knight Convention/Conference Center



LAND USE MAP – DISTRICT A

SF - SINGLE FAMILY
TH - TOWNHOUSE
GA - GARDEN APARTMENT
H - HIGH-RISE APARTMENT
C - NON-MARINE COMMERCIAL
I - NON-MARINE INDUSTRIAL
P - PUBLIC/INSTITUTIONAL
T - TRANSPORTATION/UTILITIES/ PARKING

O - OPEN SPACE & RECREATION
M - MARINAS & MINOR REPAIRS
MS - MARINE SALES, ACCESSORIES/ SERVICE
F - FISHERIES
RE - RESTAURANTS
Y - BOAT YARD/MAJOR REPAIR
S - SHIPPING & CARGO
- MARINE RELATED

consists of three principal uses: a convention conference facility with ancillary banquet and meeting rooms, which is used for concerts, cultural and sporting events; hotel and ancillary facilities such as restaurants and amenities; and a series of commercial shops which link the convention/conference center to parking areas and the riverfront. Cye's Rivergate was the first high-rise office building to be developed near the mouth of the river.

The DuPont Plaza hotel, located immediately east of the Brickell Avenue bridge on the north bank of the Miami River, is a mixed-use facility combining hotel, office and limited retail commercial. Immediately to the north of the DuPont Plaza hotel is the future site of the Miami Centre project which consists of an office tower and the Pavillion hotel.

This district has excellent regional accessibility as a result of the I-95 access and exit ramps. Along the north bank of the river, the access and exit ramps are located along S.E. 2nd and 3rd Streets, just east of North Miami Avenue. On the south bank, the ramps are located between S.W. 4th and 3rd Avenues just south of S.W. 7th Street. The expressway itself, serves as a territorial marker, defining the district's northern and western border. It is important to note that whereas the properties along the south bank of the river enjoy a similar level of accessibility to the expressway system due to the westerly location of the access and exit ramps on the north of the river, those properties which lie west of South Miami Avenue do not enjoy the same level of accessibility to the expressway

system. Traffic to or from these properties must travel in an eastwardly direction through heavily congested roads to loop back to the expressway system; or travel northward to the exit and access ramps located northwest of the Government Center area. In addition, the bridge ramps typically present access difficulties to any riverfront properties which are less than 200 feet in depth. A majority of these properties are located along the south side of the river as opposed to the north bank where larger tracts of land are available for development.

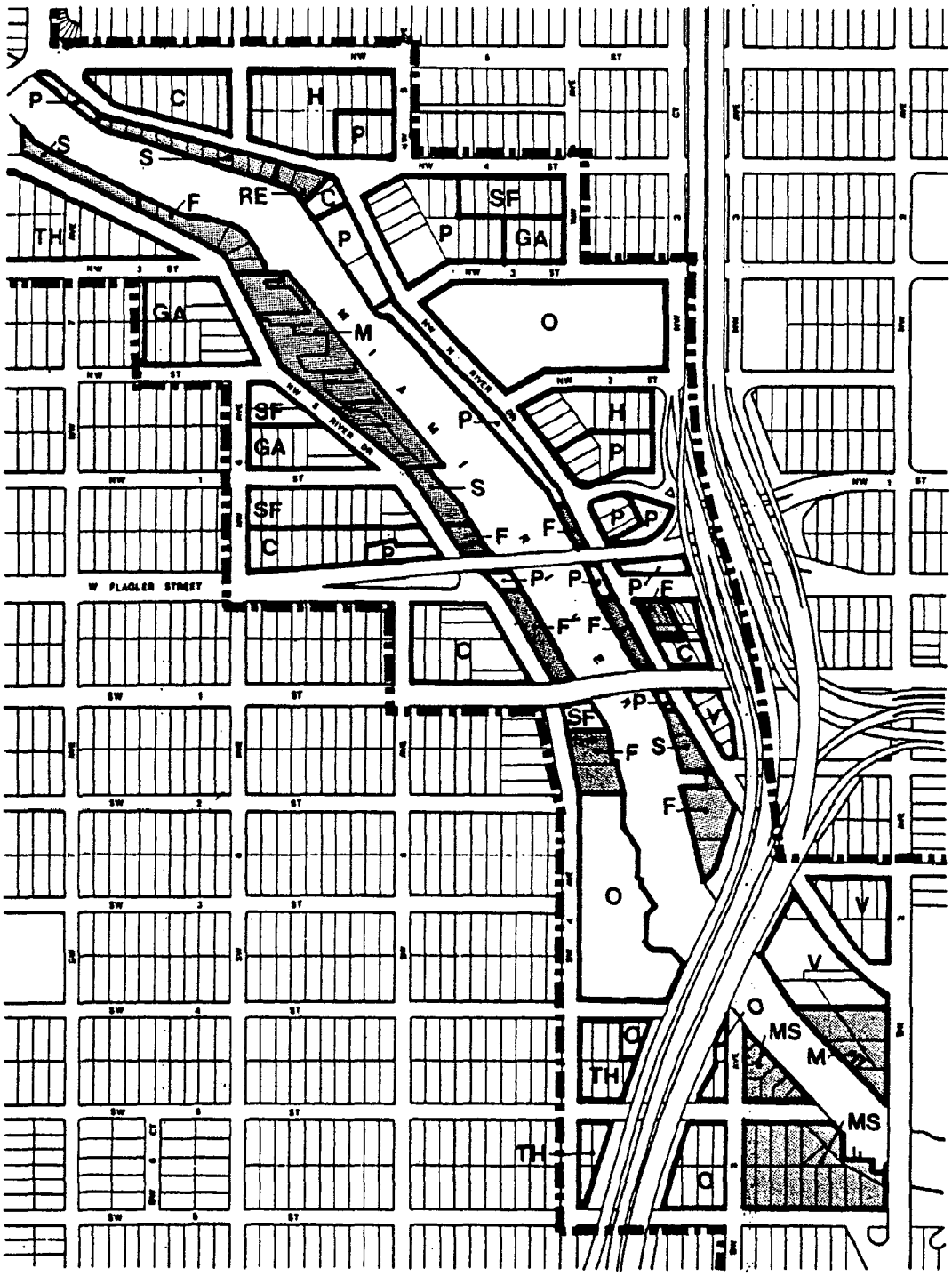
The river varies in width from 164 feet to a maximum of 218 feet just east of Metrorail Guideway. The depth of the channel varies from 15 to 18 feet.

Most of the marine-related uses are concentrated just east of I-95, with Miami Shipyard Corporation, a boatyard facility for minor or major repair of large vessels, as the largest marine use. With the sale of Tommy's Boatyard this year, the length of the river frontage in marine uses declined to 30 percent. Aside from the Merrill Stevens Dry Dock Company, which has been on the Miami River for over 100 years, Tommy's Boatyard had been the second oldest operation along the river's bank.

The land use trends in this area since 1974 have been a decrease in the amount of both vacant and marine-related uses, while experiencing an increase in non-marine commerical uses. This district is in transition from marine commercial/industrial and parking to more intense non-marine commercial uses typical of urban cores. The north bank is likely to undergo development/redevelopment at a more accelerated rate than the south bank due to greater development pressures from the downtown core vis-a-vis the Brickell area.

2. <u>District B--I-95 to 5th Street Bridge</u>

District B, approximately .75 miles in length, is primarily characterized by marine commercial uses such as fisheries, marine services and marinas. Over 60 percent of the river's edge is devoted to marine-related uses. Fisheries such as East Coast Fisheries and National Fisheries along side with River Marine, Denizana Shipping and other marine-related companies, give this stretch of the river a certain marine commercial flavor which is both quaint and attractive in its own way.



LAND USE MAP – DISTRICT B

SF - SINGLE FAMILY
TH - TOWNHOUSE
GA - GARDEN APARTMENT
H - HIGH-RISE APARTMENT
C - NON-MARINE COMMERCIAL
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Y - BOAT YARD/MAJOR REPAIR
S - SHIPPING & CARGO
- MARINE RELATED

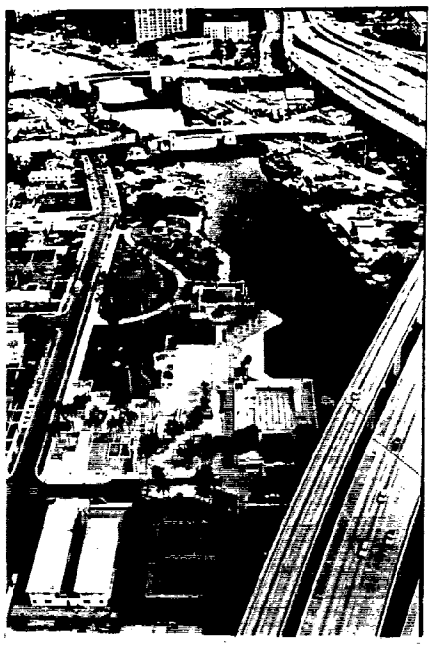
Approximately 35 percent of the shoreline is public property, either park land, public rights-of-way or governmental operations.

The river varies in width and measures 180 feet across at its narrowest point, immediately to the east of the 5th Street Bridge. The depth of the channel varies from 17.5 feet near the S.W. 1st and Flagler Street Bridges to approximately 15 feet near the 5th Street Bridge.

The newest addition to the City of Miami park system is the Jose Marti Riverfront Park, located just west of I-95 on the south bank of the river. The award-winning community park features over 650 feet of shoreline with a riverwalk. The park has a swimming pool, community facilities building, racquetball courts, softball field and open play areas.

The second open space system of importance is Lummus Park on the north bank of the river between N.W. 2nd and 3rd Streets. Lummus Park is a 5.9-acre park scheduled for redevelopment by the City of Miami. The park principally serves the high-rise elderly housing complexes to the south and north of the park, as well as the Culmer Overtown area to the north and northeast. Projected improvements for this park include minor renovations to the recreation building and card building, as well as site furniture, landscaping and lighting.

The final phase of the park improvements will consist of an entry plaza, as well as picnic shelters, paving and a fitness center. A portion of the park has frontage along the river, but this section is separated from the remaining portions of the park by North River Drive. The Pioneer Club, a historical organization, holds a 99-year lease on the building which is located on the river portion of the park. Lummus Park could play a significant role in providing a major link for pedestrian access to the north bank of the river for office workers based in various government buildings throughout the Government Center, located immediately to the east of N.W. 3rd Avenue.

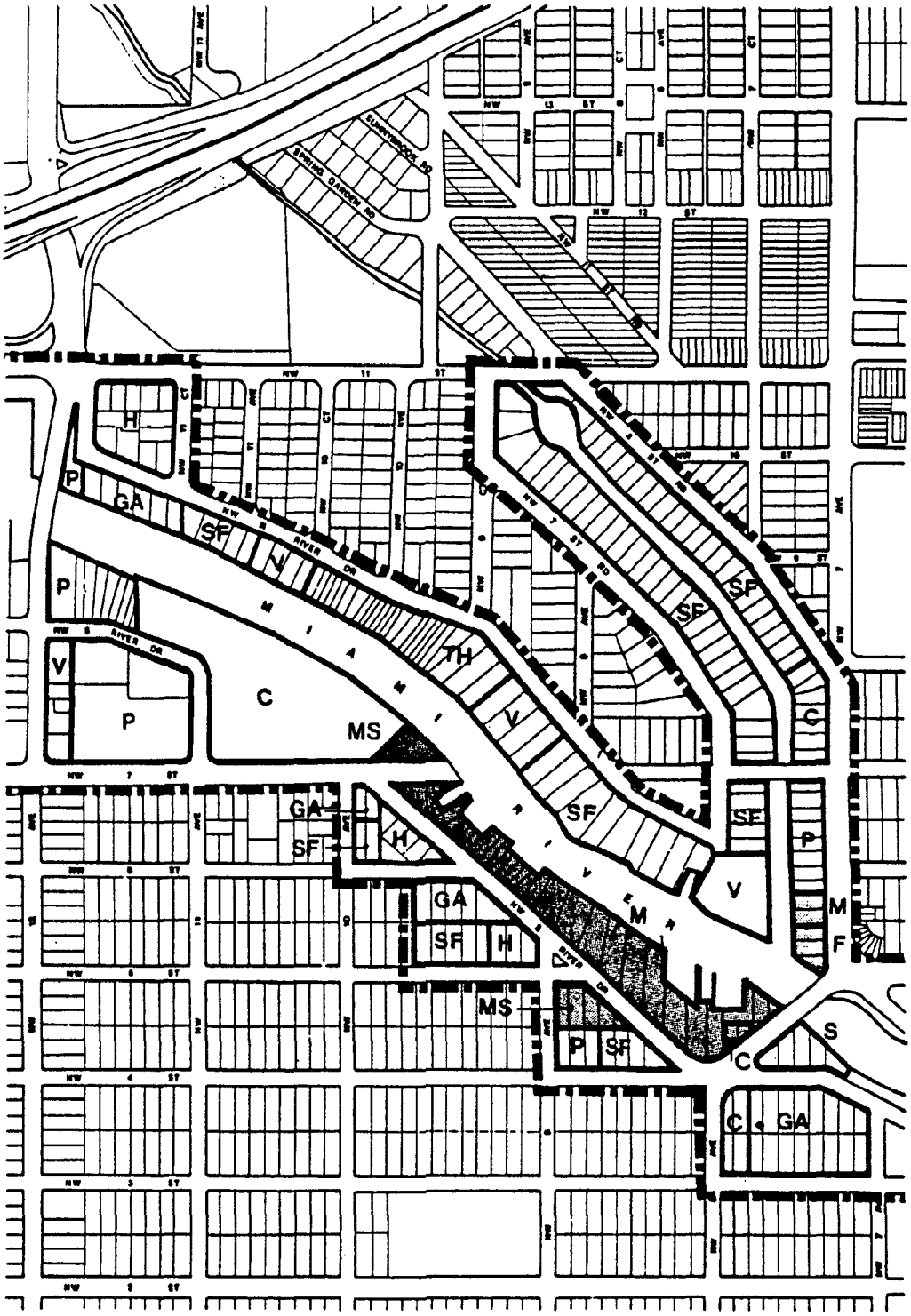


Both the Jose Marti Park and Lummus Park suffer from underutilization. In the case of the Jose Marti Park, the low-level utilization is more related to the need for recreational programs and community-based organizations to adopt the park as their recreational base. In the case of Lummus Park, the low-level utilization is cause by the condition of the recreational facilities and a need for better linkages which would connect the park to pedestrian systems along the river and to the Government Center.

The most limiting factor affecting land use patterns and trends along this stretch of the river is the narrowness of the abutting properties on either bank. Consequently, with the exception of the Jose Marti Riverfront Park, there has been an absence of significant new construction in the area. The only exception consists of Magic City Enterprises, a local development company, which has acquired several historic properties just east of S.W. 1st Avenue and converted the existing wood frame homes into a "bed-and-breakfast" hotel.

3. <u>District C--5th Street Bridge to 12th Avenue Bridge</u>

District C, approximately .65 miles in length, consists of three distinct land use elements. The first is marine-related and extends from the 5th Street Bridge to the former



LAND USE MAP – DISTRICT C

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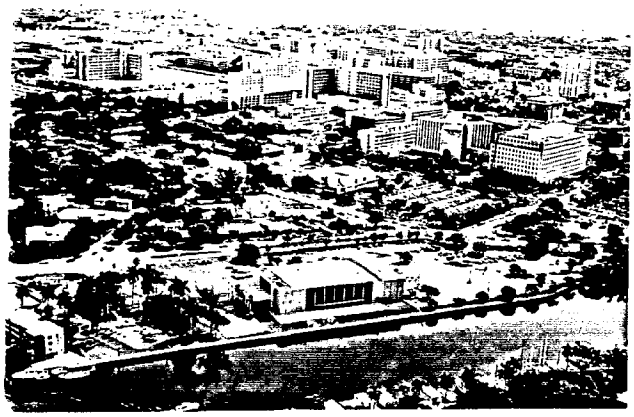
Miami News building on the south bank of the river. The Norseman Ship Building/Boat Repair Yard and the River Port Marina/ Bayliner dealership are located here. Marine services include sales, wet and dry storage and minor repairs.

The second land use element consists of non-marine commercial uses. These lie immediately to the west of the marine-related uses mentioned above and consist of the former Miami News building, now owned and operated by Southeast Bank for "back-office" operations which require no contact with the public. Dade County offices for property management and GSA are adjacent to the bank facility. This second element has absolutely no relationship to the river. Metropolitan Dade County maintains a dock for patrol boats at this location.

The third element is a residential component on the north bank consisting primarily of single-family residences within proximity of the 5th Street Bridge and increasing in density to townhouse and garden apartments toward the 12th Avenue Bridge area. In addition, there are some vacant lots which tend to be unsightly and used for abandoned vehicles.

The only recent developments in this district include a complex of moderately priced townhouses extending from N.W. 9th Court to just west of N.W. 10th Avenue along North River Drive. A smaller group of older townhouses lies immediately to the west. The townhouse development is in response to a housing market for moderately priced units generated by the civic center complex immediately to the north of this area. The waterfront units in this development have boat docks along the river's edge as a residential marketing amenity.



The civic center is a common term for an area that lies immediately north of the Miami River between 9th and 14th Avenues. This area contains a complex of both government and health care-related facilities. Jackson Memorial Hospital, Cedars of Lebanon and the Veterans Administration Hospital are located here, as well as County courts, detention facilities, public defenders' office building and the main offices of the County Public Safety Department.

Approximately 25 percent of the district is devoted to marine-related uses; 40 percent is residential; 15 percent is non-marine commercial; 15 percent is vacant; and 5 percent is public-governmental.

The river width and depth remain almost constant throughout this district. The width varies only from 160 feet to approximately 180 feet in width and the channel has a depth of approximately 15.5 feet throughout.

4. District D--12th Avenue Bridge to 17th Avenue Bridge

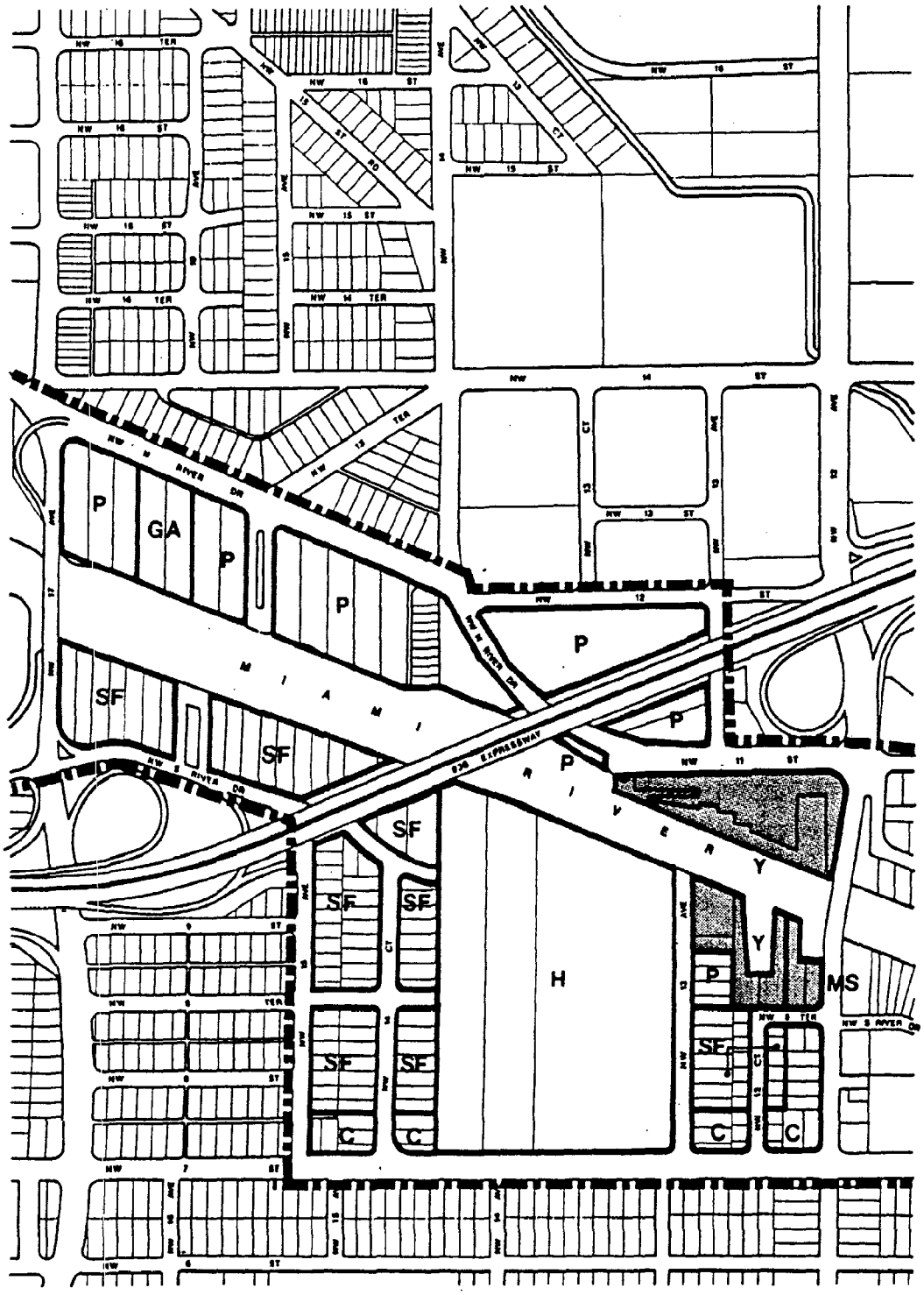
District D, approximately .65 miles in length, is a district which is primarily institutional and residential in character.

The most distinguishing land use features are the Robert King High Towers, the Merrill Stevens Boat Yard, the 836 Expressway structure crossing, the Mahi Temple and a grouping of very well-kept single-family homes bordered by a beautiful row of royal palm trees along the river's edge.

Approximately 40 percent of the shoreline is devoted to a public right-of-way and to institutions such as the Mahi Temple and other Masonic lodges. The latter occupies very valuable riverfront property with excellent vehicular and non-vehicular accessibility to the civic center area.

Another 45 percent of the shoreline is devoted to residential uses varying in type from single family, to garden apartment and high rise. The remaining 15 percent of the shoreline is comprised of the Merrill Stevens Dry Dock Company properties on both banks of the river just west of the 12th Avenue Bridge.

The river varies in depth from 180 feet to 280 feet just west of the east/west expressway, the widest point in the entire



LAND USE MAP – DISTRICT D

SF - SINGLE FAMILY
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GA - GARDEN APARTMENT
H - HIGH-RISE APARTMENT
C - NON-MARINE COMMERCIAL
I - NON-MARINE INDUSTRIAL
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- MARINE RELATED

river channel. The depth of the channel varies from 13.8 feet just east of 17th Avenue to 15.5 feet just west of the east/west expressway.

District D is the most stable area along the river. This is due in part to the fact that both banks of the river consist of large tracts of land which are either in the public domain or owned by highly successful private corporations with a long established presence in the Miami area.

5. District E--17th Avenue Bridge to the 22nd Avenue Bridge

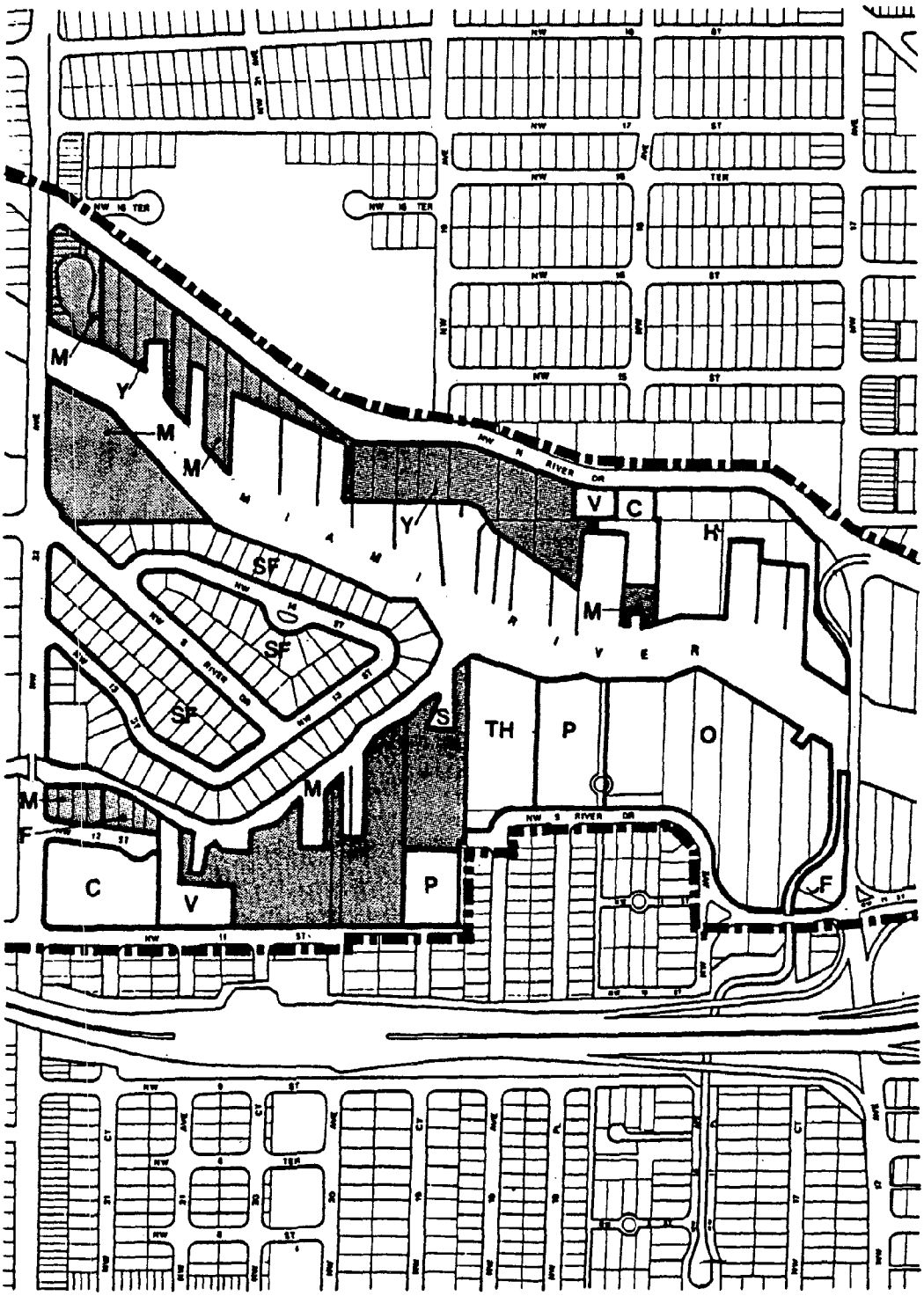
District E, approximately .65 miles in length, is a district which typifies the diversity of land uses which are commonly found along the river. Approximately 50 percent of the river's edge is devoted to marine-dependent uses such as Hardie's Marina, Nuta's Boatyard and Repair and Poland's Marina where the "do-it-yourselfers" can repair their boats.

Along South Fork River the most dominant feature is Allied Marine. Caribbean Shipping, which exports all types of second-hand goods to Haiti, is based immediately east of Allied Marine.

Approximately 35 percent of the shoreline is devoted to residential uses. Single-family, townhouse and high-rise residential are found along this stretch of the river. This is an area of contrasts. For example, one of the nicer single-family and townhouse residential developments (i.e., River Club) along the river, adjoin the Caribbean Shipping operations and Allied Marine. Similarly, River Run, a high-rise residential development with marina and recreational amenities adjoins one of the most dilapidated properties found along the river.

The balance of the shoreline is primarily consumed by the City of Miami's E.G. Sewell Park and Dodge Mental Health Hospital, immediately to the west of the park. E.G. Sewell Park is a passive park which is in need of shoreline restoration and a high degree of maintenance. Unfortunately, this park receives very little use from the surrounding residential community and consequently has not received the level of priority it deserves to enhance the park's native settings.

The river varies considerably along this district although the depth of the channel remains almost constant. The river



LAND USE MAP - DISTRICT E

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GA - GARDEN APARTMENT
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C - NON-MARINE COMMERCIAL
I - NON-MARINE INDUSTRIAL
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S - SHIPPING & CARGO
- MARINE RELATED

varies from approximately 160 feet to a width of 239 feet just west of 17th Avenue. The depth of the channel varies from 14.5 feet to approximately 15.5 feet.

6. District F--22nd Avenue Bridge to 27th Avenue Bridge

District F, approximately .65 miles in length, is primarily a residential district, with just a few exceptions on the south bank immediately west of the 22nd Avenue Bridge. Single-family, townhouse, garden apartments and high-rise residential structures are found in this district. For the most part, the housing stock is in fair to good condition but there is evidence of a need for improved maintenance of both yard areas and structurces. Approximately 60 percent of the shoreline is devoted to residential uses.

Marine-dependent services comprise only 20 percent of the shoreline; and these are primarily related to the Florida Yacht and Florida Ships property. Another 10 percent of the shoreline consists of public/institutional uses such as the Key Power Vocational School. The balance of the shoreline consists of vacant parcels and Gerry Curtis Park. During the last 10 years there has been little or no activity in this area involving new construction or changes in land use. This is primarily a residential zone along both sides of the river.

The river varies in width from a minimum of 100 feet just east of 27th Avenue to approximately 165 feet opposite the Musa Isle development, located west of Curtis Park. The depth of the channel is rather constant along this stretch of the river, averaging approximately 15 feet.

7. District G--27th Avenue Bridge to N.W. 32nd Avenue

District G, approximately .65 miles in length, is primarily marine industrial, consisting of boat yards and marine shipping terminals. Approximately 55 percent of the shoreline is devoted to marine-dependent uses.

There is a small pocket of residential on the south bank of the river fronting on South River Drive. The residential consists of single-family residences, townhouses and a trailer park just west of 27th Avenue; however, residential represents less than 20 percent of the area and it shows signs of being an area in transition. Approximately 5 percent of the area is non-marine commercial or public-institutional. Ten percent is vacant and another 10 percent is non-marine industrial.

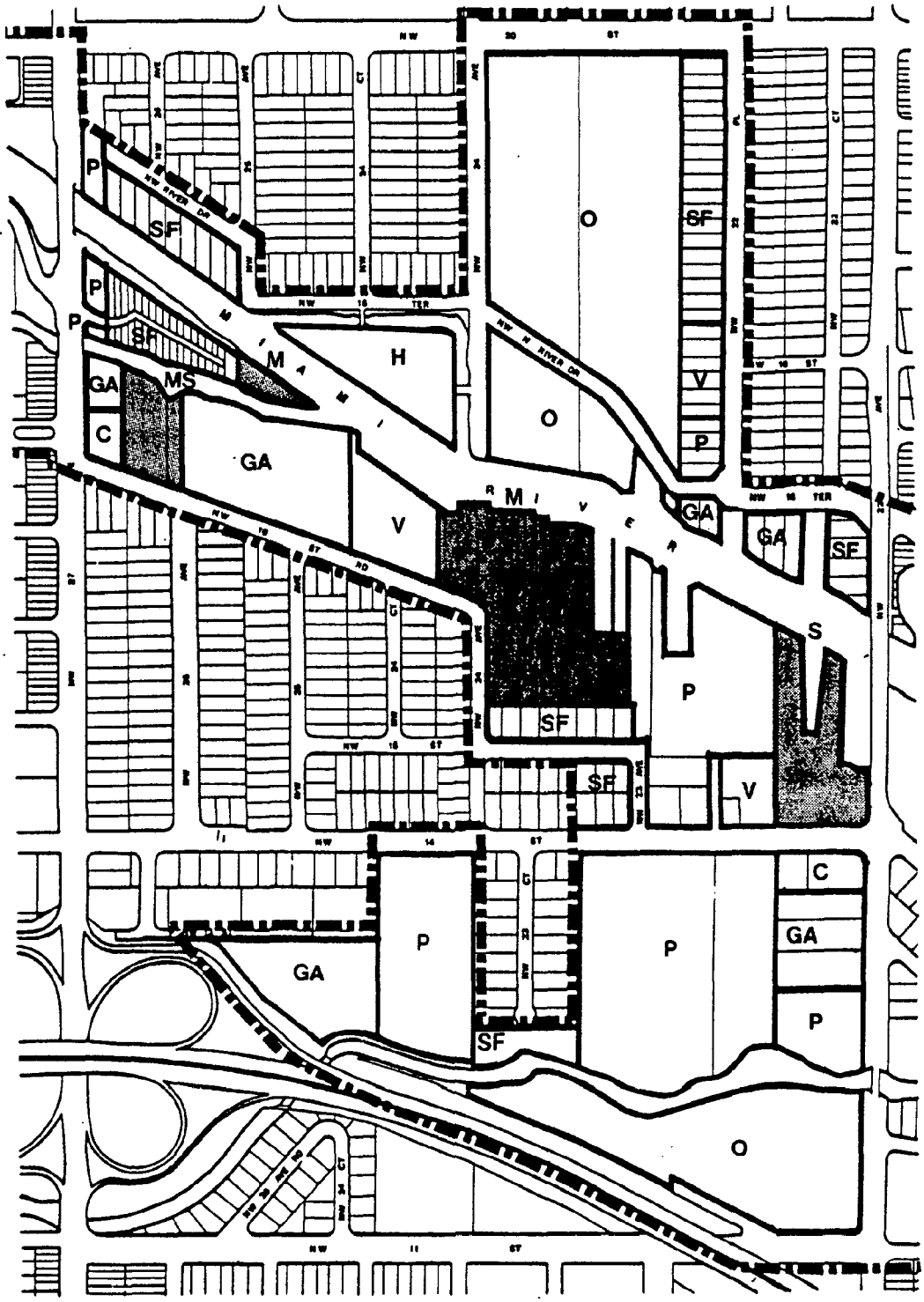
The river varies in width from a minimum of just under 100 feet within proximity of 32nd Avenue to approximately 150 feet just east of the Tamiami Canal. The depth of the channel varies from 14 feet near 32nd Avenue to 15.5 feet just east of the Tamiami Canal.

8. District H--N.W. 32nd Avenue to the Salinity Dam West of N.W. 37th Avenue

District H, approximately .65 miles in length, is a mixture of marine-related uses, both commercial and industrial, amounting to approximately 45 percent of the shoreline; and other non-marine commercial and industrial uses. The latter amount to approximately 35 percent of the shoreline. This district serves primarily as a shipping terminal for containerized cargo.

The balance, or 20 percent of the shoreline, is presently vacant and presents a formidable opportunity for expansion of existing uses, or introduction of new uses along this district. It is very likely that the trends of expanding shipping activities will continue in the future as a result of the amount of vacant land which is still available in this district. The growth and development of this portion of the river as a main shipping terminal for the Caribbean has been a slow process. This is in part due to the fact that this is the area farthest from the mouth of the river, and both the distance and number of bridge openings between these properties and the mouth of the river present a slight disinvestment factor for marine industrial investment. The nature of the river itself, as well as the surrounding land uses, present few opportunities for uses other than marine industrial or non-marine industrial operations.

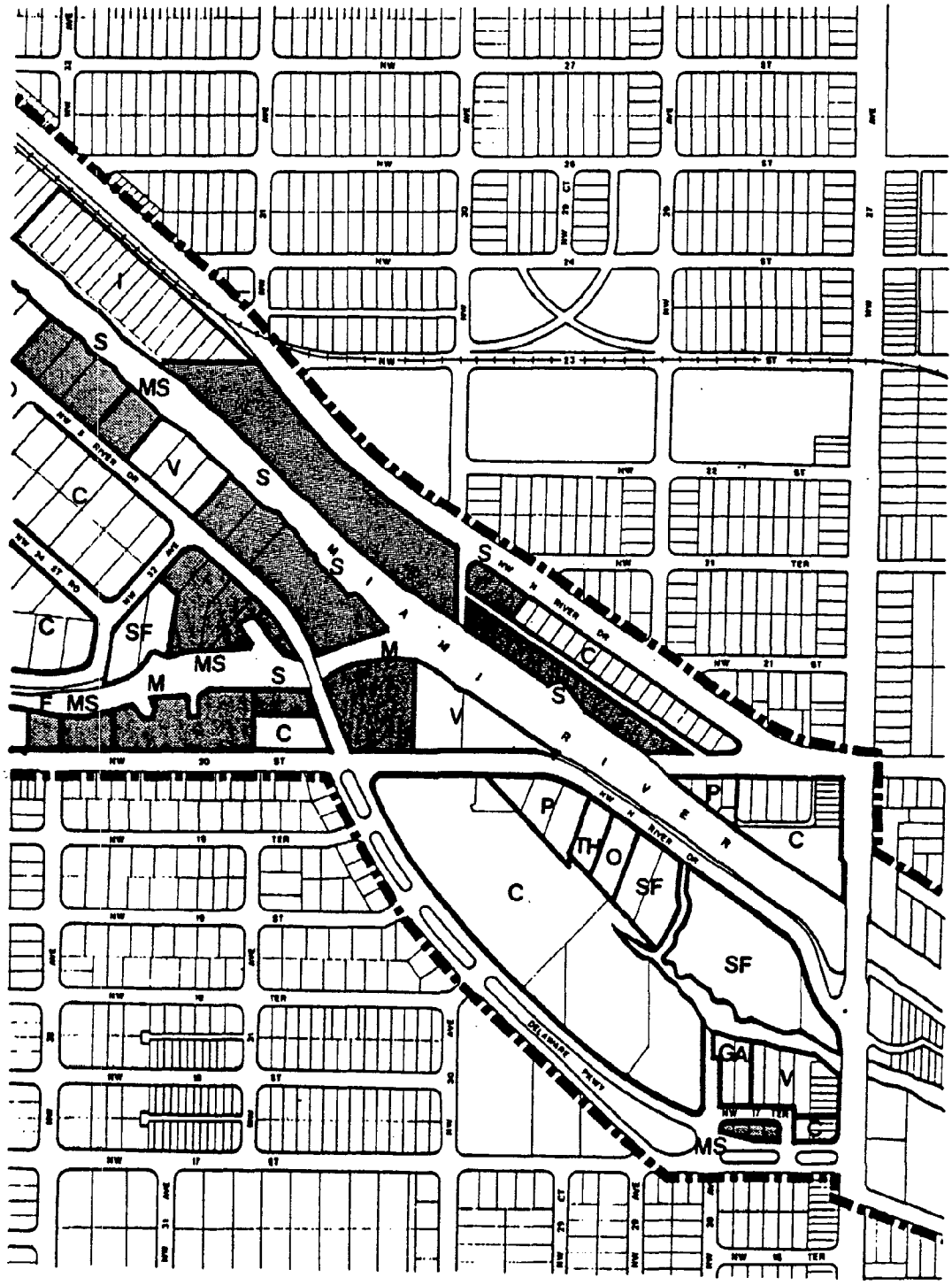
The river varies in width from 100 feet to approximately 200 feet at the entrance to Palmer Lake. The depth of channel varies from 10 feet just east of the Salinity Dam to 15 feet just west of Palmer Lake.



LAND USE MAP - DISTRICT F

SF - SINGLE FAMILY
TH - TOWNHOUSE
GA - GARDEN APARTMENT
H - HIGH-RISE APARTMENT
C - NON-MARINE COMMERCIAL
I - NON-MARINE INDUSTRIAL
P - PUBLIC/INSTITUTIONAL
T - TRANSPORTATION/UTILITIES/ PARKING

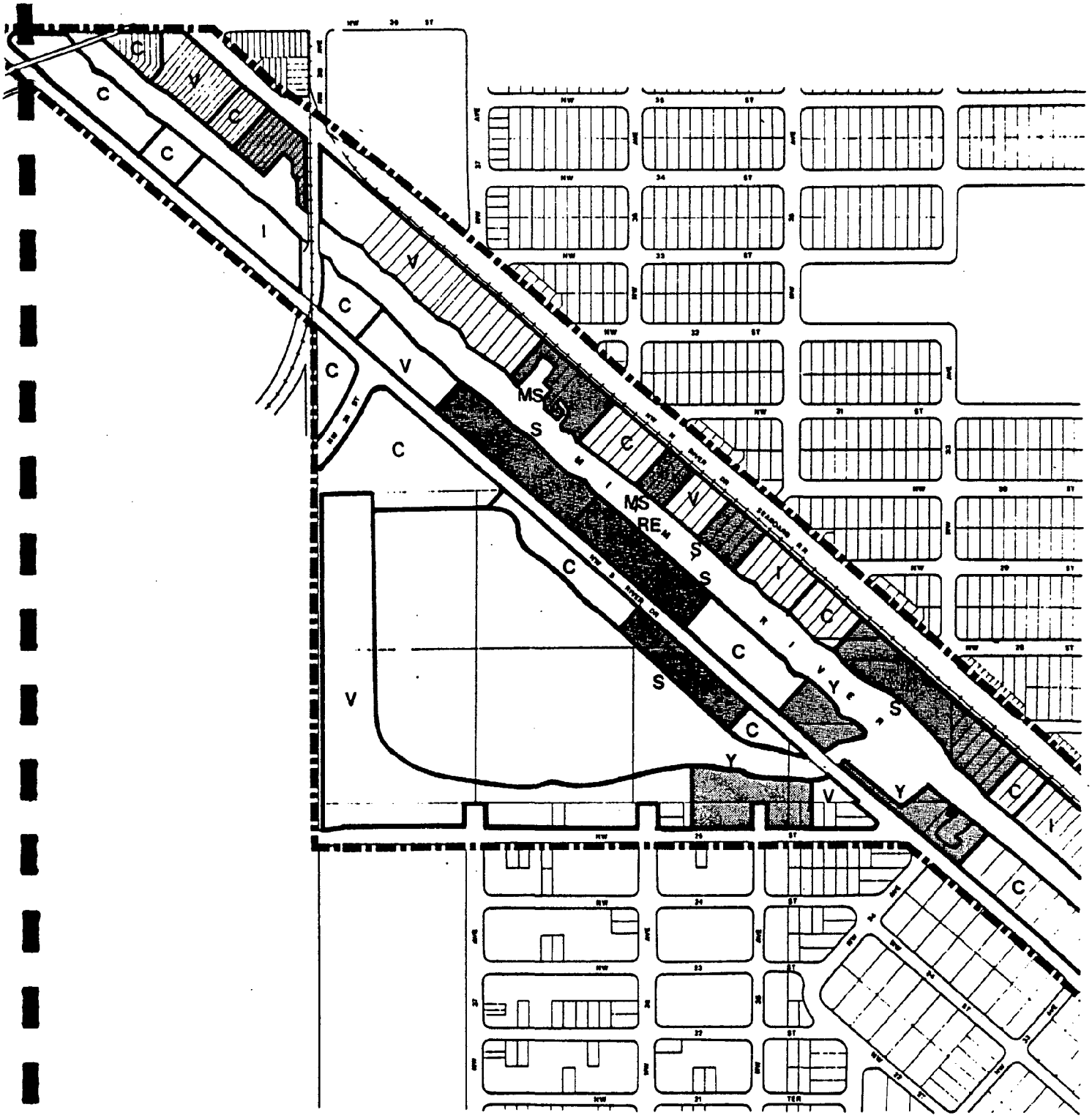
O - OPEN SPACE & RECREATION
M - MARINAS & MINOR REPAIRS
MS - MARINE SALES, ACCESSORIES/ SERVICE
F - FISHERIES
RE - RESTAURANTS
Y - BOAT YARD/MAJOR REPAIR
S - SHIPPING & CARGO
- MARINE RELATED



LAND USE MAP – DISTRICT G

SF - SINGLE FAMILY
TH - TOWNHOUSE
GA - GARDEN APARTMENT
H - HIGH-RISE APARTMENT
C - NON-MARINE COMMERCIAL
I - NON-MARINE INDUSTRIAL
P - PUBLIC/INSTITUTIONAL
T - TRANSPORTATION/UTILITIES/ PARKING

O - OPEN SPACE & RECREATION
M - MARINAS & MINOR REPAIRS
MS - MARINE SALES, ACCESSORIES/ SERVICE
F - FISHERIES
RE - RESTAURANTS
Y - BOAT YARD/MAJOR REPAIR
S - SHIPPING & CARGO
- MARINE RELATED



LAND USE MAP – DISTRICT H

SF - SINGLE FAMILY
TH - TOWNHOUSE
GA - GARDEN APARTMENT
H - HIGH-RISE APARTMENT
C - NON-MARINE COMMERCIAL
I - NON-MARINE INDUSTRIAL
P - PUBLIC/INSTITUTIONAL
T - TRANSPORTATION/UTILITIES/ PARKING

O - OPEN SPACE & RECREATION
M - MARINAS & MINOR REPAIRS
MS - MARINE SALES, ACCESSORIES/ SERVICE
F - FISHERIES
RE - RESTAURANTS
Y - BOAT YARD/MAJOR REPAIR
S - SHIPPING & CARGO
- MARINE RELATED

B. ENVIRONMENTAL CONDITIONS

Environmental conditions survey identifies the physical qualities of structures, properties and shoreline improvements along the river. The conditions were categorized according to the degree of remedial actions that would be required to upgrade the particular property to a sound condition. The term "dilapidated" was used to describe properties where structures might be structurally unsound, boarded-up or abandoned; also vacant properties which might have deteriorated bulkheads or unconsolidated shoreline and littered with junk, debris and derelict vessels or vehicles, received the same classification. "Noxious activities" is a category given to non-river-dependent uses such as "scrap metal yards" which contributes not only to polluting the ground water and river quality, but also visually blights the area.

Almost 75 years ago, the Miami River had clear, drinkable water. Today, this body of water has one of the highest concentrations of pollutants in the State of Florida. The river's water quality, although highly stratified, varies considerably throughout the length of the river. The upper reaches of the river near the Salinity Dam, is characterized by a slightly brackish water, whereas the areas of the river near the mouth are characterized by saline waters. The County Department for Environmental Resources Management (DERM) has a number of monitoring stations along the Miami River where water quality is periodically monitored. The highest level of turbidity is found at the mouth of the river, whereas the higher levels of color values are found at the upper reaches of the river. The latter is partly due to a possibility of fertilizers, metals and oil spills entering the river at sites from which industrial-type activities are conducted. A number of recent studies have documented that sediments along the entire length of the river are extremely polluted. In addition, the studies have proven that the concentrations of pollutants are much greater near the mouth than in the upper reaches of the river. It is also interesting to note that due to the heavy ship traffic which constantly re-suspends particles from the bottom, the polluted sediments are quite mixed throughout the river.

The condition of the river water quality is also affected by a number of off-shore and shoreline conditions such as storm water runoffs and outfalls, sewage overflows, eroding shorelines and others. Storm water outfalls represent the major source of pollutants along the Miami River. These outfalls

drain the public right-of-ways for an area which extends approximately 1.5 miles from the river's edge. DERM has investigated a number of sites where the leak of chemicals and oil spills have contributed to the contamination of ground water and river quality. The County has established a number of programs to identify problem sites and monitor potentially polluting operations. In addition, permitting and regulatory programs have been established to govern the discharage of storm run off into the storm water system.

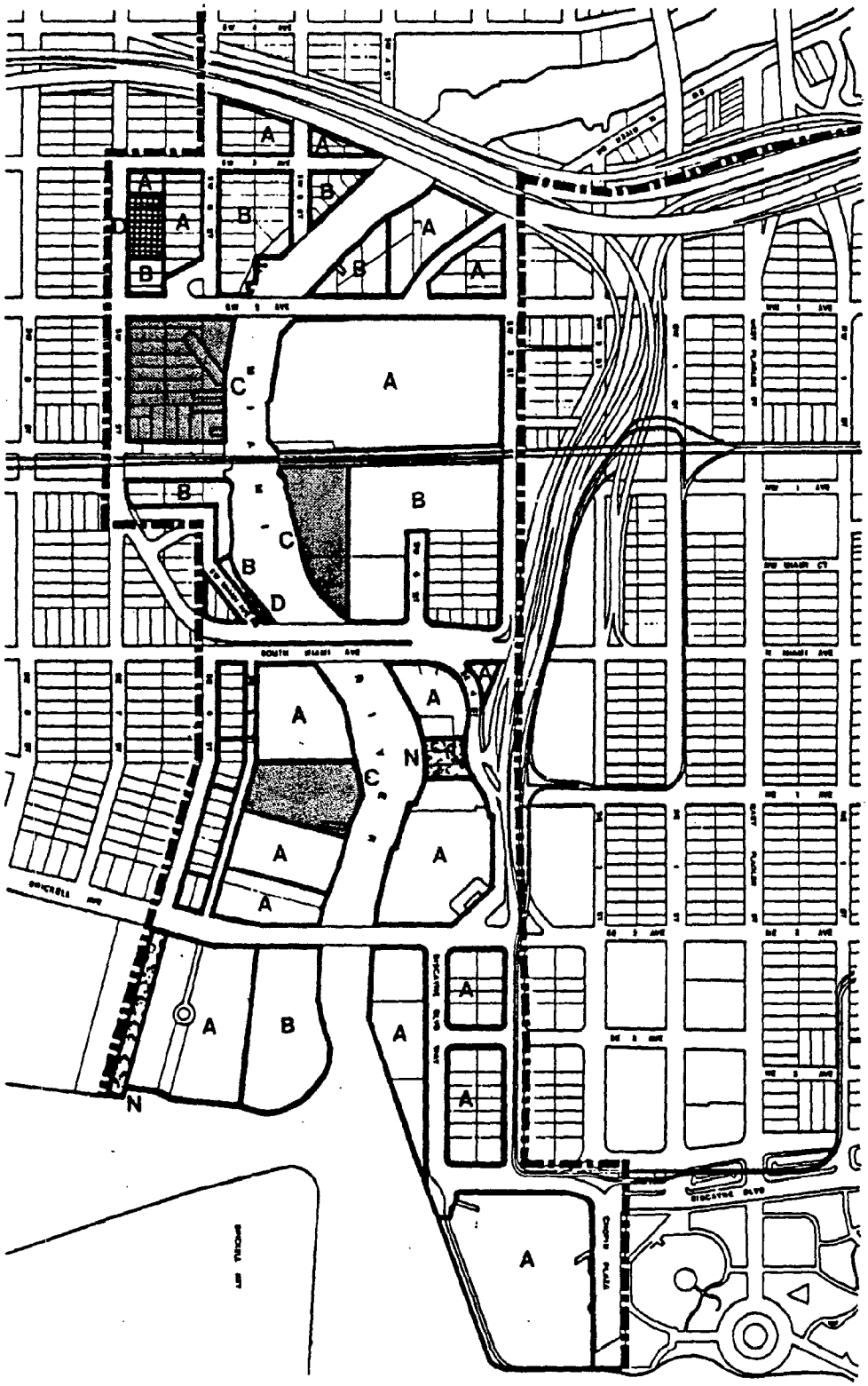
There are a number of sewage pump stations along the Miami River that receive storm water from basins that drain into the river. During heavy rainfalls, the combined storm water/sewage flows are so great that this situation causes the system to back up and overflow into the river through the storm water outfalls. In addition, the number of house boats and live-aboards moored along the river constitute another source which contributes to polluting the Miami River through a direct discharge of waste into the water.

Although there are still a number of docked or moored vessels along the river which are in deteriorating condition, a majority of partially or fully submerged vessels abandoned along the river and its tributaries, have been removed during the last several years in a combined effort between federal, State and local agencies. A number of these deteriorated vessels were removed and placed on the County's artificial reefs. Today, the majority of the partially or fully submerged vessels can be found along Seybold Canal, Wagner Canal, Tamiami Canal and Palmer Lake.

1. District A--Mouth of the River to I-95

The environmental conditions within this district are, for the most part, sound.

The most evident action required in this area is one of maintenance. For example, the vacant site west of the Rio Restaurant" is being used as a dump. Similarly the areas along the Metro Rail right-of-way adjacent to the FPL property are in need of maintenance. The shoreline along this area is quite unsightly (i.e., rubble, barb wire fencing, deteriorated bulkhead). In contrast, the public rights-of-way under I-95 are well-kept and landscaped.



ENVIRONMENTAL CONDITIONS MAP – DISTRICT A

A - SOUND

B - MAINTENANCE

C - MAJOR REPAIRS

D - DILAPIDATED

F - NOXIOUS ACTIVITIES

N - NATURAL SETTINGS

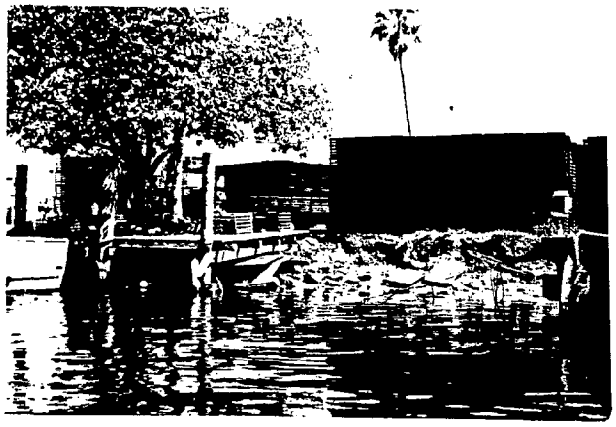
There are a few areas where major repairs of shoreline conditions are required. The most noticeable is an area immediately east of Dawson Marine, on the south bank of the river, adjacent to the new Miami Avenue Bridge.

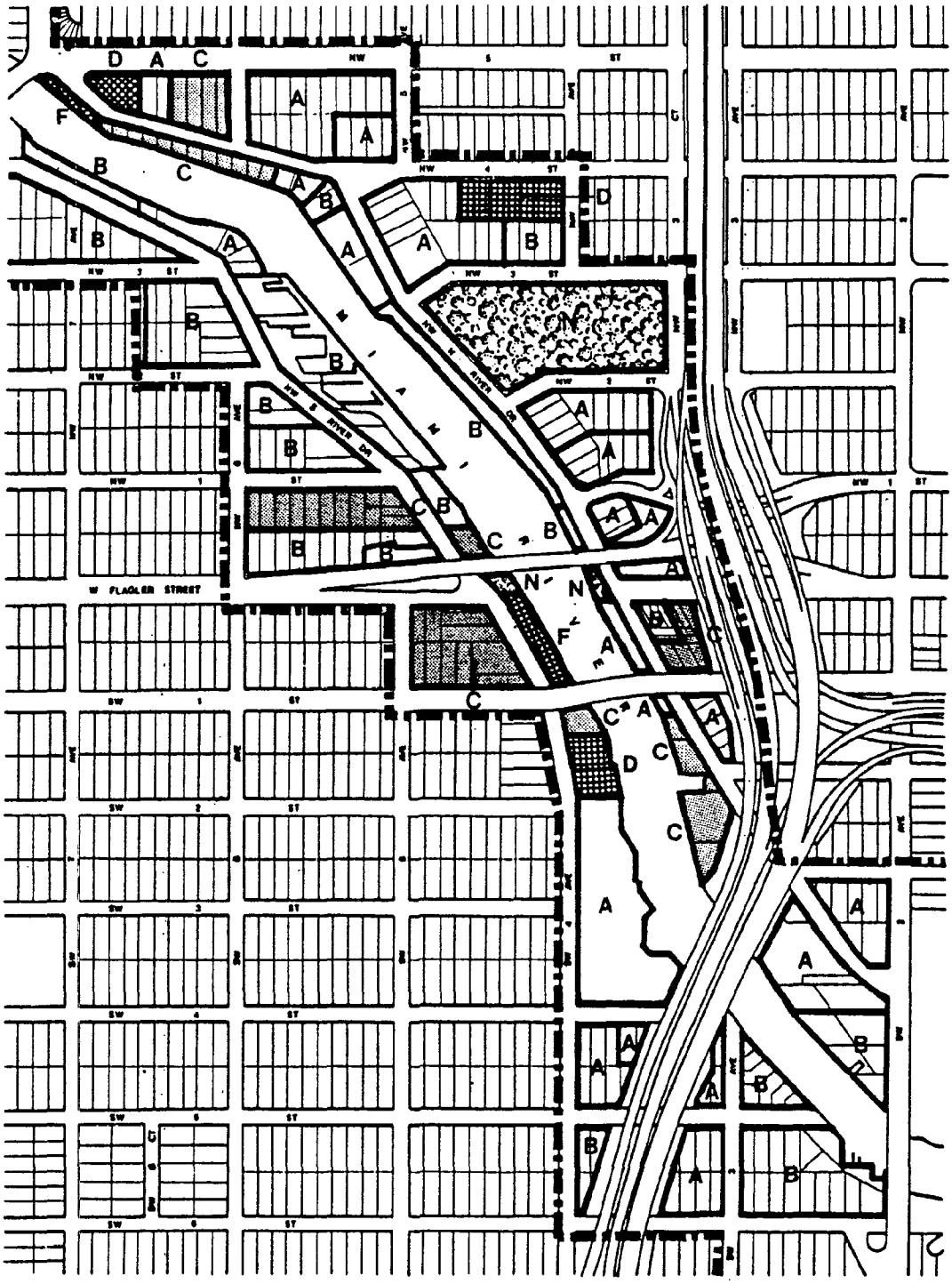
The Miami River walkway, which extends from the S.E. 2nd Avenue Bridge on the east, to Fort Dallas Park on the west, represents the initial phase of capital improvements to improve and enhance the ambiance of the river's edge along the City's central business district. In accordance with the City of Miami's waterfront charter amendment, public access to the shoreline along Biscayne Bay and the Miami River are required through setbacks and easements for all properties and land uses, with the exception of waterfront industrial-zoned properties.

2. District B--I-95 to 5th Street Bridge

The district has the most distinct marine character of any stretch of the river within the study area. Wholesale fisheries such as National, East Coast and Florida Carib Fishery, seafood restaurants such as East Coast and Joe's Restaurant, Colpac Shipping, W.T.T. Terminal, Bahamas International Shipping and other shipping companies characterize this district.

As a result of the marine activities which take place along both sides of the rivers this district might appear to be unsightly and run down. Although there are numerous instances of bulkheading which needs major repair or replacement, and rip rap which needs repair or maintenance, for the most part, the cluttered appearance is in part due to the marine commercial functions in this area.





ENVIRONMENTAL CONDITIONS MAP – DISTRICT B

A - SOUND

B - MAINTENANCE

C - MAJOR REPAIRS

D - DILAPIDATED

F - NOXIOUS ACTIVITIES

N - NATURAL SETTINGS

The open storage of lobster traps just west of the Jose Marti Park, across on the north bank of the river and just east of Florida Carib Fishery, Inc., immediately link the landside operations with a strong marine image. Similarly, the boats docked at the Colpac Shipping Terminal, just south of S.W. 1st Street on the north bank, full of open non-containerized cargo on its way to Haiti; the flotilla of "sponge fishing boats" just north and south of the Flagler Bridge; and the congregation of pelicans around Joe's Restaurant/Fish Market and National Fisheries at the west end of the district give it a colorful and distinguishable "marine image".

Unfortunately, this stretch of the river is surrounded by one of the highest crime areas in East Little Havana on the south bank and Culmer/Overtown on the north bank. In recent years, the only public effort to significantly upgrade the area has been the construction of Jose Marti Riverfront Park.

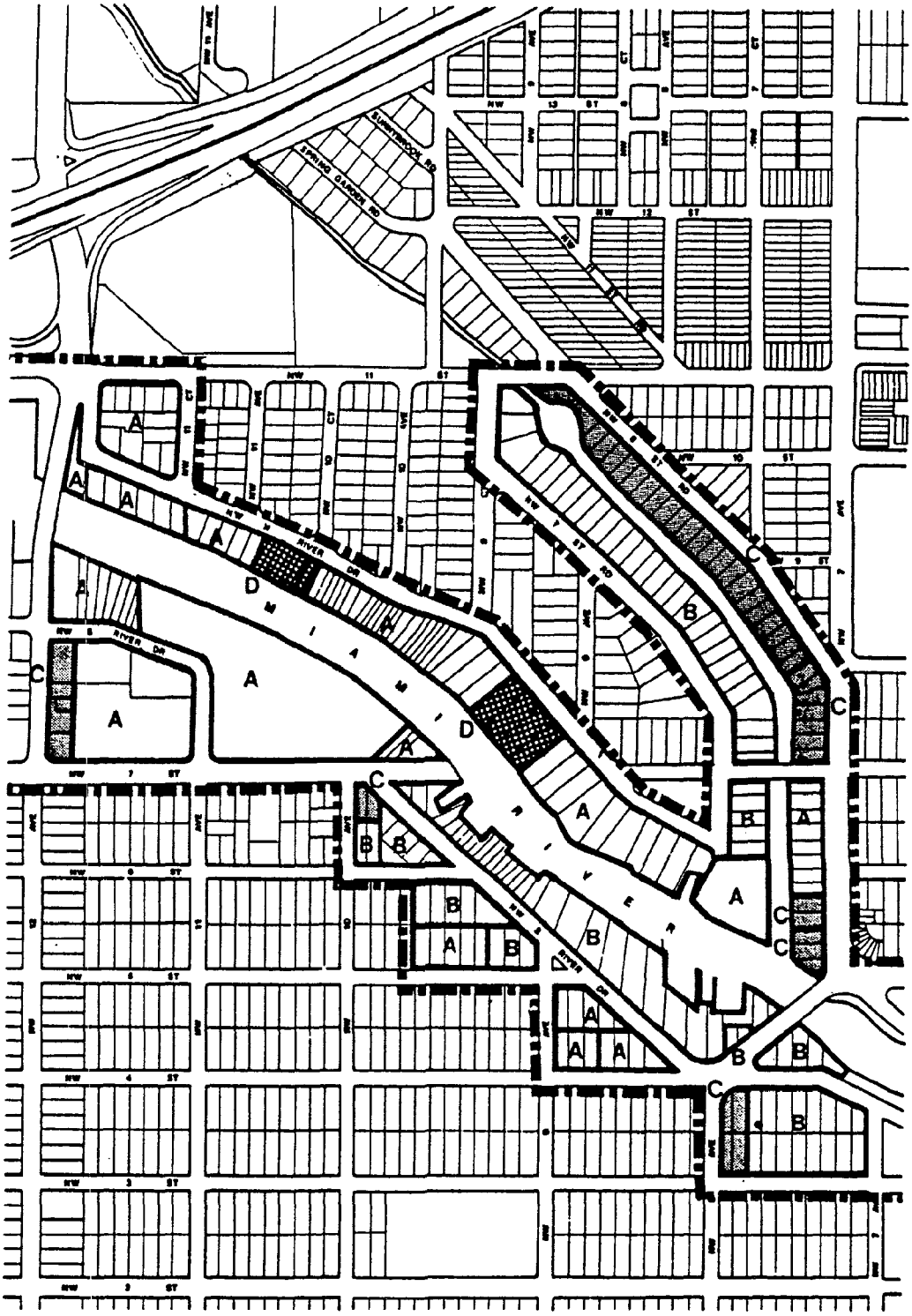
3. District C--5th Street Bridge to 12th Avenue Bridge

Environmental conditions along this district are quite sound except for a few isolated spots. These concern primarily a few vacant parcels along the north bank which are in need of maintenance and major shoreline restoration. The Metro Dade property just east of the 12th Avenue Bridge has poor shoreline conditions and the wood dock for the police patrol boats needs minor repairs.

The worst conditions are found along the Seybold Canal, at the eastern end of the district. Deteriorating bulkheads, trash piles, sunken or derelict vessels and flagrant pollution of the river are evidenced throughout the canal. A number of uses fronting along N.W. 7th Avenue, such as the Southern Bell parking lot, auto repair and body repair shops are quite incongruous with the river and create a rather incompatible relationship with the single-family homes across the way.

4. District D--12th Avenue Bridge to 17th Avenue Bridge

District D has the highest environmental quality of any other area of the river. With the exception of a few single-family residences immediately west of the expressway right-of-way on the south bank, structures along this stretch of the river are in very good condition. Properties appear to be well maintained and there are no signs which might indicate any possibility of transition or disinvestment.



ENVIRONMENTAL CONDITIONS MAP – DISTRICT C

A - SOUND

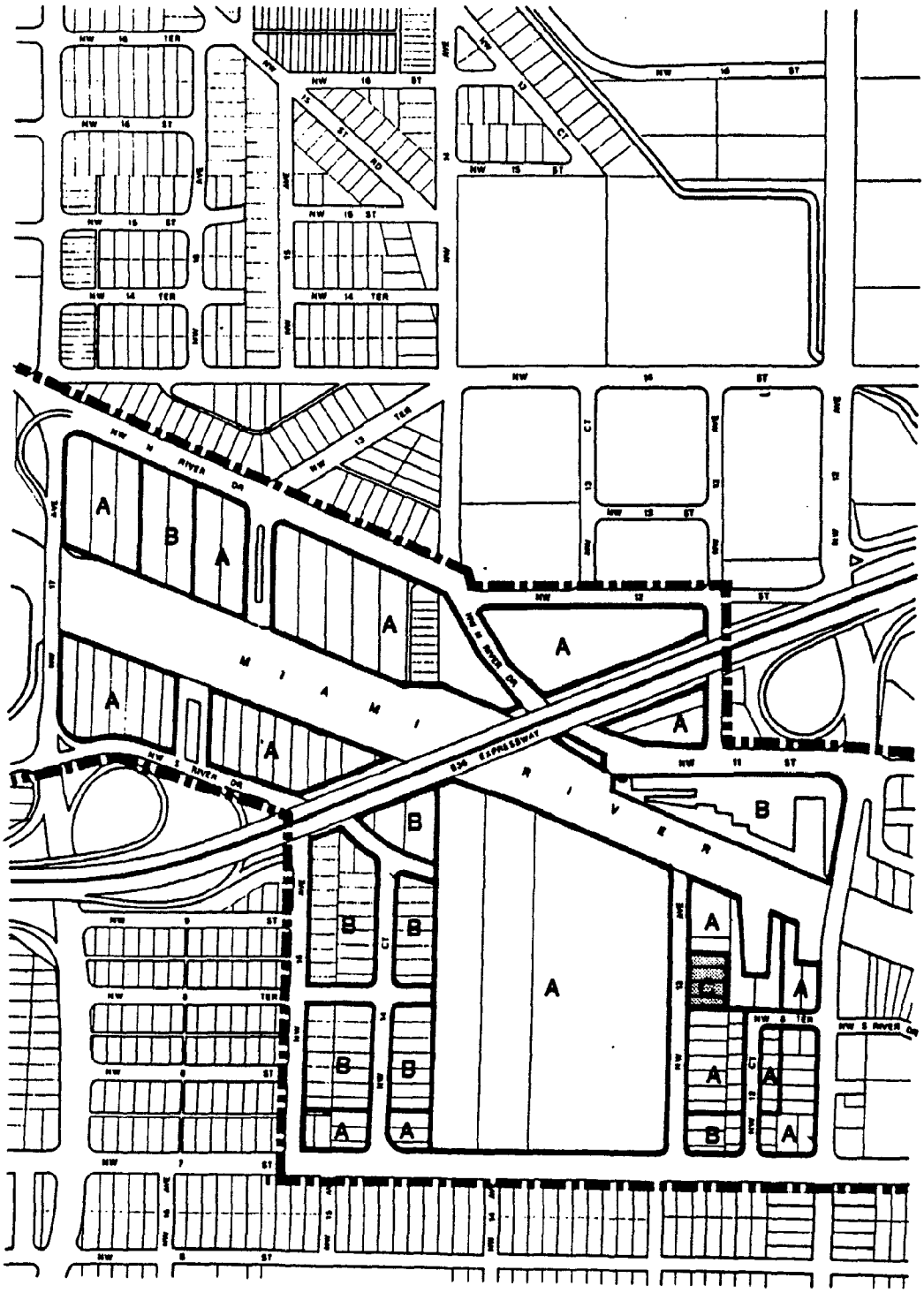
B - MAINTENANCE

C - MAJOR REPAIRS

D - DILAPIDATED

F - NOXIOUS ACTIVITIES

N - NATURAL SETTINGS



ENVIRONMENTAL CONDITIONS MAP – DISTRICT D

A - SOUND

B - MAINTENANCE

C - MAJOR REPAIRS

D - DILAPIDATED

F - NOXIOUS ACTIVITIES

N - NATURAL SETTINGS

5. District E/17th Avenue Bridge to the 22nd Avenue Bridge

The district has striking contrasts in both land uses and environmental quality.

The western portion of the district, immediately west of one of the nicer residential areas along the river, is characterized by the Ebsary Foundation property which is trashy, unsightly and with a shoreline which needs repair and in some areas replacement. On the opposite side of the river and abutting the single-family area is a vacant lot which is used by U.S. customs for storage of seized vessels. There are still several boats and abandoned yachts at this site. The property is littered with derelict vessels and vehicles. The Caribbean Shipping property is similarly in a deteriorated condition. Other properties along the South Fork River are in a similar state.

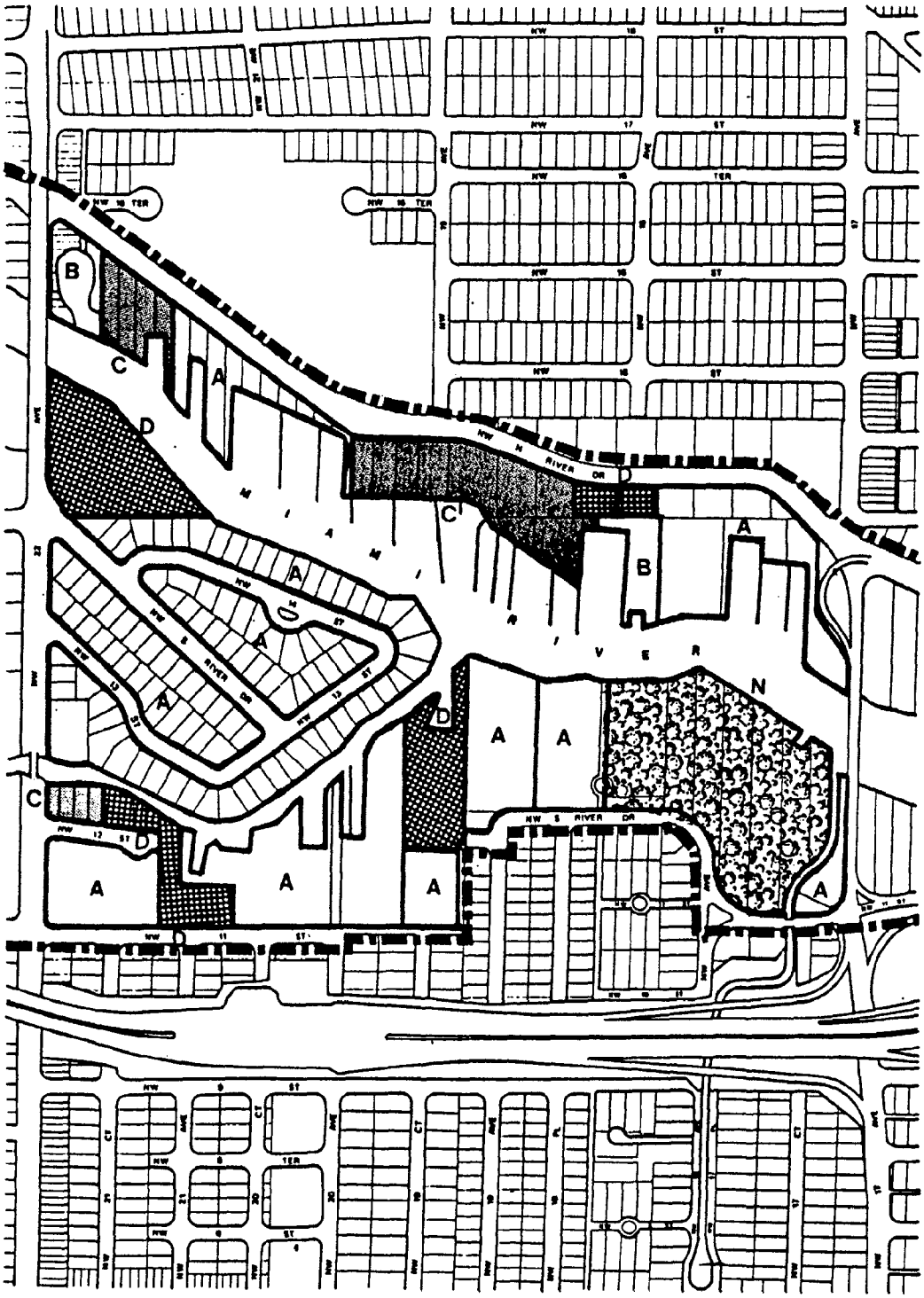
Nuta's Boat Yard property appears unsightly because of the shoreline conditons and the need for the repair of bulkheads.

Even E.G. Sewell Park, one of the most attractive passive parks in the City of Miami and the district's most distinguishable land use feature, is in need of maintenance and shoreline improvements. The rapidly eroding shoreline is losing valuable vegetation.

6. District F--22nd Avenue Bridge to 27th Avenue Bridge

The district is in sound condition with the only exception being a vacant parcel which lies between the Musa Isle Senior Citizen project and Florida Yacht. This property is trashy and in need of some limited bulkhead repairs at the westernmost corner of the property. Some of the single-family areas along the western edge of the district are in need of maintenance.

The shoreline at Gerry Curtis Park is unconsolidated and has evidence of serious erosion problems similar to Sewell Park. Several inlets and boat slips to the east of the park are being rented by live-aboards and house boats. These vessels, for the most part, give the area a "run-down and transient" appearance.



ENVIRONMENTAL CONDITIONS MAP – DISTRICT E

A - SOUND

B - MAINTENANCE

C - MAJOR REPAIRS

D - DILAPIDATED

F - NOXIOUS ACTIVITIES

N - NATURAL SETTINGS

7. District G--27th Avenue Bridge to N.W. 32nd Avenue

The environmental quality of District G is one which varies radically. For the most part, this district can be described as being of a "fair" environmental quality at best, due to the number of vacant properties which are in an abandoned state with trash, debris, abandoned vessels and deteriorated shoreline.

Although there are a number of marine boat yards such as Bojean, Tamiami Marina and B.C. Corporation, the district is primarily a shipping area with companies such as Bemuth Marine Shipping, Johnson Shipping, Hyde Shipping Corporation, and the largest shipping company being Caribbean Terminals, Inc. (CTI).

The shipping terminals can best be described as long and narrow terminals with non-descript warehouse structures in some cases and a multitude of containerized cargo deposited throughout the site. This type of activity contributes to giving this area a "messy or chaotic" appearance, although in reality it is more a function of shipping operations and not a permanent environmental condition.

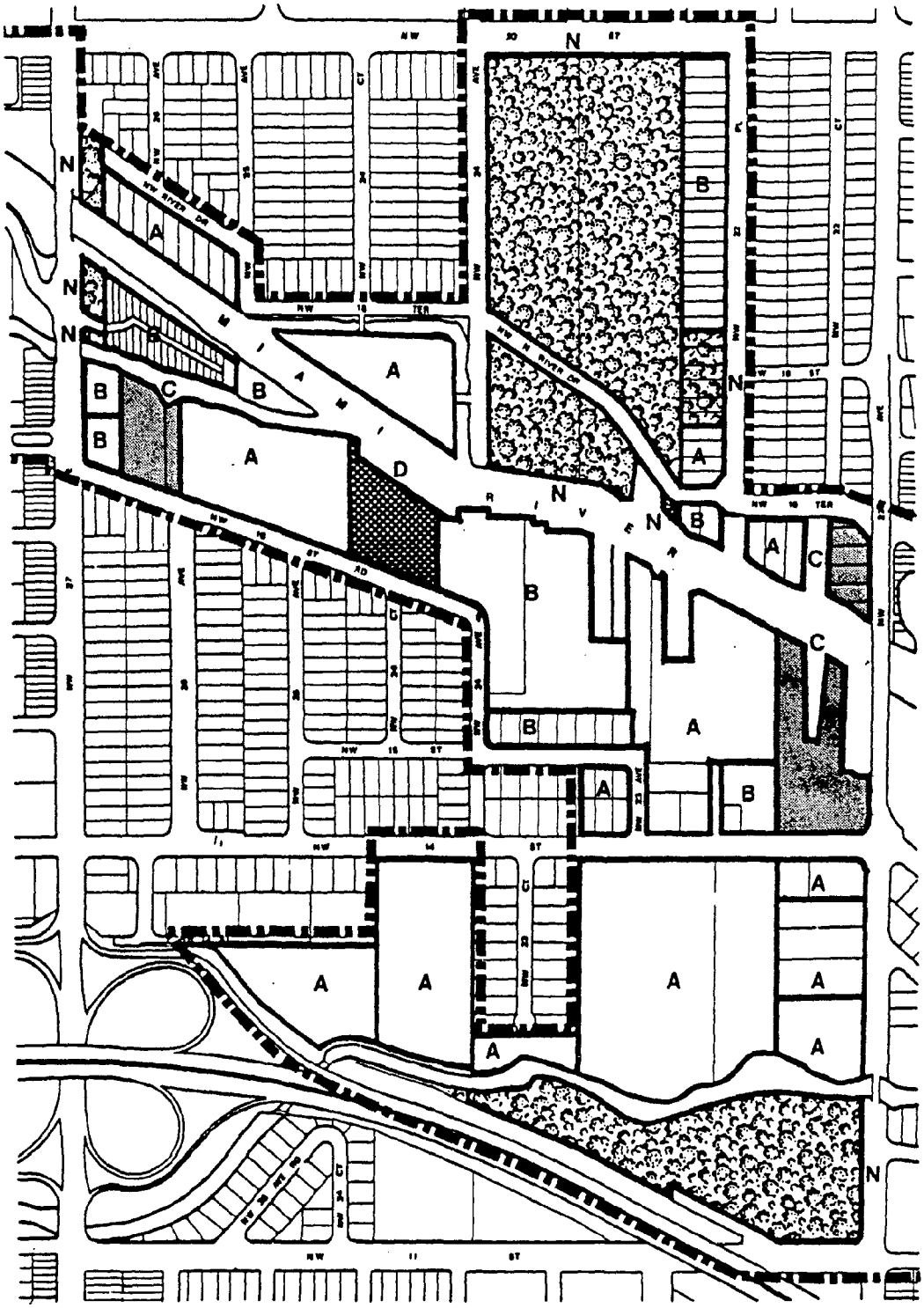
The most noxious activities thorughout this stretch of the river are the scrap metal yards. These activities present a hazardous condition to the water quality of the Miami River. In addition, the scrap metal yards and similar facilities along the river give the district a very trashy appearance.

8. District H--N.W. 32nd Avenue to the Salinity Dam West of N.W. 37th Avenue

District H is basically a continuation of the same type of uses and conditions found in District G. Their environmental conditions are practically identical, with the exception that there is more vacant land in this area.

C. RIVER EDGE CONDITIONS

The river edge conditions survey identifies the type, construction method and quality or condition of the river's edge whether it be natural or man-made.



ENVIRONMENTAL CONDITIONS MAP - DISTRICT F

A - SOUND

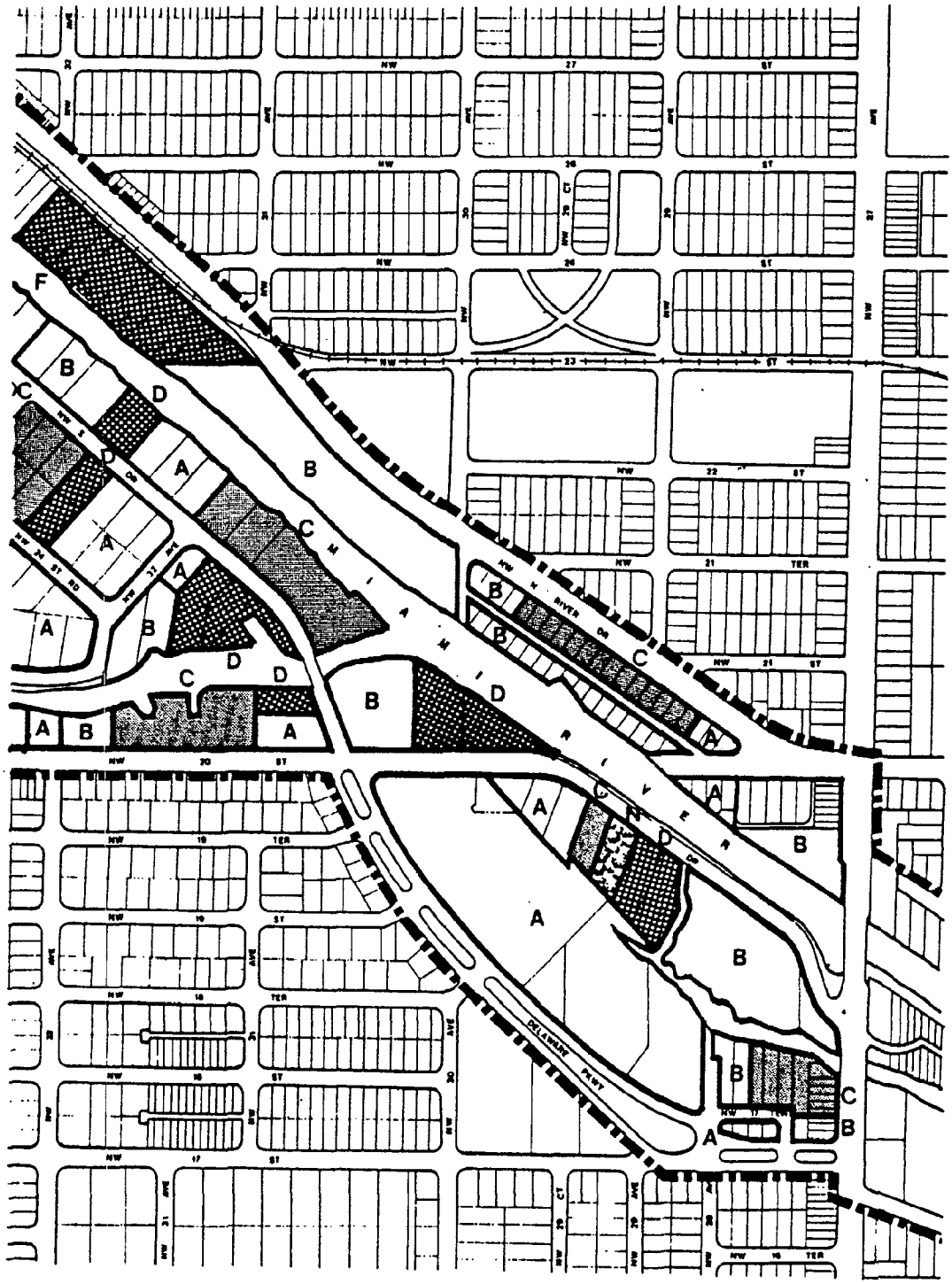
B - MAINTENANCE

C - MAJOR REPAIRS

D - DILAPIDATED

F - NOXIOUS ACTIVITIES

N - NATURAL SETTINGS



ENVIRONMENTAL CONDITIONS MAP - DISTRICT G

A - SOUND

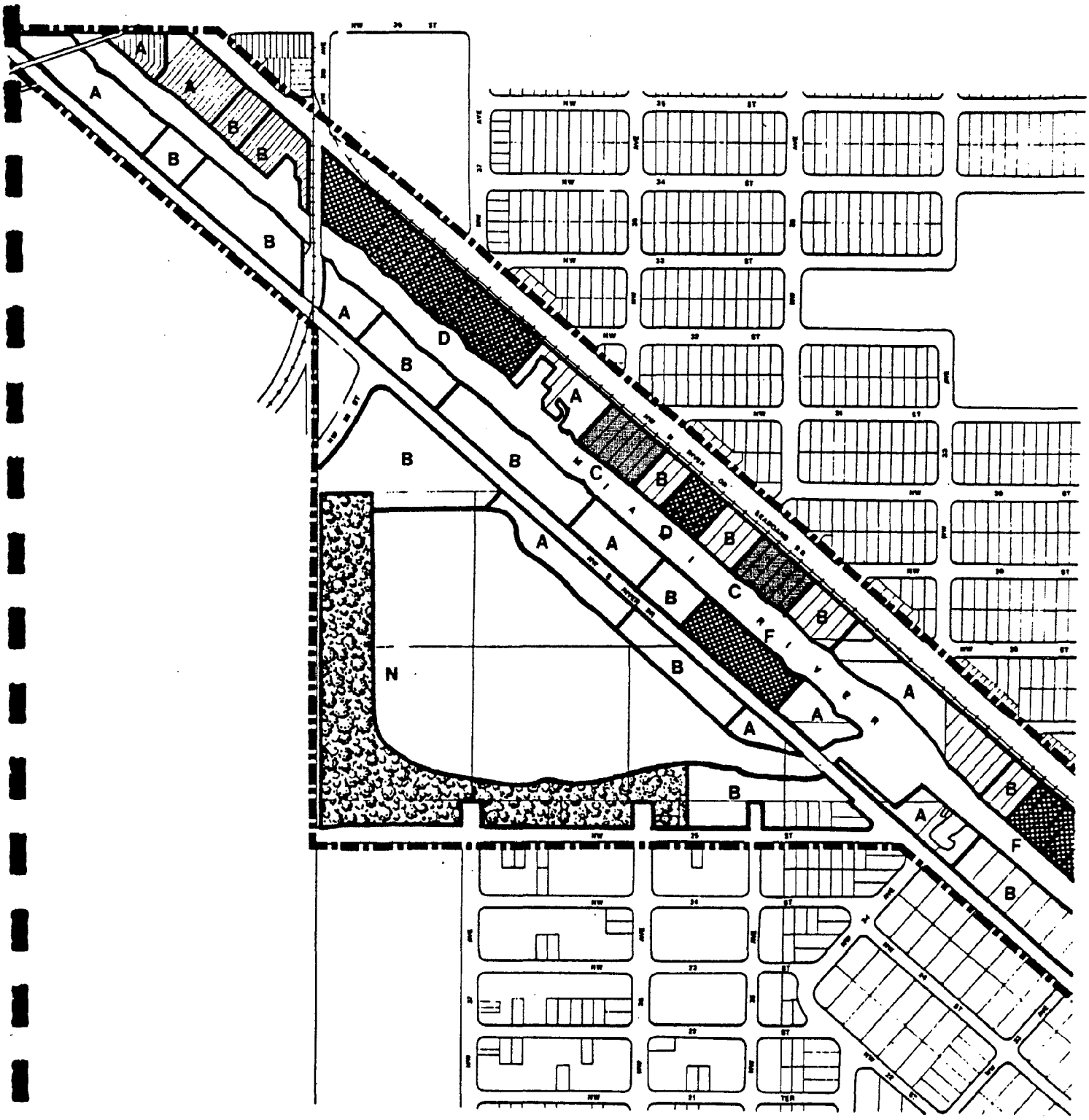
B - MAINTENANCE

C - MAJOR REPAIRS

D - DILAPIDATED

F - NOXIOUS ACTIVITIES

N - NATURAL SETTINGS



ENVIRONMENTAL CONDITIONS MAP – DISTRICT H

A - SOUND

B - MAINTENANCE

C - MAJOR REPAIRS

D - DILAPIDATED

F - NOXIOUS ACTIVITIES

N - NATURAL SETTINGS

1. District A--Mouth of the River to I-95

Over 90 percent of the shoreline is bulkheaded. Approximately 5 percent is rip-rapped and the balance is unconsolidated.

Although the majority of the bulkheading is concrete, there is a considerable amount of steel sheet bulkheading. The bulkheading is in good condition, particularly east of the U.S. Customs and River Park Hotel. However, the steel bulkhead just west of Tommy's Boatyard, along the IntraAmerica Investment property is in a deteriorated condition and requires replacement. Similarly, the steel bulkheading immediately to the west of the Miami Yacht and the Rio Sea Food Restaurant (S.W. 2nd Avenue and North River Drive) is deteriorated and needs repair.

There are also areas of unsightly rubble and debris (i.e., unconsolidated) along the public right-of-way of Dade County's mass rapid transit system (i.e., Metrorail) and along adjacent shoreline abutting vacant or underutilized tracts of land.

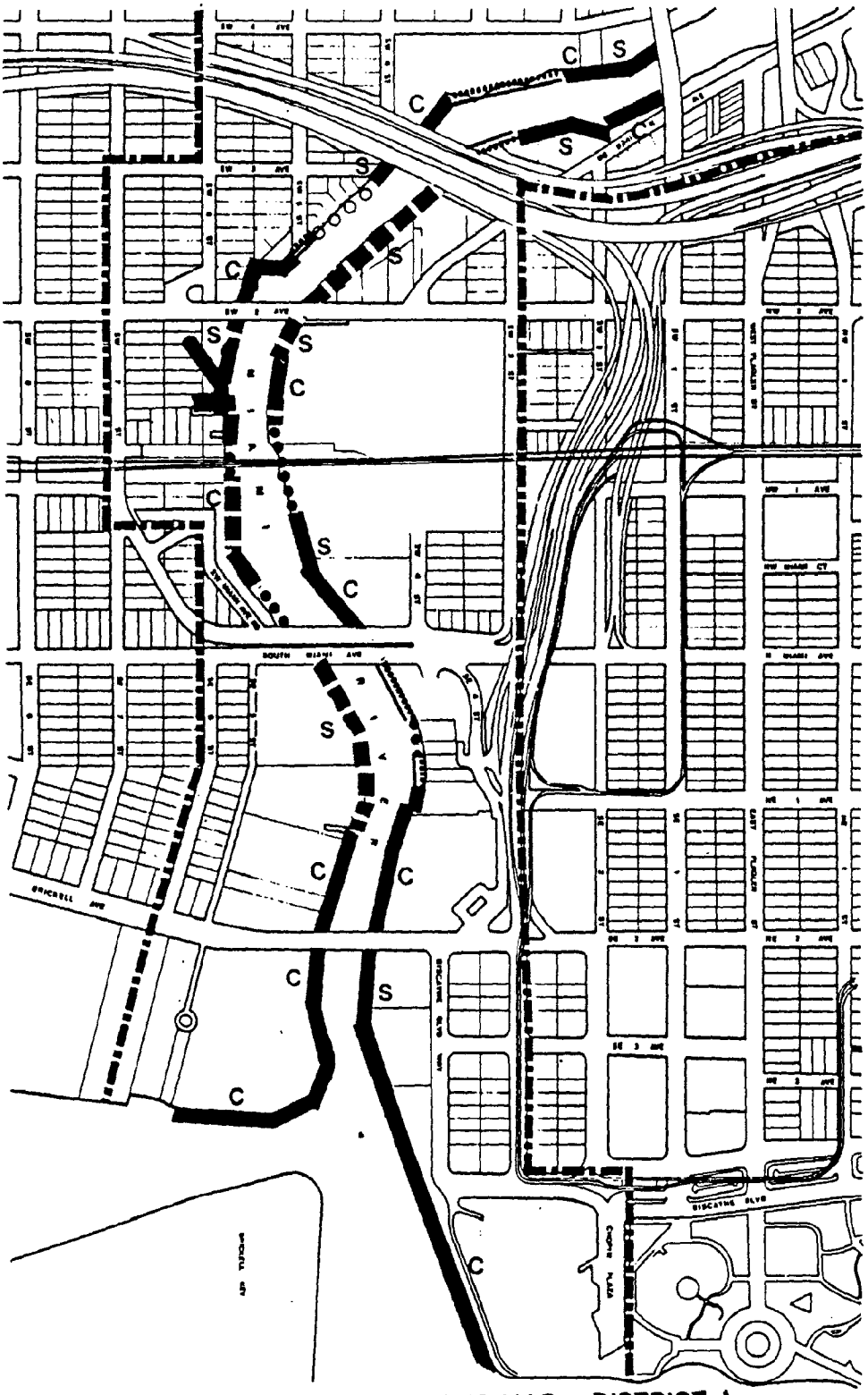
2. District B--I-95 to 5th Street Bridge

Approximately 80 percent of the shoreline is bulkheaded. Although a majority of the bulkheading is concrete formed, there are several examples of steel bulkheading. Immediately south of Lummus Park and on both sides of the river between Flagler and S.W. 1st Street there are examples of bulkheads which need major repair or replacement.

Immediately opposite Lummus Park, there is a coral limerock edge which has been capped. This is the closest limerock formation to the mouth of the river. The remaining shoreline is primarily rip rap with a few instances of unconsolidated material on the north bank within proximity of the 5th Street Bridge. For the most part, the rip rap areas are in need of maintenance and some minor repairs.

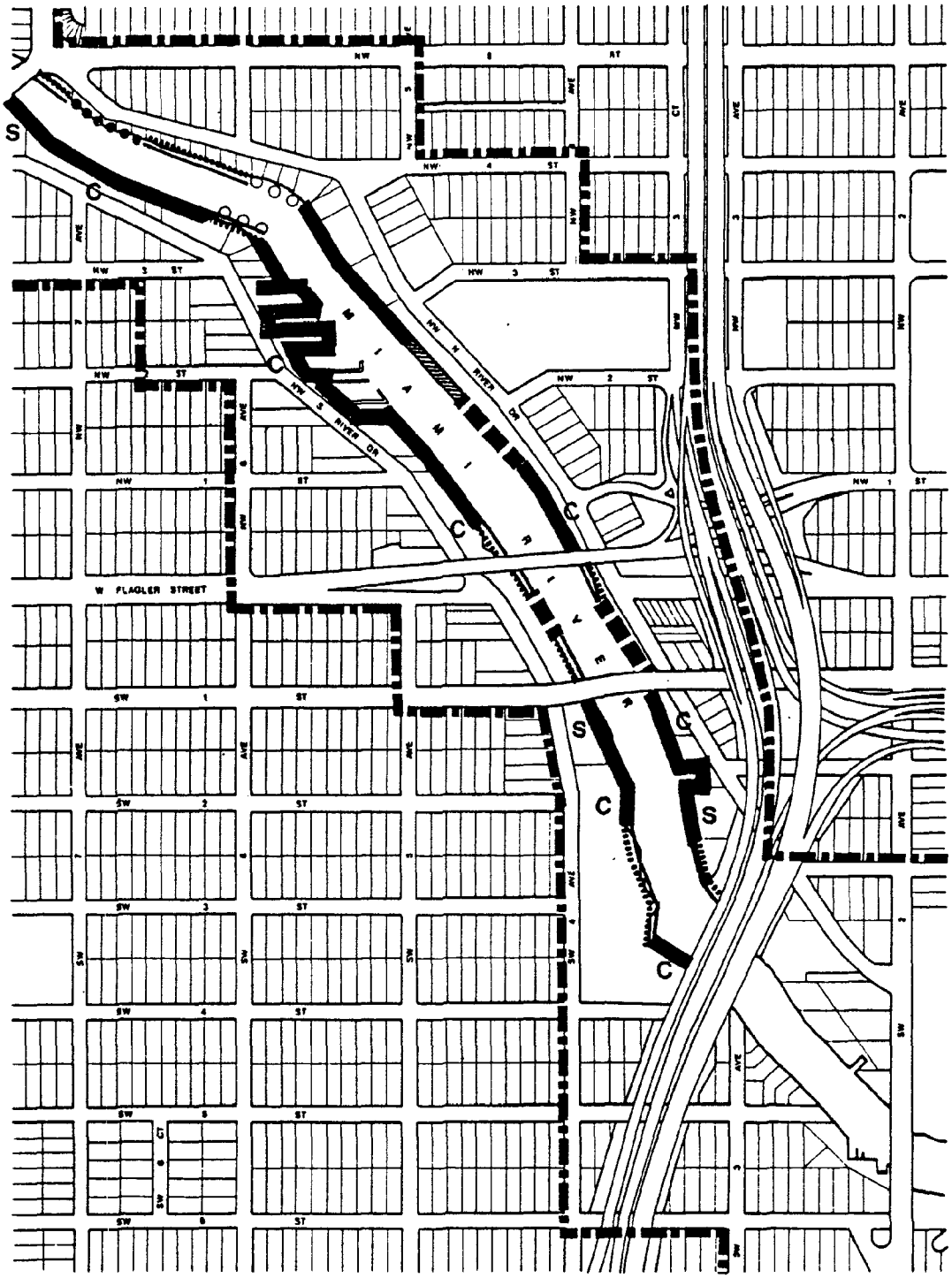
3. District C--5th Street Bridge to 12th Avenue Bridge

Approximately 80 percent of the river's edge along this district is bulkheaded. For the most part, the bulkheading is in good condition and concrete formed.



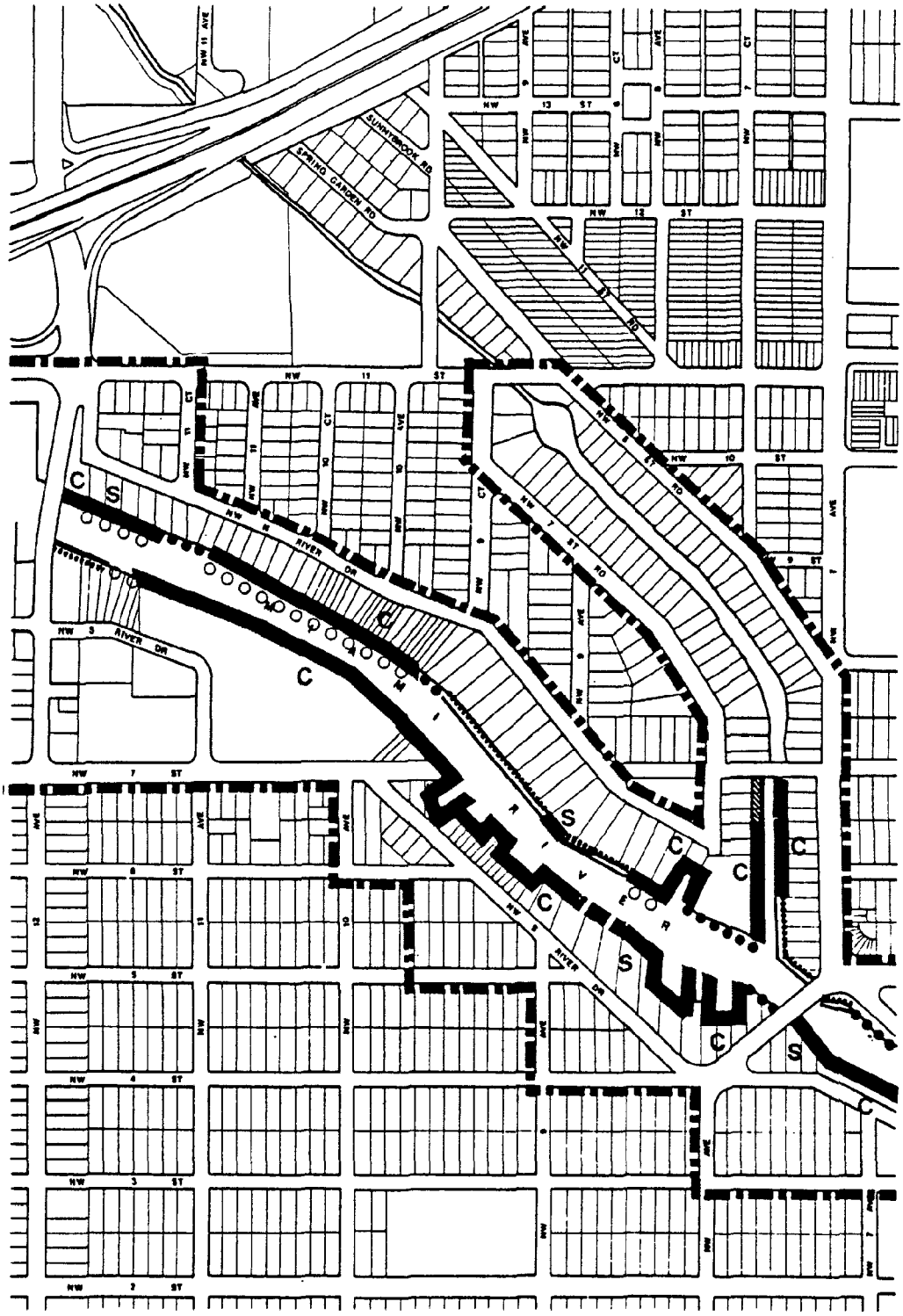
RIVER EDGE CONDITIONS MAP – DISTRICT A

- STABILIZED/GOOD CONDITION
- STABILIZED/IN NEED OF REPAIR
- NATURAL LIMEROCK
- RIPRAP/REVETMENT OR SLOPED CEMENT BAGS
- UNCONSOLIDATED/RUBBLE, SAND OR NATURAL
- C – CONCRETE BULKHEAD
- S – STEEL BULKHEAD
- W – WOOD BULKHEAD
- DOCKS



RIVER EDGE CONDITIONS MAP – DISTRICT B

- STABILIZED/GOOD CONDITION
- STABILIZED/IN NEED OF REPAIR
- NATURAL LIMEROCK
- RIPRAP/REVETMENT OR SLOPED CEMENT BAGS
- ••••••• – UNCONSOLIDATED/RUBBLE, SAND OR NATURAL
- C – CONCRETE BULKHEAD
- S – STEEL BULKHEAD
- W – WOOD BULKHEAD
- ooooo – DOCKS



RIVER EDGE CONDITIONS MAP - DISTRICT C

- STABILIZED/GOOD CONDITION
- STABILIZED/IN NEED OF REPAIR
- NATURAL LIMEROCK
- RIPRAP/REVETMENT OR SLOPED CEMENT BAGS
- UNCONSOLIDATED/RUBBLE, SAND OR NATURAL
- C - CONCRETE BULKHEAD
- S - STEEL BULKHEAD
- W - WOOD BULKHEAD
- DOCKS

Approximately 15 percent of the shoreline has been rip rapped, primarily along the single-family areas on the north bank and partially the Metro Dade property on the south bank of the river. A portion of the Metro Dade property is not consolidated.

Aside from the Metro Dade property mentioned above, the only unconsolidated shoreline conditions abut vacant or abandoned properties. These are quite unsightly and require both major maintenance and bulkheading.

4. District D--12th Avenue Bridge to 17th Avenue Bridge

Approximately 75 percent of the river's edge along this district is bulkheaded and in very good condition.

The remaining 22 percent of the shoreline is in an unconsolidated condition. Most of this occurs immediately along the river frontage of the Robert King High Towers, where there is ample evidence of an eroding shoreline (e.g., exposed root systems, ground soil washouts, etc.). Other examples are found along the expressway public right-of-way, and along the James Carnell Lodge property.

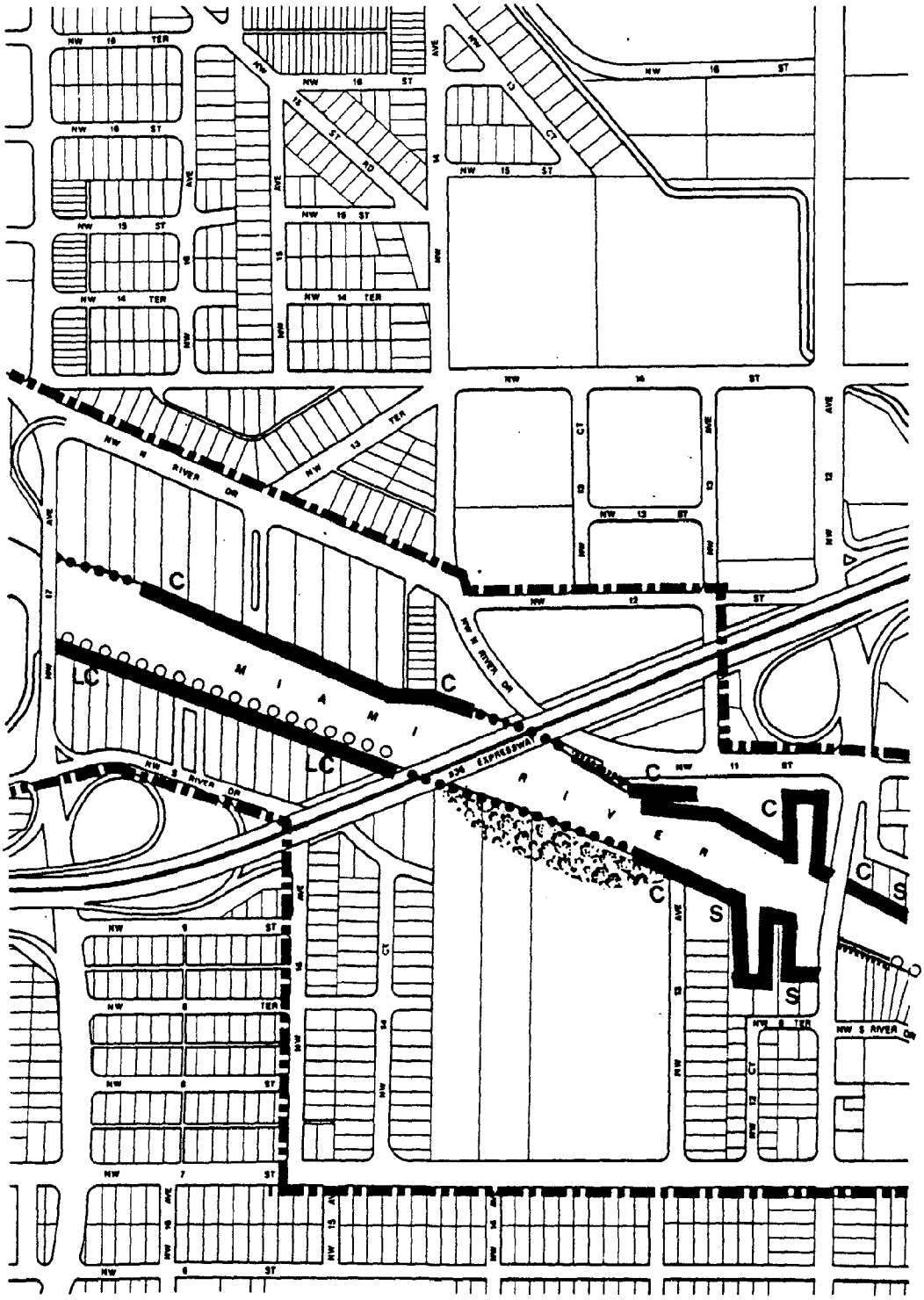
A very limited amount of rip rap is found immediately to the west of the Merrill Stevens boatyard on the north bank.

5. District E--17th Avenue Bridge to the 22 Avenue Bridge

Approximately 80 percent of the river's edge is bulkheaded. However, there is a considerable amount of bulkheading which is in need of repair or replacement, particularly along the South Fork River to the west of Allied Marine and along the Caribbean Shipping property. Also, the bulkheading along Nuta's boatyard is in need of repair.

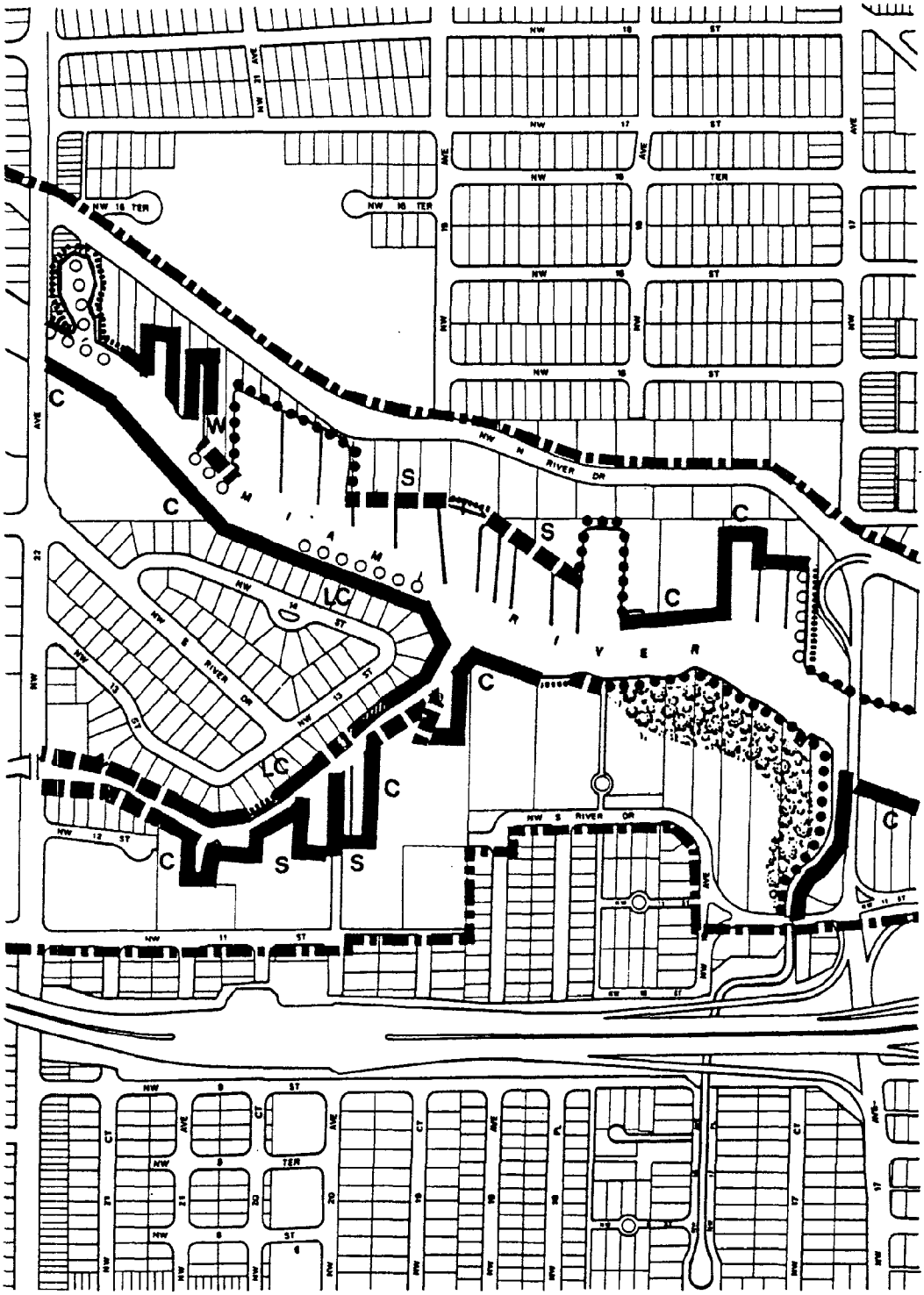
Approximately 15 percent of the shoreline is unconsolidated. This occurs primarily along E.G. Sewell Park along the south bank just west of 17th Avenue, and in the area immediately to the east of Miami Yacht Sales on the north bank.

There is a very limited amount of rip rap. This occurs primarily adjacent to the 22nd Avenue Bridge on the north bank along Paland Marina.



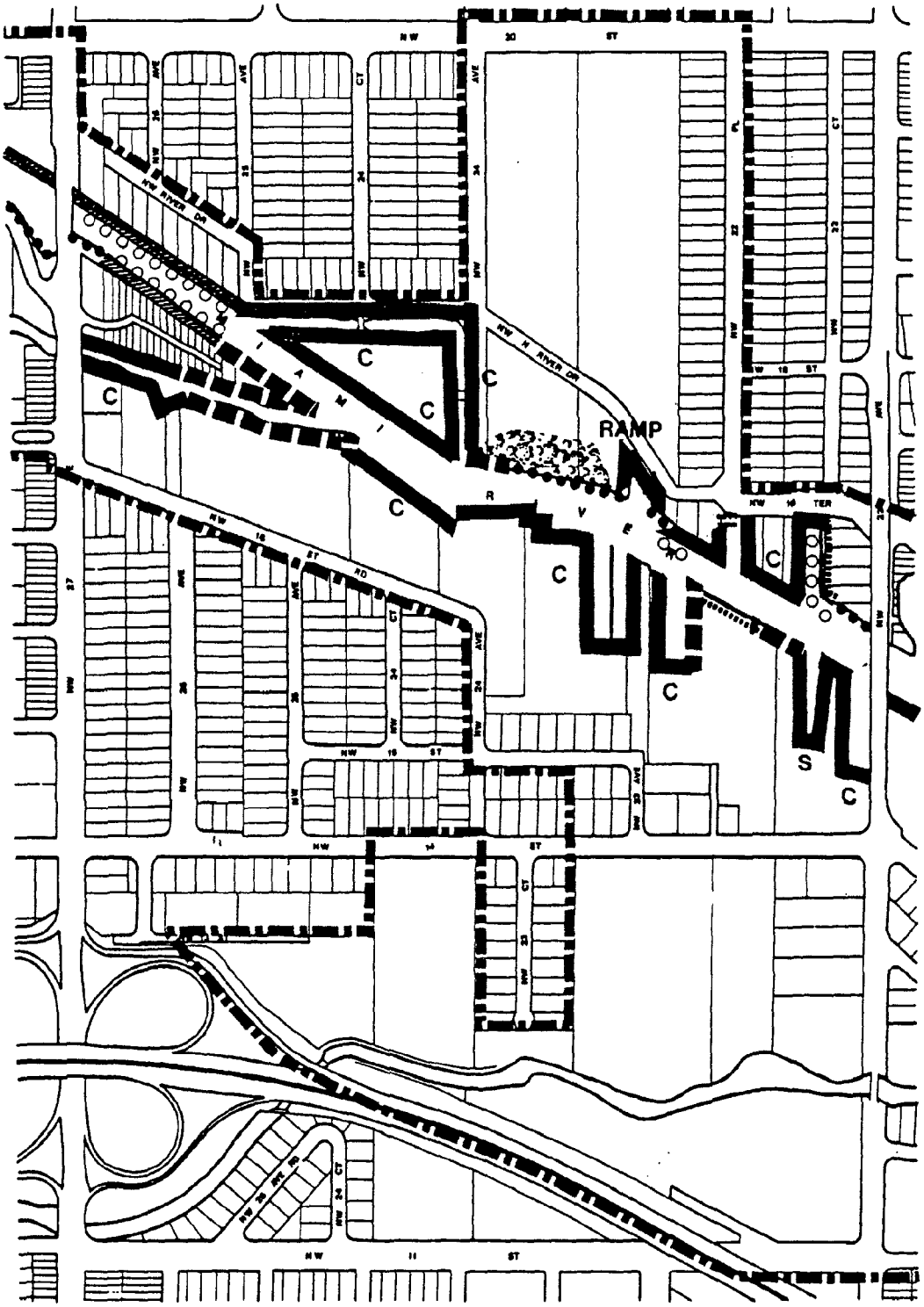
RIVER EDGE CONDITIONS MAP – DISTRICT D

- STABILIZED/GOOD CONDITION
- STABILIZED/IN NEED OF REPAIR
- NATURAL LIMEROCK
- RIPRAP/REVETMENT OR SLOPED CEMENT BAGS
- ••••••• – UNCONSOLIDATED/RUBBLE, SAND OR NATURAL
- C – CONCRETE BULKHEAD
- S – STEEL BULKHEAD
- W – WOOD BULKHEAD
- ○○○○○ – DOCKS



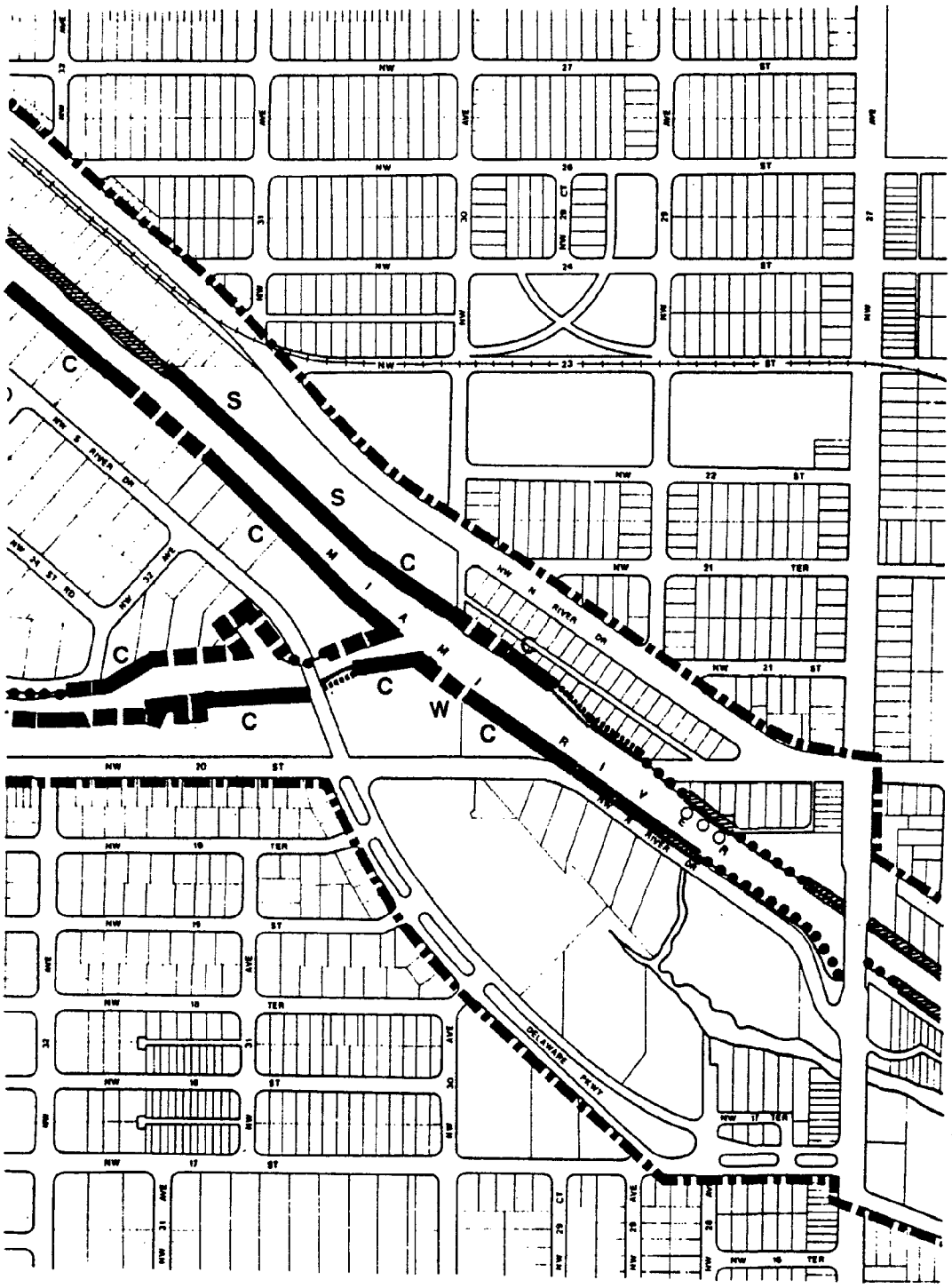
RIVER EDGE CONDITIONS MAP – DISTRICT E

- STABILIZED/GOOD CONDITION
- STABILIZED/IN NEED OF REPAIR
- NATURAL LIMEROCK
- RIPRAP/REVETMENT OR SLOPED CEMENT BAGS
- UNCONSOLIDATED/RUBBLE, SAND OR NATURAL
- C – CONCRETE BULKHEAD
- S – STEEL BULKHEAD
- W – WOOD BULKHEAD
- DOCKS



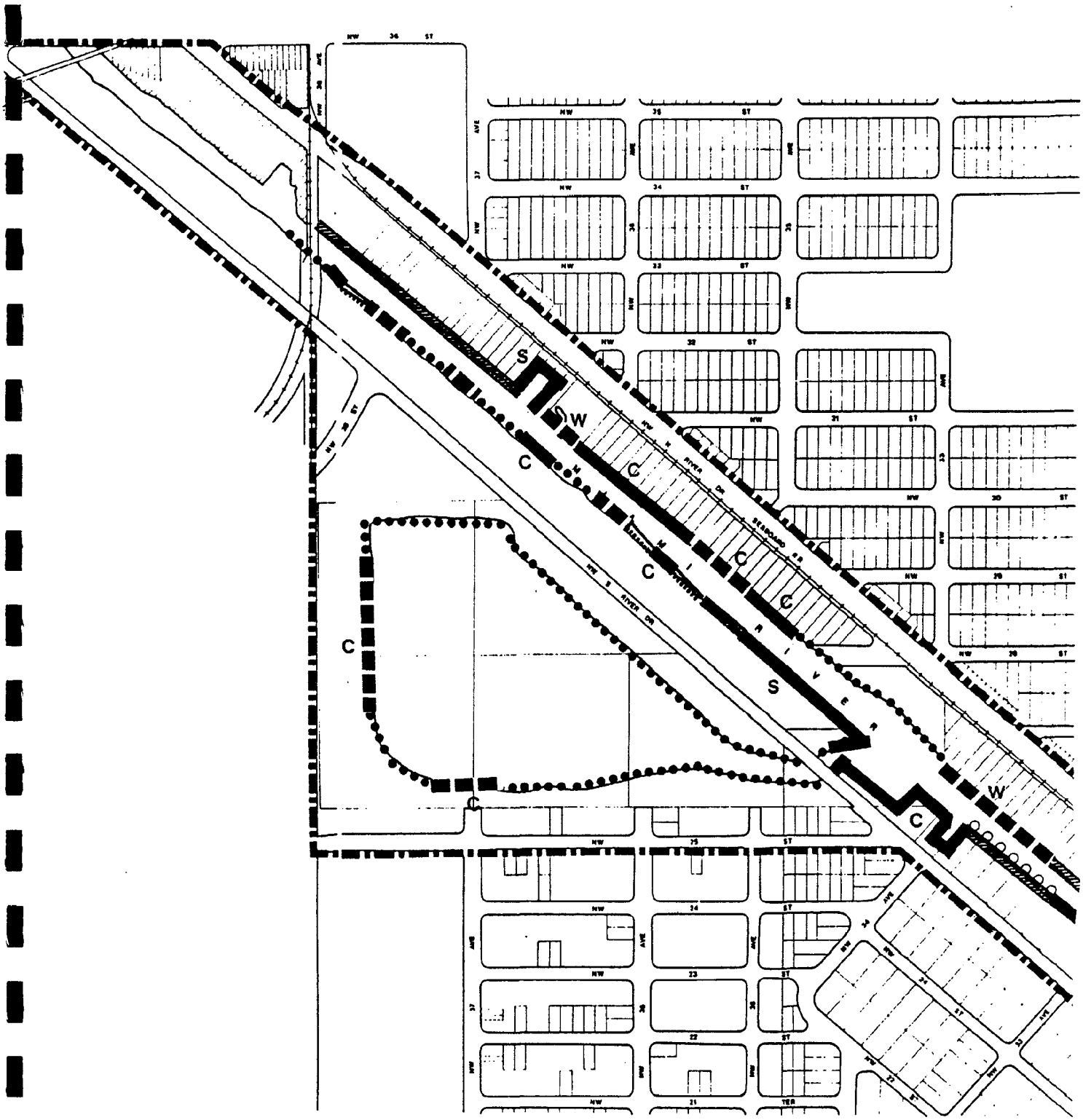
RIVER EDGE CONDITIONS MAP – DISTRICT F

- STABILIZED/GOOD CONDITION
- STABILIZED/IN NEED OF REPAIR
- NATURAL LIMEROCK
- RIPRAP/REVETMENT OR SLOPED CEMENT BAGS
- ••••••• – UNCONSOLIDATED/RUBBLE, SAND OR NATURAL
- C – CONCRETE BULKHEAD
- S – STEEL BULKHEAD
- W – WOOD BULKHEAD
- ○○○○○ – DOCKS



RIVER EDGE CONDITIONS MAP – DISTRICT G

- STABILIZED/GOOD CONDITION
- STABILIZED/IN NEED OF REPAIR
- NATURAL LIMEROCK
- RIPRAP/REVETMENT OR SLOPED CEMENT BAGS
- ••••••• UNCONSOLIDATED/RUBBLE, SAND OR NATURAL
- C – CONCRETE BULKHEAD
- S – STEEL BULKHEAD
- W – WOOD BULKHEAD
- ooooo – DOCKS



RIVER EDGE CONDITIONS MAP – DISTRICT H

- STABILIZED/GOOD CONDITION
- STABILIZED/IN NEED OF REPAIR
- NATURAL LIMEROCK
- RIPRAP/REVETMENT OR SLOPED CEMENT BAGS
- ••••••• – UNCONSOLIDATED/RUBBLE, SAND OR NATURAL
- C – CONCRETE BULKHEAD
- S – STEEL BULKHEAD
- W – WOOD BULKHEAD
- ooooo – DOCKS

6. District F--22nd Avenue Bridge to 27th Avenue Bridge

Approximately 80 percent of the river's edge is bulkheaded and in good condition. However, there are several examples of bulkheads which need repair. For example, along the Musa Isle Development; around Martin's Point (N.W. 18th Terr); at the western edge of Curtis Park along the end of N.W. 24th Avenue; and at several spots along the Key Power, Inc., property, the bulkhead is in need of repair.

In addition, the river's edge along Gerry Curtis Park is unconsolidated and eroding. Unconsolidated and rip rap conditions represent only 10 percent of the shoreline. The balance of the river's edge consists of natural limerock with wood docks varying in quality througout the area.

7. District G--27th Avenue Bridge to N.W. 32nd Avenue

Approximately 75 percent of the shoreline is bulkheaded. Most of it is concrete formed except that portion extending from N.W. 30th Avenue to 31st Avenue along the north bank, which is steel formed. With the exception of wood bulkheading just east of the Bojean Boat Yard and steel bulkhead immediately across the channel, both of which are in a deteriorated condition, the remainder of the bulkheading is in good condition.

Along the north bank of the Tamiami Canal there are also areas just south of South River Drive where the bulkheading is in deteriorated condition and needs to be replaced.

Approximately 10 percent of the shoreline is natural limerock, primarily just west of 27th Avenue along both sides of the river. Similarly, another 10 percent of the shoreline is unconsolidated. This is found on opposite banks of the river in the vicinity of the Orkin Pest Control property and the Trailer Park just west of 27th Avenue.

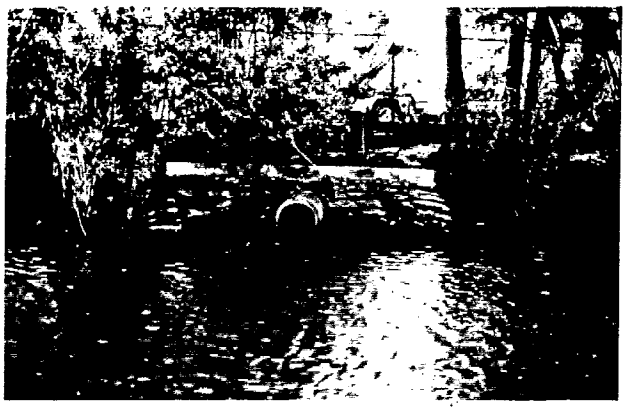
8. District H--N.W. 32nd Avenue to the Salinity Dam West of N.W. 37th Avenue

Approximately 60 percent of the shoreline is bulkheaded. It is mostly in sound condition except for two instances where there are wood bulkheads. These are in a deteriorated state and need to be replaced.

Approximately 20 percent of the shoreline is unconsolidated and another 15 percent is natural limerock. The balance is rip rap.

D. INFRASTRUCTURE

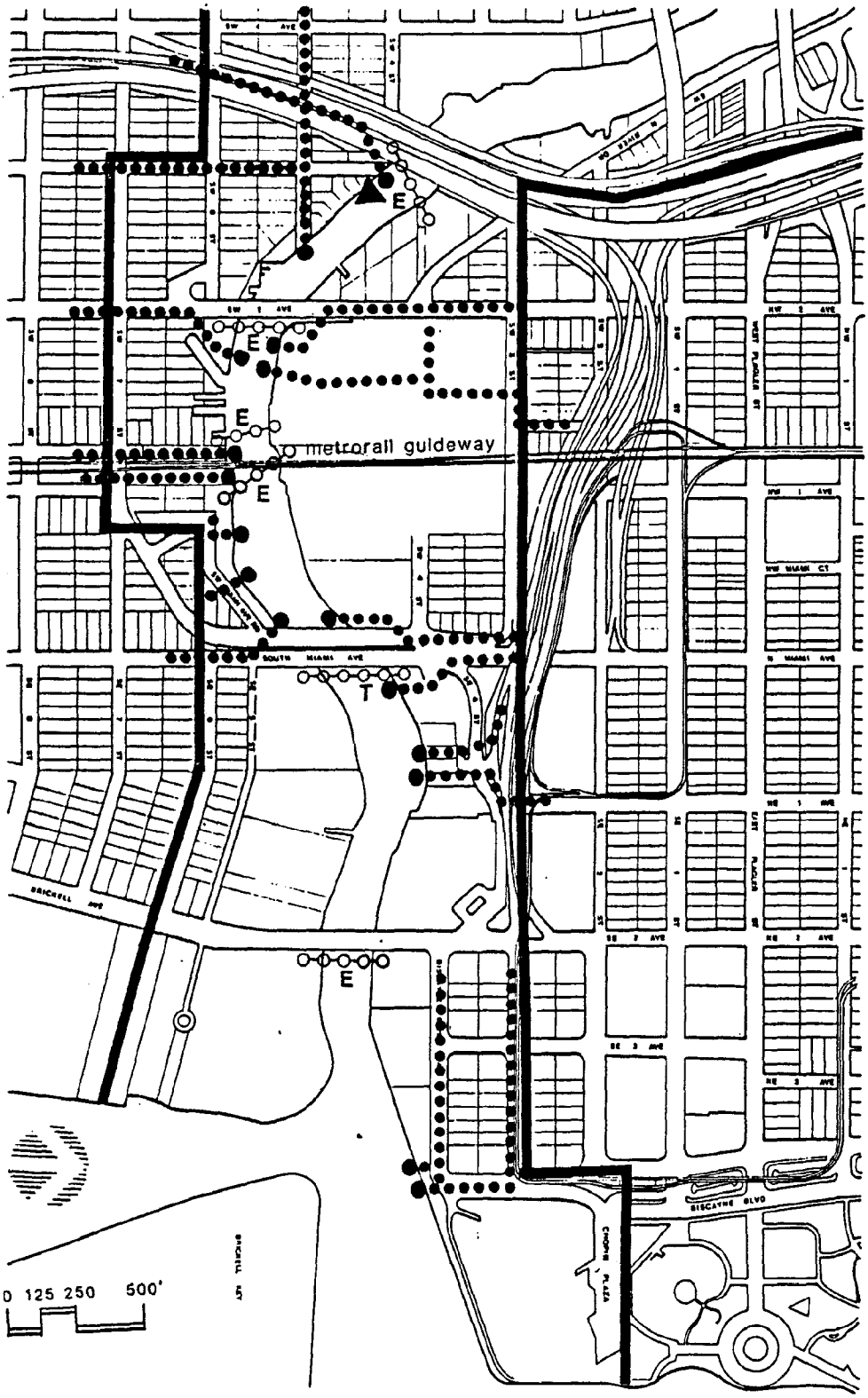
The infrastructure survey identifies those utility crossings such as telephone, electric, gas, water and sewer which impact the river and limit or constrain future actions. In addition, outfalls which cause contamination and turbidity of water quality, such as sanitary sewer overflows and storm sewer outfalls, have also been identified.



It should be noted that the map exhibits, which illustrate the above-referenced infrastructure conditions, overlap geographically. Consequently, it is likely that utility elements such as storm sewer outfalls, which are located along the edges of adjacent districts, will appear twice in the maps for each adjoining district. As a result, in totaling the number of utility elements along the river, the overlap between these districts should be taken into account so as to avoid the redundancy which occurs as a result of the overlap in the district designations.

1. District A--Mouth of the River to I-95

Both banks of the river are well served with sanitary and storm sewer systems. However, there is a sanitary sewer overflow at S.W. 4th Street which is resulting in



INFRASTRUCTURE MAP - DISTRICT A

- UTILITIES CROSSING THE RIVER
- E - ELECTRICITY
- T - TELEPHONE
- W - WATER MAIN
- S - SANITARY
- G - GAS
- STORM SEWER & OUTFALL
- SANITARY SEWER OVERFLOW

occasional contamination of the water quality. The main interceptor on the north bank is a 60- to 72-inch line running along North River Drive and N.W./N.E. 4th Street.

There are approximately 16 storm sewer outfalls along this portion of the river. In addition, there are 5 electric cable line crossings and 1 telephone line crossing.

2. District B--I-95 to 5th Street Bridge

Both banks of the river are well served with sanitary and storm sewer systems. However, there are 4 sanitary sewer overflows along this stretch of the river contributing to the contamination of the water quality: 2 are located immediately to either side of the 48-inch sanitary sewer interceptor crossing which connects the 66-inch interceptor at South River Drive and N.W. 3rd Street with the 60-inch interceptor at North River Drive and S.W. 1st Street and one at the eastern edge of Jose Marti Park.

There are approximately 20 storm sewer outfalls along this portion of the river. In addition, there is 1 electric cable line crossing and 2 telephone line crossings.

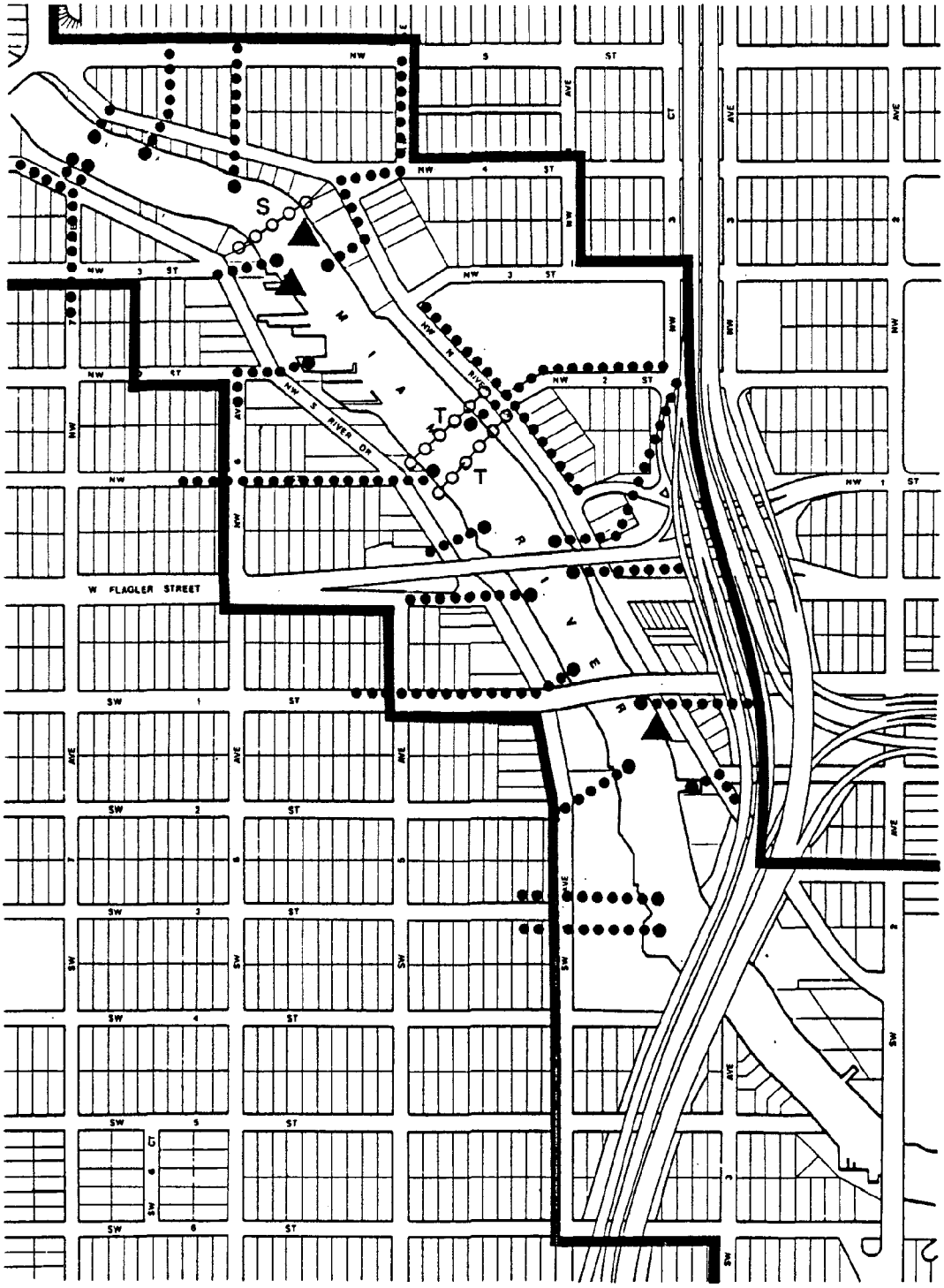
3. District C--5th Street Bridge to 12th Avenue Bridge

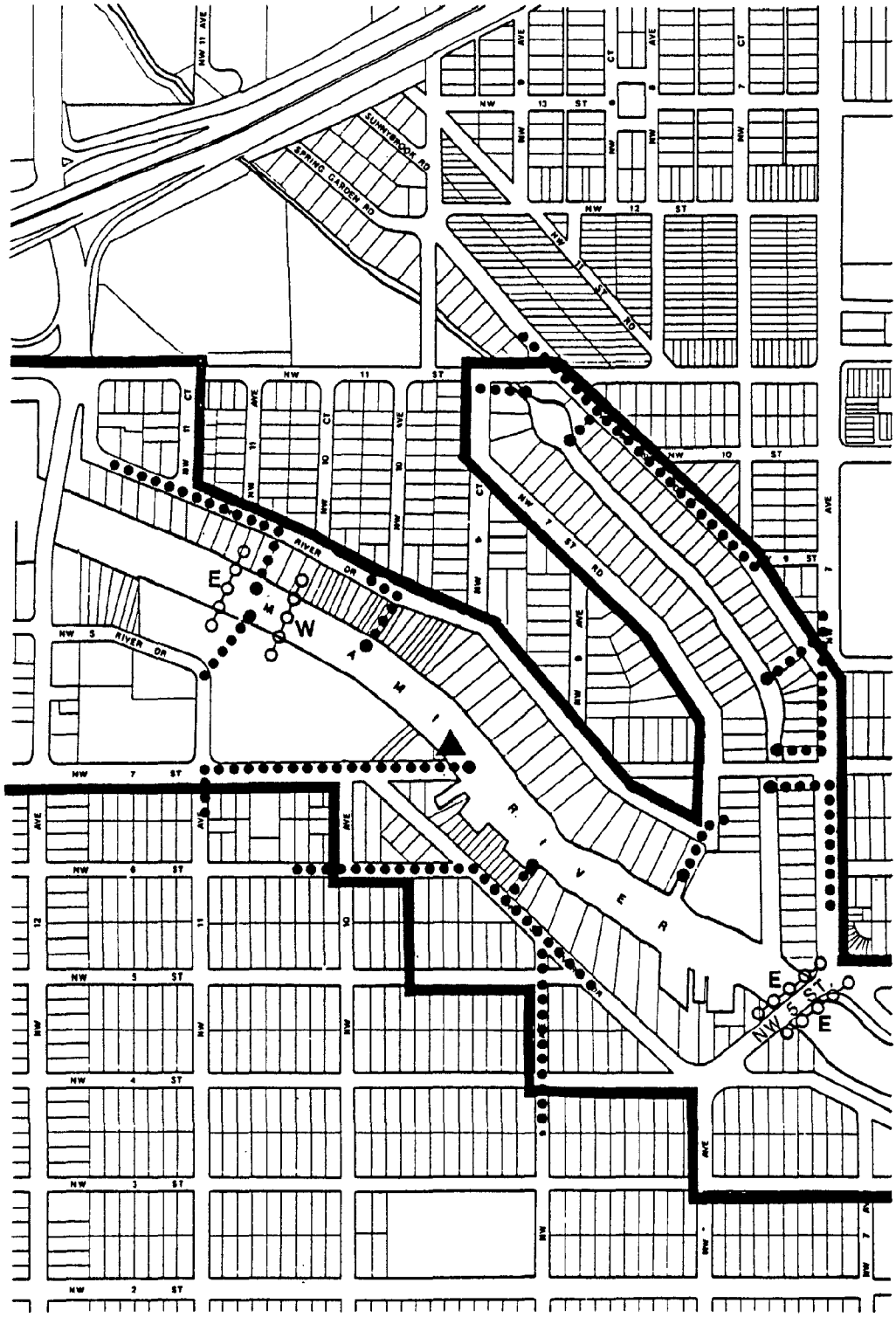
Both banks of the river are well served with sanitary and storm sewer systems. However, there is 1 sanitary sewer overflow on the south bank at the intersection of N.W. 7th Street with South River Drive, the location of a 48-inch interceptor. A 60-inch interceptor runs along North River Drive.

There are approximately 11 storm sewer outfalls along this portion of the river. There are 3 electric cable crossings and 1 water main crossing in this district.

4. District D--12th Avenue Bridge to 17th Avenue Bridge

Both banks of the river are well served with sanitary and storm sewer systems. Although there are 5 storm sewer outfalls in this district, there are no sanitary sewer overflows. There is a 48- to 60-inch interceptor running along North River Drive and a 48-inch interceptor along N.W. 7th Street which serve the north and south bank, respectively.

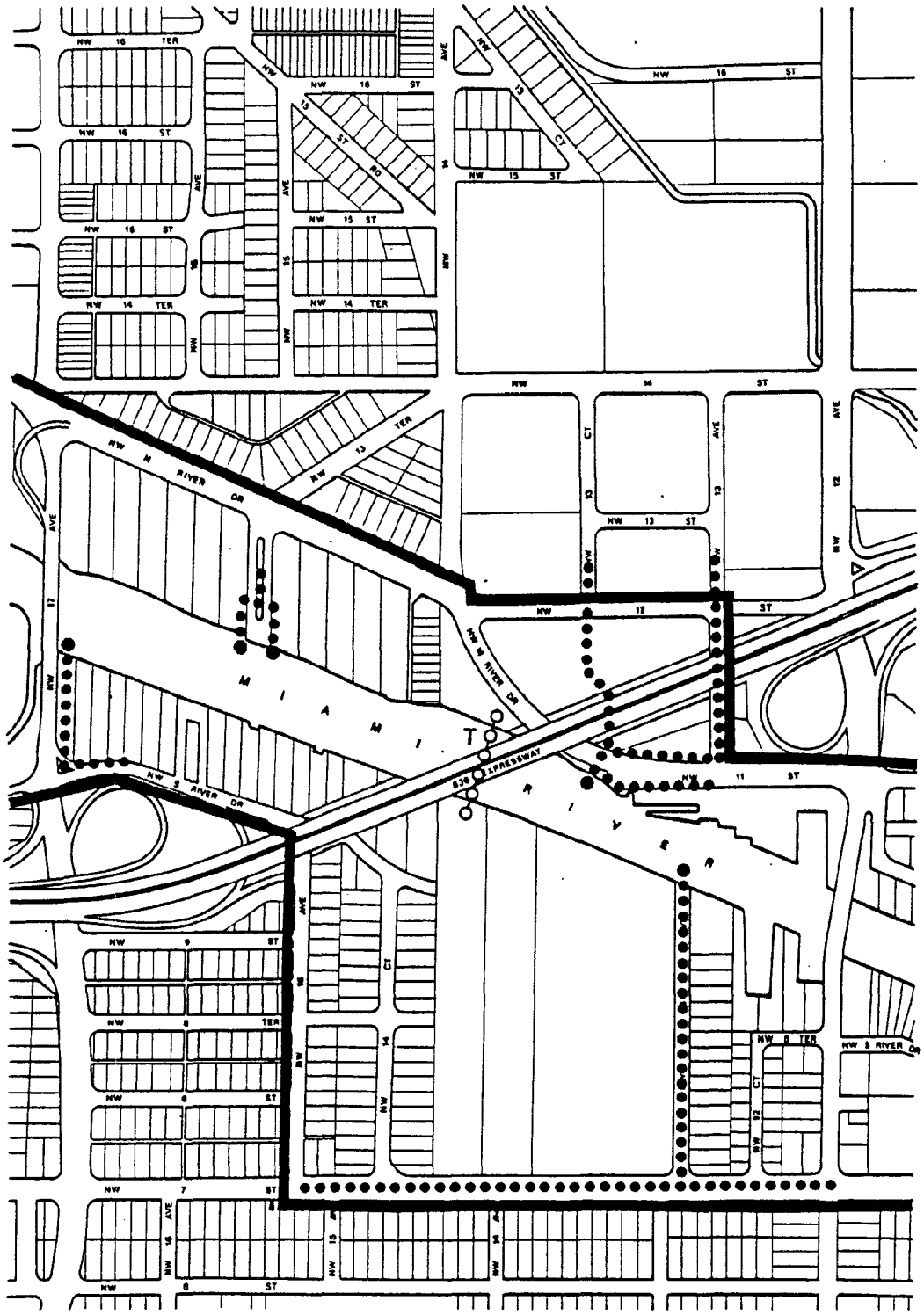

W FLAGLER STREET
NW 5 ST
NW 4 ST
NW 3 ST
NW 2 ST
NW 1 ST
SW 1 ST
SW 2 ST
SW 3 ST
SW 4 ST
SW 5 ST
SW 6 ST
NW 1 AVE
NW 2 AVE
NW 3 AVE
NW 4 AVE
NW 5 AVE
NW 6 AVE
NW 7 AVE
NW 8 AVE
NW 9 AVE
NW 10 AVE
NW 11 AVE
NW 12 AVE
NW 13 AVE
NW



INFRASTRUCTURE MAP - DISTRICT C

0 125 250 500'

- UTILITIES CROSSING THE RIVER
- E - ELECTRICITY
- T - TELEPHONE
- W - WATER MAIN
- S - SANITARY
- G - GAS
- STORM SEWER & OUTFALL
- SANITARY SEWER OVERFLOW



INFRASTRUCTURE MAP - DISTRICT D

0 125 250 500'

- UTILITIES CROSSING THE RIVER
- E - ELECTRICITY
- T - TELEPHONE
- W - WATER MAIN
- S - SANITARY
- G - GAS
- STORM SEWER & OUTFALL
- SANITARY SEWER OVERFLOW

There is only 1 telephone cable crossing coinciding with the expressway right-of-way.

5. District E--17th Avenue Bridge to the 22nd Avenue Bridge

Both banks of the river appear to be well served by both storm sewer and sanitary sewer systems. Although there are 6 storm sewer outfalls, there are no sanitary sewer overflows along this stretch of the river. The sanitary sewer interceptors consist of a 48- to 54-inch line running along North River Drive.

There is 1 electric line crossing and one gas line crossing along this district.

6. District F--22nd Avenue Bridge to 27th Avenue Bridge

Both banks of the river appear to be well served by both storm sewer and sanitary sewer systems. Although there are 15 storm sewer outfalls along this stretch of river and its tributaries, there are no sanitary sewer overflows. The sanitary sewer interceptors consist of a 42-inch force main running along N.W. 11th Street and 23 Avenue.

There are 3 telephone cable crossings and 1 electric cable crossing.

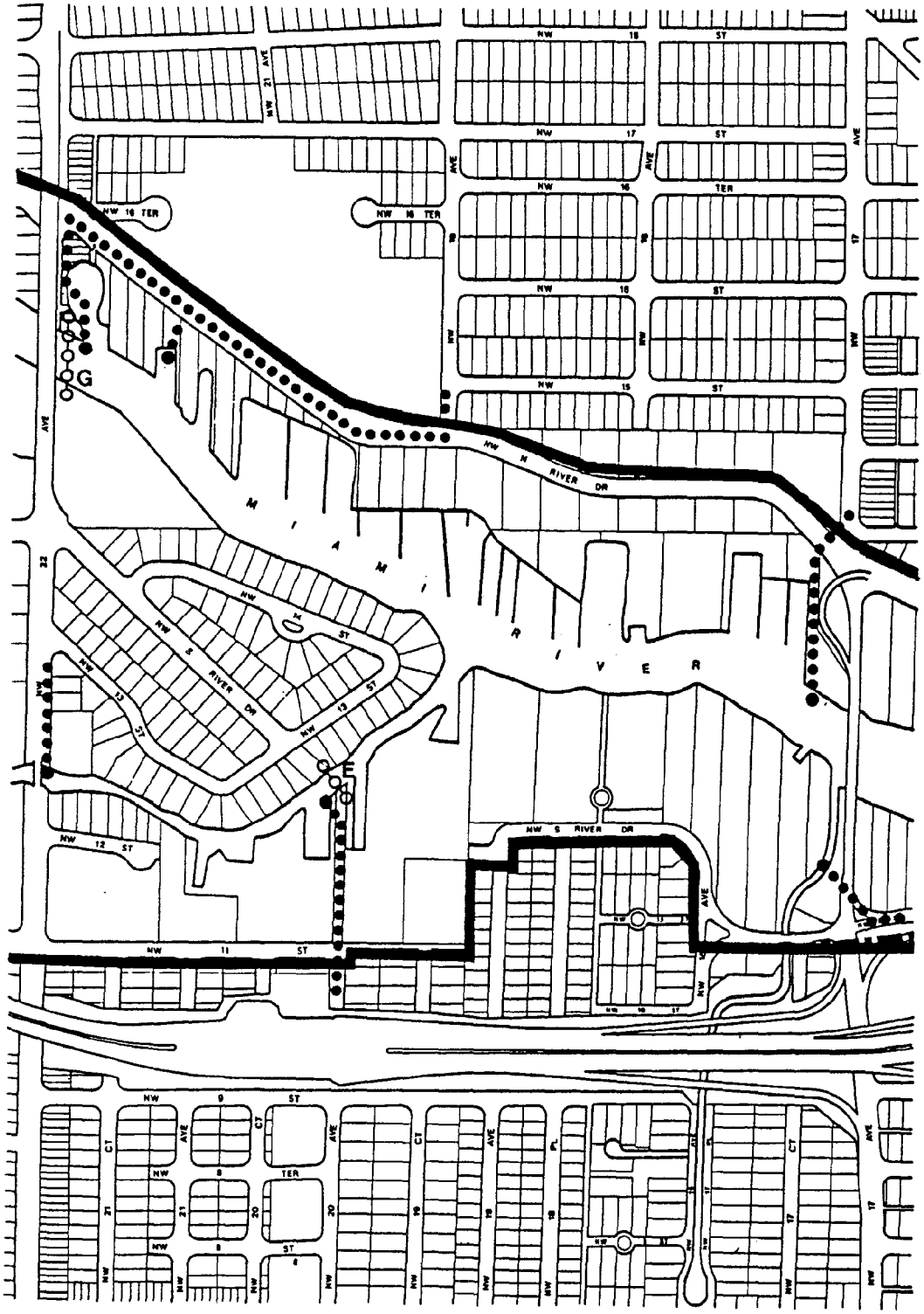
7. District G--27th Avenue Bridge to N.W. 32nd Avenue

Based on available data, it appears that those areas of the district which fall within the City of Miami limits, are served by both sanitary sewer and storm sewer systems.

There are 6 storm sewer outfalls and no sanitary sewer overflows are evident. In addition, there are at least 3 telephone cable crossings and 2 water supply crossings.

8. District H--N.W. 32nd Avenue to the Salinity Dam West of N.W. 37th Avenue

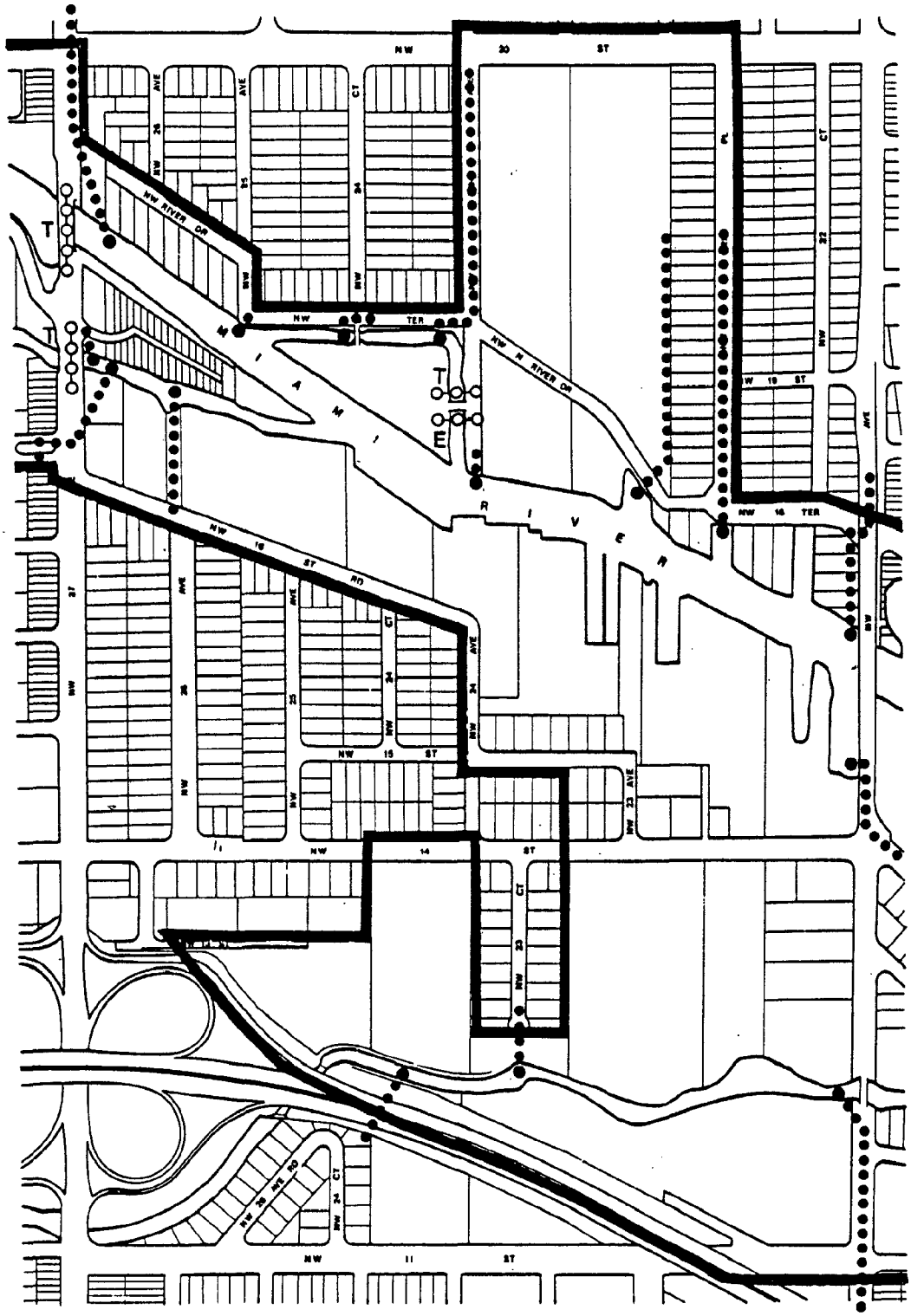
No information is available for this district at the present time.



INFRASTRUCTURE MAP – DISTRICT E

0 125 250 500'

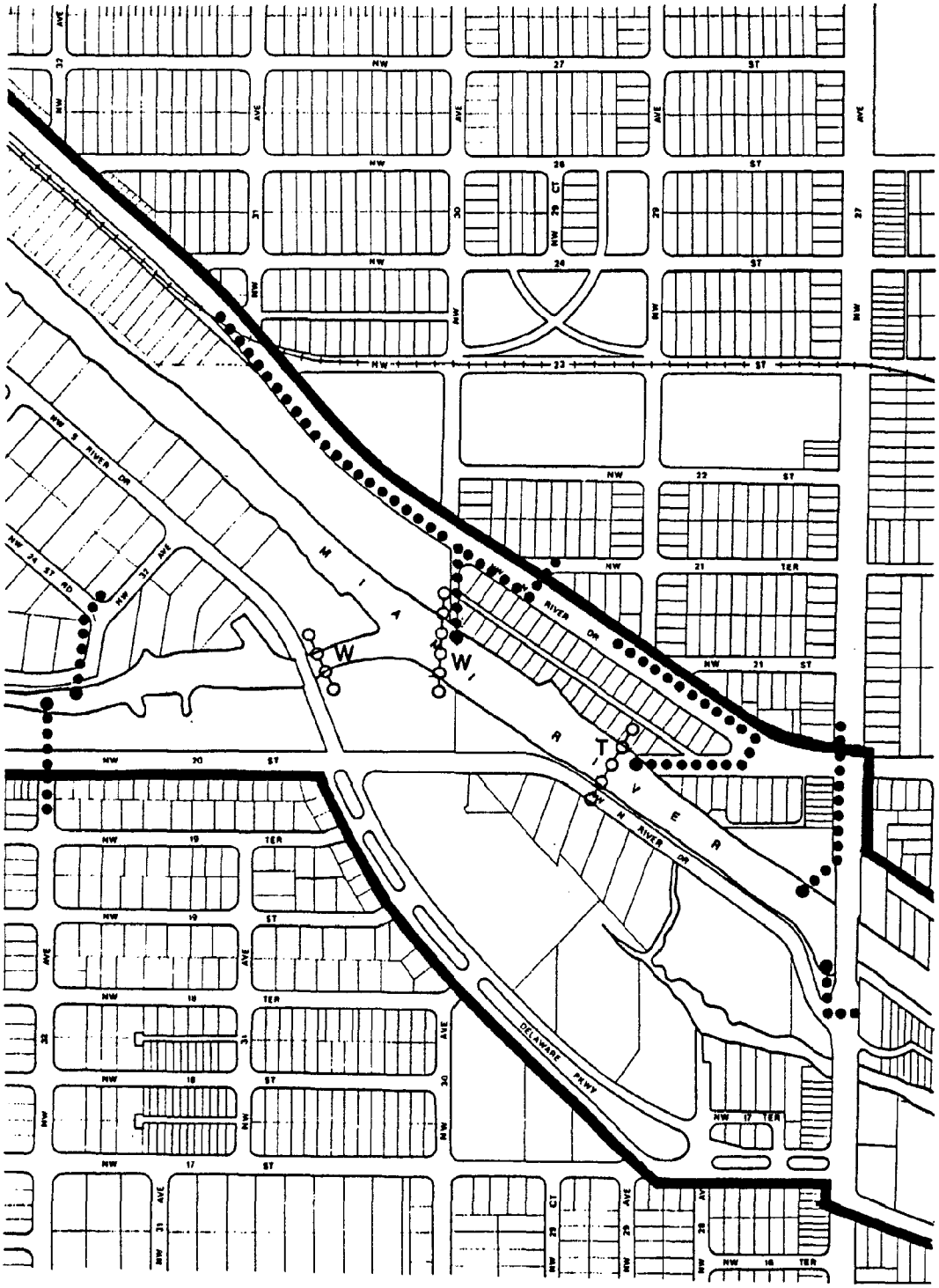
- UTILITIES CROSSING THE RIVER
- E – ELECTRICITY
- T – TELEPHONE
- W – WATER MAIN
- S – SANITARY
- G – GAS
- STORM SEWER & OUTFALL
- SANITARY SEWER OVERFLOW



INFRASTRUCTURE MAP – DISTRICT F

0 125 250 500'

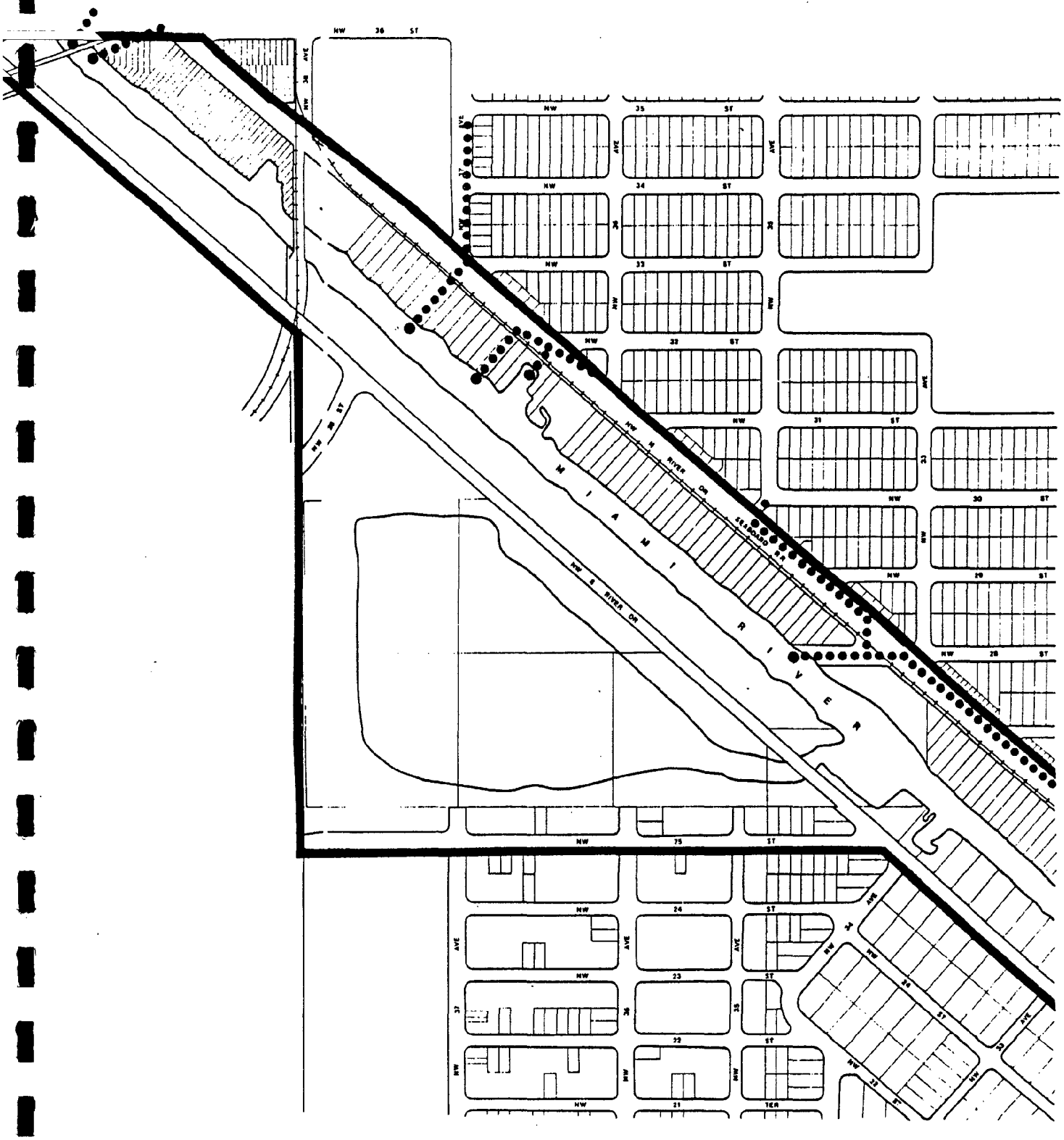
- UTILITIES CROSSING THE RIVER
- E - ELECTRICITY
- T - TELEPHONE
- W - WATER MAIN
- S - SANITARY
- G - GAS
- STORM SEWER & OUTFALL
- SANITARY SEWER OVERFLOW



INFRASTRUCTURE MAP - DISTRICT G

0 125 250 500'

- UTILITIES CROSSING THE RIVER
- E - ELECTRICITY
- T - TELEPHONE
- W - WATER MAIN
- S - SANITARY
- G - GAS
- STORM SEWER & OUTFALL
- SANITARY SEWER OVERFLOW


MIAMI RIVER
NW 36 ST
NW 35 ST
NW 34 ST
NW 33 ST
NW 32 ST
NW 31 ST
NW 30 ST
NW 29 ST
NW 28 ST
NW 25 ST
NW 24 ST
NW 23 ST
NW 22 ST
NW 21 ST
NW 2 AVE
NW 3 AVE
NW 4 AVE
NW 5 AVE
NW 6 AVE
NW 7 AVE
NW 8 AVE
NW 9 AVE
NW 10 AVE
NW 11 AVE
NW 12 AVE
NW 13 AVE
NW 14 AVE
NW

E. LAND ASSEMBLY/OWNERSHIP

Land Assembly/Ownership identifies parcels along the Miami River which, due to their land area and amount of river frontage, make them significant either because of their current use and impact on river functions or the possibility for future redevelopment. Typically a standard of 300 linear feet of shoreline and an acre in size has been used as the criteria for classifying parcels as "significant". However, there are exceptions due to location, access and land use adjacency considerations.

1. District A--Mouth of the River to I-95

The significant parcels that have been assembled under one ownership are as follows:

(1) Miami Center
(2) Dupont Plaza Hotel
(3) James L. Knight Center
(4) IntraAmerica Investments
(5) FPL/Arvida
(6) Miami Shipyard Corporation
(7) IntraAmerica Investments
(8) Tommy's Boatyard
(9) U.S. Customs
(10) Cyes Rivergate
(11) Brickell Point Apartments

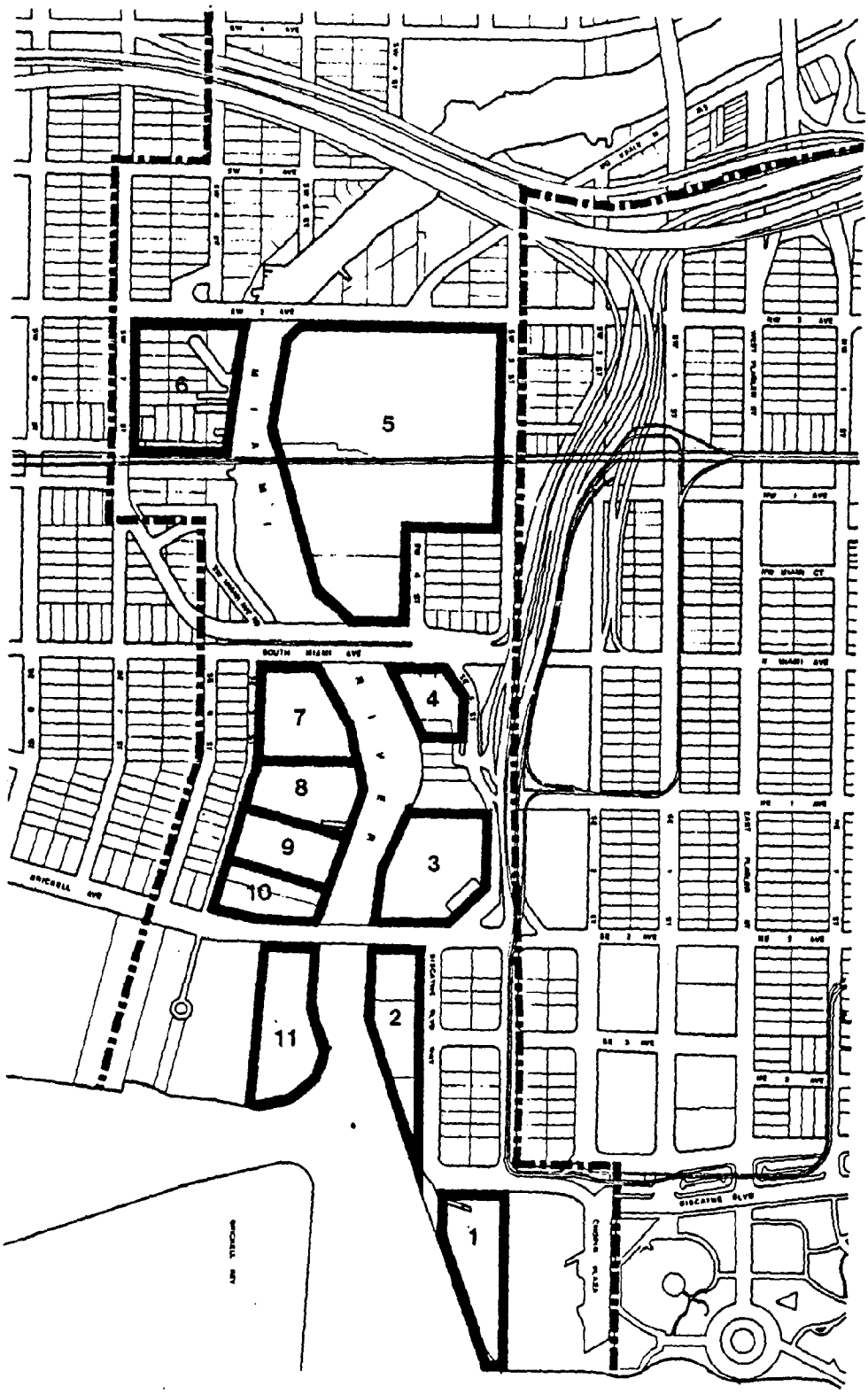
2. District B--I-95 to 5th Street Bridge

The significant parcels that have been assembled under one ownership are as follows:

(1) Miami Yacht Full Service Yards
(2) Park Towers Senior Citizen and Metro-Dade Community Action Agency
(3) Lummus Park
(4) Scottish Pite Temple
(5) Jack Orr Senior Citizen Tower
(6) Miami Dade Water/Sewer Authority
(7) City of Miami
(8) Jose Marti Riverfront Park

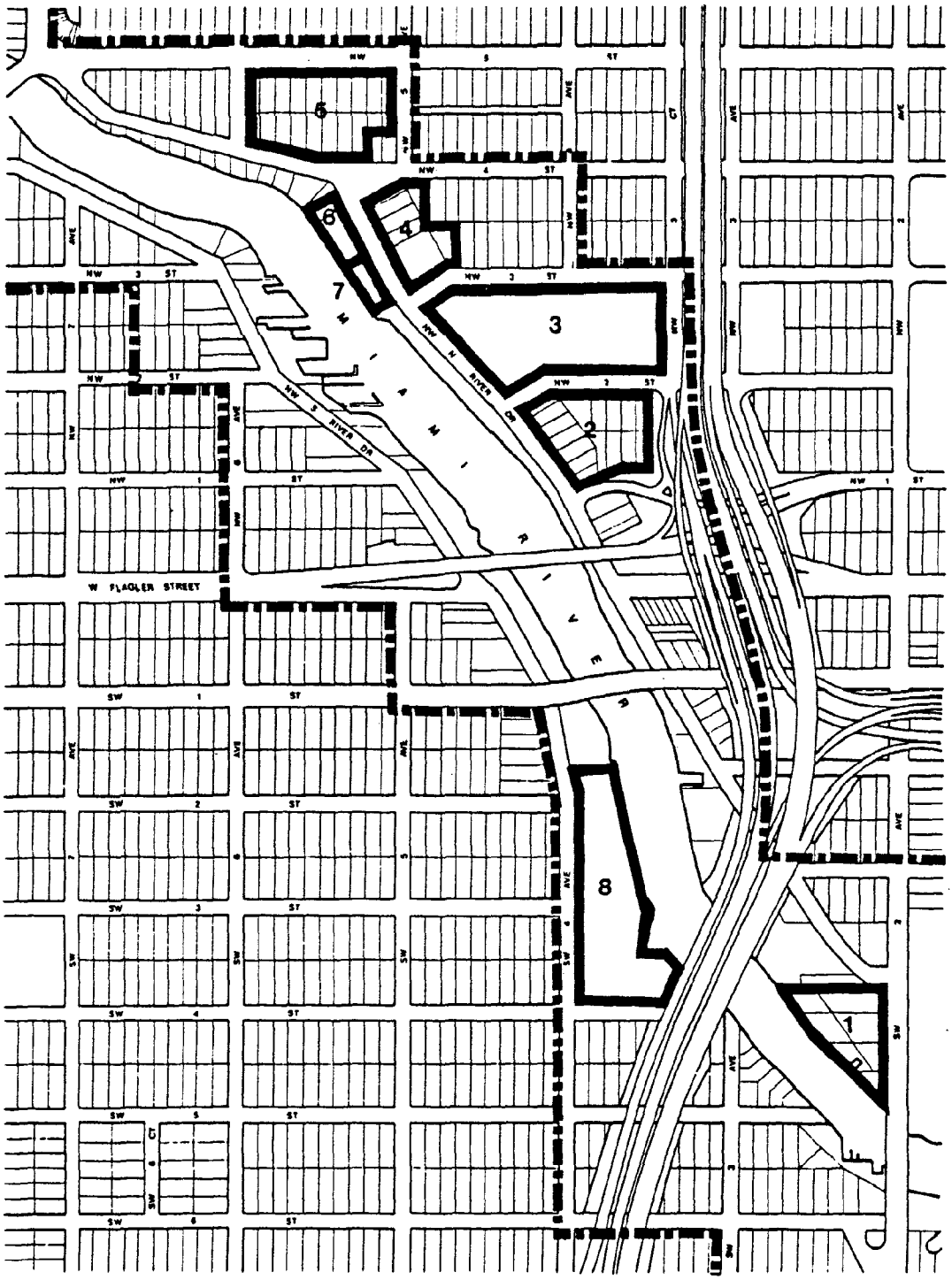
3. District C--5th Street Bridge to 12th Avenue Bridge

The significant parcels that have been assembled under one ownership are as follows:



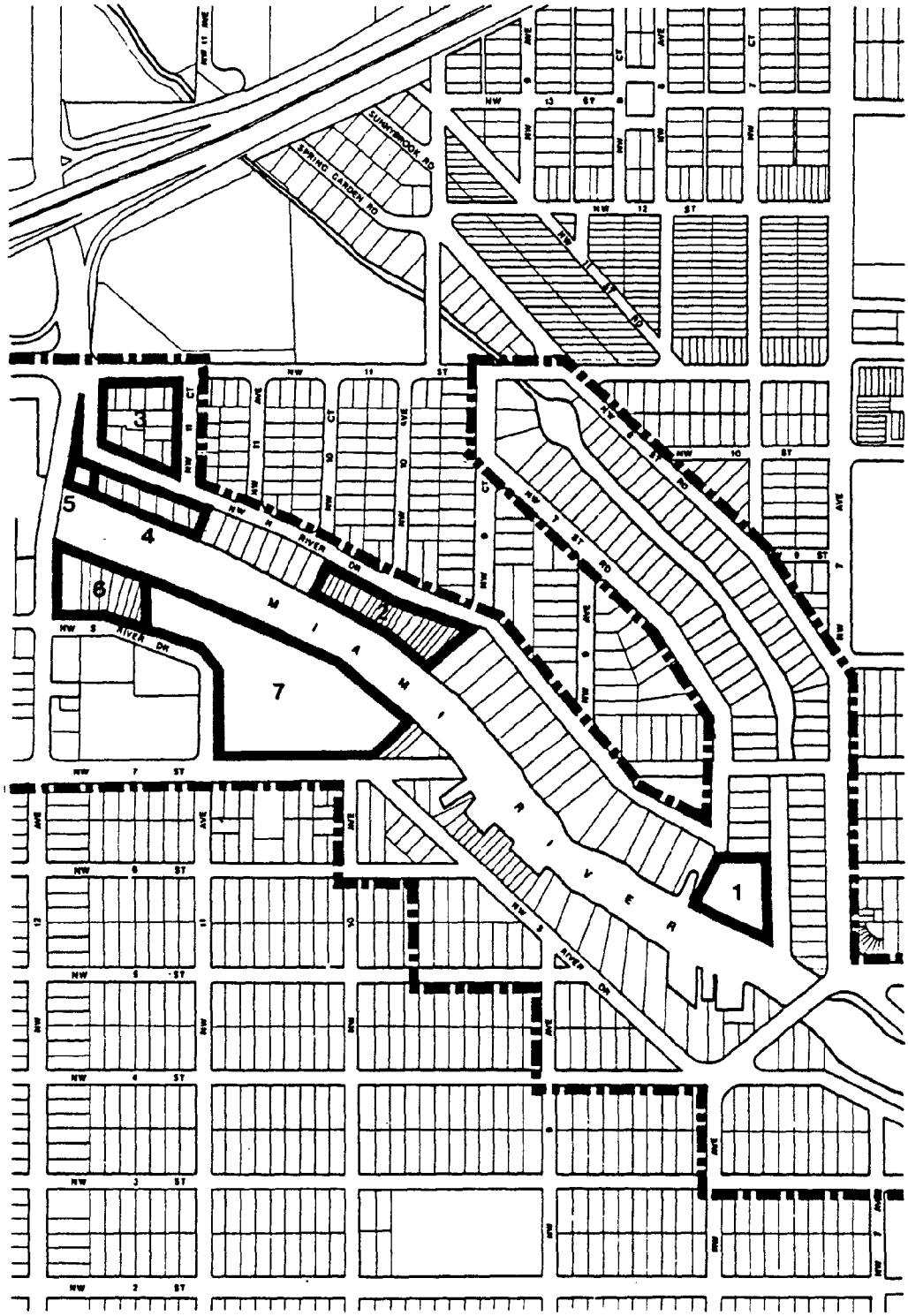
LAND ASSEMBLY / OWNERSHIP MAP - DISTRICT A

1. MIAMI CENTER
2. DUPONT PLAZA HOTEL
3. JAMES L. KNIGHT CENTER
4. INTRAMERICA INVESTMENTS
5. FPL/ARVIDA
6. MIAMI SHIPYARD COPORATION
7. INTRAMERICA INVESTMENTS
8. TOMMY'S BOATYARD
9. U.S. CUSTOMS
10. CYE'S RIVERGATE
11. BRICKELL POINT APTS.



LAND ASSEMBLY/OWNERSHIP MAP - DISTRICT B

1. MIAMI YACHT FULL SERVICE YARD
2. DADE COUNTY / PARK TOWERS SENIOR CITIZEN & COMMUNITY ACTION AGENCY
3. LUMMUS PARK, CITY OF MIAMI
4. SCOTTISH RITE TEMPLE
5. JACK ORR SR. CITIZEN TOWER
6. MIAMI DADE WATER / SEWER AUTHORITY
7. CITY OF MIAMI
8. CITY OF MIAMI, JOSE MARTI PARK



LAND ASSEMBLY / OWNERSHIP MAP - DISTRICT C

1. PRIVATE PROPERTY
2. TOWNHOUSE DEVELOPMENT
3. HOLIDAY INN
4. METRO DADE PROPERTY MANAGEMENT & GSA
5. OLD MIAMI HEROES BUILDING / SOUTHEAST BANK
6. BERMUDA HOUSE APTS.
7. CITY OF MIAMI

(1) Private Property
(2) Townhouse Development
(3) Holiday Inn
(4) Bermuda House Apartments
(5) City of Miami
(6) Metro Dade Property Management and GSA
(7) Southeast Bank

4. District D--12th Avenue Bridge to 17th Avenue Bridge

The significant parcels that have been assembled under one ownership are as follows:

(1) Merrill Stevens Dry Dock Company
(2) Metro Dade Parking
(3) Mahi Temple
(4) York Rite Masonic Temple and James Carnell Lodge
(5) Robert King High Towers, Senior Citizen

5. District E--17th Avenue Bridge to the 22nd Avenue Bridge

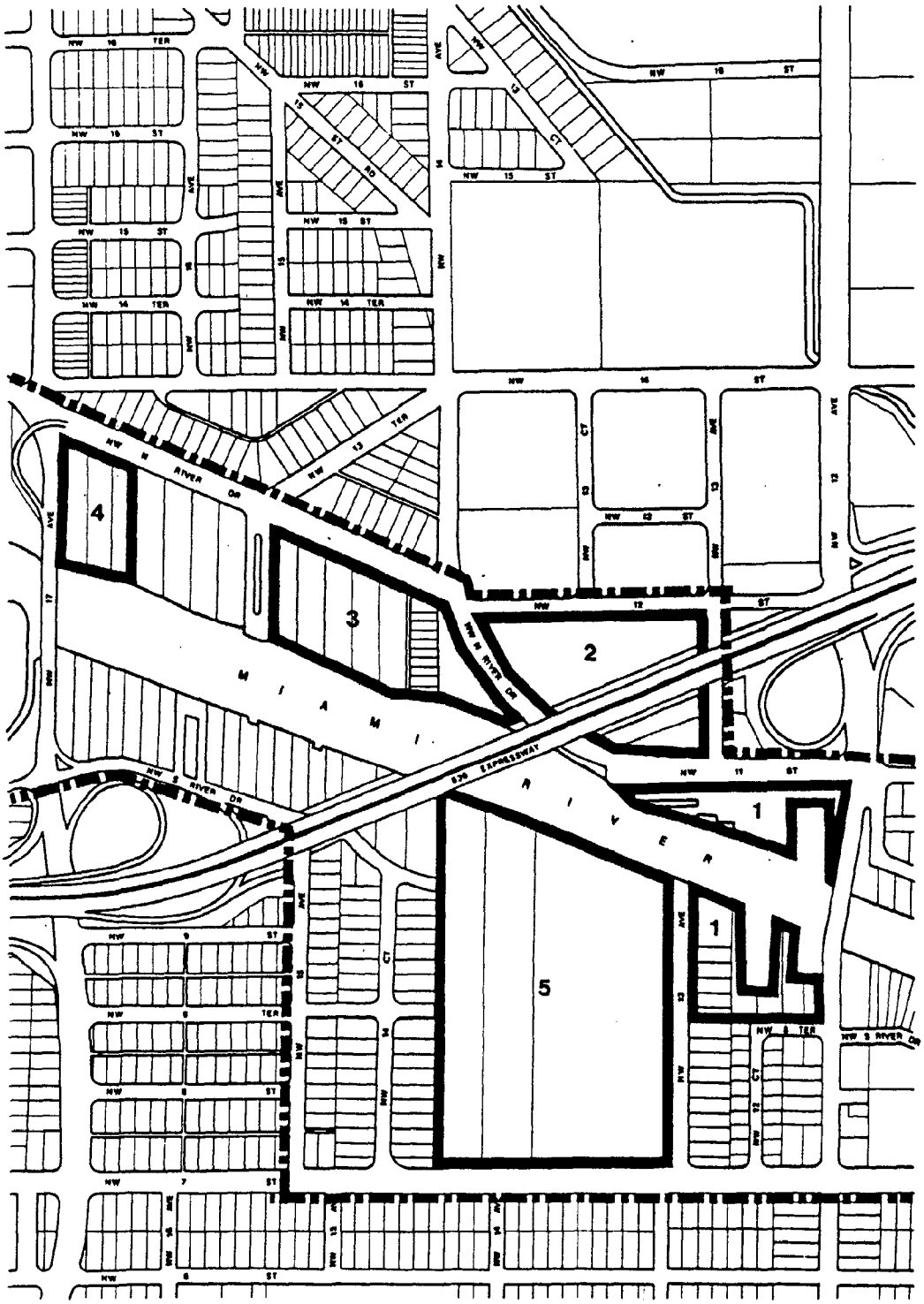
The significant parcels that have been assembled under one ownership are as follows:

(1) Allied Marine
(2) Private Property
(3) Townhouse Development/"River Club"
(4) Dodge Hospital
(5) E.G. Sewell Park
(6) Private property
(7) River Run Condominium
(8) Nuta's Boat Yard
(9) Ebsary Foundation Company
(10) U.S. Customs

6. District F--22nd Avenue Bridge to 27th Avenue Bridge

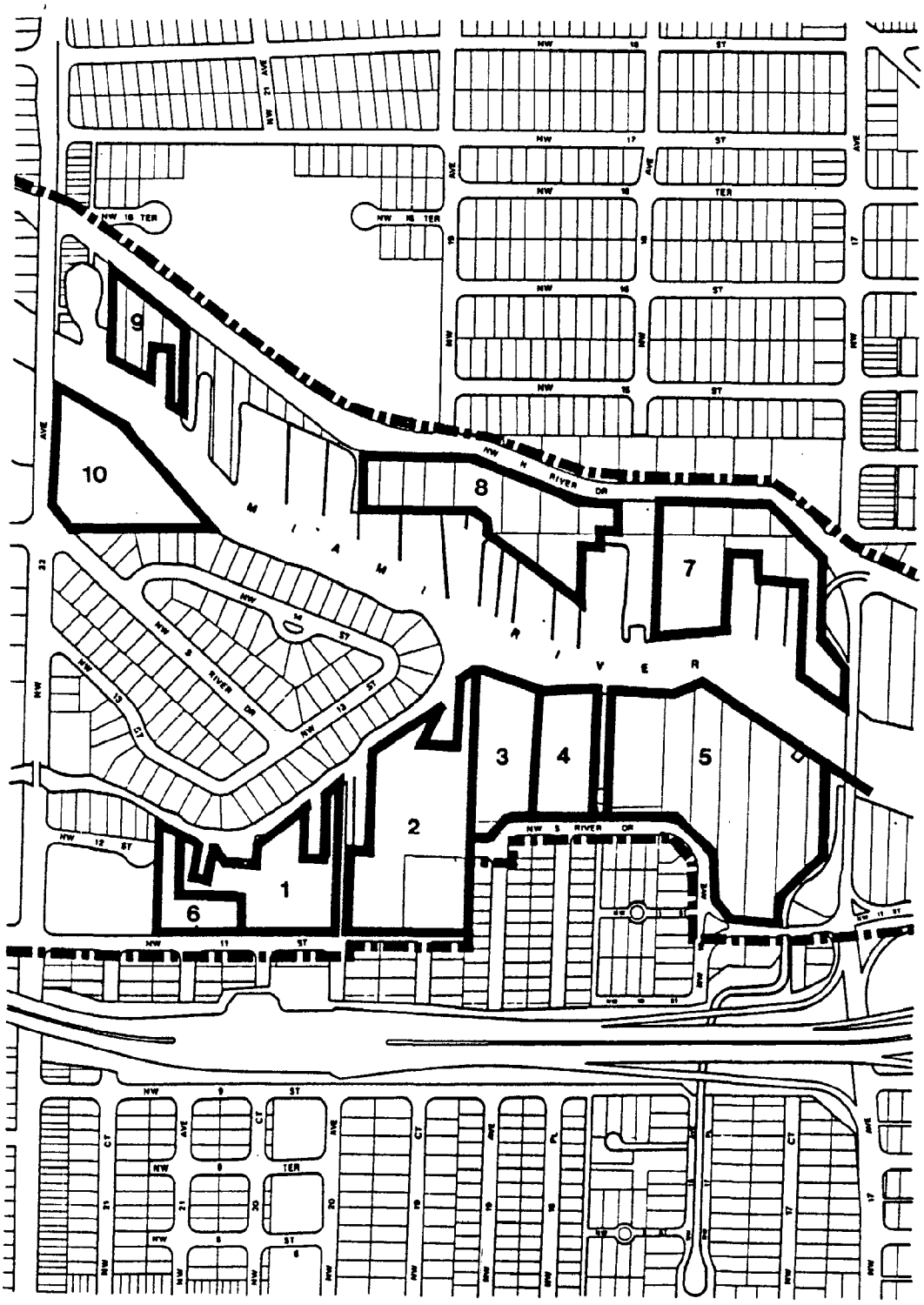
The significant parcels that have been assembled under one ownershp are as follows:

(1) Gerry Curtis Park
(2) Ten-Story Condominium
(3) Musa Isle Senior Citizen Center
(4) Private Property



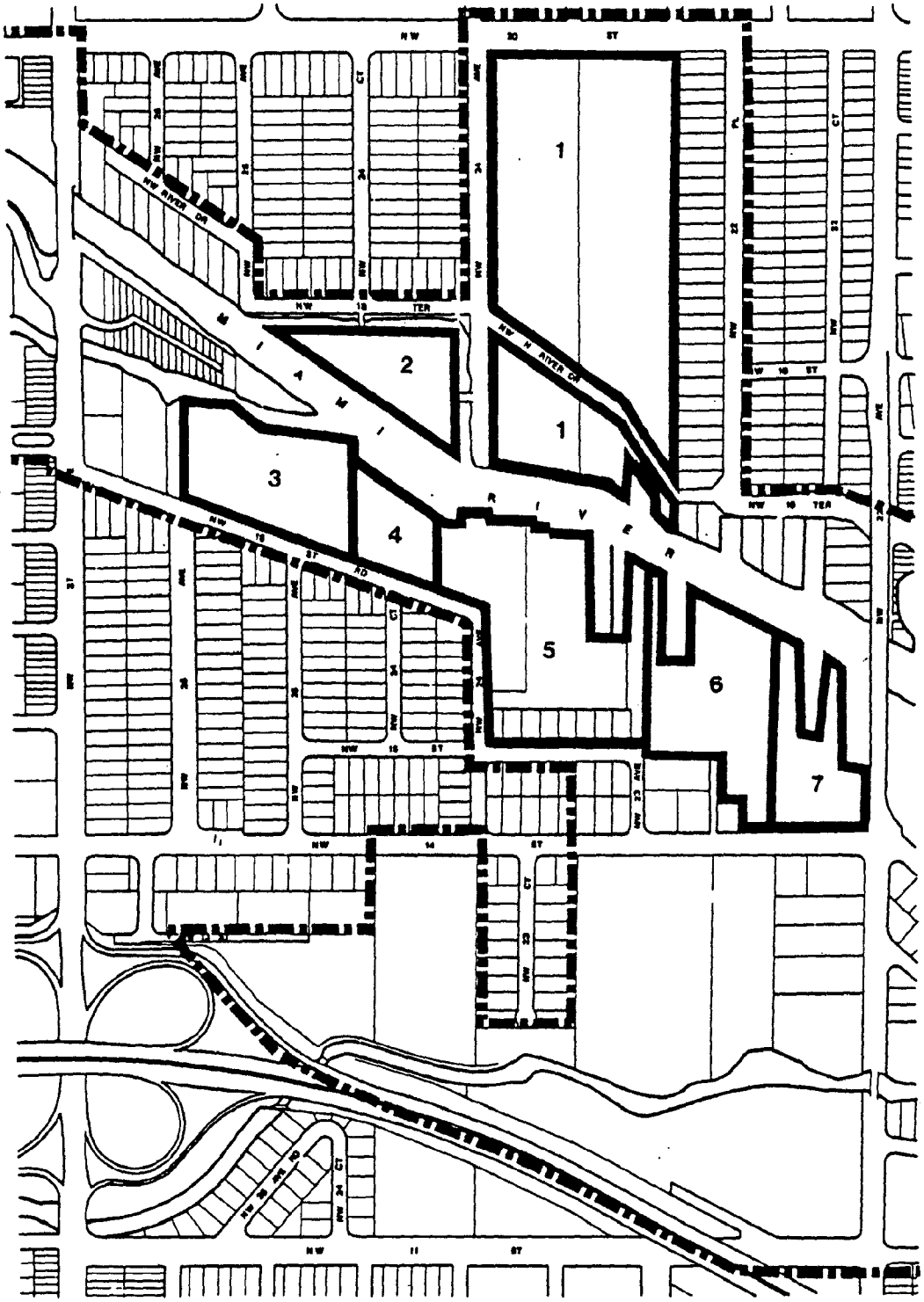
LAND ASSEMBLY / OWNERSHIP MAP – DISTRICT D

1. MERRILL - STEVENS DYRDOCK CO.
2. METRO - DADE PARKING
3. MAHI TEMPLE
4. YORK RITE MASONIC TEMPLE & JAMES CARNELL LODGE
5. ROBERT KING HIGH TOWERS, SR. CITIZEN



LAND ASSEMBLY / OWNERSHIP MAP - DISTRICT E

1. ALLIED MARINE
2. PRIVATE PROPERTY
3. TOWNHOUSE DEVELOPMENT
4. DODGE HOSPITAL
5. SEWELL PARK
6. PRIVATE PROPERTY
7. RIVER RUN CONDOMINIUM
8. NUTA'S BOAT YARD & REPAIR
9. EBSARY FOUNDATION COMPANY
10. PRIVATE PROPERTY



LAND ASSEMBLY / OWNERSHIP MAP - DISTRICT F

1. GERRY CURTIS PARK
2. TEN-STORY CONDOMINIUM
3. MUSA ISLE SR. CITIZEN CENTER
4. PRIVATE PROPERTY
5. FLORIDA YACHT
6. KEY POWER INC.
7. FLORIDA SHIPS

(5) Florida Yacht
(6) Key Power, Inc.
(7) Florida Ships

7. District G--27th Avenue Bridge to N.W. 32nd Avenue

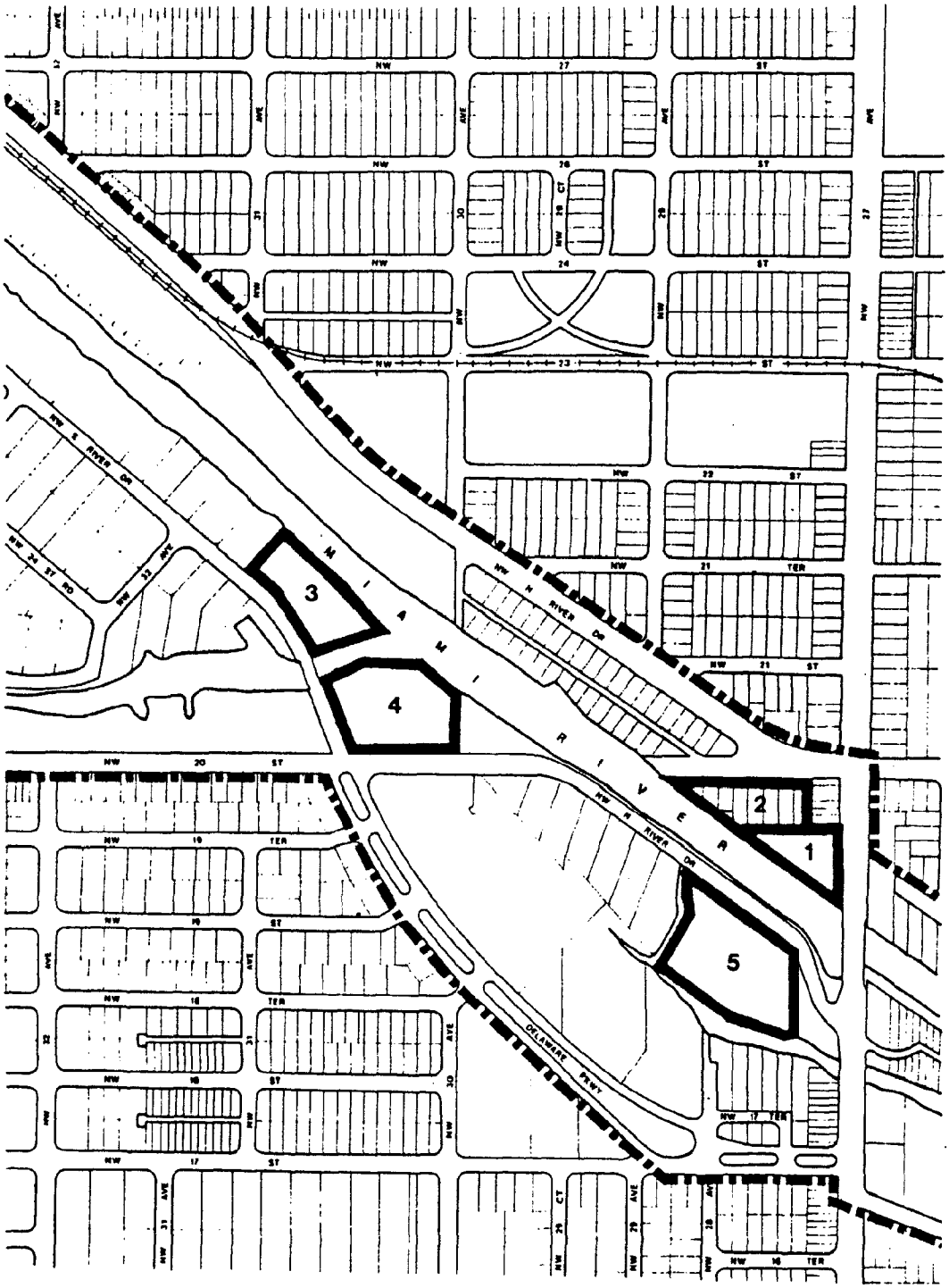
The significant parcels that have been assembled under one ownership are as follows:

(1) Orkin Pest Control
(2) Metro Dade
(3) Bermuda Marine Shipping
(4) Bojean Boat Yard Repair and Sales
(5) Residential Trailer Park

8. District H--N.W. 32nd Avenue to the Salinity Dam West of N.W. 37th Avenue

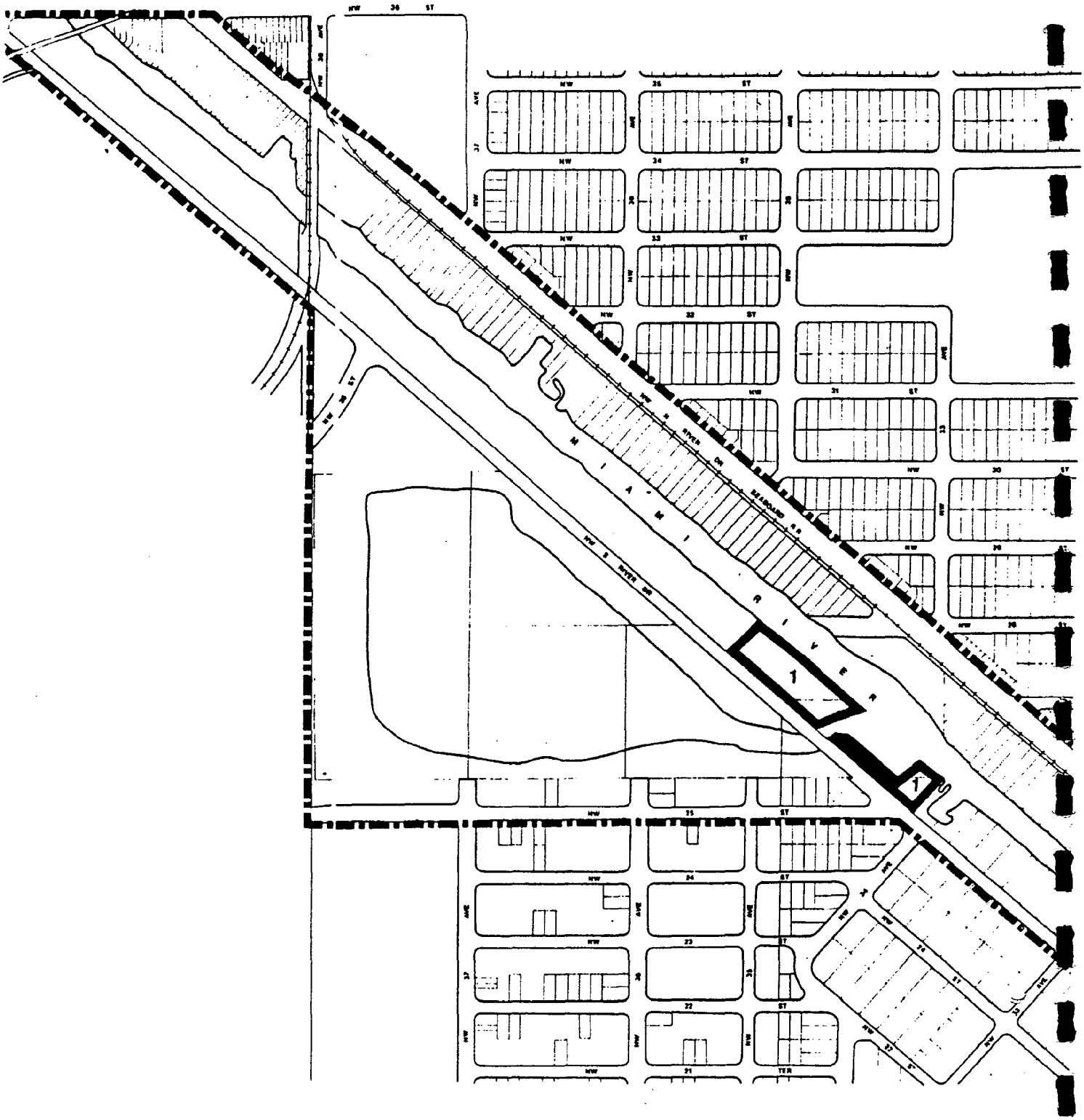
The significant parcels that have been assembled under one ownership are as follows:

(1) Jones Boat Yard



LAND ASSEMBLY / OWNERSHIP MAP - DISTRICT G

1. ORKIN PEST CONTROL
2. METRO DADE
3. BERMUTH MARINE SHIPPING
4. BOJEAN BOAT YARD REPAIR & SALES
5. TRAILER PARK



LAND ASSEMBLY / OWNERSHIP MAP - DISTRICT H

1. JONES BOAT YARD

II. EXISTING ECONOMIC CONDITIONS

The economy of the Miami River area does not function in a vacuum. Broad economic forces affecting the City of Miami, Dade County and southeastern Florida impact what does and can happen along the river corridor and along its edges. In addition, recent development activity in areas relevant to the river, such as downtown Miami and International Airport, are establishing conditions that will significantly impact future investments in the study area. It is the purpose of this section of the memorandum to pinpoint some of those broad market and development factors and trends to establish the framework for the analysis of current and future activities along the river.

A. MARKET OVERVIEW

The Miami/Dade County area has historically experienced significant growth and development. This growth has resulted from a variety of factors including in-migration to the region and a growing international economy related particularly to Central and Latin America. In recent years the in-migration rate has slowed significantly and economic problems in Latin America have contributed to a slower level of growth and development in the Dade County/greater Miami area than for the Miami/Ft. Lauderdale region. From 1980 to 1985 the average annual growth in population was less than 1 percent rising from approximately 2.7 to 2.8 million persons. Regional employment grew at a slightly over 1-percent average annual rate from approximately 1,277,000 to 1,340,000 persons. During the same period Dade County population rose from 1.6 to almost 1.8 million (an average annual gain of 1.8 percent), while employment advanced from 645,000 to 681,000 an average annual increase of 1.1 percent.

Future growth of the greater Miami/Ft. Lauderdale area is very much dependent upon favorable growth trends and economic conditions in Latin America.* Under a baseline forecast of

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* Future Prospects for Miami Fort Lauderdale Regional Economy Robert David Cruz, November 1985; Downtown Development Plan, Miami Florida Economic Analysis and Growth Projections, Hammer, Siler, George Associates, March, 1986; Economic Update, Southeast Bank, 1985/1986; Economic News, AmeriFirst, 1985/1986.

more stable growth in economic conditions in Latin America and a retained competitive advantage for Miami, average annual population growth of 1.3 to 2.1 percent per year is projected, with a 1990 population of 3.1 million rising to 4.1 million by 2005. Under the same scenario, employment is projected to grow at between 1.5 and 2.9 percent per year reaching in excess of 1.5 million by 1990 and approximately 2.1 million by 2005. More aggressive growth projections, which assume more export to Latin America and the Caribbean basin and continued lower United States interest rates, would result in population growth of 1.1 to 2.3 percent per year, with a 1990 population of 3.1 million and a 2005 population of approximately 4 million and employment growth of 1.7 to 3.5 percent per year with a 1990 employment of 1.6 million and a 2005 employment of approximately 2.1 million. In any event, steady but relatively more modest growth is projected for the region.

B. CONSTRUCTION ACTIVITY

Growth in population and employment has contributed to new construction and development throughout the region. The overall pace of construction, however, appears to have far exceeded the pace of market absorption. This has resulted in a relatively significant near-term surplus of residential and non-residential development generally throughout the region.

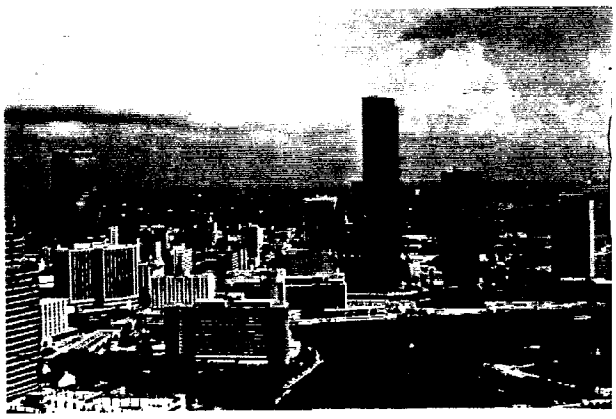
Many domestic, institutional investors and others have been attracted to Miami's traditionally strong growth rate and have taken advantage of lower interest rates to construct large amounts of office, residential and retail space. This phenomenon has resulted in significant buildings with relatively flat absorption creating a serious glut of built space.

Of the roughly 2 million square feet of competitive office space in Dade County, approximately 20 percent is vacant representing a significant increase from the 13 percent vacancy a year ago. Significant residential development has taken place and there are over 14,000 never sold or occupied condominium units in Dade County with additional units still under construction. Significant new retail space has been developed and is under construction with a total of 9.3 million square feet of commercial space serving the County's residents. In addition, significant hotel development has taken place in the downtown area. This has taken place in a market in which the number of tourist visits in Miami and the beaches has declined from approximately 6.7 million in 1980 to 5.7 million visits in 1984.

In summary, while the long-term outlook for additional growth and development in the Miami area is excellent, there is significant near-term overbuilding in both residential and non-residential markets. This has resulted in a three- to five-year backlog in certain sectors. Thus, there does not appear to be any immediate demand pressures threatening the Miami River area for those uses. Long-term growth projections, however, create demand for significant additional development potential. Although this development potential will be at as great a rate (in percentage not numerical terms) it will create long-term demand pressures for additional residential and commercial development along the river.

C. DEVELOPMENT OVERVIEW

As noted above, significant building has taken place in the Miami area combined with relatively flat absorption.



The office market is seriously overbuilt particularly in the downtown and Brickell areas. The long-term development potential for both the downtown and Brickell area is excellent. The Florida Power and Light site on the north bank of the river in the downtown, as well as sites on the south bank of the river with the linkage by the MetroMover extension, present significant long-term office and mixed-use development opportunities. Linkages to the Hyatt, the Knight Center, the Riverwalk and Fort Dallas Park all create the atmosphere for high-density development along the downtown portion of the river. The current area building reduces near-term development pressure along the river and creats a "window of opportunity" to put in place a program to encourage and/or preserve desirable maritime uses.

Significant development pressure, however, may affect the northwest portion of the river in relation to the airport. The airport (particularly to the west) represents a "hot development spot". Major projects in West Dade near the airport include DeBartolo's $402-million, 4.9-million-square-foot project; a 50-acre, 1-million-square-foot project by Deltona Corporation; and a 205-acre project by Arvida Corporation. This development and additional "spinoff" development around the airport may create demand pressures in nearby portions of the river for airport and office-related commercial activities as opposed to water-related or dependent uses. In essence a "cycle of impact" is being created around the airport which will create secondary pressures to convert land at or near the river to airport support uses (e.g., rent-a-car storage).

In downtown Miami, hotel and retail development appears to be focusing around the Bayside Specialty Retail Center. This should serve to refocus the tourist industry in Miami toward Biscayne Bay and potential future expansion of Omni to the north. Likewise, new downtown hotel development appears relatively remote given current low occupancy rates. Future hotel development will probably be closely linked to the location and development of new and expanded convention facilities.

As noted previously, the residential market is clearly overbuilt. Significant residential development is occurring in the suburban Kendall area. The luxury waterfront projects are particularly depressed because of the lack of wealthy Latin American purchasers who played an important role in this segment of the residential market. This may reduce near-term demand pressures along the river; however, long-term demand for lower-priced rental units appears strong and the close downtown location and waterfront amenities along the river may create significant development pressures when the current over-supply begins to be absorbed.

D. GEOGRAPHIC ORGANIZATION

The Miami River study area is an unusually configured and operationally complex economic system. The highly linear form of the area, the diversity of uses and the narrowness of land available to those uses in relation to the surrounding area make it similar in many respects to a stretch of highway strip commercial. Of course, in this instance, the river is substituted for the highway and there is the similarity in the uses

that would actually occur; however, in each instance the surrounding uses are strongly functionally attracted to their principal accessway and life's blood--the river or the highway.

The river changes functional character many times from one end to the other. For the most part the reasons for these differences are not related to changes in the character of the water body itself--its width, depth, water quality or other. Rather, they are due to historic, geographic, political and economic conditions that are usually expressed in a form of land-related investment. Unlike the highway analogy, therefore, a significant proportion of the businesses located along the river do not depend upon it to bring customers or goods to their operation.

A number of prior studies of the Miami River were made available to the consultant team. Some of these go back over 30 years to the early 1950's. Since they were produced by different organizations with a variety of different intents, they do not handle land use in a consistent manner. An analysis of these studies seems to indicate, however, that the total number of water-dependent uses along the river is slowly but surely declining. Within recent years we have only to note the redevelopment of the downtown area, the well-publicized closing of a boatyard in the downtown area and the conversion of one of Merrill Stevens' locations to the River Run condominium project to find examples.

This section looks at the functional character of the study area at three overall geographic levels. First there is the downtown area comprised of the five planning areas outlined in the downtown plan lying between Biscayne Bay and the I-95 overpass: Brickell Avenue, Brickell Central and Brickell West on the south side of the river and Dupont Plaza and River Quadrant on the north. The downtown portion is a part of both the primary and secondary study areas as defined by the study. For the purpose of this analysis, however, it is split off from the rest of the river and looked at separately.

The other two geographic areas are the primary study area, comprised of properties directly adjacent to the river and usually no more than a block upland from it, and the secondary study area, an irregularly shaped area extending outward from the primary area over a distance of one to maybe five or six blocks. Most of the analysis focuses on the primary study area.

1. The Downtown River

It was noted above that the development that has occurred in recent years and is likely to continue to occur in the future in downtown Miami has made the City one of the most dynamic investment environments in the nation. While some marine-oriented businesses like the Miami Shipyard and the Miami River Yacht Yard continue to operate in this area, the trend is decidedly against these operations. Rather, the real direction for the area may be typified best by the closing of Tommy's Boat Yard and the purchase by Miami River Yacht Yard of property farther up the river in case it should be displaced from its current location, which it leases from Florida Power and Light.

A variety of public and private actions over the past decade seem to make it clear that marine businesses, to the extent that they are to be represented in this area in the future, will work within a new development context. Or, perhaps more accurately, the new development should be required to take marine interests into account and to encourage reasonable types and amounts of such business to occur along with the new mixed-use development. Adequate provision should be made to relocate any marine businesses that may be displaced and the downtown river, at minimum, should retain a marine atmosphere and public access to the river from both the land and water sides.

2. Secondary Study Area

Less of the research and analytical effort has been expended in the secondary area. It appears clear, however, based on analyses of the river edge businesses, field surveys and observation, that activities occurring in the secondary study area are generally not linked to those occurring along the river. Some marine sales and services businesses exist in this area, and at the northwestern end of the river some industrial firms have buy/sell relationships with businesses on the river. For the most part, however, the secondary area consists of residential, retail and industrial uses having almost nothing to do with the river. In fact, one could pull the river away entirely and it is highly unlikely that there would be any significant change in economic activity in the secondary study area.

3. The Primary Study Area

Given the caveats indicated above for the downtown and secondary areas, the primary area begins at the I-95 overpass and extends westward to the Salinity dam. It includes the various tributaries extending off the main branch of the river, like the Tamiami Canal, Seybold Canal and Palmer Lake. For the most part the area is only about one block wide, although at certain locations it extends outward for several blocks to include logically associated contiguous properties.

E. FUNCTIONAL ANALYSIS

Analysis of economic activity in the primary area has been grouped into three major classifications defined primarily on the basis of the activity's relationship to the water.

- Water Dependent--Operations in this category are absolutely linked to the water as a generator of business activity. Included in this group are marinas, boatbuilding and repair, shipping, fisheries and marine sales where the business keeps an inventory of display boats in the water.

- Water Related--Most categories of marine sales, other wholesale and retail sales, various office uses such as insurance, freight forwarding, brokerage that provide services to the maritime industry, scrap yards and most other manufacturers, certain restaurants and various manufacturing and repair of marina equipment that does not obtain customer support directly from the water are in this group.

- Non-Water Related--All other uses including services, hotels, most restaurants and residential.

1. Water-Dependent Activities

These businesses and other operations are essentially what this study is all about. Within the Miami area there are limited locational options for firms that depend upon the water for their business. Functional aspects of these operations are summarized by major types of business activity in the paragraphs that follow.

Marinas

- The in-water and on-land boat storage function is important along the Miami River but not a dominant activity. The amount of water area available to slips is highly constrained due to the narrowness of the river in most areas. On-land storage is not a major function in the study area and is somewhat constrained by up-land area.

- There are marinas along the river as identified by the State in 1984 when it conducted a State-wide inventory of such facilities. These facilites are listed in Table II-1.

- The total number of slips indicated is 498, which is really quite modest given the length of the river. The two largest commercial facilities are Hardie's and Nuta's, which are located adjacent to each other on the north side in about the middle of the river. They are also next door to River Run and Poland thus creating a significant recreational maritime center at this location. Occupancy rates tend to be moderate to high--at least 60 percent in most instances. Some of the facilities, like Jones, Bertram and the Dupont Plaza, cater primarily to non-resident customers.

TABLE II-1

SUMMARY OF FORMAL MARINA ACTIVITY
MIAMI RIVER

Facility Name and Address	Number of Wet Slips	Number of Dry Racks	Occupancy Rate %	Percentage of Non-Resident Customers
Allied Marine	25	10	over 80	-
Anchor Marine	10	5	over 80	5
Atlantic Marine Boat Yard	10	2	60-79	20
Auto Marine Engineers, Inc.	10	-	60-79	99
Dupont Plaza Marine	21	-	-	80
Eighth Avenue Boat Slips	33	-	over 80	-
Florida Marine Center	-	15	40-59	-
Florida Yacht Basin	12	-	60-79	15
Bimini	20			
Hardie Yacht Basin	100	-	over 80	5
Jones Boat Yard, Inc.	25	3	40-59	95
Miami Pioneer Club	18	-	-	-
Miami River Marina	-	-	-	-
Miami River Yacht	20	-	over 80	10
River Run	70			
Nuta's Boat Yard	125	110	40-59	2
Isla del Mar	75			
Poland Yacht Basin	15	-	-	-
Richard Bertram & Company	29	-	40-59	80
Tamiami Marine	-	20	60-79	5
Tony's Marine Service, Inc.	35	-	Over 80	-
Commercial Subtotal	498	105		
Non-Commercial*	150	-	-	-
TOTAL	648	105		

* Slips at two condominium complexes.

Source: An Inventory of Multi-Slip Docking Facilities in Florida, 1984 prepared by Division of State Lands; tabulated by Zuchelli, Hunter & Associates, Inc.

- The inventory does not include many additional slips--presumed to number in the hundreds--associated with residences as shown in the photo below. In addition to the condominium projects identified above, most of the single-family homes located along the river and its tributaries have one or more slips. Many of these accommodate boats owned by residents. In other instances the owner of the property leases a slip to another individual. Observation indicates that some of the boats moored at these slips are being occupied by live-aboards.

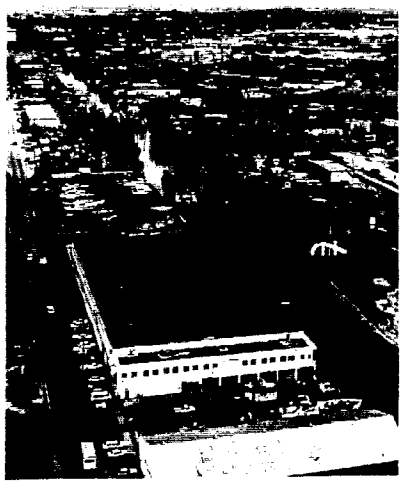
- The quality of the facilities varies widely with some of the better-quality marinas associated with residential projects. Small- to moderate-sized recreational craft with a relatively low proportion of "live-aboards" in the organized marinas are most prevalent.

- Competition for the function in the Miami area comes primarily from the public Dinner Key Marina, the Miami Beach Marina, private clubs along Biscayne Bay and some small operations in the northern part of Miami.

Ship and Boat Repair

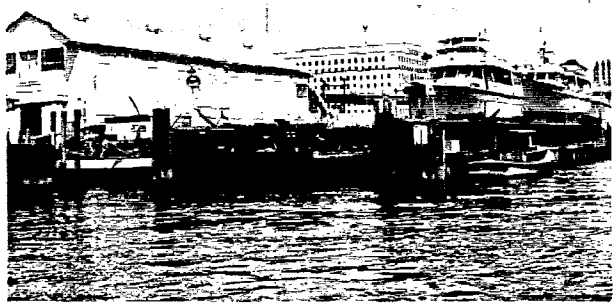
- Boat and ship yards repair and service vessels on site. They may or may not also function as a marina, but they generally need most of their slips for

storage of vessels being worked on. The river accommodates some excellent large operations of this nature, several of which have national reputations. This function is important because of the number of skilled and semi-skilled workers it accommodates and the character it imparts to the river as a working waterfront. Secondary impact is important because many of the vessels worked on are very large, have well-paid crews and make significant purchases in the area.



- The repair yard function has declined somewhat over the years due to several factors. One of these is competition from similar operations in Broward County. Many of these are newer and larger and constitute tough competition for Miami businesses. The shift in customer support from Miami to Broward has been taking place over a 10- to 15-year span and is linked in part to the decision by Dade County to enforce a personal property tax on yachts in the 1970's (which Broward did not) and to the image of Miami as less satisfactory as the Fort Launderdale area as a "home port".

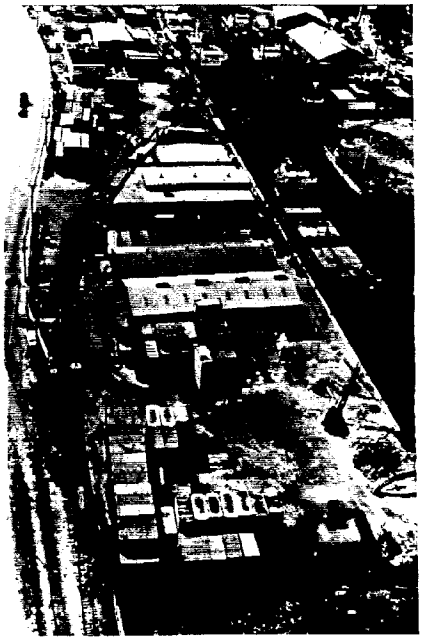
- The large luxury yacht, primarily power yachts, business is undergoing substantial world-wide growth. Several of the larger yards building and maintaining these vessels are located in Broward County. These are comparable to but generally larger than the Merrill-Stevens operation on the Miami River. For this reason these large yachts tend to go to Fort Lauderdale rather than to Miami. In addition, the owners and crews of these vessels, as well as the smaller yachts, tend to feel more comfortable in the Fort Lauderdale area because there is less ethnic diversity, the area has a "higher-income" image and the neighborhoods in which the facilities are located are considered of higher quality with less concern about personal safety and a generally more "yachty" environment.



- Repair yards, like Florida Yacht Repair in the photo on the following page, often occupy large parcels of real estate and thus are prime targets for speculators and investors interested in non-maritime development along the river.

Shipping

- The shipping function on the Miami River is large and significant. The study focuses primarily on that portion of the industry that is "formalized" or "traditional"--primarily the firms located west of 27th Avenue.



- A visibly large "informal" shipping business occurs at many different points along the river as illustrated by the vessels in the photo on the following page. The shipping industry has had its ups and downs and is currently on an upswing. It has a long history of association with the river and despite the rather unusual aspect of towing large vessels up and down the narrow waterway, functions quite satisfactorily.

Yacht Builders

- This function is limited to only a few locations at the present time. One of these is Bertram on the Tamiami Canal and Palmer Lake--a satisfactory location for that business but hardly an optimum one. Other than Bertram, the principal form of yacht building is the finishing off of sail and power vessels from bare hulls at various boat yards. Yacht building is also enjoying strong growth in Broward County.

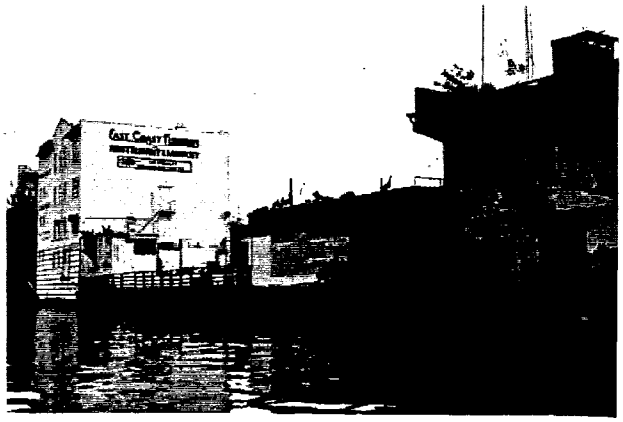
- Vessels using the Miami River largely serve the smaller Caribbean ports and deal primarily in the export of general cargo. Most of the firms are located in the Dade County portion of the river. Favorable labor costs and productivity factors as well as regional accessibility are the principal reasons why the businesses work well here. Problems are primarily the relative lack of space along and upland of the river.

Maritime Product Sales

- Most sales functions do not require a waterfront location and thus are not truly dependent upon the river. All other things being equal, however, they certainly function better along the river, which provides an opportunity for proper display of boats and equipment, product trials and customer access by both land and water. Maritime product sales operations are scattered throughout the primary and secondary study areas. The river area serves as a "shopping center" for these products in the minds of residents of Miami and a larger portion of southeastern Florida. However, it is a very dispersed shopping center with no real concentrations along the river to create a "marketing mass" capable of establishing an independent reputation and attracting customers.

Fisheries

- There have been significant changes in the character of the fisheries industry over the past several decades. These changes are related to availability of the biological stock in the area that can be served on a daily basis from Miami, changes in customer preference, the ability of the United States fishing vessels to be competitive, the size and character of fishing vessels and the economic realities of the procesing and distribution end of the business.



- The result has been a general decline in the river's role in the fishing industry. Its function is now limited primarily to storage and distribution with relatively little landing of fish or processing.

Towing, Salvage and Marine Construction

- Businesses involved in these activities comprise a small but important functional group along the Miami River. The principal towing company is vital to the movement of shipping along the river. Another towing company, which serves primarily the larger vessels calling at the Port of Miami, has secondary operations on the river. Salvage companies, with professional divers, serve the south Florida market. One significant marine construction business is located on the

river and many are dependent on it for receiving and shipping products.

- These are not glamorous activities, but they definitely fit in with the overall maritime orientation of the river and provide necessary support to other maritime functions, particularly shipping.

2. Water-Related Activities

Activities in this category do not depend on the water to bring customers or products to their place of business. Nevertheless, such firms definitely function in the maritime area, frequently serving businesses that are water dependent or customers active in maritime. Many of these firms are physically located on the river while others are located in the upland area adjacent to the river or possibly in the secondary study area.

- Engine and Equipment Sales and Repair--A number of the water-related firms fall into this category. The degree of linkage to the maritime industry varies from very close--repair and reconditioning of propellers and drive shafts, to only marginal--repair of shipping containers and trucks. This group has a strong heavy industrial functional orientation. Its presence in the study area results in part from Miami River's heritage as an industrial district related to the water. For instance, diesel engine sales and repair was perhaps more important in the past than it is today with the relative decline in the fishing industry. But these businesses continue to draw customer support from the river and from southeast Florida and operate satisfactorily at their current locations.

- Maritime Product Manufacturing--There are several firms that manufacture maritime products such as sails, safety gear and clothing that are functionally related to the maritime industry but do not depend on the water. These firms have limited customer or supplier linkages in this area but find that the Miami River environment provides a proper context for their business.

- Marine Supplies--There are many suppliers of marine products at both the retail and wholesale levels in the primary and secondary study areas. Most of these have no need to be directly on the water. Rather, they require a location that is relatively easy to find and service. Several firms with national clientele operate out of this area. They help to strengthen the identity of the Miami River district as a maritime community.

- Restaurants--It is perhaps generous to include these in the water-related category. Nevertheless, some of the existing restaurants receive a portion of their customers by boat. It has already been noted that some receive seafood products by boat. Nevertheless, it is clear that none of these restaurants require a waterfront location in order to function, although the waterfront location is probably the reason they chose their present site. Some are business extensions of seafood retail/wholesale outlets that do require a waterfront location.

3. Non-Water Related

About one-third of the survey questionnaires covered activities falling into this category. They range from private institutional uses and government activities to office functions. The majority have limited linkage to the maritime

industry but absolutely no need for sites on or near the water. It is logical, however, that those having customers in the maritime industry or providing services or information to that industry, fit into the Miami River context satisfactorily.

A number of the firms are identified as automobile repair and maintenance. These may have had linkages to the maritime industry in the past but exhibit few such linkages at the present time. While this function is not necessarily antithetical to the maritime context, they also do not contribute anything to the area.

One of the most visible activities in this category is scrap processing and junk yards. Some of these receive or ship products by water. Their function is not regarded as water related since the same kinds of activities occur elsewhere in Miami with no relation to the water. This appears to be another activity that "grew up" alongside the river simply because the area was heavy industrial in character. These firms function reasonably well but are not necessarily compatible with the maritime orientation of the area.

F. BUSINESS OPERATIONS

This section highlights the findings of the research relevent to the general business operating environment in the study area. Some of these factors have been mentioned in the paragraphs above and many will show up in the concluding section as opportunities or constraints. Information was derived from interviews and the returned survey questionnaires. The material is organized by broad categories with the salient points identified under each.

1. Real Estate

The real estate situation in the primary study area west of the I-95 overpass is clouded. There are several major forces at work that are tending to contribute to a difficult but not unreasonable operating climate for businesses.

- Ownership--A significant proportion of businesses own their real estate and thus have no landlord problems. Almost all firms that do not own desire to do so. Ownership tends to be

long-standing with relatively few recent purchases by maritime industry operators. However, there have been a couple of instances recently where maritime firms have bought real estate for relocation or expansion.

- Price of Land--Purchase of land by existing maritime businesses tends to be constrained by the relatively high cost of the land. Unimproved waterfront property seems to be selling in the range of $12 to $15 per square foot or $15 to $18 per square foot with minimum improvements upon it and maybe some piers. We find such prices high in relation to other maritime areas in which we have worked and expect that they constitute a definite constraint on maritime industry growth along the river. Nevertheless, we are aware that there are firms trying to buy property even at these prices, which indicates that they view the business environment as good--or perhaps have few options.

- Renting--Most operators who are tenants generally find that the rents are moderate and within their ability to pay. While this seems somewhat inconsistent with the earlier observations regarding the high cost of real estate, it would appear that many of the landlords are also long-term owners of the property and have little interest in forcing out their tenants. There also seems to be a fair amount of true neglect of property on the part of landlords. This certainly keeps costs and rents down. The high level of development in the Miami area, combined with significant overbuilding may create high speculative values but limit actual real estate activity.

- Real Estate Taxes--Most owners do not regard their taxes as especially burdensome. Nevertheless, there have been dramatic rises in recent years, related primarily to increases in the underlying assessed value of the real estate. Interviewed owners indicated that since 1980

assessments have risen in the range of 50 percent to 70 percent. To the extent that these increases are related directly to business operations, they are reasonable. However, this is likely not the case. Rather, the assessed values undoubtedly reflect changes in the perception of the area's future as developable real estate, and this can create a real problem for maritime businesses.

2. Labor

Business operators find the labor situation to be generally good. Workers are productive and wages are reasonable. This appears to be a strong positive feature helping to support the more employment-intensive businesses in the study area.

The firms responding to the survey employed a total of 1,734 workers for an average of 25.3 full-time and 7.5 part-time employees. Although the data may be biased since more of the larger firms returned questionnaires, the data still is an indicator of the importance of the area as an employment center.

3. Business Success

Business has been generally good for the firms responding to the survey. Only 15 of 66 respondents indicated that their business activity was flat or down since 1980. Eighteen reported business volume up significantly.

Over half of the businesses responding to the question concerning 1985 gross sales indicated that they did at least $1 million worth of business. Many have been actively adding employees, renovating space, purchasing new equipment or expanding their markets. These firms and others seem to be looking to the future optimistically with expansion being proposed.

The businesses have more to say about what they like about their locations in the study area then what they don't like. Access to the river and the waterfront are clearly among the most important locational features for these firms. Access to freeways, the downtown and the airport are also important. From this standpoint, therefore, the study area represents an unusual combination of assets--a working waterfront with high accessibility to major markets.

4. Business Climate

Most of the firms find the climate for doing business to be satisfactory at the present time. They attribute this to: a general overall improvement in the state of the river's economy; improvements in foreign trade since the dollar weakened; an upgraded image for the river and the City; and external business factors such as, low interest rates and operating costs.

However, a number of items are of concern to businesses. There is a broad concern about crime as it affects business property, customer property and automobiles. For instance, one firm has had five customer and employee automobiles stolen from its parking lot in the first six months of 1986. The image of surrounding neighborhoods, in many parts of the study area, tends to reinforce the perception and fact of criminal and anti-social activity. Because of the linear nature of the business area, it is bordered by residential areas of highly variable quality throughout its length. Many of these areas are perceived as housing individuals who create problems for businesses on the river's edge. The condition of the surrounding neighborhood is generally regarded as fair to poor, although public security and police services are considered fair or good.

While most of the firms consider the size of their land area as sufficient, many feel that parking for customers and employees is inadequate. This indicates that land availability is a greater problem than direct survey responses indicate.

5. Economic Impact

Based on the survey responses, interviews and analysis of economic activity along the river, it is possible to estimate the impact that the river has on the Miami economy. The parameters of that impact are summarized below.

- Employment--7,000 full-time jobs and 600 part-time. Almost 60 percent of the survey respondents have added employees over the past five years and about one-half plan to add workers during the next three years.

- Growth Sales--$94 million by respondents the survey. An estimated $613 million by all firms operating

along the river. This works out to about $87,000 per full-time worker which correlates very well with general experience and indicates that the data is pretty much on target. Over three-quarters of the respondents indicate that business in the past five years has been up from a little to a lot.

- Real Estate--$600 million in land and buildings from marine businesses only. This value is based on 1985 assessment information.

- Direct and Indirect Impacts--Assuming a multiplier of three, the direct business activity of $613 generates indirect economic impacts of twice that amount or just over $1.2 billion for a total impact of over $1.8 billion.

G. ECONOMIC OPPORTUNITIES AND CONSTRAINTS

In this part of the report the principal economic and physical opportunities for improved maritime-oriented business activity on the river and the constraints that will tend to limit the ability to tap those opportunities are set forth. The specific items are based on points raised in the analyses above. The material will serve as a basis for testing market conditions and establishing a framework for future public policies.

1. Economic Opportunities

There are a number of areas in which opportunities are available to both the public and private sectors. These can be used to generate new investment compatible with the objectives of the planning process.

- Within the Miami area, the Miami River has relatively little competition as a center for highly varied maritime activities. Individual sectors such as shipping, marinas, yacht repair and so forth may have competition from Dodge Island, Dinner Key, north Miami and Miami Beach, but no place boasts the concentration of the Miami River.

- Markets for products handled by Miami River businesses are generally good and the outlook favorable. This includes shipping, large yacht repair, marine supplies, various other marine services and so forth. The river is an established "shopping center" for goods of this nature.

- The operating environment constitutes an opportunity. Businesses find that such factors as labor, taxes and rent are generally in line with their ability to pay and that workers provide a good product at a reasonable cost.

- The gradual improvement in the quality of the water and in public perception of the river itself provide an opportunity for businesses to gain better overall acceptability and reception in the marketplace. There is less presumption to look down on businesses operating along the river.

- The area has excellent external access to a variety of markets including the airport, downtown and the rest of the region via good roads and, of course, the river itself.

- The availability of some relatively large private properties for reuse is viewed as an opportunity. A few of these are existing maritime operations that can be better utilized. Others are non-maritime, however, that might be used in a positive way by new maritime businesses.

- There is a large amount of publicly owned land along the river that is not being used to support the overall objective of improving the river's suitability for maritime businesses. This land can be leveraged to help achieve objectives expressed by public officials.

- The concentration of public actions and the formulation of public policies supporting the river are regarded as opportunities. While these efforts in the "political" arena are viewed by many with skepticism, they should be given the benefit of the doubt at this stage.

- The river serves as a focal point for businesses that have operational linkages among themselves. This is the strongest on the "heavy" side including shipping, salvage, towing, freight forwarding then it is on the "recreational" side. However, in general the maritime "shopping center" context provides an overall business environment that provides an opportunity for new investment in the establishment and expansion of maritime businesses.

2. Economic Constraints

While many opportunities exist, there are also constraints that will make them difficult to achieve. The most important of those are summarized below.

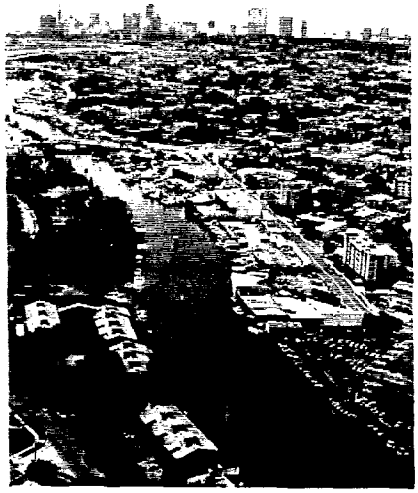
- The market environment is highly variable. Shipping and its support functions are dependent upon economic conditions at the national and international levels over which they have no control.

- Competition from other areas such as Broward County and the Florida Keys for aspects of recreational marine activities definitely put a constraint on the ability of that part of the maritime industry to expand.

- The Miami River area has a negative image among many people, although efforts are definitely paying off among local people. Still, the

skippers and owners of many of the major yachts that could be patronizing businesses along the Miami River are uncomfortable with the ethnic change that has occurred in Miami and perceive that the Miami River area has a significant amount of crime and social problems.

- Building and land space remains a problem for many firms. Land areas in many parts of the study area are extremely narrow with expansion almost out of the question. Interesting plans were developed in the past that showed the relocation of South River Drive to increase the amount of land immediately adjacent to the river.



- Land values are relatively high for marine use and tend to diminish the ability of maritime businesses to purchase real estate for expansion or relocation.

- The condition of nearby neighborhoods is poor in many instances. This tends to perpetuate the generally negative image that people have of this part of Miami.

- Port of Miami officials, who focus primarily on shipping activities at Dodge Island, tend to ignore the role of the Miami River as an aspect of the Miami region's shipping operations.

Actions by the Port could conceivably hinder the shipping industry on the river. In our view the shipping industry must be regarded as a whole and the contributions of its different elements, including the Miami River activities, recognized as part of the whole industry.

- Already hindering river industry is the problem of bridges. While this is viewed as having no easy solution, the bridges are clearly a constraint on many types of maritime activities along the river--shipping, yacht repair and yacht storage.

- Governmental regulations have created difficulty for some firms. These vary from small marinas to large yacht repair and building operations and the shipping industry. These regulations need to be reviewed in light of the pragmatics of operating along the river in a constrained land area and in an industrial-type district.

- Security and crime issues continue to be problems for businesses and constraints on the willingness of people to invest further in their businesses.

III. MARKET EVALUATION

The purpose of the market evaluation is to build on the analysis of existing conditions set forth in Sections I and II and to provide a basis for preparation of the development program and implementation strategy. The organization of this section is as follows:

A. Introduction
B. Regional Market Framework
C. Commercial Marine
D. Marine Industrial
E. Recreational Boating
F. General Industrial
G. General Commercial
H. Residential

A. INTRODUCTION

In most instances a market evaluation can use data clearly identifying past trends in order to assess future markets. Or the analsyis can draw on work done by others to establish a framework. The market evaluations set forth below do not enjoy the luxury of being able to employ these techniques satisfactorily. The principal reason is that the maritime activities, which are the principal focal point of this study and are key to the future of the Miami River, are poorly tracked from a data standpoint. Sources of objective statistical information are limited and data is inconsistent in quality and time coverage. It would appear that, unlike office, hotel, retail and residential uses, the kinds of maritime functions operating along the river do not attract enough interest from governmental bodies to encourage the development of a strong data base for the complex number of maritime businesses on the river.

An example of the problem, which exists even at the federal level, is the information contained in Table II-1. The data for 1968 and 1972 were derived from an earlier study of the Miami River. The Commerce Department's County Business Patterns as their source. Since that document is published today, it was assumed that the older data could be updated. While that has turned out to be true to a limited extent, inconsistencies in the availability of information for particular categories in certain years makes the material extremely difficult to use.

TABLE III-1

EMPLOYEES AND ESTABLISHMENTS
MARINE INDUSTRIES IN DADE COUNTY
1968 TO 1984

Marine Activity	1968		1972		1980		1982		1984	
	E*	U*	E*	U*	E*	U*	E*	U*	E*	U*
Ship & Boat Building & Repairing	2,589	80	2,267	55			2,000	83		
Boat Building & Repairing	2,213	71	2,063	49			1,900	68		
Ship Building & Repairing	376	9	204	6			100	15		
Boat Dealers	277	36	390	45						
Water Transportation Services	206	46	325	45	2,627	60			4,834	89
Deep Sea Foreign Transport					654	9			982	12
Deep Sea Domestic Transport					N/A	N/A			247	5
Marine Cargo Handling	751	11	780	7	2,334	13				
Local Water Transportation	220	16	-	18		9				
Wholesale Fish & Seafoods	306	23	249	37						
Fisheries (Fresh & Frozen)	97	17		18						
Unclassified					293	47			462	68

* E = Employees; U = Units or Establishments

Source: County Business Patterns, U.S. Department of Commerce, Social and Economic Statistics Administration.

At present it is clear that the highest and best use of the real estate bordering the Miami River is as maritime business operations. Public policies should support that conclusion. Some of the businesses operating along the river look scruffy and are scruffy. Some are not on particularly strong financial footings. But we see no reason to encourage public actions to program these businesses out of existence. On the contrary, such actions should nurture and support the firms.

It is appropriate to conclude this introduction with several of the key conclusions derived from the economic assessment.

- The Miami River is a successful maritime center.
- As an assemblage of activities, the river is unique in the City and has few parallels anywhere else in the nation.
- Taken as a group, the businesses operating along the river are a major employer and taxpayer.
- There are effective business relationships among the various firms that help to support the entire business complex.
- Many of the private sector operations could find no other location in Miami in which to operate. The river is their only real option.

In the following paragraphs, we analyze the market for the various types of uses considered appropriate to this study.

B. REGIONAL MARKET FRAMEWORK

Future change in the Miami-Dade County economy provides a context for projecting the market for the kinds of businesses located along the Miami River. While there is no clear, strong one-to-one relationship between the strength of business on the river and what happens at the regional level, it is likely that as goes the regional economy, so will the economy of the river.

1. General Context

Florida is one of the nation's fastest growing states from both economic and population standpoints, and it is

expected to continue to be among the top two or three for the remainder of this century. Miami is the dominant city in the South Florida region, which has been participating vigoriously in this growth. Growth in Dade County has not been quite as strong as in the rest of South Florida. Between 1970 and 1980, the population of Broward County increased 64.2 percent while in Dade County it increased 28.2 percent. From 1980 through 1984, as indicated by the Census Bureau, Broward County's population increased 7.4 percent while Dade's expanded by 4.9 percent. In the latter period, the City of Miami's population grew at a faster rate than the County--7.4 percent.

It is clear from these data that Dade County and Miami are participating in a significant, broadly based expansion of their economies linked to growth in South Florida and Florida's growth relative to the rest of the nation.

2. Employment Projections

Recent employment trends are shown in Table III-2 for the Miami Metropolitan Statistical Area, which is Dade County. Reasonable to strong growth has been experienced in all sectors, except manufacturing where there was a small decline. Overall, the area added 80,000 jobs during the first five-year span, an increase of 11.6 percent. This is a very favorable employment profile, especially when compared with the County's population growth of 4.9 percent for the slightly shorter 1980 to 1984 period.

Regarding future employment, we cite the baseline projections prepared in 1985 as part of a broad overview of the prospects for the Miami-Fort Lauderdale regional economy. The statistical base is slightly different so the numbers do not align perfectly than that in Table II-2. The continued expansion of the Miami area economy is clearly indicated, however. The forecaster took into account national and regional economic factors, with particular emphasis being placed on the area's trade relationship with South and Central America and the Caribbean Basin.

Growth is expected to be particularly vigorous during the period to 1995 and then taper off. The latter is probably more related to conservative forecasting than to likely fact. There is certainly no indication in the numbers of any significant problems in the local economy.

TABLE III-2

NON-AGRICULTURAL WAGE AND SALARY EMPLOYMENT
MIAMI MSA
1979 TO 1984

Economic Sector	1979 Annual Average		1984 Annual Average		1979-1984 Total Change	
	Number	Percent	Number	Percent	Number	Percent
Manufacturing	98,600	14.3%	96,900	12.6%	(1,700)	- 1.7%
Construction	34,800	5.0	38,300	5.0	3,500	10.1%
Transportation/Communication/ Utilities	67,900	9.8	70,800	9.2	2,900	4.3%
Wholesale & Retail Trade	180,400	26.2	199,300	25.9	18,900	10.5%
Finance, Insurance & Real Estate	49,000	7.1	61,500	8.0	12,500	25.5%
Services	167,300	24.3	203,600	26.5	36,300	21.7%
Government	91,600	13.3	99,200	12.9	7,600	8.3%
Total	689,600	100.0%	769,600	100.0%	80,000	11.6%

Source: Florida Department of Labor and Employment Security, Division of Employment Security.

3. Population

Metropolitan Miami experienced population growth from 1970 to 1984 of over 2 percent annually. Much of this growth occurred outside the City, particularly in the unincorporated areas on its western edges. Like many large American cities, however, Miami itself gained population from 1970 to 1984. It experienced average annual growth of 0.4 percent.

Future growth in the metropolitan area is projected to be somewhat slower. Nevertheless, by 1997 the County will have a population of almost two million people. Moderate growth in the City itself is projected to continue over the next decade with Miami's population reaching a total of 374,800 by 1997.

4. Implications for the Miami River

The economy of the river reacts to forces occurring at two rather distinct levels. First, businesses in the commercial marine and marine industrial categories primarily respond to national and international markets and economic factors. Second, the recreational boating, general commercial and residential markets respond to much more local economic activity. The data presented above show a general and broad-based expansion of the regional economy linked to factors at the national and international levels. They indicate a favorable market environment for business along the river. In the paragraphs which follow, the growth prospects for the various functional categories relevant to the river are evaluated.

It is relevant to note at this point an important finding of the Phase I analysis of existing conditions. It is that the river area covers a portion of Miami in which real estate values are among the highest in the region. Commercial and residential development in parts of this corridor is intense. Yet, the marine-related businesses which comprise the bulk of the activity along the river are not intrinsically high revenue/profit generators and thus are usually able to pay only industrial type rents or land prices. Regardless of how strong the market is for their products, therefore, these uses are likely to continue to be under pressure from the development of the "external", non-marine, market as Miami continues to grow. This problem has the potential of putting considerable pressure on the real estate occupied by maritime operations--the only real estate now existing in the Miami area on which many of them can operate satisfactorily. These pressures have already

TABLE III-3

BASELINE WAGE AND SALARY EMPLOYMENT FORECASTS
MIAMI MSA
1985 TO 2005

Economic Sector	Employment (000)[1/] 1985	1995	2005	Percent Change 1985-1995	1995-2005
Manufacturing	105.2	121.6	121.8	15.6%	1.6%
Construction	32.6	39.7	32.3	21.8%	-22.9%
T.C.U.[2/]	70.6	91.6	100.8	29.7%	10.0%
Wholesale & Retail Trade	195.0	244.9	295.8	25.6%	20.7%
F.I.R.E.[3/]	60.9	71.7	73.2	17.7%	2.1%
Services	218.7	267.0	311.6	22.1%	16.7%
Government	117.8	147.8	180.7	25.5%	22.3%
Total	813.5	999.2	1,139.4	22.8%	14.0%

1/ Baseline assumption.
2/ Transportation, Communications, Utilities.
3/ Finance, Insurance, Real Estate.

Source: Future Prospects for the Miami-Ft. Lauderdale Economy, November, 1985.

TABLE III-4

POPULATION TRENDS AND PROJECTIONS
MIAMI SMSA AND SURROUNDING COUNTIES
1970 TO 1997

	1970 Census	1980 Census	1984	1987	1992	1997	Average Annual Percent Change 1970-1984	1984-1987	1987-1997
Miami SMSA (Dade County)	1,267,792	1,625,781	1,737,100	1,826,200	1,918,400	1,994,000	2.3%	2.0%	0.9%
Broward County	620,100	1,018,200	1,127,200	1,212,600	1,363,700	1,503,100	4.4%	2.4%	2.2%
Glades County	3,669	5,992	6,900	7,300	8,000	8,800	4.6%	2.2%	2.0%
Hendry County	11,859	18,599	20,600	22,800	26,200	29,400	4.0%	3.6%	2.7%
Indian River County	35,992	59,896	69,400	79,300	94,400	107,700	4.8%	4.8%	3.3%
Martin County	28,035	64,014	76,100	87,600	103,300	116,000	7.4%	5.0%	3.0%
Monroe County	52,586	63,188	69,800	72,800	78,200	83,400	2.0%	1.6%	1.4%
Okeechobee County	11,233	20,264	22,900	25,500	29,500	33,500	5.2%	3.9%	2.8%
Palm Beach County	348,753	576,863	667,400	749,400	880,400	998,500	4.7%	4.1%	3.0%
St. Lucie County	50,836	87,182	100,800	117,800	138,000	156,000	5.0%	5.8%	3.0%
Subtotal	1,163,063	1,914,198	2,161,100	2,375,100	2,721,600	3,036,400	4.5%	3.3%	2.6%
Regional Total	2,430,855	3,539,979	3,898,200	4,201,300	4,640,100	5,030,400	3.4%	2.7%	1.9%

Source: U.S. Bureau of the Census; Urban Decision Systems, Inc.; University of Florida, Bureau of Economic and Business Research; The Rouse Company.

become evident at the downtown end of the study area and at selected points elsewhere, such as thos locations where condominiums have been built, and can only increase in the future.

C. COMMERCIAL MARINE

The commercial marine function covers businesses in the broad categories set forth below. The letters in the parenthesis following the category indicate whether that activity tends to be water-dependent (WD), water-related (WR) or other (O).

- Shipping--The loading and unloading of vessels and associated storage and office functions (WD).
- Towing/Salvage (WD).
- Fisheries--Unloading, storage, moderate processing, wholesale distribution (WD).
- Freight-Forwarders--Primarily the office function associated with the shipping industry (WR).
- Commercial Marine Services--Shipbrokers, naval architects/engineers/surveyors, insurance and other professional-type services to the industry (WR).

1. Business Context

The analysis of existing conditions revealed that for the most part businesses of a commercial marine nature are doing well to very well and have generally positive outlooks for the future. While the level of business activity in this functional area varies substantially with such factors as the strength of the economy of the Caribbean basin and the existence of fish in the ocean, there is no reason to believe that the general outlook for the category as a whole is not strong. It is concluded that the bulk of the existing businesses can remain viable and that there are very few soft spots where the plan could indicate a reduction in activity. On the contrary, the overall strategy for these firms should be to try to find additional space into which they can expand.

2. Shipping

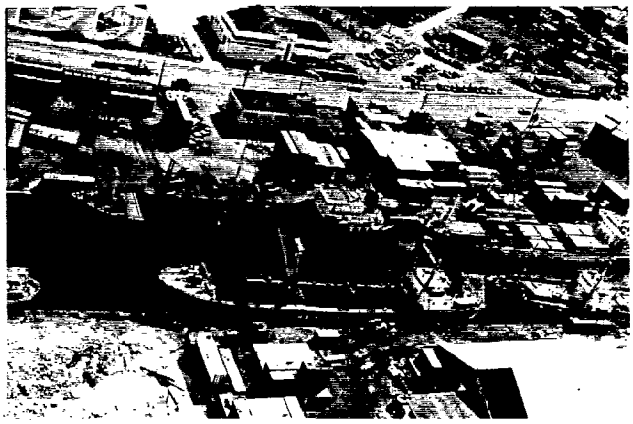
Shipping in the Miami River has two components. First, there is the "traditional" shipping activity represented by such firms as Bernuth, Hyde, Pioneer and Antillean. These operate from relative modern, established bases. Second, there is the less-well structured independent or "informal" business typified by the Haitian trade. This is conducted primarily in small wooden vessels using much less formalized terminal facilities on the river.

This evaluation focuses primarily on the first of these. The presence and economic significance of the second is recognized, but information on it is essentially non-existent, and its overall contribution to the economy of the river, though significant, is much less than that for the traditional shippers.

The market for shipping activity along the Miami River is a function of an extremely complex set of factors. The assumptions set forth below are used to guide the market evaluation.

- There will be reasonable political stability in the Caribbean basin, moderate economic growth and generally increased trade with the United States.
- Smaller Caribbean ports will remain accessible primarily to shallow draft ships, the kinds of vessels which use the Miami River as opposed to Dodge Island.
- Vessels serving the Caribbean will get no larger (primarily in terms of beam and draft) than the largest now using the river.
- Whether due to unions or other factors, a wage differential favoring the river will continue to exist between the Miami River and Dodge Island. We anticipate, however, that in the longer term, operations at Dodge Island will become generally less unionized.
- Operational issues concerning ship traffic on the river, particular the bridges and the depth of the river will be no worse in the future than they are today.

Given these assumptions, we expect the major shipping companies to experience continued, moderate expansion. Local analysts have indicated a growth in the value of exports to the Caribbean average roughly ten percent per year through the rest of this century. Almost all of the shipping activity on the river is export trade. The seven major shipping terminals on the river currently handle between 450 to 500 vessels per year moving about 469,000 tons. If river shipping activity were to share proportionally in the total growth of trade, the this figure would double in the next ten years and then double again by 2005.



Some of the increased activity would be accounted for by larger ships and more frequent sailings and thus not necessarily indicate a need for additional space. In addition, there is still room for growth at some of the river's major shipping terminals. However, the data make it clear that the terminals will likely require more real estate at some time in the future or be forced into a non-competitive situation relative to Dodge Island and other Florida ports.

The bulk of the major terminals are located at the far upper reaches of the river. There is vacant and under-utilized riverfront land in that area as well as some firms operating on the river which do not require waterfront access. Based on the outlook for this sector, we perceive a demand for approximately 50 percent more space for these businesses than they currently occupy. Public policy should encourage and assist the expansion by existing firms to "soft" areas adjacent to their current operations. Another approach would be to develop a new general access cargo facility to be used by a number of firms.

With regard to the Haitian-type shipping activity, there is definitely a need to accommodate these vessels at some sort of an organized location. The development of a "public dock" general access terminal that could be used by such vessels is a potentially workable solution. So doing would bring more structure to the industry and even free up some pieces of real estate along the river for other uses.

2. Towing/Salvage

One major towing company and several small salvage businesses currently operate along the river. Their growth will likely occur in direct proportion to the expansion of commercial marine activities in general. However, there is no perceived need for additional space by these operations. On the other hand, if some form of "maritime business complex" was developed along the river, it is conceivable that the small salvage companies might find it to their advantage to relocate their operations to that area.

3. Fisheries

The Miami River continues to be the principal focal point in the region for the landing of fish. This industry has changed substantially over the past 10 to 15 years as local fish stocks have declined. Nevertheless, firms such as National Fisheries, Florida Carib Fishery and East Coast Fisheries continue to operate successfully along the river, although they receive products primarily by truck.

We anticipate that this business sector will continue to be under pressure in future years. The industry faces a variety of problems affecting its future health. The operating environment along the river for these firms is satisfactory but not optimum. We do not see existing firms requiring any additional space nor do we see demand by firms not currently in the business.

From a real estate and operations standpoint, the best solution for this industry would be to develop a "seafood industrial park" in the Miami area. It would require a minimum of five acres for such an operation to work effectively. If several firms moved into such a project from locations elsewhere on the river, the land that they would be leaving would become available for development of other maritime or compatible activities.

4. Freight Forwarders and Marine Services

These are primarily office functions, the economic viability of which are linked directly to general growth in the maritime sector of the local economy. We see modest growth in these activities and the need for some additional office space. At the present time, many of these businesses occupy space as part of a larger marine complex. There are a few free-standing office buildings such as the International Center on North River Drive just west of 27th Avenue. We project a need for 20,000 to 30,000 square feet of space of this type in each of the two projection periods--to 1995 and to 2005.

D. MARINE INDUSTRIAL

This category of activity includes a wide range of industrial type functions.

- Boat Manufacturing (WD/WR).
- Shipyards--Large facilities with a railway catering to larger vessels, primarily commercial but also larger pleasure yachts (WD).
- Marine Item Manufacturers--Sail makers, riggers, marine hardward (WR).
- Marine Contractors--Firms that do construction work on the water's edge, piers, bulkheads, etc. (WD).
- Machinery Repair/Fabrication--Engineers, propellers, generators, shafts (WR).

Marine industrial businesses have an important presence on the river. They tend to be relatively intensive space users and major employers. There is a considerable amount of interdependence among the firms in this category. For instance, shipyards require the services of mechanical repair businesses.

Based on the surveys and interviews, it is concluded that the existing businesses in this category are generally viable. Moderate growth is expected for the category as a whole.

1. Shipyards

One of the most important of these is Miami Shipyard on Southwest 2nd Avenue at Southwest 7th Street. It is located near the end of the Brickell Avenue development corridor and across the Miami River from the expanding downtown development area. It is an important maritime business that is definitely being impacted by the development of Miami's downtown core.

The market for the kinds of services provided by Miami Shipyard, Merrill Stevens and Florida Ship, which comprise the principal firms in this sector, is seen as strong enough to support their continued success if external factors do not impede their ability to do businesses. Downtown development is such an external factor.

2. Boat Manufacturers

This is primarily Bertram and it is unlikely that any new manufacturers will come into the area in the future. Nationally, production line boat manufacturing is taking place away from waterfront locations in typical industrial park or isolated industrial building settings. Bertram, however, is dependent upon the water since it tests all of its boats in

Biscayne Bay. The prospects for Bertram are considered bright since the firm is a recognized leader in its field, keeps its production facilities modern, and has a loyal clientele.

Bertram, and to a certain extent other marine businesses located at the river's upper end, are being impacted by expansion of operations, such as rental car agencies, serving Miami International Airport. The planning process needs to recognize Bertram's possible future expansion requirements in order to assure that the proper kind of assistance is available to help the company continue to be successful at this location.

3. Manufacturers of Marine Products

The river presents a suitable environment for operations in this category such as sailmakers, hardware manufacturers, riggers, etc. Some of these businesses, however, could be located in traditional industrial parks. The value of the river is that it creates a compatible maritime-oriented operational setting.

Growth of businesses in this sector will be related to expansion of the marine industry in general and Miami's suitability as a location. It is our judgment that many of the firms will remain small and oriented primarily toward the local market. At present, some of these businesses like Shore Sails, occupy space in larger yards. In the case of Shore, it is the Miami Shipyard. We estimate a need for 30,000 to 40,000 square feet of space for such functions in each of the two projection periods.

4. Marine Contractors

One of the largest such contractors in the region, Ebsary Corporation, is located on the river. We see this firm as remaining viable in the future, but perceive no introduction of other similar firms to the river.

Ebsary has occupied its location for a long time. It is situated in a part of the river which is otherwise primarily recreational boating. The sensitive relocation of Ebsary to a different site on the river would help make this part of the river suitable for comprehensive treatment as a recreational boating center. However, no action should be taken that would cause harm to the Ebsary business. This issue is covered in greater detail in the development program.

5. Machinery Repair/Fabrication

The repair and sale of various types of engines, propellers and other marine-related heavy equipment is a major activity in the river corridor. Most existing firms are quite viable and have indicated their need for expansion. The need for up to 30,000 square feet of building space for such activities in the two ten-year projection periods is indicated.

E. RECREATIONAL BOATING

Some of the functions described in other categories relate to recreational boating, but the ones listed below are specifically oriented toward the person who pursues marine activities primarily from a recreational standpoint. The following operations are covered.

- Marinas--Wet and dry storage of boats (WD).
- Boat Yards--Smaller facilities as contrasted with shipyards, using small railways or travel lift devices; frequently occurring in association with marinas (WD).
- Boat Dealers (WR).
- Marine Retailers (WR).
- Marine Services--Yacht brokers, insurance, finance, and others providing "office-type" services to recreational boaters.

The Miami River is an important center for recreational boating business in South Florida. Boating registrations in the region have climbed from 87,900 in 1980 to 98,800 in 1985. Dade County has the largest number of pleasure boat registrations in South Florida. The total has increased 3,600 from 1980 to 1985, as can be seen in Table II-5, but the County has lost a small proportion of share in South Florida as a whole.

One of the most interesting statistics concerning South Florida is the fact that it is the location of most of the State's larger vessels. This can easily be seen in Table II-6. Dade has 38 percent of all of the registered vessels 110 feet long or longer, 15 percent of those 65 feet to 110 feet,

TABLE II-5

PLEASURE BOAT REGISTRATIONS
UNITED STATES, FLORIDA (DADE, BROWARD AND
PALM BEACH COUNTIES AND SOUTH FLORIDA
1978 TO 1985

	1978	1980	1982	1984	1985
United States	8,034,905	8,577,857	9,073,972	9,281,199	9,308,112
State of Florida	434,818	466,775	480,384	529,436	544,675
South Florida	80,860	87,894	86,949	93,972	98,809
Dade County	37,373	39,007	38,026	40,945	42,642
Broward County	25,458	29,271	29,637	31,458	33,034
Palm Beach County	18,029	19,616	19,286	21,569	23,133

Source: Florida Department of Natural Resources.

TABLE III-6

DADE, BROWARD, PALM BEACH COUNTIES
BOAT REGISTRATIONS AS PERCENT OF STATE TOTAL
(Rounded)

Size of Boat (feet)	Dade	Broward	Palm Beach	South Florida
Under 12	7%	5%	3%	15%
12 to 16	3%	3%	3%	9%
16 to 26	12%	8%	5%	25%
26 to 40	17%	15%	7%	39%
40 to 65	17%	18%	7%	42%
65 to 110	15%	30%	17%	62%
Over 110	38%	23%	-	61%

Source: Laventhol & Horwath.

TABLE III-7

GROSS SALES OF MOTORBOATS, YACHTS, MARINE PARTS AND ACCESSORIES
FLORIDA (DADE, BROWN AND PALM BEACH COUNTIES) AND SOUTH FLORIDA
1979 TO 1985
($000)

Fiscal Year	Florida	Dade County	Percent of Florida	Broward County	Percent of Florida	Palm Beach County	Percent of Florida	South Florida Area	Percent of Florida
1978/1979	762,675	129,660	17.0%	195,690	25.7%	30,776	4.0%	356,126	46.7%
1979/1980	796,407	146,543	18.4%	200,048	25.1%	33,125	4.2%	379,716	47.7%
1980/1981	845,301	135,385	16.0%	249,324	29.5%	39,760	4.7%	424,469	50.2%
1981/1982	972,991	154,075	15.8%	246,404	25.3%	47,235	4.9%	447,714	46.0%
1982/1983	901,353	129,257	14.3%	269,251	29.9%	40,586	4.5%	439,094	48.7%
1983/1984	1,080,082	155,173	14.4%	283,790	26.3%	72,686	6.7%	511,649	47.4%
1984/1985	1,244,527	174,294	13.8%	330,849	26.4%	75,985	6.1%	581,128	46.3%
Annual Compound Growth Rate	7.4	4.3		7.8		13.8		7.3	

Source: Florida Department of Revenue.

and 17 percent of those 40 to 65 feet. In the first of these categories, it is clearly ahead of Broward County, behind in the second, and about the same in the third.

Gross sales of marine-related items are shown in Table II-7. In contrast to the very high proportion of boat registrations compared to Broward County, Dade is getting only about one-half of the sales activity. This clearly shows that Dade County residents are purchasing marine items in Broward County. It also indicates that Broward is getting a larger amount of business from visitors to the region.

We see the opportunity for reasonable growth in recreational boating in the Miami area and the Miami River is an appropriate location for some of that activity. Because of the problem of having to traverse the river to get to facilities and land and operational constraints on the facilities themselves, the Miami River recreational boating industry remains vulnerable to competition from other parts of the Miami area. At the present time this is primarily the Dinner Key and Miami Beach marina. It could also include a "Watson Island" type of development at some time in the future, although our assumption is that there will be no such development for at least the next ten years. Even with the growth of these other areas, it is our judgment that the Miami River will continue to be a successful recreational boating center.

A study of the demand and supply of marine services in Florida completed in December, 1984 indicates that by 1995 there will be 46,500 boats registered in Dade County and 49,550 by 2005. Thus, there is little question that Dade will remain a center for strong recreational boating activity in the future.

1. Marinas

The demand/supply study cited above indicates that in 1982 an estimated 7,847 boats were berthed in Dade County, of which 4,559 were wet slips. It estimated that there was a capacity of just under 6,000 wet slips in the County. It forecast that in 1995 there will be a demand for 5,617 slips and by 2005, 5,952. Looking at the 1995 figure, that indicates a need for about 1,000 more slips than currently exist in the County.

The Miami River is a suitable location for some of these slips from a market standpoint. The biggest problem, however, is physical capacity. It will be extremely difficult to add new docks and berthing facilities along the river due to its narrow width and the requirement to keep the waterfront open to accommodate winter traffic. Thus, the likely future strength for the Miami River will be in upgrading existing facilities, perhaps even rebuilding existing marinas to accommodate larger and better-quality yachts.

The River Run Condominium complex is an example of a new marina at an old location (the site was formerly part of the Merrill Stevens yacht yard complex) which has been successful. The quality of yachts being berthed on the river is still not as high as at Dinner Key or Miami Beach. We believe, however, that as the river development program is implemented and the overall image of the river is improved, the area will become more appealing to yachtsmen owning better-quality vessels.

There are currently an estimated 648 formal (versus "at home") slips on the river. If the river was to experience an increase in demand proportional to the overall County increase, then it would need approximately 130 more slips by 2005. However, there is only a moderate ability to provide such slips. This means that the strategy must recognize the addition of slips whenever possible, including as part of non-maritime commercial complexes. To the extent physically possible, larger slips should be encourage near the mouth of the river. It is important to keep in mind that boats are the fuel for many other types of marine businesses. Thus, it is critical that the total boat inventory along the river and in Dade County, as well as the quality of that inventory, be kept as high as possible.

Some of the existing marinas, particularly those in District B, are very small and their long-term viability is suspect. They are constrained from both the water and land sides. Policy should assist these operations wherever possible, but the longer term solution may be to have some of these operations merge with adjoining maritime uses.

2. Boatyards

There are a number of boatyards on the Miami River serving pleasure craft. These range from extremely small operations to very large, comprehensive and professional complexes like the one run by Allied Marine. Boatyards obtain their

business from the local inventory of vessels as well as transient vessels. The ability of Miami River establishments to serve both of these markets has been hamperd by the overall quality of the river environment. The users of both the marinas and boatyards are particularly sensitive to neighborhood conditions. Many of these businesses are negatively impacted by anti-social behavior attributed to people living in adjacent communities.

Assuming no unforeseen major competitor, we believe that those well-run boatyards currently in existence will be successful in the future. We also feel that additional boatyard entrepreneurs would be attracted to the area if the right kind of real estate opportunity could be presented. This would almost certainly involve having the boatyards develop in association with up-graded marina facilities.

3. Boat Dealers

There are several significant boat dealers on the river. From a locational standpoint they tend to be scattered at diverse points so that the area does not work as effectively as it should as a boating "shopping center". Because boat dealers tend to maintain an inventory of expensive vessels, they are particularly sensitive to vandalism and neighborhood problems. Under the assumption that these problems can be satisfactorily controlled, we see the opportunity for additional dealerships along the river at selected locations. We project the demand for two to three acres of land for each of the ten-year periods along the river for use by dealers. This space might be developed in association with marinas since boat dealers and marinas are compatible and mutually supporting uses.

4. Marine Retailers/Wholesalers

Several firms providing marine products at retail and wholesale in the river corridor. Store units can range from 2,000 square feet up to as much as 10,000. On a net basis, there may be some consolidation of these operations in the future, but we believe that there will be demand for net new space of 15,000 to 20,000 square feet in each of the projection periods.

5. Recreational Marine Services

Many of these services (yacht brokers, insurance, charter operators) are accommodated in integrated maritime complexes like Allied Marine. We anticipate growth consistent with the general expansion of recreational boating in Dade County. These primarily office functions could account for 10,000 to 15,000 square feet of net new space to 1995 and a like amount to 2005.

F. GENERAL INDUSTRIAL

This category includes the scrap operations, auto repair facilities, container/trailer repair busineses and others of similar nature. Some provide direct support to businesses along the Miami River. For the most part, however, they do not have to be on the river and are not compatible with maritime operations. The problem is--they have to be somewhere. That place happens to be the river at the present time because it has functioned as an industrial-type area for decades and the land values have been historically low enough to support theres uses, particularly if owned by form.

There will be growing demand for these services in the future. We recommend, however, that none of this demand be allocated to the study area. In fact, in our judgment, these uses are clearly incompatible with the long-term strategy for the river. Thus, alternative locations should be identified for them and their real estate utilized for expansion of maritime businesses.

G. GENERAL COMMERCIAL

This section evaluates the market for non-marine commercial uses in the study area. It covers office, retail, entertainment and eating and drinking activities. The overall market potential for each of these uses is evaluated followed by an examination of how these uses can be combined with marine activities in order to be mutually re-enforcing. Potential public policy incentives which could affect market opportunities are identified, along with additional public policy actions which could be utilized to have non-marine commercial facilities support marine activities.

1. Office

There is approximately 22 million square feet of competitive office space in the Dade County area. The office market is experiencing a significant "glut" in almost all market sectors. The current vacancy of appoximately 4.5 million square feet (or approximately 20 percent) is a significant increase from the approximately 13-percent vacancy one year ago and the typical 10-percent vacancy normally experienced in the Dade County area.

In addition to the 4.5 million square feet of vacant space, another approximately 5.2 million square feet of office space is currently under construction and available. This 9 million square feet of available space can be compared with the County-wide annual absorption rate approximately 1.2 million square feet. Thus, there appears to be approximately an 8-year supply of available office space currently on the market.

Office space within the Dade County area has tended to become less centralized in the central business district/ Brickell area, but more concentrated in suburban office centers. It is estimated that approximately 22 percent of the office space in the County is concentrated in the central business district with an initial 10 percent concentrated in the Brickell area immediately to the south. The airport/west Dade area represents a concentration of office space almost as large as the combined central business/Brickel area or 26 percent. Likewise, Coral Gables with 11 percent of the office market and south Dade/Kendall, with 9 percent of the market represent significant office concentrations. The remaining approximately 22 percent of office space or approximately 5 million square feet is scattered throughout the County.

The primary study area has limited office space, with the exception of downtown and Brickell-related office space in District A. Large office concentrations in the traditional central business district and Brickell Avenue area are located immediately adjacent to the primary study area, with vacant and underutilized sites within District A representing a significant portion of future downtown office development opportunities.

Remaining portions of the primary study area have only scattered office space, primarily associated with marine industrial uses. The Civic Center office complex, adjacent to District D has a large amount of public sector space, but had little or no spin-off office development effect within the primary study area. In general, the study area (with the exception of the area at the mouth of the river) generally does not have an office market image nor concentration of office or office support uses.

Following absorption of the current over-supply of office space, we see significant opportunities for major office development within District A. These office spaces will be directly related to and part of office growth in the central business district and Brickell areas. Based upon historic absorption office and market projections prepared for the City of Miami Planning Department as part of the downtown development plan, it is estimated that the downtown area (CBD and Brickell) will capture approximately one-third of the estimated average annual 1.2-million-square-foot office absorption, as shown in Table II-8. This represents an average annual absorption for the entire Brickell/CBD area of approximately 400,000 square feet per year. This would indicate a four-to five-year period required for absorption of currently and/or under construction space. It is assumed, therefore, that development potential for major office development projects in the District A study area would take place in the early 1990's. Development in this area would take place at a similar intensity to previous development projects with major office buildings constructed in the 300,000 to 500,000 square foot range, with floor area ratio in the 4 to 8 range.

Elsewhere in the primary study area limited office market potential is foreseen. It is estimated that outside of the central business district/Brickell area the riverfront would be competing with major suburban office concentrations. The river area does not have a significant office market image nor office

TABLE III-8

PROJECTED MIAMI RIVER
AVERAGE ANNUAL OFFICE MARKET DEMAND
1985 TO 2005
(000 square feet)

	Demand (000 Sq. Ft.) 1985		2005
Dade County Office Space	22,000		46,000
CBD Office Space	4,800		10,100
Brickell Office Space	2,200		4,600
Other Office Concentrations	10,200		21,200
Other Scattered Locations	4,800		10,100
Average Annual Potential			
Dade County		1,200	
CBD/Brickell		400	
Scattered Locations		250	
"Up River" Locations (@ 3-5% of Scattered)		8 - 12	

Source: Estimated by Zuchelli, Hunter & Associates, Inc.

concentration to become a major "player" in the office market. As such, the river would be competing for scattered suburban office market absorption, which in all of Dade County is estimated to amount to approximately 250,000 square feet per year. Assuming a relatively modest 3- to 5-percent capture rate of this demand, an estimated 8,000 to 12,000 square feet of scattered office space development could take place along the river outside of the central business district/Brickell Avenue areas.

More intensive marine-related activities are not deemed compatible or supportive of office use. A marine-related character however, should be required in terms of dockage space, river walks, public access along the river, recreational boating activity and the like. Major office developments should be required to provide such water-related amenities and services in order to obtain for higher-density allowances. Such as, density bonuses for providing public access, public recreation, marine slips and other marine-related facilities.

2. Retail, Entertainment, Eating and Drinking

The retail, entertainment, eating and drinking market in Dade County is likewise generally saturated. Significant new retail, movie theater and restaurant construction has taken place throughout the County. In addition, in order to maintain competitive market position, many older retail centers have been recycled and rehabilitated into neighborhood commercial, specialty or off-price centers. Significant retail construction has taken place in the Kendall area leaving this area significantly over stored. Likewise, significant retail construction in southern Broward County has virtually eliminated retail inflow from Broward and has, in fact, generated a retail outflow from northern Dade County into Broward County.

This significant retail expansion has taken place in conjunction with relatively modest growth in local residential market expenditures, a relatively "flat" tourist market, and a significant decline in purchases from the Latin American market.

In the central business district, the increasing dependency upon the Caribbean and Latin American tourist market has caused a significant shift in retail marketing away from general merchandise, establishments (department stores) toward apparel, jewelry and miscellaneous shoppers goods (especially consumer electronics). This conversion toward the Latin and

Caribbean markets, combined with the declines in this market has resulted in reduction in downtown retail sales. Downtown retail sales, while significantly below the $250-to $300square--foot range experienced from the height of the Latin American sales "boom" are still quite high and are estimated to range from $180 to $190 dollars per square foot. Thus, the approximately 2.7 million square feet of retail space within the central business district core area is estimated to have current retail sales of approximately $500 million.

Growth and sales potential in the overall downtown is dependent upon growth in residential population, downtown employees, tourists and other visitors. Based upon studies conducted for the downtown master plan; shoppers goods expenditures (expenditures for general merchandise, apparel, furniture and home furnishings and miscellaneous comparison good items) from area residents are projected to advance (in constant dollars) from $344 million in 1985 to $472 million by the year 2005. Eating and drinking expenditures for these residents are projected to advance from $110 to $150 million over the same time period while eating and drinking expenditures are projected to advance to $36 to $49 million.

Downtown employees are projected to represent a significant growth potential for shoppers goods and eating and drinking facilities. In 1985 shoppers goods, and eating and drinking expenditures of downtown employees are estimated at $67 and $32 million, respectively. By the year 2005 they are projected to rise from $161 to $81 million, respectively.

A final major source of demand is visitors. Throughout Dade County it is estimated that visitor expenditures for eating and drinking expenses, outside hotels, amount to approximately $1 billion in 1985 and is expected to rise to approximately $1.6 billion by the year 2005. Entertainment expenditures are expected to rise from $680 million to $1.1 billion during this same time period while expenditures for shoppers goods are expected to rise from $200 million to $327 million. As summarized in Table III-9, there is significant growth projected in overal retail sales, particularly as it relates to eating and drinking and in particular as it relates to tourist-derived eating and drinking expenditures.

The riverfront area currently has limited consumer-oriented retail activity. Furthermore, it has more remote and difficult access than existing or emerging retail centers in the central business district such as Bayside. Likewise the Downtown

Component of Metro Rail tends to concentrate downtown employees expenditure within the central business district not outside. Given the current characteristics along the river and the likely strong concentration of tourist activity at Bayside, Coconut Grove and other areas it is not practical that the river area will attract significant discretionary retail expenditures.

The river area is beginning to establish itself as a specialty restaurant center. It is perceived that the future retail and entertainment orientation of the Miami River area will thus be toward waterfront eating and drinking establishments. Building upon the ambience of the river and its future improvement in water quality and amenity factor, significant waterfront-related eating and drinking/entertainment market potential can be developed.

Waterfront eating, drinking and entertainment concentrations have developed in a variety of urban locations similar to the Miami River. In Baltimore, Fells Point was developed as an eating and recreational area despite the nearby competition of the Inner Harbor area. In Cleveland with an almost non-existing downtown restaurant environment, a strong waterfront restaurant orientation has emerged from saloons to gourmet restaurants, in the Flats along the Cayahoga River. San Fransisco has its traditional Fisherman's Pier area while San Diego has emerging restaurant activity along its waterfront.

Zoning and development requirements for major new developments in District A should <u>require</u> placement of waterfront-related restaurants, cafes and other such activities. Development regulations in District B, combined with public sector amenities and expansion of parking availability could be utilized to attract waterfront eating and drinking establishments. Joint marketing and promotion should be used to make this area a specific restaurant concentration and destination.

In addition to eating and drinking and entertainment activities, limited amounts of non-marine-related convenience goods space demand will be created by residential development (as discussed in a subsequent portion of this chapter). These convenience goods activities should be integrated into major new residential development. Convenience-goods activities will probably be at a small scale and should be specifically prohibited along parcels with direct river frontage.

TABLE III-9

PROJECTED GROWTH IN RETAIL POTENTIAL
DADE COUNTY, MIAMI AND MIAMI RIVER AREAS
1985 TO 2005
(000,000 1985 dollars)

	1985	2005	Growth 1985-2005
Residential Expenditures			
Shoppers Goods	$ 344	$ 472	$ 128
Eating & Drinking	110	150	40
Downtown Employee Expenditures			
Shoppers Goods	$ 67	$ 161	$ 94
Eating & Drinking	32	81	49
Visitor Expenditures*			
Shoppers Goods	$ 200	$ 327	$ 127
Eating & Drinking	1,000	1,600	600
Entertainment	680	1,100	420
Total Expenditure Potential			
Shoppers Goods	$ 611	$ 960	$ 349
Eating & Drinking	1,142	1,831	689
Entertainment	680	1,100	420
Total	$2,435	$3,891	$1,458

* Dade County non-hotel expenditures.

Source: Zuchelli, Hunter & Associates, Inc.

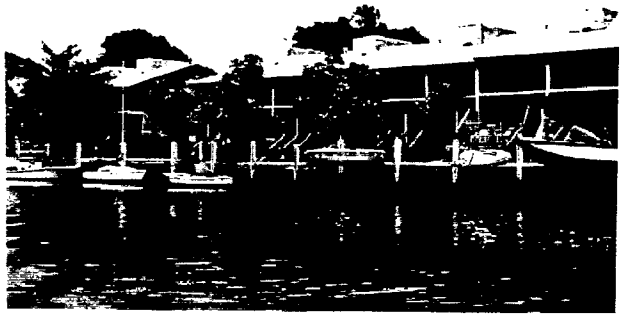
H. RESIDENTIAL

This market evaluation is based upon regional and study area trends and opportunities for residential activity. Particular attention is placed on the market opportunities for mixed-use riverfront development projects combining marine-related uses with residential development.

Similar to other markets, the residential market in Dade County is generally overbuilt. The condominium market in particular has too many units and far too few buyers. There is an estimated in excess of 14,000 never sold, new condominium units in Dade County. In addition there are approximately 7,000 condominium units which were purchased for speculation or rental that have never been occupied.

The overbuilding is particularly prevelant in the luxury market which previously oriented itself toward the foreign buyer. The greatest demand appears to be for the middle-priced condominium units in the $80,000 to $100,000 price range, particularly in the suburban Kendall area. Competition, however, is intense and financial and other concessions are being offered. The condominium market problems have led to small "boomlet" in construction of rental apartments. Despite the over-building, continued construction is taking place. From 1980 to 1985 an estimated 46,000 units reached the marketplace while only 38,000 units were absorbed.

Growth in population and households in the area and a general stabilization in the vacancy rate should result in market absorption of these units in a relatively short period of time. Based upon market studies prepared by the Downtown Master Plan, in terms of growth and population household and housing units, and assuming a return to the 8.4 vacancy rate experienced in 1980 there is an estimated average annual potential for new dwelling units in Dade County over the next 15 years of approximately 10,000 units. The City of Miami and the primary study area have not shared in this historical growth. Less than 10 percent of the Dade County housing starts in the last 10 years took place in the City of Miami. A large portion of these units took place in luxury units along Brickell and at the Venetia project near Omni.



The primary study area contains a vast number and variety of housing units. Scattered single-family home, garden apartments and townhouses are along then river. Based upon the current pattern of residential use along the riverfront, excellent proximity to the downtown and the regional highway network, we see a significant opportunity for middle-income housing of the current prices ($80 to $100,000). In essence, the Miami River with waterfront amenities could provide an option for entry-level "yuppies" now forced to locate to the Kendall area.

Assuming reduction in the current "glut" in the housing market and near-term actions to improve and enhance the environment along the river, it is estimated that beginning in the early 1990's the study area could capture approximately 2 to 3 percent of the average annual housing market. Through the year 2005 it is estimated that up to 6,000 dwelling units could be marketed within the primary study area, as summarized in Table III-10. This assumes a strong public sector program to encourage residential development, particularly intensified residential densities in current single-family townhouse areas, as well as public sector design controls and investments to improve the quality and design image of the river.

H. MARKET EVALUATION SUMMARY

The following demand potentials were derived in the market evaluation reported in Chapter II.

- Commercial Marine

  - Shipping--Moderately strong growth over the next 20 years...a need for about 50 percent more space at major terminals...consider development of a "public dock" to serve Haitian and similar small vessels.

  - Towing/Salvage--No new space needed.

  - Fisheries--No net new space requirements unless a "seafood industrial park" is developed...strategy should be to try to retain existing operations.

  - Freight Forwarders and Marine Services--20,000 to 30,000 square feet of space required to 1995 and the same to 2005.

- Marine Industrial

  - Shipyards--Moderate growth on-site...no need for new real estate unless Miami Shipyard is dislocated from its current site and re-established on the river.

  - Boat Manufacturers--Enable Bertram to secure additional land adjacent to it.

  - Manufacturers of Marine Items--30,000 to 40,000 square feet of space in each of the two projection periods.

  - Marine Contractors--No demand for net new space... consider moving Ebsary to a site elsewhere on the river.

  - Machinery Repair.

- Recreational Boating

  - Marinas--Any slips that can be developed will be occupied...existing facilities should be upgraded...facilities capable of accommodating

TABLE III-10

PROJECTED MIAMI RIVER
AVERAGE ANNUAL HOUSING MARKET AND DEMAND
1985 TO 2005

	1970	1980	1985	2005
Dade County Population	1,267,800	1,625,800	1,770,000	2,250,000
Dade County Households	427,600	609,800	680,300	880,000
Dade County Housing Units	453,900	665,400	756,000	960,000
Dade County Vacant Units	21,800	55,600	75,700	76,000
Dade County Percent Vacant	4.8	8.4	10.0	8.3
Dade County Owner-Occupied	231,600	332,500	374,200	528,000
Percent	54.2	54.5	55.0	55.0
Dade County Renter-Occupied	196,000	277,300	306,100	432,000

	1985 to 2005
Dade County Average Annual Potential	9,985
Overall Riverfront Market Capture Rate @ 2-3	200 to 300

Source: Estimated by Zuchelli, Hunter & Associates, Inc.

larger yachts should be encouraged...proportional share of the County's growth in wet slips to the year 2005 would be 130 additional.

- Boatyards--Long-term viability of existing yards... reinvestment on site...possible relocation of some facilities to new, larger sites...little or no net new growth.

- Boat Dealers--Two or three acres of land for each of the ten-year periods.

- Marine Retailers/Wholesalers--30,000 to 40,000 square feet over 20 years.

- Recreational Marine Services--20,000 to 30,000 square feet to 2005.

- General Industrial

  - Scrap Operations, Auto Repair Facilities, Etc.--Net reduction in facilities consistent with expansion of maritime activities.

- General Commercial

  - Office--Significant potential in the early 1990's in District A...limited office market potential elsewhere.

  - Retail, Entertainment, Eating and Drinking--Restaurants should be required as part of projects in District A...reasonable demand for waterfront eating and drinking facilities in District B... no shoppers goods retail potential...convenience goods retail in association with new residential.

- Residential

  - All Units--200 to 300 units per year in the study area.

IV. DEVELOPMENT PROGRAM

The purpose of this section is to outline the elements of a development program related primarily to real estate opportunities existing along the river. Such opportunities are generated at locations where land is vacant, is not being used in a fashion consistent with the marine business retention orientation of the river's edge, or is being under-utilized by an existing marine operation. The purpose of this section is to establish a basis for future comprehensive planning efforts along the river.

The section consists of four major parts. The first presents a general approach to land utilization for both marine and non-marine businesses. The second proposes overall land-use patterns that should guide development policy in each of the study districts. The third part analyzes the various opportunities and constraints affecting sites in the study area. The section concludes with recommendations concerning of future utilization of specific opportunity sites where it is believed appropriate to effect a change or reinforce a current use.

A. LAND UTILIZATION CRITERIA

The analysis of existing economic conditions and the market evaluation reveal certain important characteristics of the economy of the river. First, the marine businesses operating along the river are reasonably healthy and find it a generally suitable environment in which to operate. Second, for many of them there are essentially no locational alternatives in the Miami area. Third, these businesses are not intrinsically so successful that they can afford to pay high rents or buy expensive land. Fourth, uses of a non-maritime nature are competing for land along the river's edge and, in some cases, have displaced marine businesses. The fact that there has not been more such displacement is believed due in part to the City's waterfront district zoning policy.

Because the basic characteristics of most elements of the marine trades place them well down the ladder of land uses in terms of "ability to pay", it is extremely important that future policies regarding development along the river reflect the special economic and physical character of the industry.

The criteria considered most important in establishing the location of marine businesses are summarized below for each of the major categories of such business set forth in market evaluation. One of the important themes that should help to govern the location of future investment is that of "clustering". That is, to the extent possible and reasonable uses within broad categories of activity should be grouped within reasonable proximity to each other. However, for most of its length the entire river area functions as a "marine business center", so it is not necessary to be overly definitive regarding the clustering of activities as long as they are on or adjacent to the river.

1. Shipping

Shipping terminals require good road access with rail service being a favorable but not necessary criterion. It is also logical that shipping terminals be located near the mouth of the river in order to eliminate the need to tow long distances. However, the major terminals are located in Dade County at the head of the river because they use non--union labor, which presents fewer problems in the County. Thus, the terminals trade-off a negative factor, the need to be towed to and from Biscayne Bay as illustrated in the photograph below, against a positive factor, the ability to employ non-union labor.

This situation shows how various elements can affect location. The "traditional" shipping terminals used by the larger vessels require relatively large amounts of land. Smaller terminals serving primarily the "informal" islands trade would also benefit from good access and relatively large sites but tend to occur at locations not necessary having those attributes.

2. Towing/Salvage

A moderate sized location on the river capable of accommodating a few small-to-medium-sized towing and salvage vessels is all that is needed by these businesses. They can be anywhere along the river as long as the overall land use context is commercial or industrial marine.

3. Fisheries

The wholesale fish operations benefit from locations near groupings of restaurants and thus are attracted to areas near the downtown. While their site requirements are relatively modest, most of the operations currently existing along the river would probably operate more effectively on sites with more room. Sites near the mouth of the river facilitate access by fish boats bringing product to the plants by water.

4. Services

These office functions can be almost anywhere, including downtown office buildings, but benefit from reasonable proximity to other commercial marine facilities, especially the shipping terminals.

5. Boat Manufacturers

With the exception of the Bertram site, there are essentially no locations on the river suitable for a major production line boat manufacturing operation. These require extensive amounts of space and moderate cost land and do not necessarily have to have water access.

6. Shipyards

This industrial-type use would work best near the mouth of the river so client vessels would not have to travel

great distances or pass through many bridge openings. Optimumly, sites should be about the size of Miami Shipyard, but facilities can be smaller. However, the development situation in District A would make it extremely difficult to establish a new shipyard in that area so they would go elsewhere.

7. Marine Contractors

Such companies require a water's edge location in an industrial environment. Sites can be small to moderate, in size, sufficient for the storage of heavy equipment and materials.

8. Manufacturers of Marine Products

These are relatively "clean" businesses that do not have to be in an industrial area but which would probably feel more comfortable in such an area. The operations can work on relatively small sites. These criteria also apply to machinery repair and fabrication businesses.

9. Marinas

The need to have a sufficient number of slips to create a large enough facility to be profitable requires that marinas utilize parts of the river where there is enough waterway width to permit such development. In addition, marinas benefit from a non-industrial environment, optimumly locations near high-quality residential areas.

10. Boatyards

Since most boatyards function in association with or are similar to marinas, the criteria are about the same. If the boatyard does not have many permanent slips, then its location can be more industrial in nature.

11. Recreational Boating Services

These functions generally derive market support from marinas and boatyards and should be located in association with or in close proximitys to them.

12. Industrial

General industrial uses not associated with the marine business usually do not require water-edge locations and should not be located along the river.

13. General Commercial

Restaurants benefit from a location on the water and often from a relationship with a fisheries operation. Optimaly they should be located near well-traveled or heavy-populated areas. Specialty retail facilities benefit from the same locational criteria but require even closer proximity to the downtown work force. There is no particular relationship between the water's edge and office functions not related to marine trades.

14. Residential

Essentially all types of residential development gain market support from a location along the river. Neighborhoods should be generally stable and non-industrial in nature. Residential is perceived as a reasonable "in-fill" use along the river but should not displace marine businesses.

B. LAND USE BY DISTRICT

Generalized land use proposals for the study area are summarized below by District.

1. District A

This district is already clearly on its way to becoming part of the expanding Miami commercial core. Thus, the dominant land use for it will be mixed-use commercial including intensive qualities of office, lodging, retail and residential at high densities.

Despite the current development momentum, the area has attributes as a location for maritime business. Its presence near Biscayne Bay and major centers of population and workers, provide it with certain advantages. It is strongly recommended, therefore, that developments along the river be required to include maritime activities.s The kinds of uses that would be appropriate include berthing areas for yachts, marine retail facilities, and certain "office-type" marine services. Existing marine businesses should be retained.

2. District B

District B is a transitional area where uses change from "downtown commercial" to those with a marine orientation (10 year or so) typical of much of the Miami River waterfront. Successful marine businesses occupy locations on both sides of the river despite severe physical constraints that limit the growth potential of many of them. The general land use approach in this area should be a mixture of low-intensity commercial, such as restaurants, and maritime.

3. District C

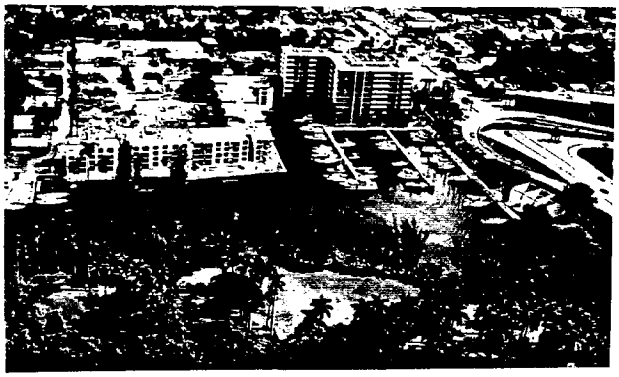
The south side of the river in this area should be pure maritime. This means that in the long term, the Southeastern Bank and Dade County General Services operations would be converted to accommodate maritime functions. The general land use approach for the north side should be residential.

4. District D

The Merrill Stevens complex at the eastern edge of this district should be regarded as part of the maritime area on the south side of the river. The rest of the south side is residential, while the north side to the west of the 836 overpass would be institutional. In the longer term (1995+) some other use should be made of this institutional area. In the event that the institutional uses are relocated, the two apartment complexes in the middle should be acquired. Maritime uses could be considered at that time, although a combination of maritime and nonmaritime would be reasonable.

5. District E

The entire north side, with the exception of the River Run condominium complex, should be planned for recreational boating. As can be seen in the photo of River Run below, that development has a significant maritime operation in the form of its slips.



The parcel on the south side adjacent to the 22nd Avenue bridge should be a heavier form of maritime. Maritime uses (marine industrial, recreational boating) should also be indicated for the area on the south side that includes Allied Marine and adjacent properties from the entrance of the South Fork back to 22nd Avenue.

6. District F

The north side should be entirely residential/public, with the latter taking into account the presence of Curtis Park. The south side should be residential on the west half and pure maritime on the east half. The latter includes Florida Yacht Repair, which should remain an active marine business in private ownership.

7. District G

The entire north side and the south side from N.W. 20th Street should all be maritime. A possible exception is the Palmer Lake area which might be used for industrial or commercial activities associated with the airport. The southeastern corner of the area should be residential.

8. Summary

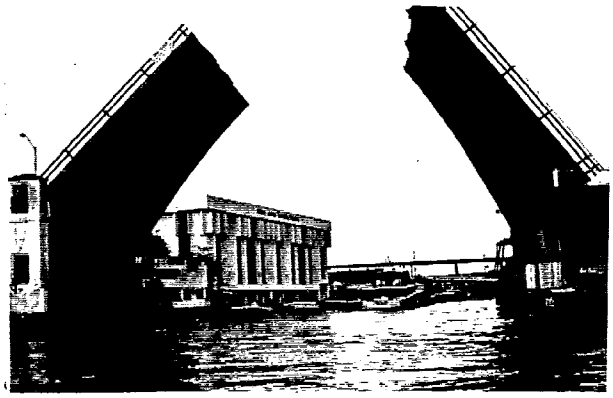
The general land use approach articulated above is intended to recognize existing residential areas and the mixed use development momentum that is occurring adjacent to the downtown. Otherwise it postulates an aggressive approach to creating internally consistent marine activity areas adjacent to the river. The total amount of land included in these areas is probably greater than can be absorbed in the short term but would be more readily absorbed in the longer term. That presumes that the economic and policy considerations underlying a strong maritime posture are in place and applied.

C. LAND USE SITE OPPORTUNITIES AND CONSTRAINTS

The site opportunities and constraints survey identifies areas which might represent an opportunity for redevelopment, development, expansion of existing uses, or general physical improvements to the area to the advantage of economic and market potentials. Constraints to development or redevelopment such as land patterns, accessibility, land use adjacencies, etc., that tend to limit the tapping of opportunities are also identified.

1. Bridges

In a generic sense, bridges and bridge openings constitute a significant physical constraint to the development of riverfront property along both sides of the river. Bridges, more particularly the bridge ramps, obstruct access to riverfront properties. Due to the standard grid pattern for the highway network throughout Dade County, both local and thru traffic avoid North and South River Drive as a result of the bridge constraints as well as the natural barrier of the river itself.



Opportunities for expansion of marine industrial and marine commercial services are influenced by the number and types of bridges along the Miami River. For example, the Fifth Street bridge when open, is effectively 55 feet wide whereas some of the large vessels coming into the river are approximately 47 feet wide and 280 feet long. The bridge openings and schedule affect the growth of shipping and related aspects of the marine industry, in addition to creating traffiic-related problems for surrounding areas.

2. Property Depth

The depth of properties along both sides of the Miami River constitutes a development and functional constraint. This is most evident along District B, where the depth of property is under 50 feet in some cases and not suitable for any use other than open storage of marine equipment. This

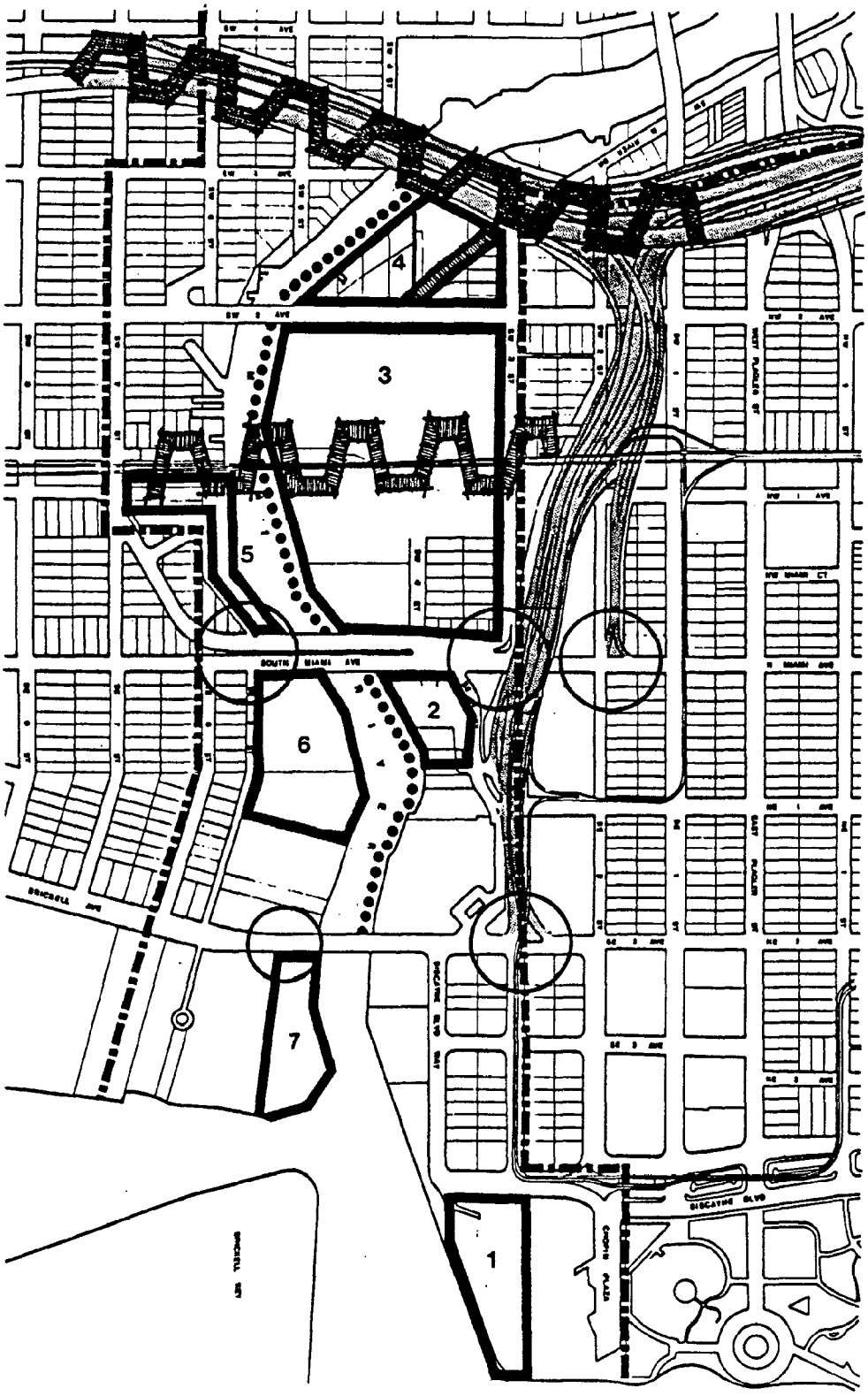
constraint can be seen throughout most districts with the exception of District A, where some of the largest development tracts in the City of Miami can be found.

3. Land Use Regulations

In addition to the items mentioned above, land-use regulations such as zoning also present a development constraint or opportunity to riverfront redevelopment and/or the preservation of existing maritime uses. The City of Miami's Waterfront Industrial Zoning category limits the development of properties falling in this category to marine-related or marine-dependent uses. Although zoning ordinances are subject to market influences and change, they nevertheless constitute a significant tool to implement desired landuse policies. In the case of properties along both banks of the river, waterfront industrial zoning and an expansion of maritime zoning overlays could assist in furthering objectives to preserve, enhance and assist in the expansion of marine-related uses along the Miami River.

4. District A/Mouth of the River to I-95

District A has the highest probability of general commercial development as a result of the proximity to the Downtown and Brickell business districts; and the amount of



CONSTRAINTS & OPPORTUNITIES – DISTRICT A

exit and access ramps connect to the downtown roadway network at South Miami Avenue or to the east at SE Second Avenue. This forces a rather circuitous route for motorist traveling to and from the riverfront parcels mentioned herein.

The FPL/Arvida property, is the largest parcel within the district which is suitable for redevelopment to a more intense use due to its present under-utilized condition. This area has well-defined boundaries established by the I-95 expressway system, the SE Second Avenue Bridge and the river itself. The redevelopment of this parcel could represent the most significant catalyst to the evolution of the north bank of the river into an upscale sector of non-marine office commercial and residential uses.

There is also the possibility for the development of the westernmost properties (Site 4) through the assembly of the Miami Yacht and El Rio Restaurant property together with the vacant properties to the north and west. The North River Drive public right-of-way which bisects these parcels should be abandoned to assist in the assemblage of this development parcel. Once assembled, this parcel would be suitable for density residential and non-marine/commercial uses. Finally, although lacking the depth of the other properties described above, Site 5 on the south bank, could be suitable for redevelopment as non-marine commercial/retail due to its proximity to the Brickell business district and shoreline exposure.

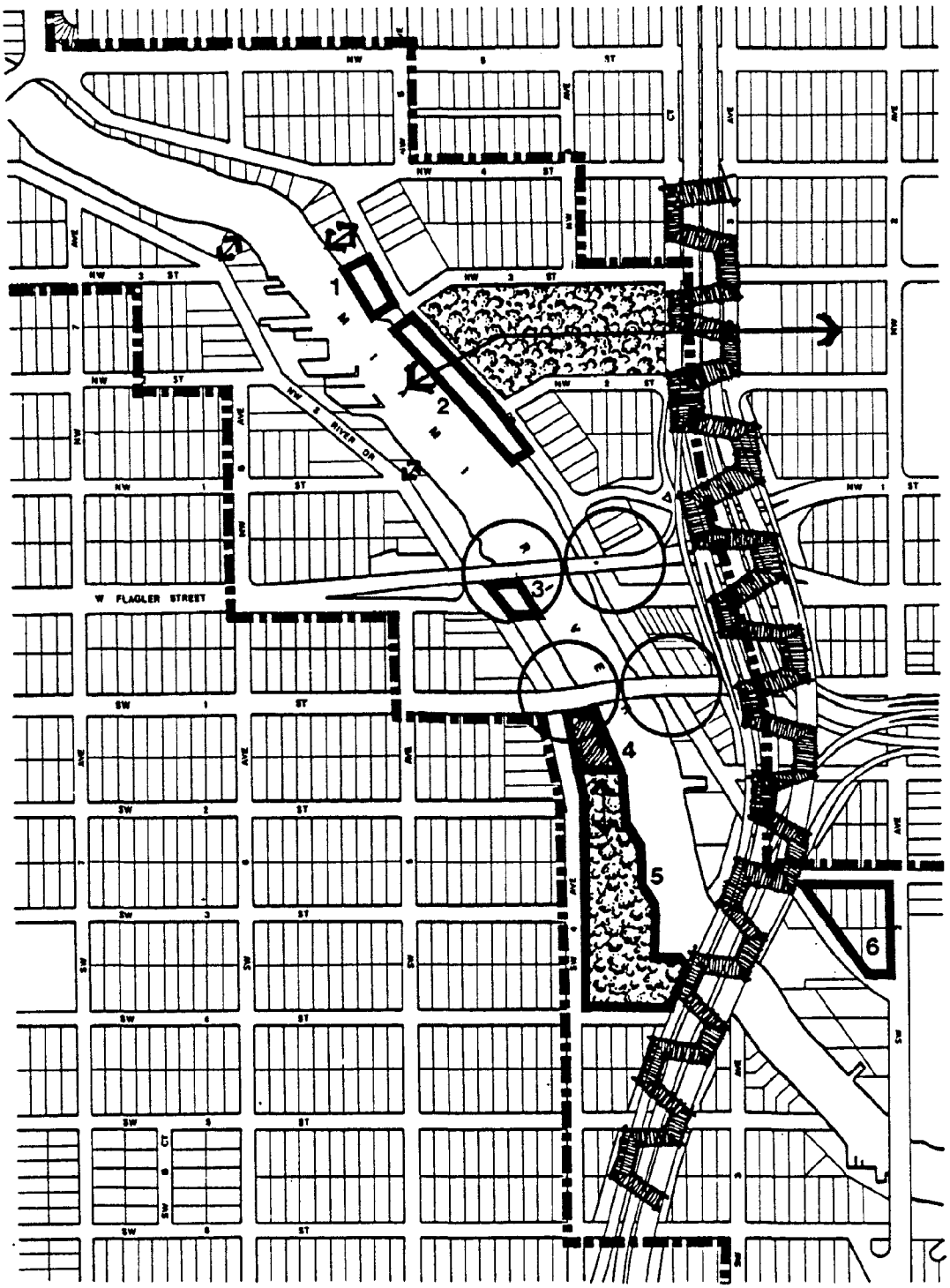
The incorporation of waterfront recreational amenities such as docking, riverwalks and overlooks are encouraged throughout this district, to provide a marine atmosphere, as a part of all waterfront redevelopment involving non-marine commercial or residential uses.

4. District B/I-95 to 5th Street Bridge

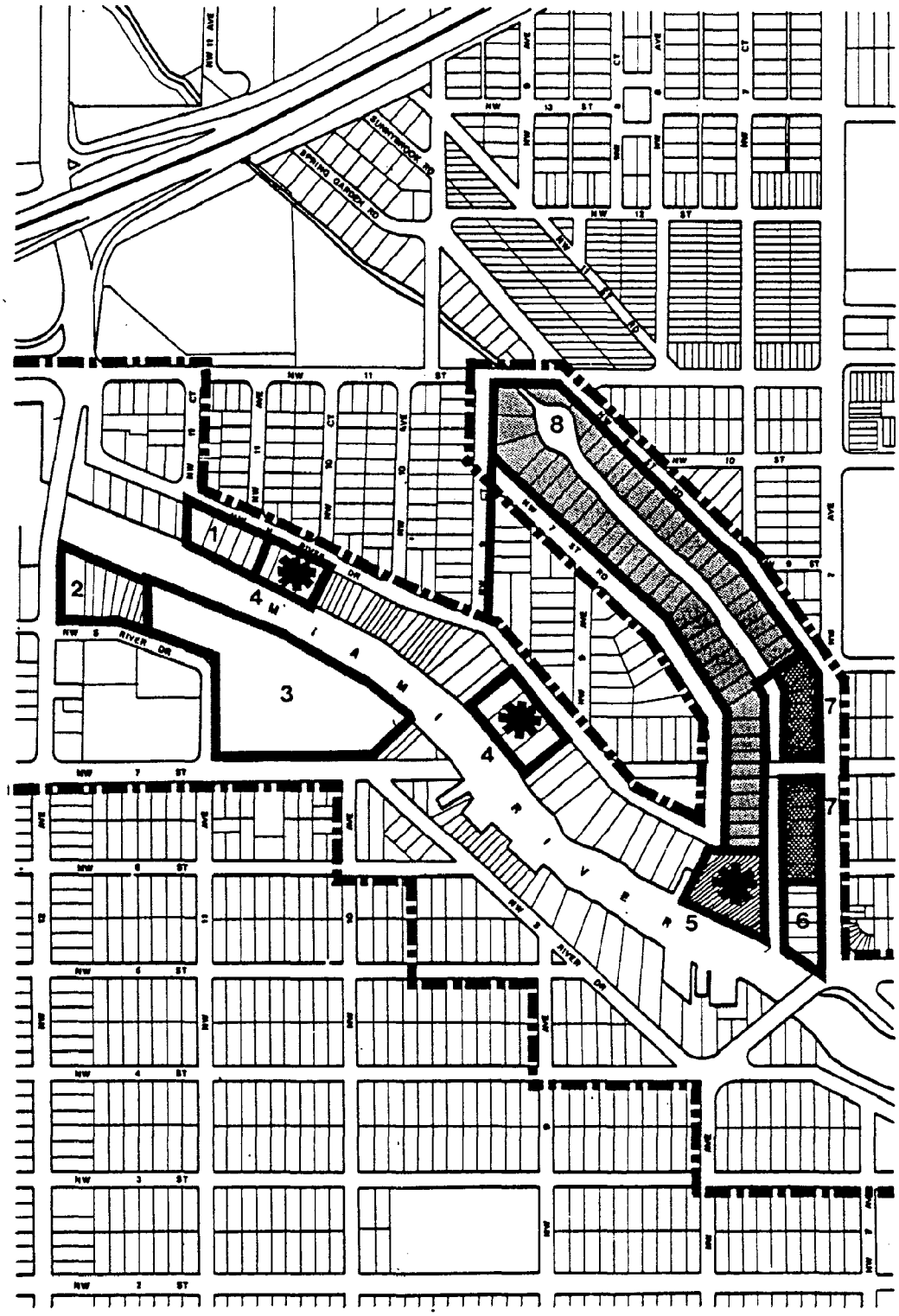
District B is severely constrained by the land development and platting configurations, which are characterized by small riverfront lots with very narrow depth. In addition, both the SW First Street and Flagler Street bridges impair eastwest accessibility to the riverfront properties along this district.

The key to site opportunities in this district lie with City of Miami Parks. On the north bank, Lummus Park could become a primary link between the downtown core and the river's edge, if redeveloped as an urban park serving not only the senior citizen housing projects, but also the employment population based at the Government Center. In addition, a stretch of City of Miami property which lies opposite Lummus Park, could also be developed as a "linear park" with possible revenue-producing concession areas at either end of the property. This property (Site 2) is currently leased to the Miami Pioneers on a 99-year lease basis. Docking facilities could remain at this following redevelopment but the structure housing the Miami Pioneers would best be relocated to Lummus Park. The parking area adjacent to the Miami-Dade Water and Sewer Pump Station, which belongs to the Scottish Rite Temple across the street, could be used as overflow parking during special events (Site 1). This parking area would need to be beautified through paving, lighting, landscaping and street furniture treatments.

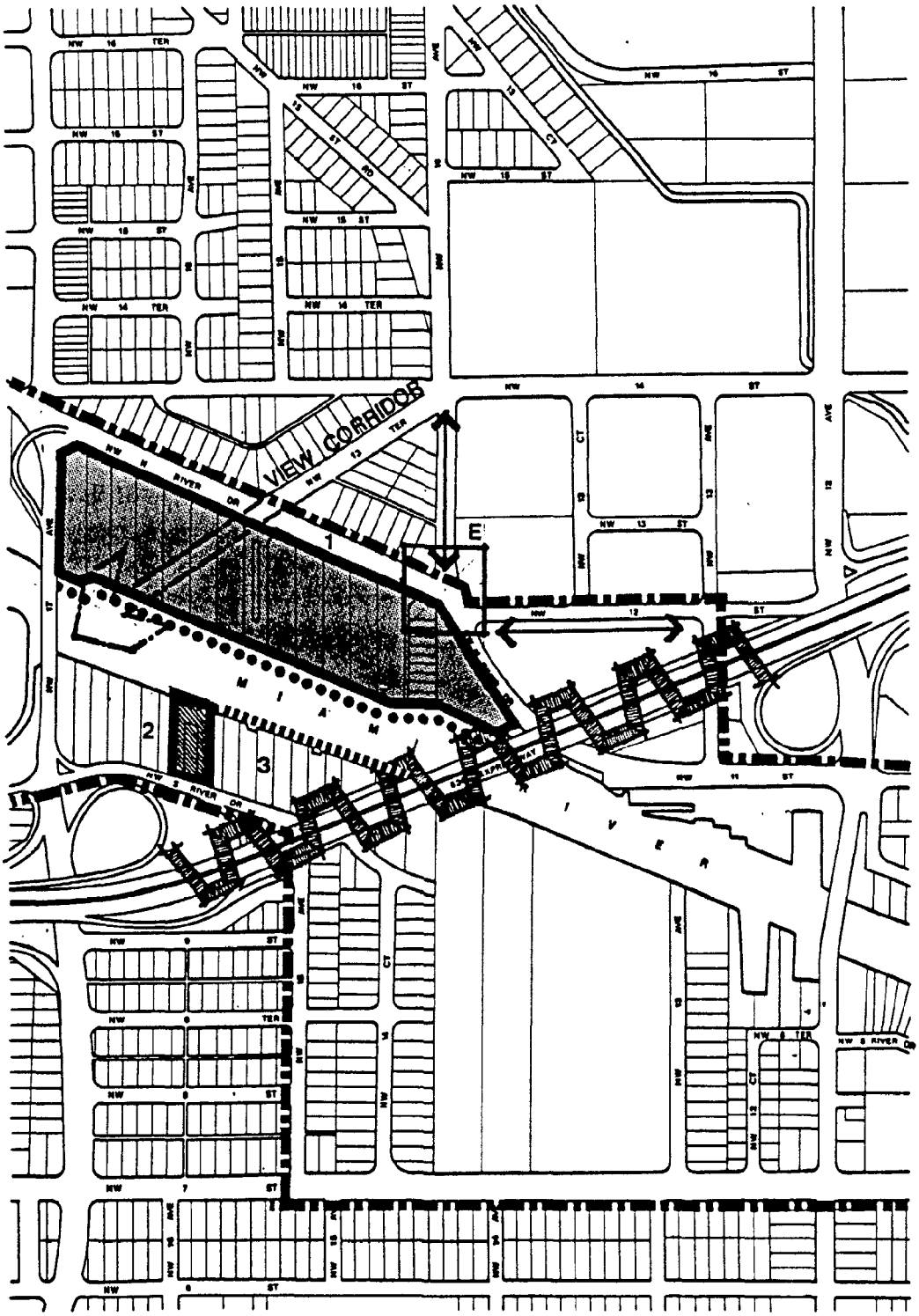
On the south bank of the river Site 3 is vacant and presents an opportunity for expansion of marine services. Site 4 consists of a single-family residence which is currently being converted into a restaurant. This project was developed by Magic City Enterprises, a local development group involved in the restoration and preservation of historic structures in East Little Havana through adaptive re-use efforts. Immediately adjacent to this structure is a vacant property which presents an opportunity for the development of an entertainment node working in conjunction with the Magic City Enterprises project. A complex such as the one referred to herein, consisting of seafood and ethnic restaurants, could generate the necessary critical mass to attract passive related pedestrian activitiies to the north end of Jose Marti Riverfront Park.



CONSTRAINTS & OPPORTUNITIES – DISTRICT B



CONSTRAINTS & OPPORTUNITIES - DISTRICT C



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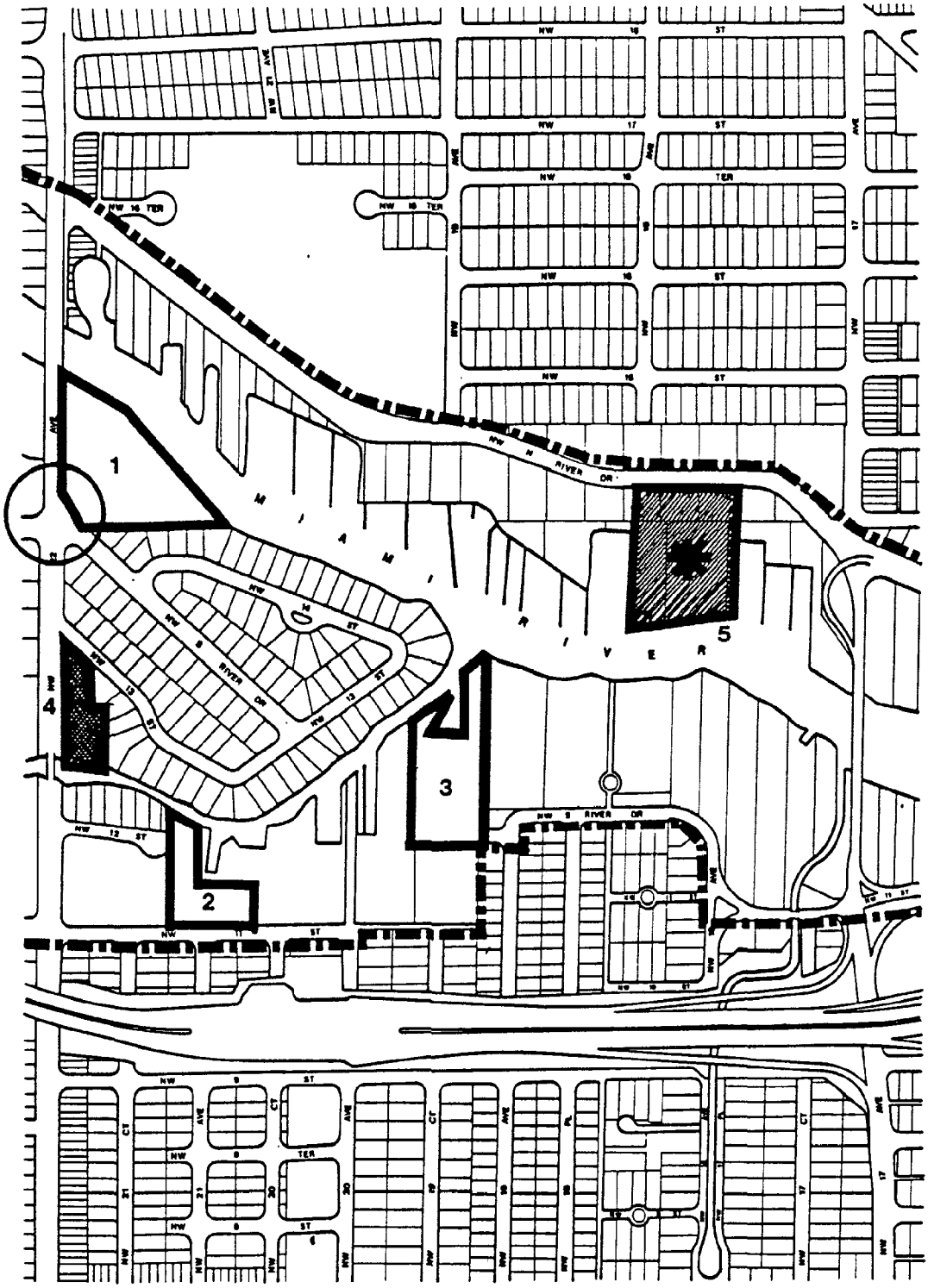
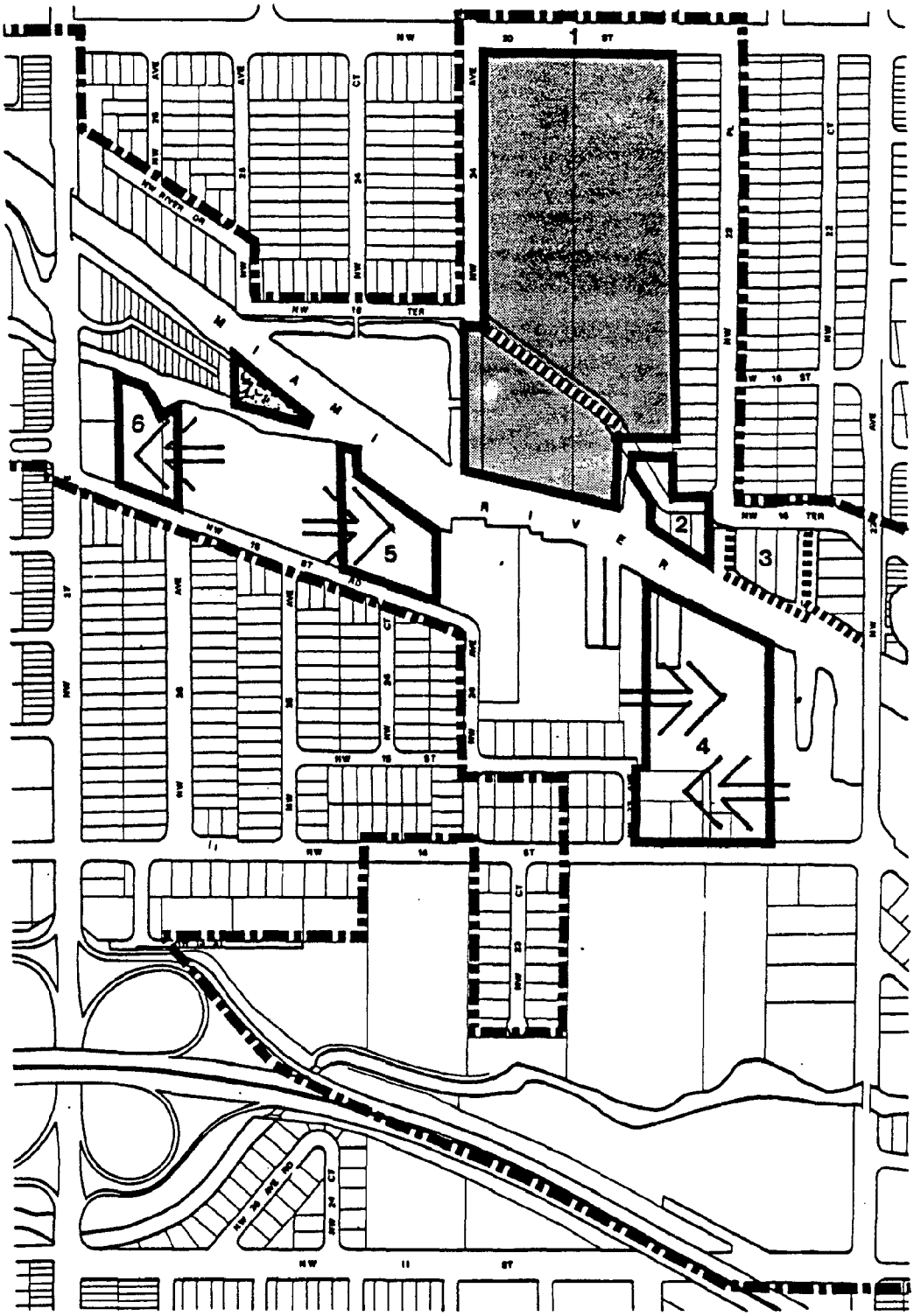


CONSTRAINTS & OPPORTUNITIES - DISTRICT E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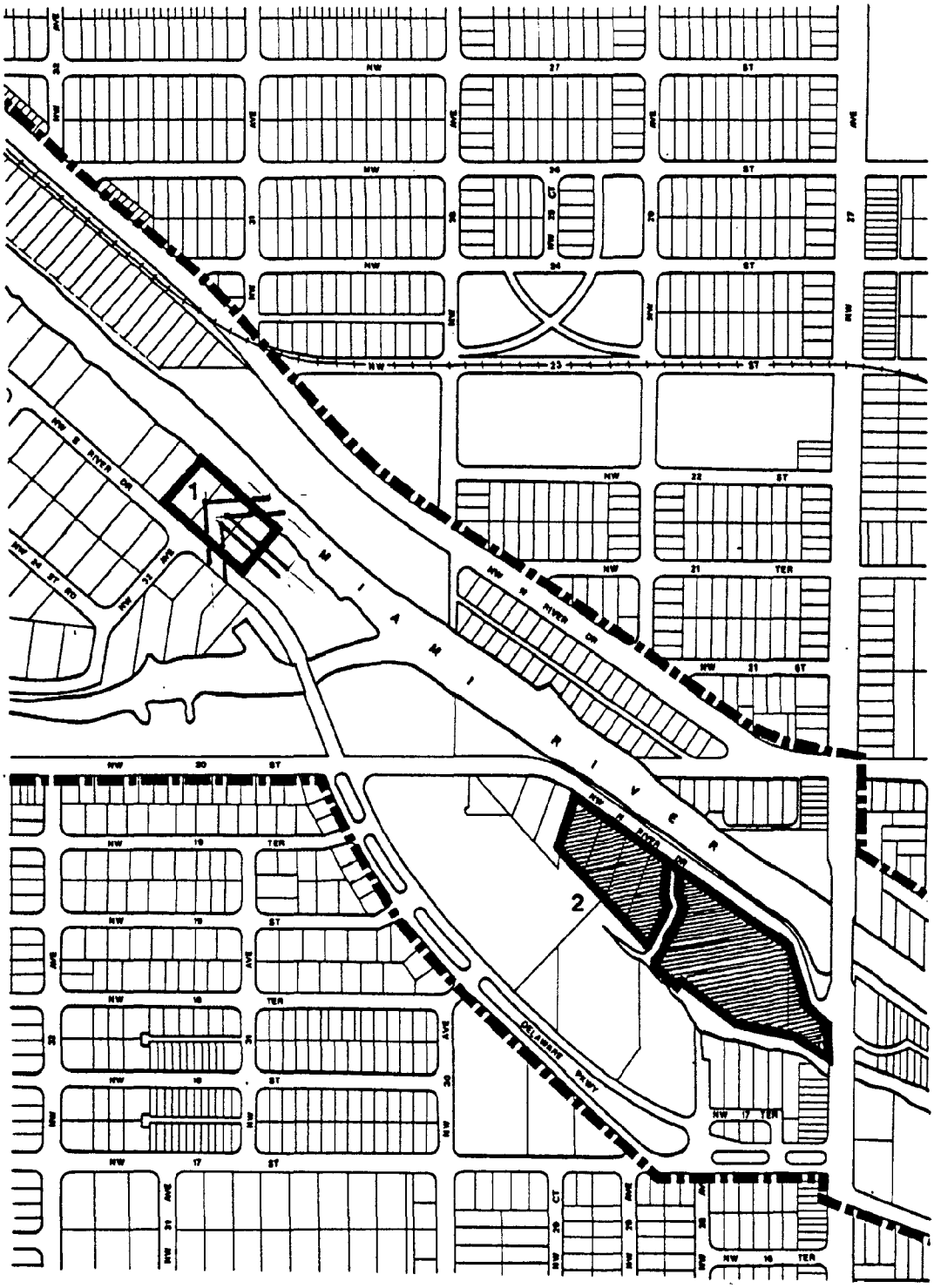
The sites around Lake Palmer (site 3) are privately owned and suitable for marine/commercial-idustrial. Minor and major boat repair could be handled here. The only constraint aside from the distance to the mouth of the river, is the clearance of the bridge at South River Drive. However, it is possible that the properties around the basin could be developed as a marine idustrial park.

D. DEVELOPMENT NODES

Parcels and areas along the river and its tributaries have been identified for possible new developpment within the general land use construction set forth above. The full inventory of develoment nodes and recommended near- and long-term development approaches for each are listed on the following pages.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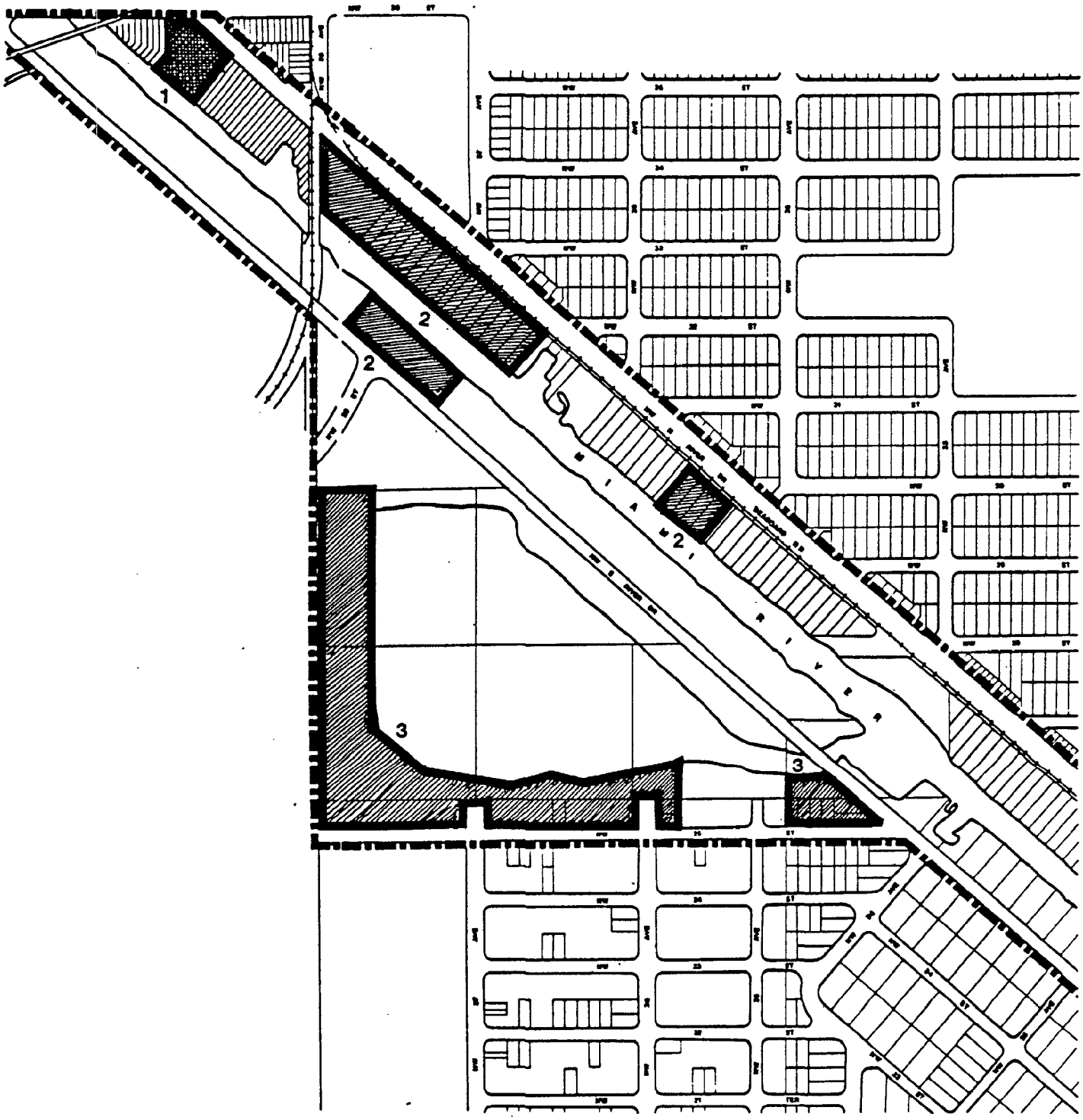

CONSTRAINTS & OPPORTUNITIES - DISTRICT H

MIAMI RIVER LEVEL DEVELOPMENT PLAN

MIAMI RIVER DEVELOPMENT NODES
DISTRICT B

Site	Description	Approx. Size (Acres)	Current Use / Zoning	Proposed Use (Near-Term) / Proposed Use (Long-Term)	Comments
B1	Dade W&S Station	.5	Parking Lot / RG-3/6	Surface parking / Same as above	Landscaping, screening & lighting. River walk would terminate at this point. Overflow parking for terminus.
B2	Miami Pioneers	1.5	Inst. (Club); Recr. Marine / RG-3/6	Restaurant & marine recreation /	Excellent location for seafood restaurant, raw bar-lounge & marina as part of N. River Dr. & terminus park improvements.
B3	Flagler Bridge	.38	Vacant / CG-1.7	Marine commercial / Restaurant	Fisheries, shipping or other water-dependent use with marine related use on the 2nd level.
B4	SW 1st St. Bridge	.75	Resi. (Single-Family) & Vacant / CR-3/7	Restaurant conversion at north end of Jose Marti Park / Should be developed to complement restaurant identifed above	Conversion in process will test the market. A grouping of marine theme restaurants would help anchor the park & create an attraction for the community.

MIAMI RIVER DEVELOPMENT NODES
DISTRICT C

Site	Description	Approx. Size (Acres)	Current Use / Zoning	Proposed Use (Near-Term) / Proposed Use (Long-Term)	Comments
C1	North Bank 1	1.2	Single Family	Converstion to townhouse residential / Same	Underutilized. Convert SF to TH.
C2	12th Ave. Bridge	2.75	Metro Dade / WF-I/7	Marine commercial or marine industrial / Same	Public property, current use not water related...could be leveraged for marine-related use/commercial.
C3	Southeastern Bank	6.7	Bank "Back-Office" Operations / WF-I/7	Marine commercial & marine industrial / Same	Excellent location for marine industrial, related commercial, marine recreational with possible mixed-use office.
C4	North Bank 4	2.75	Vacant / RG-2/4	Townhouse residential / Same	Underutilized; extension of adjacent TH development.
C5	Seybold Point	1.8	Vacant / RG-2/4	Residential /	Corner lot is a focal point at entrance to Seybold Canal.
C6	5th St. Bridge	1.1	Marine Industrial / CG-1/7	Marine commercial /	Marine commercial would be more compatible with efforts to redevelop properties along both side of the canal.
C7	Seybold Commercial	3.0	Mixed Commercial / CG-1/7	General commercial /	
C8	Seybold Canal Com.	11.0	Residential / RS-2/2 & RG-2/4	Residential /	

MIAMI RIVER DEVELOPMENT NODES
DISTRICT D

Site	Description	Approx. Size (Acres)	Current Use / Zoning	Proposed Use (Near-Term) / Proposed Use (Long-Term)	Comments
D1	Civic Center West	15.75	Institutional & Residential / RG-3/6	Institutional & residential / Mixed use with marine commercial	Emphasis on water-related commercial & developing marine recreational opportunities.
D2	Public Right of-Way	1.2	Street End / RS-2/2	Single-family residential / Same as above	Possibility of R.O.W. abandonment or swap with property adjacent to 836 expressway R.O.W.
D3	Residential Neighborhood	3.0	Residential / RS-2/2	Residential Stabilization / Same as above	High-quality housing should be encouraged by removing barrier or intrusion element & creating a "green buffer" with the 836 R.O.W.

MIAMI RIVER DEVELOPMENT PROGRAM
DISTRICT E

Site	Description	Approx. Size (Acres)	Current Use / Zoning	Proposed Use (Near-Term) / Proposed Use (Long-Term)	Comments
E1	22nd Ave. Bridge	4.5	Vacant / WF-I/7	Marine industrial / Same as above	Great site/excellent frontage on river. Accessibility at intersection is constraint.
E2	Allied West	2.0	Vacant / WF-I/7	Expansion at boatyard complex /	
E3	Haiti Ship. Terminal	3.1	/ WF-I/7	Expansion of marine industrial /	Existing shipping operations should be relocated...property is ideal for boat repair & expansion of Allied Marine.
E4	22nd Ave.	1.8	Vacant / RS-2/2	Conversion from residential to residential/office /	
E5	River Run Addition	5.0	Residential Under Construction / RG-3/6	High-rise residential with marine recreational /	
E6a	Nuta's	4.75 (land)	Recrea. Marine Underutilized / WF-I/7	Redevelopment as a recreational boating center with marinas, sales, minor repair, brokerage /	For sale. ----
E6b	Hardie's	2.2 (land)	Recrea. Marine / WF-I/7	Same as E6a /	For sale. -- Assembly of these properties under one management & improve marine recreational facilities & services.
E6c	Poland's	.75 (land)	Recrea. Marine / RG-2/4	Same as E6a /	For sale. ----

MIAMI RIVER DEVELOPMENT NODES
DISTRICT F

Site	Description	Approx. Size (Acres)	Current Use / Zoning	Proposed Use (Near-Term) / Proposed Use (Long-Term)	Comments
F1	Curtis Park		Public Park/PR	Public park / Same	General park improvements.
F2	Curtis Park	1.25	Public Park/PR / RG-2/4	Public right way & marine recreational improvements	Closure of N. River Drive, develop a cul-de-sac, improved parking areas boat ramp & river overlook.
F3	Residential	1.0	Garden Apartments / RG-2/4	Increase recreational boating in conjunction with existing garden apartments	
F4	Key Power	9.0	Marine Industrial / WF-I/7	Redevelop as marine industrial	Expansion for marine industrial water-dependent/major boat repair boatyard.
F5	Muse Isle East	3.0	Vacant / RG-2/5 & WF-I/7	Boatyard complex	Join to Florida Yacht.
F6	Muse Isle West	1.75	Vacant / CR-3/7	Residential townhouse	
F7	Point	.66	Vacant / WF-R/7	Public open space and marine recreational	Good river vistas.

MIAMI RIVER DEVELOPMENT NODES
DISTRICT G

Site	Description	Approx. Size (Acres)	Current Use / Zoning	Proposed Use (Near-Term) / Proposed Use (Long-Term)	Comments
G1	Benuth West	1.75	Vacant	Marine industrial-shipping	Expansion of shipping terminals.
G2	North River Drive	8.0	Mixed Com. & Resi. (trailer park) CG-2/7	High-density residential	Opportunity for the improvement of S. River Dr. as a "malecon" to create the ambiance or stage for residential development.

MIAMI RIVER DEVELOPMENT NODES
DISTRICT H

Site	Description	Approx. Size (Acres)	Current Use / Zoning	Proposed Use (Near-Term) / Proposed Use (Long-Term)	Comments
H1	Salinity Dam	1.66	Vacant / IU-2	Marine industrial (WR) /	The R&R Bridge is a constraint to the development of any water-dependent properties in this area.
H2a	North River Drive	5.25	Vacant / IU-1	Shipping/cargo terminal /	
H2b	South River Drive	2.0	Vacant / IU-2	Shipping/cargo terminal /	
H2c	North River Drive	1.2	Vacant / IU-2	Shipping/cargo terminal /	
H3a	Lake Palmer	14	Vacant / IU-2	Industrial park /	The bridge at NW S. River Dr. (due to clearance) is a major constraint to the development of water-dependent use along Lake Palmer.
H3b	25th St. at N. River Dr.	1.5	Vacant / IU-1	Same as H3b /	
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V. PUBLIC/INSTITUTIONAL CONTEXT

The public/institutional analysis identifies sites, environmental conditions and physical factors affecting the level of public access, utilization and enjoyment of the river's resources.

A. GENERAL ISSUES

The following public/institutional improvements are of a generic nature and apply to all districts along the Miami River.

1. Bridges

There are a total of 15 river crossings within the study area (not counting bridges along tributaries). Three of these are fixed expressway or metrorail guideway crossings and present no problems to boat traffic or land use accessibility in the case of river-front properties. However, there are 6 bascule bridges which have a clearance under 18 feet and are over 45 years old. Five bridges have an average of 24 or more openings daily. Improved traffic conditions for both mercantile shipping and vehicular traffic within proximity of bridge access ramps could significantly improve if the older bascule bridges with low clearances were replaced with new bridges. In addition, the 57-year-old Brickell Avenue bridge should receive high priority for replacement due to its importance within the context of the downtown and Brickell areas. This bridge also serves a considerable amount of pedestrian traffic and the design of a replacement bridge should take this aspect into account.

2. Pollution and Water Quality

The high contamination of the rivers water quality with organic and inorganic substancces is a serious concern affecting not only the Miami River but Biscayne Bay as well. A high degree of the contamination flows into the bay as a result of the high volume of ship traffic which constantly re-suspends polluted sediments from the river bottom.

It is critical that an agreement be reached between Federal (i.e., Army Corps of Engineers), State and County agencies to clean-up the Miami River through a comprehensive dredging

program extending from the north to the south bank of the river, along a 6-mile stretch extending from the mouth of the river to the Salinity Dam; such a dredging program would not only help remedy the river's water contamination problem, but it would also improve navigation.

Currently the County and City have been cooperating in a clean-up of the river by daily pick-ups of floating debris, trash and other suspended particles which might have been abandoned. These efforts have had a significant and positive impact in improving the "visual image" of the river. The U.S. Coast Guard also participates in the role of "overseer" for clean-up programs related to oil spills.

In addition, as a result of the efforts of Senator Lawton Chiles in mid-1985, over one hundred derelict vessels consisting of abandoned, submerged or partially submerged vessels were removed from the river. Some of these were utilized for the expansion of an artificial reef, approximately 1-1/2 miles offshore near the Dade/Broward County line. Federal laws permit the U.S. Customs to expeditiously dispose of a vessel that is valued at less than $100,000 or that has been used to transport contraband. Today, there are still close to 40 derelict or abandoned vessels along the river and its tributaries.

Finally, it is important that in addition to the measures identified above, a comprehensive drainage system improvement be initiated to correct the direct disposal of pollutants through storm sewer outfalls and the occasional occurrence of sanitary sewer overflows into the storm sewer system.

3. Shoreline Conditions

Approximately 18 percent of the river's edge, along the six-mile stretch from the mouth of the river to the Salinity Dam is characterized by deteriorated bulkheads or unconsolidated conditions. These shoreline conditions contribute to the pollution of the river water quality through erosion/spills and limit the use of the rivers edge for marine commercial or marine recreational purposes. In addition, these conditions particularly in the case of the deteriorated bulkheads present a hazardous and unsightly condition. It is important that a comprehensive and coordinated effort be initiated betwen the City of Miami and Dade County (Code Enforcement, Public Works and Building Departments) to monitor code violations and refer

these to the County's Unsafe-Structure's Board. On a long-term basis the City and County should continue to cooperate in a shoreline consolidation program along both river banks with the cost of the improvements pro-rated and assessed to the individual property owners. Appropriations from the State for shoreline improvements will be enhanced for consolidation improvements along Sewell Park, Curtis Park and other areas.

B. OPPORTUNITIES AND CONSTRAINTS

1. District A/Mouth of the River to I-95

a. Riverwalks and Mini-Parks

Due to the proximity to the Downtown Central Business District and the Brickell Avenue office corridor, the banks of the Miami River are a prime location for the development of riverwalks, plazas and marine recreational amenities such as docking facilities and overlooks. The development of these riverwalks would be constrained only by existing waterfront industrial uses; and in some cases the bridge crossings.

b. Street Closures

In addition, the City should also be favorable to the abandonment of NW River Drive just west of 2nd Avenue to allow for the land assembly of parcels presently separated by this portion of NW River Drive.

c. River Quadrant Project

Concerning the River Quadrant project, a large mixed-use development proposed by FPL/ARVIDA, the City should encourage the development of a linear park along the Metrorail right-of-way linking the riverfront area along the River Quadrant project with the Dade County Government Center. It would be desirable if the project would dedicate a parcel of land, approximately 250 feet by 250 feet and located adjacent to the proposed linear park near the center of the River Quadrant, for use as public open space and developed as an urban plaza. Unlike most open space along the Miami River, this urban park would not represent an edge condition; and consequently, it would serve as a park where a number of activities would converge while providing a "sense of place" for the project.

d. Fort Dallas Park

Finally, plans by the City of Miami to upgrade the Fort Dallas Park, a (.75) acrea mini-park fronting on the westernmost edge of the Miami River (just west of the River Park Hotel) has received high priority for implementation. The City has funds available for the park improvements which will consist of landscaped plazas, water features, food/beverage concessions and other amenities. The development of Ft. Dallas Park will serve as a "pilot project" for other open-space and marine recreational amenities along future extensions of the riverwalk. The historic Flagler House (formerly the "Butler Building") is located in Ft. Dallas Park.

2. District B/I-95 to 5th Street Bridge

a. North River Drive

In 1985, the City of Miami Planning Department developed a proposal for the improvement of North River Drive from the 2nd Avenue Bridge to the 5th Street Bridge. The purpose of the improvements would be twofold: First, to repair and beautify a public roadway which currently is not only unsightly, but in need of repair; and second, to provide for a better linkage between the marinas, seafood restaurants, fisheries and other marine uses found on the north bank of the river. The proposal will also develop a beautiful "entry way" where Lummus Park fronts on North River Drive. This new entrance will also enhance a visual and functional linkage between the city park and the river's edge.

The improvements to North River Drive will consist of new decorative paving, pedestrian crosswalks, a colonnade of queen palms to highlight the linear walkways and provide orientation to both motorists and pedestrians. The improvements will convert this area into a combination shore-drive and river promenade.

b. Lummus Park

The concepts for the improvements to North River Drive also include the development of a marina and waterfront plaza on that portion of Lummus Park which borders the Miami River and is separated from the main portion of the park by North River Drive.

Lummus Park is a 5.9 acre city park, which is in need of a major uplift. Structures such as the recreation building, card room and other shelters and activity areas are in need of repair. The park's recreational facilities (i.e., shuffleboard courts, etc.) are primarily programmed for the nearby senior citizen centers. The park has not yet received the necessary funding appropriations to accomplish the capital improvements proposed by the Parks and Recreation Department.

Lummus Park is the key to the success of the proposed North River Drive improvement project. It will be critically important for the City to leverage the real estate assets of Lummus Park through land leases and concession agreements in the public/private development of marine recreational and other attractions in this area. Attractions such as the proposed marina, seafood restaurants, fish and seafood market and specialty shops would enhance the establishing a "destination point" for residents and visitors alike. Such a development would be linked to the existing East Coast Fisheries and Joe's Seafood Restaurant along the water's edge.

Finally, Lummus Park serves as the only possible pedestrian link with the office employment population at the Government Center, just one block away. However, the park and the Government Center are separated by the I-95 expressway and the City of Miami Police parking area beneath the expressway. The linkage between the proposed riverfront improvements and the Government Center, via Lummus Park could be achieved through the following:

(1) Redevelop the park with an "urban ambience" oriented to the nearby employment base. A pedestrian mall concept with a promenade varying in width from a minimum of 20 feet in width to a maximum of 50 feet in width should be planned along the north side of NW 2nd street. The pedestrian mall should be paved with decorative pavers, landscaped to provide shade and orientation, water features and provisions for food concession areas and vendors. The park design should accommodate the recreational needs of the nearby senior citizens. The park should also feature a water-oriented plaza along the promenade, complementing the proposed entry way at North River Drive.

(2) The Lummus Park Plaza recommended above should serve as a stage for noon-time cultural events such as recitals, brass bands, theatrical skits, concerts, etc. Cities

such as Norfolk, Virginia, have full-time staff responsible for organizaing and managing a year-round calendar of cultural events at urban parks and other municipal facilities. A similar effort is required for parks such as Lummus and Bayfront Park.

(3) The City parking lot, beneath I-95, should be slightly modified so that the promenade may be continued as described above. The promenade at this point would be approximately 20 feet wide.

(4) Pedestrian crosswalks at the intersections of NW 2nd Street with NW 3rd Court and NW 3rd Avenue would be designed with decorative pavers.

(5) The promenade would continue along the north side of NW 2nd Avenue. Themed lighting, decorative paving patterns, street furniture and the planting of queen palms would be utilized to visually reinforce the linkage.

c. Jose Marti Marina

The City of Miami has proposed the development of a marine commercial center on a one-acre parcel of publicly owned land across from Jose Marti Riverfront Park on the north side of the River just west of I-95. The development would be a public/private venture with a program including a marina, marine-oriented shops and restaurants, similar to the Lummus Park development.

This type of effort needs to be encouraged as part of a comprehensive effort to develop "destination points" along North River Drive.

d. Flagler Plaza

At the foot of Flagler Street and North River Drive is a small (5,000 square feet) publicly owned parcel adjacent to East Coast Fisheries which has been proposed by the City of Miami as a waterfront plaza-outdoor cafe.

Similar, to other proposed projects along North River Drive, this development would serve as another "scenic stop" along North River Drive.

e. Jose Marti Riverfront Park

The award-winning design for Jose Marti Riverfront Park is a reality along the river's south bank, but unnoticed by many. The park has a disappointing level of utilization.

The City should consider efforts to establish an "adopt-a-park" program with community-based organizations and corporate sponsors. Recreational programming and organized sports activities need to be "institutionalized" at the south end of the park.

At the north end of the park, the City should consider the public/private development of a "seafood court of restaurants" through concession or land-lease agreements.

3. District C/5th Street Bridge to 12th Avenue Bridge

a. River Gateways

The City of Miami has a very small parcel of land on the north bank of the river just east of the 12th Avenue Bridge. This parcel should be beautified through landscaping and planting of groupings of palms at staggered heights to create a sense of river gateway at this point.

b. 12th Avenue Marine Center

On the opposite side of the river, Dade County operates GSA and Property Management functions. The County should be encouraged to relocate these operations which are not water dependent (except for the patrol boat berthing area) to another site. This would make this site available for marine commercial uses, either water dependent or water related. In addition, a similar treatment to the one recommended for the City of Miami property is encouraged here also. The latter would assist in developing a symmetrical "landscape gateway design".

4. District D/12th Avenue Bridge to 17th Avenue Bridge

a. River Place

District D presents a tremendous opportunity for a public/private joint development effort involving the Mahi Temple, York Rite Masonic Temple and James Carwell Lodge to the

west; and County property presently being used for surface parking. The properties are presently zoned RG-3/6. The land assembly of the parcels extending between the Maji Temple and the York Rite Masonic Temple comprise approximately 15.75 acres. Due to the proximity to the Civic Center just one block away, this proposed redevelopment tract would be suitable for a mixed-use development program. Retail functions particularly restaurants, lounges, etc. should have a marine orientation. Docking areas should also be provided along the entire stretch of the project, paralleling a river promenade lined with marine retail commercial uses. It is possible that a hotel or residential mix could be provided towards the western edge of the project.

It is recommended that parking serving both the project and the Civic Center, be provided on the County-owned property immediately to the east. Above-grade pedestrian bridges would link the upper parking levels with both the proposed project and Civic Center buildings.

The intersections of North River Drive with NW 23 Terrace; and North River Drive with NW 12th Street would be improved through paving, decorative cross-walks, landscaping and street furniture to help create the gateways into the project. The project design should consider the provision of "view corridors" along the axis of NW 13 Terrace to provide a vista of the river's edge. It is recommended that the intersection of the "view corridor" and river's edge be reserved as a berthing place for sailboats. This would provide the view corridor with a "marine back-drop" or focal point at the river's edge.

b. Robert King High Towers

The river's edge along the Robert King High Towers elderly housing project is unconsolidated and shows signs of erosion. In addition, the grounds are in need of maintenance; and upgraded seating and lighting along the river's edge.

The highest priority should be corrective measures to bulkhead or rip-rap the shoreline.

c. NW 17th Avenue Dead End Street

The City should consider the closure of the NW 17th Avenue dead end street since it serves no useful purpose

other than to present an element of "public intrusion" between two single-family lots. Public access to the river's edge at this location detrimentally impacts the quality and privacy needs of a single-family area. The single-family homes located just to the west are the most attractive and best kept residences along the river. One half of the proposed street abandonment would revert to the two single-family properties at either side of the public right-of-way.

5. District E/17th Avenue Bridge to the 22nd Avenue Bridge

The only significant public opportunity in this district is Sewell Park. The park is approximately 9 acres in size. It is located immediately west of SW 17th Avenue bridge on the south bank of the river. South River Drive and Dodge Hospital form the southern and western borders of the park. The 836 expressway is located just 2 blocks south of the park from south of the park and virtually "cuts off" the park from access to nearby residential areas. Consequently, the park has a very limited "constituency".

Sewell Park is a passive community park. Since 1982, the park has been earmarked within the City's Parks and Recreation Improvement Plans for general facelift improvements, handicapped access improvements, irrigation and shoreline improvements. The City has not funded or taken action on any of these problem areas.

It is recommended that the shoreline improvements be given priority for implementation. It is possible that if recreational amenities, complementing the park's passive character (i.e., vita courses, jogging trails, boat ramp, etc.) are developed at the park, park utilization from nearby residential areas would likely increase.

In any event, the park does present a very beautiful vista across from the River Run Condominium project on the opposite bank of the river, as well as for boaters traveling westward. The Parks and Recreation Department recommended improvements will enhance the appearance of both the park and river's edge.

6. District F/22nd Avenue Bridge to 27th Avenue Bridge

Curtis Park is a 28-acre community park serving the Allapattah neighborhood. The neighborhood is probably one of

the most balanced areas of the City in terms of population mix relative to ethnicity: Hispanics, Blacks and Anglos. The park has the most diverse range of recreational facilities and programming, found in the study area. Activities at the park include baseball, football, tennis, swimming and boxing. The latter two activities are part of the park's supervised recreational programs.

The most critical element in expanding the quality and level of utilization of park activities consists of the installation of lighting at the sport field areas. This will allow park utilization at nighttime by organized football and soccer leagues. A limited number of playground and court surface improvements are also needed. Similar to Sewell Park, Curtis Park is also in need of shoreline improvements, either rip rap or bulkheading. Curtis Park has the only public boat ramp on the river.

Similar to Lummus Park, Curtis Park is bisected by North River Drive into a water side and land side tract.

In 1985 the City opened the Allapatah Elderly Meals Center at the park, with the assistance of Community Development Block grants.

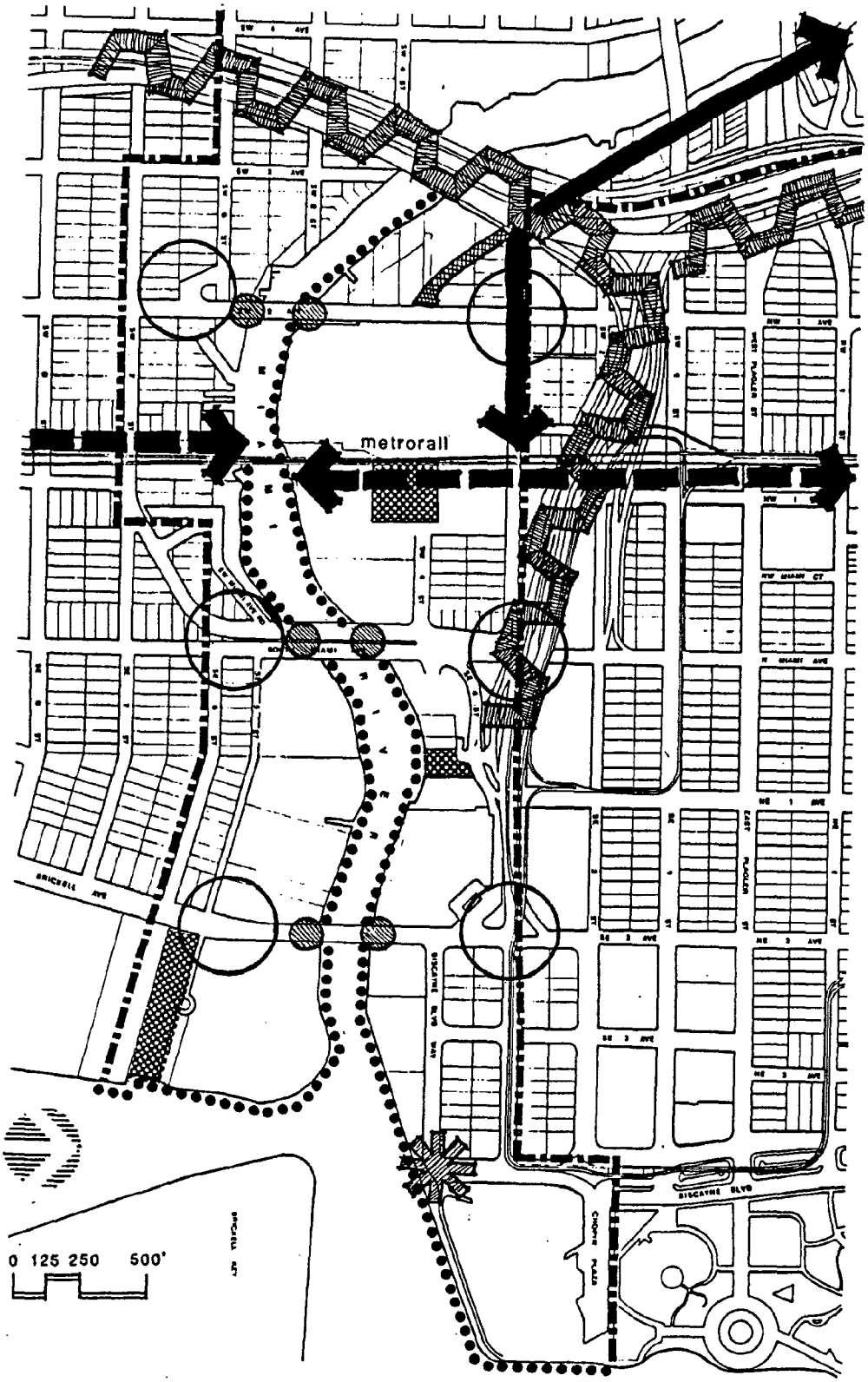
7. District G/27th Avenue Bridge to NW 32nd Avenue

The Dade County Property located just west of NW 27th Avenue, on the north bank of the river is currently utilized as a parking lot and storage area for County vehicle and equipment. This type of activity is neither water dependent nor water related.

It is encouraged that the City and County coordinate in the conversion of this property into a more marine-related activity which would simultaneously serve a public purpose (e.g., dry-boat storage and boat ramp). Efforts to assemble the private property immediately to the east are also encouraged since the latter is also not a water-related use (i.e., ORKIN PEST CONTROL).

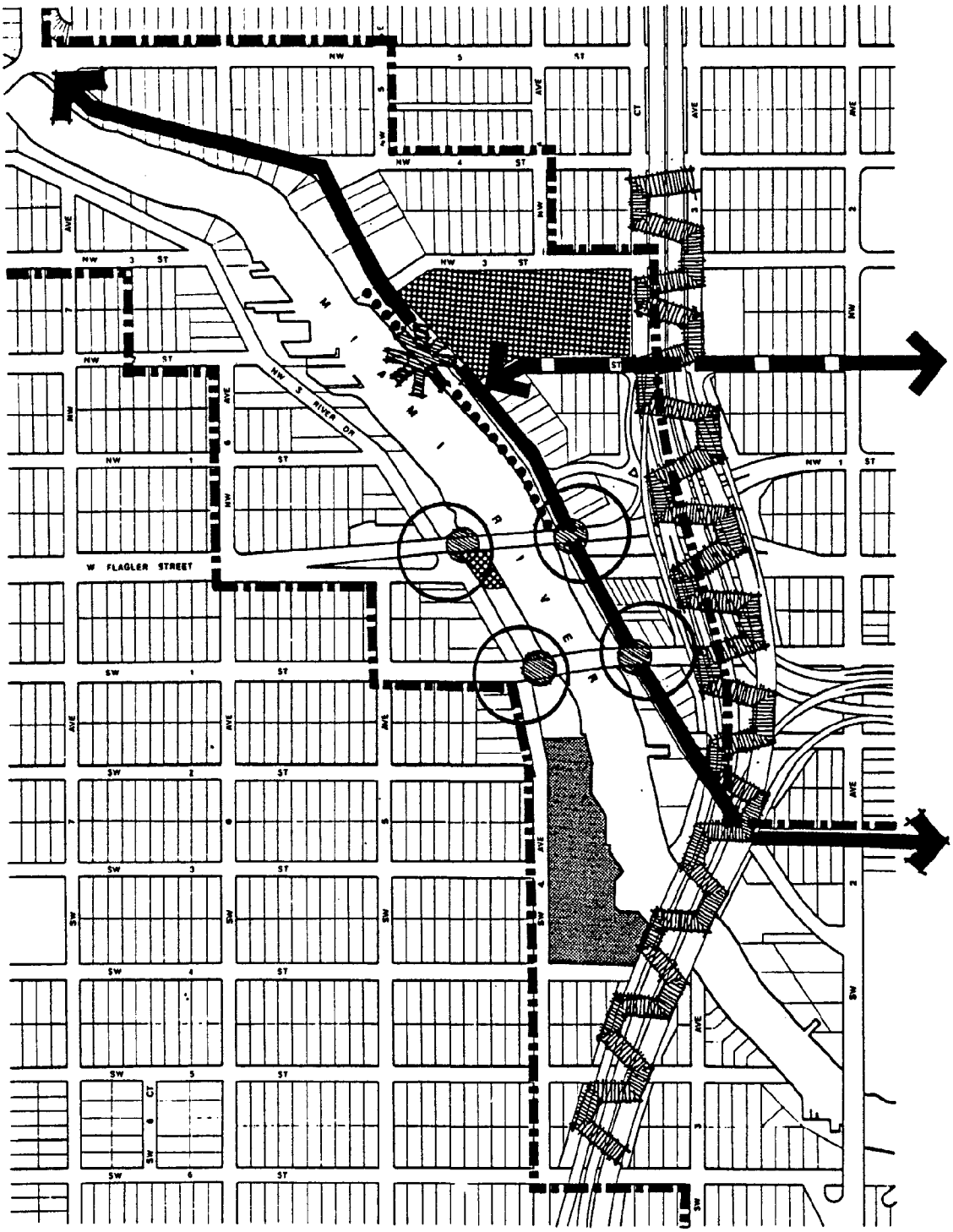
8. District H/NW 32nd Avenue to the Salinity Dam West of NW 37th Avenue

There are no significant public/institutional opportunities along this district other than those of a generic nature, mentioned previously in the Introduction (page II-34).



SITE CONSTRAINTS & OPPORTUNITIES - DISTRICT A

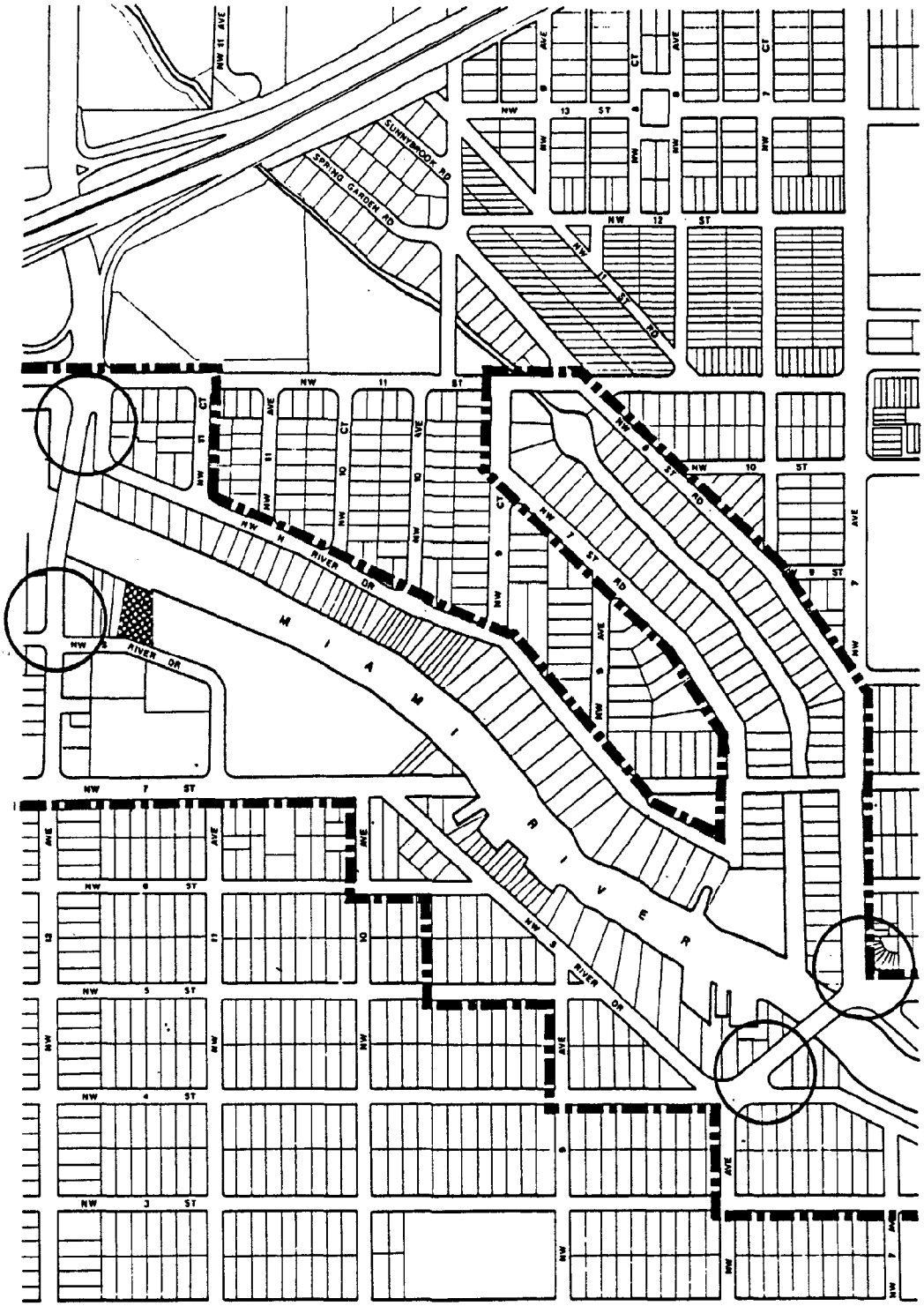
- MAJOR PUBLIC IMPROVEMENTS
- MINOR PUBLIC IMPROVEMENTS
- PEDESTRIAN LINKAGES
- RIVERWALKS & PROMENADES
- FOCAL POINTS & GATEWAYS
- VIEW CORRIDOR
- ROADWAY ABANDONMENT
- ROADWAY BEAUTIFICATION
- BRIDGE BARRIER
- ACCESSIBILITY
- BARRIER



SITE CONSTRAINTS & OPPORTUNITIES - DISTRICT B

- MAJOR PUBLIC IMPROVEMENTS
- MINOR PUBLIC IMPROVEMENTS
- PEDESTRIAN LINKAGES
- RIVERWALKS & PROMENADES
- FOCAL POINTS & GATEWAYS
- VIEW CORRIDOR
- ROADWAY ABANDONMENT
- ROADWAY BEAUTIFICATION
- BRIDGE BARRIER
- ACCESSIBILITY
- BARRIER

0 125 250 500'



SITE CONSTRAINTS & OPPORTUNITIES - DISTRICT C

- MAJOR PUBLIC IMPROVEMENTS
- MINOR PUBLIC IMPROVEMENTS
- PEDESTRIAN LINKAGES
- RIVERWALKS & PROMENADES
- FOCAL POINTS & GATEWAYS
- VIEW CORRIDOR
- ROADWAY ABANDONMENT
- ROADWAY BEAUTIFICATION
- BRIDGE BARRIER
- ACCESSIBILITY
- BARRIER

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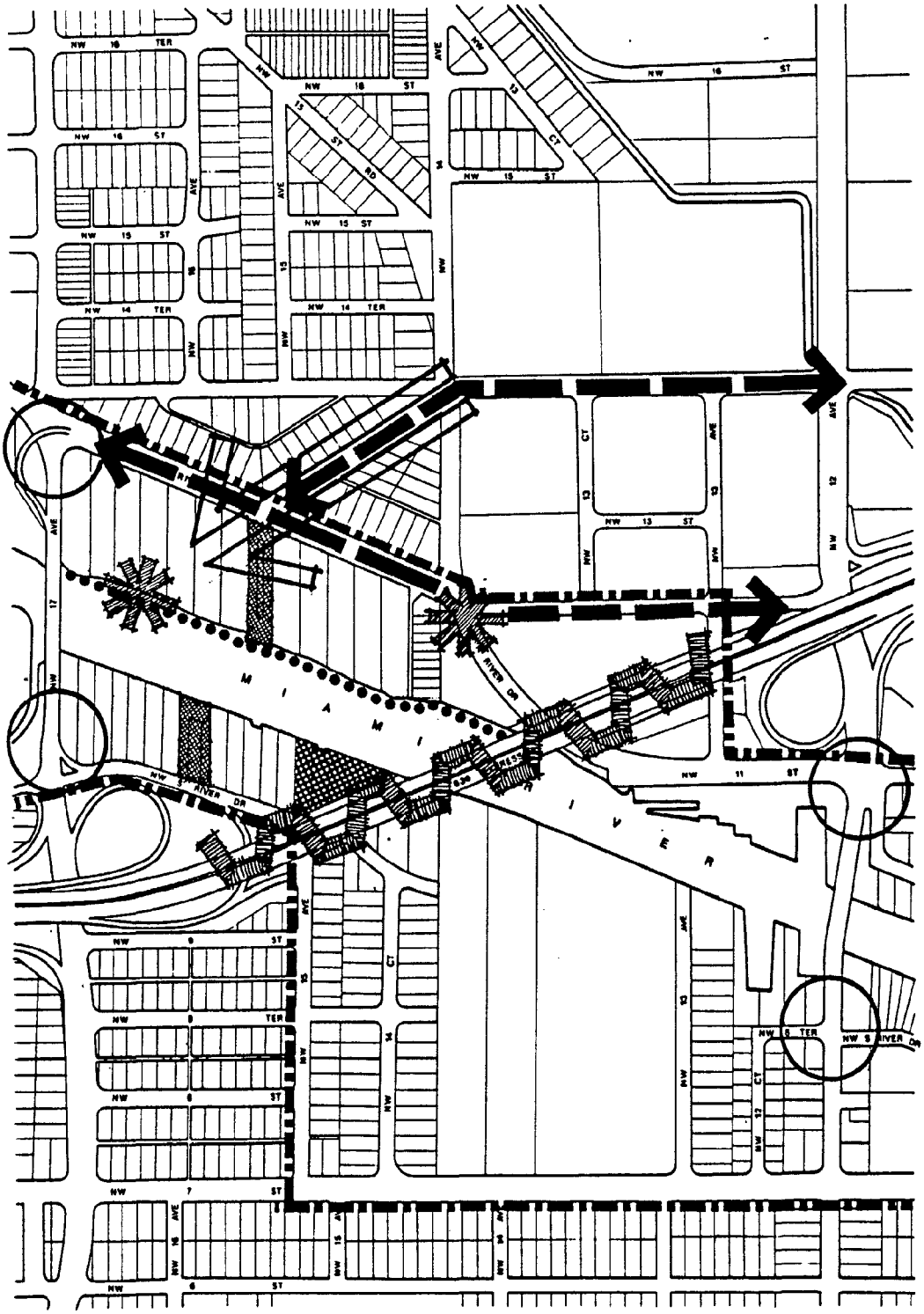

SITE CONSTRAINTS & OPPORTUNITIES - DISTRICT D

- MAJOR PUBLIC IMPROVEMENTS
- MINOR PUBLIC IMPROVEMENTS
- PEDESTRIAN LINKAGES
- RIVERWALKS & PROMENADES
- FOCAL POINTS & GATEWAYS
- VIEW CORRIDOR
- ROADWAY ABANDONMENT
- ROADWAY BEAUTIFICATION
- BRIDGE BARRIER
- ACCESSIBILITY
- BARRIER

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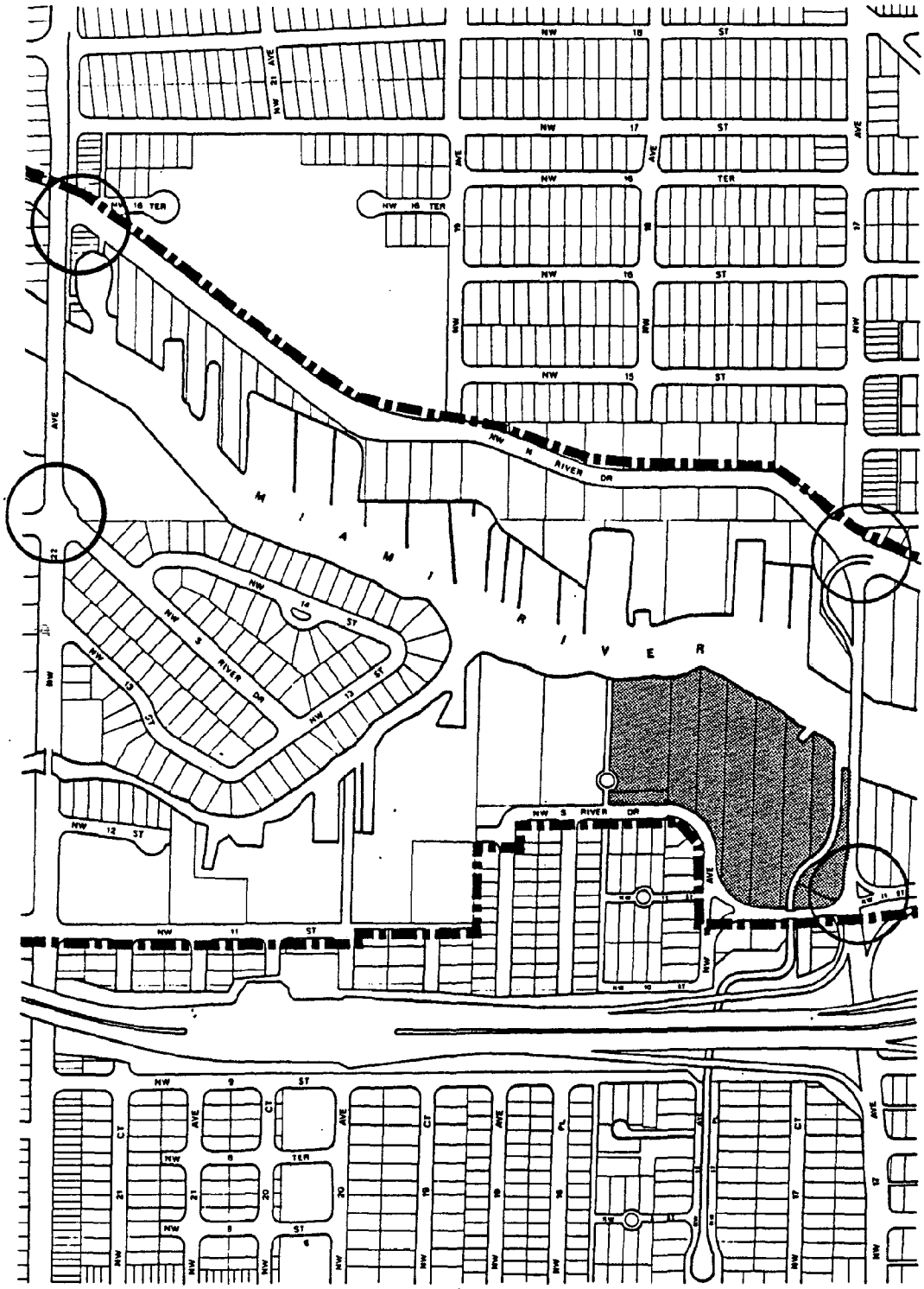

SITE CONSTRAINTS & OPPORTUNITIES - DISTRICT E

- MAJOR PUBLIC IMPROVEMENTS
- MINOR PUBLIC IMPROVEMENTS
- PEDESTRIAN LINKAGES
- RIVERWALKS & PROMENADES
- FOCAL POINTS & GATEWAYS
- VIEW CORRIDOR
- ROADWAY ABANDONMENT
- ROADWAY BEAUTIFICATION
- BRIDGE BARRIER
- ACCESSIBILITY
- BARRIER

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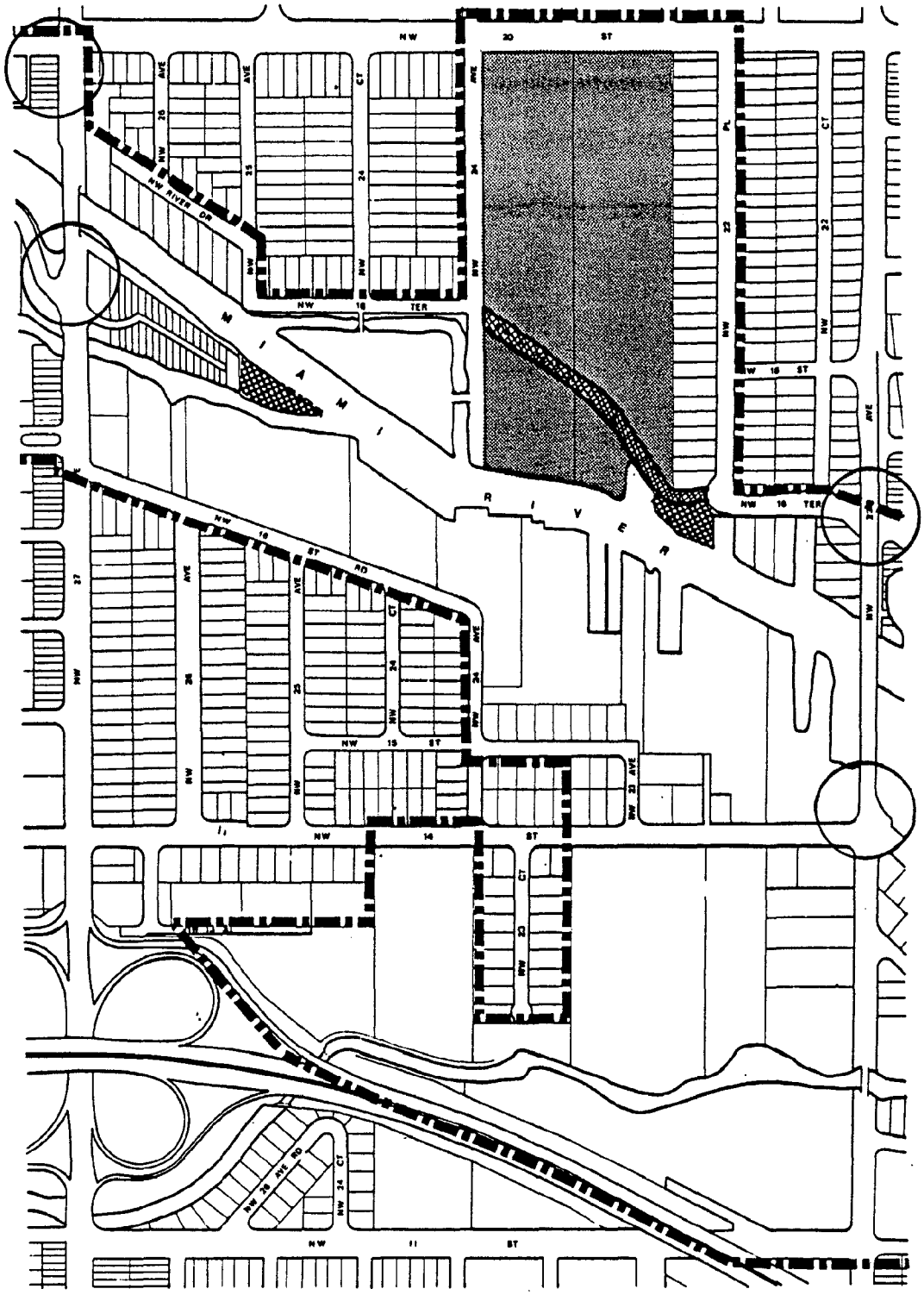

SITE CONSTRAINTS & OPPORTUNITIES - DISTRICT F

- MAJOR PUBLIC IMPROVEMENTS
- MINOR PUBLIC IMPROVEMENTS
- PEDESTRIAN LINKAGES
- RIVERWALKS & PROMENADES
- FOCAL POINTS & GATEWAYS
- VIEW CORRIDOR
- ROADWAY ABANDONMENT
- ROADWAY BEAUTIFICATION
- BRIDGE BARRIER
- ACCESSIBILITY
- BARRIER

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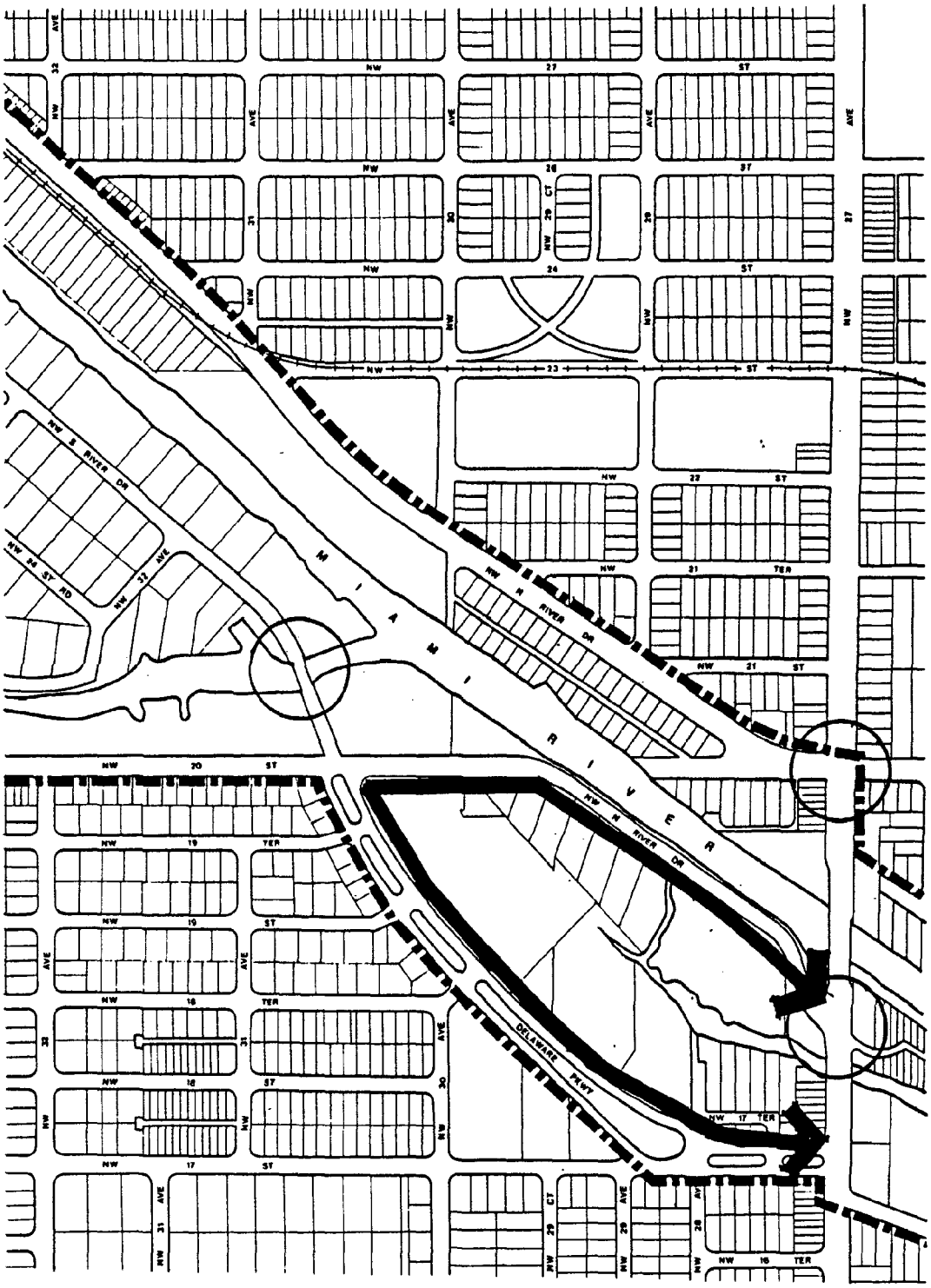
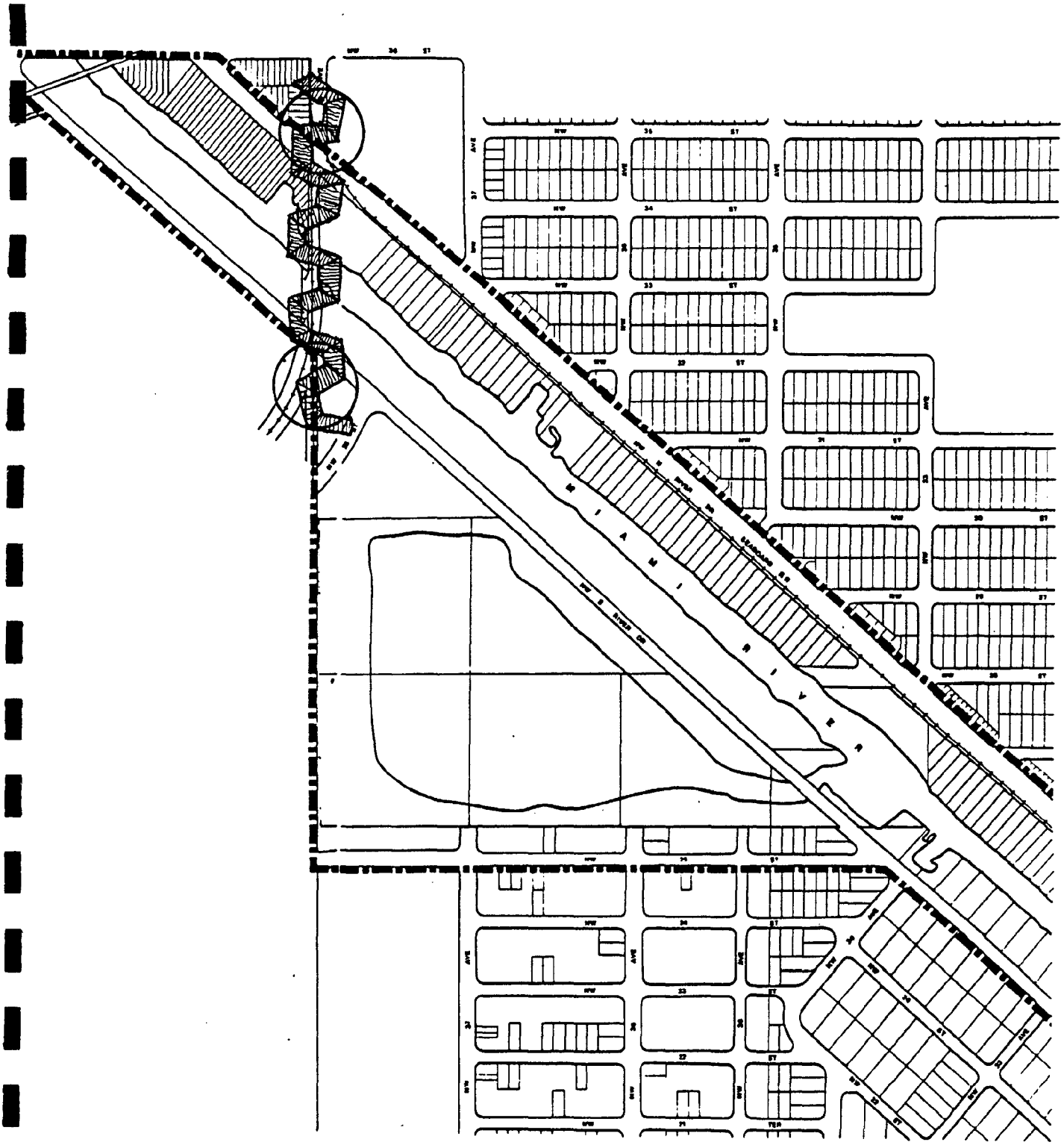


SITE CONSTRAINTS & OPPORTUNITIES DISTRICT G

- MAJOR PUBLIC IMPROVEMENTS
- MINOR PUBLIC IMPROVEMENTS
- PEDESTRIAN LINKAGES
- RIVERWALKS & PROMENADES
- FOCAL POINTS & GATEWAYS
- VIEW CORRIDOR
- ROADWAY ABANDONMENT
- ROADWAY BEAUTIFICATION
- BRIDGE BARRIER
- ACCESSIBILITY
- BARRIER

0 125 250 500'



SITE CONSTRAINTS & OPPORTUNITIES - DISTRICT H

- MAJOR PUBLIC IMPROVEMENTS
- MINOR PUBLIC IMPROVEMENTS
- PEDESTRIAN LINKAGES
- RIVERWALKS & PROMENADES
- FOCAL POINTS & GATEWAYS
- VIEW CORRIDOR
- ROADWAY ABANDONMENT
- ROADWAY BEAUTIFICATION
- BRIDGE BARRIER
- ACCESSIBILITY
- BARRIER

0 125 250 500'

VI. IMPLEMENTATION STRATEGY

The purpose of this chapter is to present a preliminary strategy to guide the City of Miami in the subsequent formulation of land use plans, public policies (zoning, regulation and financing) and development strategies. The City is to utilize the preliminary implementation strategy as a guide to subsequent formulation of specific land use plans, zoning regulations and other development controls/incentives. The strategy is based upon the previously completed site analyses, market evaluations and development program proposals. It also considers input derived from extensive interviews and surveys of marine industry representatives as well as policy and technical input from the City and County Planning and Zoning staff.

The implementation strategy is based upon public adoption of the land use and development program proposals identified in the previous sections of this report. Furthermore, it assumes a proactive public policy to attempt to implement overall land use proposals and specific concepts for identified development nodes. It is envisioned that the public sector will actively "make things happen" and will invest significant organizational and appropriate financial resources to assure achievement of development program recommendations.

This chapter is organized into two main sections. The first portion discusses overall development strategy recommendations aimed at: instituting an organizational structure to implement and coordinate project implementation; formulating a promotion, marketing and merchandising strategy; describing overall development district impelementation strategies; and providing specific development strategy recommendations by individual river district. The second portion of this chapter contains a summary description of proposed methods of financing public and private sector development within the Miami River study area.

A. DEVELOPMENT STRATEGY/MANAGEMENT PLAN

Based upon the market evaluation and previous consultant/city work sessions, a preliminary implementation/development strategy has been prepared outlining the sequential steps necessary for project implementation and outlining the roles and

responsibilities of various parties. The development strategy/ management plan includes: proposed organization and management recommendations; a preliminary marketing and promotion strategy; specific public policy actions related to the creation of overall development districts; and a preliminary discussion of development strategies by individual river subsegments.

1. Project Management Activities/Requirements

An important aspect of facilitating stabilization and revitalization of the Miami River is the creation of a management structure and organization responsible for overseeing the master plan development process and its implementation. Based upon experience in other localities, we know that it is imperative that a strong advocacy group be created for the Miami riverfront.

Building upon the various organizations and groups currently existing and operating along the river, we recommend that a central quasi-public agency be created to act as an advocate and coordinator for riverfront improvement. We suggest this agency be a private 501C3 nonprofit development corporation. The corporation should represent a balancing of public and private sector interests and as such should include a board of trustees that is equally distributed between public and private sector representatives. Public sector representatives should be appointed by the City, County and State. Private sector representatives should consist of a cross-section of marine and other businesses within the defined geographic area of corporate interests which should approximate the boundaries of the primary and secondary Miami River study areas. A balancing of interests can be obtained by operating through a small executive committee. Decisions by the executive committee would require a majority vote of both public and private representatives on the executive committee.

The initial prime responsibility for the development corporation should be to coordinate and oversee planning for the riverfront area. It is suggested that the corporation undertake prime planning responsibilities under contract with the City and County. This operation would be quite similar to that performed by other 501C3 corporations working as a contract representative of the City (e.g., Charles Center Inner Harbor Management in Baltimore; Charleston, West Virginia Renaissance; North Coast Development Corporation--Cleveland).

Following its contract responsibility to assist the City and County in the preparation and approval of a master plan, if deemed appropriate, the corporation could assist the City and County in the formulation of a community redevelopment area/ tax increment financing district pursuant to Section 163. The corporation could play the key role in preparing and formulating the CRA plan. Upon implementation of the CRA plan, it would be possible for the development corporation to play a major role such as functioning as an advisor or a defacto community redevelopment area board. This would give the corporation the added role of facilitating development through implementation of the CRA plan and the distribution of tax increment financing district funds. The potential utilization of a tax increment financing district approach is discussed later in this chapter.

Other catalytic revitalization functions which the development corporation could undertake would be utilization of available industrial development bond programs (pending new tax legislation), underwriting and assistance in loan packaging, management and assistance of a revolving loan and other similar technical advisory functions. Finally, as the capabilities, roles responsibilities and experience of the development corporation matures, it may be possible for it to play a more active role as implementor or risktaker of Miami River area revitalization. This may involve the development corporation in actual land or business development situations acting as developer or business owner representative or functioning as developer or business venture investor of last resort.

Any development corporation must have full support of the public and private sector. This will include both political and financial commitment. Any development corporation should have a paid professional staff. This would consist of an executive director or general management and one or two support personnel. Because of the significant "start-up" time involved in creating and implementing such a development corporation, it is important that initially the development corporation be provided two or three year's seed money for staff support and professional consultant advice. Based upon experience of other corporations, a three-year budget of approximately $500,000 to $600,000 would be required. Actual budget requirements could be reduced through the provision of in-kind services such as staff, office space, professional services, etc. In the longer run, it is important that the development corporation ultimately have an independent funding source. At

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the end of a two- to four-year initial operation period, ongoing corporation funds could be provided through tax increment financing district revenue, grants and contracts with other public agencies, development fees and venture investments and/or membership assessments.

In summary, it is important that a specific, well-supported organizational structure be created to advocate and facilitate revitalization along the river. This organization must be given responsibility for planning and facilitating revitalization. It is important that a separate discrete group representing both public and private sector interests be created to provide the necessary focus required for revitalization and improvement of the riverfront. Furthermore, such an organization must have adequate political and financial support to successfully undertake its mission.

2. Marketing/Promotion Strategy

A major element in attempting to market and implement improvement and revitalization along the river is the need to change the market image. The formulation and implementation of a marketing and promotion strategy to re-enforce public and private sector development goals and objectives and assist in achieving desirable market penetration is required.

We recommend that a marketing and promotion strategy be developed, formulated and implemented by the proposed 501C3 development corporation. The marketing and promotion strategy thus would be clearly interrelated with the overall master planning and implementation activities along the waterfront and would represent a combined public and private sector promotion effort. The marketing and promotion strategy should have two major thrusts: first a general public-oriented overall promotion strategy and an industry-related targeted merchandising effort.

A broad general public promotion effort should be undertaken to enhance and improve the public perception and market image of the Miami River area. These efforts should consist of the preparation, publication and distribution of brochure and other promotional efforts which emphasize the positive and improving aspects of the river (e.g., improving water quality, public sector improvement efforts, park improvements, available

restaurant facilities, available recreation and other marine services, etc.). Particular emphasis should be placed on changing area problems related to crime and negative physical image perceptions. A campaign should be initiated to work closely with local media representatives to emphasize and highlight the positive aspects of the river area. Finally, a series of specific events should be organized to bring attention to the attributes and opportunities that exist along the river. Riverfront festivals, marine regattas, and other special events focusing either on marine activities or the public parks and recreation facilities should be emphasized.

In conjunction with the general public promotion program, a more targeted industry-oriented marketing and promotion effort should be undertaken. This would include the preparation of marketing and other technical data and information highlighting the attributes and resources available along the river. Specific private development projects should be identified and promoted. Assistance should be provided to developers, merchants and marine organizations in the form of technical assistance and coordination to further assist in joint advertising and promotion efforts "selling" the Miami River as a marine "supermarket" offering an unparalleld depth and breadth of marine-related services. Finally, following identification of specific opportunity nodes, project packaging and promotion should take place. This would include the preparation and dissemination of marketing data and information, developer solicitation and selection in industry and business recruitment.

3. Development District Activity

Additional public policy actions and development strategies would include the creation and special treatment within individual development districts. This could include a variety of activities such as: specialized development incentives/regulations; creation of community redevelopment areas; adoption of special overlay districts; provision of tax incentives; financing assistance (to be discussed more fully in the following report section); capital improvement programming; and development activities.

In order to assist in facilitating improvement and revitalization of the riverfront area, it is important that a series of development incentives and regulations should be adopted. For example, in areas where significant development

potential for non-marine activities may take place, such as the mouth of the river, these developments should be required to provide water-related amenities and services in order to obtain higher-density allowances. Furthermore, in order to obtain major development approvals, it may be desirable to require that any marine activities that are displaced be provided for and/or relocated at another location. Similarly, new development should be required to include waterfront-related activities such as boat dock space, restaurants, public access and promenades, etc. Likewise, residential activities must emphasize and require mutually supportive marine activities such as recreational boating, yacht sales and dealers, slips, ramps, dry storage and the like. Regulations should be designed to preserve marine-related uses along the water's edge and prohibit non-marine-related uses, save those of more higher intensity that can support and aid marine uses.

The creation of a large tax-increment financing district would allow major development via the downtown portion of the river to create sufficient tax-increment financing district funds to support necessary public sector infrastructure improvements throughout the target area, required improvements such as public parks, riverwalks and parking. In Jacksonville, for example, significant portions of the St. John's riverfront on both the south and north bank are contained within tax-increment financing districts. Tax-increment funds generated by a major office development (Prudential Life Insurance office building) have been utilized to provide parking, riverwalk improvements and necessary infrastructure to encourage riverfront restaurant development.

A supplement to the creation of a community redevelopment or tax-increment financing district would be the creation of special overlay district zones. These overlay district zones would contain specific design standards assuring proper design control and relationship to the waterfront. Furthermore, various use activities along the water's edge could be made special exceptions in order to provide additional planning and community input into the review and approval process. Likewise, the institution of any non-marine-related uses within the defined overlay district could be made a special exception in order to assure proper evaluation of the desirability, practicality and appropriateness of displacement of marine-related uses.

Tax incentives can be an important tool in encouraging and facilitating marine-related uses. Various proposals have been made to adopt special marine-use zoning, similar to agricultural zoning. Under this procedure, marine-related uses would be assessed at their value as marine facilities in exchange for assurances that they will be maintained in marine utilization. This would eliminate any forcing of marine-related uses to higher levels of activity because of increased assessments and tax burdens. Similarly, investment tax credits and other state tax incentives could be provided for marine activities and a similar vein to those tax incentives currently provided under the State Enterprise Zone program. Because of the particular nature of marine activities, it is believed that special legislation based upon the Enterprise Zone legislation would probably be required.

A variety of financial assistance techniques as discussed in more detail later in this report, could also be provided. This could include, but not necessarily be limited to, such activites such as technical assistance in loan packaging, revolving loan programs, direct rehabilitation loans, tax credits and the like.

Capital improvement budgeting could be of major assistance along the riverfront. Capital improvements should consist of local, state and Corps of Engineers funds to improve the river's edge and provide necessary water and sewer facilities as well as vehicular access, pedestrian access, public open space, parking and the like.

Finally, a series of additional proactive development activities could take place. Development activities could be as low-scale as provision of technical assistance to local businesses, and provision of necessary zoning changes. More proactive programs could improve a series of land acquisition activities aimed at setting the stage for marine-related facility expansion. Likewise, provision of infrastructure directly aimed at specific marine-related development projects as opposed to more general capital improvement programs also could be undertaken. Finally, the public sector could undertake the development of a marine industrial park aimed at assisting expansion and/or relocation of existing marine uses or targeting new marine activities to the river.

4. Site/Area Specific Development Strategies

This section of the report contains a brief overview of specific development/implementation strategies by individual Miami River districts as previously identified.

a. District A

As noted previously, this district has a high probability of major development activity. Since this development will probably not be directly marine-related, it is important to leverage the opportunities to support other portions of the river where more marine-related activities may take place. An important aspect of the development strategies for this portion of the river is to include new development in a larger community redevelopment/tax-increment financing district area whereby revenue generated by major development within District A can be utilized to support infrastructure and other required public sector investments elsewhere along the river. This does not preclude the utilization of tax-increment financing district revenues derived from District A within District A for river edge and other improvements but realizes that significant surplus revenues may be generated which could support marine-related activities at locations where development funds are less likely to be generated.

New mixed-use development in District A should be required to have a marine character and orientation including public access along the river, riverwalks, dockage and where feasible, marine recreation activities. Any marine-related uses which would be displaced by new development should be relocated and/or replaced in exchange for major development rights for large mixed-use development projects. As noted elsewhere in the report, the Miami Shipyard land creates a major public policy question. If at all possible, this important reuse should be preserved. If a more intensive land use would replace the Miami Shipyard, a part of the "cost" of converting the Miami Shipyard to non-marine uses should be a significant contribution to support replacement and/or replication of identical and/or similar shipyard activities elsewhere along the river.

b. District B

Emphasis on development in this area is preservation and retention of marine-related uses on the small, narrow-depth riverfront lots. Additional investments to improve and

up-scale City of Miami parks should be made to tie in to those elements within this district. A series of low-scale public sector investments such as riverwalks and public access should be provided while preserving the current working river character. This would require restriction of non-marine uses within this area. While riverfront restaurant activity would further be encouraged in this area, they probably should be made special exceptions and/or conditional uses in order to allow adequate control on the design siting size and interrelationships of the restaurant activities. An active program to provide joint marketing and promotion of restaurants, fisheries and other marine-related activities should particularly be promoted and this intense working-river area with its close relationship to the downtown core.

c. District C

The development strategy in this area should be to encourage improving and up-scaling residential development in a controlled manner. Larger scale residential development should be encouraged to a degree that it can preserve and/or provide recreational marine and boat slip activities along the river's edge. A general upgrading in the Seybold Canal area should be encouraged for strong design controls and guidelines. Minor increases in residential density (probably to townhouse scale) should be provided with these development incentives given exchange of preservation and/or encouragement of marine-related uses along the water's edge.

d. District D

Within this district, significant institutional uses are found in proximity to the civic center. Opportunities exist for development of a predominently residential nature. The public sector should take an active role in facilitating development through river edge improvements, which would ensure public accessibility and the maintenance of marine and marine-related activities. Higher-density residential development could be provided in exchange for maintenance of recreational marine activities. Furthermore, significant tax-increment financing district revenues could be generated from residential development which would, in turn, be utilized to support more intensive commercial marine activities elsewhere along the riverfront.

e. District E

This area contains significant vacant and underutilized recreational marine activities. Within it, the public sector must actively encourage commercial marine or recreational marine activity. Concurrently, higher-density residential development should be encouraged along with South Fork River. This would require strict zoning definitions which would target various land masses for the proper uses. Because of the available land resources and current land availability, this portion of the river may represent an excellent near-term opportunity for public sector intervention in the form of land purchase and subsequent development of a recreational commercial marine industrial park.

f. District F

This area contains significant opportunities for upscaling and improvement of public land uses within Curtis Park. The entire park should have a stronger relationship to the river. Public sector investments should be made to enhance the quality and level of activity of recreational boating which may take place within the park. Possibilities for a significant boat ramp launching areas and/or leasing of commercial and/or recreational marine activities on the river's edge at Curtis Park should be considered. The Key Power site may represent another opportunity to develop and/or assist in the development of a marine industrial park activity. Other areas along the river's edge seem more related to higher-intensity residential development which should be required to maintain an active marine orientation along the river's edge.

g. District G

Vacant and/or underutilized properties within this district will probably be designated for shipping and other industrial marine-related uses. The public and private sector should join forces to encourage and facilitate expansion and improvement of shipping facilities. Expanded parcel size and improved vehicular access should do much to enhance the ability of this area to function as an expanded shipping area. Zoning regulations should be designed to restrict development to shipping and other industrial marine-related uses. Necessary public infrastructure investments, dockage improvements and the like should also be undertaken.

h. District H

This area is similar to District G and even more oriented to shipping terminals. Zoning regulations and necessary access and other infrastructure improvements should be oriented to improving current shipping operations and allow adequate room for expansion. Because of bridge clearance problems, vacant land around Lake Palmer should be organized into a marine industrial/commercial park that could support shipping or airport uses.

B. FUNDING

This section contains a brief summary of proposed methods of financing public and private sector development within the Miami River study area. Potential financing techniques are organized into public sector financing techniques and strategies for assisting in the funding of private sector elements.

1. Public Sector Financing

Resources available to finance public sector improvements within the Miami River study area are extremely limited. The prime source of funds for river improvements will probably be tax-increment financing revenues. As noted previously, it is proposed that the entire riverfront study area be identified a community redevelopment area. This would require a definition of slum and blight or economic disuse within the study area and the preparation of a community redevelopment plan as well as a series of target area action plans. The proposed development programs and real estate data contained in this report, combined with subsequent master planning recommendations should be utilized to prepare a pre-feasibility report which would estimate the probable size and timing of the tax increment and coordinate tax-increment financing revenues with required infrastructure and other investments.

A secondary source of significant public sector funds within the Miami River study area is the potential use of impact fees. Major sources of public funding revenues throughout the state are proposed to be derived from impact fees. In the Miami River study area, it is proposed that impact fees derived from major mixed-use, office and residential development be utilized to preserve, replace and/or relocate marine-related uses. Specialized impact fees which would relate to

the potential economic impact on existing marine uses should be quantified and specific impact fee funds be dedicated to support, revitalize and expand marine industries within the study area.

As available, loans and grants from non-local funding sources should be sought. This would include Army Corps of Engineer assistance to improve commercial navigation and recreational boating facilities along the river. Likewise, Coastal Zone funding assistance should be sought to the maximum extent possible. Other loan and grant programs related to improvement of water quality, public parks and the like also should be sought.

The proposed Miami River area development corporation should play a major role in making grants and funding requests. Should programs remain available, the corporation likewise should seek funding and loan support through the EDA and SBA programs. City and County community and economic development funds should be allocated to the river study area. Specific capital improvement program funds should be budgeted to a long-range marine retention and expansion program. The specific targeting of capital improvement funds for marine-related uses would demonstrate the public sector support for such activities. This targeting of capital improvement funds would require full documentation of the potential benefits to be derived from marine retention and expansion in terms of such factors as: tax revenue, jobs, payroll, recreational opportunities, environmental quality and the like.

Finally, the consultant team believes the public sector, through the proposed development corporation, should take an active entrepreneurial role facilitating and implementing marine-related activities within the Miami River study area. This would include investing public sector capital funds in land purchasing and subsequent lease or sale, revolving loan funds and/or marine industrial park development. Carefully planned and programmed funds into identified development opportunity projects could both achieve implementation of these projects and generate a fair and reasonable return on investment.

A proactive role as a risk-taker/implementer of marine-related activity could achieve both the goals of marine industry retention and expansion as well as generate long-term

cash flow (through land leasing, loan repayments and/or project participation) to both repay the public sector investment and generate an ongoing source of revenue to further assist and support marine activities along the riverfront.

2. Public Sector Funding Strategies

The promotion, creation and encouragement of a viable maritime activity along the Miami River will allow existing and future marine uses to obtain required capital funds from conventional private sector funding sources. In the interim, the public sector may have to assist in the retention and revitalization of marine activities. In the near-term, an important assist for existing industries may be the utilization of a form of tax abatement for marine-related uses similar to agricultural assessments utilized elsewhere. Under this procedure, marine-related uses would be assessed as their value for marine-related uses and not necessarily at their highest and best use value. This would require a commitment for the property to remain in marine-related uses and would not "force" the property to convert to non-marine related uses because of ever increasing assessed land values.

Similar to marine-related special assessments, a marine-related enterprise zone could be created along the riverfront. This would provide additional tax incentives for investment and expansion of marine-related uses. It is believed that modifications may be required in existing State Enterprise Zone legislation to make incentives applicable to retention and continued operation of marine-related uses where deemed desirable. Likewise, enterprise legislation should be designed ensure retention, expansion and recruitment of marine-related activities. The enterprise zone should be specifically designed to prevent replacement of marine-related uses by more labor-intensive or other activities which could take greater advantage of the incentives contained within the enterprise zone legislation.

As noted previously, additional funding assistance to the private sector could be provided through a variety of more traditional economic development tools. This could consist of financial and technical tools such as: technical assistance in the application for state, federal and private financial assistance; utilization of tax-exempt industrial development bonds financing if available; utilization of SBA loan underwriting/ loan packaging if available; creation of a revolving loan fund

for marine-related uses; creation of marine-oriented venture capital and investment funds. If still available, Urban Development Action Grant assistance should also be sought.

In summary, a variety of financing and funding techniques should be sought. Prime emphasis should be placed upon tax-increment financing to create the needed infrastucture and support services to assist marine-related industries. An aggressive public sector policy of direct investment and development should be utilized to enhance the economy of the Miami River area. The Miami River area marine industry is generally economically viable. Improvements in the physical quality and market image of the area, combined with necessary public sector infrastructure investments and planning activities should place marine-related activities on still firmer financial footing. The implementation of these necessary "up-front" public sector planning and investment programs will enable existing and prospective marine uses to then obtain the bulk of their funding requirements from conventional private sector funding sources.

APPENDIX

APPENDIX A

REAL PROPERTY ANALYSIS

The tables on the following pages summarize selected real property data provided by the City from the Dade County Property Tax Appraiser file. Information is provided concerning: assessed land and improvement values and recent property sales. Key vacant and/or underutilized development sites along the river are identified and key real property information provided.

As shown in the attached tables and mapped and discussed in Section II, the study area contains a large mixture of use types. Of the 2,107 parcels within the immediate study area over half are in residential use. In addition there are significant amounts of vacant and public land. Subarea 1 contains a significant amount of undeveloped and commercial land. Subarea 2 is predominantly commercial and residential. Subareas 3 and 4, in the middle portion of the study area, have significant residential properties. Subareas 5, 6 and 7 are predominantely mixed-use with significant industrial types.

Land use, floor area, building value, land value and total value was examined for the study area. Particular attention was placed in evaluating factors for 56 key tracts identified within the study area. In general, it was found that land values are relatively high and generally exceed the value of the improvements. Land values generally range from $12 to $18 per square foot. There is a surprisingly large number of consolidated parcels in single ownership creating significant development opportunities.

At the mouth of the river in District A/Subarea 1, 11 key parcel areas were identified. These parcels are significantly vacant and/or underdeveloped having a land value of approximately $64.7 million and improvements valued at only slightly over $15.0 million.

Subarea 4 contains 4 key consolidated opportunity parcels owned by shipping interests, the County and cultural institutions. These four parcels have an estimated land value of $7.0 million and an improvement value of only $2.8 million.

Likewise, Subarea 5 contains significant key parcels with land valued at $9.9 million and improvements at only $2.7 million.

Subarea 6 contains several large marine-related uses with land values significantly greater than building values ($5.3 million versus $1.5 million).

Sales activity in the study area has been relatively limited. Sales prices are generally significantly in excess of assessed values. Several marine-related uses are attempting to purchase property at these higher land values but have met minimum success.

TABLE A-1

MIAMI RIVER ECONOMIC STUDY
SUMMARY REAL ESTATE DATA
SUMMARY BREAKDOWN OF LAND USE BY PARCELS
SUBAREAS 1 THROUGH 7

Use Category	Number of Parcels	Percent of Subgroup	Percent of Total
Residential			
Condo	49	4.3%	2.3%
Single-Family	485	42.6	23.0
Duplex	178	15.6	8.4
Multi-Family	236	20.7	11.2
Mixed-Use (Residential)	23	2.0	1.1
Townhouse	168	14.7	8.0
	1,139	100.0%	54.1%
Undeveloped	421		20.0%
Commercial			
Retail	72	38.9%	3.4%
Service	3	1.6	0.1
Office	24	13.0	1.1
Amusement	7	3.8	0.3
Blank Commercial	2	1.1	0.1
Mixed-Use (Commercial)	77	41.6	3.7
	185	100.0%	8.8%
Institutional			
Municipal	37	20.6%	1.8%
Education	2	1.1	0.1
Cultural	8	4.4	0.4
Medical	12	6.7	0.6
Religious	20	11.1	0.9
Dade County	54	30.0	2.6
BPI	45	25.0	2.1
Mixed-Use (Institutional)	2	1.1	0.1
	180	100.0%	8.5%

TABLE A-1
(continued)

Industrial			
Light Manufacturing	30	30.0%	1.4%
Light Storage	50	50.0	2.4
Heavy Storage	11	11.0	0.5
Mixed-Use (Industrial)	9	9.0	0.4
	100	100.0%	4.7%
Transportation & Utilities	55		2.6%
Tourist	22		1.0%
Water	3		0.1%
Agricultural	1		0.0%
Parks	1		0.0%
Total	2,107		100.0%

Source: Zuchelli, Hunter & Associates, Inc., based upon Real Estate File Data supplied by the City of Miami.

TABLE A-2

MIAMI RIVER ECONOMIC STUDY
SUMMARY REAL ESTATE DATA
BREAKDOWN OF LAND USE BY PARCELS WITHIN EACH DISTRICT

	Number of Parcels						
Property Type	Subarea 1	Subarea 2	Subarea 3	Subarea 4	Subarea 5	Subarea 6	Subarea 7
Residential	3	65	137	733	99	91	11
Commercial	9	29	14	103	12	11	7
Tourist	2	6	1	13	-	-	-
Industrial	2	15	9	61	5	7	1
Parks*	-	-	-	-	-	1	-
Institutional	3	15	8	133	3	13	5
Agricultural	-	-	-	1	-	-	-
Transportation & Utility	9	4	1	36	5	-	-
Water	-	-	-	3	-	-	-
Underdeveloped	23	48	14	293	27	9	7
Total	51	182	184	1,376	151	132	31

* The available data is not consistent in its categorization of parks; for example, Lummus Park is not contained in the list of River Master Plan Properties, Jose Martin Park is listed as underdeveloped and Sewell Park is listed as single family. Except for the one parcel identified in Subarea 6, no other land is categorized as parks.

Source: Zuchelli, Hunter & Associates, Inc., based upon Real Estate File Data supplied by the City of Miami.

TABLE A-3

MIAMI RIVER ECONOMIC STUDY
SUMMARY REAL ESTATE DATA FOR ALL DISTRICTS/SUBAREAS

District/ Subarea	Number of Parcels	Building Value	Land Value	Total Value
A/1	51	$ 18,609,546	$ 78,069,714	$ 96,679,260
B/2	182	12,115,162	19,572,902	32,191,984
C/3	184 2/	12,079,300	16,489,433	32,432,873 1/
D/4	1,376 3/	204,535,037	65,698,908	359,852,401 1/
E/5	151	7,947,491	16,469,600	24,417,091
F/6	132	11,954,419	20,583,901	48,149,390 1/
G/7	31	4,896,645	4,354,610	9,251,255
H/8	170	11,575,901	47,253,979	58,829,880
	2,277	$283,713,501	$268,493,047	$661,804,134 1/

1/ Statistical discrepancy is a result of land and building values not being broken out for individual co-op, townhouse or condominium units; only aggregate values are given.

2/ There are 45 townhouse units aggregated into the total value category.

3/ There are 37 condo units, 123 townhouse units and 436 co-op units aggregated into the total value category.

Source: Zuchelli, Hunter & Associates, Inc., based upon Real Estate File Data supplied by the City of Miami.

TABLE A-4

MIAMI RIVER ECONOMIC STUDY
SUMMARY REAL ESTATE DATA FOR KEY PARCELS
DISTRICT A/SUBAREA 1

	Name	Folio #	Address	Land Use	Floor Area	Building Value	Land Value	Total Value
1.	Miami Center	0114301040	N/A	-	-	-	-	-
2.	Dupont Plaza Hotel	0114301010	300 Biscayne Blvd. Way	Mixed-use Commercial	204,538	$ 3,500,000	$14,911,245	$18,411,245
3.	James L. Knight Center	3137220010 3137220020 3137220030	N/A	-	-	-	-	-
4.	Intramerica Investments	4137250010	N/A	Parking Lots	0	$ 26,520	$ 4,369,470	$ 4,395,990
5.	FPL/Arvida	0114401110	N/A	-	-	-	-	-
		0114401200	315 SW 2nd	Retail	0	$ 522	$ 187,500	$ 188,022
		0114802010	N/A	Parking Lot	0	78,792	4,704,480	4,783,272
		0114801010	122 SW 3rd	Utilities	48,351	1,067,666	13,799,800	14,867,466
		0100000290	N/A	-	-	-	-	-
		0100000310	N/A	-	-	-	-	-
		0113502010	N/A	-	-	-	-	-
		0110000320	N/A	-	-	-	-	-
6.	Miami Shipyard Corporation	0203901030	615 SW 2nd	Office	48,589	$ 594,849	$ 1,146,060	$ 1,740,549
		0203901010	615A SW 2nd	Mix Industrial	14,240	124,275	450,000	574,275
		0203901011	615 SW 2nd	Light Mfg.	11,789	99,941	690,000	789,941
					74,618	$ 818,705	$ 2,296,060	$ 3,104,765

TABLE A-4
(continued)

	Name	Folio #	Address	Land Use	Floor Area	Building Value	Land Value	Total Value
7.	Intramerica Investments	0210601340	451 S. Miami Ave.	Urban Underdev.	0	0	$ 4,111,000	$ 4,111,000
		0210601350	100 N. Biscayne	Urban Underdev.	0	0	2,649,700	2,649,100
		0240601360	N/A	-	-	-		
8.	Tommy's Boatyard	0210001010	31 SE 5 St.	Retail	31,711	$ 1,000	$ 5,037,249	$ 5,038,249
9.	U.S. Customs	0210001020	77 SE 5 St.	Office	180,705	$ 2,534,785	$ 4,617,900	$ 7,152,685
10.	Cye's Rivergate	0210001030	65 SE 5 St.	Urban Underdev.	0	$ 0	$ 2,629,700	$ 2,629,700
		0210001060	444 Brickell Ave.	Office	279,310	7,026,420	5,357,800	$12,384,220
11.	Brickell Point Apartments	0210001050	N/A	-	-	-	-	-
	Totals					$15,054,410	$64,661,904	$79,716,314
	Building Value/Land Value						23.3%	

Source: Zuchelli, Hunter & Associates, Inc., based upon Real Estate File Data supplied by the City of Miami.

TABLE A-5

MIAMI RIVER ECONOMIC STUDY
SUMMARY REAL ESTATE DATA FOR KEY PARCELS
DISTRICT B/SUBAREA 2

	Name	Folio #	Address	Land Use	Floor Area	Building Value	Land Value	Total Value
1.	Miami Yacht	0114002050	N/A	Urban Underdev.	0	- 0	$ 1,656,920	$ 1,656,920
	Full-Service Yard	0114201010	400 SW 2 Ave.	Parking Lot	0	$ 2,513	1,742,480	1,744,993
		0114201020	418 SW 2 Ave.	Mixed-Use Comm.	15,572	201,144	2,136,000	2,337,144
					15,572	$ 203,657	$ 5,535,400	$ 5,739,057
2.	Dade County							
	Park Towers Senior	0110901090	N/A	-	-	-	-	-
	Citizen & Com.	0110901070		-	-	-	-	-
	Action Agency	0110901120		-	-	-	-	-
3.	Lummus Park							
	City of Miami	0109302010	N/A	-	-	-	-	-
4.	Scottish Rite							
	Temple	0109001120	365 NW N. River Dr.	Cultural	34,495	$ 739,794	$ 214,420	$ 954,214
5.	Jack Orr Senior							
	Citizen Tower	0107101110	455 NW 6 Ave.	Dade County	99,999	$ 3,899,656	$ 464,070	$ 4,363,726
6.	Miami Dade Water/							
	Sewer Authority	0109001170	390 NW North River Dr.	Municipal	8,220	$ 94,142	$ 148,570	$ 242,712

TABLE A-5
(continued)

Name	Folio #	Address	Land Use	Floor Area	Building Value	Land Value	Total Value
7. City of Miami	0109001130	474 NW 4 St.	Parking lots	0	$ 4,229	$ 45,310	$ 49,539
8. City of Miami Jose Marti Park	0200106010	5040 SW 60 Pl	Urban Underdev.	0	$ 0	$ 104,330	$ 104,330
	0200106020	201 SW 4 Ave.	Urban Underdev.	0	0	182,690	182,690
	0200106140	N/A	Urban Underdev.	0	0	189,910	189,910
	0202701030	N/A	–	–	–	–	–
	0202701010	380 SW 3 St.	Urban Underdev.	0	0	109,550	109,550
	0200106070	3500 Pam Am Dr.	Urban Underdev.	0	0	22,400	22,400
	0200106120	3464 NW N. River	Urban Underdev.	0	0	13,470	13,470
	0200106090	353 SW 4 Ave.	Municipal	577	3,834	21,170	25,004
	0200106080	3500 Pan Am Dr.	Urban Underdev.	0	0	32,810	32,810
	0200106130	3464 NW N. River	Urban Underdev.	0	0	22,350	22,350
	0200106100	353 SW 4 St.	Urban Underdev.	0	0	50,720	50,720
	0200106030	315 SW 4 St.	Retail	287	244	42,390	42,634
				864	$ 4,078	$ 791,790	$ 795,868
Totals					$ 4,945,556	$ 7,199,560	$12,145,116
Building Value/Land Value						68.7%	

Source: Zuchelli, Hunter & Associates, Inc., based upon Real Estate File Data supplied by the City of Miami.

TABLE A-6

MIAMI RIVER ECONOMIC STUDY
SUMMARY REAL ESTATE DATA FOR KEY PARCELS
DISTRICT C/SUBAREA 3

Name	Folio #	Address	Land Use	Floor Area	Building Value	Land Value	Total Value
1. Private Property	3135271330	728 NE 67 St.	Urban Underdev.	0	$ 0	$ 371,050	$ 371,050
2. Townhouse Dev.	3135460010	1044 NW N. River Dr.	Townhouse	0	$ 0	$ 0	$ 120,130
	3135460020	1040 NW N. River Dr.	Townhouse	0	0	0	118,240
	3135460030	1036 N. River Dr.	Townhouse	0	0	0	120,470
	3135460040	1032 N. River Dr.	Townhouse	0	0	0	117,120
	3135460050	1028 NW N. River Dr.	Townhouse	0	0	0	118,240
	3135460060	1024 N. River Dr.	Townhouse	0	0	0	125,800
	3135460070	N/A	Townhouse	-	-	-	-
	3135460080	N/A	Townhouse	-	-	-	-
	3135460090	N/A	Townhouse	-	-	-	-
	3135460100	N/A	Townhouse	-	-	-	-
	3135460110	N/A	Townhouse	-	-	-	-
	3135460120	N/A	Townhouse	-	-	-	-
	3135460130	N/A	Townhouse	-	-	-	-
	3135460140	N/A	Townhouse	-	-	-	-
	3135460150	N/A	Townhouse	-	-	-	-
	3135460160	N/A	Townhouse	-	-	-	-
	3135460170	N/A	Townhouse	-	-	-	-
	3135460180	N/A	Townhouse	-	-	-	-
	3135460190	N/A	Townhouse	-	-	-	-
	3135460200	N/A	Townhouse	-	-	-	-
	3135460210	N/A	Townhouse	-	-	-	-

TABLE A-6
(continued)

Name	Folio #	Address	Land Use	Floor Area	Building Value	Land Value	Total Value
3. Holiday Inn	3135260310	1170 NW 11 St.	Motel	102,732	$ 3,209,691	$ 832,760	$ 4,042,451
	3135260320	1000 NW 11 St.	Single-Family	1,248	27,345	59,500	86,895
	3135260330	1159 NW N. River Dr.	Single-Family	1,154	25,881	44,620	70,501
				105,134	$ 3,262,917	$ 936,930	$ 4,199,847
4. Metro Dade Prop. Management & GSA	N/A	-	-	-	-	-	-
5. Old Miami Heroes Bldg/SE Bank	3135260850	N/A	Municipal	0	$ 0	$ 187,500	$ 187,500
6. Bermuda House Apartments	3134000230	5800 NW 77 Ct.	Urban Underdev.	0	$ 0	$ 69,120	$ 69,120
	3135000260	N/A	Dade County	0	0	117,070	117,070
	3135310010	1115 NW S. River Dr.	Dade County	23,223	476,860	318,600	795,460
				23,223	$ 476,860	$ 504,790	$ 981,650
7. City of Miami	3135290010	N/A	-	-	-	-	-
Totals					$ 3,739,277	$ 2,000,270	$ 6,460,067*
Building Value/Land Value						18.7%	

* Discrepancy in total value figures is a result of individual townhouse values not being separated from total.

Source: Zuchelli, Hunter & Associates, Inc., based upon Real Estate File Data supplied by the City of Miami.

TABLE A-7

MIAMI RIVER ECONOMIC STUDY
SUMMARY REAL ESTATE DATA FOR KEY PARCELS
DISTRICT D/SUBAREA 4

	Name	Folio #	Address	Land Use	Floor Area	Building Value	Land Value	Total Value
1.	Merril-Stevens Drydock Co.	3134210180	1270 NW 11 St.	Light Storage	75,754	$ 100,000	$ 1,433,120	$ 1,533,120
		3135220110	1201 NW S. River Dr.	Retail	3,070	33,837	234,860	268,667
		3135230100	825 NW 12 Ct.	Urban Underdev.	0	0	578,570	578,570
		3135250010	N/A	-	-	-	-	-
		3135250020	N/A	-	-	-	-	-
		3135250030	N/A	-	-	-	-	-
		3135250040	N/A	-	-	-	-	-
2.	Metro-Dade Parking	3135370020	190 NE 3 St.	Municipal	0	$ 0	$ 584,140	$ 584,140
		3135370080	N/A	Dade County	0	0	711,550	711,550
							$ 1,295,690	$ 1,295,690
3.	Mahi Temple	3135110050	1500 NW N. River Dr.	Cultural	47,164	$ 1,598,937	$ 1,802,420	$ 3,401,357
		3135120010	1500 NW N. River Dr.	Cultural	0	0	210,000	210,000
		3135370090	72 W Flagler St.	Dade County	0	0	457,380	457,380
					47,164	$ 1,598,937	$ 2,469,800	$ 4,068,737
4.	York Rite Masonic Temple & James Cornell Lodge	3134110010	1690 NW N. River Dr.	Cultural	16,713	$ 354,197	$ 472,080	$ 826,277
		3135110020	1670 NW N. River Dr.	Cultural	7,014	152,530	252,700	405,203
		3135110030	1610 NW N. River Dr.	Multi-Family	21,074	508,449	257,600	766,049
					44,801	$ 1,015,176	$ 982,380	$ 1,997,556

TABLE A-7
(continued)

Name	Folio #	Address	Land Use	Floor Area	Building Value	Land Value	Total Value
5. Robert King High	3135210160	1389 NW 7 St.	Muncipal	0	$ 4,716,800	$ 2,728,600	$ 7,445,400
Towers, Sr. Citizen	3135470010	800 NW 13 Ave.	Dade County	0	11,109,565	1,779,210	12,888,775
					$15,826,365	$ 4,507,810	$20,334,175
Totals					$18,574,285	$11,502,230	$30,076,515
Building Value/Land Value						16.2%	

Source: Zuchelli, Hunter & Associates, Inc., based upon Real Estate File Data supplied by the City of Miami.

TABLE A-8

MIAMI RIVER ECONOMIC STUDY
SUMMARY REAL ESTATE DATA FOR KEY PARCELS
DISTRICT E/SUBAREA 5

	Name	Folio #	Address	Land Use	Floor Area	Building Value	Land Value	Total Value
1.	Allied Marine	3174020010	N/A	-	-	-	-	-
2.	Privare Property	3134420020	5040 SW 60 Pl.	Urban Underdev.	0	$ 0	$ 556,700	$ 556,700
		3134420040	1995 NW 11 St.	Light Storage	11,217	263,173	479,130	742,303
		3134420050	1975 NW 11 St.	Heavy Storage	4,800	139,295	410,090	549,385
		3134670010	N/A	-	-	-	-	-
3.	Townhouse Development	3134460520	1901 NW S. River Dr.	Multi-Family	53,575	$ 1,683,237	$ 735,000	$ 2,418,237
		3134460530	2150 NW 9 St.	Urban Underdev.	0	0	48,800	48,800
					53,575	$ 1,683,237	$ 783,800	$ 2,467,037
4.	Dodge Hospital	3134420010	1961 NW S. River Dr.	Medical	26,085	$ 307,050	$ 655,580	$ 962,630
5.	Sewell Park	3134451030	1701 NW 11 St.	Single-Family	2,752	$ 102,048	$ 2,622,310	$ 2,724,358
6.	Private Property	3134490090	1142 NW 21 Ave.	Urban Underdev.	0	$ 0	$ 487,870	$ 487,870

TABLE A-8
(continued)

Name	Folio #	Address	Land Use	Floor Area	Building Value	Land Value	Total Value
7. River Run Condos.	3134170010	N/A	-	-	-	-	-
	3134170020	N/A	-	-	-	-	-
	3134170040	N/A	-	-	-	-	-
	3134170050	1700 NW N. River Dr.	Urban Underdev.	-	$ 0	-	$ 446,250
	3134170070	N/A	-	-	-	-	-
	3134170060	N/A	-	-	-	-	-
	3134170011	N/A	-	-	-	-	-
8. Nuta's Boatyard & Repair	3134170120	1818 NW N. River Dr.	Mixed Commercial	1,881	$ 36,818	$ 68,820	$ 105,635
	3134170140	1884 NW N. River Dr.	Mixed Commercial	16,013	124,626	1,014,350	1,138,976
	3134241180	1884 NW N. River Dr.	Urban Underdev.	0	0	385,860	385,860
				17,894	$ 161,444	$ 1,469,030	$ 1,630,474
9. Ebsary Foundation Co.	3134241150	2154 NW N. River Dr.	Light Manfg.	3,923	$ 57,872	$ 576,330	$ 634,102
10. Private Property	3134950010	1401 NW 22 Ave.	Parking Lots	0	$ 9,727	$ 1,440,530	$ 1,450,257
Totals					$ 2,723,846	$ 9,927,250	$12,651,366
Building Value/Land Value						27.4%	

Source: Zuchelli, Hunter & Associates, Inc., based upon Real Estate File Data supplied by the City of Miami.

TABLE A-9

MIAMI RIVER ECONOMIC STUDY
SUMMARY REAL ESTATE DATA FOR KEY PARCELS
DISTRICT F/SUBAREA 6

	Name	Folio #	Address	Land Use	Floor Area	Building Value	Land Value	Total Value
1.	Curtis Park	3134000330	1901 NW 24 Ave.	Municipal	13,650	$ 429,777	$ 5,407,980	$ 5,837,757
2.	10-Story Condo	3134820001 thru 2070	1800 NW 24 Ave.	Condominiums	N/A	-	-	$ 7,471,670
3.	Musa Isle Sr. Citizen Center	3134810010	2507 NW 16 St.	Multi-family	1	$ 2,947,641	$ 916,500	$ 3,864,141
4.	Private Property	3134000220	230 W 55 St.	Urban Underdev.	0	0	$ 670,110	$ 670,110
5.	Florida Yacht	3134680010	1583 NW 24 Ave.	Mixed Commercial	3,404	$ 25,632	$ 935,770	$ 961,402
		3134590020	1483 NW 24 Ave.	Mixed Commercial	78,482	100,000	1,475,200	1,575,200
		3134050080	1501 NW 24 Ave.	Single Family	985	21,849	14,990	36,839
		3134050070	2361-63 NW 15 St.	Duplex	1,512	30,141	27,300	57,441
		3134050060	2351-53 NW 15 St.	Duplex	1,523	29,773	27,300	57,073
		3134050050	2341-43 NW 15 St.	Duplex	2,824	59,103	27,300	86,403
		3134050040	2331 NW 15 St.	Duplex	2,047	43,318	27,300	70,618
		3134050030	2321-23 NW 15 St.	Duplex	1,523	29,773	27,300	57,073
		3134050020	2311-13 NW 15 St.	Duplex	1,512	30,466	27,300	57,766
		3134050010	2301-03 NW 15 St.	Duplex	1,523	29,773	27,740	57,512
					95,335	$ 399,828	$ 2,617,500	$ 3,017,327

TABLE A-9
(continued)

Name	Folio #	Address	Land Use	Floor Area	Building Value	Land Value	Total Value
6. Key Power, Inc.	3134590010	1583 NW 24 Ave.	Mixed Commercial	11,299	$ 50,000	$ 457,380	$ 507,380
	3134230010	2277 NW 14 St.	Light Storage	53,347	981,101	1,023,480	2,004,581
				64,646	$ 1,031,101	$ 1,480,860	$ 2,511,961
7. Florida Ships	3134000160	2215 NW 14 St.	Mixed Commercial	7,499	$ 109,890	$ 452,170	$ 562,060
Totals					$ 4,918,237	$11,545,120	$23,935,026*
Building Value/Land Value						42.6%	

* Discrepancy in total value figures is a result of individual condominium values not being separated from total.

Source: Zuchelli, Hunter & Associates, Inc., based upon Real Estate File Data supplied by the City of Miami.

TABLE A-10

MIAMI RIVER ECONOMIC STUDY
SUMMARY REAL ESTATE DATA FOR KEY PARCELS
DISTRICT G/SUBAREA 7

	Name	Folio #	Address	Land Use	Floor Area	Building Value	Land Value	Total Value
1.	Orkin Pest Control	3133070030	1960 NW 27 Ave.	Light Storage	9,800	$ 181,325	$ 469,910	$ 651,235
2.	Metro Dade	3133070040	N/A	Dade County	0	0	$ 153,900	$ 153,900
3.	Bermuth Marine Shipping	N/A	-	-	-	-	-	-
4.	Bojean Boat Yard Repair & Sales	N/A	-	-	-	-	-	-
5.	Trailer Park	3133160010	1900 NW 27 Ave.	Mixed Commercial	1,415	$ 54,758	$ 500,500	$ 555,258
	Totals					$ 236,083	$ 1,124,310	$ 1,360,393
	Building Value/Land Value						21.0%	

Source: Zuchelli, Hunter & Associates, Inc., based upon Real Estate File Data supplied by the City of Miami.

TABLE A-11

MIAMI RIVER ECONOMIC STUDY
SUMMARY REAL ESTATE DATA
HISTORIC SALES ACTIVITY OF LARGE LAND PARCELS

Parcel No.	Name	Address	Folio #	Sale Amount	Last Sale Date
	District A/Subarea 1				
7	Intramerica Investments	415 S. Miami Ave.	0210601340	$6,900,000	11/80
9	U.S. Customs	77 SE 5 Ave.	0210001020	$1,000,000	9/72
10	Cye's Rivergate	65 SE 5 St.	0210001030	$1,400,000	10/74
	District B/Subarea 2				
1	Miami Yacht Full Service Yard	418 SW 2 Ave.	0114201020	$3,500,000	1/85
7	City of Miami	228 SW 2 Ave.	0114001130	$ 156,000	1/80
8	City of Miami	315 SW 4 St.	0200106030	$ 19,900	7/72
	District C/Subarea 3				
3	Holiday Inn	1159 NW North River Dr.	3135260330	$ 1	5/76
6	Bermuda House Apartments	5800 NW 77 Ct.	3135000230	$ 28,700	9/78
	District D/Subarea 4				
4	York Rite Masonic Temple & James Carnell Lodge	1610 NW N. River Dr.	3135110030	$ 800,000	7/79

TABLE A-11
(continued)

Parcel No.	Name	Address	Folio #	Sale Amount	Last Sale Date
	District E/Subarea 5				
2	Townhouse Development	1901 NW S. River Dr.	3134460520	$ 810,000	3/81
		2150 NW 9 St.	3134460530	$ 810,000	3/81
6	Private Property	1142 NW 21 Ave.	3134490090	$ 750,000	7/83
10	Private Property	1401 NW 22 Ave.	3134950010	$2,260,000	9/81
	District F/Subarea 6				
4	Private Property	230 NW 55 St.	3134000220	$ 950,000	4/81
5	Florida Yacht	1583 NW 24 Ave.	3134680010	$3,000,000	6/81
		1583 NW 24 Ave.	3134590020	$3,000,000	6/81
		2341-43 NW 15 St.	3134050050	$ 39,000	3/73
		2321-22 NW 15 St.	3134050030	$ 36,000	3/78
		2311-13 NW 15 St.	3134050020	$ 42,000	10/78
		2301-03 NW 15 St.	3134050010	$ 30,500	7/71
6	Key Power, Inc.	1583 NW 24 Ave.	3134590010	$3,000,000	6/81
		2277 NW 14 St.	3134730010	$ 635,000	11/73

Source: Zuchelli, Hunter & Associates, Inc., based upon Real Estate File Data supplied by the City of Miami.

APPENDIX B

CHART I

ALL SURVEY RESPONDENTS

- Total number of responding surveys: 70

Subtotal--Water-Related	22
Subtotal--Water-Dependent	24
Subtotal--Other	24

- Years at location.

Total Responding:	66
Average	19.98
Sum	1,318
Minimum	0
Maximum	61
Standard Deviation	15.48
Variance	239.7

- Own or Rent.

Total Responding:	67
Total Owning Property	38
Total Renting Property	29

Of those who rent, 25 prefer to own and 4 prefer not to.

- Operating directly on waterfront:

  Total Responding: 67 Yes: 35 No: 32

- If not on waterfront, need for a waterfront location:

  Total Responding: 37 Yes: 5 No: 32

If need and looking for waterfront location, 3 said yes and 9 said no.

- Best aspect of current locations:

Low Rent Rate	5
Proximity to Downtown	7
Proximity to Airport	8
Proximity to Freeway	9
Proximity to Waterfront/River	21
Proximity to Customers	29
Proximity to Other Firms	18
Location/Access	35
Other	4

CHART I
(continued)

- Worst aspects of current location:

Neighborhood	12
Zoning	4
Need for Space/Parking	8
Crime	12
Access/Traffic	19
Taxes	4
Industrial Waste/Pollution	6
Other	23

- Operations at other location:

Total Responding: 68 Yes: 22 No: 46

- Current employees:

	Average	Sum	Min	Max	Std	Var
Full-Time	25.25	1591	1	325	55.54	3085
Part-Time	7.526	143	0	100	21.90	479.9

- Type of Business:

Yacht Sales/Repair	22
Cars	11
Manufacturer/Skilled & Unskilled Labor	19
Marine Services	31
Construction	9
Recreation/Restaurant/Hotel	10
Marina/Tugboat	17
Shipping	6

- Business trend since 1980:

Total Responding:	66
Up a Lot	18
Up a Little	33
Flat	9
Down	6

CHART I
(continued)

- Factors affecting business operations:

A.	Size of your land area:	Sufficient	47		Insufficient		19
B.	Amount of building space:	Sufficient	45		Insufficient		21
C.	If you rent, is the rent:	Too high	9		Reasonable		24
D.	Availability of labor:	Sufficient	54		Insufficient		10
E.	Quality of workers:	Good	35	Fair	26	Poor	3
F.	Cost of labor:	High	10		Moderate		53
G.	Public security/police services:	Good	24	Fair	28	Poor	16
H.	Road/highway access:	Good	43	Fair	14	Poor	11
I.	Do you regard the condition of the surrounding neighborhood as?	Good	9	Fair	34	Poor	25
J.	Parking for customers:	Good	22	Fair	22	Poor	25
K.	Parking for employees:	Good	27	Fair	24	Poor	18
L.	Public transportation:	Good	19	Fair	26	Poor	22
M.	River water quality:	Good	7	Fair	31	Poor	26
N.	Is river water quality?	Improving	29		Getting Worse		14
O.	Are bridge openings a problem for your business?	Yes:	22		No:		45
P.	Are governmental regulations a problem?	Yes:	20		No:		44

CHART I
(continued)

- Recent and planned operations:

	Last 5 years		Next 3 years		Both
Employees	Added	18	Plan to add	11	21
New or Renovated Bldg.	Added	17	Plan to add	14	7
Bulkheads Improvements	Installed/ Repaired	16	Plan to Install or Repair	9	4
Major Equipment	Purchased	18	Plan to add	11	15
Customers Base	Already Expanded	14	Expect to Expand	12	16
Location	Changed	10	Plan to move	7	6

- Positive factors affecting business:

Local Economy	27
National Economy	17
River/City Image	4
Weather	4
Marine Industry Outlook	14
Trade	22
Quality of Labor	2
Location	22
Other	33

- Negative factors affecting business:

Crime/Drugs	16
Workforce	5
Traffic/River/Bridges	13
City Services/Taxes	8
Location/Parking/Access	10
Imports/Competition	16
Political/Social Problems	17
High Costs/Insurance	13
Image	6
Other	33

CHART I
(continued)

- 1985 gross sales: (46 responses, very good)

Less than $150,000	9	$1,000,000 to $1,499,000	6
$150,000 to $399,000	7	$1,500,000 to $1,999,000	2
$400,000 to $749,000	9	$2,000,000 to $2,999,000	4
$750,000 to $999,000	4	Over $3,000,000	15

CHART II

WATER-RELATED RESPONDENTS

- Total number of responding surveys: 22

- Years at location.

Total Responding:	20
Average	18.53
Sum	370.7
Minimum	.25
Maximum	50
Standard Deviation	15.93
Variance	253.7

- Own or Rent.

Total Responding:	22
Total Owning Property	12
Total Renting Property	10

Of those who rent and responded, 9 prefer to own and 0 prefer not to.

- Operating directly on waterfront:

Total Responding: 21 Yes: 7 No: 14

- If not on waterfront, need for a waterfront location:

Total Responding: 15 Yes: 2 No: 13

If need and looking for waterfront location, 1 said yes and 4 said no.

- Best aspect of current locations:

Low Rent Rate	2
Proximity to Downtown	1
Proximity to Airport	3
Proximity to Freeway	2
Proximity to Waterfront/River	8
Proximity to Customers	10
Proximity to Other Firms	3
Location/Access	8
Other	0

CHART II
(continued)

- Worst aspects of current location:

Neighborhood	4
Zoning	1
Need for Space/Parking	3
Crime	4
Access/Traffic	8
Taxes	1
Industrial Waste/Pollution	3
Other	7

- Operations at other location:

Total Responding: 22 Yes: 5 No: 17

- Current employees:

	Average	Sum	Min	Max	Std	Var
Full-Time	13.72	302	2	40	12.00	144.1
Part-Time	1.4	7	1	2	0.489	0.24

- Type of Business:

Yacht Sales/Repair	9
Cars	4
Manufacturer/Skilled & Unskilled Labor	6
Marine Services	15
Construction	0
Recreation/Restaurant/Hotel	2
Marina/Tugboat	0
Shipping	0

- Business trend since 1980:

Total Responding:	22
Up a Lot	9
Up a Little	8
Flat	4
Down	1

CHART II
(continued)

- Factors affecting business operations:

A.	Size of your land area:	Sufficient	15		Insufficient	7	
B.	Amount of building space:	Sufficient	17		Insufficient	5	
C.	If you rent, is the rent:	Too high	3		Reasonable	10	
D.	Availability of labor:	Sufficient	13		Insufficient	7	
E.	Quality of workers:	Good	12	Fair	8	Poor	1
F.	Cost of labor:	High	0	Moderate	21	Low	0
G.	Public security/police services:	Good	9	Fair	9	Poor	4
H.	Road/highway access:	Good	13	Fair	4	Poor	5
I.	Do you regard the condition of the surrounding neighborhood as?	Good	5	Fair	7	Poor	9
J.	Parking for customers:	Good	5	Fair	9	Poor	8
K.	Parking for employees:	Good	6	Fair	9	Poor	7
L.	Public transportation:	Good	7	Fair	7	Poor	8
M.	River water quality:	Good	1	Fair	11	Poor	8
N.	Is river water quality?	Improving	7		Getting Worse	6	
O.	Are bridge openings a problem for your business?	Yes:	3		No:	19	
P.	Are governmental regulations a problem?	Yes:	4		No:	14	

CHART II
(continued)

- Recent and planned operations:

	Last 5 years		Next 3 years		Both
Employees	Added	5	Plan to add	2	10
New or Renovated Bldg.	Added	8	Plan to add	4	3
Bulkheads Improvements	Installed/ Repaired	3	Plan to Install or Repair	1	0
Major Equipment	Purchased	10	Plan to add	3	6
Customers Base	Already Expanded	5	Expect to Expand	3	6
Location	Changed	6	Plan to move	1	5

- Positive factors affecting business:

Local Economy	9
National Economy	4
River/City Image	1
Weather	2
Marine Industry Outlook	6
Trade	8
Quality of Labor	1
Location	4
Other	10

- Negative factors affecting business:

Crime/Drugs	3
Workforce	3
Traffic/River/Bridges	4
City Services/Taxes	1
Location/Parking/Access	6
Imports/Competition	6
Political/Social Problems	2
High Costs/Insurance	4
Image	2
Other	8

CHART II
(continued)

- 1985 gross sales: (46 responses, very good)

Less than $150,000	2	$1,000,000 to $1,499,000	2
$150,000 to $399,000	4	$1,500,000 to $1,999,000	0
$400,000 to $749,000	4	$2,000,000 to $2,999,000	1
$750,000 to $999,000	1	Over $3,000,000	4

CHART III

WATER DEPENDENT SURVEY RESPONDENTS

- Total number of responding surveys: 24

- Years at location.

Total Responding:	24
Average	23.37
Sum	1,318
Minimum	0
Maximum	61
Standard Deviation	17.05
Variance	29.08

- Own or Rent.

Total Responding:	23
Total Owning Property	11
Total Renting Property	12

Of those who rent, 11 prefer to own and 1 prefers not to.

- Operating directly on waterfront:

Total Responding: 23 Yes: 22 No: 1

- If not on waterfront, need for a waterfront location:

Total Responding: 6 Yes: 3 No: 1

If need and looking for waterfront location, 2 said yes and 1 said no.

- Best aspect of current locations:

Low Rent Rate	0
Proximity to Downtown	1
Proximity to Airport	3
Proximity to Freeway	4
Proximity to Waterfront/River	9
Proximity to Customers	12
Proximity to Other Firms	9
Location/Access	11
Other	2

CHART III
(continued)

- Worst aspects of current location:

Neighborhood	5
Zoning	1
Need for Space/Parking	1
Crime	4
Access/Traffic	6
Taxes	3
Industrial Waste/Pollution	1
Other	8

- Operations at other location:

Total Responding: 23 Yes: 7 No: 16

- Current employees:

	Average	Sum	Min	Max	Std	Var
Full-Time	23.4	515	1	102	27.97	782.6
Part-Time	2.375	19	1	5	1.653	2.734

- Type of Business:

Yacht Sales/Repair	6
Cars	2
Manufacturer/Skilled & Unskilled Labor	7
Marine Services	7
Construction	1
Recreation/Restaurant/Hotel	2
Marina/Tugboat	10
Shipping	6

- Business trend since 1980:

Total Responding:	23
Up a Lot	4
Up a Little	12
Flat	3
Down	4

CHART III
(continued)

- Factors affecting business operations:

A.	Size of your land area:	Sufficient	17		Insufficient	8	
B.	Amount of building space:	Sufficient	12		Insufficient	11	
C.	If you rent, is the rent:	Too high	4		Reasonable	7	
D.	Availability of labor:	Sufficient	22		Insufficient	2	
E.	Quality of workers:	Good	16	Fair	7	Poor	1
F.	Cost of labor:	High	6	Moderate	18	Low	0
G.	Public security/police services:	Good	7	Fair	9	Poor	8
H.	Road/highway access:	Good	16	Fair	5	Poor	3
I.	Do you regard the condition of the surrounding neighborhood as?	Good	2	Fair	14	Poor	8
J.	Parking for customers:	Good	9	Fair	8	Poor	7
K.	Parking for employees:	Good	12	Fair	6	Poor	6
L.	Public transportation:	Good	6	Fair	14	Poor	3
M.	River water quality:	Good	6	Fair	11	Poor	6
N.	Is river water quality?	Improving	13		Getting Worse	6	
O.	Are bridge openings a problem for your business?	Yes:	11		No:	11	
P.	Are governmental regulations a problem?	Yes:	10		No:	13	

CHART III
(continued)

- Recent and planned operations:

	Last 5 years		Next 3 years		Both
Employees	Added	7	Plan to add	2	7
New or Renovated Bldg.	Added	1	Plan to add	2	4
Bulkheads Improvements	Installed/ Repaired	9	Plan to Install or Repair	5	4
Major Equipment	Purchased	4	Plan to add	4	7
Customers Base	Already Expanded	3	Expect to Expand	5	7
Location	Changed	3	Plan to move	2	1

- Positive factors affecting business:

Local Economy	9
National Economy	7
River/City Image	2
Weather	2
Marine Industry Outlook	4
Trade	10
Quality of Labor	1
Location	10
Other	12

- Negative factors affecting business:

Crime/Drugs	8
Workforce	1
Traffic/River/Bridges	6
City Services/Taxes	5
Location/Parking/Access	1
Imports/Competition	5
Political/Social Problems	9
High Costs/Insurance	6
Image	2
Other	15

CHART III
(continued)

- 1985 gross sales: (46 responses, very good)

Less than $150,000	3	$1,000,000 to $1,499,000	1
$150,000 to $399,000	1	$1,500,000 to $1,999,000	2
$400,000 to $749,000	3	$2,000,000 to $2,999,000	1
$750,000 to $999,000	2	Over $3,000,000	6

CHART IV

OTHER SURVEY RESPONDENTS

- Total number of responding surveys: 24

- Years at location.

Total Responding:	22
Average	17.59
Sum	387
Minimum	3
Maximum	45
Standard Deviation	12.29
Variance	151.28

- Own or Rent.

Total Responding:	22
Total Owning Property	15
Total Renting Property	7

Of those who rent, 4 prefer to own and 3 prefers not to.

- Operating directly on waterfront:

Total Responding: 23 Yes: 6 No: 17

- If not on waterfront, need for a waterfront location:

Total Responding: 37 Yes: 0 No: 18

If need and looking for waterfront location, 0 said yes and 4 said no.

- Best aspect of current locations:

Low Rent Rate	3
Proximity to Downtown	5
Proximity to Airport	2
Proximity to Freeway	3
Proximity to Waterfront/River	4
Proximity to Customers	7
Proximity to Other Firms	6
Location/Access	16
Other	2

CHART IV
(continued)

- Worst aspects of current location:

Neighborhood	3
Zoning	2
Need for Space/Parking	4
Crime	4
Access/Traffic	5
Taxes	0
Industrial Waste/Pollution	2
Other	8

- Operations at other location:

Total Responding: 23 Yes: 10 No: 13

- Current employees:

	Average	Sum	Min	Max	Std	Var
Full-Time	40.73	774	1	325	93.59	8759
Part-Time	19.5	117	1	100	36.13	1305

- Type of Business:

Yacht Sales/Repair	7
Cars	5
Manufacturer/Skilled & Unskilled Labor	6
Marine Services	9
Construction	8
Recreation/Restaurant/Hotel	6
Marina/Tugboat	7
Shipping	0

- Business trend since 1980:

Total Responding:	21
Up a Lot	5
Up a Little	13
Flat	2
Down	1

CHART IV
(continued)

- Factors affecting business operations:

A.	Size of your land area:	Sufficient	15		Insufficient	5	
B.	Amount of building space:	Sufficient	16		Insufficient	5	
C.	If you rent, is the rent:	Too high	2		Reasonable	7	
D.	Availability of labor:	Sufficient	19		Insufficient	1	
E.	Quality of workers:	Good	7	Fair	11	Poor	1
F.	Cost of labor:	High	4	Moderate	14	Low	0
G.	Public security/police services:	Good	8	Fair	10	Poor	4
H.	Road/highway access:	Good	14	Fair	5	Poor	3
I.	Do you regard the condition of the surrounding neighborhood as?	Good	2	Fair	13	Poor	8
J.	Parking for customers:	Good	8	Fair	5	Poor	10
K.	Parking for employees:	Good	9	Fair	9	Poor	5
L.	Public transportation:	Good	6	Fair	5	Poor	11
M.	River water quality:	Good	0	Fair	9	Poor	12
N.	Is river water quality?	Improving	9		Getting Worse	2	
O.	Are bridge openings a problem for your business?	Yes:	8		No:	15	
P.	Are governmental regulations a problem?	Yes:	6		No:	17	

CHART IV
(continued)

- Recent and planned operations:

	Last 5 years		Next 3 years		Both
Employees	Added	6	Plan to add	7	4
New or Renovated Bldg.	Added	8	Plan to add	8	0
Bulkheads Improvements	Installed/ Repaired	4	Plan to Install or Repair	3	0
Major Equipment	Purchased	4	Plan to add	4	2
Customers Base	Already Expanded	6	Expect to Expand	4	3
Location	Changed	1	Plan to move	4	0

- Positive factors affecting business:

Local Economy	9
National Economy	6
River/City Image	1
Weather	0
Marine Industry Outlook	4
Trade	4
Quality of Labor	0
Location	8
Other	11

- Negative factors affecting business:

Crime/Drugs	5
Workforce	1
Traffic/River/Bridges	3
City Services/Taxes	2
Location/Parking/Access	3
Imports/Competition	5
Political/Social Problems	6
High Costs/Insurance	3
Image	2
Other	10

CHART IV
(continued)

- 1985 gross sales: (46 responses, very good)

Less than $150,000	4	$1,000,000 to $1,499,000	3
$150,000 to $399,000	2	$1,500,000 to $1,999,000	0
$400,000 to $749,000	2	$2,000,000 to $2,999,000	2
$750,000 to $999,000	1	Over $3,000,000	5

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