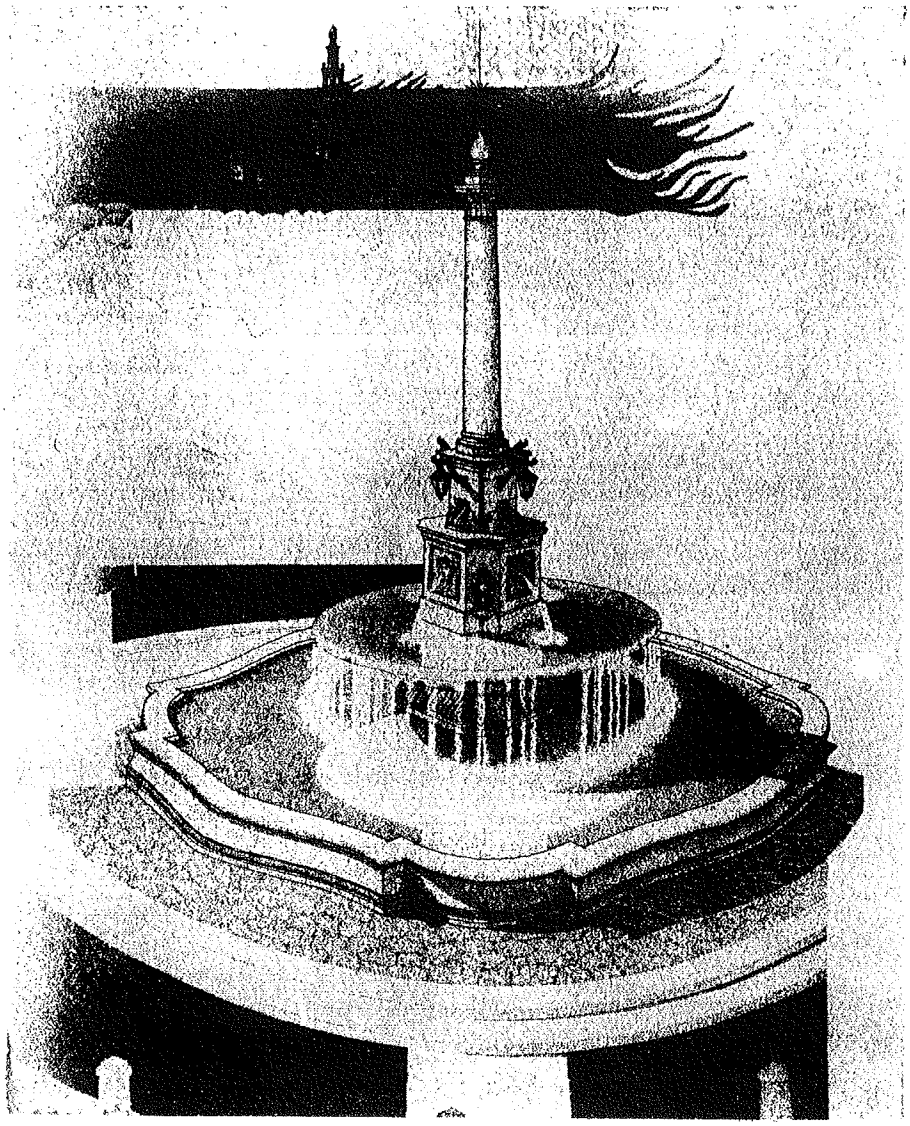
THE CITY BEAUTIFUL

THE CITY OF CORAL GABLES

COMPREHENSIVE PLAN



THE CITY OF CORAL GABLES

COMPREHENSIVE PLAN

as last ammended May 15, 1990

CITY COMMISSION

George M. Corrigan, Mayor
Mark J. Wolff, Vice Mayor
Jim Barker
Bob Hildreth
William H. Kerdyk

LOCAL PLANNING AGENCY

E. R. Brownell, Chairman
Richard Bullman, Vice-Chairman
Scott Baena
George Milhet
Jeanne Ann Moorman
Alfonso Perez
Wayne (Chip) Withers

CITY ATTORNEY	CITY MANAGER	CITY CLERK
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PLANNING DIRECTOR

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Preparation of this document was aided through financial assistance received from the State of Florida under the Local Government Comprehensive Planning Assistance Program authorized by Chapter 86-167, and 87-98, Laws of Florida and administered by the Florida Department of Community Affairs.

PREFACE

The Florida Legislature adopted amendments to Chapter 163, Part II of the Florida Statutes (F.S.) which govern the preparation, adoption and implementation of local government comprehensive plans. Significant legislative changes added requirements that specific level of service (LOS) standards be included in local comprehensive plans and that no development orders be issued if the LOS standards would not be met. Also strengthened were requirements for consistency of local plans with the State Comprehensive Plan (Chapter 187, F.S.) and with the applicable Regional Policy Plan, for consistency of all subsequent local development orders and development regulations with the adopted provisions of the local comprehensive plan, and for internal consistency among the different elements of the local comprehensive plan. Further changes included enhanced requirements for State review and approval of local comprehensive plans and penalties for noncompliance; and the establishment of provisions for affected parties to challenge a plan, local development regulation, and development order.

These statutory amendments also altered requirements for specific contents of plan elements. The Florida Department of Community Affairs (State land planning agency) has adopted rules establishing minimum criteria for the contents and qualities of local government comprehensive plans. Section 9J-5, Florida Administrative Code (F.A.C.) adopted on February 14, 1986 and amended on September 30, 1986, establishes the Minimum Criteria for Review of Local Government Comprehensive Plans and Determination of Compliance. Rule 9J-5 was followed in preparing this comprehensive plan.

In order to provide for orderly review and maintenance of a locally responsive community planning instrument, this document is organized in the following Chapters:

Preface
Table of Contents
List of Figures

Introduction
1. Land Use
2. Traffic Circulation
3. Housing
4. Sanitary Sewer, Solid Waste, Drainage, Potable Water, Natural Ground Water Aquifer Recharge
5. Coastal Management
6. Conservation

7. Recreation and Open Space
8. Intergovernmental Coordination
9. Capital Improvements
10. Historic Preservation

Glossary

Acknowledgements

Chapters 1 through 9 are plan elements required by Rule 9J-5 (FAC). Chapter 10 Historic Preservation, an optional element, is considered very important to the City of Coral Gables and is included in this plan. Each chapter contains certain portions that will be adopted by local ordinance into the City Code. Other portions, which will not be adopted, are included as supporting information. The support material includes inventories of conditions, analyses, and background summaries of State, Regional and preexisting policies where desireable.

The contents which are required to be adopted are Goals, Objectives and Policies addressing, certain issues specified in Rule 9J-5, plus a program to monitor and periodically report on projected future conditions and on progress made in implementing the comprehensive plan. The Land Use, Traffic Circulation, and Capital Improvements Elements are also required to include adopted components in the form of maps or schedules of future conditions plus explanatory information. Those portions of the plan which are to be adopted are marked by notes to that effect.

ADJACENT MUNICIPAL AND METRO DADE COUNTY PLANS

The Coral Gables Comprehensive Plan was prepared with consideration given to the developing local comprehensive plans for the adjacent municipalities of South Miami, West Miami, Miami and the unincorporated Metropolitan Dade County.

While the City's plan is designed to establish consistency across adjacent jurisdictions, all such plans have certain unique characteristics. Those using this plan who are interested in conditions in, or proposals for other jurisdictions, are advised to refer directly to the comprehensive plan and development regulations of the jurisdiction of interest.

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INTRODUCTION

The City of Coral Gables has a long tradition of city planning. It is known throughout the world as a community of style, charm and gracious living in an atmosphere of classical old world mediterranean and spanish architectural character, graced with abundant trees, fountains, plazas, and quaint residential village character. Coral Gables has deep roots in its foundation as a planned city, created from the native South Florida lands into a center of high quality residential neighborhoods and a highly prized international center for banking and trade. It is attractive to visitors who wish to marvel at the historic architectural treasures throughout "The City Beautiful".

To help preserve this character, the City has maintained an adopted Comprehensive Plan for many years. The last general revision was adopted in 1978 and has since been periodically revised. This comprehensive plan is the next major revision.

The most significant change from prior plans is the level of responsibility and commitment required of not only the developers and builders of the community but of the City itself. While additional authority has been granted to the City to control and regulate its development, so too has additional responsibility been placed upon the City to ensure that it does a thorough job to provide fair, predictable, balanced and equitable governance. The development community must in turn develope is concert with the City.

To properly implement these revised powers, the City will establish a solid technical foundation of information about the community, its conditions, its current and likely future health and vitality. The result will be a greater level of understanding by the city and development community as to what actions will result in successful projects which contribute to the long term benefit of the community as a whole.
The plan contains elements which deal with every major aspect of the community. Each element contains certain statements which give voice to the aspirations the City leaders and citizens have for this community. Such statements will be adopted into law. These include Goals, Objectives and Policies, which upon adoption, must be implemented. Also included in the adopted components is a monitoring program which is required for periodically measuring progress being made in implementing the comprehensive plan. The monitoring program is also necessary to enable the required level of service (LOS) standards to be implemented. By this process of planning, performing, reviewing and planning again, the city has a powerful engine for progress. This comprehensive plan is a living document. It is open to revision every six months by public petition and approval by the City Commission. The public has an open and important role to perform in the continued maturing and responsive adaptation of the plan to changes in the City.

(The following section is adopted by City ordinance)

STATEMENT OF LEGISLATIVE INTENT

This Statement expresses the legislative intent of the Coral Gables City Commission with regard to the Comprehensive Plan 1989 (PLAN). This Statement is applicable to the PLAN in its entirety and is declared to be incorporated by reference into each element thereof.

1. Nothing in the PLAN shall be construed or applied to constitute a temporary or permanent taking of private property or the abrogation of vested rights as determined to exist by the Code of Coral Gables, Florida.

2. The PLAN is intended to set general guidelines and principles concerning its purposes and contents. The PLAN is not a substitute for specific programs for implementation, action, or land development regulations.

3. The City Commission recognizes that a particular application may bring into conflict, and necessitate a choice between, different goals, objectives, policies, priorities, and provisions of the PLAN. While it is the intent of the City Commission that the land use element be afforded a high priority, other elements must be taken into consideration in light of the City Commission's responsibility to provide for the multitude of needs of a large heavily populated and diverse community. Recognizing that City Commission and city agencies will be required to balance competing goals, objectives, and policies of the PLAN, it is the intention of the City Commission that such City Commission and city agencies consider the overall intention of the PLAN as well as portions particularly applicable to a matter under consideration in order to ensure that the PLAN, as applied, will protect the public health, safety and welfare.

This concludes the adopted sections of this element.

PLAN ADOPTION ORDINANCE

THE CITY OF CORAL GABLES

ORDINANCE NO.

AN ORDINANCE ACCEPTING THE DOCUMENT ENTITLED "CORAL GABLES COMPREHENSIVE PLAN, 1989", AS REVISED AND AS AN AMENDMENT TO THE DOCUMENT ENTITLED "CITY OF CORAL GABLES COMPREHENSIVE PLAN 1978-2000"; ADOPTING THOSE PORTIONS SO MARKED IN THE DOCUMENT AND AS AMENDED; AND REPEALING ALL ORDINANCES IN CONFLICT OR INCONSISTENT HEREWITH.

WHEREAS, on April 29, 1980. the City of Coral Gables adopted a document entitled "City of Coral Gables Comprehensive Plan 1978-2000" as evidenced by Ordinance No. 2345; and

WHEREAS, in October, 1985, the State of Florida adopted the "Local Government Comprehensive Planning and Land Development Regulation Act" which necessitated that amendments be made to the City's adopted Comprehensive Plan; and

WHEREAS, the State of Florida Department of Community Affairs Division of Resource Planning and Management then established Chapter 9J-5 entitled "Minimum Criteria for Review of Local Government Comprehensive Plans and Determination of Compliance" which outlined specific Comprehensive Plan requirements; and

WHEREAS, the City of Coral Gables desires to comply with the requirements specified in the regulations noted above; and

WHEREAS, the City of Coral Gables has made great effort to follow designated procedures and meet mandated requirements so as to ensure careful consideration of all items prior to final adoption; and

WHEREAS, after fifteen workshop meetings and forty task force meetings over a two year period and after notice of public hearing duly published, a public hearing was held before the Local Planning Agency (Planning and Zoning Board) on February 8, 1989, at which hearing all interested persons were afforded an opportunity to be heard; and

WHEREAS, the Local Planning Agency, at its special public hearing on February 8, 1989, recommended the acceptance of the document entitled "Coral Gables Comprehensive Plan, 1989", as revised, and adoption of those portions so marked in the document and as amended.

NOW, THEREFORE, BE IT ORDAINED BY THE COMMISSION OF THE CITY OF CORAL GABLES:

SECTION 1. That the document entitled "Coral Gables Comprehensive Plan, 1989", as revised, is accepted and those portions so marked in the document and as further amended are adopted, all as amendments to the "City of Coral Gables Comprehensive Plan 1978-2000".

SECTION 2. That all ordinances or parts of ordinances inconsistent or in conflict herewith shall be and the same are hereby repealed insofar as there is conflict or inconsistency.

PASSED AND ADOPTED THIS 16 DAY OF February A.D., 1989

APPROVED:

GEORGE M. CORRIGAN
MAYOR

PUBLIC PARTICIPATION ORDINANCE

CITY OF CORAL GABLES

RESOLUTION NO.

A RESOLUTION SETTING FORTH PROVISIONS FOR PUBLIC PARTICIPATION IN THE COMPREHENSIVE PLANNING PROCESS; SPECIFYING PUBLIC HEARING PROCEDURES; SPECIFYING ADVERTISING AND NOTIFICATION REQUIREMENTS; AND PROVIDING OPPORTUNITIES FOR, AND CONSIDERATION OF, PUBLIC COMMENTS.

WHEREAS, the City of Coral Gables has endeavored to incorporate public participation at every level of the Comprehensive Planning and amendment process; and

WHEREAS, the City of Coral Gables through its Local Planning Agency established Citizen Task Forces to review and make recommendations upon amendments to the Comprehensive Plan as a means of assuring public participation; and

WHEREAS, public hearing and advertising procedures are established in Section 2-25(d), Comprehensive Plan, of the City Code which states that: "the amendment of the Comprehensive Plan shall be in the manner prescribed by Chapter 163 Florida Statutes; and

WHEREAS, the public aspect requirement of all Local Planning Agency meetings and records is established in Section 2-24(e) of the City Code; and

WHEREAS, the Planning and Zoning Board, acting as the Local Planning Agency, follows public hearing procedures and advertising requirements set out in Section 27-6 and 27-7 of the Zoning Code; and

WHEREAS, over the course of two and one-half (2-1/2) years, numerous meetings, workshops and public hearings have been held in order to solicit public comments, and review and recommend upon amendments to the City's Comprehensive Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE COMMISSION OF THE CITY OF CORAL GABLES AS FOLLOWS:

SECTION 1. That the City Commission finds that the extensive public hearing process followed prior to this resolution was conducted in compliance with Section 2-25(d) of the City Code, Chapter 163.3161 F.S. and Section 95-5.004 FAC.

SECTION 2. That the City of Coral Gables shall hold at least two advertised public hearings on the proposed Comprehensive Plan, plan element or plan amendment pursuant to Florida Statute 163.3161.

SECTION 3. That at the City's option, one of these advertised public hearings may be conducted by the Local Planning Agency.

SECTION 4. That both public hearings shall be conducted on a weekday after 5:00 P.M.

SECTION 5. That advertisement of each of the public hearings shall be published in a newspaper of general paid circulation and said ad shall be at least one-quarter page in size and shall include a geographic location map showing the are covered by the proposal.

SECTION 6. That the affected property owner(s) and owners of property within three hundred (300) feet of the affected property shall be mailed a notice of public hearing indicating the proposal and the date, time and location of the public hearing.

SECTION 7. That when the affected area is determined to be the whole City as in the case of a five (5) year Plan review, mailed public hearing notices as described in Section 6, above, shall not be required.

SECTION 8. That written comments may be submitted to the Local Planning Agency and the City Commission at the specified public hearings. Prior to said hearing, written comments will be accepted by the Planning Director who shall submit the comments into the public record.

SECTION 9. That consideration shall be given to all public comments, either collectively or individually, and that the response to said public comments shall be evidenced by the final action taken in the amendment of the Comprehensive Plan.

PASSED AND ADOPTED THIS DAY OF A.D., 1989

Chapter 1

FUTURE LAND USE ELEMENT

The information accumulated for the 1978 plan has formed the foundation of the best available information for much of the existing quantified land use data being analyzed. Future land use data has been developed with the aide of a computer simulation of the city in a geographic information system utilized for generalized land use classifications custom designed for the City of Coral Gables.

1.
EXISTING LAND USE:

The City is very stable, with a highly evolved zoning code and development regulation program in place. The strengthened requirements of Florida growth management law now create the need to revisit the technical, analytical and policy foundations of planning for the City.

For general comprehensive planning purposes the uses of land in the City are classified in general categories of common character. Earlier analysis placed less emphasis on detailed measurement of intensity and quantity, but rather the general location and broad character of use. The Zoning Code and related design regulations served to structure the more detailed limitations on each site. No detailed analytical data is available on a site by site basis. Rather a more generalized set of data is used, reflecting the different requirements of the earlier period. Modern planning practice will require a rigorous program of measurement and compilation to establish a modern baseline and consistent procedures.

In review of the existing data on the existing land use, the following generalized land uses are considered.
These Existing Land Use Classifications are used for the Existing Land Use map series. (See maps 1.1)

RESIDENTIAL SINGLE-FAMILY
RESIDENTIAL DUPLEX
RESIDENTIAL MULTI-FAMILY
COMMERCIAL
INDUSTRIAL
RECREATION/PARKS/OPEN SPACE
MUNICIPAL BUILDINGS (including other public facilities and grounds)
RELIGIOUS INSTITUTIONS
EDUCATIONAL INSTITUTIONS
HOSPITALS
CONSERVATION AREA
GOLF COURSE

VACANT/UNDEVELOPED TRACTS
HISTORIC RESOURCES

Note: Agricultural (This category is required by Rule 9J-5 F.A.C., There are no agricultural land uses in the City, therefore no such classification is shown)

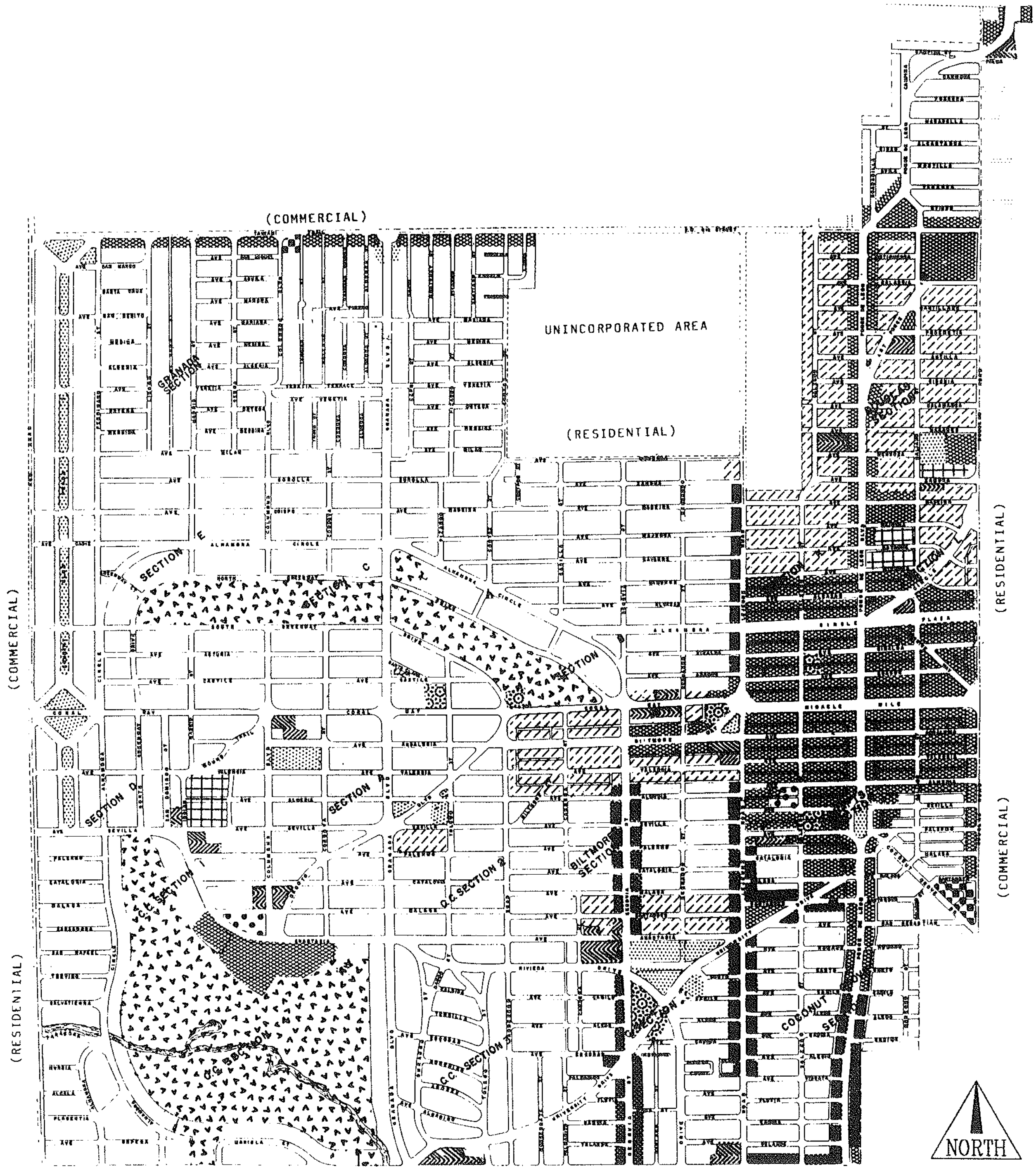
2.

NATURAL RESOURCES

The following natural resources are shown on the Existing Land Use map series & related maps in other chapters of the Plan:

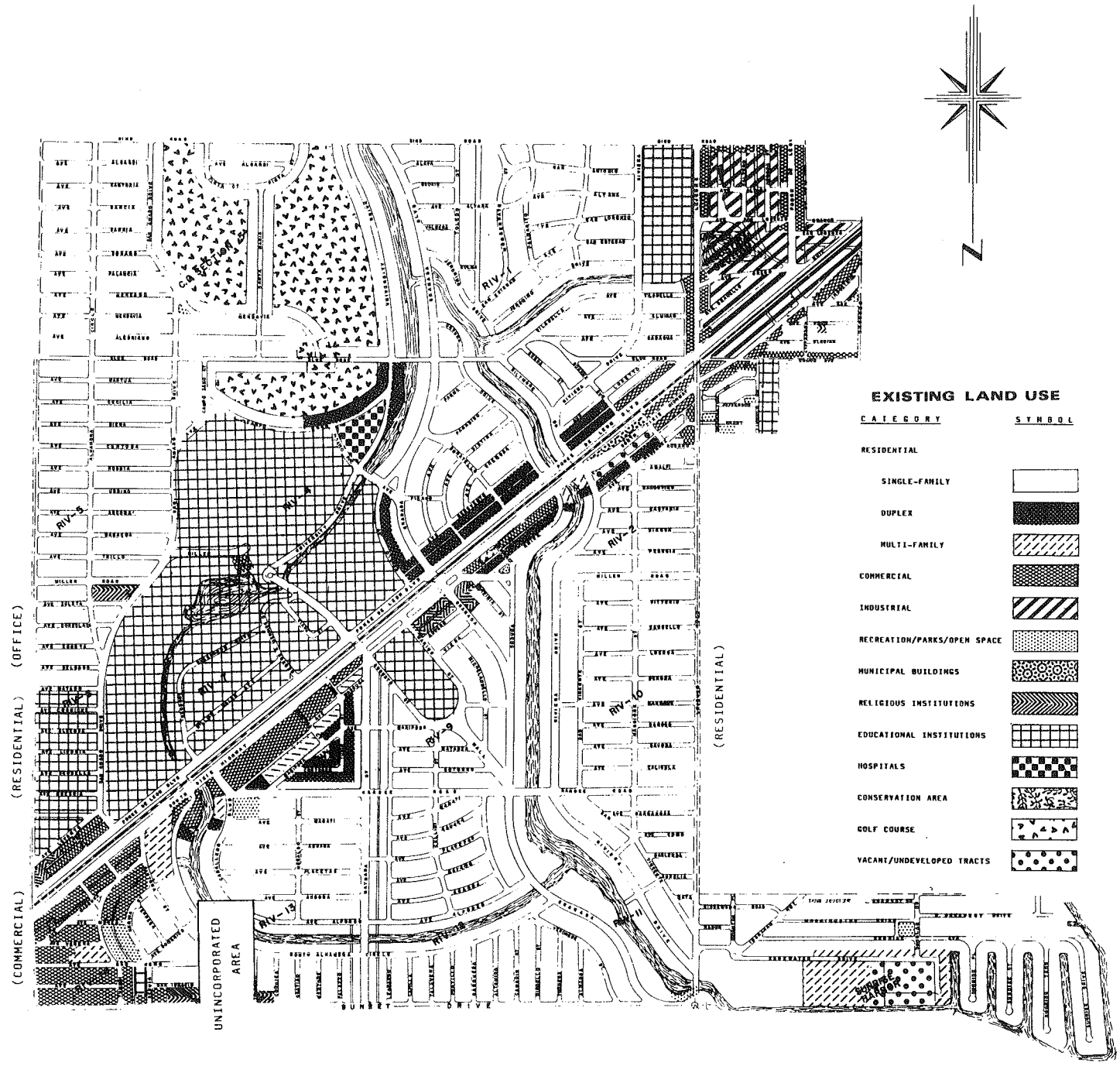
Existing & planned water wells & cones of influence (no potable water wells are located within the city); Beaches & shores, including estuarine systems; Rivers, bays, lakes, floodplains, and harbors; Wetlands; Minerals and soils.

MAP 1.1. EXISTING LAND USE PART A

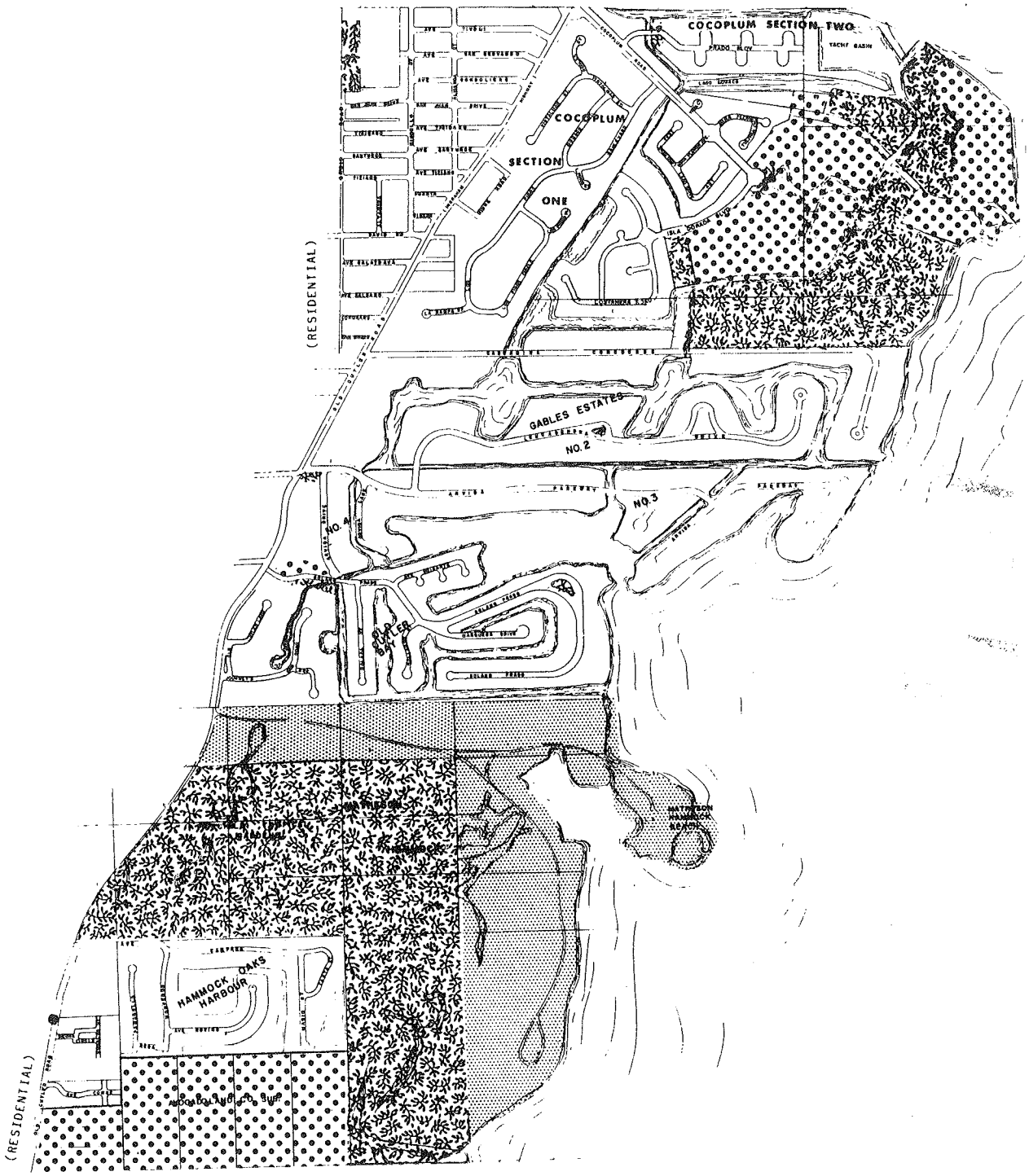


The City of Coral Gables

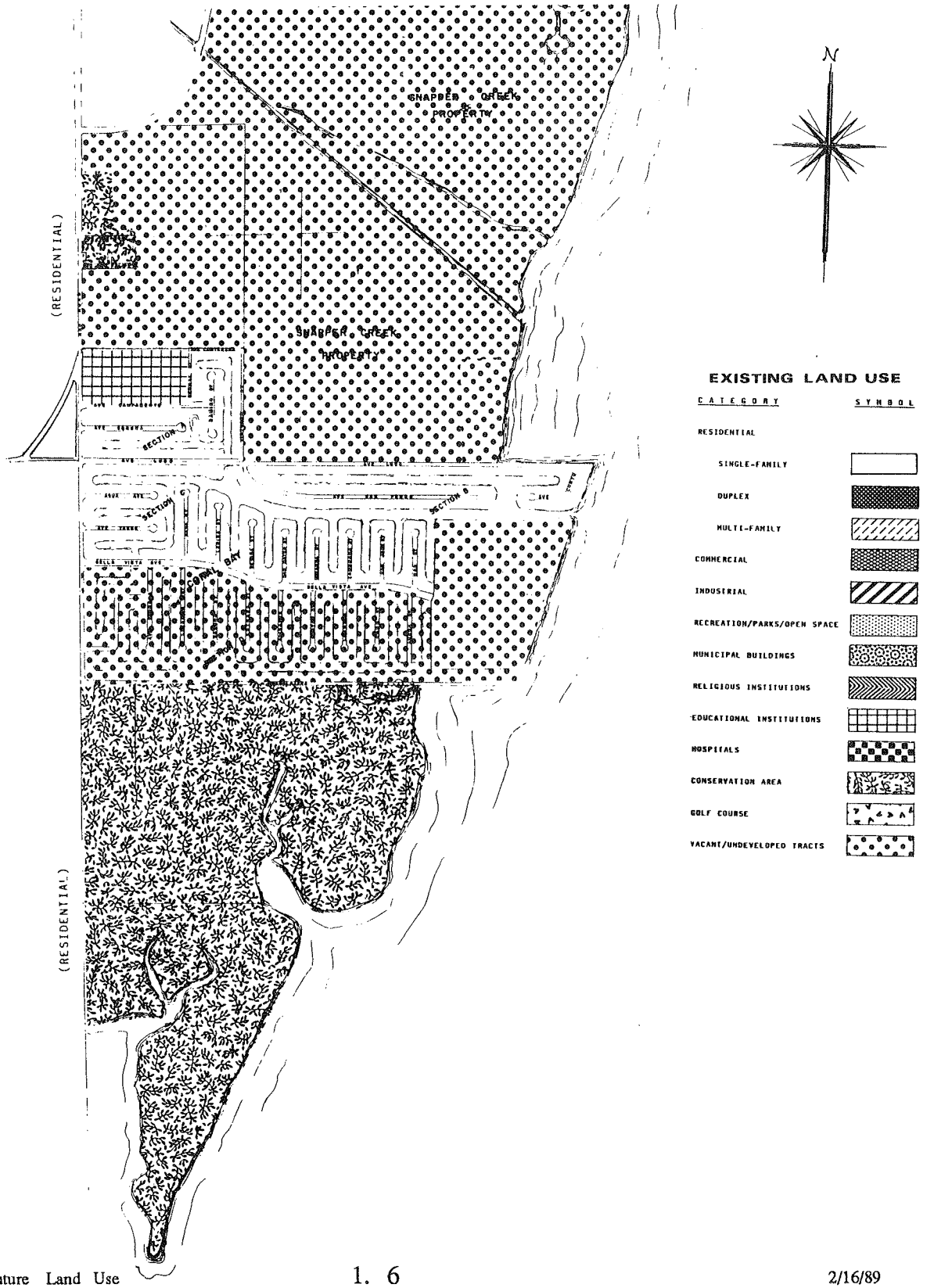
MAP 1.1. EXISTING LAND USE PART B

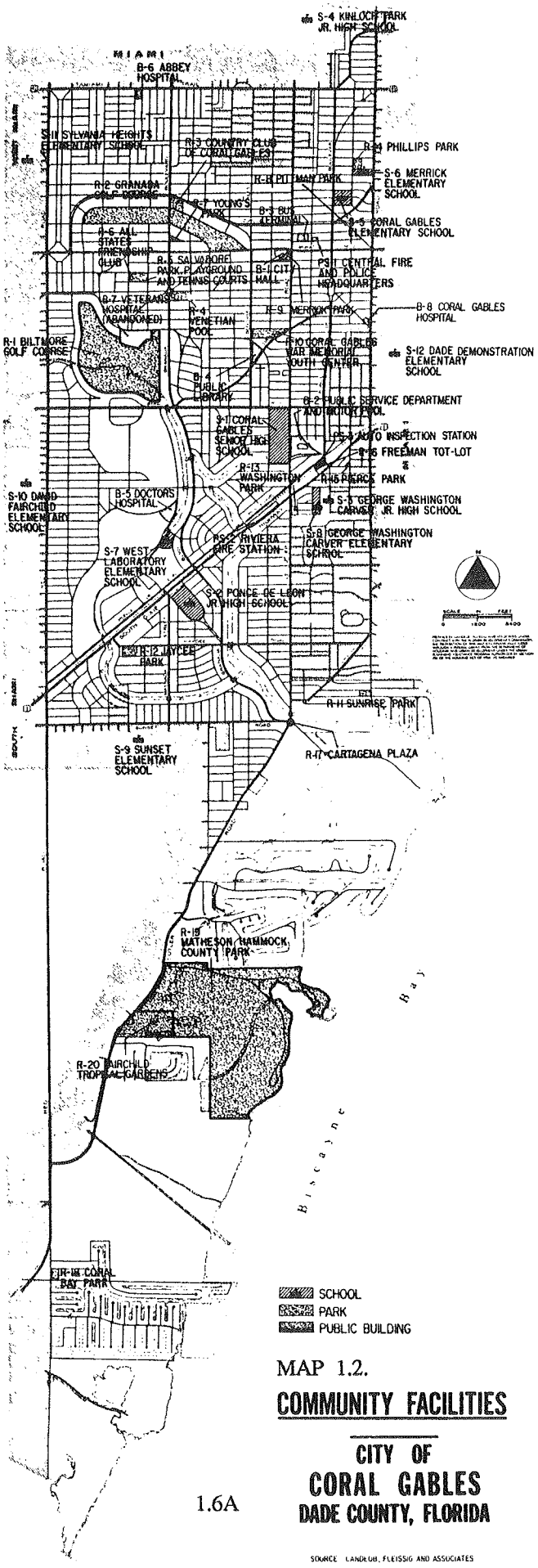


MAP 1.1. EXISTING LAND USE PART C



MAP 1.1. EXISTING LAND USE PART D





MAP 1.2.

COMMUNITY FACILITIES

CITY OF
CORAL GABLES
DADE COUNTY, FLORIDA

SOURCE: LANDRUM, FLEISSIG AND ASSOCIATES

3.
LAND USE INTENSITY

The approximate acreage & general range of intensity of use is provided in tabular form for the gross land area within each land use category. An exception is made here for Historic Resources Land Use which by its nature is not generally measured by intensity as it is essentially an attribute of all other land uses. The City has an extensive historic resources program which is the subject of the Historic Preservation Element.

Table 1.3.

EXISTING LAND USE 1978
City of Coral Gables

CLASS	AREA	% of TOTAL	% of Dev. Acres
Residential - Total	4,596.90	59.52	74.44
Single Unit Low/Med Density	4,130.00	53.48	66.88
Duplex	64.70	0.84	1.05
Apartment	378.70	4.90	6.13
Multiple Dwelling (Highrise)	23.50	0.30	0.38
Commercial & Services - Total	426.40	5.52	6.90
Industrial - Total	67.50	0.87	1.09
Educational - Total	301.00	3.90	4.88
Recreational - Total	783.60	10.15	12.69
Golf Courses	358.80	4.65	5.81
Community Recreational	424.80	5.50	6.88
TOTAL DEVELOPED	6,175.40	79.96	100.00
Open Land & Other	1,547.50	20.04	
Unplatted Land	1,172.00	15.18	
Horticultural Areas (1)	25.50	0.33	
Wetlands - Dade Co. Gov't	350.00	4.53	
TOTAL LAND USE	7,722.90	100.00	

(1) The Horticultural Areas of this 1978 inventory are now considered institutional land use for the 1988 analysis.
Source: City of Coral Gables Comprehensive Plan 1978-2000

4.
FUTURE LAND USE

The Future Land Use and related information required by law is contained in the varied maps of this Plan which include stable data about the city and are considered part of the future land use map series, a series of maps depicting unchanging existing conditions or projected future conditions planned for the City. Of these, only the Future Land Use Map is adopted into law. The other maps serve as general references only.

The Future Land Use Map contains graphic depictions of the designated land use classifications throughout the city. The Future Land Use Map is a record drawing maintained as a public record of The City of Coral Gables. Published copies shall be separately distributed as an unbound set of two maps showing the North half and South half of the City.

Table 1.4.
FUTURE LAND USE DATA
City of Coral Gables
TRAFFIC ZONE ANALYSIS SUMMARY

See Traffic Zones Map 2.1. for Zone locations and extents.

LandUse Class	Traffic Zones: 1	2	3	4	5	6	7	8
R**	3,695.4	534.3	765.1	2,170.9	1,533.7	2,000.8	1,446.6	3,314.5
RH**	0.0	0.0	41.4	16.0	0.0	18.1	0.0	53.1
RMD**	29.7	0.0	122.8	0.0	0.0	54.7	82.9	37.8
RML**	40.1	16.7	0.0	0.0	6.6	0.0	0.0	213.9
RMM**	0.0	1,293.3	0.0	0.0	0.0	0.0	0.0	0.0
RMH**	0.0	4,074.9	0.0	0.0	0.0	0.0	0.0	0.0
CL	26.8	47.1	66.5	3.8	5.7	8.4	23.6	38.4
CM	0.0	109.8	65.0	1.5	0.0	0.0	11.0	0.0
CH	0.0	126.4	51.5	11.6	28.5	0.0	0.0	18.2
I	0.0	0.0	0.0	0.0	0.0	0.0	127.6	0.0
U	0.0	0.0	0.0	0.0	0.0	62.7	0.0	0.0
E	0.0	10.8	0.0	0.0	0.0	0.0	38.8	30.3
PR*	60.2	3.1	0.0	2.3	146.5	108.5	0.0	3.3
OS*	16.9	0.1	1.4	1.0	5.2	0.5	0.0	3.2
PB	0.0	0.0	2.1	11.8	0.0	12.0	24.3	0.0
H	0.8	0.0	5.2	0.0	0.0	9.0	0.0	0.0
RI	6.2	8.8	1.6	8.8	9.6	6.0	0.0	7.9
C*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HST	NA	NA	NA	NA	NA	NA	NA	NA

Note all data is in units of net effective land use development potential acres
* Indicates data is for gross Land Use Area in Acres
** Indicates data is in Dwelling Units
Source: William N. Gray GIS System ; Coral Gables Planning Department;
Coral Gables 1978-2000 Future Land Use Map.
LPA 1988 Proposed Future Land Use Map.
[LPA Recommended as of 5/26/88,
and modified as to limited LU and density definitions on 6-8-88]
(Revision 5 \ dated 6-14-88/2:00pm) (8th iteration of overall analysis)
The level of detail supported by source data limits analysis to
an overall error rate estimated between 3 and 4 percent.

Table 1.4. CONTINUED PAGE 2
FUTURE LAND USE DATA
City of Coral Gables
TRAFFIC ZONE ANALYSIS SUMMARY

LandUse Class	9	10	11	Land use Potential Totals	Land use Potential Units
R**	713.9	4,247.5	2,850.6	23,273.5	DU
RH**	0.0	0.0	0.0	128.6	DU
RMD**	78.1	0.0	0.0	406.1	DU
RML**	252.1	0.0	0.0	529.4	DU
RMM**	54.5	0.0	0.0	1,347.8	DU
RMH**	0.0	0.0	0.0	4,074.9	DU
CL	128.3	0.0	0.0	348.5	Acres
CM	0.0	0.0	0.0	187.3	Acres
CH	0.0	0.0	0.0	236.1	Acres
I	0.0	0.0	0.0	127.6	Acres
U	0.0	0.0	0.0	62.7	Acres
E	1.7	0.0	30.3	111.9	Acres
PR*	5.3	434.6	0.0	763.9	Gross Acres
OS*	0.0	0.0	0.0	28.2	Gross Acres
PB	0.0	0.0	102.1	152.3	Acres
H	0.0	0.0	0.0	15.0	Acres
RI	2.9	0.0	0.0	51.8	Acres
C*	0.0	103.2	832.2	935.4	Gross Acres
HST	NA	NA		0.0	

Table 1.5.
FUTURE LAND USE DATA
City of Coral Gables
UTILITIES ZONE ANALYSIS

See Utility Zone Map 4.1. for Zone locations and extents.

LU Type	Utilities Zone	Raw Area Gross (sq.feet)	Adjust for R/W	LU Area Net (acres)	Density Factor (DU/ac) (or FAR)	Utilization Factor	LU impact Value (Units as noted)
Zone Summary:							
ALL	SS-1	48429907	0	1,111.8			
ALL	SS-2(na)	0	0	0.0			
ALL	SS-3	2047946	0	47.0			
ALL	SS-4	4788731	0	109.9			
ALL	SS-5	22322693	0	512.5			
ALL	SS-6	6556200	0	150.5			
ALL	SS-7	4733397	0	108.7			
ALL	SS-8	4968055	0	114.0			
ALL	SS-9	0	0	0.0			
ALL	SS-10	1854869	0	42.6			
ALL	SS-11	276296	0	6.3			
ALL	SS-12(na)	0	0	0.0			
ALL	SS-13(na)	0	0	0.0			
ALL	SS-14(na)	0	0	0.0			
ALL	SS-15	14437533	0	331.4			
ALL	SE100	25708500	0	590.2			
ALL	SE101	19386170	0	445.0			
ALL	SE102	9781392	0	224.5			
ALL	SE103	0	0	0.0			
ALL	SE104	14778602	0	339.3			
ALL	SE105	35847814	0	822.9			
ALL	SE106	5660336	0	129.9			
ALL	SE107	24863164	0	570.8			
ALL	SE108	5958167	0	136.8			
ALL	SE109	0	0	0.0			
ALL	SE110	Gross	0	0.0			
ALL	SE111	24701989	0	567.1			
ALL	SE112	15756194	0	361.7			
ALL	SE113	5138431	0	118.0			
ALL	SE114	7084499	0	162.6			
ALL	SE115	1296862	0	29.8			
ALL	**total**	**306377747**	**0**	**7,033.4**			

Table 1.5. CONTINUED PAGE 2
FUTURE LAND USE DATA

Zone Detail:

LU Type	Utilities Zone	Raw Area Gross (sq.feet)	Adjust for R/W	LU Area Net (acres)	Density Factor (DU/ac) (or FAR)	Utilization Factor	LU impact Value (Units as noted)
ALL	SS-1	48429907	-0.2	889.4	0	1	0.0
RL	SS-1	28048907	-0.2	515.1	6	1	3,090.7
RH	SS-1	447829	-0.2	8.2	9	1	74.0
RMD	SS-1	510884	-0.2	9.4	9	1	84.4
RML	SS-1	1235403	-0.2	22.7	15	1	340.3
RMM	SS-1	1651675	-0.2	30.3	40	1	1,213.3
RMH	SS-1	5452696	-0.2	100.1	70	1	7,009.8
CL	SS-1	1730301	-0.2	31.8	3	1	95.3
CM	SS-1	3135422	-0.2	57.6	3	1	172.7
CH	SS-1	3456568	-0.2	63.5	3	1	190.4
E	SS-1	294497	-0.2	5.4	2	1	10.8
PR	SS-1	1454347	-0.2	26.7	2	1	53.4
OS	SS-1	143740	0	3.3	0	1	0.0
PB	SS-1	485520	-0.2	8.9	2	1	17.8
H	SS-1	142111	-0.2	2.6	2	1	5.2
RI	SS-1	240007	-0.2	4.4	2	1	8.8
ALL	SS-2(NA)	0	-0.2	0.0	0	1	0.0
ALL	SS-3	2047946	-0.2	37.6	0	1	0.0
RL	SS-3	2047946	-0.2	37.6	6	1	225.7
ALL	SS-4	4788731	-0.2	87.9	0	1	0.0
RL	SS-4	4096268	-0.2	75.2	6	1	451.4
RML	SS-4	320971	-0.2	5.9	15	1	88.4
CH	SS-4	252620	-0.2	4.6	3	1	13.9
PR	SS-4	118872	-0.2	2.2	2	1	4.4
ALL	SS-5	22322693	-0.2	410.0	0	1	0.0
RL	SS-5	22112782	-0.2	406.1	6	1	2,436.6
PR	SS-5	66362	-0.2	1.2	2	1	2.4
PB	SS-5	143549	-0.2	2.6	2	1	5.3
ALL	SS-6	6556200	-0.2	120.4	0	1	0.0
RL	SS-6	6556200	-0.2	120.4	6	1	722.4
ALL	SS-7	4733397	-0.2	86.9	0	1	0.0
RL	SS-7	4733397	-0.2	86.9	6	1	521.6
ALL	SS-8	4968055	-0.2	91.2	0	1	0.0
RL	SS-8	4161571	-0.2	76.4	6	1	458.6
RMD	SS-8	411627	-0.2	7.6	9	1	68.0
RML	SS-8	394857	-0.2	7.3	15	1	108.8

Table 1.5. CONTINUED PAGE 3
FUTURE LAND USE DATA

LU Type	Utilities Zone	Raw Area Gross (sq.feet)	Adjust for R/W	LU Area Net (acres)	Density Factor (DU/ac) (or FAR)	Utilization Factor	LU impact Value (Units as noted)
CM	SS-9	200000	-0.2	3.7	3	1	11.0
I	SS-9	2316841	-0.2	42.5	3	1	127.6
PB	SS-9	223784	-0.2	4.1	2	1	8.2
ALL	SS-10	1854869	-0.2	34.1	0	1	0.0
RL	SS-10	1272774	-0.2	23.4	6	1	140.2
RH	SS-10	121630	-0.2	2.2	9	1	20.1
CL	SS-10	219141	-0.2	4.0	3	1	12.1
E	SS-10	210526	-0.2	3.9	2	1	7.7
PR	SS-10	23274	-0.2	0.4	2	1	0.9
OS	SS-10	7524	0	0.2	0	1	0.0
ALL	SS-11	276296	-0.2	5.1	0	1	0.0
CL	SS-11	124655	-0.2	2.3	3	1	6.9
ALL	SS-12	NA	-0.2	0.0	0	1	0.0
ALL	SS-13	NA	-0.2	0.0	0	1	0.0
ALL	SS-14	NA	-0.2	0.0	0	1	0.0
ALL	SS-15	14437533	-0.2	265.1	0	1	0.0
RL	SS-15	13984044	-0.2	256.8	6	1	1,540.9
PR	SS-15	37326	-0.2	0.7	2	1	1.4
OS	SS-15	39915	0	0.9	0	1	0.0
C	SS-15	376248	0	8.6	0	1	0.0
ALL	SE100	25708500	-0.2	472.1	0	1	0.0
RL	SE100	23110610	-0.2	424.4	6	1	2,546.6
CL	SE100	465066	-0.2	8.5	3	1	25.6
PR	SE100	1404083	-0.2	25.8	2	1	51.6
OS	SE100	707002	0	16.2	0	1	0.0
H	SE100	21739	-0.2	0.4	2	1	0.8
ALL	SE101	19386170	-0.2	356.0	0	1	0.0
RL	SE101	11873742	-0.2	218.1	6	1	1,308.4
RML	SE101	24089	-0.2	0.4	15	1	6.6
CL	SE101	102841	-0.2	1.9	3	1	5.7
CH	SE101	516640	-0.2	9.5	3	1	28.5
PR	SE101	6383476	-0.2	117.2	2	1	234.5
OS	SE101	224406	0	5.2	0	1	0.0
RI	SE101	260976	-0.2	4.8	2	1	9.6
ALL	SE102	9781392	-0.2	179.6	0	1	0.0
RL	SE102	9781392	-0.2	179.6	6	1	1,077.8

Table 1.5. CONTINUED PAGE 4
FUTURE LAND USE DATA

LU Type	Utilities Zone	Raw Area Gross (sq.feet)	Adjust for R/W	LU Area Net (acres)	Density Factor (DU/ac) (or FAR)	Utilization Factor	LU impact Value (Units as noted)
RL	SE103	-1368126	-0.2	-25.1	6	1	-150.8
RMD	SE103	667476	-0.2	12.3	9	1	110.3
CL	SE103	33174	-0.2	0.6	3	1	1.8
RMD	SE103	667476	-0.2	12.3	9	1	110.3
ALL	SE104	14778602	-0.2	271.4	0	1	0.0
RL	SE104	12665612	-0.2	232.6	6	1	1,395.6
RMD	SE104	501433	-0.2	9.2	9	1	82.9
CL	SE104	117355	-0.2	2.2	3	1	6.5
E	SE104	1057035	-0.2	19.4	2	1	38.8
PB	SE104	437167	-0.2	8.0	2	1	16.1
ALL	SE105	35847814	-0.2	658.4	0	1	0.0
RL	SE105	18157769	-0.2	333.5	6	1	2,000.8
RH	SE105	109235	-0.2	2.0	9	1	18.1
RMD	SE105	330994	-0.2	6.1	9	1	54.7
CL	SE105	151982	-0.2	2.8	3	1	8.4
U	SE105	11385759	-0.2	209.1	0.3	1	62.7
PR	SE105	4727382	-0.2	86.8	2	1	173.6
OS	SE105	20217	0	0.5	0	1	0.0
PB	SE105	555429	-0.2	10.2	2	1	20.4
H	SE105	244912	-0.2	4.5	2	1	9.0
RI	SE105	164135	-0.2	3.0	2	1	6.0
ALL	SE106	5660336	-0.2	104.0	0	1	0.0
RL	SE106	5545742	-0.2	101.8	6	1	611.1
RMD	SE106	34609	-0.2	0.6	9	1	5.7
RI	SE106	79985	-0.2	1.5	2	1	2.9
ALL	SE107	24863164	-0.2	456.6	0	1	0.0
RL	SE107	22956453	-0.2	421.6	6	1	2,529.6
RH	SE107	199586	-0.2	3.7	9	1	33.0
RMD	SE107	228913	-0.2	4.2	9	1	37.8
RML	SE107	58076	-0.2	1.1	15	1	16.0
CL	SE107	477986	-0.2	8.8	3	1	26.3
E	SE107	613459	-0.2	11.3	2	1	22.5
OS	SE107	194304	0	4.5	0	1	0.0
RI	SE107	134387	-0.2	2.5	2	1	4.9
ALL	SE108	5958167	-0.2	109.4	0	1	0.0
RL	SE108	5955090	-0.2	109.4	6	1	656.2
PR	SE108	3077	-0.2	0.1	2	1	0.1

Table 1.5. CONTINUED PAGE 5
FUTURE LAND USE DATA

LU Type	Utilities Zone	Raw Area Gross (sq.feet)	Adjust for R/W	LU Area Net (acres)	Density Factor (DU/ac) (or FAR)	Utilization Factor	LU impact Value (Units as noted)
ALL	SE111	24701989	-0.2	453.7	0	1	0.0
C	SE111	24701989	0	567.1	0	1	0.0
ALL	SE112	15756194	-0.2	289.4	0	1	0.0
C	SE112	15756194	0	361.7	0	1	0.0
ALL	SE113	5138431	-0.2	94.4	0	1	0.0
C	SE113	5138431	0	118.0	0	1	0.0
ALL	SE114	7084499	-0.2	130.1	0	1	0.0
RL	SE114	2946595	-0.2	54.1	6	1	324.7
C	SE114	4120442	0	94.6	0	1	0.0
PR	SE114	17462	-0.2	0.3	2	1	0.6
ALL	SE115	1296862	-0.2	23.8	0	1	0.0
R	SE115	680708	-0.2	12.5	6	1	75.0
RML	SE115	397527	-0.2	7.3	15	1	109.5
RMM	SE115	141497	-0.2	2.6	20	1	52.0
CH	SE115	77130	-0.2	1.4	3	1	4.2
TOTAL		306377747	-0.2	5,626.7	1	1	5,626.7

(land uses exclusive of general rights-of-way)

Note: All Residential LU Impact in DU's; All PR, OS & C is in Gross Acres;
Others are in Net LU Acres
Source: William N. Gray GIS System ; Coral Gables Planning Department;
Coral Gables 1978-2000 Future Land Use Map.
LPA 1988 Proposed Future Land Use Map.
[LPA Recommended as of 5/26/88,
and modified as to limited LU and density definitions on 6-8-88]
(Revision 5 \ dated 6-14-88/2:00pm) (8th iteration of overall analysis)
The level of detail supported by source data limits analysis to
an overall error rate estimated between 3 and 4 percent.

Table 1.6.
FUTURE LAND USE DATA
City of Coral Gables
COASTAL ZONE CAPACITY ANALYSIS SUMMARY

See Utility Zone Map 4.1. for Zone locations and extents.

CLASS	SS-3	SS-4	SS-5	SS-6	SS-7	SS-15	SE109	SE110
ALL	2047946	4788731	22322693	6556200	4733397	14437533	18916383	8288288
RL	2047946	4096268	22112782	6556200	4733397	13984044		4683605
RML		320971						
RMM								
CH		252620						
PR		118872	66362			37326	18916383	
PB			143549					2780149
OS						39915		
C						376248		
E								824534

CLASS	SE111	SE112	SE113	SE114	SE115	TOTAL (Sq. Ft.)	TOTAL (Acres)
ALL	24701989	15756194	5138431	7084499	1296862	136069146	3,124
RL				2946595	680708	61841545	1,420
RML					397527	718498	16
RMM					141497	141497	3
CH					77130	329750	8
PR				17462		19156405	440
PB						2923698	67
OS						39915	1
C	24701989	15756194	5138431	4120442		50093304	1,150
E						824534	19

Source: William N. Gray GIS System ; Coral Gables Planning Department;
Coral Gables 1978-2000 Future Land Use Map.
LPA 1988 Proposed Future Land Use Map.
[LPA Recommended as of 5/26/88,
and modified as to limited LU and density definitions on 6-8-88]
(Revision 5 \ dated 6-14-88/2:00pm) (8th iteration of overall analysis)
The level of detail supported by source data limits analysis to
an overall error rate estimated between 3 and 4 percent.

4.
LAND USES ADJACENT TO THE CITY

The City of Coral Gables is generally bounded by major arterial roads which has resulted in patterns of land use that do not reflect the master planned heritage of the City. Therefore, land use patterns beyond the city limits may appear different than those adjacent land uses within the city. The Existing Land Use map series identifies the generalized land uses of land adjacent to its boundaries. No designated areas of critical state concern are present within the City Limits. There are no unincorporated enclaves within the corporate limits. No adjacent unincorporated areas are involved in active annexation into the City. No action has been undertaken by the property owners of such areas to join the City. At least three areas, each bounded on three sides by the City Limits, are to be reviewed for the potential long term alternative impacts on level of service issues in the event the citizens of such areas elect to join the City or otherwise require city services.

5.
POPULATION

POPULATION PROJECTIONS FOR CORAL GABLES

5.1.
Introduction

The Need for Population Projections: Sound professional practice requires that comprehensive planning be based on projections of future population characteristics. An understanding of potential population change is essential to the preparation of a plan which will be responsive to the anticipated conditions facing Coral Gables.

Florida statutory law and the Florida Administrative Code require that local governments prepare population projections as part of their comprehensive plan revision process. Local government plans must now adequately address the needs of the projected population in each of the required comprehensive plan elements. The population projections are reviewed and approved by the Florida Department of Community Affairs, which measures the viability of a plan "in terms of its ability to accommodate increasing population."

Data Sources for Population Projections: The population data utilized for the Coral Gables projections are based on the most current and accurate data available. The historical population data is from the decennial Census conducted by the U.S. Bureau of the Census. The official current population estimates used are prepared by the University of Florida Bureau of Economics and Business Research (BEBR). Population projections are prepared for Dade County by BEBR, but only estimates of current population for the proceeding year are available for the city. Local data

sources for population projection include city housing permit and residential capacity data, subarea projections prepared by the Metro-Dade County Planning Department, and residential electric meter connections. The Coral Gables population projections have been based on Census data, official BEBR estimates, and Metro-Dade County Planning Department projections.

5.2. Historic Population Trends

Resident population and household trends for Coral Gables, Dade County, and Florida are illustrated in Table 1. The figures shown for 1960, 1970, and 1980 are Census estimates of resident population. The 1987 estimates have been interpolated from county estimates. Resident population is defined by the Census Bureau and BEBR as being those persons who reside in a place for six months or more each year, and are often referred to as permanent residents.

The resident population of Coral Gables increased from 34,793 in 1960 to 43,241 in 1980, according to the Census. The estimated gain in residents was 7,701 from 1960 to 1970, and 747 from 1970 to 1980. The compound annual population growth rate in the city was 2.02 percent during the 1960s and 0.17 percent during the 1970s. This rate was significantly lower than the compound annual rate of growth in Dade County or the state during the 1960s. From 1970 to 1980, the city's rate of population growth was also less than the Dade County rate of 2.52 percent, and was substantially less than the state rate of 3.68 percent.

In 1987, the number of residents in Coral Gables was estimated at 44,120, based on Metro-Dade subarea figures. This figure is 879 more than the 1980 Census estimate. The BEBR estimates, which are based partially on residential electric meter connection data and are subject to statistical error at the local level, were not used. The Metro-Dade figures, as the official county population estimate, are assumed to be sufficiently accurate as a basis for projecting the future population of the city and assuring consistency with the county comprehensive plan.

5.3. Historic Household Trends

Table 1.7. shows that the rapid growth in the number of households established in Dade County and Florida in the 1960s and 1970s moderated during the period from 1980 to 1986. Household formation has continued at a slightly higher rate than population growth. Trends toward later marriages, fewer children per family, and more single-person households have resulted in a decline in the average number of persons per household. There are recent indications, though, that the rate of decline in persons per household is now also moderating.

A significant factor in the changing resident population of Coral Gables recently has been the declining number of persons per occupied household. Persons per household decreased from 2.84 in 1960 to 2.20 in 1970, and to 2.03 in 1980. The 1987 estimate shows a stabilization of this decline, at an estimated 2.03 persons per household. The trend in persons per household at the county level reflects the national and state trend. Demographers at the Bureau of Economic and Business Research agree with national population experts that the decreasing number of persons per household should continue in the short run, although the rate of decline is expected to slow.

There are recent indications that some Dade County communities may now be experiencing a reversal of the declining persons-per-household trend. According to the population specialists at the Metro-Dade County Planning Department, increases in the average number of persons per household are believed to be occurring in some areas where families of Hispanic origin comprise the majority of new residents. A trend toward larger household size may also be occurring in areas which have become more attractive to young couples and families and relatively less attractive to older couples. The City of Miami Beach is an example of a community where the persons per household estimate rose from 1.70 in 1980 to 1.75 in 1986.

5.4. COMPONENTS OF POPULATION CHANGE

Demographic Components

The population of a community can be divided into two main groups, defined on the basis of residency. The resident population lives in the community six months or more each year, and is comprised of persons who occupy year-round housing units and persons in group quarters. Group quarters include such residential uses as orphanages, nursing homes, jails, and dormitories. Population estimates reported by the Census Bureau and projections reported by BEBR and Metro-Dade County only address resident population. Resident population estimates for Coral Gables are shown in Table 1.7.

There is another population group, the seasonal population, that is particularly important for many Florida communities. Seasonal population is important because it can place significant demands on public services and facilities. This population component is comprised of persons who occupy transient lodging facilities and seasonal housing units intended for short-term rental, or are non-resident visitors not staying in lodging. Transient lodging includes hotel and motel units, apartments and other housing units leased for less than six months. Seasonal housing units are reported in the Census as vacant seasonal and mitigatory units and as vacant year-round units held for occasional use.

Table 1.8. presents estimates of the seasonal population categories for Coral Gables for 1986. This data has been obtained from interviews with city officials and local property managers; an analysis of the Master File Statistics maintained by the Florida Department of Business Regulation, Division of Hotels and Restaurants; and an interpolation of seasonal population estimates prepared by Metro-Dade County. The estimate for the potential population in housing held for seasonal and occasional use has been derived from the 1980 Census data and adjusted to account for a slight increase in the total number of housing units in the city between 1980 and 1988. Day trips have been determined not to be a significant or quantifiable population factor because residents' commuter trips to employment outside the city probably result in an offset of non-resident daytime population. Visiting population is estimated to account for 4,601 persons at peak season. This figure represents persons staying with family and friends.

The 1988 estimate of seasonal population can be used that forecast future seasonal population based on two assumptions: First, that there will be no change in the number of transient lodging units in the city other than those currently under construction; and second, that the number of seasonal and occasional housing units will remain at the same percentage of total housing units as was reported in the 1980 Census.

Residential Capacity

Coral Gables is approaching build-out. During the 1960s and 1970s, population growth in the city was accommodated by the construction of new housing units on vacant, residentially-zoned land. Most of this land has now been developed, leaving a very limited amount of suitable vacant land for the development of new residential units. The limited remaining residential capacity is a very significant factor for considering the future population potential in Coral Gables. Some additional residential units could possibly be accommodated through redevelopment of existing developed land at higher densities. The extent of this potential is not great, primarily because much of the residential property in the city is reasonably sound. Most of the housing is unlikely to be redeveloped during the planning period over the next 10 years.

There is another residential capacity factor which influences the total population of a community, the vacancy rate. Vacancy rates typically fluctuate with changing market conditions. Vacancy tends to be lower in housing units which are owner-occupied than in renter-occupied units. Based on previous estimates and current conditions for all occupied units, the vacancy rate in Coral Gables can reasonable be expected to fluctuate between three and six percent during the planning period. It has been assumed that the vacancy rate in the city over the period covered by the population projections will average about four percent.

POPULATION PROJECTIONS

A projection of Coral Gables population through 2005 is shown in Table 1.9. A ratio method of projection was used to derive the projected year-round population in the city for the time period from 1990 to 2005 in five-year intervals. These figures are based on population estimates and projections prepared by the Metro-Dade County Planning Department and published in February 1987. City projections were prepared in July 1987. There are two important reasons for the selection of the Dade County data. First, the projection of the county population by the County Planning Department includes subarea projections which are not available from the state. Second, the projected population for the City of Coral Gables is now required to be coordinated with the county's projections.

The projection methodology used by the County Planning Department involved county, subarea, and census tract level analyses. A revised 1985 population estimate for Dade County was also prepared. This estimate of 1,770,760 is higher than the official state estimate of 1,759,251 for the county's 1985 population. At the subarea level, the Dade County projections consider an estimated population at buildout, historical data from the Census, and a current population estimate. The application of a factor for residential capacity is particularly appropriate for Coral Gables, which has limited remaining vacant land for development.

Dade County Subareas 5.1 and 5.3 contain the Census Tracts which include the municipal area of Coral Gables. To derive the projections for the city, the census tracts in this subarea which are within the city or cover parts of the city were identified. The population estimates for 1970-1985 and projections for 1990-2005 for these tracts were then totaled. The Census Tracts which do not contain an area of the city were excluded to further refine the level of analysis. A ratio of the city population estimates for 1970, 1980, and 1985 was then derived by dividing the city population figure for the respective years into the corresponding census tract totals.

Between 1970 and 1985, the city population declined from 88.7 percent of the larger area population to 86.4 percent. An assumption was then made that this declining percentage would be held relatively constant over the projected five year intervals to 2005. This percentage increased to 86.5 percent in 1990, decreased slightly to 86.4 percent in 1995, and increased to 86.5 percent in 2000. The totals of the projected Census Tract populations were then multiplied by this percentage of derive the projected city population. This analysis indicates an increase in the permanent, resident population from 1985 to 2005, when the projected resident population reaches 44,487. This figure does not include the seasonal population, which has been added to the projections in Table 3 for each interval to determine the functional, or total, population. With the seasonal population adjustment, the total population projected for 2005 is 51,691. The City's population age and sex characteristics for 1980 are shown in Table 1.10. and Chart 1.11.

Conclusion

The population projections presented in this report are prepared for planning purposes only, and should not be construed to define actual population limits. A change in the assumptions in either methodology will result in a shift in the projected population figures. The actual population of the city at any given point in the future is dependent on the implementation of development policies during the planning period covered in the projections, as well as changing social and economic conditions which are beyond the scope of these projections.

Table 1.7
COMPARATIVEPOPULATION CHANGE 1960-1987 ESTIMATES

Coral Gables, Dade County, and Florida

Area	1960	1970	1980	1987
Coral Gables				
Total Population	34,793	42,494	43,241	44,120
Group Quarters Population	2,386	9,571	9,890	9,898
Household Population	32,407	32,923	33,351	34,222
Households	11,411	14,965	16,429	16,858
Persons per Household	2.84	2.20	2.03	2.03
Dade County				
Total Population	935,047	1,267,792	1,625,781	1,829,000
Households	308,325	428,026	609,830	692,000
Persons per Household	2.98	2.91	2.63	2.61
Florida				
Total Population	4,951,460	6,791,418	9,747,197	12,043,608
Households	1,550,044	2,284,786	3,744,254	4,789,135
Persons per Household	3.11	2.90	2.55	2.46

Sources:

City of Coral Gables Planning Department, 1988.
Metro-Dade County Planning Department, Population Estimates and Projections, 1987, and telephone contacts, 1988.
U.S. Department of Commerce, Bureau of the Census, Census of Housing, General Housing Characteristics, 1960, 1970, 1980.
University of Florida, Bureau of Economic and Business Research, telephone contacts, 1988, and "Population Studies," Bulletins 79 and 80, 1987.
Van Horn Associates, Inc., 1988.

Notes:

Coral Gables 1987 figures based on 1980-87 units permitted (X 95 % occupancy), and reported demolitions of residential units (permits-demolitions=452 new units).
Group quarters population not included in table.

Table 1.8
SEASONAL POPULATION ESTIMATE, 1988

Seasonal Population Category	Seasonal Population	Reported Units	Persons per Unit
Non-Resident Lodging Units			
Hotels and Motels	1530	956	1.6
Rooming Houses and Transient Apartments	681	426	1.6
Mobile Homes	0	0	na
R.V. Parks and Campgrounds	0	0	na
Seasonal and Occasional Units	451	205	2.2
Day Trips & Visits	4601	na	na
Estimated Peak Seasonal Population	7017		

Sources: Florida Department of Business Regulation, Division of Hotels and Restaurants, "Master File Statistics," April 1988.
U.S. Department of Commerce, Bureau of the Census, Census of Housing, General Housing Characteristics,1980
Metro-Dade County Planning Department, "Population Estimates and Projections," 1987, and "Seasonal-Transient Population," 1987.
Van Horn Associates, Inc., 1988.

Table 1.9
CORAL GABLES POPULATION 1970-1985 ESTIMATES 1990-2005 PROJECTIONS
As a Percentage of Subarea Census Tracts, Dade County, Florida

Census Tract	1970	1980	1985	1990	1995	2000	2005
56.00	4,059	4,351	4,565	4,526	4,528	4,528	4,525
61.01	5,033	5,283	5,343	5,351	5,362	5,370	5,378
61.02	6,071	6,187	6,260	6,268	6,280	6,290	6,299
62.00	9,906	10,203	10,391	10,410	10,433	10,450	10,461
74.00	6,742	6,331	6,451	6,455	6,498	6,478	6,487
75.01	2,757	2,719	2,766	2,769	2,774	2,779	2,783
75.02	5,199	5,682	5,681	5,690	5,701	5,710	5,718
75.03	1,081	841	846	844	846	847	849
78.01	835	913	928	942	951	958	965
79.01	4,093	3,620	3,662	3,661	3,668	3,674	3,679
80.00	2,145	3,777	4,079	4,199	4,242	4,276	4,306
Tract Totals	47,921	49,907	50,972	51,115	51,283	51,360	51,450
Subarea / City	88.7%	86.6%	86.4%	86.5%	86.4%	86.5%	86.5%
Percent Change	na	-2.0%	-0.2%	0.1%	-0.1%	0.1%	0.0%
City Permanent	42,494	43,241	44,059	44,212	44,322	44,432	44,487
City Seasonal	na	na	6,633	7,204	7,204	7,204	7,204
City Total Populatior	na	na	50,692	51,416	51,526	51,636	51,691

Notes: Figures rounded.
Peak seasonal figures adjusted for hotel units, held constant after 1990.

Sources: Metro-Dade County Planning Department, Research Division, "Population Estimates and Projections," "Population Projections by City," and "Seasonal-Transient Population," 1987.
Van Horn Associates, Inc., 1988.

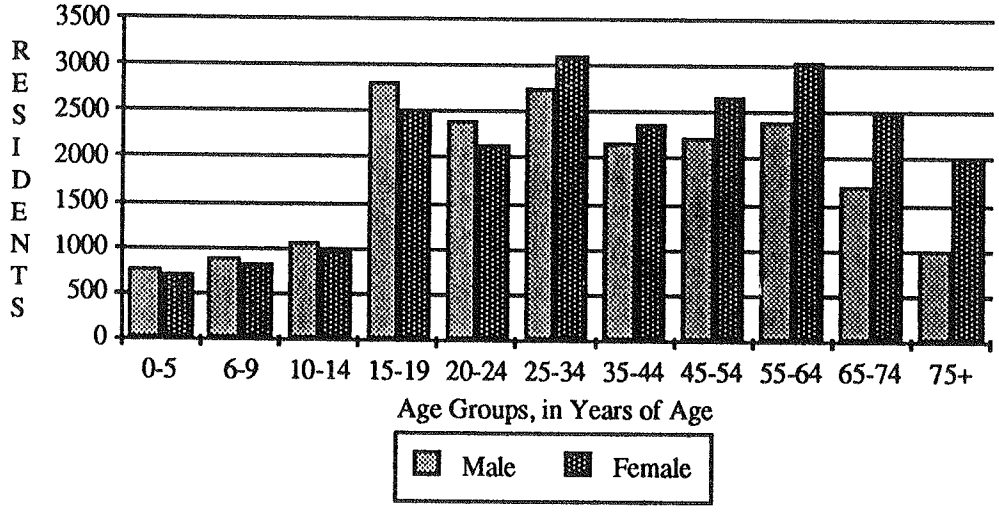
Table 1.10
POPULATION BY AGE AND SEX
CORAL GABLES 1980

Age Group	Male	Female	Total
0-5	772	714	1486
6-9	889	825	1714
10-14	1073	988	2061
15-19	2816	2533	5349
20-24	2417	2159	4576
25-34	2772	3096	5868
35-44	2161	2386	4547
45-54	2219	2682	4901
55-64	2412	3057	5469
65-74	1696	2531	4227
75+	1011	2026	3037
Total (a)	20,238	22,997	43,235

Note: (a) Ages not reported by Census for 6 persons.

Sources: U.S. Census Bureau, 1980 Census of Housing, Summary Tape File 1A, 1982.
Van Horn Associates, Inc., 1988.

Chart 1.11
POPULATION BY AGE AND SEX
CORAL GABLES 1980



6.
LAND USE ANALYSIS:

6.1.
This section is an analysis of the availability of facilities & services as identified in traffic circulation, sanitary sewer, solid waste, drainage, potable water, & natural groundwater aquifer recharge elements.

6.1.1.
TRAFFIC CIRCULATION ANALYSIS
In recent years, certain areas in the City of Coral Gables have experienced increases in employment levels. The area of Downtown, in particular, accounts for most changes in employment. Commercial developments generates additional vehicular traffic. This new traffic generated within the limits of the City must be accommodated in conjunction with traffic which traverses the area to other destinations. The through traffic is therefore most extensively affected by population and employment trends outside the City.

Traffic volumes have generally been increasing in Coral Gables during the past decade. This trend is expected to continue at least on major arterial throughout the City. For purposes of this analysis, 1986 Average Daily Traffic (ADT) volumes on the principal roadway system within the City were used. The traffic volume data collected by Dade County represents the most recently available traffic information. Identification of additional roadway performance characteristics must wait for further data to be obtained. As Level of Service analysis procedures are implemented, such data will be obtained. Areas which require attention include the downtown; US-1; Old Cutler Road; historic road corridors; and local neighborhood roadways impacted by regional traffic.

6.1.2.
SANITARY SEWER ANALYSIS

City maintenance personnel report no abnormality of pump stations operation that would be suspect of pump capacity problems.

Approximately 3 square miles of the City are not sewered, where homes and some businesses are on septic tank and drainfield systems.

Coral Gables is not inside of the cone of influence of any public wellfield. Parts of the City fall inside the 1000ppm salinity concentration line at the base of the aquifer.

The residential single family and duplex areas of the City served by septic tanks appear to not pose a threat to the public health. No instances of ground water contamination have been reported to date. The City should continue to be alert for any such occurrences.

Multi-family, commercial, industrial and institutional land uses that are currently served by septic tank systems could pose a threat to the public health if not properly used and maintained.

6.1.3. SOLID WASTE ANALYSIS

City conducts garbage and trash collection and disposes at county facilities.

City contracts with a private hauler for large generators of solid waste.

City has an ongoing equipment replacement program.

City does not segregate or recycle any portions of the solid waste. The county does have programs which provide such disposal needs.

Special pickups of certain waste categories such as oversized or unusual wastes are infrequent and are provided on an as needed basis within the normal capacity of the collection system.

Hazardous wastes are not collected by the City, but remain the responsibility of the waste generator to dispose through authorized services and agencies outside of the City's collection system.

Solid waste collection system is effective under current practices.

State enforcement of the thirty percent recycling rule is to be met by the county's resource recovery facility as they meet state requirements. The City conducts its collection duties in accord with county rules.

6.1.4. DRAINAGE ANALYSIS

There are two major outfall systems of positive drainage that service the Central Business District, the industrial area south of Bird Road and east of Le Jeune Road, and adjacent residential areas. Approximately 750 acres are served by the two systems. Because they are interconnected in the upper reaches, they cannot be

entirely separated. One discharges at Bird Road and Granada and the other at Riviera and Jeronimo. The former is also provided with a pumping station.

The area of the City that lies south of Sunset Drive and east of Old Cutler is entirely served by a series of outfalls and discharges. Exact locations and tributary drainage areas were not available as of July 1988. The areal extent of this basin is approximately 2,800 acres.

Other private and public systems discharge to the Coral Gables waterway and the lakes and canals that are inside of the University of Miami. There was no information available as to the extent of these systems as of July 1988. These systems add about 500 acres of surface drainage.

The Florida Department of Transportation maintains the drainage system of South Dixie Highway. This system drains approximately 100 acres.

All remaining drainage systems are comprised of infiltration-percolation via french drains or slab-covered trenches. These systems discharge by gravity into the aquifer.

There are a few drainage wells, mainly in the Central Business District that serve high rise buildings.

The Granada Golf Course is used as a dry-retention and storage bleeddown basin during periods of heavy rainfall.

The City's drainage system experiences occasional siltation and plugging of both positive drainage and percolation pipes by debris and vegetation. Such conditions are normally addressed through general maintenance.

Portions of the existing percolation systems are beyond their life expectancy (30 years); and some do not have any service life left. These systems need to be identified and replaced on a scheduled basis.

Portions of areas in the coastal areas, east of Old Cutler and south of Sunset, have suffered subsidence and settlement. Portions of these drainage systems are undersized to meet current modern design standards, or are ineffective, as inlets have higher elevations than once-tributary surrounding grades.

Portions of the City which are without structured storm drainage need to be monitored to determine any need for improvements.

Some positive drainage and percolation systems are not provided with the means of trapping greases, oils, grit and sediments.

6.1.5.
POTABLE WATER DISTRIBUTION SYSTEM ANALYSIS

The Potable Water provider of both water treatment and its distribution is Metro Dade County Water and Sewer Authority. The City does monitor general conditions of systems outside of its direct charge, if only to coordinate projects to avoid major conflicts in location and scheduling and operation of interrelated but independently run utilities.

Many properties are served by aged, undersized mains. Sizes vary from 1 1/2" to 4".

Some properties are long distances from fire hydrant service (up to 1500').

Many properties are served by a single fire hydrant.

Many hydrants are served by 4-inch lines.

Some cases of 4-inch lines feeding a 6" line, with hydrants were found.

The backbone of the distribution network was found to be largely 8 and 12, with some 16 and 20 inch mains, fed from a single 30" supply line.

Various "bottlenecks" exist where small mains feed larger mains.

Many houses and businesses are fed from the rear of the properties, where there are undedicated easements and access to meters is poor.

Many water distribution lines have exceeded their service life and should be replaced. Most of these lines are also undersized. Replacement should be with pipes of necessary diameter.

Coral Gables contains sections of the City where hydrant spacing is less than desirable. Metro Dade standards call for fire hydrants to have the following spacing, measured along the main, and are compared to range of distances found in Coral Gables shown in parenthesis:

* Residential: 750 feet maximum (300 to 1,800 feet)
* Low-rise multifamily residential: 600 feet (300 to 1,200 feet)
* Commercial, industrial, high rise residential: 300 feet (200 to 1,300 feet).

Coral Gables contains sections where water main sizes are inadequate. Metro Dade standards call for the following pipe sizes, as compared to the sizes found in Coral Gables shown in parenthesis:

Section line roads - Douglas, Granada, Red, Tamiami Trial, Coral Way, Bird, Miller, Sunset, Kendall and Old Cutler: 16 inch minimum (8 to 24 inch)

Half section line roads - LeJeune, Columbus, Santa Maria, Maynada, Milan, Anastasia (Sevilla - San Sebastian), Blue and Hardee: 12 inch minimum (4 to 8 inch)

Other minor and collector roads - 8 inch minimum (1 1/2 to 8 inch)

Cul de Sacs: to 200 feet: 8" (6"), greater than 200 feet: 12" (6")

Main lines serving hydrants: 8 inch (3 to 24 inch)

Substantial improvements are necessary to bring the system into compliance with modern standards. Approximately 30 miles of pipelines are required as a minimum to provide an acceptable level of fire protection service. Were this to be a new system designed to modern standards an additional 60 to 80 miles of pipelines would be required. Detailed research and analysis is necessary to identify the actual needs and associated costs and scheduling.

6.1.6. NATURAL GROUNDWATER RECHARGE ANALYSIS

Approximately 10 percent of the City is drained by positive drainage systems that offer minimal recharge possibility by indirect infiltration of stormwaters into the groundwater.

Local hydrogeologic conditions are as follows:
Coral Gables lies over the Biscayne Aquifer, a surficial aquifer.
Groundwater is locally available for a variety of uses. Quality is good, and would be suitable for drinking water supplies, except for the presence and threat of salt water intrusion.
The base of the aquifer is partially contaminated with salt water. Groundwater withdrawals have kept the chloride concentrations at a balance over the last 10 years.

Approximately 50 percent of the City is provided with french drains for stormwater disposal which offer direct infiltration of runoff into the groundwater.

Approximately 40 percent of the City's area infiltrates stormwaters and recharges the aquifer through surface infiltration.

Land use and development practices, strong support for vegetation and landscaping all provide for a high degree of valuable and effective surface stormwater infiltration and groundwater recharge.

6.2.
ANALYSIS OF UNDEVELOPED LAND

The City is a well established community which is nearly complete in the absorbtion of undeveloped land. The majority of land areas remaining vacant are tracts of environmentally sensitive coastal lands planned for either protected recreation and open space or conservation uses. Limited lands exist which, while not yet occupied, are considered committed planned developments, with their impacts having been sufficiently reviewed under development codes predating the adoption of this plan. A very limited number of sites may have had historic zoning and land use classifications which do not reflect current growth management trends in the area, and lacking valid development orders are subject to revision in their land use and / or zoning classifications in recognition of their current status within the community. Historic platted lands which have not been developed in accord with such original plats may be subject to review in the context of current community conditions. The balance of undeveloped lands are isolated parcels in land use categories where their intended development was generally provided for in earlier development projects. Examples of these would include single and duplex residential sites which remain serviced by existing infrastructure in place. The low intensity of such remaining sites would not normally pose a signicant impact on the facilities required to service them. As a prized planned residential community, few such sites remain. The next generation of growth is taking place in the form of intensification of land use by one of three methods.

a. Aggregation of smaller parcels into tracts which permit more intense utilization;
b. Redevelopment of existing sites which were developed below their original planned capacity, or
c. Development in response to the development of new use demands arising out of regional influences unanticipated by the original City Master Plan.

Development in the Downtown area is typical of the second method. The center city was planned for highrise development which, typical of the earlier downtown economy, is not reflected in the earlier buildings. Recent market demands have now begun to result in development densities in commercial land uses which reflect the original city master plan.

The third method is seen most directly in the impact of the regional Metropolitan Dade County Metrorail system coursing through the center of the community, along the U.S. Highway 1 corridor. In its path are rising pressures for more intense land uses focused on the advantages of direct access to the rail system through two stations in or adjacent to the city.

The greatest tracts of undeveloped land in the city are dominated by the coastal

properties owned by Dade County. These tracts have been designated for predominately conservation uses. Other undeveloped lands are designated for residential development.

As indicated in Table 1.3. Existing Land Use 1978, about 15% of the City was unplatted and considered undeveloped. That has declined during the last decade. It is now estimated that, with the exception of Government owned lands, less than 5% of the City remains unplatted. While precise data is not available as of July 1988, the small land area remaining is within the margin of error for the current data available to permit the City to be treated as essentially complete in its initial absorption of developable land. The development remaining is either fulfillment of planned projects or the normal process of redevelopment by replacement of existing construction. This redevelopment activity is generally most evident in the commercial downtown district as well as the US 1 / Metrorail corridor as previously mentioned.

Large tracts of land remaining for development are limited to the coastal zone. A more detailed analysis of these lands has been undertaken in the Coastal Management Element.

An analysis of the land needed to accommodate the projected residential population is included in the Housing Element.

All undeveloped lands have been found suitable for uses as identified in the Future Land Use Element. Based upon site specific factors including soils, topography, natural resources, and historic resources, each site must be analyzed to determine specific use and development limitations which may apply.

Commercial land use in the City center requires special attention. The downtown of Coral Gables has become a very special center of international business, finance, banking and diplomacy. Supporting this is the hospitality industries of hotels, restaurants, and shops. In this setting, the issue is not one of how much land is available, but rather at what intensities should the existing land be allowed to be developed and still preserve the charm, grace, and character of the City which initially attracted such businesses. Limits should also be set to protect surrounding residential neighborhoods. Based on the historically planned limit of 13 stories of building height in the downtown, the area has continued to be developed as a concentrated urban center.
Over 50 % of the parcels in the central business district are underutilized. The local network of streets, alleys, water, sewer and other services have generally been preplanned to support significant development. Demand appears capable of absorbing all of the developable land which the City determines is appropriate for a balanced urban community.

6.4.
ANALYSIS OF NEED FOR REDEVELOPMENT:

Based upon the potential or existing presence of blighting conditions and the need for reduction or elimination of uses inconsistent with the city's character and future land uses, selected redevelopment actions are identified. An important redevelopment area designated for specific research and redevelopment attention is the industrial area bounded by Bird Road, Ponce de Leon Boulevard, the City limits, South Dixie Highway (US Highway 1), and Le Jeune Road. This area is under active review by the City as the subject for an indepth analysis and action program to prepare for the changing character and market demands resulting from the presents of the Metrorail Station adjoining to the east, and the rise of professional service, commercial and light industry replacing the automotive and heavier industries of prior years. No proposed landuse changes shall be made for this area until the detailed study is completed.

The Mac Farlane Homestead and St. Alban's Park Subdivisions are part of a residential community South of US Highway 1 and East of Le Jeune Road which is the subject of a coordinated effort by Metro Dade County and the City of Coral Gables to foster redevelopment of the neighborhood. The City is actively supporting the installation of improved utilities in the area.

6.5.
ELIMINATION OF INCONSISTENT LAND USE AND DEVELOPMENT ACTIVITY:

There exists a continuing need to eliminate and prevent land uses and specific characteristics of development inconsistent with or directly damaging to the community's unique character & planned future land uses.
Today, such inconsistencies are routinely include the permit and review process for private development activities which are, to a great degree, regulated as to land use and detailed functional and aesthetic design. More attention and mutual cooperation is required however, between the City and the many Federal, State and County agencies in the detailed capital projects which are undertaken within the City. Specific design and aesthetic considerations, historic preservation, cultural and local community involvement processes need to be given the full attention of those other agencies with jurisdictional responsibilities within the City. The City in turn will assist in establishing and maintaining greater awareness of the City's unique requirements, such as with design and aesthetic standards for buildings, lighting, signage, landscaping, and maintenance of government projects which may otherwise be exempt from local regulations. Another example may be the maintaining of canopy trees over roads by adding extensive new trees of proper species and size to provide a full restoration of the character which may be lost by a required improvement.

6.6.
REDEVELOPMENT COORDINATION WITH TRANSPORTATION

Redevelopment activities which are included in the policy programs of this plan are expected to require coordination with transportation facilities, and management practices to provide needed support. The opportunity to encourage access to a wide variety of transit facilities is one way of focusing support on a desired redevelopment activity.

6.7.
FLOOD PRONE AREA DEVELOPMENT

Development & redevelopment in flood prone areas must be based upon suitability determined from Flood Insurance Rate Maps, Flood Hazard Boundary Maps, or other accurate data to assure the preservation of flood protection to the subject property and the entire community dependent on the overall area.

The flood prone nature of areas as reflected in the flood prone map does not preclude regulated use. Such lands are found to be used for conservation, nature parks or low density residential uses.

No lands have been designated for publicly subsidized redevelopment which are considered hazardously flood prone areas. New developments are regulated and are not permitted to develop in flood prone areas unlawfully.

The following sections are adopted by City ordinance:

FUTURE LAND USE GOALS, OBJECTIVES, AND POLICIES

The following goals, objectives and policies form a foundation upon which specific community management decisions must be based when issues involving land use are being considered.

7.
GOAL:

THE CITY OF CORAL GABLES ESTABLISHES THE LAND USE GOAL TO MAINTAIN AND ENHANCE THE EXTRAORDINARY CHARACTER AND QUALITY OF LAND USES WITHIN THE CITY IN MEETING THE AESTHETIC, PHYSICAL, SOCIAL, CULTURAL, ECONOMIC, NATURAL AND MAN MADE ENVIRONMENTAL NEEDS OF ITS RESIDENTS AND VISITORS IN A MANNER THAT WILL BALANCE IMMEDIATE AND LONG TERM COMMUNITY INTERESTS AND RESOURCES IN THE ORDERLY PROTECTION OF THE POPULATION'S HEALTH, SAFETY, AND WELFARE.

7.1.
OBJECTIVE
The location, extent and intensity of future land use as adopted in the Future Land Use Map Series will be based, in part, upon the physical and financial feasibility of providing all affected areas with services at Levels of Service (LOS) which meet or exceed the minimum standards adopted in the comprehensive plan.

7.1.1.
POLICY
Effective as of October 1, 1991, development orders authorizing all threshold development, or changes in land use classification, shall be contingent upon the ensured provision of affected services at least at the required Levels of Service (LOS) by appropriate means, concurrently with the projected effective date of actual need attributable to the development, which for this plan may be estimated to be up to 364 days, based upon the unique conditions of each development, following the time and date of the securing of the Final Certificate of Occupancy for such space as may otherwise be lawfully occupied. Ensured provision of affected services may include agreements or other detailed, obligatory processes by which the services shall be made real in a timely and equitable fashion. The definition of such processes and procedures shall be included in the development regulations of the City.

7.1.2.
POLICY
Requirements and procedures shall be established by October 1, 1991, for all threshold development to contribute its proportional share of capital facilities, funds, and/or land thereof, necessary to accommodate the impact of the proposed development or increment of redevelopment over and above preexisting development on a site.

7.1.3.
POLICY
The city will establish by October 1, 1990, a continuing program of monitoring and compilation of data necessary to determine existing and projected Levels of Service and to periodically prepare Evaluation and Appraisal Reports for submittal to the State land planning agency, as required by Chapter 163, F.S. and Rule 9J-5, F.A.C.

7.1.4.
POLICY
The City shall adopt and implement land development regulations by September 1, 1989, pursuant to s.163.3202, F.S., as interim regulations, while development of more detailed and integrated regulations are developed, considered and adopted in full and open public process. This two-staged approach is found by the City to be the balanced and responsible action it is to take, in recognition that time, limited resources, and the orderly, considered process of professional advice, public participation and official deliberation and adoption of detailed and complete regulations can not be accomplished in full within the schedule set forth in the statute. In the event that the statutory schedule is changed, the interim regulations may not be adopted, depending upon the final regulations to serve the appropriate purpose.

7.1.5.
POLICY
The adopted Future Land Use Map Series shall used as a basis for programs, actions and regulations established to carry out the intent of this Plan.

7.2.
OBJECTIVE
Efforts shall be made to control blighting influences, and redevelopment shall be encouraged in areas experiencing deterioration.

7.2.1.
POLICY
Routine monitoring of the City will be done to permit early detection of blighting influences. Procedures will be established by 1992 to support action correcting such blighting influences and to encourage appropriate redevelopment in areas where existing conditions have deteriorated to unacceptable levels.

7.3.
OBJECTIVE
By the year 1995 the city shall endever to reduce by at least 75% the number of land uses which are inconsistent with the Future Land Use Map and related parts of this plan.

7.3.1.
POLICY
Residential neighborhoods should be protected from intrusion by incompatible uses that would disrupt or degrade the health, safety, tranquility, aesthetics and welfare of the neighborhood by noise, light, glare, odor, vibration, dust, hazardous materials or traffic.

7.3.2.
POLICY
Uses designated in the plan which cause significant noise, light, glare, odor, vibration, dust, hazardous conditions or industrial traffic, shall provide buffering when located adjacent to or across the street from incompatible uses such as residential uses.

7.3.3.
POLICY
Normally disruptive uses may be permitted on sites within related districts only where proper design solutions are demonstrated and committed to in advance which will be used to integrate the uses so as to buffer any potentially incompatible elements.

7.3.4.
POLICY
Evaluate and revise the Zoning Code, within one year of the effective date of this plan's adoption, as necessary to provide the appropriate instruments to enforce and effectively carry-out the requirements of this plan.

7.3.5.
POLICY
An examination of the revised Zoning Code shall be made to determine its consistency with the Land Use Plan. Within two years of the adoption of this plan, action shall be taken to correct any remaining inconsistencies.

7.4.
OBJECTIVE
Provide for protection of natural and historic resources.

7.4.1.
POLICY
Implement the policies of the Coastal Management Element, Conservation Element, Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Natural Ground Water Aquifer Recharge Element, and the Historic Preservation Element.

7.4.2.
POLICY
Include balanced consideration for protection of natural and historic resources in the consideration of granting all development orders.

7.5.
OBJECTIVE
Maintain the overall coastal area residential population at densities which will result in an average overall residential development density at or below six (6) dwelling units per gross acre averaged throughout the coastal area East of Old Cutler Road.

7.5.1.
POLICY
Restrict residential development which will cause the average overall residential development density to exceed six (6) dwelling units per gross acre averaged throughout the coastal area East of Old Cutler Road.

7.5.2.
POLICY
The City Planning Department will establish, by July 1, 1990, and maintain an inventory of dwelling units and overall land areas East of Old Cutler Road in order to maintain an up-to-date density average against which proposed projects may be tested.

7.6.
OBJECTIVE
Coordinate the city's actions with appropriate resource planning and management plans prepared pursuant to Chapter 380, FS, and approved by the Governor & Cabinet in a fashion consistent with this plan.

7.6.1.
POLICY
Coordinate with State, regional, county and local agencies to ensure mutual cooperation in the development of all appropriate resource planning and management plans prepared pursuant to Chapter 380, FS.

7.6.2.
POLICY
Coordinate with other governments in securing full provision of resources by the State and non-city agencies for programs of their design, creation and/or benefit, and to ensure the protection of local self determination in matters which are not demonstrated to be of actual regional significance.

7.7.
OBJECTIVE
Discourage the proliferation of urban sprawl through the maintenance of a strong and responsive comprehensive planning process to maintain balanced development within the city.

7.7.1.
POLICY
Encourage effective and proper development of employment centers of high quality which offer potential for local employment in reasonably close proximity to protected residential neighborhoods.

7.7.2.
POLICY
Encourage development of remaining undeveloped and vacant isolated parcels of developable property through identification and staff assistance in providing information as to appropriate uses permitted by code and proper procedures to be undertaken to obtain the proper development orders.

7.7.3.
POLICY
Finalize an analysis of the industrial area by January 1, 1990, and adopt a specific neighborhood redevelopment plan within one year following such analysis. The plan shall include Future Land Use and development regulations to support the plan.

7.8
OBJECTIVE
Ensure land and resources are made available which are suitable for utility facilities and other infrastructure required to support proposed development.

7.8.1.
POLICY
Requirements and procedures shall be established by October 1,1991, for all threshold development which will require them to contribute their proportional share of capital facilities, funds, and / or land therefore, necessary to accommodate the impact of the

proposed development or increment of redevelopment over and above existing development on a site.

7.9.
OBJECTIVE
Encourage sound innovation in development regulations which provide a continuing process to respond to community needs.

7.9.1.
POLICY
Encourage balanced mixed use developments in the downtown, which promote pedestrian activity and provide for specific commitments to design excellence and long term economic and cultural vitality.

7.9.2.
POLICY
Encourage the detailed planning of downtown to establish sound economic, aesthetic and land use principals for effective utilization of both public and private resources.

7.10.
OBJECTIVE
By the date required by Section 163.3202, F.S., the City shall make provisions which ensure that future land use and development in the City is consistent with the comprehensive plan.

7.10.1.
POLICY
The Planning Department shall review proposals to amend the development regulations and shall report on the consistency between such proposals and the comprehensive plan, as required by Chapter 163, F.S.

7.10.2.
POLICY
The City shall maintain regulations consistent with the comprehensive plan which regulate the use and development of land in a manor which, at a minimum, provide for land use consistent with the Future Land Use Plan map series, interpretive text and Land Use Element goal, objectives and policies; regulate the subdivision of land; regulate signage; regulate development and use in areas subject to seasonal or periodic flooding; provide for stormwater management; open space and regulate on-site traffic flow and parking.

7.11.
OBJECTIVE
Maintain a pattern of overall low density residential use with limited medium, and high density residential uses in selected areas to preserve the low intensity character of the residential neighborhoods.

7.11.1.
POLICY
Maintain and enforce effective development and maintenance regulations.

7.12.
OBJECTIVE
Maintain the high aesthetic community design standards.

7.12.1.
POLICY
Maintain and enforce effective development and maintenance regulations.

7.13.
OBJECTIVE
Create, preserve and maintain scenic vistas in keeping with the classic tradition as embodied in the original city plan.

7.13.1.
POLICY
Maintain and enforce effective development and maintenance regulations.

7.14.
OBJECTIVE
Preserve and improve the character of neighborhoods.

7.14.1
POLICY
Establish and codify boundaries for all neighborhoods by October 1, 1990.

7.14.2.
POLICY
Develop and maintain specific policies for the preservation and improvement of the character of neighborhoods by October 1, 1990.

8.
FUTURE LAND USE MAP

The Future Land Use Map depicts the future land uses found to be in the public interest and to be the basis for regulations, programs, actions and rules of the City and other affected agencies. The following Future Land Use Classifications and associated definitions are used for the Future Land Use and Historic Resources Map series.

8.1.
RESIDENTIAL USE (SINGLE-FAMILY)

8.1.1
RL - RESIDENTIAL LOW DENSITY:
Single-family residential; detached homes with density not to exceed 6 units per gross acre.

8.1.2
RH - RESIDENTIAL HIGH DENSITY:
Single-family residential with density not to exceed 9 units per gross acre. Although intended primarily for detached single-family homes, it does not preclude special types of residences such as townhouses, patio homes, cluster homes or zero-lot-line homes, as long as the density restrictions are met.

8.2.
RESIDENTIAL USE (MULTI-FAMILY)

8.2.1
RMD - RESIDENTIAL MULTI-FAMILY DUPLEX DENSITY:
Duplex dwellings with a density of up to 9 units per gross acre.

8.2.2.
RML - RESIDENTIAL MULTI-FAMILY LOW DENSITY:
Multi-family residential, with a density not to exceed 20 units per gross acre. Maximum permitted height is four stories; with architectural incentives six stories are allowed.

8.2.3.
RMM - RESIDENTIAL MULTI-FAMILY MEDIUM DENSITY:
Multi-family residential with a density not to exceed 40 units per gross acre. Maximum permitted height is six stories; with architectural incentives, eight stories are allowed.

8.2.4.
RMH - RESIDENTIAL MULTI-FAMILY HIGH DENSITY:
Multi-family residential with a density not to exceed 60 units per gross acre. Maximum permitted height is thirteen stories; With architectural incentives, sixteen stories are allowed.

8.3.
COMMERCIAL USE

8.3.1.
CL - COMMERCIAL LOW-RISE INTENSITY:
Residential; retail; services; offices. This category is oriented to pedestrian and neighborhood commercial uses. Mixed uses allowed. Maximum F.A.R. of 3.0. Maximum permitted height is four stories; with architectural incentives six stories are allowed.

8.3.2.
CM - COMMERCIAL MID-RISE INTENSITY
Same uses as Low Intensity. Maximum F.A.R. of 3.0. Maximum permitted height is six stories; with architectural incentives, eight stories are allowed.

8.3.3.
CH - COMMERCIAL HIGH-RISE INTENSITY:
Same uses as Medium Intensity with a maximum F.A.R. of 3.0. Maximum permitted height is thirteen stories; With architectural incentives, sixteen stories are allowed.

8.4.
I - INDUSTRIAL USE:
All uses allowed in Commercial Land Use categories, except residential. Automobile uses, wholesale uses, light industry and manufacturing allowed. Maximum F.A.R. of 3.0. Maximum permitted height is six stories.

8.5.
U - UNIVERSITY USE:
This category shall include buildings and land use area used for learning research, and living as part of a university campus. It may also include limited commercial activities oriented to university housing. Maximum F.A.R. of .5 for the entire campus as a planned development site.

8.6.
E - EDUCATION USE:
Primary and secondary schools both public and private. Maximum F.A.R. of 2.0.

8.7.
PR - PARKS AND RECREATIONAL USE:
Public/private land areas and buildings for recreation, both active and passive, including sports, golf, tennis and similar activities. Maximum F.A.R. of 2.0.

8.8.
OS - OPEN SPACE:
Open space land areas including, but not limited to right-of-way plazas and entranceways. Maximum F.A.R. of 0.

8.9.
PB - PUBLIC BUILDINGS & GROUNDS:
Buildings and adjacent land areas used for Local, State or Federal government purposes, and for public and semi-public services, including utilities. Maximum F.A.R. of 2.0.

8.10.
H - HOSPITAL USE:
Buildings and land areas used for medical and health related services. Maximum F.A.R. of 2.0.

8.11.
RI - RELIGIOUS / INSTITUTIONAL USES:
Churches, temples, houses of worship, fraternal organizations and related accessory uses such as educational and child care services. Maximum F.A.R. of 2.0.

8.12.
C - CONSERVATION AREAS:
Environmentally sensitive areas such as marshes, swamps, mangroves, and natural wildlife habitats. Conservation areas shall have an F.A.R. of 0, except for designated areas specified for limited support facility development. Designated limited development areas shall be restricted to passive support activities such as nature trails and restroom facilities. Proposals for limited development shall be reviewed on an individual basis.

8.13.
HP - HISTORIC PROPERTIES:
Buildings, sites, and districts determined to be historically, architecturally or archaeologically significant by National Register listing or local landmark designation. Historic Properties Land Use Classification is an overlay classification which modifies the underlying land use classification. The location of such HP classified properties may be depicted on the Future Land Use Map series or on the Historic Preservation Map series as determined suitable by the City.

8.14

PT - PUBLIC TRANSPORTATION:

Streets, alleys, and other such lands and Rights-of-Way which serve as essential network corridors for the conveyance of goods and services throughout the City and beyond. Use is restricted to functional transportation systems, including roads, sidewalks, utilities, signage, plazas, entrances, landscaping, and related purposes. As such land uses do not, in themselves, generate demands for services, but rather serve the transportation and communication demands of other land uses, there is no intensity or density unit of measure to be applied in their land use classification. This classification is not shown on the Future Land Use Map series, but is understood to include all lands within the Right-of-Way Property Boundary of the collective public rights-of-way in the city to whomever titled. In the future, additional designations of PT use areas both public and private, may be made as necessary for the proper provision of the transportation system of the community. Special public buildings and facilities which serve transportation needs as well as other needs are to be classified as PB - Public Buildings & Grounds. When alleys, streets, easements or other rights-of-way are vacated, or through other proscribed means converted from a public transportation corridor, such conversion will be considered a technical adjustment to the Comprehensive Plan Future Land Use Map and is not to be considered a land use amendment. It shall not require the procedures set forth for amendment of the Comprehensive Plan or Future Land Use Map Series and shall not require a Land Use Public Hearing. Vacation of such PT land shall cause the land use classification of the underlying proprty to be administratively adjusted to such land use classifications as are adjacent, and to the extent determined by the City Commission at the time of such action.

8.15

NOTE:

FAMILY DAY CARE HOMES are permitted in residential land use areas in accord with housing goals, objectives and policies addressed in the Housing chapter and the City Zoning Code.

MIXED USES are permitted to varying degrees in RMH, RMM, RML, CL, CM, CH uses. See policies and various development codes for implementation.

9.

FUTURE LAND USE MAP INTERPRETIVE NOTES:

The specific instructions, interpretve notes are to be given greater weight in the determination of the meaning and application of the Future Land Use Map representations.

9.1.

Classifications of land use are to cover the parcels of land within their boundaries, unless otherwise specified. Public street and alley rights-of-way are classified as Public

Transportation unless otherwise designated. Easements carry the land use classification of the parent tract unless otherwise specified.

9.2.
The land use classes are depicted on the Future Land Use Map in two dimensions, however this represents the three dimensional space above and below the ground. Although no occurrences exist in the city, this plan anticipates and holds available the use of three dimensional space descriptions for those land uses which require a more complex ownership, pattern of use and regulation than is common at this time. Examples of such types of uses may include Air-Rights properties; Mixed Use projects which utilize three dimensional above ground, subsurface, or sub-aquatic designs with complex public and private ownerships.

9.3.
As the result of unique site specific conditions affecting the general realization of the goals, objectives and policies of this plan, the following parcels are to be further regulated in accord with the following Future Land Use Map Interpretive Policies:

9.3.1.
THE NORTH 1/2 OF BLOCK 93 & 94 OF RIVIERA SECTION 2 SUBDIVISION shall be required to submit a Development Review Site Plan for development and maintenance, to be reviewed, adjusted, and approved if appropriate. No building permit, of any degree, may be issued until such design and maintenance proposal is approved by the City and agreed to by the applicant. Of particular concern on these sites are the desire to ensure that effective measures are taken to protect the adjacent residential neighborhood from the noise, lights, trash, vehicular access and other detrimental conditions associated with commercial uses. Special consideration shall be given to the addition of traffic to the local streets serving the neighborhood and any increased risk of crime as a result of unoccupied commercial facilities after hours.

9.3.2.
THE EAST 1/2 OF BLOCK 44 AND THE EAST 1/2 OF BLOCK 37 OF DOUGLAS SECTION also known as The Coliseum, is an historic resource within the City of Coral Gables. Its Future Land Use classification as CH - Commercial high intensity is predicated on the following conditions:

1) Unity of Title must be demonstrated and maintained.
2) The building is to be restored consistent with the provisions of the City of Coral Gables Historic Preservation Ordinance and other applicable ordinances with review & approval by the Historic Preservation Board.
3) Design sensitivity and consideration of negative impacts on the adjacent residential and park uses must be demonstrated.
4) No air-rights development shall be allowed above the historic facility.
5) Failure to preserve the historic structure shall result in the reversion of the land use classification to Commercial Mid-Rise Intensity which shall be subject to development review site plan procedures.

9.3.3.
The area bounded by Southwest Eighth Street on the North, Douglas Road on the East, Le Jeune Road on the West, and Madeira Avenue on the South is designated a special study area for further review inorder to consider the appropriatness of designating certain parcels for RMH.

9.3.4.
Blocks 3, 4, and a portion of block 5 of the Sunrise Harbour Subdivision is the subject of court ordered action and is therefore designated "ENJOINED LAND" and shall bear a land use classification of COMMERCIAL and APARTMENT as was in effect as of the date in the court order. The designation of such high density use is made solely on the basis of the City Attorney's opinion and the prior court ruling. It does not recommend or serve as an endorsement of any proposed development or reflect the city's application of community planning principals.

9.4.
Historic Properties Land Use Classification is an overlay classification which modifies the underlying land use classification. The location of such HP classified properties may be depicted on the Future Land Use Map series or on the Historic Preservation Map Series as determined suitable by the City.

This concludes the adopted sections of this element.

Chapter 2

TRAFFIC CIRCULATION ELEMENT

1.
EXISTING CONDITIONS

1.1.
FUNCTIONAL CLASSIFICATION:

Roadways in the City are classified according to their function within the road network.

Map 2.1. Functional Classification of Roadways shows the existing functional classification of the principal roadways in Coral Gables. The principal roadway system, comprised by arterial and collector roadways is approximately distributed as follows:

Arterials	60%
Collectors	40%

The North/South arterial roadways are:
- Red Road (S.W. 57th Avenue)
- Le Jeune Road (S.W. 42nd Avenue)
- Douglas Road (S.W. 37nd Avenue).

The East/West arterial roadways are:
- Sunset Drive (S.W. 72nd Street),
- Bird Road (S.W. 40th Street),
- Coral Way (S.W. 22nd Street)
- Tamiami Trail (S.W. 8th Street).

Arterial roadways that run diagonally Northeast-Southwest through the city are:
- South Dixie Highway (S.R. 5, U.S. 1)
- Old Cuttler Road

The functional classification system subdivides facilities as follows:

1.1.1.
Arterial:

Streets and highways serving major metropolitan activity centers, the highest traffic volume corridors, long to moderate trip desires, and a high proportion of total urban area travel on a minimum of mileage. Service to abutting land should be subordinate to the provision of travel service to major traffic movements. This system carries the major portion of trips entering and leaving an urban area, as well as the majority of

through movements desiring to bypass the central city, and normally will carry important intraurban as well as intercity bus routes.

1.1.2.
Collector:
Streets penetrating neighborhoods, collecting traffic from local streets in the neighborhoods, and channeling it into the arterial systems. The system primarily carries local traffic movements within residential neighborhoods, commercial, and industrial areas. It may also serve local bus routes.

1.1.3.
Local:
Local streets provide direct access to abutting land and access to the Collector system. They offer the lowest level of mobility and usually carry no bus routes. The Local streets should only carry traffic generated by development adjacent to that street.

1.2.
Traffic Volumes:
In recent years, certain areas in the City of Coral Gables have experienced increases in employment levels. The area of Downtown, in particular, accounts for most changes in employment. Commercial developments generates additional vehicular traffic. This new traffic generated within the limits of the City must be accommodated in conjunction with traffic which traverses the area to other destinations. The through traffic is therefore most extensively affected by population and employment trends outside the City.

Traffic volumes have generally been increasing in Coral Gables during the past decade. This trend is expected to continue at least on major arterial throughout the City. For purposes of this analysis, 1986 Average Daily Traffic (ADT) volumes on the principal roadway system within the City were used. The traffic volume data collected by Dade County represents the most recently available traffic information. Identification of additional roadway performance characteristics must wait for further data to be obtained. As Level of Service analysis procedures are implemented, such data will be obtained. Areas which require attention include the downtown; US-1; Old Cutler Road; historic road corridors; and local neighborhood roadways impacted by regional traffic.

1.3.
Roadway Capacities:
Roadway capacity is the maximum number of vehicles that can reasonably travel through a roadway segment in a predetermined time period. Peak hour roadway capacity values generally accepted throughout South Florida for long range planning and analysis were developed by the Florida Department of Transportation (FDOT). These values are based upon typical conditions for various road categories. The

principal parameters affecting capacity are: roadway functional classification, area type and number of lanes. The FDOT capacities used in this study are listed in Table 2.1. and are expressed in number of vehicles per day traveling in both directions.

Map 2.2. shows the number of lanes for the principal roads in the area. The number of lanes varies from 2 lanes on a few arterial to 6 lanes on South Dixie Highway (S.R. 5, U.S. 1).

1.3.1.
Level Of Service:
Level of Service (LOS) is a measure of the operational conditions on a roadway and the perception of these conditions by motorists. Speed, freedom to maneuver, traffic interruptions, comfort, convenience and safety are a few indicators of level of service. Since the amount of traffic using the road affects the level of service relative to the number of lanes, the ratio of Volume to Capacity (V/C) is frequently used to calculate level of service. Low V/C ratios indicate good level of service (LOS "A" is the best) and high V/C ratios indicate low level of service (LOS "F" is the worst).

This analysis, consistent with the FDOT rated capacities, uses V/C ratios to calculate Level of Service. The V/C scale applicable to the urban conditions prevalent in Coral Gables is presented in Table 2.2.

Level of Service "A" through "C" are desireable. Level of Service "D" is acceptable given the urban character of Dade County and Coral Gables. Existing average daily traffic volumes, capacities and levels of service in the study area are shown as Map 2.3.

1.4.
Traffic Accidents:
The locaiton and frequency of accidents occurring in the major intersection within the study area for 1986 and 1987 is presented in Table 2.3..

1.5.
Roadway Deficiencies:
Table 2.4. presents a listing of the deficient roadway segments and the existing cross-section. Due to the unique historic, residential, aesthetic and cultural nature of the City, and in some cases physical limitations make it locally unacceptable or impractical to add more lanes to the deficient roadways. These are refered to as Constrained Sections of roadways.

Selection of specific improvements to address existing deficiencies must consider among other things, programmed and planned improvements, existing degree of congestion, rate of traffic growth, practicality of widening improvements of widening or

constructing other facilities, availability of alternative transportation modes and balanced responses to competing policies. The analysis of future conditions includes a plan to address existing deficiencies in light of programmed and planned improvements.

1.6.
Existing Bikeway Path:
Existing bikeway paths within the City limits are shown on Map 2.3. Traffic Zones and Existing Capacity / Level of Service and Bikeways.

Table 2.1.
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
ROADWAY CAPACITY BY LANES AND CLASS
AT LEVEL OF SERVICE E

expressed in
Vehicles Per Day traveling in both directions

NUMBER OF LANES BOTH DIRECTIONS	FREEWAY	ARTERIAL	DIVIDED ARTERIAL	UNDIVIDED COLLECTOR
		Central Business District (CBD)		
2	------	-------	12,500	9,700
4	76,000	30,000	22,000	15,200
6	114,000	45,600	35,300	------
8	152,000	58,400	------	------
10	190,000	------	------	------
		Non-CBD		
2	-------	------	15,700	12,100
4	76,000	36,000	27,200	19,200
6	114,000	55,700	44,400	------
8	152,000	72,000	65,600	------
10	190,000	------	------	------

Table 2.2.

VOLUMN / CAPACITYRANGE EQUIVALENTS TO LEVEL OF SERVICE CLASSIFICATIONS

V/C RATIO (RANGE)	LEVEL OF SERVICE	DESCRIPTION
0 - 0.60	A	Free flow traffic at average travel speeds.
0.61 - 0.70	B	stable flow with the presence of other users in traffic stream being noticeable.
0.71 - 0.80	C	Uncongested with other users in traffic stream causing significant interactions.
0.81 - 0.90	D	Congested stable flow with major delays.
0.91 - 1.00	E	Very congested with traffic at or near capacity.
1.01 +	F	Extremely congested with breakdown flow (major delays occurring frequently).

Table 2.3.

TRAFFIC ACCIDENT COUNTS FOR SELECTED INTERSECTIONS 1986 / 1987

	Red Road	Granada Blv'd	Le Jeune Road	Ponce de Leon	Douglas Road
Flagler	na	na	na	na	10 / 20
Tamiami Trail	17 / 24	11 / 3	na / 9	9 / 7	na / 25
Coral Way	18 / 15	11 / 6	13 / 7	42 / 20	27 / 16
Bird Road	35 / 25	7 / 10	23 / 18	11 / 9	na
U S - 1	4 / na	na / 12	36 / 33	11 / 11	na
Sunset Road	5 / 8	1 / 1	na / na	na	na
Old Cuttler Road	10 / 3	na	na	na	na

Source: Metro Dade Police Department
William N. Gray, AICP

Table 2.4.

EXISTING TRAFFIC CONDITIONS ON DEFICIENT ROADWAYS

LINK	FROM	TO	VOLUME	CAPACITY	V/C	LOS
Red Road	SW 8 St	Coral Way	20,662	15,700	1.32	F
	Coral Way	Blue Rd	14,896	15,700	0.95	E
	Blue Rd	S Dixie Hwy	17,560	15,700	1.12	F
Granada Blvd	Bird Rd	S Dixie Hwy	16,715	12,100	1.38	F
Le Jeune Rd	SW 8 St	Coral Way	36,104	36,000	1.00	F
	Coral Way	Bird Rd	33,208	36,000	0.92	E
	S Dixie Hwy	Cartagena Circle	31,347	15,700	2.00	F
SW 8 St	Red Rd	Granada Blvd	37,251	27,200	1.37	F
	Granada Blvd	Douglas Rd	35,444	27,200	1.30	F
Coral Way	Red Rd	Le Jeune Rd	25,700	15,700	1.64	F
Bird Rd	Red Rd	Le Jeune Rd	47,642	36,000	1.32	F
Sunset Rd	Red Rd	Le Jeune Rd	48,020	36,000	1.33	F
S Dixie Hwy	Red Rd	Le Jeune Rd	71,993	55,700	1.29	F
	Le Jeune Rd	Douglas Rd	68,771	55,700	1.23	F
Old Cuttler	Cartagena Cir	Red Rd	19,140	15,700	1.22	F

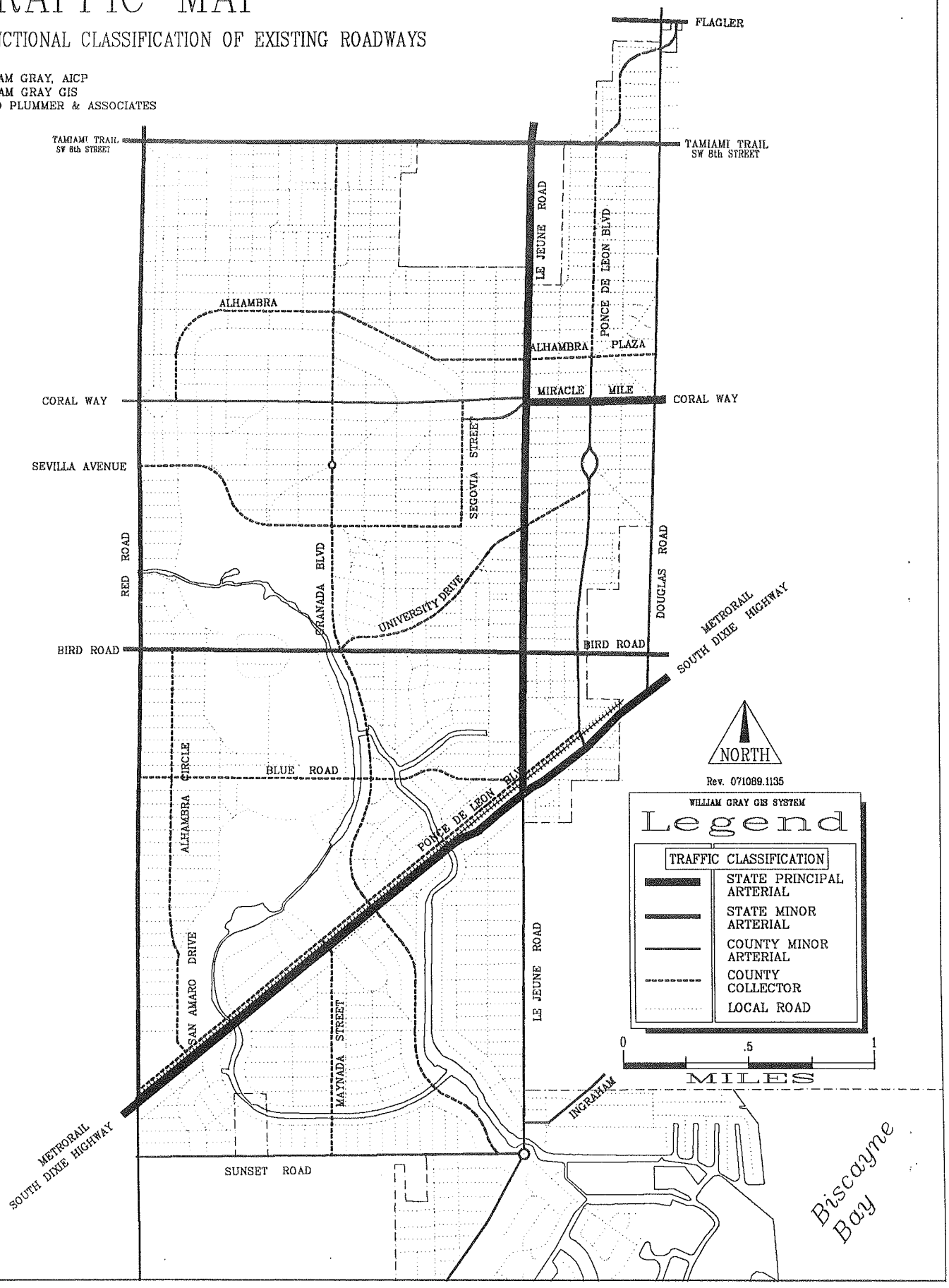
Conditions are as identified at current level of analysis for data from selected 1987-88 records.

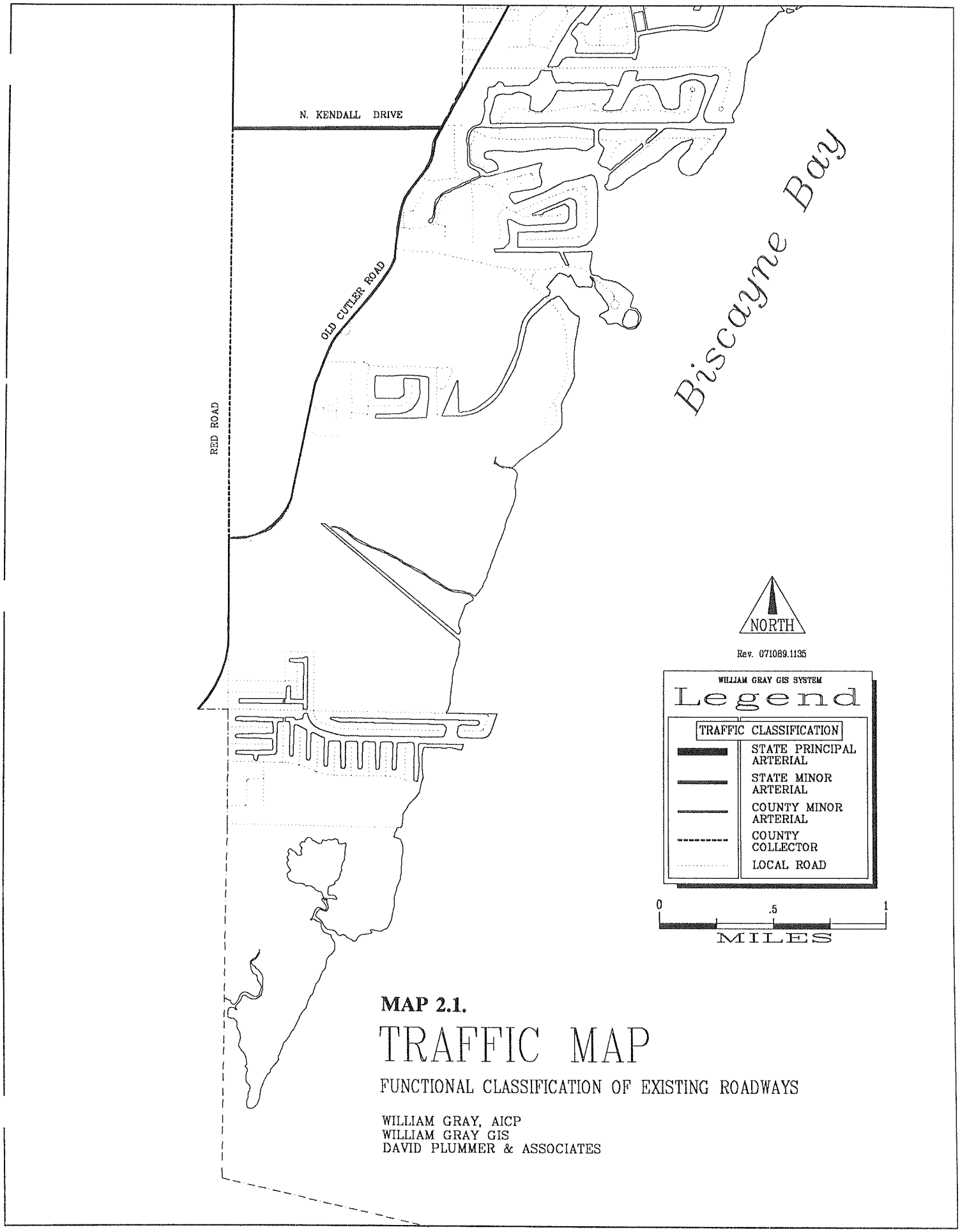
MAP 2.1.

TRAFFIC MAP

FUNCTIONAL CLASSIFICATION OF EXISTING ROADWAYS

WILLIAM GRAY, AICP
WILLIAM GRAY GIS
DAVID PLUMMER & ASSOCIATES





MAP 2.1.

TRAFFIC MAP

FUNCTIONAL CLASSIFICATION OF EXISTING ROADWAYS

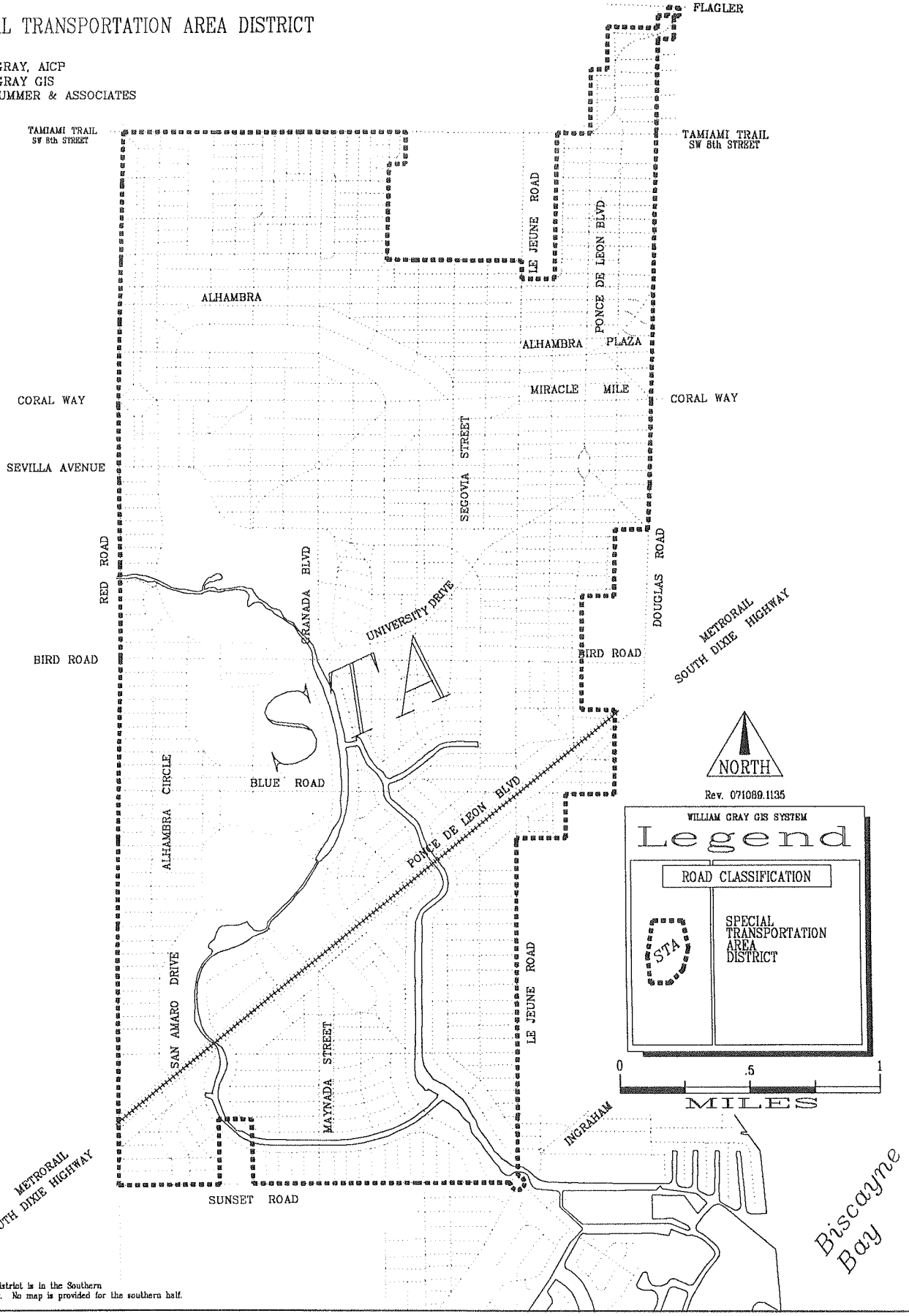
WILLIAM GRAY, AICP
WILLIAM GRAY GIS
DAVID PLUMMER & ASSOCIATES

MAP 2.1.1

TRAFFIC MAP

SPECIAL TRANSPORTATION AREA DISTRICT

WILLIAM GRAY, AICP
WILLIAM GRAY GIS
DAVID PLUMMER & ASSOCIATES



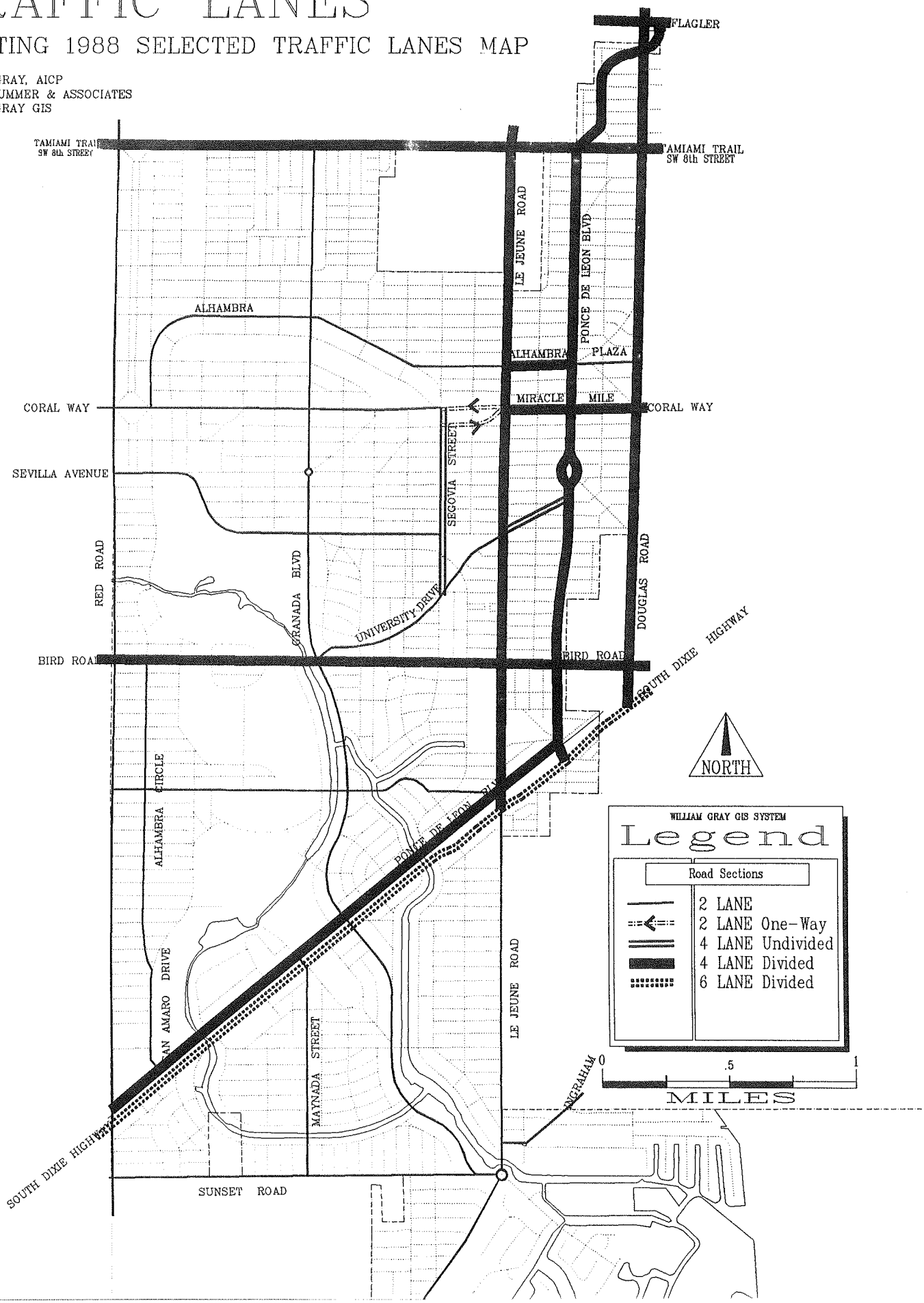
Note: No STA district is in the Southern half of the city. No map is provided for the southern half.

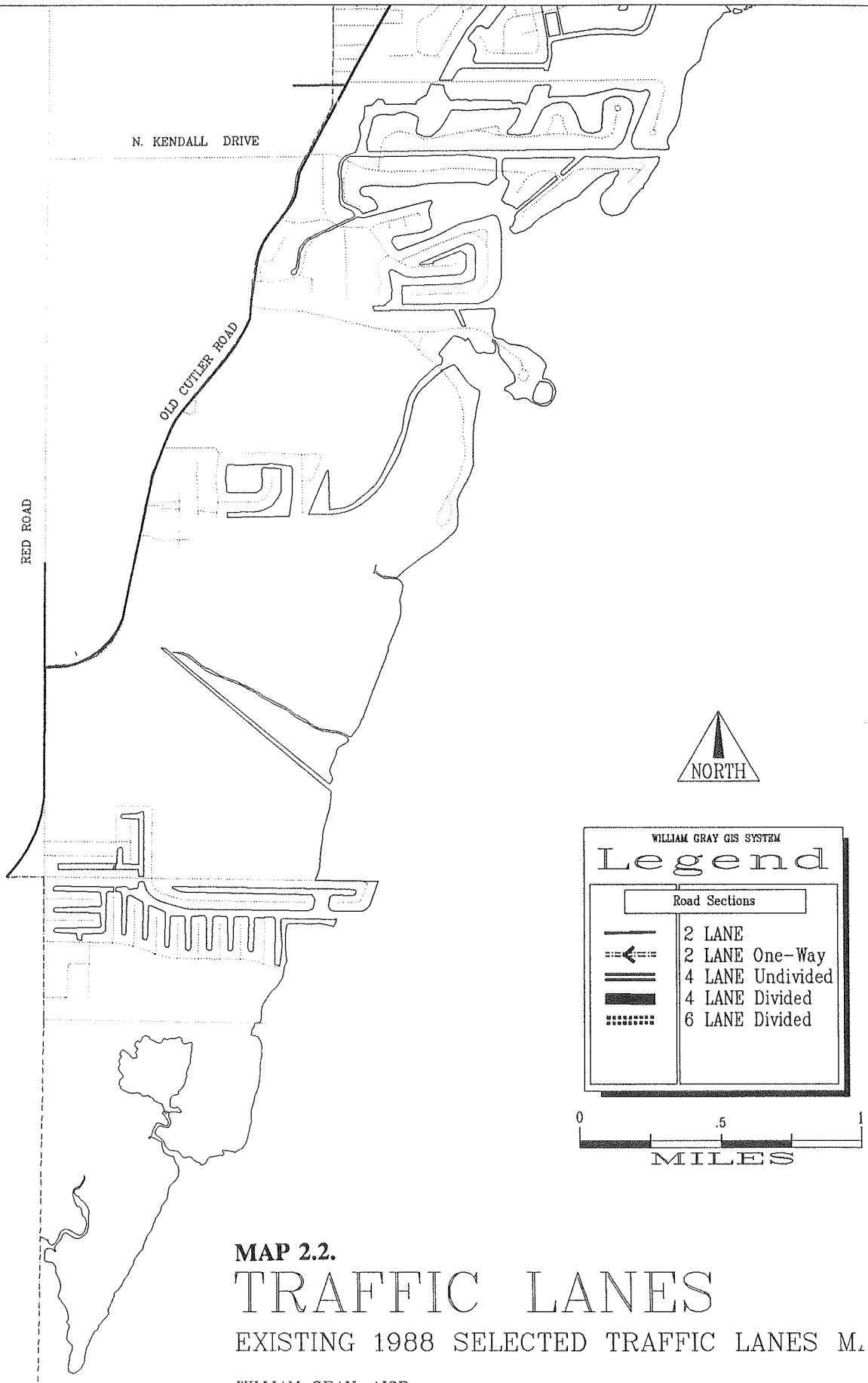
MAP 2.2.

TRAFFIC LANES

EXISTING 1988 SELECTED TRAFFIC LANES MAP

WILLIAM GRAY, AICP
DAVID PLUMMER & ASSOCIATES
WILLIAM GRAY GIS





MAP 2.2.

TRAFFIC LANES

EXISTING 1988 SELECTED TRAFFIC LANES M.

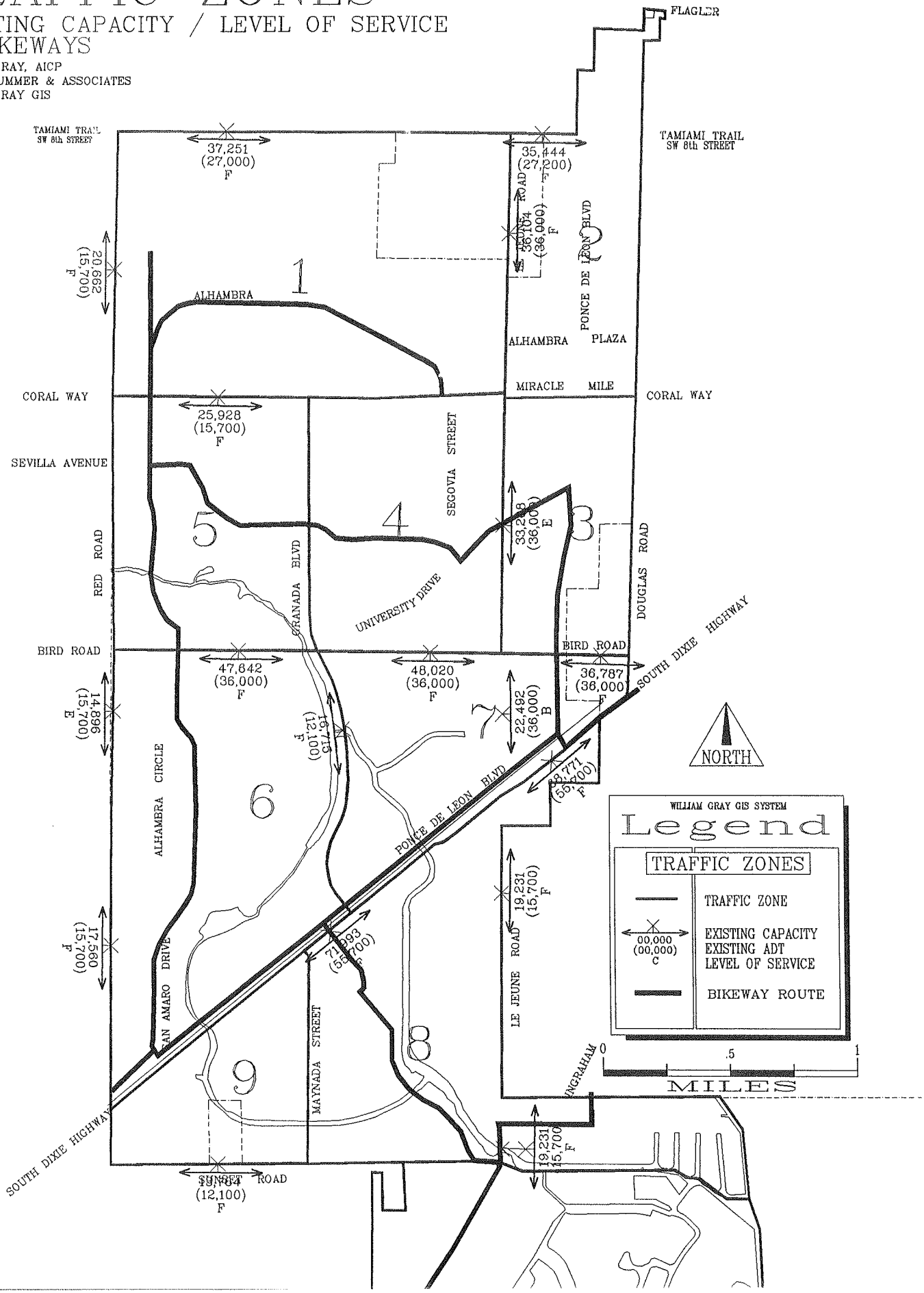
WILLIAM GRAY, AICP
WILLIAM GRAY GIS
DAVID PLUMMER & ASSOCIATES

MAP 2.3.

TRAFFIC ZONES

EXISTING CAPACITY / LEVEL OF SERVICE & BIKEWAYS

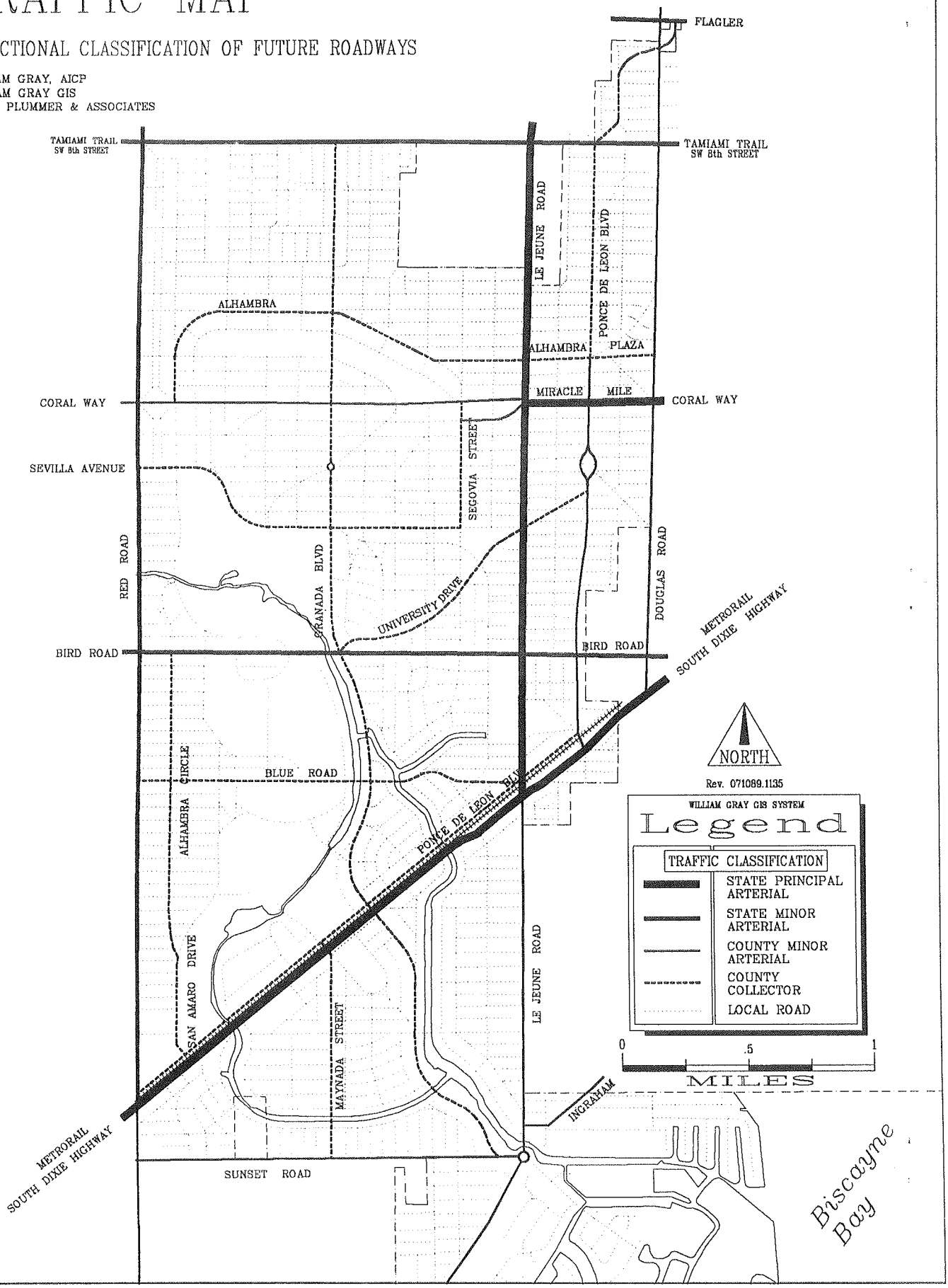
WILLIAM GRAY, AICP
DAVID PLUMMER & ASSOCIATES
WILLIAM GRAY GIS

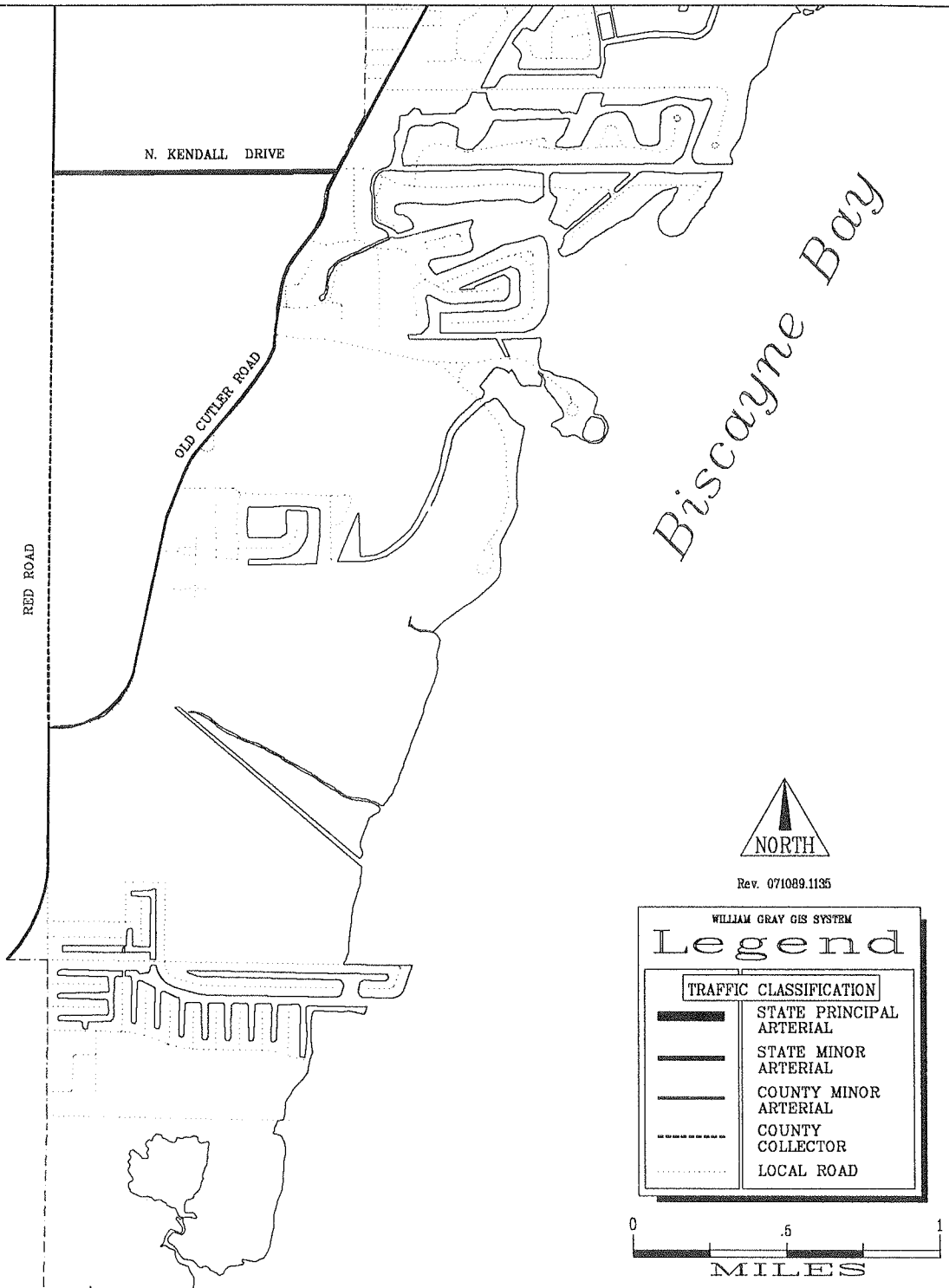


MAP 2.4.
TRAFFIC MAP

FUNCTIONAL CLASSIFICATION OF FUTURE ROADWAYS

WILLIAM GRAY, AICP
WILLIAM GRAY GIS
DAVID PLUMMER & ASSOCIATES





MAP 2.4.

TRAFFIC MAP

FUNCTIONAL CLASSIFICATION OF FUTURE ROADWAYS

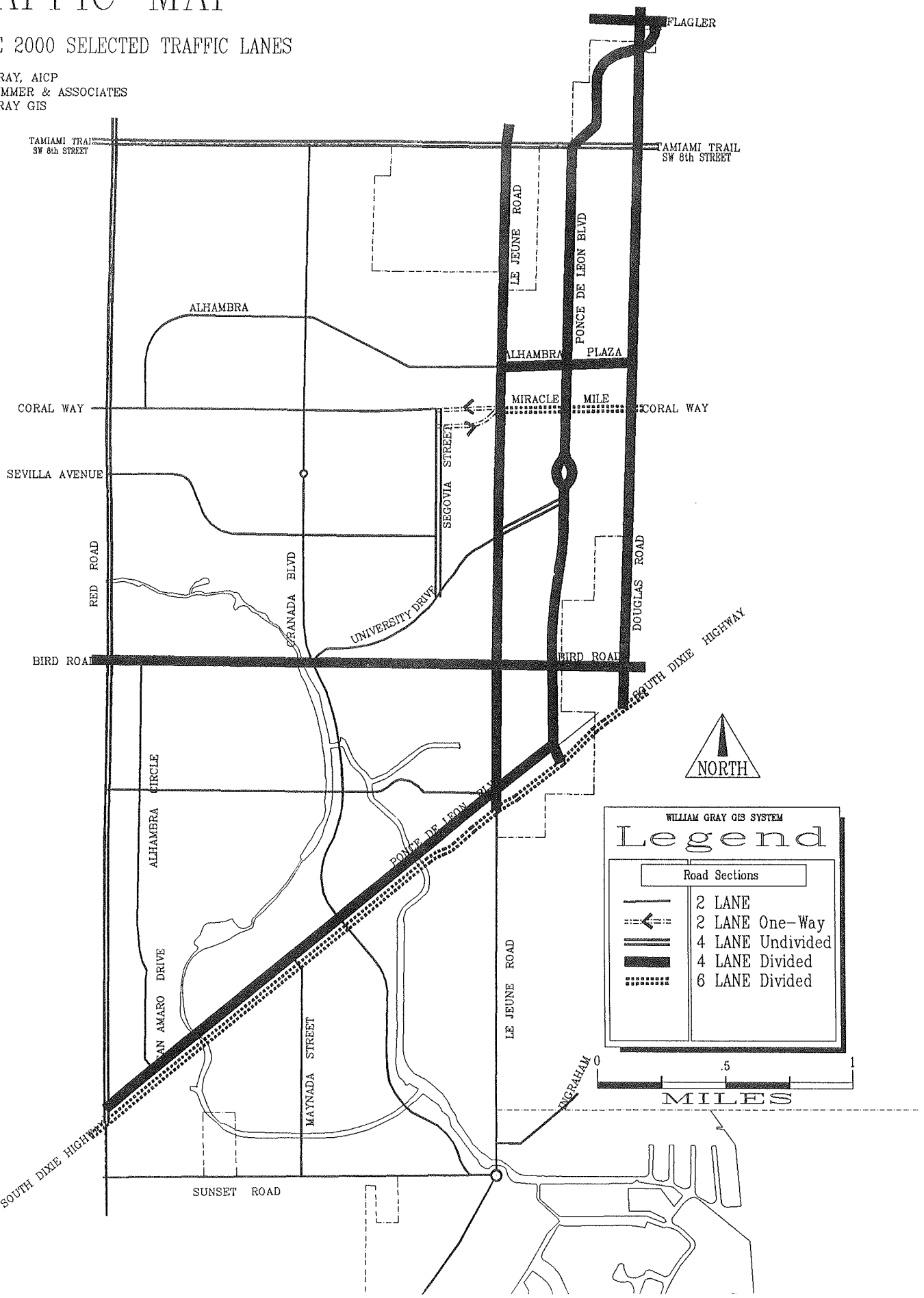
WILLIAM GRAY, AICP
WILLIAM GRAY GIS
DAVID PLUMMER & ASSOCIATES

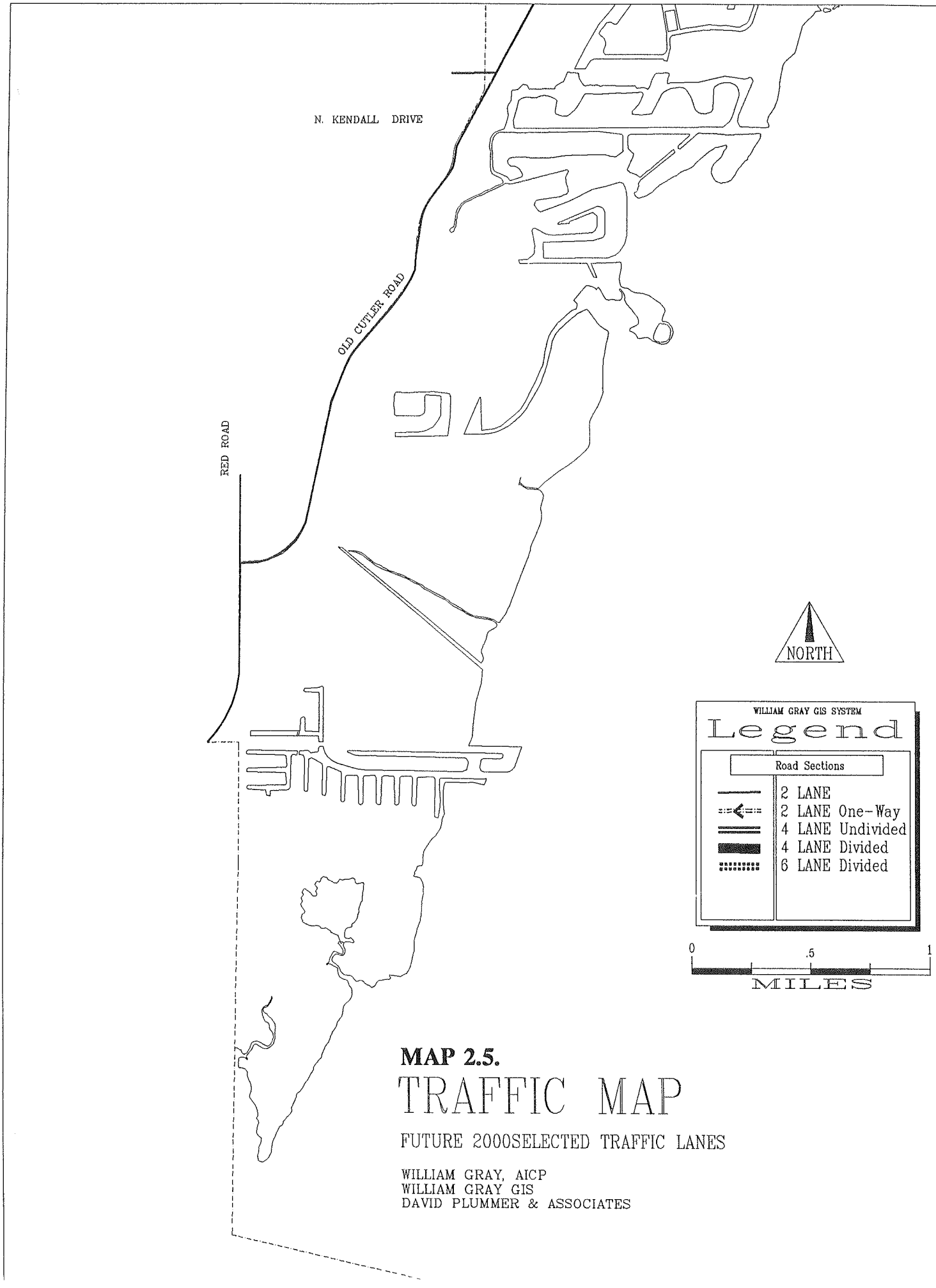
MAP 2.5.

TRAFFIC MAP

FUTURE 2000 SELECTED TRAFFIC LANES

WILLIAM GRAY, AICP
DAVID PLUMMER & ASSOCIATES
WILLIAM GRAY GIS





MAP 2.5.

TRAFFIC MAP

FUTURE 2000SELECTED TRAFFIC LANES

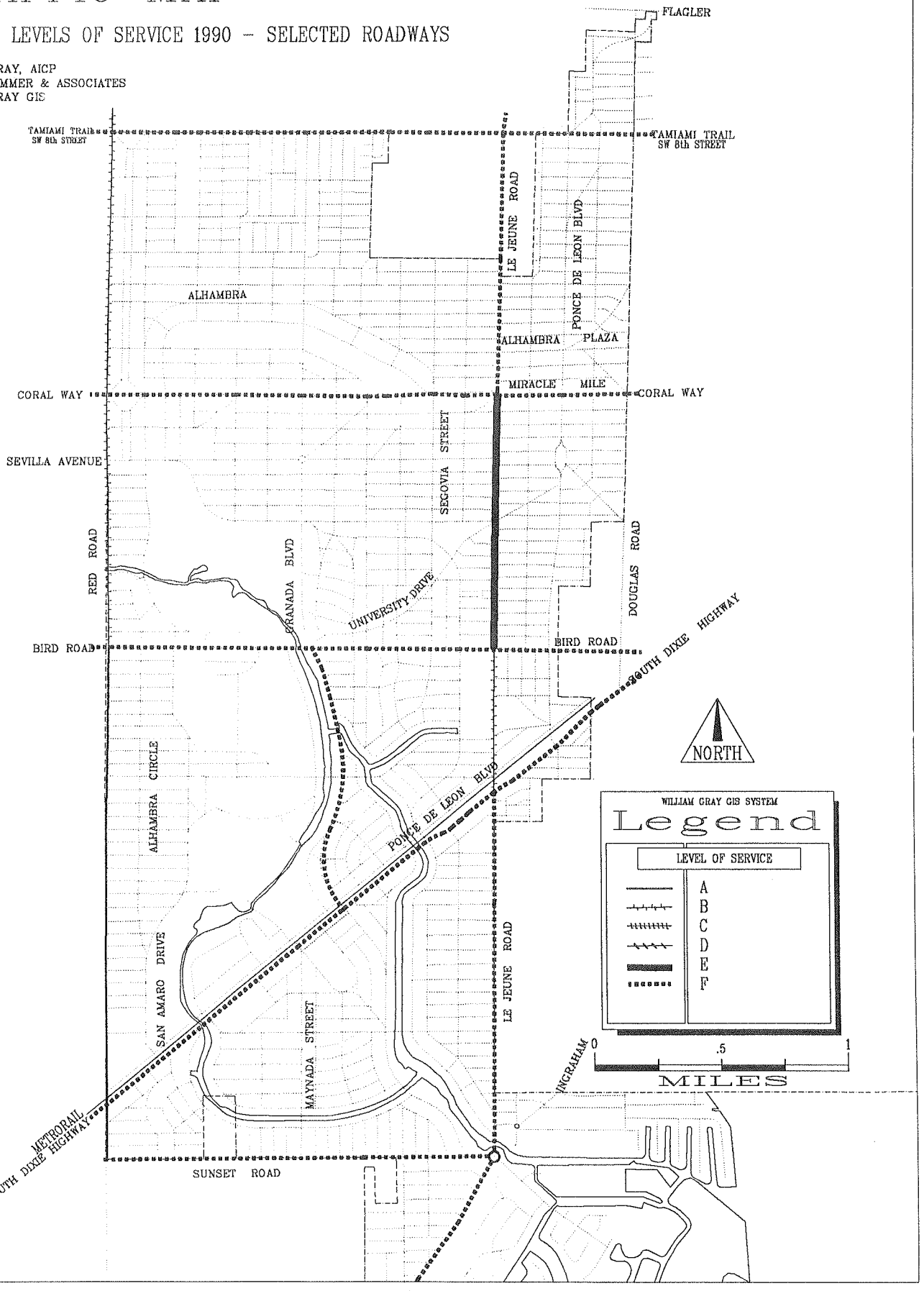
WILLIAM GRAY, AICP
WILLIAM GRAY GIS
DAVID PLUMMER & ASSOCIATES

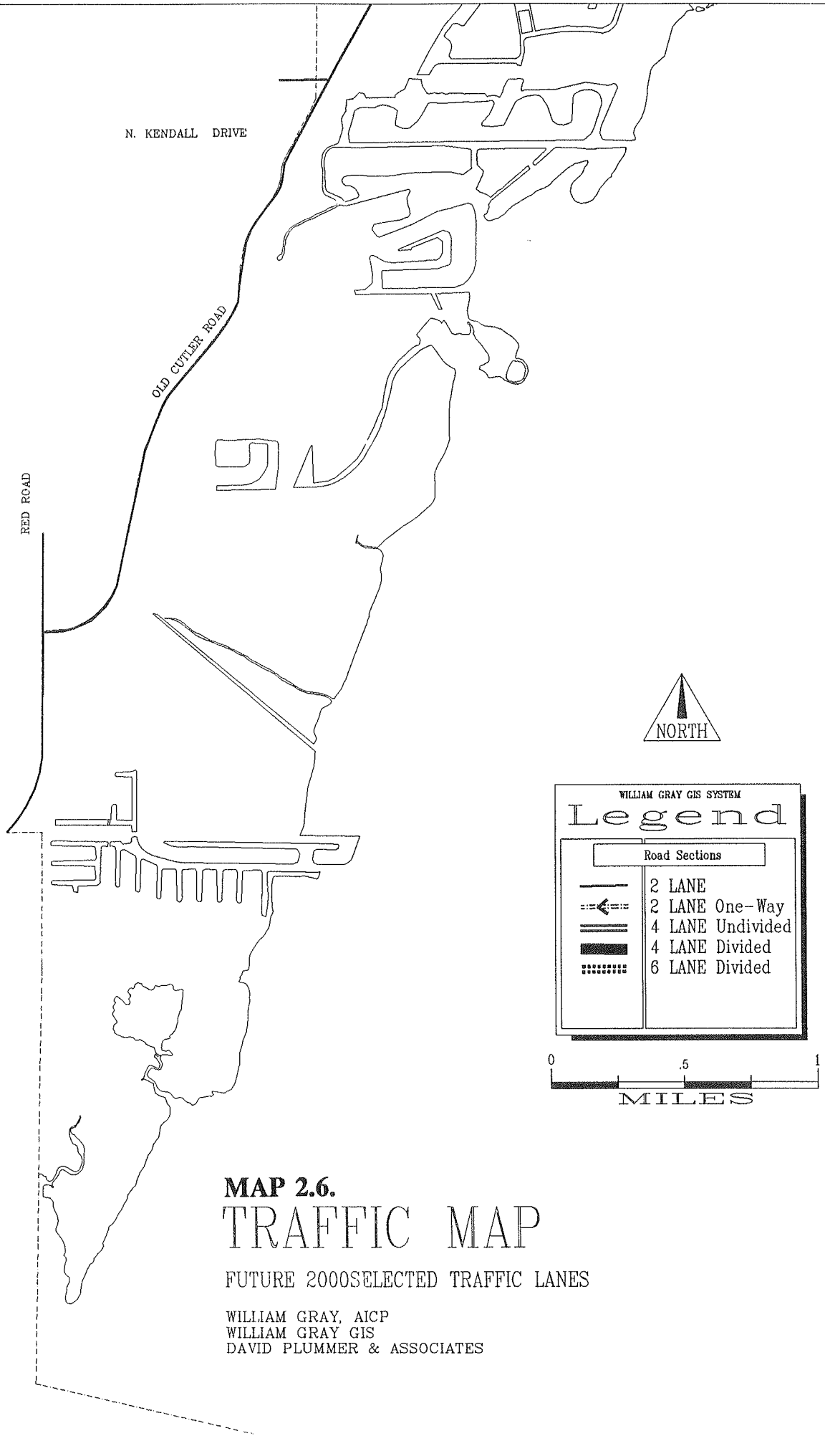
MAP 2.6.

TRAFFIC MAP

FUTURE LEVELS OF SERVICE 1990 - SELECTED ROADWAYS

WILLIAM GRAY, AICP
DAVID PLUMMER & ASSOCIATES
WILLIAM GRAY GIS





MAP 2.6.

TRAFFIC MAP

FUTURE 2000SELECTED TRAFFIC LANES

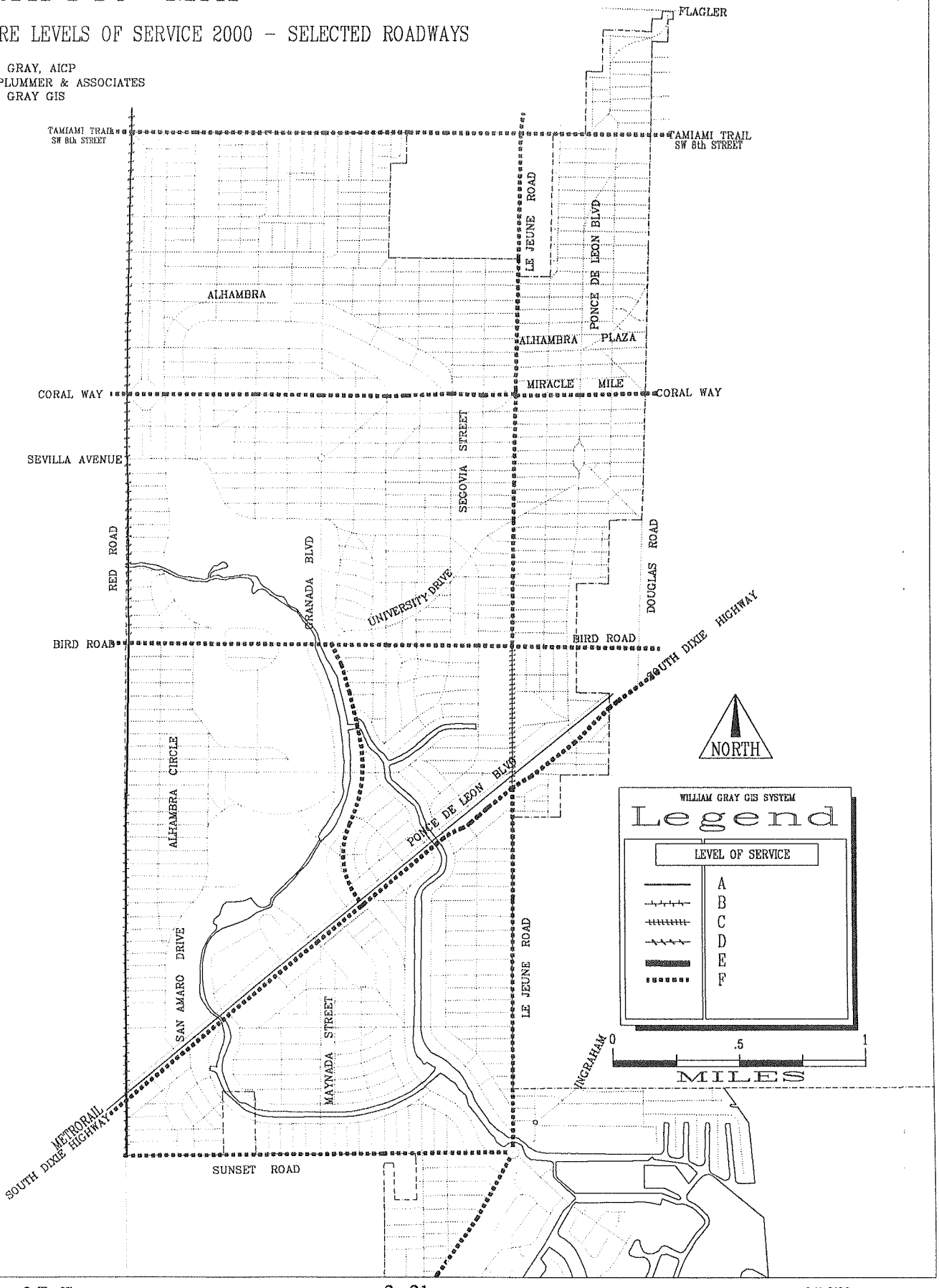
WILLIAM GRAY, AICP
WILLIAM GRAY GIS
DAVID PLUMMER & ASSOCIATES

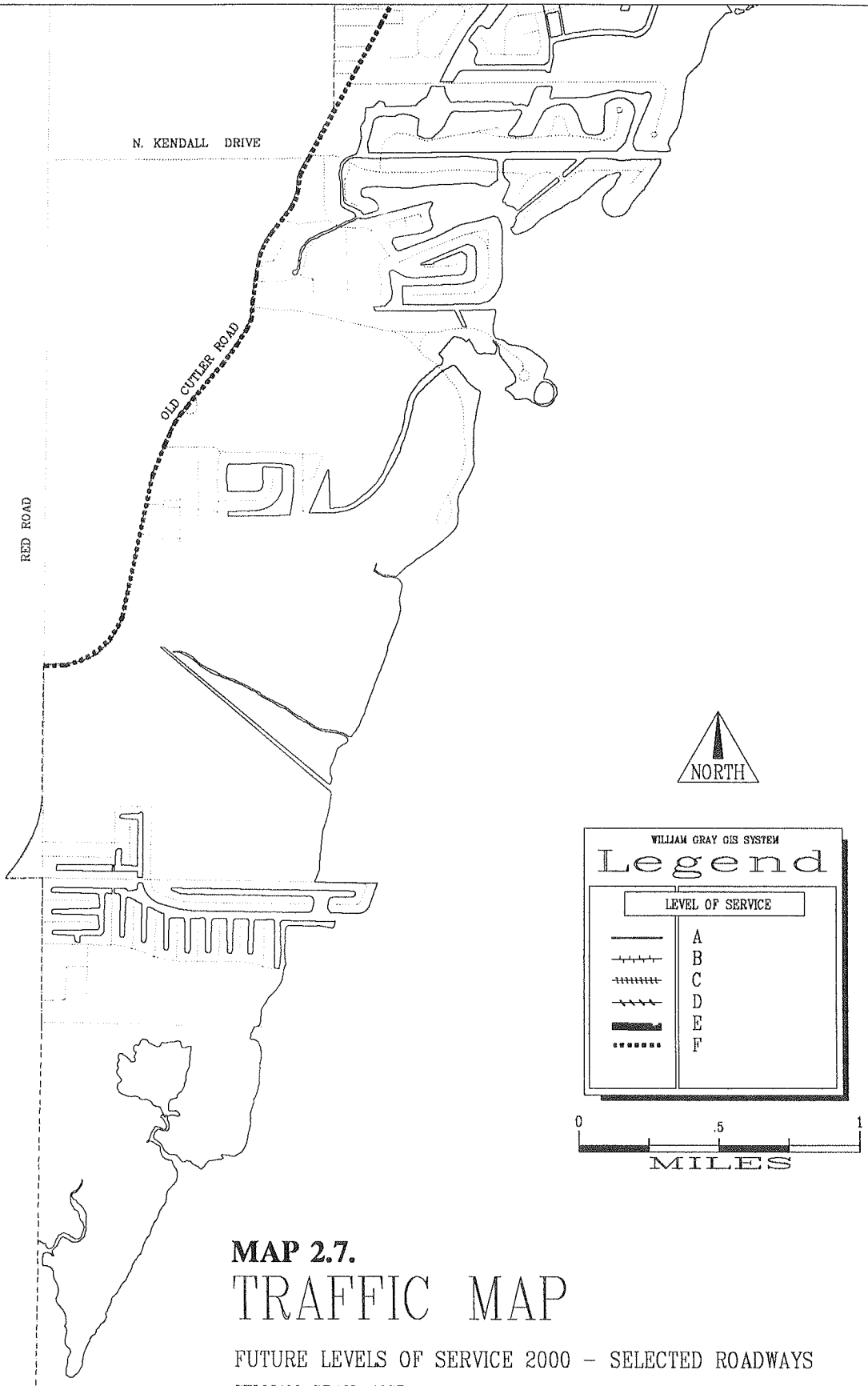
MAP 2.7.

TRAFFIC MAP

FUTURE LEVELS OF SERVICE 2000 - SELECTED ROADWAYS

WILLIAM GRAY, AICP
DAVID PLUMMER & ASSOCIATES
WILLIAM GRAY GIS





MAP 2.7.

TRAFFIC MAP

FUTURE LEVELS OF SERVICE 2000 – SELECTED ROADWAYS

WILLIAM GRAY, AICP
WILLIAM GRAY GIS
DAVID PLUMMER & ASSOCIATES

2.
FUTURE TRAFFIC CIRCULATION

2.1
Future Land Use:

Existing levels of population and employment for the City were reviewed for this element. Projections for the years 1990 and 2010 obtained from Metropolitan Dade County and the City for Future Land uses projected within the city limits. Average Daily Traffic (ADT) Maps published by Metro-Dade County were reviewed. The analysis resulted in a projected growth factor of one and one half percent (1.5%) annual traffic growth. This is consistent with the projections utilized by Metropolitain Dade County.

2.2.
Programmed and Planned Roadway Improvements:

Table 2.5. presents a list of roadway capacity improvements presently programmed for construction in the area, as well as improvements planned through the year 2010. These improvements were included in the analysis to ensure consistency with current planning efforts by the City and other agencies. Completion of the improvements will improve the future travel patterns in the area.

2.3.
Future Levels of Service:

Maps 2.6. and 2.7. portray future levels of service on the presently planned and programmed roadway network. The maps indicate that the number of links operating below Level of Service "D" will continue to increase even with the presently planned and programmed roadway improvements. Coral Gables and Dade County, acknowledge the existence of arterial roadways that are considered *Constrained Facilities.* These are roadways carrying high traffic volumes, currently operating below County and State Levels of Service standards, and are physically constrained from further widening due to lack of available rights-of-way and/or are legislatively protected from improvements due to their historical designation. A list of such roads is presented in Table 2.6..

The City, along with the County, will continue to seek appropriate and balanced solutions to improve the Level of Service on these constrained facilities. Viable solutions may include capacity improvements to parallel alternative roadways within a particular impacted corridor, Transportation System Management (TSM) type improvements such as improved signal timing, channelization to improve turning movements, placing a greater emphasis on ridesharing, and staggered and flexible hours. Public transit and exclusive transit facility improvements in these corridors will also continue to be investigated for implementation, when feasible and cost effective, to encourage shifts to high occupancy vehicles and systems.

2.4.
Level of Service Standard:

Expansion of the road system is generally restricted by two major factors, the practicality of certain improvements and their cost. Correction of existing deficiencies, if Level of Service "D" were to be achieved, would not only be prohibitively expensive but will prove to be impractical due to the right-of-way acquisitions required by new roadway crossections and the unacceptable impacts involved in developing new corridors in the historic and aesthetic context of the City, as well as the need to meet multi-modal needs of the future.

This analysis recognizes that it may not be feasible to achieve Level of Service "D" on all of the roadways in the City.

The City has several links presently operating below Level of Service "D". The limiting right-of-way conditions combined with high land values and the historic and/or residential nature of the area creates special problems which warrant still another approach to level of service standard. A Special Transportation Area (STA) designation shall be sought through the Dade County Metropolitan Planning Organization for the area bounded by Tamiami Trail (S.W. 8th Street), Flagler Street and the City Limits on the North. Sunset Drive on the South, Red Road (S.W. 57th Avenue) on the West and Cartagena Plaza, Le Jeune Road, The City Limits and Douglas Road (S.W. 37th Avenue) on the East. The proposed level of service standard in the Special Transportation Area is a Peak Hour Level of Service "E" with no more than 20% of the links operating at a Level of Service "F". Additionally, specific roadways with historic, aesthetic and/or unigue values should be considered for Level of Service "F" standard (see Table 2.6. for listing of "Constrained" roadway facilities).

2.5.
Transportation System Management:

Optimization of the existing transportation system capacity is possible by implementing and encouraging Transportation System Management (TSM) techniques. These include, among others, High Occupancy Vehicle (HOV) lanes, reversible lanes and staggered work hours. Staggered work hours should be encouraged in selected special generator areas. Carpooling, van pooling and use of mass transit may be encouraged by employers through incentives.

Supply/pricing policies should also be considered. Limited and selectively priced parking, coupled with alternative transportation modes could effect a noticeable impact on vehicular traffic. Shuttle systems can be designed to encourage use of mass transit, commuter rail and peripheral parking.

2.8.
Pedestrians:

Pedestrians and motorist benefit from well planned pedestrian facilities. Special attention will be paid to accommodating pedestrians in the following special generator areas:

Downtown,
Transit terminals,
Special events,
Scenic/recreation areas.

Proper treatment of the pedestrian needs include consideration for wide sidewalks, pedestrian signals. crosswalks and grade separation where effective.

Table 2.5.
COMMITTED & PLANNED ROADWAY IMPROVEMENTS

Metro-Dade County Transportation Improvement Program, 1986; and Metro-Dade County Plan for the Year 2000. (Including Florida Department of Transportation 5 Year Plan)

COMMITTED ROADWAY IMPROVEMENTS

Roadway Link	Type of Work	Cost	Year
SR 5/US 1 from: Ponce de Leon to: Douglas Road	Improve Horizontal and Vertical Curve	R/W $ 89,000 CST $102,700 CEI $ 14,300	1987-88 1990-91 1990-91
SR 90/US 41/S.W. 8th Street from: S.W. 57th Ave. to: S.W. 42nd Ave.	Road Reconstruction	CST $342,900 CEI $ 34,300	1988-89 1988-89
SR 90/US 41/S.W. 8th Street from: S.W. 42nd Ave. to: S.W. 37th Ave.	Road Reconstruction	CST $449,200 CEI $ 44,900 [1]	1988-89 1988-89
SR 959/S.W. 57th Ave. from: US 1	Road Reconstruction	PE $400,000 R/W$4,21,000	1988-89 1991-92

PLANNED ROADWAY IMPROVEMENTS

Roadway Link	Limits	Improvement
S.W. 57th Avenue	from: S.W. 8th Street to: US 1	Widen to 4 lanes

[1] Cost includes part of this project outside of the City Limits.
Source: Metro-Dade County Transportation Improvement Program, 1986; and Metro-Dade County Plan for the Year 2000. Florida Department of Transportation

Table 2.6.

Roadways considered "Constrained"from further widening [1]

Roadway	Limits from:	to:
U.S. 1 (S. Dixie Hwy.,S.R. 5)	S.W. 37th Avenue (Douglas Road)	S.W. 57th Avenue (Red Road)
S.W. 40th Street (Bird Road)	Ponce de Leon Blvd.	S.W. 57th Avenue (Red Road)
S.W. 8th Street (Tamiami Trail)	S.W. 37th Avenue (Douglas Road)	S.W. 57th Avenue (Red Road)
S.W. 24th Street (Coral Way)	S.W. 37th Avenue (Douglas Road)	S.W. 57th Avenue (Red Road) [2]
Old Cutler Road	S.W. 72nd Street (Sunset Drive)	S.W. 57th Avenue (Red Road)
S.W. 72nd Street (Sunset Drive)	Cartagena Circle	S.W. 57th Avenue (Red Road)
S.W. 42nd Avenue [3] (LeJeune Road)	Cartagena Circle	U.S. 1 (S. Dixie Hwy., (S.R. 5)

[1] Source: Proposed Metro-Dade County Comprehensive Master Plan, Traffic Circulation Element 2000 and 2010. List Adjusted to reflect Coral Gables City Limits.

[2] Extension of Coral Way as a "Constrained Facility" from S.W. 42nd Avenue (LeJeune Road) to S.W. 37th Avenue (Douglas Road) is proposed by the City of Coral Gables.

[3] Proposed by the City of Coral Gables.

The following section is adopted by City ordinance:

TRAFFIC CIRCULATION GOALS, OBJECTIVES AND POLICIES:

The traffic circulation element of the comprehensive plan provides a general planning outlook related to the transportation needs of the City. It establishes a transportation goal with more specific objectives and policies for more directed action. The policies of this plan are directed at providing transportation services balanced among other comprehensive plan policies. Judgement must be exercised in the interpretation and application of these policies to insure the final outcome is responsive to the will of the citizens of the City, while serving the common needs of the greater community of Dade County and the State.

3.
OVERALL TRANSPORTATION GOAL

The City is to ensure the balanced provision for an integrated multi-modal transportation system which encourages the efficient, safe and coordinated movement of people and goods within and through the City, while maintaining the historic, residential, cultural, and environmental quality and characteristics unique to the City.

3.1.
OBJECTIVE

All roads within the City are classified as roads within Existing Urbanized Areas by the State of Florida, and are within the Urban Infill Area (UIA) by Metro-Dade County. No roadways in the City of Coral Gables, classified as County Collector or higher, should operate at a level of service lower than the Level of Service Standards contained in the adopted policies of this element. The LOS standards for traffic facilities shall be used in the concurrency management program to issue development orders as of the effective date provided in CMP as set forth in the Capital Improvements Element.

3.1.1.
POLICY

The minimum or lowest quality acceptable peak-period* operating Level of Service (LOS) standards for State Principal Arterial, Minor Arterial, County Minor Arterial and County Collector roads within the City of Coral Gables shall be as herein established;

*Peak period means the average of the two highest consecutive hours of traffic volume during a weekday;

1. For the interim period 1989 through 1994 the minimum acceptable peak-period operating LOS shall be LOS E (100 percent of their capacity) with the following exceptions:
   1.1. The minimum acceptable peak-period operating LOS for any road

operating below LOS E on or before September 1, 1989 and constrained roads shall be fifteen percent (15%) below said existing LOS;

1.2. In lawfully established Special Transportation Areas (STAs) twenty percent (20%) of non-State facilities may operate below LOS E

2. Beginning January 1, 1995, the minimum acceptable peak-period LOS standard shall be the following:

2.1. Where no public mass transit service exists, roadways shall operate at or above LOS E; In STA's 20 percent of non-State roads may operate below LOS E.

2.2. Where mass transit service having headways of 20 minutes or less is provided within 1/2 mile distance, roadways shall operate at no greater than 120 percent of their capacity;

2.3. Where extraordinary transit service such as commuter rail or express bus service exists, generally parallel roads within 1/2 mile shall operate at no greater than 150 percent of their capacity.

3.1.2.
POLICY

Roadways that are physically or environmentally constrained or legislatively prohibited from expansion due to their valued historic, or cultural character, will be allowed to operate at level of service (LOS) as established for Constrained Facilities; Constrained Roads, and/or non-State roads within an STA, operating above the minimum LOS standard E as of September 1, 1989 shall not operate at a LOS lower than that established under the 1995 standards.

The following roads are designated Constrained Facilities:
U.S. 1 (S. Dixie Hwy.,S.R. 5) from S.W. 37th Avenue (Douglas Road) to S.W. 57th Avenue (Red Road);
S.W. 40th Street (Bird Road) from Ponce de Leon Blvd. to S.W. 57th Avenue (Red Road);
S.W. 8th Street (Tamiami Trail) from S.W. 37th Avenue (Douglas Road) to S.W. 57th Avenue (Red Road);
S.W. 24th Street (Coral Way) from S.W. 37th Avenue (Douglas Road) to S.W. 57th Avenue (Red Road);
Old Cutler Road from S.W. 72nd Street (Sunset Drive) to S.W. 57th Avenue (Red Road);
S.W. 72nd Street (Sunset Drive) from Cartagena Circle to S.W. 57th Avenue (Red Road);
S.W. 42nd Avenue (LeJeune Road) from Cartagena Circle to U.S. 1 (S. Dixie Hwy., S.R. 5).

3.1.3.
POLICY
Any section of any roadway may temporarily operate at a LOS lower than the established minimum if capacity improvements raising the LOS of such roadway to its standard ; are assured to exist on a timely basis as provided for through the concurrency management provisions of this plan.

3.1.4.
POLICY
Issuance of all Developments Orders for new developments or significant expansions of existing developments shall be contingent upon compliance with the applicable LOS standards contained in this comprehensive plan.

3.1.5.
POLICY
The City of Coral Gables shall formalize procedures and requirements for all development, regardless of size, to contribute its proportionate share of transportation facilities, or funds or land, necessary to accommodate the impact of the proposed development.

3.1.6.
POLICY
Special planning and urban management needs related to severe limitations of right-of-way conditions, high land values, urban infill development, highly regarded historic, aesthetic, environmental and unique residential nature of the area, combined with central business district requirements for LOS standards which support more intense road and mass transit utilization for productive and essential human and business interaction are recognized by the City's intent to apply by November 1, 1990 through the Dade County Metropolitan Planning Organization and the State Department of Transportation for establishment of a special transportation area (STA). The STA is defined as the area bounded by Tamiami Trail (S.W. 8th Street), Flagler Street and the City Limits on the North; Sunset Drive on the South, Red Road (S.W. 57th Avenue) on the West and Cartagena Plaza, Le Jeune Road, the City Limits and Douglas Road (S.W. 37th Avenue) on the East; All transportation facilities within the STA shall be considered both as individual facilities and as an integrated functional system for balanced transportation services.

3.1.7.
POLICY
Although the City is not required to adopt a mass transit element, it recognizes that traffic circulation is dependent upon mass transit operated within the City of Coral Gables under the authority of Metro-Dade County. The provision of efficient mass transit and paratransit services that serve existing and future trip generators and attractors are essential to the continued development of the City. Therefore, the City shall continue to support Metropolitan Dade County in its authorization and provision

of these necessary mass transit services. Such support shall include the enforcement of the adopted LOS standards, roadway design standards, and effective transportation mode options that enhance efficient person-trip and vehicular movements and reduces accident potential. Support shall also include participation in the intergovernmental coordination activities of the MPO, Florida Department of Transportation, and The Transportation Plan Technical Advisory Committee of Metro-Dade County in the formulation of transportation policy and efforts to maintain adopted level of service standards.

3.1.8.
POLICY
MAP 2.1. TRAFFIC MAP - FUNCTIONAL CLASSIFICATION OF EXISTING ROADWAYS is included by reference and adopted to establish the functional classification of roadways within the City. The location of the primary mass transit terminals for Metro-Rail along the South Dixie Highway corridor at The University of Miami, and at Douglas Road, and the Metro-Transit bus terminal at Salzedo Street and Aragon Avenue shall be added to this map to reflect the key mass transit nodes within the City. Additionally, the following are collector and arterial roadways where mass transit service having headways of 20 minutes or less is provided within 1/2 mile distance:
U.S. 1 (S. Dixie Hwy.,S.R. 5) from S.W. 37th Avenue (Douglas Road) to S.W. 57th Avenue (Red Road);
S.W. 40th Street (Bird Road) from Ponce de Leon Blvd. to S.W. 57th Avenue (Red Road);
Ponce de Leon Blvd. from S.W. 57th Avenue (Red Road) to S.W. 42nd Avenue (LeJeune Road);
S.W. 8th Street (Tamiami Trail) from S.W. 37th Avenue (Douglas Road) to S.W. 57th Avenue (Red Road);
S.W. 24th Street (Coral Way) from S.W. 37th Avenue (Douglas Road) to S.W. 57th Avenue (Red Road);
Old Cutler Road from S.W. 72nd Street (Sunset Drive) to S.W. 57th Avenue (Red Road);
S.W. 72nd Street (Sunset Drive) from Cartagena Circle to S.W. 57th Avenue (Red Road);
S.W. 42nd Avenue (LeJeune Road) from Cartagena Circle to S.W. 8th Street (Tamiami Trail).
Granada Boulevard from S.W. 8th Street (Tamiami Trail) to S.W. 72nd Street (Sunset Drive).
University Drive from S.W. 40th Street (Bird Road) to S.W. 42nd Avenue (LeJeune Road)

S.W. 37th Avenue (Douglas Road) from U.S. 1 (S. Dixie Hwy.,S.R. 5) to S.W. 8th Street (Tamiami Trail)

S.W. 57th Avenue (Red Road) from U.S. 1 (S. Dixie Hwy.,S.R. 5) to S.W. 8th Street

(Tamiami Trail)

Additionally, the following are collector and arterial roadways where extraordinary transit services such as commuter rail or express bus service exists, generally parallel to and within 1/2 mile of such roads:
U.S. 1 (S. Dixie Hwy.,S.R. 5) from S.W. 37th Avenue (Douglas Road) to S.W. 57th Avenue (Red Road);
S.W. 40th Street (Bird Road) from Ponce de Leon Blvd. to S.W. 57th Avenue (Red Road);
S.W. 8th Street (Tamiami Trail) from S.W. 37th Avenue (Douglas Road) to S.W. 57th Avenue (Red Road);
S.W. 24th Street (Coral Way) from S.W. 37th Avenue (Douglas Road) to S.W. 57th Avenue (Red Road);
S.W. 42nd Avenue (LeJeune Road) from Cartagena Circle to S.W. 8th Street (Tamiami Trail).

3.1.9.
POLICY
MAP 2.1.1 TRAFFIC MAP - SPECIAL TRANSPORTATION AREA DISTRICT is included by reference and adopted to establish the delineate the boundary of the special transportation area (STA) for which the City shall apply for district designation within which all roads shall be measured for service capacity against the Level of Service standard for STA designated facilities. All roads within the city have been constructed along their planned corridors. No change in functional classification is planned for future road facilities.

3.2.
OBJECTIVE
Provide for a safe, convenient and efficient motorized and non-motorized transportation system.

3.2.1.
POLICY
The City shall maximize utilization of existing roadway capacity and reduce peak period congestion by implementing to the maximum extent feasible, traffic operation improvements and transportation systems management alternatives including but not limited to the following: Improved signal timing, intersection signing, markings, channelization, restrictions and management of on-street parking, the use of mass transit and paratransit services, employer-base van pooling, car pooling, , and employer-based staggered and/or flexible work hours.

3.2.2.
POLICY
Accessibility to major thoroughfares shall be limited to adequate, properly designed and safe systems through adopted design standards and procedures, which at a minimum address: Adequate storage and turning bays; Spacing and design of median openings and curb cuts; Provision and maintenance of service roads; Driveway access and spacing.

3.2.3.
POLICY
High frequency accident locations shall be monitored by maintaining detailed data acquired by the City from other agencies, in order to provide greater functional design related information and early warning as to the development of serious deficiencies and the potential for design improvements which may alleviate hazardous conditions.

3.2.4.
POLICY
The City shall consider bicycle and pedestrian ways in the planning of transportation facilities.

3.2.5.
POLICY
The City shall promote safe movement of bicycle and pedestrian traffic in development proposals.

3.3.
OBJECTIVE
Coordinate traffic circulation system with future land uses and capital improvements element as adopted on future land use map series and the Plan, recognizing fiscal and physical constraints.

3.3.1
POLICY
The City shall establish peak period level of service standards for the non-constrained City arterial and collector roadways.

3.3.2.
POLICY
The designation of certain areas as Special Transportation Areas (STA) shall be sought from the Metropolitan Planning Organization, and other related agencies in order to allow levels of service to be compatible with the area constraints and City comprehensive plan policies.

3.3.3.
POLICY
The City shall maintain consistency between the adopted traffic circulation element policies and other adopted policies of the comprehensive plan.

3.3.4.
POLICY
The adopted Land Use Plan Maps shall be used to guide the planning of future transportation corridors to ensure the proper coordination between transportation planning and future development patterns.

3.4.
OBJECTIVE
Coordinate with plans and programs of the Metropolitan Planning Organization, Public Transportation Authority, Chapter 380 FS based resource planning and management plans and Florida's Department of Transportation (FDOT) Five (5) Year Transportation Plan.

3.4.1.
POLICY
Subsequent FDOT Five-Year Transportation Plans (as well as Metropolitan Dade County's Transportation Improvement Program) shall be reviewed for consistency to ensure that they remain in keeping with Coral Gables comprehensive plan.

3.4.2.
POLICY
The Coral Gables Comprehensive Plan and the Long Range Transportation Plan Update prepared by the Metropolitan Planning Organization shall be mutually consistent.

3.4.3.
POLICY
The City shall review the compatibility of the Traffic Circulation Element and coordinate it with the Traffic Circulation Plan and Program of Metropolitan Dade County, adjacent municipalities and the South Florida Regional Planning Council and shall cooperate in maintaining adequate inter-regional mobility.

3.5.
OBJECTIVE
Rights-of-Way and transportation corridor needs for existing and future transportation facilities needs shall be designated and reserved.

3.5.1.
POLICY
The City shall continue to maintain and conform with the minimum right-of-way requirements as established by appropriate agencies, as balanced against the historic, aesthetic, cultural and residential character of the City.

3.5.2.
POLICY
The City shall require the dedication of the appropriate share of the necessary right-of-way from all developments at the time of development.

3.5.3.
POLICY
Advanced rights-of-way shall be reviewed or acquired, where necessary, for future transportation improvements identified in the adopted comprehensive plan.

3.6.
OBJECTIVE
The traffic circulation system will protect community and neighborhood integrity.

3.6.1.
POLICY
The City will strive to conserve and protect the character of neighborhoods by preventing the intrusion of through vehicles on local & collector streets.

3.6.2.
POLICY
Major thoroughfares and intersections should be located and designed in a manner which would not tend to sever or fragment land which is or could otherwise be developed as well defined neighborhoods.

3.6.3.
POLICY
The City shall discourage through traffic in neighborhoods by use of traffic management techniques, including signage, landscape design and roadway design.

3.6.4.
POLICY
Because of the unique historic, aesthetic and residential qualities of Coral Way, Bird Road and Old Cutler Road, these arterial roadways shall be maintained at their present designation and capacity.

3.7.
OBJECTIVE
Plan and ensure development of a transportation system that preserves environmentally sensitive areas, conserves energy and natural resources, and maintains and enhances community aesthetic values.

3.7.1.
POLICY
The City shall provide landscaping along roadways to serve as visual and sound buffers and to maintain the quality of the environment within the City.

3.7.2.
POLICY
The City shall avoid transportation improvements which encourage or subsidize development in environmentally sensitive areas identified in the conservation element.

3.7.3.
POLICY
If no feasible alternative exists, needed transportation facilities may be placed in environmentally protected conservation areas. However, such areas are to be limited and design techniques used to minimize the negative impact upon the natural systems in a balanced manner.

3.7.4.
POLICY
New roads shall be designed to prevent and control soil erosion, minimize destructive secondary impacts of clearing and grubbing operations, minimize storm run-off, and avoid unnecessary changes in drainage patterns.

3.7.5.
POLICY
The City shall pursue and support transportation programs (e.g., rapid transit, express buses, high occupancy vehicles (HOV), bikeways) that will help to maintain or improve air quality and help conserve energy.

3.7.6.
POLICY
Design of new roadways shall be undertaken so as to make them compatible with the surrounding environment, complement adjacent development and provide an aesthetically pleasing visual experience to the user and to the adjacent area.

This concludes the adopted sections of this element.

4.0
OTHER TRANSPORTATION RELATED ELEMENTS

The City of Coral Gables is not required to include a Mass Transit Element in the comprehensive Plan.

There are no aviation, commercial shipping port, or commercial freight rail terminal facilities within the City. Elements for these facilities are not required for the City. Air space control surfaces for distant aviation facilities are well above any current or anticipated facilities within the City.

Chapter 3

HOUSING ELEMENT

1.
INTRODUCTION

Housing is an essential need. The City of Coral Gables was originally envisioned as a suburban community providing a quality residential environment. The attractiveness of the city is a testament to George Merrick's vision of what Coral Gables would become when he began in the 1920's to develop and promote the land which his father had planted in citrus groves. Mr. Merrick also foresaw the time when Coral Gables would evolve into an established community with stable neighborhoods and prospering commerce. While the city today is the location of some of the finest homes in South Florida, it also offers more modest residences, meeting a wide range of housing needs.

Coral Gables is a developed, predominantly residential community within the metropolitan Miami urban area. Almost all of the buildable land in the city has been subdivided and improved. There is a limited number of vacant residential parcels remaining. Land available for construction of new residential structures is located in existing platted subdivisions. Redevelopment of existing land uses offers some opportunities for new housing, and may become more important in the future as more of the older residential structures begin to need rehabilitation or replacement. Coral Gables actively promotes preservation of its historic residential properties and maintenance of sound housing conditions through the efforts of the city Historic Preservation Division and Building Department, and support of the Coral Gables Historic Preservation Board.

This housing element presents an overview of existing housing conditions, an analysis of housing issues, and concludes with statements of a goal, objectives, and policies. The analysis addresses housing needs, maintenance of the quality of existing housing stock, and the provision of adequate sites for housing. The goal, objectives, and policies provide guidance for city decisions affecting housing and for maintaining a residential environment of high quality in Coral Gables.

2.
EXISTING CONDITIONS

2.1.
Housing Characteristics

Housing Type: Development in Coral Gables is primarily residential in character.

Areas designated on the Future Land Use Map for residential uses comprise almost 4,100 acres of the 7,680 acre land area in the city. According to the 1980 Census, 54.8 percent (9,670 units) of the housing units were single-family dwellings. The percentage of single-family units has not changed since the 1980 Census, although the number of single family units is estimated to have increased to 10,087. There has been a slight increase since 1980 in the percentage of housing units in structures with ten or more units, from 27.3 percent (4,813 units) to 27.8 percent (5,127 estimated units). Housing units in structures with two to nine units increased slightly from 3,151 to 3,207. Total units and the percentage of housing inventory by type of unit are shown in Table 3.1. The total number of units is estimated to have increased from 17,641 to 18,421 between 1980 and 1987.

Housing Tenure: In 1980, the Census reported that 58.6 percent of all occupied units were owner-occupied. The remaining 41.4 percent were renter-occupied units. Occupied housing units totaled 16,429, with 9,620 owner-occupied and 6,809 renter-occupied.The other 1,212 housing units in the city were vacant or held for seasonal and occasional use. Housing tenure characteristics are detailed in Table 3.2.
Housing Vacancy: Table 3.3 shows the housing vacancy characteristics for Coral Gables and Dade County as reported in the 1980 Census. At the time of the Census, 1,172 units of the total housing units in Coral Gables were vacant. The vacancy rate was 6.6 percent in the city, compared to an overall county rate of 7.9 percent. Not counting units which had been rented or sold and were awaiting occupancy, and units held for occasional use, the vacancy rate was 4.8 percent. There were 331 vacant housing units for sale, and 228 of those units had been on the market for more than six months. Of the 258 vacant units for rent, 123 had been vacant for less than two months.

Age of Housing: The reported age of housing structures in Coral Gables is an indicator of the established residential character of the city. A significant portion of the housing stock in Coral Gables is over 25 years old. Approximately 16.9 percent is at least 49 years old, having been constructed in 1939 or earlier. Another 46.7 percent of the housing stock is 29 to 48 years old, having been constructed from 1940 to 1959. Only 2.5 percent of the housing structures (totaling 453 structures) have been permitted since January 1980. Table 3.4 lists the age of housing structures reported in the 1980 Census and updated with city housing permit data through 1987. While there is a high proportion of older homes, the homes have substantially higher average resale values than the county-wide average and are typically well-maintained.

Renter-Occupied Housing Costs: Table 3.5 compares the monthly gross rents for specified renter-occupied housing units in the city with the Dade County totals. The median contract rent in Coral Gables for specified renter-occupied housing units at the time of the last Census was $266 per month. In 1980, 27.4 percent of the renter-occupied housing units in the city rented for $300 or more a month. Rentals under $200 a month comprised only 13.2 percent of the renter-occupied housing units.

Owner-Occupied Housing Value: The median value of specified owner-occupied housing units in Coral Gables was $106,700 in 1980, and the mean value of owner-occupied and vacant for-sale condominium units was $63,882. According to the Census, 38.9 percent of the housing units were in the value range from $50,000 to $99,999. Housing units valued at $100,000 or more comprised 46.0 percent of the owner-occupied housing units. Less than ten percent of the owner-occupied units were valued under $50,000. Table 3.6 shows the value of owner-occupied housing units in the city as reported in the 1980 Census.

Monthly Costs of Owner-Occupied Housing Units: The median monthly cost of owner-occupied housing units in Coral Gables in 1980 was $495 when the unit was mortgaged, and was $188 for units without mortgages. Of the total number of owner-occupied housing units, 73.9 percent were mortgaged and 26.1 percent were not mortgaged at the time of the Census. Table 3.7 shows the monthly owner costs of owner-occupied housing units in the city in 1980.

Rent-to-Income Ratio: Table 3.8 indicates the number and percentage of specified rental units by cash rent category and rent-to-income ratio. The median household income in Coral Gables for renter-occupied housing units in 1980 was $13,894. The median contract rent was $266. The median rent-to-income ratio was 23.0 percent based on the figures reported for the 1980 Census. This ratio compares favorably to the generally accepted standard that housing costs should not exceed 30 percent of gross household income. Utilizing the 30 percent ratio standard of housing costs to gross household income, rental costs would be deemed excessive at $347.35 per month. There were 3,177 renter-occupied units in Coral Gables, or 49.1 percent of all rental units, with monthly rents at or below $300.

Housing Cost-to-Income Ratio: Table 3.9 illustrates the number and percentage of owner-occupied units by monthly owner costs category and cost-to-income ratio. The median household income in Coral Gables for owner-occupied housing units in 1980 was $33,163. The median monthly owner costs for owner-occupied housing units that were mortgaged were $575, and for units without mortgages were $188. The median cost-to-income ratio for units with mortgages was 20.8 percent. This was well below the recommended cost-to-income ratio of 30 percent ($254 less than the 30 percent figure of $829), based on median household income for owner-occupied units. There were 2,335 units, or 24.9 percent, of the 9,364 total owner-occupied housing units which had a cost-to-income ratio of 27.1 percent or more.

Condominium Housing: Tenure, occupancy status and value of year-round condominium housing units in Coral Gables as reported by the 1980 Census is shown in Table 3.10. The table compares these characteristics with other selected Dade County communities. Of the 597 condominium units reported, 413 were renter occupied (69.2 percent). Another 92 units were owner-occupied or vacant for-sale. The average value of owner-occupied and vacant for-sale units was $115,775.

2.2.
Comparative Housing Characteristics, Coral Gables and Dade County

Information from the 1980 Census of Housing has been used to provide the following comparative characteristics between Coral Gables and Dade County. These figures will have changed since the Census was conducted, but noting the similarities and differences between the city and the county as a whole in 1980 provides a context for better understanding current housing market conditions in the city. The 17,641 total housing units reported for the city comprised less than 2.7 percent of the county's total housing stock of 661,954 reported units. With the more rapid growth in other areas of the county since 1980, the city share of the county housing inventory is now less than in 1980.

The percentage of single-family residential units in Coral Gables in 1980, 54.8 percent, was similar to Dade County, where 56.4 percent of the year-round housing units were single-family, according to the Census. In the county, the owner-occupancy rate was reported to be 54.5 percent in 1980, while the city had a somewhat higher rate of 58.6 percent. The median list price of the vacant units for sale in Coral Gables was $128,500. This figure is $67,200 more than the median list price of $61,300 for all the vacant units for sale in Dade County at the time of the Census. The average value of single family residential building permits issued between 1980 and 1987 is $266,122.

The vacancy rate was 6.6 percent in the city, compared to an overall county rate of 7.9 percent. Not counting units which had been rented or sold and were awaiting occupancy, and units held for occasional use, the reported vacancy rate was 4.8 percent. Since the Census, housing in the city has maintained a lower vacancy rate and higher median value compared to Dade County as a whole.

The median contract rent for specified renter-occupied housing units at the time of the last Census was $266 a month in Coral Gables, 15.2 percent higher than the median rent of $231 a month for Dade County. In 1980, 37.8 percent of the renter-occupied housing units in the city rented for $350 or more a month. Only 14.6 percent of the county-wide renter-occupied housing units were in this cost range. Rentals under $200 a month comprised 13.2 percent of the renter-occupied housing units in Coral Gables, compared to 38.8 percent for the county.

The median monthly cost of owner-occupied housing units in Coral Gables in 1980 was $495 when the unit was mortgaged, and in Dade County was $374. Of the total number of owner-occupied housing units in Coral Gables, 73.9 percent were mortgaged and 21.1 percent were not mortgaged. County-wide, 78.9 percent were mortgaged and 21 percent were not mortgaged. The median monthly cost of owner-occupied housing units without mortgages in Coral Gables was $188, and in Dade County was $116.

Clearly, there are fewer similarities than differences between the city and the county as a whole in terms of housing characteristics. Housing costs, owner-occupied housing

values, and rents were significantly higher in Coral Gables. These characteristics reflect the success of the city in maintaining a quality residential environment.

2.3. Housing Conditions

Individual housing units may be considered substandard if the unit lacks of complete plumbing for exclusive use of the residents, lack of complete kitchen facilities, lack of central heating, and overcrowding (which is defined as more than one person per room living in a unit). The 1980 Census provides data regarding these interior conditions of the housing stock. Table 3.11 contains a summary of the measures of substandard housing conditions for Coral Gables and Dade County in 1980. A lack of central heating was reported for 1,205 housing units, or 6.8 percent of the total reported units. Another 757 units (4.3 percent) were reported as overcrowded. A lack of complete plumbing or kitchen facilities was reported for less than one percent of the housing units.

It should be noted that lack of central heating as an indicator of a substandard housing condition accounted for almost 58 percent of the substandard conditions reported by the Census in the city. This indicator is not a good measure of substandard condition in subtropical Dade County, where other means of heating may be sufficient for infrequent cool weather. The city had significantly fewer substandard conditions than Dade County in all the substandard conditions categories.

A lack of exterior maintenance is another indicator of substandard condition. Since almost two-thirds of the housing stock is more than 28 years old, the condition of housing should be an area of concern. A negligible number of units appear substandard upon visual inspection. Deterioration of housing units, which is evidenced by a lack of exterior maintenance, is not significant.

2.4. Subsidized Housing Development

There are no reported government-subsidized rental housing developments in Coral Gables, according to state and local records or the U.S. Department of Housing and Urban Development list of Projects Under Development in Dade County. The city is currently working with the Metro-Dade County Department of Housing and Urban Development on infrastructure improvements to support the provision of moderate cost housing in the McFarlane Homestead neighborhood. The county is utilizing funds from a commercial property transfer tax surcharge account to purchase vacant lots and substandard housing in the neighborhood. The Coconut Grove Local Development Corporation.and will then subsidize the construction of new units on these lots by private contractors. Infrastructure improvements in the neighborhood are to include street, drainage, and water line upgrading, a park, and lighting. The city has agreed to contribute $500,000 toward the estimated $1.5 million needed for these

improvements, which will benefit the entire neighborhood.

2.5. Group Quarters

Group Homes: There are no centers for independent living in Coral Gables. The only facility of this type in Dade County is the C-Sail Center located in the City of Miami. There are no long-term residential care facilities in Coral Gables. According to the Dade County District Office of the Florida Department of Health and Rehabilitative Services, there are no family group homes, no foster family group homes, and no licensed child caring or child placing residential facilities within Coral Gables.

Dormitories and Campus Housing: Campus housing at the University of Miami has a capacity of approximately 3,800 persons. According to the 1986 Campus Planning Study by Dober and Associates, Inc., the campus housing capacity may change substantially. The study envisions removal of low density housing "...in the area surrounding and bounded by Walsh Avenue, Dickinson Drive, and George E. Merrick Street...." New residential colleges have been planned which would increase the student population housed at the university to about 5,400.

2.6. Mobile Homes

Coral Gables has no mobile home subdivisions, parks, or mobile homes on individual lots located within the city. The city allows construction site trailers on a temporary basis.

2.7. Historically Significant Housing

The Coral Gables Historic Preservation Division is responsible for administering the city's historic preservation program. The city has prepared an Historic Preservation Element, in recognition of the significance of historic properties in Coral Gables. The location of all the city's historically significant housing currently listed in the Florida Master Site File has been identified on the "Historic Resources of Coral Gables - Map Series." The city has also conducted a study which evaluates potential economic incentives to encourage historic preservation. The recommendations of this study are reflected in the goals, objectives, and policies of the Historic Preservation Element.

2.8. Recent Housing Activity

Permits issued for residential construction and demolitions indicate the level of housing activity in the city. Between 1980 and 1987 building permits were issued for

417 single-family residences, an average of about one per week. Other residential building permits issued during this time period were for six duplexes and 358 units in multi-family buildings. Demolition permits were issued for 335 residential units during this time, resulting in an estimated net gain of 452 units. The annual gain in residential units from 1980 through 1987 averaged less than 57 units. Table 3.12 shows residential building permit and demolition activity for the time period from 1980 through 1987.

3.
NEEDS ASSESSMENT

3.1.
New Household Formation

Based on projections of population change and assuming a stabilization of the average number of persons per household for year-round and seasonal units, the potential for new household formation can be assessed. The figures in Table 3.13 indicate potential household formation through 1998, given a continuation of the existing residential land use pattern and construction of single family detached housing on the remaining vacant lots. This analysis projects an annual average formation of 21 new households residing in single family units and eight new households in multifamily units. A total of 319 new households are anticipated, with 231 in single family residences and 88 in multifamily units. Of these new households, 64 are projected to be in the very low and low ranges, 112 in the moderate and middle ranges, and 144 in the upper middle and upper ranges of family income.

The distribution of housing type and tenure for new household formation indicated in Table 3.13 has been interpolated from 1980 Census information for the city. The analysis is consistent with population projections prepared for the comprehensive plan, which are based on county sub-area and city population projections prepared by Dade County. This analysis has not been adjusted for recent building permit trends, which would indicate a higher level of household formation based on the potential for new unit construction. While the city is approaching build-out of its residential land, and some vacant, buildable parcels are not likely to be developed, actual household formation will be determined by market conditions and the availability of newly constructed housing, not official population projections.

3.2.
Housing Needs

Anticipated New Housing Needs : Housing needs are determined by analyzing projected population trends and new household formation, in conjunction with a consideration of the life expectancy of the existing housing inventory. A total of 417 single-family residences, six duplexes, and 358 multifamily units in 30 buildings were

constructed between January 1980 and December 1987. It is anticipated that this rate of construction, approximately one unit per week after adjusting for demolitions, will decline through the year 1998. The characteristics of new single-family housing units are expected to reflect the existing stock of middle to upper income owner units. New multifamily units may be either rental or condominium units, with rents targeted to middle to upper income tenants. Rehabilitation of existing housing units and construction new units on vacant lots or as replacements for demolished units in the McFarlane Homestead neighborhood will provide the primary source of new units for low and moderate income households. There are no rural or farmworker households within the city.

Housing Rehabilitation : A significant portion of the housing stock was constructed between the 1920's and the 1950's. Although most of these units are in sound condition, it can be anticipated that at least two percent of the housing stock, as it reaches 50 years of age, will become substandard and require replacement or rehabilitation. Of the 3,062 units built prior to 1940, 61 units may requirement replacement or rehabilitation annually. Of the 8,443 units built between 1940 and 1959, it is projected that 169 units per year may require repair or replacement after 1990.

3.3. Land Requirements for Housing

Remaining vacant, developable land designated for residential uses in Coral Gables is limited, and the market feasibility of new residential development or redevelopment will continue to be contingent the supply of appropriately zoned land. Absorption of new housing units through the year 1998 is limited by two key factors: (1) the availability of vacant lots and parcels suitable for development in desirable locations, and (2) external market factors beyond the direct control of the city.

Table 3.14 illustrates the residential land use capacity of the city, based on allowable densities for land designated residential on the Future Land Use Map. It is important to note, however, that that almost all of the residential land in the city is currently developed. This development has predominantly occurred at lower densities than allowed by land use designations. For example, it is estimated that land designated for single-family housing could accommodate 23,267 units if developed at the maximum allowable density under current city regulations. The Residential Low (RL) category allows up to six single family units per acre. Islands of Cocoplum is the only recent residential subdivision with a number of undeveloped lots left. Lot sizes for the remaining unsold parcels, which number less than 30, range in size from one-third of an acre to over an acre.

The remaining vacant residential land in the city is more than adequate to meet the projected needs for new household formation. Existing and future development is expected to remain at lower densities overall than the maximum allowable. While the

demand for higher residential densities may increase in the future, Coral Gables does not anticipate any substantial change in existing residential land use density patterns during the next ten years. The capacity of remaining vacant, residential land is a more significant determinant of new housing potential in Coral Gables than market demand.

3.4. Housing Delivery Process and Housing Needs Served by Private Sector

Private development firms will continue to be the primary provider of new housing in Coral Gables. New housing will continue to be permitted and constructed for the remaining vacant, residential land in the city. Relatively high land values and the character of most existing residential properties have maintained a predominantly middle and upper income housing market in the city. Housing needs for the middle and upper income market will be served by private financial institutions and developers. Housing needs for the low and moderate income market will be primarily served by the Coconut Grove Local Development Corporation, which funds construction of low and moderate income housing by private residential contractors.

Development and redevelopment of the housing stock is a function primarily undertaken by the private sector. Coral Gables does not build any housing, although the development regulations of the city do guide and govern the private sector's residential construction activity. Maintenance of the housing stock is also a private sector responsibility. Coral Gables does play an important indirect role in this regard, as the enforcement of zoning and housing codes acts as a constant reminder to the private sector of its maintenance responsibilities. The market for residential properties in Coral Gables is enhanced by the quality of the existing housing stock and the attractive environment in the city. The private sector is not anticipated to have any difficulty meeting the needs for new housing or replacement and rehabilitation of the existing housing stock in the city.

3.5. Provision of Adequate Housing

The provision of housing is not only a private sector responsibility. Coral Gables and other local governments in Dade County have a responsibility to assure that adequate housing is available to meet the needs of all residents. Although the city is not involved in housing production, there are several actions which the city can take to support the provision of housing for persons who have special housing needs which are not met by private housing, or do not have sufficient incomes to compete efficiently in the private housing market.

These actions include support for public housing programs and cooperation with other local government and federal housing agencies, provision of adequate infrastructure in low and moderate income housing areas, and implementation of land use regulations

which do not prohibit housing which is affordable or meets special needs. Active enforcement of building codes to prevent substandard conditions, and correct these conditions when they occur, is a city responsibility which helps to maintain adequate housing for all Coral Gables residents.

Provision of Infrastructure to Support Housing: As noted before in this element, the city is working with the Metro-Dade County Department of Housing and Urban Development on infrastructure improvements to support the provision of moderate cost housing in the McFarlane Homestead neighborhood. The primary concern in this neighborhood is upgrading older water lines. Some of the these lines do not have sufficient pressure to maintain fire flows required for the permitting of new residential construction under the city's current building codes. Drainage improvements are also planned for this area. Elsewhere in the city, public infrastructure is adequate to support new housing.

Income and Housing: The South Florida Low Income Housing Task Force has recommended that housing issues for low and moderate income families be addressed on the basis of housing markets. In Dade County these areas are defined as the seven major statistical areas used by the Metro-Dade County Planning Department. Coral Gables is in the Southeast Dade housing market area. This market area has a substantial inventory of housing units affordable by low and moderate income families. Median family income in Dade County was estimated to be $29,700 in February 1987 by the U.S. Department of Housing and Urban Development (HUD). The HUD estimates define income levels for analysis purposes. Very low income is 50 percent of the median, or $14,850. The moderate family income level is between 80 and 120 percent of the median, or $26,774 to $37,535. These figures are for a family of four and are further adjusted for family size.

Affordability: Assuming that housing expenses should not exceed 30 percent of gross annual income, then very low income families can afford no more than $371.25 per month for housing in Dade County. Families in the low and very low income ranges are not typically participants in the home-ownership market. It is therefore appropriate to focus on rental housing for this issue. By adjusting the reported gross rent for specified renter-occupied units in the 1980 Census for inflation, it can be estimated that Coral Gables had approximately 1,600 rental units which were affordable by families in the very low income range in 1980. This analysis does not adjust for below market rents in the reported units or changes in the rental housing stock since the Census. The amount of affordable units may have changed significantly since 1980, and cannot be accurately determined without a current housing market study. Recent sales of owner-occupied units in Coral Gables indicate that there is ample housing in the city for families with incomes above the low and moderate income ranges.

Elimination of Substandard Housing: Almost 80 percent of the housing stock in Coral Gables is approximately 30 to 70 years old. Adequate housing maintenance in order

to minimize the effects of deterioration due to age is important. Although the housing has been generally well-maintained up to this time, a threshold point is being reached. Effective code enforcement operations are a significant factor for insuring that substandard housing conditions are remedied. Substandard housing conditions predominantly occur due to three primary causes: overcrowding, structural deficiencies, and inadequate maintenance.

Overcrowding: Multiple occupancy is defined as the existence of substandard living conditions resulting from overcrowding. This problem, which affects many communities in South Florida, is primarily a result of inmigration by persons not yet familiar with the rules, codes, and accepted standards of living in the United States. The 1980 Census reported that 4.3 percent of the occupied housing units in Coral Gables were overcrowded. Multiple occupancy is the most difficult substandard housing condition to enforce and to correct. Enforcement is a municipal responsibility at this time and is likely to remain so for the foreseeable future.

Structural Failures: Some structural failures may occur in the city's older housing stock within the next 10 to 15 years. These failures may be expected to take the form of concrete tie-beam failure or roof structure collapse. Inspection of these structural elements is beyond the scope of the building and code enforcement personnel at the local level. If such failures do occur, the involvement of Coral Gables will be limited to approval and inspection of any replacement and rehabilitation work undertaken by private firms.

Maintenance of Rental Housing: Units in the housing stock with the greatest potential for creating substandard conditions and receiving a majority of violation citations are rental housing units with absentee ownership and no active property management. Property owners or managers who live elsewhere are too often not concerned with the condition of their property, and renters sometimes do not maintain their homes with the same care as homeowners. Although 41.4 percent of the occupied housing units in Coral Gables were renter-occupied, according to the 1980 Census, structural deterioration is not a significant problem. An on-going and directed program of code enforcement insures adequate maintenance of the condition of the city's housing stock.

3.6.
Provision of Adequate Sites for Housing

Mobile Homes: As a built-up coastal community with strong local support for maintenance of aesthetic standards and regulations requiring structural compatibility, mobile homes are not considered an appropriate residential use in Coral Gables. Land costs in existing residential areas would be prohibitively expensive for a mobile home park or subdivision. The very few remaining vacant residential lots are zoned for conventional single-family homes, which does allow modular housing construction. Mobile homes are more subject to damage from high winds than site-built housing during a severe storm event, therefore the location of this type of housing in a coastal

area such as Coral Gables is not advisable.

Low and Moderate Income Housing: The city's stock of housing which is affordable for low and moderate income households is located primarily in the area of the city adjacent to Coconut Grove (McFarlane Homestead and Golden Gate) and the higher density Douglas Section residential area in the northeast area of the city. The built-up character of the city leaves no opportunity for new housing construction in any price range except for scattered vacant lots or redevelopment. In the event of a major storm event which destroys large areas of Coral Gables, the city may consider some areas for higher density land use designation during post-disaster planning, which could allow redevelopment of residential areas to be targeted to more affordable residences. As addressed in the Coastal Management Element, however, it is not anticipated that significant changes would be implemented in the overall residential land use pattern of the city should such a disaster occur.

Licensed Group and Foster Homes: Provision of adequate sites for licensed group and foster homes is an issue of regional importance. At the present time there are no foster care facilities and no licensed adult congregate living facilities in Coral Gables. Chapter 163, Florida Statutes, requires that the provision of adequate sites for group homes and foster care facilities in residential areas or areas with residential character be addressed in local comprehensive plans. City regulations and other applicable county and state regulations must be satisfied before local approval can be granted. It is recognized that these facilities benefit from proximity to supporting services such as medical care, public transportation, and neighborhood shopping. These locational factors should be considered during the approval process.

3.6.4.
Historically Significant Housing

Efforts toward securing additional registrations on the National Historic Register or locally-designated preservation districts and historically significant housing will continue to be encouraged and supported, through the efforts of the Coral Gables Historic Preservation Board and city Historic Preservation Division. The revitalization, maintenance, and preservation of local historic residential properties will remain a city priority. The city's historic preservation program is fully addressed in the Historic Preservation Element of the Comprehensive Plan.

Table 3.1.

Housing Inventory, 1980 and 1987

Total Units, Coral Gables, 1980 and 1987

	1980		1987	
Type of Unit	Units	Percent	Units	Percent
Single Family	9,670.0	54.8	10,087.0	54.8
2 to 9 Units	3,151.0	17.9	3,207.0	17.4
10 or More Units	4,813.0	27.3	5,127.0	27.8
Mobile Home/Trailer	7.0	0.0	0.0	0.0
Total	17,641.0	100.0	18,421.0	100.0

Note: Percents rounded.

Sources: U.S. Census Bureau, Table 86, Census of Housing, 1980.
City of Coral Gables Building Department, 1988.
Van Horn Associates, Inc., 1988.

Table 3.2.

Housing Tenure Characteristics

Coral Gables and Dade County, 1980

	Coral Gables		Dade County	
Occupied Housing Units	Units	Percent	Units	Percent
Owner-Occupied	9,620.0	58.6	332,527.0	54.5
White	9,402.0	57.2	285,181.0	46.8
Black	100.0	0.6	37,331.0	6.1
Other	118.0	0.7	89,056.0	14.6
Renter-Occupied	6,809.0	41.4	277,303.0	45.5
White	6,099.0	37.1	212,959.0	34.9
Black	426.0	2.6	47,220.0	7.7
Other	284.0	1.7	103,410.0	17.0
Total Occupied Units	16,429.0	100.0	609,830.0	100.0

Note: Percents rounded.

Sources: U.S. Census Bureau, Table H-1, Census of Housing, 1980.
Van Horn Associates, Inc., 1988.

Table 3.3.

HOUSING VACANCY CHARACTERISTICS AS A PERCENTAGE OF OCCUPIED UNITS

Coral Gables and Dade County, 1980

Vacant Housing Units	Coral Gables Units	Coral Gables Percent	Dade County Units	Dade County Percent
For Sale Only	331	28.24232	8593	16.48569
Vacancy Rate	na	3.326299	na	2.519055
Vacant < 6 Months	228	na	7074	na
Median List Price	128500	na	61300	na
For Rent	258	22.01365	15943	30.58668
Vacancy Rate	na	3.650771	na	5.436732
Vacant < 2 Months	123	na	10049	na
Rented/Sold, Waiting Occupant	197	16.80887	8123	15.58399
Held For Occasional Use	137	11.68942	11017	21.13614
Other Vacant	249	21.24573	8448	16.20751
Total Vacant Units	1172	100	52124	100

Note: Percents rounded.

Sources: U.S. Census Bureau, Table H-1, Census of Housing, 1980.
Van Horn Associates, Inc., 1988.

Table 3.4.

AGE OF HOUSING STRUCTURES

Year Built	Number of Structures	Percent of Structures
1980 to 1987	453	2.503592
1979 to 1980	167	0.922958
1975 to 1978	803	4.437935
1970 to 1974	1653	9.135625
1960 to 1969	3513	19.41528
1950 to 1959	5691	31.45242
1940 to 1949	2752	15.20946
1939 or earlier	3062	16.92274
Total Reported Units	18094	100

Note: Some units built prior to 1980 have been demolished.
Percents rounded.

Sources: U.S. Census Bureau, Table 86, Census of Housing, 1980.
City of Coral Gables Building Department, 1988.
Van Horn Associates, Inc., 1988.

Table 3.5.

Monthly Gross Rent, Renter-Occupied Housing Units

Coral Gables and Dade County, 1980

Contract Rent	Coral Gables Units	Coral Gables Percent	Dade County Units	Dade County Percent
Less than $50	0	0	6538	2.404012
50 to $99	13	0.201332	13756	5.05806
100 to $149	108	1.672603	28388	10.43822
150 to $199	519	8.037788	51196	18.82469
200 to $249	978	15.14635	52172	19.18356
250 to $299	1343	20.79913	45453	16.713
300 to $349	1061	16.43178	29111	10.70407
350 to $399	682	10.56218	16238	5.970687
400 to $499	706	10.93387	12687	4.66499
500 or more	837	12.96268	10641	3.912679
No cash rent	210	3.252284	5782	2.126032
Total Reported Units	6457	100	271962	100

Note: Percents rounded.
Sources: U.S. Census Bureau, Table 90, Census of Housing, 1980.
Van Horn Associates, Inc., 1988.

Table 3.6.

Value of Owner-Occupied Housing,

Coral Gables, 1980

Owner-Occupied Units	Number	Percent
Less than 10000	3	0.03775
10000 to $19,999	20	0.251667
20000 to $29,999	62	0.780169
30000 to $49,999	479	6.027432
50000 to $99,999	3094	38.93293
100000 to $149,99	2034	25.59456
150000 to $199,99	931	11.71511
200000 or more	1324	16.66037
Total Reported Units	7947	100
Median Value	106700	

Notes: Percents rounded.
Sources: U.S. Census Bureau, Table H-1, Census of Housing, 1980.
Van Horn Associates, Inc., 1988.

Table 3.7.

Monthly Costs of Owner-Occupied Housing Units

Coral Gables and Dade County, 1980

Mortgage Status and Selected Monthly Costs	Coral Gables Units	Coral Gables Percent	Dade County Units	Dade County Percent
Mortgaged Units	7,073	73.9	184,410	78.9
Less than $100	6	0.1	1,537	0.7
$100 to $199	104	1.1	19,594	8.4
$200 to $299	619	6.5	39,829	17.0
$300 to $399	994	10.4	42,468	18.2
$400 to $599	2,012	21.0	51,157	21.9
$600 or more	3,338	34.9	29,825	12.8
Median Monthly Costs	495		374	
Units Not Mortgaged	2,502	26.1	49,331	21.1
Median Monthly Costs	188		116	
Total Reported Units	9,575	100.0	233,741	100.0

Note: Percents rounded.

Sources: U.S. Census Bureau, Table 90, Census of Housing, 1980.
Van Horn Associates, Inc., 1988.

Table 3.8.

Rent-to-Income Ratios Based on $13,894 Median Income

For Specified Renter-Occupied Housing Units, Coral Gables, 1980

Renter-Occupied Units	Units	Percent	Rent:Income Ratio
No Cash Rent	210	3.2	na
Less Than $100	19	0.3	less than 8.6%
100 to $199	627	9.7	8.6 to 17.2 %
200 to $299	2321	35.9	17.2 to 25.8 %
300 to $399	1743	27.0	25.8 to 34.5 %
400 to $499	706	10.9	34.5 to 43.1 %
500 or more	837	13.0	43.1 % or more
Total Reported Units	6463	100.0	

Note: Percents rounded.
Sources: U.S. Census Bureau, Table 90, Census of Housing, 1980.
Van Horn Associates, Inc., 1988.

Table 3.9.

Cost-to-Income Ratios Based on $33,163 Median Income

For Specified Owner-Occupied Housing Units, Coral Gables, 1980

Monthly Owner Costs	Units	Percent	Cost:Income Ratio
Mortgaged Units			
Less Than $100	6	0.1	less than 3.6%
100 to $199	104	1.1	3.6 to 7.2 %
200 to $299	619	6.6	7.2 to 10.8 %
300 to $399	994	10.6	10.8 to 14.4 %
400 to $499	1094	11.7	14.4 to 18.1 %
500 to $599	918	9.8	18.1 to 21.7%
600 to $749	997	10.6	21.7 to 27.1%
750 or more	2335	24.9	27.1 % or more
Units Not Mortgaged	2297	24.5	
Total Reported Units	9364	100.0	
Median cost with mortgage	575		0.208
Median cost without mortgage	188		0.068

Note: Percents rounded.
Sources: U.S. Census Bureau, Table 90, Census of Housing, 1980.
Van Horn Associates, Inc., 1988.

Table 3.10.

Tenure, Occupancy Status, and Value of Year-Round Condominium Housing Units

Coral Gables and Selected Dade County Communities, 1980

Area	Owner-Occupied & Vacant-For-Sale	Renter-Occupied	Other Vacant	Percent Vacancy Rate (a)	Mean Value of Owner-Occupied & Vacant-For-Sale
Bal Harbour	412	102	327	38.9	188,174
Coral Gables	92	413	92	15.4	115,775
Bay Harbor Island	1,039	126	222	16.0	81,262
Miami	4,795	2,981	2,050	20.9	81,083
South Miami	147	45	6	3.0	79,226
Surfside	283	50	186	35.8	77,973
Miami Shores	286	58	10	2.8	70,865
Unincorporated	31,966	8,173	5,889	12.8	64,091
Miami Beach	8,833	2,036	2,059	15.9	62,428
El Portal	27	10	4	9.8	51,019
N. Miami Beach	3,120	539	286	7.2	49,615
Homestead	51	55	5	4.5	46,446
North Miami	1,848	432	81	3.4	42,944
Sweetwater	217	57	11	3.9	41,308
Hialeah	3,166	1,728	145	2.9	37,817
Other Cities	1,854	466	272	10.5	NA
Total/Median	58,136	17,271	11,645	13.4	63,882

Notes: (a) does not include vacant-for-sale.
Percents rounded.

Sources: U.S. Census Bureau, 1980 Census of Housing, Summary Tape File 1A, 1982.
Van Horn Associates, Inc., 1988.

Table 3.11.

Condition of Housing Stock Summary

Coral Gables and Dade County, 1980

Condition	Coral Gables Units	Coral Gables Percent	Dade County Units	Dade County Percent
Lacking complete plumbing for own use	113	0.639538	9555	1.443454
Lacking complete kitchen facilities	19	0.107533	14421	2.17855
Lacking central heating	1205	6.819854	167096	25.24284
Overcrowded (>1 person/room)	757	4.28434	73848	11.15606
Total reported units	17669	100	661954	100

Note: Percents rounded.

Sources: U.S. Census Bureau, Summary Tape File 1B and Table H-1, 1980.
Van Horn Associates, Inc., 1988.

Table 3.12.

Residential Building Permit and Demolition Activity, Total Units

Coral Gables, 1980-1987

Year	Single Family	%	Average S.F. Val	Duplex	%	Multi-Family	%	Annual Total	%	Demo Total	Net New
1980	66	36.3	136,029	6	3.3	110	60.4	182	100.0	49	133
1981	52	34.2	161,783	0	0.0	100	65.8	152	100.0	57	95
1982	46	56.1	206,511	4	4.9	32	39.0	82	100.0	49	33
1983	40	81.6	231,433	0	0.0	9	18.4	49	100.0	74	-25
1984	30	60.0	154,383	0	0.0	20	40.0	50	100.0	10	40
1985	40	60.6	629,938	0	0.0	26	39.4	66	100.0	14	52
1986	59	64.8	309,271	0	0.0	32	35.2	91	100.0	51	40
1987	84	73.0	299,625	2	1.7	29	25.2	115	100.0	31	84
Totals	417	53.0	266,122	12	1.5	358	45.5	787	100.0	335	452

Notes: Single family permit values not adjusted for inflation.
Percents rounded.
Sources City of Coral Gables, 1988.
Van Horn Associates, Inc., 1988.

Table 3.13

Projected Household Formation, by Family Income Range

Coral Gables, 1988-1998

Housing Type	Tenure	Household Formation Annual	Total	Income Range VL-L	M-M	UM-U
Single Family		21	231	46	81	104
	Owner	19	207	41	73	93
	Renter	2	24	5	8	11
Multifamily		8	88	18	31	40
	Owner	1	16	3	6	8
	Renter	7	72	15	25	32
Tot Households		29	319	64	112	144

Notes: VL-L: very low and low family income, below $25,000.
M-M: moderate and middle family income, $25,000 to $49,999.
UM-U: upper middle and upper family income, $50,000 and over.
Constant 1987 dollars, all figures rounded.
Source: Van Horn Associates, Inc., 1988.

Table 3.14

Residential Land Use Capacity

Coral Gables, 1988

Traffic Analysis Zone		Residential Units by Use Category RL	RH	RMD	RML	RMM	RMH	Unit Totals
TAZ	1	3695	0	29	40	1293	4074	**9131**
TAZ	2	534	0	0	16	0	0	**550**
TAZ	3	765	41	122	0	0	0	**928**
TAZ	4	2170	16	0	0	0	0	**2186**
TAZ	5	1533	0	0	6	0	0	**1539**
TAZ	6	2000	18	54	0	0	0	**2072**
TAZ	7	1446	0	82	0	0	0	**1528**
TAZ	8	3314	53	37	213	0	0	**3617**
TAZ	9	713	0	78	252	54	0	**1097**
TAZ	10	4247	0	0	0	0	0	**4247**
TAZ	11	2850	0	0	0	0	0	**2850**
Total Units		23267	128	402	527	1347	4074	**29745**

Traffic Analysis Zone		Residential Acres by Use Category RL	RH	RMD	RML	RMM	RMH	Area Totals
TAZ	1	615.8	0.0	3.2	2.7	32.3	58.2	**712.2**
TAZ	2	89.0	0.0	0.0	1.1	0.0	0.0	**90.1**
TAZ	3	127.5	4.6	13.6	0.0	0.0	0.0	**145.6**
TAZ	4	361.7	1.8	0.0	0.0	0.0	0.0	**363.4**
TAZ	5	255.5	0.0	0.0	0.4	0.0	0.0	**255.9**
TAZ	6	333.3	2.0	6.0	0.0	0.0	0.0	**341.3**
TAZ	7	241.0	0.0	9.1	0.0	0.0	0.0	**250.1**
TAZ	8	552.3	5.9	4.1	14.2	0.0	0.0	**576.5**
TAZ	9	118.8	0.0	8.7	16.8	1.3	0.0	**145.7**
TAZ	10	707.8	0.0	0.0	0.0	0.0	0.0	**707.8**
TAZ	11	475.0	0.0	0.0	0.0	0.0	0.0	**475.0**
Total Acres		3,877.8	14.2	44.7	35.1	33.7	58.2	**4,063.7**

Note: All figures rounded.
See Future Land Use Data tables for limitations of data

Sources: William N. Gray GIS System, 1988.
Van Horn Associates, Inc., 1988.

4.
GOAL, OBJECTIVES, AND POLICIES

4.0.
Goal:
To assure the availability of a safe, sound, and attractive residential environment for all residents of Coral Gables.

4.1.
OBJECTIVE:
Provisions for adequate and affordable housing for existing and future residents shall be made.

4.1.1.
POLICY:
Coral Gables shall support the involvement of county, regional, state, and federal agencies in housing production, where appropriate.

4.1.2.
POLICY:
The utilization of federal, state, and local housing subsidy programs is recognized as a means to provide housing opportunities for low income persons and families, where appropriate.

4.2.
OBJECTIVE:
Eliminate substandard housing conditions and blighting influences, and improve structural and aesthetic housing conditions.

4.2.1.
POLICY:
New housing construction and remodeling or rehabilitation of existing residences shall be in conformance with local building requirements. The city will strictly enforce its zoning regulations, building codes, and ordinances to assure conformance.

4.2.2.
POLICY:
Maintain accurate records of existing housing conditions and housing stock.

4.2.3.
POLICY:
Aesthetic compatibility and visual harmony shall be considered as bona fide criteria in reviewing requests for building permits.

4.2.4.
POLICY:
Improve the regulatory and permitting processes, as necessary, and revise and amend the appropriate sections of the comprehensive plan, zoning regulations, building codes, and city ordinances as warranted by changes in housing conditions.

4.2.5.
POLICY:
Require demolition or rehabilitation of unsound housing which poses a threat to the safety and welfare of the community.

4.2.6.
POLICY:
New development shall be compatible with adjacent established residential areas.

4.2.7.
POLICY:
Redevelopment of neighborhoods with deteriorating housing should be supported by city investment in public facilities and public services improvements.

4.3.
OBJECTIVE:
Conserve the existing housing stock in Coral Gables.

4.3.1.
POLICY:
Promote the conservation and rehabilitation of existing housing as a means of maintaining or improving residential conditions and reducing the waste of valuable resources.

4.3.2.
POLICY:
Preserve identified historically significant housing through city action or support for private action.

4.3.3.
POLICY:
Establish principles and standards to guide techniques and strategies for conservation, rehabilitation, and demolition programs.

4.4.
OBJECTIVE:
Formulate appropriate housing implementation programs as part of the ongoing planning process.

4.4.1.
POLICY:
Implementation of infrastructure improvements in the McFarlane neighborhood shall be monitored.

4.4.2.
POLICY:
Residential building permit and demolition data shall continue to be maintained.

4.5.
OBJECTIVE:
Support adequate housing sites for all residents of Coral Gables.

4.5.1.
POLICY:
Support the involvement of the City with private and non-profit agencies to improve coordination among participants involved in housing production.

4.5.2.
POLICY:
Support the provision of adequate sites for housing low and moderate income families, and Florida Department of Health and Rehabilitative Services licensed or funded group and foster homes on a regional housing market basis, to foster non-discrimination in housing and to encourage effective, healthful, residential alternatives to inappropriate institutionalization. Such Florida Department of Health and Rehabilitative Services licensed or funded group and foster homes shall be permitted uses under RMM - Residential Multi-Family Medium Density Land Use Classification.

4.5.3.
POLICY:
The location of community residential facilities dispersed among the regional housing market to serve persons special housing needs, disabilities, or handicaps shall be supported by Coral Gables.

4.6.
OBJECTIVE:
Provide equitable treatment for all residents of Coral Gables displaced through public programs or activities.

4.6.1.
POLICY:
The provision of reasonably located standard housing for persons experiencing displacement due to public actions shall be supported, where appropriate.

Chapter 4

SANITARY SEWER, SOLID WASTE, DRAINAGE, POTABLE WATER, NATURAL GROUND WATER AQUIFER RECHARGE

This chapter addresses the general utilities which are often provided by or managed by the City or by Metro Dade County within the city. These include:

SANITARY SEWER,
SOLID WASTE,
DRAINAGE,
POTABLE WATER,
NATURAL GROUND WATER AQUIFER RECHARGE

The chapter is organized to provide analysis information about each area of service individually. The chapter conclusion contains the goal, objectives, and policies for all of the utilities services.

1.
SANITARY SEWER
ANALYSIS

1.1.
City maintenance personnel report no abnormality of pump stations operation that would be suspect of pump capacity problems. There are no reports of any of the following symptoms:

Long pumping periods
Overflows
Backups
Long pumping elapsed times
High head conditions
Abnormally high, or peak flows

1.2.
Approximately 3 square miles of the City are not sewered, where homes and some businesses are on septic tank and drainfield systems. See Map 4.1

1.3.
Coral Gables is not inside of the core of influence of any public wellfield. Parts of the City fall inside the 1000ppm salinity concentration line at the base of the aquifer.

1.4.
The residential single family and duplex areas of the City served by septic tanks appear to not pose a threat to the public health. No instances of ground water contamination have been reported to-date. The City should continue to be alert for any such occurrences.

1.5.
Multi-family, commercial, industrial and institutional land uses that are currently served by septic tank systems could pose a threat to the public health if not properly designed, constructed, used and maintained.

1.6.
An estimated 1 million gallons per day (MGD) of sewage are generated ln Coral Gables. Approximately 0.08 MGD generated by sources outside the City limits and handled by City facilities. This represents 1 percent of the total. The sources of this sewage are 16 private pump stations from commercial and multifamily properties.

1.7.
The aerial extent of sanitary gravity sewers is shown in Figure ~.1. Detailed information of sewer sizes, depths, manhole and service lateral locations are maintained by the City's Public Works Department in 1'=lOO' scale atlases. The information is too great to be effectively included in the CMP.

1.8.
The entity having operational responsibility for the sanitary sewer facilities ln the City's Public Works Department. The geographic areas served by the sanitary sewers are shown in Figure ~.1. Areas shown with "SS" designation are served by sanitary sewers. Areas with "SE" designation remain unsewered, except where seven isolated parcels are provided with individual pump stations discharging to other parts of the sewer system. All of the commercial/industrial business and multifamily residential land uses with the exception of two areas of limited size are served by the sanitary sewers. Only portions of single family and duplex land uses remain unsewered. The best available data is not sufficient to present the specific design capacities, current demand and operating conditions or the current level of service of the sanitary sewerage facilities beyond the information presented.

1.9.
There are no known operational deficiencies ln the sanitary sewerage system. Proposed land use changes, redevelopments and increases in density will require additional analysis of operational characteristics to identify improvements which will be necessary.

2.
SOLID WASTE
ANALYSIS

2.1.
City conducts garbage and trash collection and disposes at county facilities.

2.2.
City contracts with a private hauler for large generators of solid waste.

2.3.
City has an ongoing equipment replacement program.

2.4.
City does not segregate or recycle any portions of the solid waste. The county does have programs which provide such disposal needs.

2.5.
Special pickups of certain waste categories such as oversized or unusual wastes are infrequent and are provided on an as needed basis within the normal capacity of the collection system.

2.6
Hazardous wastes are not collected by the City, but remain the responsibility of the waste generator to dispose through authorized services and agencies outside of the City's collection system.

2.7.
Solid waste collection system is effective under current practices.

2.8.
State enforcement of the thirty percent recycling rule is to be met by the county's resource recovery facility as they meet state requirements. The City conducts its collection duties in accord with county rules.

2.9
Coral Gables' Department of Public collects approx. 38,000 tons per year of solid waste. One fourth of the tonnage is garbage, and three fourths trash. The quantity collected by numerous private haulers from commercial. industrial, and multifamily land uses is not known. The multifamily component is estimated at 10,000 ton/yr. The proportional capacity of the Dade County facilities allocated to Coral Gables cannot be determined from the available data.

2.10
The Dade County facilities providing service to Coral Gables are as follows:

Coral Way ('West') Transfer Station (1200 TPD cap):lO% allocation.
Central ("Resource Recovery') (58 Street) Facility (2500 TPD cap):5% allocation.
South Regional Facility (2500 TPD cap):5% allocation.

See Map 4.2.

2.11
The county's solid waste facilities service a geographical area much greater than the City of Coral Gables. The facilities are not under Coral Gables jurisdiction, therefore the size of the geographic area is not relevant to the City's responsibility under this Plan.

2.12
Dade County Code requires that the County provide for all solid waste disposal in the County. All municipal and private collectors are required to dispose of all solid waste at county facilities. The design capacity is the responsibility of the county.

2.13
Dade County facilities are outside Coral Gables jurisdiction. Operation and current demand on these facilities is not known.

2.14
The level of service provided by Coral Gables collection routes is as follows:
Residential: Annual average of 5 lbs. per capita per day of trash and garbage.

2.15
Collection equipment are the only facilities operated by the City. The City maintains its own equipment and provides for regular vehicle replacement. Disposal facilities are outside the City's jurisdiction. County facilities provide adequate disposal for the City's refuse.

3. DRAINAGE ANALYSIS

3.1.
There are two major outfall systems of positive drainage that service the Central Business District, the industrial area south of Bird Road and east of Le Jeune Road, and adjacent residential areas. Approximately 1,000 acres are served by the two systems. Because they are interconnected in the upper reaches, they cannot be entirely separated. One discharges at Bird Road and Granada and the other at Riviera and Jeronimo. The former is also provided with a pumping station.

3.2.
The area of the City that lies south of Sunset Drive and east of Old Cutler is entirely served by a series of outfalls and discharges. Exact locations and tributary drainage areas were not available as of July 1988. The areal extent of this basin is approximately 1,400 acres.

3.3.
Other private and public systems discharge to the Coral Gables waterway and the lakes and canals that are inside of the University of Miami. There was no information available as to the extent of these systems as of July 1988. These systems add about 500 acres of surface drainage.

3.4.
The Florida Department of Transportation maintains the drainage system of South Dixie Highway. This system drains approximately 100 acres.

3.5.
All remaining drainage systems are comprised of infiltration-percolation via french drains or slab-covered trenches. These systems discharge by gravity into the aquifer.

3.6.
There are a few drainage wells, mainly in the Central Business District that serve high rise buildings.

3.7.
The Granada Golf Course is used as a dry-retention and storage bleeddown basin during periods of heavy rainfall.

3.8.
The City's drainage system experiences occasional siltation and plugging of both positive drainage and percolation pipes by debris and vegetation. Such conditions are normally addressed through general maintenance.

3.9.
Portions of the existing percolation systems are beyond their life expectancy (30 years); and some do not have any service life left. These systems need to be identified and replaced on a scheduled basis.

3.10.
Portions of areas in the coastal areas, east of Old Cutler and south of Sunset, have suffered subsidence and settlement. Portions of these drainage systems are undersized to meet current modern design standards, or are ineffective, as inlets have higher elevations than once-tributary surrounding grades.

3.11.

Portions of the City which are without structured storm drainage need to be monitored to determine any need for improvements.

3.12.
Some positive drainage and percolation systems are not provided with any means of trapping greases, oils, grit and sediments.

3.13.
All drainage facilities lying within the City provide 100 percent of their allocation to City-wide drainage.

3.14.
The City's Public Works Department has operational responsibilities for drainage facilities in the public right-of-way and on City property, with the exception of the facilities within state roads which are maintained by the Florida Department of Transportation. Facilities within private property are privately maintained.

3.15.
Map 4.3. identifies the geographical areas served by positive drainage systems.

3.16.
The best available data is not sufficient to present the specific design capacities, current specific demands on, or the level of service provided by the drainage systems. The desirable and intended levels of service are as follows:

Public places, public and private parking lots, public streets, etc: 5 year storm.
Private facilities, other than private parking lots: 2 year storm.

3.17.
Existing drainage needs are determined by the Public Works Department. Systems are maintained on a regular basis. Projected needs are not anticipated to exceed current levels since the City is nearly built-out. Future needs will be determined on a project by project basis.

3.18.
The general performance of the drainage facilities is good. The impact on adjacent natural resources is minor, as a small fraction of the City is served by positive drainage systems. The balance of the drainage is provided by infiltration-percolation.

3.19.
Natural drainage features within the City are identified on Map 4.3.

3.20.
Existing regulations governing land use as it relates to the discharge of stormwaters into and the use of natural drainage

features are as follows:

State: Chapter 17-25 FAC
Local (County): Chapter 24, County Code
City: Chapter 19-15, City Code
Regional: Chapter 40 E-40 FAC

4. POTABLE WATER DISTRIBUTION SYSTEM ANALYSIS

The Potable Water provider of both water treatment and its distribution is Metro Dade County Water and Sewer Authority. The City does monitor general conditions of systems outside of its direct charge, if only to coordinate projects to avoid major conflicts in location and scheduling and operation of interrelated but independently run utilities.

4.1.
Many properties are served by aged, undersized mains. Sizes vary from 1 1/2" to 4".

4.2.
Some properties are long distances from fire hydrant service (up to 1500').

4.3.
Many properties are served by a single fire hydrant.

4.4.
Many hydrants are served by 4-inch lines.

4.5.
Some cases of 4-inch lines feeding a 6" line, with hydrants were found.

4.6.
The backbone of the distribution network was found to be largely 8 and 12, with some 16 and 20 inch mains, fed from a single 30" supply line.

4.7.
Various "bottlenecks" exist where small mains feed larger mains.

4.8.
Many houses and businesses are fed from the rear of the properties, where there are undedicated easements and access to meters is poor.

4.9.
Many water distribution lines have exceeded their service life and should be replaced. Most of these lines are also undersized. Replacement should be with pipes of

necessary diameter.

4.10.
Coral Gables contains sections of the City where hydrant spacing is less than desirable. Metro Dade standards call for fire hydrants to have the following spacing, measured along the main, and are compared to range of distances found in Coral Gables shown in parenthesis:

* Residential: 750 feet maximum (300 to 1,800 feet)
* Low-rise multifamily residential: 600 feet (300 to 1,200 feet)
* Commercial, industrial, high rise residential: 300 feet (200 to 1,300 feet).

4.11.
Coral Gables contains sections where water main sizes are inadequate. Metro Dade standards call for the following pipe sizes, as compared to the sizes found in Coral Gables shown in parenthesis:

Section line roads - Douglas, Granada, Red, Tamiami Trial, Coral Way, Bird, Miller, Sunset, Kendall and Old Cutler: 16 inch minimum (8 to 24 inch)

Half section line roads - LeJeune, Columbus, Santa Maria, Maynada, Milan, Anastasia (Sevilla - San Sebastian), Blue and Hardee: 12 inch minimum (4 to 8 inch)

Other minor and collector roads - 8 inch minimum (1 1/2 to 8 inch)

Cul de Sacs: to 200 feet: 8" (6"), greater than 200 feet: 12" (6")

Main lines serving hydrants: 8 inch (3 to 24 inch.

4.12.
Substantial improvements are necessary to bring the system into compliance with modern standards. Approximately 30 miles of pipelines are required as a minimum to provide an acceptable level of fire protection service. Were this to be a new system designed to modern standards an additional 60 to 80 miles of pipelines would be required. Detailed research and analysis is necessary to identify the actual needs and associated costs and scheduling.

4.13.
The entire water supply, treatment. pumping and transmission system that serves Coral Gables and all surrounding areas are owned and operated by the Metro Dade County. It is estimated that Coral Gables has an average total daily demand of 12.0 million gallons. which represents 4% of the County's capacity.

4.14.
The facilities that serve Coral Gables also serve a geographical area much larger than

the city. Identification of that area, the land uses served, and other information is outside the responsibility of the City.

4.15.
Water treatment facilities have a combined capacity of 383 million gallons per day.

4.16.
The best available data is not sufficient to present the specific design capacities, current specific demands on, or the level of service provided by the current potable water facilities.
The desireable average level of services for non-fire flow consumptive uses are as follows:

Quantity levels of service:
Residential: 200 gallons per capita per day.
Commercial: 0.1 gallons per sq. ft. per day
Industrial: 0.2 gallons per sq. ft. per day

Pressure levels of service:
Average: 50 psi
Maximum operation: 70 psi
Minimum operation: 40 psi
Fire: 20 psi

Quality levels of service:
In accord with Chapter 17-22 FAC

5.
NATURAL GROUNDWATER RECHARGE ANALYSIS AND CONCLUSIONS

5.1.
Approximately 10 percent of the City is drained by positive drainage systems that offer minimal recharge possibility by indirect infiltration of stormwaters into the groundwater.

5.2.
Local hydrogeologic conditions are as follows:

Coral Gables lies over the Biscayne Aquifer, a surficial aquifer.

Groundwater is locally available for a variety of uses. Quality is good, and would be suitable for drinking water supplies, except for the presence and threat of salt water intrusion.

The base of the aquifer is partially contaminated with salt water. Groundwater withdrawals have kept the chloride concentrations at a balance over the last 10 years.

5.3.
Approximately 50 percent of the City is provided with french drains for stormwater disposal which offer direct infiltration of runoff into the groundwater.

5.4.
Approximately 40 percent of the City's area infiltrates stormwaters and recharges the aquifer through surface infiltration.

5.5.
Land use regulation, development practices, strong support for vegetation and landscaping all provide for a high degree of valuable and effective surface stormwater infiltration and quality groundwater recharge.

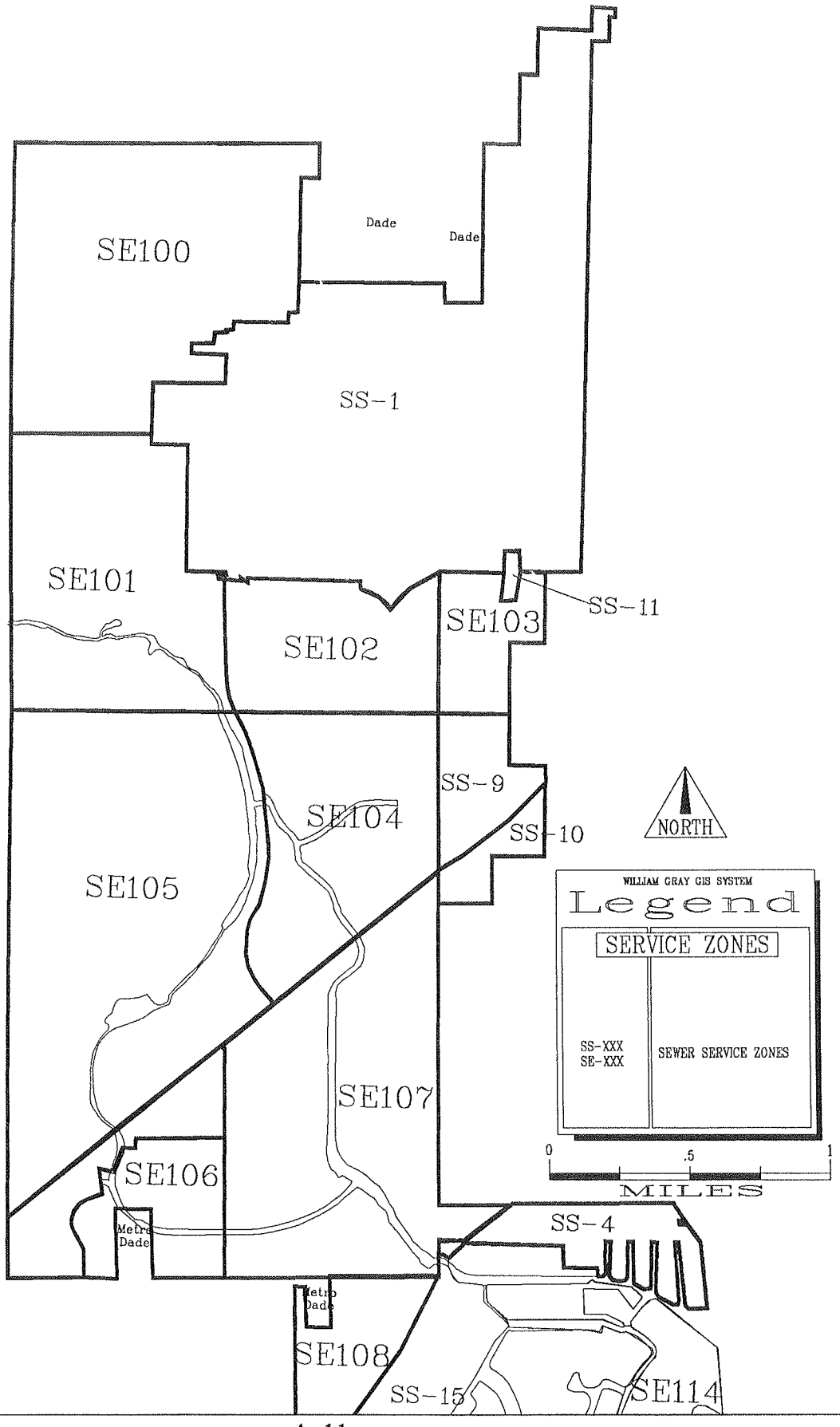
5.6.
Existing regulations governing aquifer recharge are:

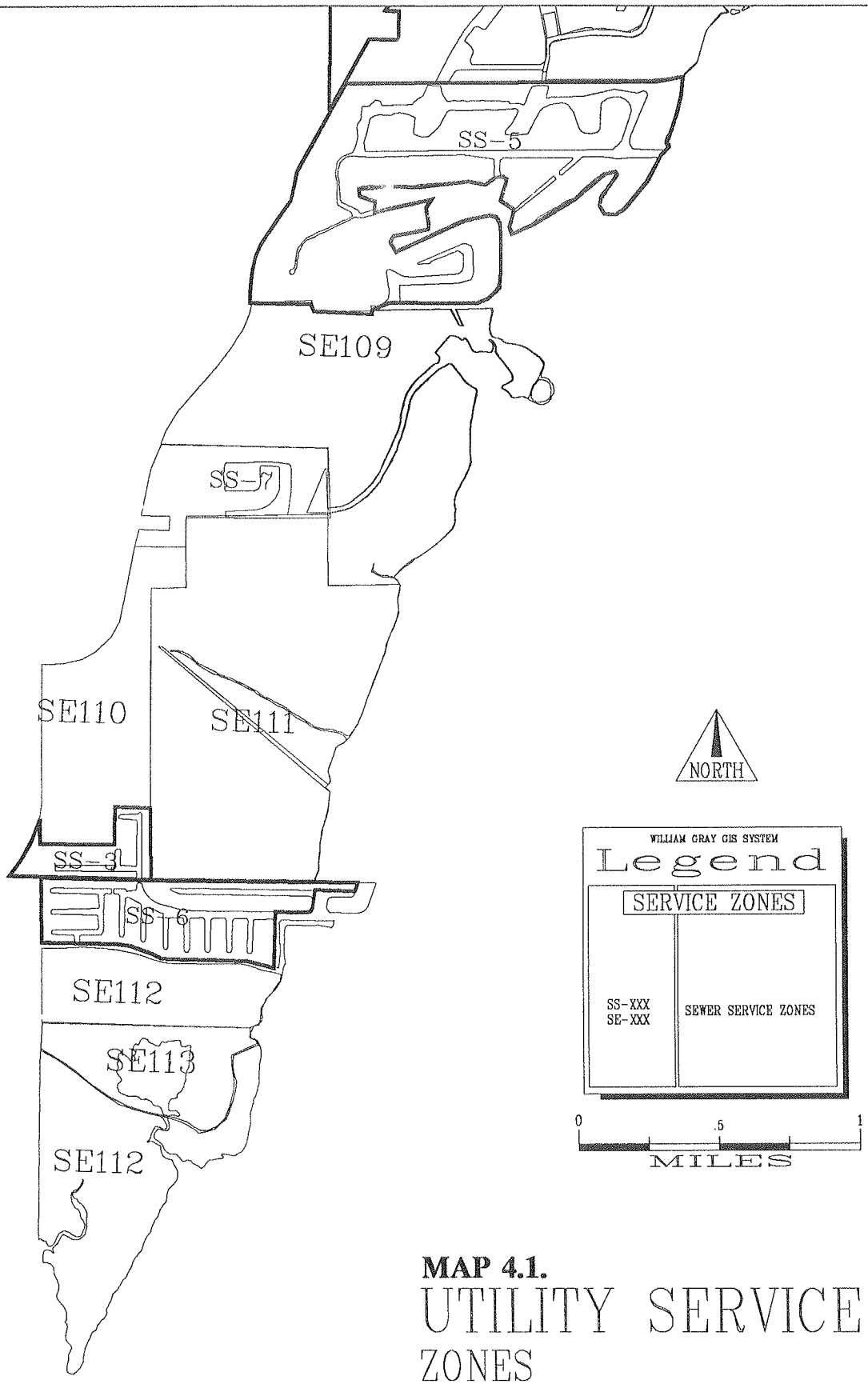
17-25 FAC, as enforced by the DER
Chapter 24 of the Dade County Code. enforced by DERM
40 E-40 FAC. enforced by SFWMD

MAP 4.1.

UTILITY SERVICE ZONES

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LUDOVICI & ORANGE
WILLIAM GRAY / GIS



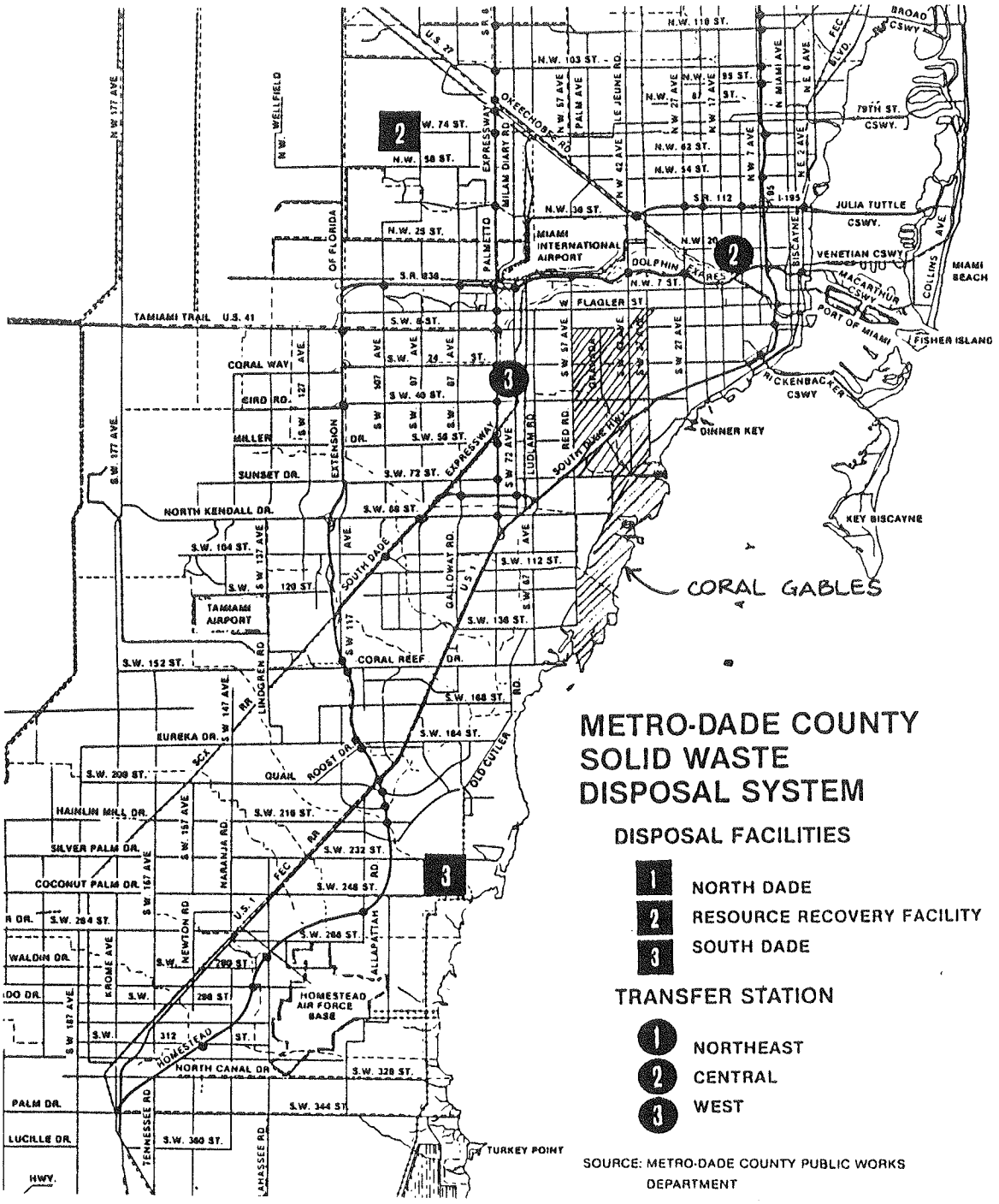


MAP 4.1.

UTILITY SERVICE ZONES

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MAP 4.2.
METRO-DADE SOLID WASTE DISPOSAL SYSTEM

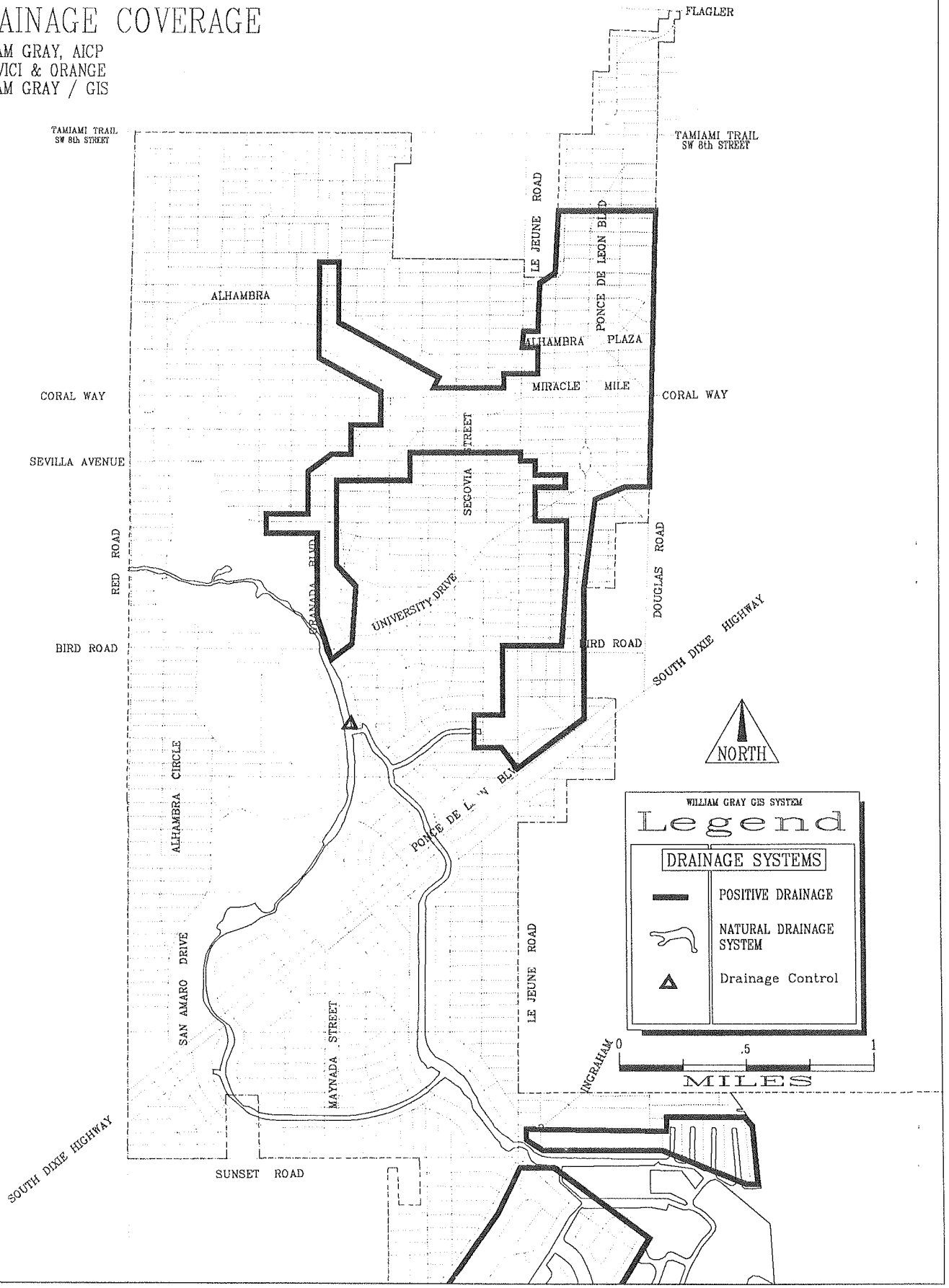


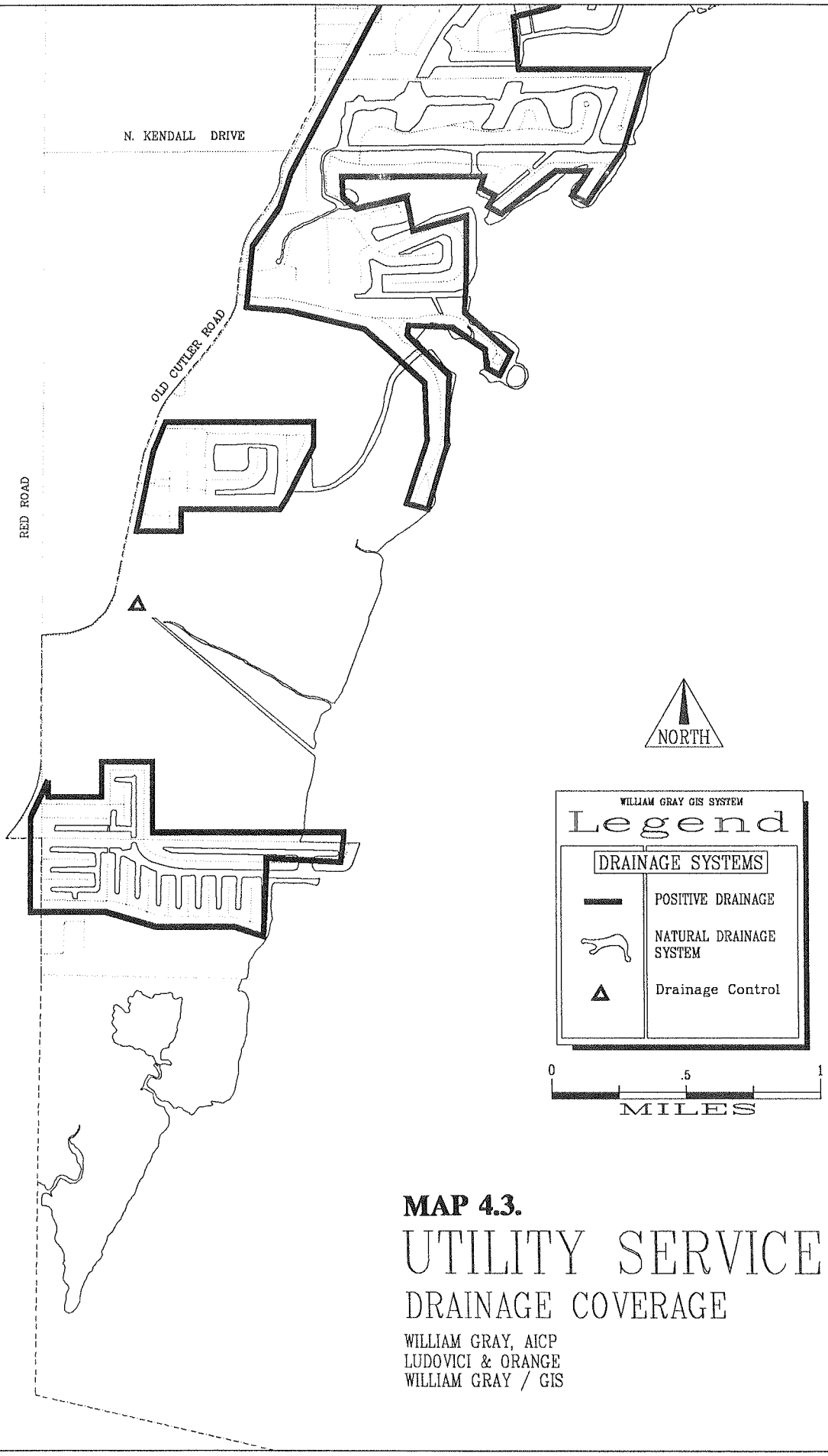
MAP 4.3.

UTILITY SERVICE

DRAINAGE COVERAGE

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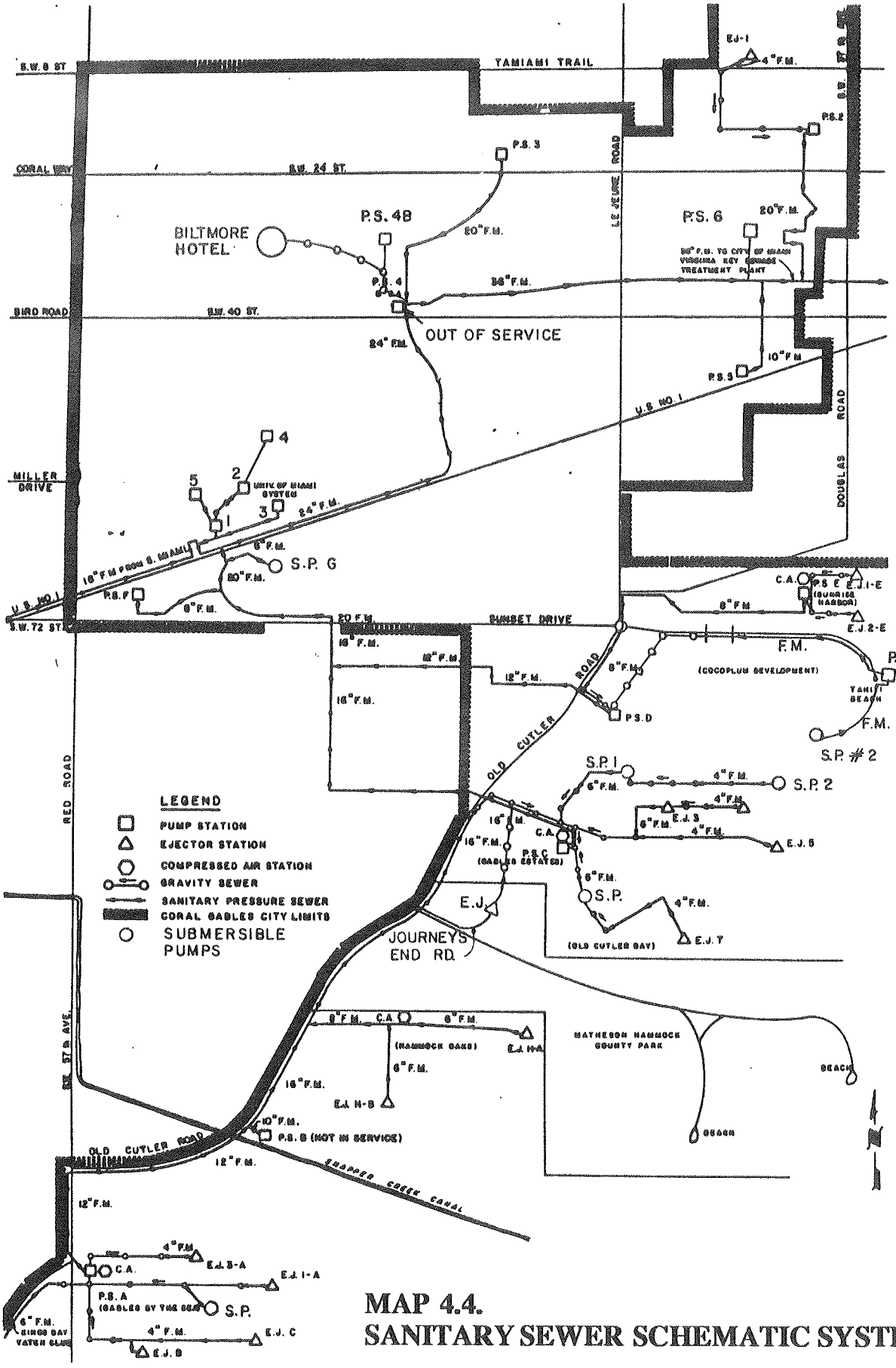


MAP 4.3.

UTILITY SERVICE

DRAINAGE COVERAGE

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MAP 4.4.
SANITARY SEWER SCHEMATIC SYSTEM

The following section is to be adopted by City ordinance:

SANITARY SEWER, SOLID WASTE, DRAINAGE, POTABLE WATER, NATURAL GROUND WATER AQUIFER RECHARGE GOALS, OBJECTIVES, AND POLICIES

The following goals, objectives and policies form a foundation upon which specific community management decisions must be based when issues involving land use, public services, capital expenditure and other items related to this plan are being considered.

6.
GOAL:
Ensure the provision of high quality, healthful, effective, reliable, efficient, environmentally sound and necessary services for coordinated sanitary sewer, solid waste, drainage, potable water, and natural ground water aquifer recharge to City residents and visitors.

SANITARY SEWER

6.1.
OBJECTIVE:
Ensure effective septic tank utilization for Single Family and Duplex Land Uses where they remain safe, efficient, environmentally sound and the least costly long term method of disposal of sanitary waste. All other areas are to be efficiently and effectively serviced by sanitary sewer systems within 10 years of the date of adoption of this plan.

6.1.1.
POLICY:
Vacant single family residential lots can be developed and septic tanks installed provided certain conditions are met. These conditions are:

* Sewage loadings of gallons per day per square foot do not exceed those recommended by the septic tank code, for the size drainfield or absorption area that is available.

* Mounded soil absorption fields shall not be permitted.

* Connection to sanitary sewer shall be required upon availability of such service.

* A permit for such construction is issued and the work is approved.

6.1.2.
POLICY:
Land uses, other than Residential Single-Family RL and RH or Residential Multi-Family RMD (Duplex) that are presently on septic systems, shall be provided with sanitary sewer service on a priority basis as feasible. New developments shall also be required to connect to the sewer system in accord with City administrative rules, which shall not be less restrictive than the Dade County Code. Existing sanitary sewer systems within the jurisdiction of the City shall be operated at levels of service not less restrictive than that provided for in the Code of Metropolitan Dade County Chapter 24 Environmental Protection, as amended. All sanitary sewer systems within the jurisdiction of the City shall be operated to provide at least the minimum Levels of Service (LOS) as herein described:

1. The Metro-Dade County regional wastewater treatment and disposal system shall operate with a design capacity of 2 percent above average daily flow for the preceding year.
2. Effluent discharged from Metro-Dade County wastewater treatment plants shall meet all federal, State, and County standards.
3. The local system shall maintain the design capacity to collect and dispose of 100 gallons of sewage per capita per day.
4. All collection and treatment facilities shall maintain the capacity to transport and treat peak demand flow without overflow.

A study of the sanitary sewer facilities shall be undertaken beginning no later than October 15, 1990 to develope data and analysis of the level of service currently available from such public facilities. The study and analysis is to be completed by September 30, 1992. Revisions to the LOS standards shall be undertaken, if necessary, at the next available Plan Amendment scheduled following the sanitary sewer LOS study.

6.1.3.
POLICY:
The City shall require the proper maintenance of septic tanks by the owner to prevent pollution of groundwater.

6.1.4.
POLICY:
The City shall maintain a directory of tanks in use, a record of tank inspections as may be conducted by others, and to include the following when service permits ready collection and reporting of such information: liquid depth; thickness of sludge; conditions of tank; conditions of drainfield; indications of the presence of hazardous materials.

6.1.5.
POLICY:
The City may consider the monitoring of septic tank construction, operation and maintenance, including

Approximate number of fixture units connected.

* Tank size.
* Tank location on site
* Drainfield size
* Drainfield location on site
* Date of original installation, dates of repairs and emptyings.
* Connection of garbage grinder, dishwasher or washing machine.
* Presence of hazardous materials.

6.1.6.
POLICY:
Private sanitary sewer collection and pumping systems shall make annual reports to the City regarding their estimated loads and overall conditions of their pumping stations and transmission systems. Reports should be prepared and certified by a Florida registered engineer.

6.1.7.
POLICY:
The City shall require that properties on private sewer systems obtain permits whenever modifications are made which could affect the quantity, quality or peak to average loading ratio of their sewage.

6.1.8.
POLICY:
The City shall continue to review meter readings from private system's potable water supplies and evaluate the individual system's impact on the City's sanitary sewerage facilities.

6.1.9.
POLICY:
The conditions of gravity sanitary sewers, pump stations, and force main systems shall continue to be investigated. The following parameters should be reported on:

* Age, remaining service life;
* Infiltration and inflow;
* Capacities, compared to loading demands;
* Operating pressures
* Physical conditions, need for repairs, replacement
* Reliability in emergency situations.
* The annual reports would be detailed and complete sufficient to support critical analysis of the systems condition and future needs.

6.1.10
POLICY
The City shall ensure that sanitary facilities are provided to meet projected future demands as they are realized, at the required LOS. Facilities to meet new demands shall be provided for by those creating that demand. Such provision of facilities shall be by construction, payment of fees, or taxes, which shall lead to construction, or by binding agreement for construction assuring that required facilities are available to meet the concurrency requirements of this plan. Future demand estimates should be used to aide in the sizing and scheduling of such facilities, however, construction of facilities need only occur where actual demand is realized, and when such facilities will provide for operation at no less than the LOS standard applicable. The City shall coordinate with Metro-Dade Water and Sewer Authority to monitor and exchange information and management practices to insure LOS standards are being maintained.

6.1.11.
POLICY
The City shall monitor the general operation of its Sanitary Sewer services to assure that no less than the minimum acceptable Level of Service standards are being provided. Such a monitoring program shall provide recommendations for needed capital improvements commitments in the Capital Improvements Budget and the concurrency management program.

6.1.12.
POLICY
Water conservation practices utilized in support of the policies in the Conservation Element shall be employed including maintenance and operation to minimize groundwater and surface water infiltration, Inform the public as to effective use of water-restricted sanitary sewer plumbing fixtures, and participation in Metro-Dade programs to improve water conservation.

SOLID WASTE

6.2.
OBJECTIVE:
Maintain solid waste collection operations in a safe, effective, environmentally sound and efficient manner, in balance with local and regional solid waste comprehensive plan policies.

6.2.1.
POLICY:
The City shall be prepared to modify its solid waste collection practices in a manner consistent with any new solid waste recycling, hazardous waste practices requirements of the primary agencies responsible for solid waste disposal and recycling.

6.2.2.
POLICY
The City shall maintain nominal collection services at the following levels of service: Residential pickup is to be twice a week for household waste and once per week for trash; Commercial service provided by private contract service, shall continue at a level of service as agreed upon by the parties, not less than once per week. In cooperation with the Metro-Dade County, the City shall provide and maintain a minimum acceptable Level of Service for Solid Waste collection at an annual average design generation rate of five pounds (5 lbs) per capita per day for residential service, and disposal facilities collectively maintained at a minimum of five years capacity to be available at the generation rate of 7 pounds per capita per day. Commercial service shall be required to maintain a minimum acceptable level of service at an annual average design generation rate of 7 lbs per capita per day as calculated by the primary service provider Metro-Dade County. Certification of the availability and committment of capacity by Metro-Dade and applicable private vendors, shall be sufficient to demonstrate that such facilities are available to the site, during the concurrency review process.

6.2.3.
POLICY
The City shall cooperate in the hazardous waste collection and disposal programs of Metro-Dade County by enforcing within the City's jurisdiction, such hazardous waste collection practices required by the county and other agencies with jurisdiction. Such cooperation shall consist of an annual hazardous waste notification by mail insert in utility billings or local newsletter serving the city. Such notification shall indicate that the City does not provide Hazardous Waste Collection services and inform the public that such services are provided by Metro-Dade County and others including but not limited to ... (include a list of local vendors of such services active at the time of notification)

6.2.4.
POLICY
The City shall monitor the general operation of its Solid Waste collection services to assure the minimum acceptable Level of Service is being maintained. Such a monitoring program shall provide recommendations for needed capital improvements commitments in the Capital Improvements Budget and the concurrency management program.

6.2.5.
POLICY
The City shall employ water conservation strategies and techniques to minimize the use of potable water in the provision of solid waste collection services. Such strategies shall include management attention to reducing unattended wash-down hose running,

self closing nozzles, and wash down schedules based upon need and not just time schedule. The City shall consider the utility of using recycling procedures for portions of water useage in its solid waste collection services.

DRAINAGE

6.3.
OBJECTIVE:
Maintain surface and storm water drainage systems in a safe, effective, environmentally sound and efficient manner.

6.3.1.
POLICY:
The City should continue to support adequate preventive maintenance programs for drainage systems.

6.3.2.
POLICY:
Future street-scape and private landscaping projects should undergo special scrutiny to support drainage system effectiveness.

6.3.3.
POLICY:
Water conservation, natural resource conservation and related policies will be supported by inclusion in positive drain systems of pollution control facilities which will separate oils and greases as well as sediment and grit from the discharge waters, as resources permit.

6.3.4.
POLICY:
New development, and redevelopment should provide for adequate on-site stormwater management. Off-site stormwater management improvements should also be made when these projects are located within or adjacent to areas with drainage problems that rate higher than 20 points in the City's rating systems, or affect and adversely impact existing drainage facilities.

6.3.5.
POLICY:
Issue development orders only to projects that meet or exceed the minimum acceptable LOS standards for drainage and flood protection.

6.3.6.
POLICY:
All new drainage facilities should be provided with pollution control to the level approved and locally accepted as best available technology consistent with existing regulatory requirements, including but not limited to the following when applicable:

* Retention of stormwater;
* Flow of stormwater over grassed and vegetated areas;
* Utilization of pavements that allow water to permeate;
* Sumps;
* Grease separation baffles;
* Mosquito control;
* Infiltration and percolation prior to overflow or outfall discharge.

6.3.7.
POLICY:
Identify locations that are subject to flooding. Assist property owners with general information of available flood-proofing technology. Flood prone areas which represent substantial risk for occupants during disaster events should be considered for corrective action or targeted for special attention during disaster response actions.

6.3.8.
POLICY:
Require projects to be designed to prevent flood damage in accord with applicable law. The South Florida Water Management District and Metro-Dade County shall be coordinated with to assure regional and local drainage and flood protection programs are maintained. The minimum acceptable Level of Service standards for drainage shall be protection from the degree of flooding that would result for a duration of one day during a storm that statistically occurs once in five years. All land on which urban development is to occur shall be filled to meet or exceed the Metro-Dade County's flood criteria adopted by resolution R-951-82, as may be amended from time to time. All structures shall be constructed at, or above the minimum floor elevations as specified in the Federal Insurance Rate Maps for Coral Gables in Dade County, Florida. All new development must retain at least the first one inch (1") of storm water runoff on-site, or other non-public sites as may be secured for permanent services. Designs to meet this first inch criteria will be reviewed for design solutions to meet actual site conditions. The burden for the construction of such facilities shall be borne by the developer and/or owner of such sites. Failure of such facilities and subsequent corrections shall also be the responsibility of the developer and/owner. The City may require greater than the first one inch on-site retention where the City establishes more restrictive rules in the public interest. The LOS standard shall be fairly and equitably applied to all development sites where increased drainage service is required.

6.3.9.
POLICY:
Promote the use of water conservation measures through the use of on-site retention of stormwater, use of native vegetation with low water requirements to reduce irrigation demands, and community education in water conservation practices in development site planning and drainage design.

POTABLE WATER

6.4.
OBJECTIVE:
The potable water treatment and distribution system shall be maintained by the system owner and operators in a safe, effective, efficient, environmentally sound and reliable manner consistent with this comprehensive plan.

6.4.1.
POLICY:
As existing potable water distribution system components reach the end of their effective useful life, the replacement of the system shall be undertaken in close and timely coordination with the City and impacted agencies to ensure efficient scope, sequence and scheduling of such work with other projects being considered or undertaken, including but not limited to sanitary sewer, electric, communication, street resurfacing or improvements, and integration into the capital improvements budget of all affected parties.

6.4.2.
POLICY:
The Public Works and Fire Departments shall continue to be involved in the plans review process in order to advise the Building Department of necessary improvements to the water system and whether individual construction permits should also include water system improvements.

6.4.3.
POLICY:
The Miami-Dade Water and Sewer Authority (MD WASA) shall be encouraged to conduct an analysis of the existing system, determine, in cooperation with the City of Coral Gables, the exact magnitude of necessary improvements, and prepare a program for construction which will rank priorities, establish pipe sizes, determine where fire hydrants are needed, and propose location and routing of pipelines.
Such work should be undertaken in a manner to assure coordination of County and City resources, development standards, design aesthetics, long range community objectives & policies and the Coral Gables Comprehensive Plan.

6.4.4.
POLICY:
The County shall be encouraged to investigate possible sources of financing for the water system improvements.

6.4.5.
POLICY:
The minimum acceptable Level of Service standards of potable water and fire protection shall be such that water is to be delivered to users at a pressure not less than twenty pounds per square inch (psi) and not greater than 100 psi; Minimum fire flows shall be maintained at not less than 500 gpm in single family residential areas of densities of less than 5.8 units per acre; 750 gpm for single family and duplex residential areas at densities of 5.8 dwelling units per acre or more; 1500 gpm in multi-family residential and low intensity commercial areas of two floors or less and; 3000 gpm in all other commercial and industrial areas; Automatic fire suppression systems shall be required in all buildings of six floors or more; The regional treatment system shall operate with a rated capacity which is no less than two percent (2%) above the maximum day flow for the preceding year; Water quality shall meet or exceed all federal, state, and County primary standards for potable water; System-wide storage capacity for finished water shall equal no less than fifteen percent (15%) of the County-wide average daily demand; The system shall maintain the capacity to produce and deliver 200 gallons per capita per day.

6.4.6.
POLICY
Water conservation practices, strategies and techniques shall be utilized to minimize the waste and unnecessary degradation of potable water sources and supplies and support the policies in the Conservation Element; The use of water conserving plumbing fixtures; Active water use management and education of customers and systems operators in water conservation methods are to be begun by the city by requesting recommendations from each department as to ways in which conservation practices and educational activities may be undertaken. The city shall evaluate such recommendations and initiate those which are cost effective and practical to implement.

NATURAL GROUND WATER AQUIFER RECHARGE

6.5.
OBJECTIVE:
Manage the natural ground water aquifer recharge conditions in a safe, effective and reliable manner as required by current design standards and codes.

6.5.1.
POLICY:
Encourage improved groundwater recharge by requiring all new construction projects to consider providing:

* Greater pervious open and green space;
* Pervious pavements;
* French drains, slab-covered trenches or drainage wells, and limit overflows;
* Allow direct overland flow discharge to surface waters (canals or bay) only when no other practical or effective method of stormwater discharge is possible.
* Allow positive drainage discharges to surface waters only when other methods are impractical or impossible, and only when adequate pollution control (grit and grease) is provided.

6.5.2.
POLICY:
Encourage designs which will diminish groundwater withdrawals.

6.5.3.
POLICY:
Encourage designs which will increase high quality groundwater recharge.

6.5.4.
POLICY:
Comply with South Florida Water Management District and Metro-Dade Code and environmental protection rules for stormwater disposal methods. Refer to the LOS for drainage for retention standards to be met.

This concludes the adopted sections of this element

Chapter 5

COASTAL MANAGEMENT ELEMENT

1. INTRODUCTION

Coral Gables is located in lower southeast Florida on the Atlantic coast. Chapter 380, Florida Statutes, requires coastal communities in Florida to prepare a Coastal Management Element as an integral part of the local comprehensive plan. The Coastal Management Element addresses the issues of planning for development in the coastal area, restricting development where appropriate for conserving coastal resources, protecting residents in the coastal area from storm hazards, and limiting public expenditures in coastal areas subject to destruction by natural disasters. The coastal area of Coral Gables is generally defined as the area within the city east of Old Cutler Road, including the uplands between Old Cutler Road and the Biscayne Bay shoreline, the tidal wetlands along the bay, and the part of Biscayne Bay that lies within the the city boundaries.

The Coastal Management Element of the Comprehensive Plan addresses many issues which are also addressed in other plan elements. These issues are also specifically required to be addressed for the Coastal Management Element, however. Existing land use, development and redevelopment, natural and historic resources, and natural disasters planning concerns in the coastal area are included in the Coastal Management Element.

1.1. Coastal Area Descriptions

The Florida Administrative Code defines coastal areas in Chapter 9J-5 on the basis of state requirements for coastal management elements of local government comprehensive plans. Where addressing requirements related to hurricane evacuation and hazard mitigation, the coastal area is defined as all portions of the city within the hurricane vulnerability zone delineated by the Federal Emergency Management Agency. In Coral Gables, this area is comprises the land which lies within the designated hurricane vulnerability zone shown on Map 5.1. The coastal area must include all estuarine waters within the city's jurisdiction where addressing requirements related to water quality and quantity, and estuarine environmental quality. Where addressing other requirements in this plan element, the coastal area encompasses the following: waters and submerged lands of Biscayne Bay; the shoreline adjacent to Biscayne Bay; living marine resources; facilities which are water-dependant, water-related, or provide public access to the estuarine shoreline; and adjacent land where development activities may impact the waters and submerged lands (land east

of Old Cutler Road), shoreline, marine resources, water-dependant facilities, water-related facilities, and public shoreline access facilities.

Chapter 161, Florida Statutes requires that beach and shore preservation be addressed in local plans, and specifies that the coastal area be divided into three zones. The first zone is comprised of the area within a government jurisdiction which is seaward of the mean high water line. The second zone is the upland area between the mean high water line and the Coastal Construction Control Line set by the Florida Department of Natural Resources. The Department of Natural Resources has permitting authority for this zone and is currently redrawing the Coastal Construction Control Line throughout the state. The third zone, called the coastal building zone, is 1,500 feet landward of the seasonal high water line and requires local code regulation.

2.
EXISTING CONDITIONS

2.1.
Coastal Area Land Use

The land within the coastal area of Coral Gables covers an estimated 3,124 acres. Land in private ownership is largely developed. Existing land use in the coastal area of Coral Gables consists primarily of single-family residential , conservation, and recreation uses. Other land uses include the Coral Gables Waterway and the Snapper Creek Canal, public buildings, education, and some commercial uses. Generalized land uses in the coastal area are shown on the Existing Land Use Map.

The acres and percentage of coastal land area, by land use type, in Coral Gables are shown in Table 5.1. The city is fortunate in having substantial land in recreation and conservation uses along Old Cutler Road. Just over 50 percent of the land area, or about 1,590 acres, are in recreation and conservation uses. Open space and other public lands comprise 68 acres. These uses are the least intensively developed and are less subject to damage from serious storms and flooding. Land designated for low density single family housing comprises 45.5 percent of the area. Most of the 1,420 acres of land in this classification has been developed, although there are a number of unbuilt lots in the Islands of Cocoplum subdivision and other scattered single family vacant lots. Multi-family residential land uses cover about 19 acres. Land designated for commercial (eight acres) and educational (19 acres) use are less than one percent of the coastal area. The commercial land is presently vacant. A private academy is located on the educational land and is a very low density use.

Land Use Conflicts: There are no identified significant conflicts among existing shoreline land uses within the coastal area. A potential conflict could arise if the eight acres of vacant land designated for commercial uses between the Coral Gables Waterway and Edgewater Drive are developed for uses other than water-dependent or water-related or which are not compatible with the adjacent neighborhood character.

Water-Dependent Land Uses: Land uses which depend on direct water access include marinas, yacht and ship repair facilities, boat anchorage and ramps, some marine industries, charter and rental boat dockage, beaches, and fishing piers. In Coral Gables, Matheson Hammock Park Marina is the only public land use in the coastal area which is water-dependent. The marina has 246 wet slips and 75 dry slips. Matheson Hammock Park also contains dockage for charter, rental, and tour boats; private boat anchorage; a public beach; and boat launching ramps. Private marinas in Coral Gables include Cocoplum Marina (104 wet slips), Water's Edge Condominium (18 wet slips), Gables Harbour Condominium (23 wet slips), and Gables Waterway Towers (27 wet slips). Map 5.1 shows existing water-dependent land uses in the coastal area.

Water-Related Land Uses: Water-related uses are associated with activities which are water-dependent but do not require direct water access.These uses support activities such as boat building, boat sales and services, marine supply sales, and equipment rentals for aquatic sports. The water-related uses located at Matheson Hammock Park include facilities for charter, rental, and tour boats; windsurfer rentals; ships' store; and a dockmaster's office. Other water-related uses occur at Cocoplum Marina.

Redevelopment Areas: There are no currently designated redevelopment areas in the coastal area. Development or redevelopment within the area will be in accordance with the existing land uses and zoning.

Economic Base: Activities which generate income and employment are referred to as the economic base of an area. In the coastal area of Coral Gables, economic activities are predominantly related to residential construction, property maintenance, and real estate sales and financing. The small amount of remaining vacant residential land and stable, developed character of the coastal area limit the future potential of the area in terms of income and employment generating activities. Other economic base activities include recreation and tourism at Matheson Hammock Park and Fairchild Tropical Garden, and water-related activities such as commercial boat charters, marine supply sales, and slip rentals at the marinas. The privately-owned land in the coastal area is valuable for its contribution to the property tax base of the city. Future land use within the city's coastal area is not anticipated to change substantially from the character of existing land uses.

2.2. Coastal Resources

The coastal area's natural resources are confined to that part of Biscayne Bay which is within the city limits and natural preserves east of Old Cutler Road. As can be seen on Map 5.1, part of the city limits of Coral Gables extend east to the Intracoastal Waterway channel and include an large area within Biscayne Bay. Natural resources are further detailed in the Conservation Element.

Biscayne Bay Estuary: The shoreline of Coral Gables is dominated by mangrove swamps and artificial seawalls. The wetland areas and bay form an estuary, or zone of transition between the fresh water and salt water environments. The mangroves protect the shoreline from excessive marine erosion. The estuary is a highly productive biological system, supporting many species of plants and animals. The productivity of Biscayne Bay depends primarily on the viability of two major environmental communities: the mangrove swamp and the bottom-dwelling (benthic) marine grasses. The well-being of these two communities improves water clarity in the bay and insures the presence of large populations of game fish.

Vegetative Communities: The coastal area in Coral Gables begins as the land to the east of Old Cutler Road starts to drop off from an elevation of about 20 feet down towards Biscayne Bay. The pineland environment, which prevails throughout most of Coral Gables, extends 300 to 600 feet down this eastern slope. This area is characterized by the presence of slash pine, cabbage palm, coontie, bracken, and several grasses. Hammocks, or their remnants, can be found throughout this zone. In areas not altered greatly by urban development, the hammock vegetation includes poisonwood, live oak, wild grape, strangler fig, and gumbo limbo. Casuarinas (Australian Pines) have proliferated in the disturbed areas. State legislation protects several of the plant species present in the coastal area, including coonties, mangroves, and sea lavender.

Lagoons and canals mark the eastern extension of the pineland zone, which stops at the salinity barrier about 2.5 feet above sea level. Mangroves begin at this point and extend out into the tidelands of Biscayne Bay. Buttonwood, white mangroves, red mangroves, and black mangroves are found within this community. In all mangrove areas where there has been dredging and land fill, casuarinas predominate. In areas where these highly combustible trees have been burned, extensive populations of cabbage palm, Florida holly, ragweed, saw palmetto, and nickerbean can be found. Throughout this entire zone there are countless examples of invasive, exotic species. Over 30 different exotic (non-native) plant species have been identified in the coastal zone of Coral Gables.

Beyond the mangrove areas lies the near shore, or submerged land, of Biscayne Bay. This environment extends about 1,500 feet into the bay. In the 50 to 100 foot wide intertidal zone most of the sea floor is relatively bare and is covered with sand, shell fragments, and rock rubble. In these areas turbulence caused by wave action prevents the establishment of rooted vegetation. Where chunks of exposed mangrove peat, as well as a few mangrove roots and stumps, are found, it indicts an eroding area. The floor of the intertidal zone is mostly silica sand with bits of organic debris and a few shells. It is a very even floor with slight slopes.

Beyond the intertidal zone, three types of shallow water vegetation exists. These include attached algae, sea grasses, and grass beds with algae. The first of these

communities, attached algae, forms over bottoms covered with rock and shell rubble. The dominant plant is red algae, although small concentrations of green and brown algae also exist. About 300 feet from shore the bay bottom is covered by fine sediment and dense growths of seagrasses, primarily cuban shoalweed and turtle grass. This cuban shoalweed is more plentiful in the shallower water while the turtle grass is more abundant where the water is deeper than two feet.Two or three hundred yards offshore, small, more or less round beds of manatee grass and cuban shoalweed appear. These beds are surrounded by sparse to moderate growths of green and red algae.

Wildlife Habitats : Several species of mammals can be found in the coastal zone of Coral Gables. Raccoons, marsh rabbits, and cotton rats can be found from the shoreline to the upland, developed areas. Occasionally there are reports of foxes and opossums. Grey squirrels inhabit the coastal hammocks, which may also support rice rats and cotton mice. In the bay, there are transient populations of West Indian manatees and bottlenose dolphins. Reptiles inhabiting the coastal area include loggerhead and green sea turtles in the bay; and water snakes, terrapins, and anole lizards in the mangroves and marshes. Tree frogs and Southern toads are amphibians found in the coastal hammocks and uplands. At low tide, coon oysters can be found attached to mangrove roots. Also among the mangrove roots are land crabs and fiddler crabs. Coffee bean snails are frequently encountered attached to plants along the canals and waterways.

Among the species of birds most often seen in the coastal zone are herons, cormorants, kingfishers, anhingas and ospreys. The Chapman Field property owned by the county is an important rookery area for several bird species. Wading birds found in the coastal area include herons, egrets, white ibis, clapper rails, and an occasional roseate spoonbill. Many species of shorebirds frequent the beaches around Biscayne Bay, but are limited in the coastal area of the city by the lack of beaches and open shore areas. The more common shorebirds include plovers, sandpipers, snipe, and killdeer. Aquatic birds are found in open water and shoreline habitats. Aquatic birds found in Coral Gables are brown pelicans, frigatebirds, double-breasted cormorants, several species of gulls and terns, and in the winter black skimmers and pied-billed grebes.Numerous songbirds area also found in the area. State legislation protects three bird species; least terns, black-whiskered vireos, and gray kingbirds (which summer in the area).

Living Marine Resources : Fish are numerous in the canals and small inlets of Coral Gables coastal zone. Needlefish, mullet, and barracuda can be seen here in large numbers. The bay supports a significant number of marine species, including four which are protected by federal legislation. These are loggerhead, Kemp's Ridley, and leatherback sea turtles, and the West Indian manatee. Among the commercially valuable marine species found in the bay are shrimp, stone crab, blue crab, spiny lobster, snook, groupers, mullet, snappers, spotted seatrout, red drum, and pompano. Recreational species include jacks, drums, grunts, porgies, and barracuda. Other

notable species are pinfish, anchovies, sharks, tilefish, angelfish, wrasses, squid, and jellyfish.

2.3. Future Land Uses in the Coastal Area

Areas of Special Concern to Coral Gables: Since the land use character of the upland area is set by existing development, no change in the effect of land use in the future is anticipated in the coastal area. The existing benthic and aquatic habitats in Biscayne Bay are more likely to be negatively impacted by conditions beyond the jurisdiction of Coral Gables. These conditions include the quality of water discharged from the Biscayne Canal, dredging activities to maintain the Intracoastal Waterway channel, and more intense development or redevelopment of land adjacent to Coral Gables along the Biscayne Bay shoreline.

Effect of Development and Redevelopment on Coastal Resources: As urban development has expanded southward along the shores of Biscayne Bay, biologically productive areas have slowly disappeared from adjacent estuarine environments. In the future, if certain precautions are taken, these steady losses can be minimized. A balance must be maintained between the tremendous growth pressures in the coastal environment and the need to protect those coastal resources that attracted people here in the first place. Bulkheading, for example, should be avoided and replaced with a sloping riprap shoreline. Mangroves should be preserved and replanted. Channels must be clearly marked so marine grassbeds can be avoided by power boats. Expanded or new water-dependent and water-related uses should be located in areas that are least sensitive to alteration and impacts on the natural environment. Proposed future land uses will maintain the low density character of the coastal area, with more than half of the land in public ownership and substantial areas designated for preservation. It is essential that the remaining natural areas be preserved since so much of the area has been developed, inhibiting the productivity and viability of the estuarine biological system.

Floodplains: The delineation of areas subject to coastal flooding is provided on the Federal Emergency Management Agency Flood Insurance Rate Maps. These maps are used in administering the "National Flood Insurance Program" and are hereby incorporated by reference as supporting documents of this Comprehensive Plan. The Flood Insurance Rate Maps delineating flood hazard zones in Coral Gables were last revised in November 1987. Base flood elevations have been determined throughout the coastal area in the city. The zone of coastal flooding with velocity hazard (Zone VE) extends back from the shoreline between 100 and 1,200 feet. This zone is narrowest between the shoreline and Sunset Drive in the northern part of the coastal area and widest at the Chapman Field property. The water level in the Coral Gables Waterway and Snapper Creek Canals will also rise during severe storm events, but storms would have to approach or exceed the 100-year frequency to be accompanied by flooding beyond the Waterway. The primary concern is coastal flooding, which is

limited to the area east of Ingraham Highway and Old Cutler Road during storms less severe than a 500-year frequency event.

2.4. Historic Resources and Sites

Historic resources have been identified in the coastal area of Coral Gables. The entire area from Cocoplum to Chapman Field is considered a significant archaeologic and historic zone by Dade County. This "Area of Archaeological Sensitivity" includes Site # 8-DA9 on the state "Master Site File" list of historically-significant sites. This site consists of a black dirt and shell midden along both sides of the Snapper Creek Canal on county-owned property. A burial component has not been found at this site, although further examination is to be conducted by Dade County. The Snapper Creek property is designated for conservation by both the city and county future land use plans. This designation protects the Snapper Creek site from development in the future. Several other aboriginal (Native American) sites have been identified by Dade County at other locations in the coastal area as well. It is possible that existing development has replaced or removed evidence of other sites. Coordination between the county and the city is needed to assure that development or redevelopment in the coastal area does not replace the known sites prior to investigation by professional archaeologists and historians. No city-designated historic sites or structures are located in the coastal area.

2.5. Maintenance of Estuarine Environmental Quality

Pollution within the coastal environment of Coral Gables is minimized by currents and tidal movements which produce exchanges between estuarine waters and waters farther out in Biscayne Bay. These in turn are exchanged with oceanic waters beyond the bay. If these currents are strong, polluted water can be flushed from the bay in about one day. If the currents are weak the flushing process may take anywhere from a few days to a week. Waters in the more remote inlets of Biscayne Bay, like those along the shores of Coral Gables, take a longer time to mix with outlying water. In addition to the current and tidal activity, the amount of time involved in the movement of water from Biscayne Bay to mix with oceanic waters can be accelerated or diminished by the magnitude of the winds and any change of tidal action in the ocean itself.

Estuarine Pollution Conditions and Problems: Water quality in the estuary is characterized as generally very good. Point sources of pollution are the residential canals, Coral Gables Waterway, Snapper Creek Canal, and the marina at Matheson Hammock Park. Water quality sampling is conducted by the Metro-Dade Department of Environmental Resources Management. Water quality in the Coral Gables Waterway from the sampling site near 57th Avenue and 60th Street was last tested in 1984. Test results indicated that overall water quality was good. Levels of nitrates were slightly elevated above background conditions, and some increased salinity was

noted just downstream from the salinity dam. Water quality in the Snapper Creek Canal was last tested in 1980. Levels of lead and total coliform were slightly elevated above background conditions. Levels of phosphates, nitrates, and turbidity were within water quality standards. Due to improved upstream conditions outside the city limits, county staff expects that sampling would now indicate even better water quality conditions in the Snapper Creek Canal.

The area of Biscayne Bay within the city limits is among the best water quality for the entire bay. The extensive marine grass beds, fewer canals and drainage outfalls, less intensive upland land uses, and better water circulation in this part of the bay supports maintenance of water quality conditions which are significantly better than the northern areas of the bay. The positive drainage outfalls along the finger canals serving the Old Cutler Bay and Gables Estates subdivisions, and the Coral Bay subdivision between Bella Vista and Avenue Lugo, discharge some accumulated contaminants such as fertilizers, pesticides, oil, and other urban runoff materials from non-point sources. However, the water quality in the Bay adjacent to these areas has remained satisfactory while the area has substantially built out, indicating that the pollution from the outfalls is not a significant problem.

Impacts of Proposed Development and Redevelopment : Existing urban land uses cover less than one-half of the coastal area of Coral Gables. Even with infilling on vacant parcels designated for urban uses, which would primarily be low density residential uses, open space and park or conservation land designated on the future land use map will continue to comprise over one-half of the coastal area. While new development or redevelopment will continue to contribute pollutant loadings, primarily in the form of surface water runoff, adherence to the proposed future land uses will help to maintain a substantial amount of undeveloped land area to serve as a filter for runoff. Infrastructure issues including location of existing facilities to serve development and redevelopment in the coastal area are addressed in the Sanitary Sewer, Solid Waste, Potable Water, Drainage, and Aquifer Recharge Element.

Impacts of Proposed Public Facilities : The impacts of proposed public facilities in the coastal area are addressed in the Sanitary Sewer, Solid Waste, Potable Water, Drainage, and Aquifer Recharge Element.

Regulatory Programs for Maintenance of the Estuary : Actions needed to maintain the Biscayne Bay estuary and to minimize estuarine pollution are defined in the Biscayne Bay Aquatic Preserve Management Plan and are under the authority of county, regional, and federal agencies. The city should continue to maintain the amount of park and conservation land in the coastal area, with low density residential uses as the predominant urban land uses. Intensive commercial uses and high-density residential development could result in lower water quality from surface water drainage and other associated impacts. The city will continue to fully cooperate with the Florida Department of Environmental Regulation (DER), the Metro-Dade Department of Environmental Resources Management (DERM), the Florida Department of Natural

Resources (DNR), the U.S. Army Corps of Engineers, and the South Florida Water Management District to assure that the regulatory programs of these agencies are fully complied with in the city.

2.6. Natural Disasters Planning Concerns

Coral Gables is situated in the lower southeast Florida region on the Atlantic coast. The National Oceanic and Atmospheric Administration has identified this area as being the most vulnerable in the United States to hurricanes. Within the city limits, most of the area east of Old Cutler Road may be subject to flooding during a serious storm and has been identified as a highly hazardous area in the event of a hurricane. Map 5.1 delineates the areas within the city limits of Coral Gables by the degree of their vulnerability to flooding in the event of a 100-year storm. Base flood elevations in the flood hazard zones have been determined for these areas by the Federal Emergency Management Agency.

The most recent hurricane evacuation study for Dade County was prepared for the Army Corps of Engineers, Jacksonville District Office, in June, 1983. Two storm situations were analyzed for Dade County. The brunt of the impact from these potential storms will be borne by the coastal barrier islands which separate Biscayne Bay from the Atlantic Ocean. Hurricanes in categories 1 to 3 on the Saffir/Simpson scale would result in stormtides at the shoreline between 5 and 10 feet above main sea level. The velocity of the hurricane winds in these categories would range between 74 and 130 miles per hour. With a category 4 or 5 storm, the stormtide would range from 13 feet above mean sea level to over 15 feet. Winds would range upward from 131 miles an hour to in excess of 155 miles an hour.

Hurricane Evacuation Planning: Map 5.2. shows the hurricane vulnerability zone, refuge, and evacuation routes for those residents of Coral Gables who would be advised to evacuate their homes in the coastal area in the event of hurricane threat. Since the developed land within the coastal area of Coral Gables is in low-density residential uses, it is not anticipated that the population at risk from a significant storm will change significantly in the future. Generally, the area within the city east of Old Cutler Road and Ingraham Highway is defined as the traffic evacuation zone for a Category 4 or 5 storm. Given the limited area of the hurricane vulnerability zone in Coral Gables, evacuation in the event of a serious storm should not pose a significant transportation problem.

Hurricane Shelters: Residents of Coral Gables are assigned to the hurricane evacuation refuge at Miami Killian High School (Shelter # 13). City residents in Dade County Evacuation Zones 14 and 15 would be advised to evacuate in the event of a severe storm. Those residents living in Zone 14 would be advised to use the evacuation route west on Sunset Road from Cartagena Plaza to SW 57 Avenue, then

south to SW 112 Street and west to Killian High School at SW 97 Avenue. Those residents living in Zone 15 would be advised to use the evacuation route west on SW 112 Street to Killian High School. Coral Gables Community Center is also a shelter designated by the city. Designation of shelters is reviewed annually by the Dade County Office of Emergency Management and the American Red Cross. Other shelter options are preferable to the Red Cross shelters, which are intended only as temporary storm shelters. Shelter options include commercial lodging and family or friends out of the evacuation area.

Impact of Future Land Uses: There are no mobile home parks or industrial operations in the coastal high hazard area. The area is predominantly zoned for low-density residential, conservation , and recreation uses, which alleviates the need to make a determination of the degree of hazard posed by the construction or reconstruction of other uses in the coastal high-hazard area. The Future Land Use Map does not indicate any change from existing land use types or distribution.

Special Needs Populations : Services to special needs populations in Coral Gables are provided for in the Basic Emergency Operations Plan of the city. Persons in this category include the disabled, infirm, and elderly. The public safety departments of the city practice responses and maintain specialized equipment to help meet the needs of persons with special needs in the event of hazard evacuation or other emergency.

Emergency Warning System: The city's public information system is the responsibility of the Coral Gables Police Department, and includes an emergency warning system to notify residents of the event of emergencies. The Department has the capability to dispatch cars with loud-speakers throughout the city to notify the public of imminent threats to public health and safety. In the event of an emergency condition, the Coral Gables Emergency Operations Center at the Public Safety Building maintains liaison with the Dade County Emergency Operations Center and participates as part of the Dade County Warning System.

Public Notice Of Potential Hazard : Public notification of the potential dangers and appropriate preparatory measures for severe storms are provided in a Sunday edition of the Miami Herald in May or June each year. A special section of the newspaper is devoted to hurricane preparation information. This issue also details information on evacuation routes to public shelters and the availability and use of the shelters. Additional information is available from the Emergency Operations Centers of Dade County and Coral Gables.

2.7.
Public Shoreline Access Facilities

There are four places of public shoreline access in Coral Gables. One of these places is at Ingraham Park, which is a city-owned park with approximately 600 feet of shoreline. There are about 15 on-street parking spaces at Ingraham Park. The other

three places with public shoreline access are county-owned parks. Matheson Hammock Park has off-street parking for almost 1,000 vehicles, a public beach, ten boat ramp lanes, 246 wetslips, and 156 boat trailer parking spaces. Chapman Field and Snapper Creek are not developed parks but are public properties within the city having shoreline access.

2.8. Coastal Area Infrastructure

Infrastructure components in the coastal area include roads, water lines, sewerage, and drainage facilities inventoried in the Traffic Circulation and Public Facilities Elements of this Comprehensive Plan. Other public infrastructure includes bridges, navigation channels, shoreline protection structures, marinas, boat ramps, piers, and docks. At this time, it is not anticipated that that financial feasibility or public safety considerations warrant relocating any infrastructure likely to be threatened during a severe storm event. Three county-maintained bridges are located in the coastal area of Coral Gables: one over the Coral Gables Waterway, one in Matheson Hammock Park, and one over Snapper Creek Canal. There are 13 storm water outfalls discharging into the residential canals in the Cocoplum development. These outfalls are sized between 12 and 23 inches in diameter. One storm water outfall less than 24 inches in diameter discharges into the residential canal located between Sunrise Place and Sunrise Court north of the Coral Gables Waterway. There are four storm water outfalls discharging into the Matheson Hammock Park Marina basin and three storm water outfalls discharging into the bay at the park. These outfalls are also sized between 12 and 23 inches in diameter. There are 23 storm water outfalls, sized between 12 and 23 inches in diameter, discharging into canals in the residential area south of Snapper Creek and north of Chapman Field. Other infrastructure components are listed below:

* 600 feet of unconsolidated shoreline at Ingraham Park;
* 3000 feet of unconsolidated shoreline, 2700 feet of vertical bulkhead, 850 feet of riprap at Matheson Hammock Park;
* 5200 feet of unconsolidated shoreline at Snapper Creek property;
* More than one mile of unconsolidated shoreline at Chapman Field;
* Public docks and boat ramps at Matheson Hammock Park Marina;
* Coral Gables Waterway and Snapper Creek Canals;
* Navigation channels: Coral Gables Waterway and Snapper Creek Canals, Matheson Hammock Park;

2.9. Post-Disaster Redevelopment Planning

As specified by Chapter 9G-13, Florida Administrative Code, Coral Gables will comply with the implementation of the requirements of the "Post-Disaster Redevelopment Rule". The city will cooperate with the Florida Department of Community Affairs to

coordinate damage assessments with assistance from other federal, state, regional and local agencies. Coral Gables has complied with the requirements of Chapter 161.56 (1), Florida Statutes, regarding the adoption of a building code which regulates construction in the coastal area.

Flood Insurance: Coral Gables participates in the National Flood Insurance Plan Program in conformance with the "Federal Disaster Relief Act of 1974."

Land Uses in High-Hazard Areas: Predominant land uses in the VE Zones are single family residential; park, recreation, and open space; and conservation. The Future Land Use Map reflects existing land uses in the area identified on the Floood Insurance Rate Maps as subject to coastal flooding with velocity hazard. The uses designations are low density and are not anticipated to change in the event of redevelopment following a natural disaster such as a hurricane.

Beach Conditions: There are no dune areas or other topographical features or vegetation within the city boundaries that require preventative planning measures. The only public beach in the coastal area is a man-made swimming beach at Matheson Hammock Park which is maintained by Dade County.

Preventative Planning Measures: The public infrastructure, including coastal protection structures, in the coastal area which could sustain substantial damage from a natural disaster includes the facilities at Matheson Hammock Park, three county-maintained bridges, and bulkheads and riprap along some of the shoreline at Matheson Hammock Park. The city and the county does not anticipate removing existing public infrastructure from its present location.

Proposed Land Use in the Coastal High-Hazard Area: Proposed land use in the coastal high-hazard area for all land use classifications is shown on the Future Land Use Map Series. The only change from existing land use designations occurs for the area north of the Chapman Field Property and south of Bella Vista, which is now in state ownership. The use designation has changed from Single-family to Conservation.

Hazard Reduction in the Coastal High-Hazard Area: The Future Land Use Element continues low density use designations for the coastal high-hazard area. There are no new major public facilities proposed for this area. In the event of a severe storm which damages structures by greater than 50 percent of their value, the City may consider alternatives to allowing redevelopment of the damaged structures. Structures insured by the National Flood Insurance Program will be governed by the standards set forth in that program. Where feasible, public structures may be relocated from the high-hazard area. The City may also limit public expenditures for infrastructure which may support redevelopment in the high-hazard area. Most of the structures which are vulnerable to storm damage are single-family residences, but the high market value of these structures and the property probably precludes a program for public purchase.

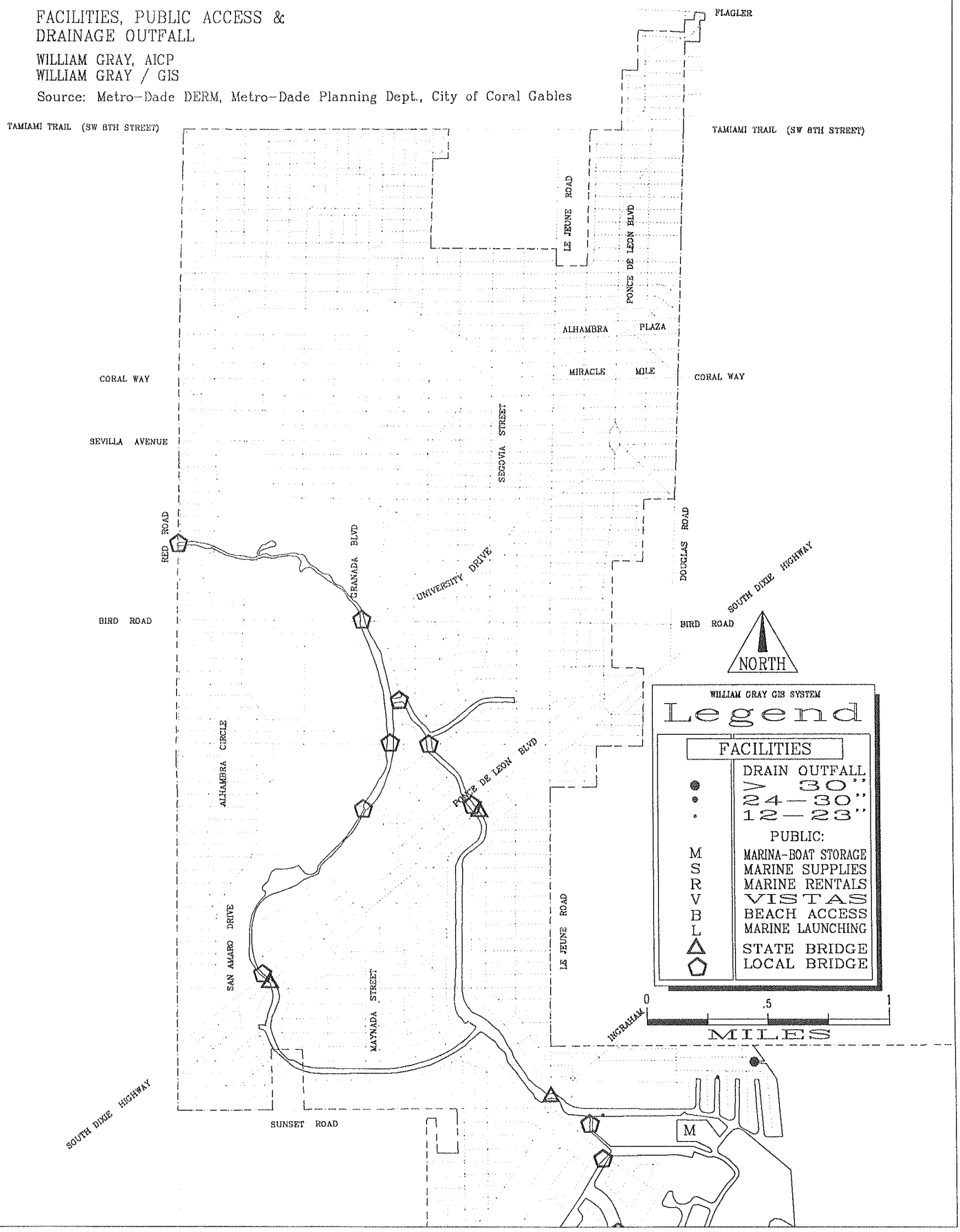
MAP 5.3.

COASTAL MANAGEMENT

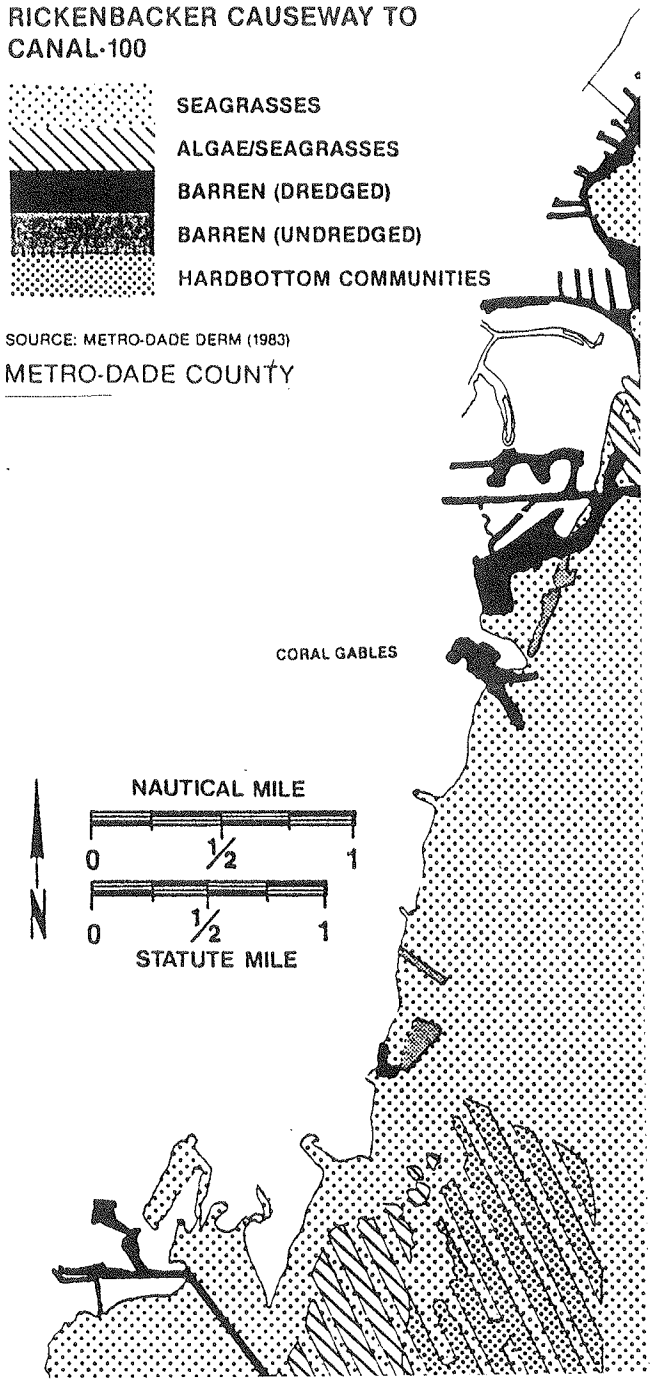
FACILITIES, PUBLIC ACCESS &
DRAINAGE OUTFALL

WILLIAM GRAY, AICP
WILLIAM GRAY / GIS

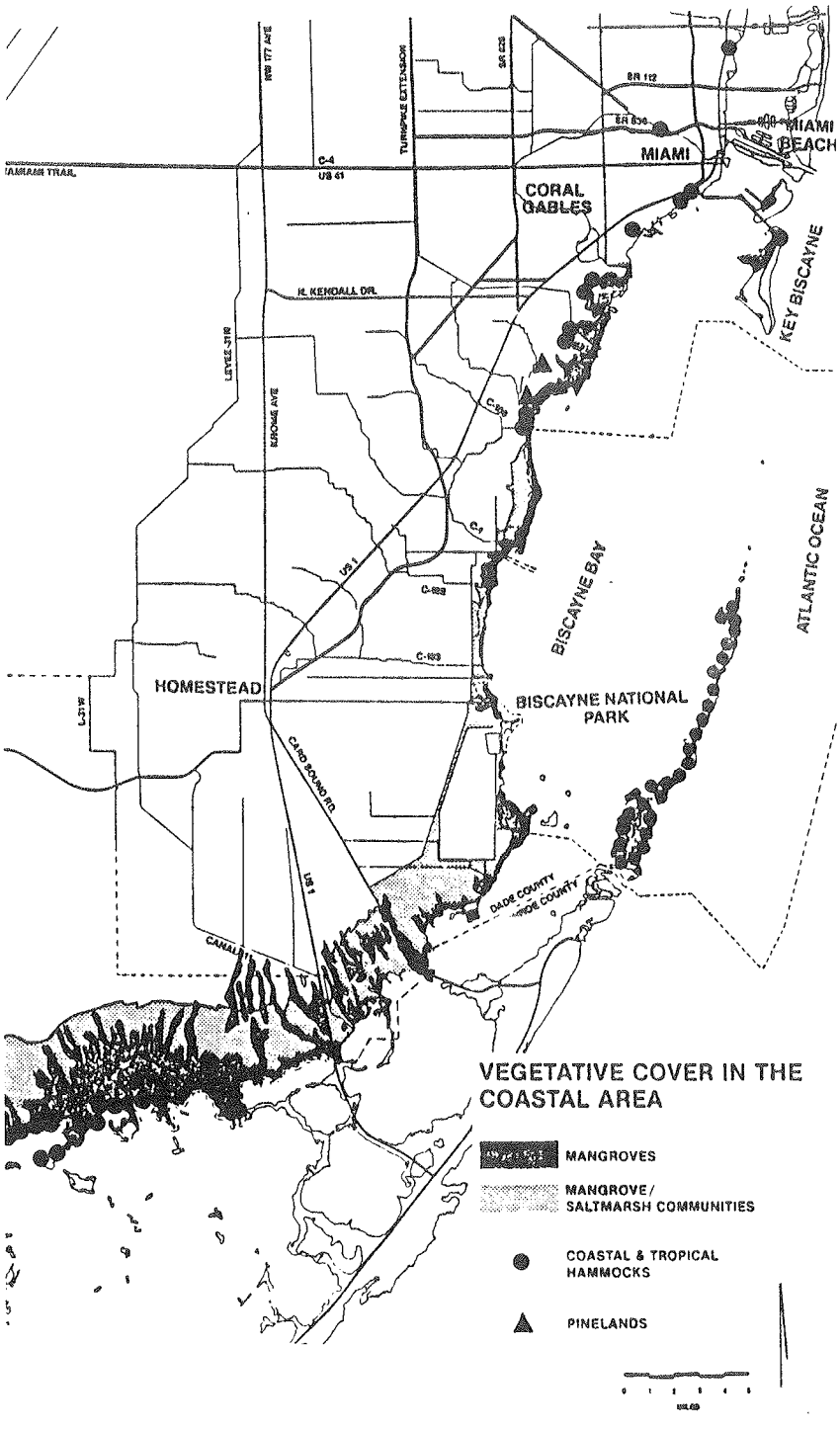
Source: Metro-Dade DERM, Metro-Dade Planning Dept., City of Coral Gables



MAP 5.4.
COASTAL BENTHIC COMMUNITIES

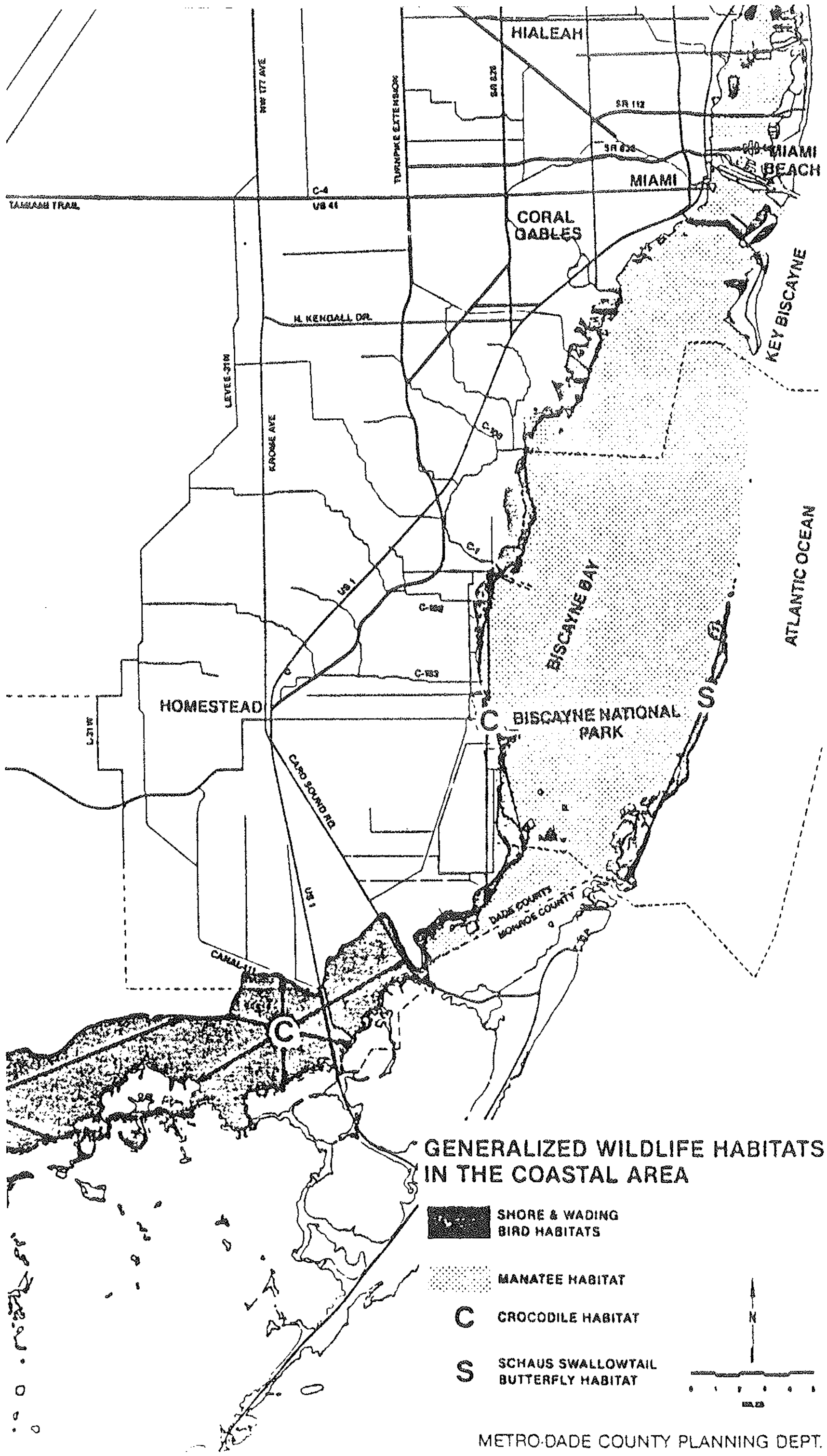


MAP 5.5.
COASTAL VEGETATIVE COVER

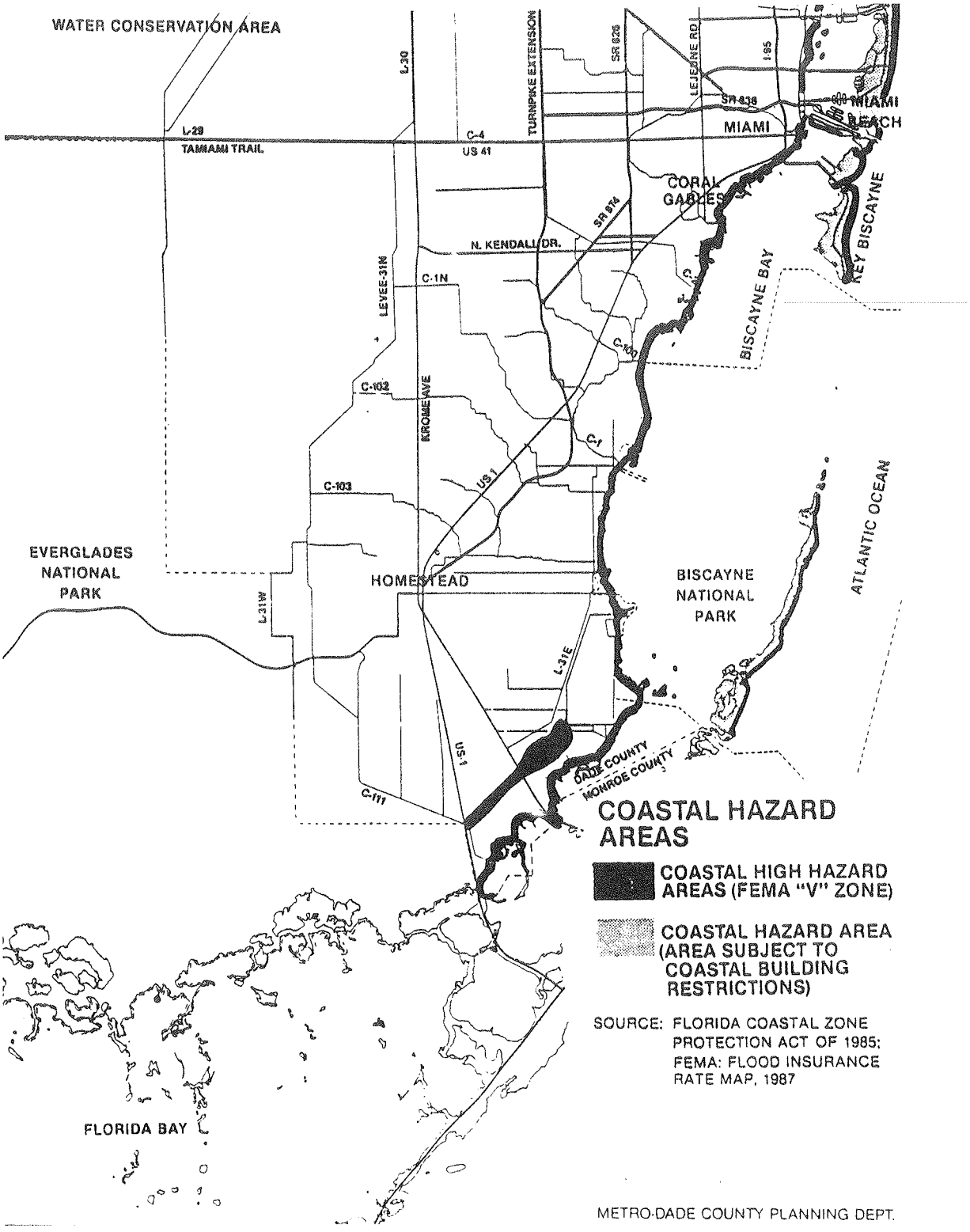


METRO-DADE COUNTY PLANNING DEPT.

MAP 5.6.
COASTAL WILDLIFE HABITATS



MAP 5.7.
COASTAL HAZARD AREAS



The following section is to be adopted by City ordinance:

COASTAL MANAGEMENT ELEMENT GOALS, OBJECTIVES, AND POLICIES

These goals will protect the natural amenities of Coral Gables, will insure healthy and aesthetically pleasing surroundings, and will restrict development of particularly sensitive and unique natural areas, when implemented. The goals of the City, County, neighboring cities, and the state should therefore compliment each other.

3.
GOAL:
To conserve, manage, use and protect natural and environmental resources and maintain and enhance the natural balance of ecological functions in the coastal area.

3.1.
OBJECTIVE:
Maintain or improve coastal area and estuarine environmental quality, as measured by existing baseline environmental indicators for water quality provided by Metro-Dade Department of Environmental Regulation and Management.

3.1.1.
POLICY:
Development affecting coastal and estuarine water resources shall provide for maintaining or enhancing the biological and economic productivity of those resources.

3.1.2.
POLICY:
The wastewater disposal systems of Coral Gables shall maintain water quality at or exceeding state and federal standards.

3.1.3.
POLICY:
The city shall cooperate with the South Florida Water Management District, state agencies, and local government jurisdictions for area-wide water resources planning and management.

3.1.4.
POLICY:
The city shall cooperate with the appropriate state and local agencies for identifying, controlling and eliminating point sources of water pollution.

3.1.5.
POLICY:
All federal and state water quality standards shall be enforced in Coral Gables.

3.2.
OBJECTIVE:
Protect and conserve remaining coastal resources, including wetlands, living marine resources, wildlife habitat, and historic resources.

3.2.1.
POLICY:
Coordination with appropriate public agencies for the management of the coastal zone to provide a balance between irreversible commitments and conservation of resources, shall be the responsibility of the Planning Department. Methods for coordinating with Dade County and the City of Miami to prevent estuarine pollution and protect Biscayne Bay, control surface water runoff, and protect living marine resources shall be identified and set forth in interlocal agreements.

3.2.2.
POLICY:
Review and incorporate appropriate changes to natural resource protection and management plans by Dade County and state and federal agencies into the policies set forth in this plan element.

3.2.3.
POLICY:
Land use planning and management of development regulation in the coastal zone shall be based on sound ecological principles and the public interest.

3.2.4.
POLICY:
Maintenance dredging and spoil disposition activities shall not reduce existing water quality or result in permanent disruption of natural habitat.

3.2.5.
POLICY: Discharge of pollutants and disposal of wastes into canals, storm drains, submerged lands, or open waters is prohibited.

3.2.6.
POLICY: Historic sites shall be identified and protected, and performance standards for development and sensitive reuse for of historic resources shall be established.

3.3.
OBJECTIVE:
Restore and enhance disturbed or degraded natural resources and implement programs to mitigate future natural resources disruption or degradation in the coastal area.

3.3.1.
POLICY:
Existing coastal wetlands and submerged lands should not be drained or filled, and should be restored or enhanced where disturbed or degraded by development. The City shall monitor dredge and fill permits issued by the U.S. Army Corps of Engineers and shall further monitor new development applications to the City to ensure that this policy is enforced.

3.3.2.
POLICY:
Specific and cumulative impacts of development or redevelopment upon wetlands; water quality, water quantity,wildlife habitat, living marine resources, and shoreline systems shall be limited by strictly regulating land alteration activities likely to result in erosion and sedimentation, or long-term water quality degradation and habitat loss.

3.3.3.
POLICY:
Protect existing natural shoreline areas, establish construction standards which minimize the impact of man-made structures on shoreline systems, and restore altered shorelines within the city's jurisdiction.

4.0.
GOAL:
To protect human life and investment in the coastal area of Coral Gables.

4.1.
OBJECTIVE:
Limit public expenditures in coastal high-hazard areas to projects clearly in the public interest and which minimize the risk from storm damage.

4.1.1.
POLICY:
Public expenditures for infrastructure improvements shall be located outside floodprone areas, to the extent practicable, to keep floodways as unobstructed as possible.

4.1.2.
POLICY:
Limit public expenditures that subsidize development permitted in coastal high-hazard areas except for restoration or enhancement of natural resources.

4.1.3.
POLICY:
The City adopts the coastal high-hazard area as shown on the Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency.

4.2.
OBJECTIVE:
Assure that future development or redevelopment maintains or reduces hurricane evacuation times.

4.2.1.
POLICY:
Maintain low-density residential land use designations in the coastal high-hazard area by directing higher-density population concentrations to areas away from the coastal high-hazard area through the City's land use planning process.

4.2.2.
POLICY:
Relieve deficiencies identified in the hurricane evacuation analysis of the South Florida Hurricane Contingency Study, and continue to integrate regional and local notification and evacuation procedures into the Coral Gables Basic Emergency Operations Plan.

4.3.
OBJECTIVE:
Establish priorities and development guidelines for post-disaster redevelopment in the coastal area.

4.3.1.
POLICY:
Post-disaster redevelopment shall reduce or eliminate the exposure of human life and public and private property to natural hazards.

4.3.2.
POLICY:
Prepare a post-disaster redevelopment plan which addresses land use, public safety, infrastructure, and public investment concerns. The post-disaster redevelopment plan shall include policies to distinguish between immediate repair and cleanup actions needed to protect public health and safety and long-term repair and redevelopment

activities; and the removal, relocation, or structural modification of damaged infrastructure and unsafe structures.

4.3.3.
POLICY:
Incorporate recommendations of interagency hazard mitigation into the comprehensive plan and post-disaster redevelopment plan.

4.3.4
POLICY:
Identify areas which may warrant post-disaster redevelopment, including elimination of unsafe conditions and inappropriate land uses, and limitation of redevelopment in areas of likely repeated damage.

4.4.
OBJECTIVE:
Establish priorities and development standards for shoreline uses.

4.4.1.
POLICY:
Provide for increased public access to the shoreline consistent with public needs, continuing and replacing adequate physical public access to shorelines; enforcing the public access requirements of the Coastal Zone Protection Act of 1985; and providing transportation or parking facilities for shoreline access.

4.4.2.
POLICY:
Methods for coordinating with Dade County and the City of Miami to ensure adequate sites for water-dependent uses, reduce exposure to natural hazards, and ensure public shoreline access shall be identified and set forth in interlocal agreements.

4.4.3.
POLICY:
Establish priorities for siteing water-dependent and water-related land uses.

4.4.4.
POLICY:
Establish performance standards for shoreline development.

4.4.5.
POLICY:
Establish criteria for marina siteing which address land use compatibility, availability of upland support services, existing protective status or ownership, hurricane contingency

planning, protection of water quality, water depth, environmental disruptions and mitigation actions, availability for public use, and economic need and feasibility.

4.5.
OBJECTIVE:
Reduce the exposure of human life and property to natural hazards in the coastal area.

4.5.1.
POLICY:
Regulate building practices, floodplains, beach alteration, stormwater management, sanitary sewer and septic tanks, and land use to reduce the exposure of human life and public and private property to natural hazards.

4.5.2.
POLICY:
Incorporate the direction provided in the hazard mitigation annex of the Coral Gables Basic Emergency Operations Plan into comprehensive planning and development regulation for the city.

4.5.3.
POLICY:
Direct population concentrations away from the coastal high-hazard area through the City's land use planning process.

4.6.
OBJECTIVE:
Establish level of service standards, areas of service and phasing of infrastructure in coastal area.

4.6.1.
POLICY:
Limit development in designated coastal high-hazard areas to uses which have historically proven to be less vulnerable to storm damage.

4.6.2.
POLICY:
Relocate or replace infrastructure away from designated coastal high-hazard areas, where feasible.

4.6.3.
POLICY:
Ensure that required infrastructure is available to serve the development or

redevelopment at densities proposed by the future land use plan in the coastal area, consistent with coastal resource protection and safe evacuation. Funding for infrastructure shall be phased to coincide with the demands generated by development or redevelopment.

This concludes the adopted sections of this element

CHAPTER 6

CONSERVATION ELEMENT

1. INTRODUCTION

Coral Gables is a municipal jurisdiction which comprises 12 square miles in the metropolitan Miami urbanized area. The city is almost entirely developed, with the exception of a few remaining parcels. The significant natural reservations of the city are that portion of Biscayne Bay which lies within the city limits, and several large parcels adjacent to the bay in the southern part of the city. These parcels include a private natural preserve in the Islands of Cocoplum development, and county-owned land at Matheson Hammock Park, the Snapper Creek property, and Chapman Field. The Snapper Creek Canal and Coral Gables Waterway flow through the city and discharge into Biscayne Bay.

The natural environment of the area along the eastern shore of Biscayne Bay has been significantly changed since the 1920's. Prior to the beginning of development in this area of Dade County, the mainland shore consisted of a band of mangroves and the bay bottom plant vegetation consisted of scattered seagrass beds. By the late 1920's a significant amount of benthic vegetation had been established along large areas of the shallows on the eastern side of Biscayne Bay. Dredge and fill activities changed the configuration of the shoreline, water depths, and shore bottom. The natural vegetation of the upland area of Coral Gables area was dominated by pine, palmetto, and scattered hardwood trees.

Coral Gables is located between the central urban core of Miami and developing areas south and west of the city in Dade County. A sensitive balance is required between the development systems serving southern Dade County and environmental quality maintained in the city. The Conservation Element of the Coral Gables Comprehensive Plan identifies the existing natural resource systems, resource uses and pollution problems, and the potential for conserving, using, and protecting the identified resources. Following an identification and analysis of existing natural resources, the element sets forth statements of a goal, objectives, and policies regarding conservation of natural resources and maintenance of environmental quality. These statements establish specific direction for city programs and activities which affect the conservation and appropriate use of natural resources to ensure that environmental quality is maintained and that existing natural resources are protected.

2.
EXISTING CONDITIONS AND NATURAL RESOURCES

2.1.
Natural Environment

Climate: The environmental setting of Coral Gables is characterized by a sub-tropical marine climate. The summer season is relatively long, with warm temperatures and frequent rainfall. Summer temperatures are tempered by ocean breezes and occasional cloud cover. The winters are distinguished by mild temperatures and infrequent precipitation. The winter dry season is unique among continental climatic conditions, although it is typical for the Caribbean and parts of Mexico. Conditions are favorable for plant growth all year, with an average annual temperature of about 76 degrees Fahrenheit and average annual rainfall of approximately 60 inches.

Rainfall: Precipitation is not distributed evenly throughout the year. Average monthly rainfall is less than three inches during the months of November through April and increases from May through October. The period with heaviest rains is in September and October, when average monthly rainfall exceeds six inches. Thunderstorms occur about 80 times per year, and are common during the summer months. Hurricanes are much less frequent occurences.

Hurricanes: Historically, hurricanes are more likely to threaten South Florida during the months of September and October, although climatic conditions favorable to the formation of these serious storms can occur from late May through early November. Since 1911, there have been nine hurricanes which have passed over South Florida, affecting Coral Gables. Heavy rainfall and high winds accompanying these storms caused widespread flooding and damage to vegetation. Records at the Fairchild Tropical Garden, which is located in the coastal area of the city, indicate significant losses of vegetation due to the hurricanes in September 1945 and September 1960.

Topography: The topography of the Atlantic coastal ridge, which runs through Coral Gables, provides elevations reaching over 15 feet above sea level at its highest points just east of Coral Gables in the Coconut Grove area of Miami. This ridge is frequently referred to as the "Rim of the Everglades." Coconut Grove is the oldest part of Miami. The early settlers (and before them the aboriginal inhabitants) chose the area because of its elevation, which made it relatively safe from flooding. The good drainage characteristics had an added benefit with less favorable mosquito habitat than the surrounding lowland areas. The land surface of the city is relatively flat with elevations between 10 and 15 feet above sea level, and slight variations in surface relief that affect drainage and vegetation.

Geology: The land surface of Coral Gables is underlayed by several strata of limestone and sandstone. These strata (layers) were deposited during past geologic ages when the area which is now Dade County was submerged under water. The emergence of the South Florida land mass is geologically recent, and these rock

formations are among the youngest in the continental United States. The deepest strata form the Tamiami formation, and are composed of compacted clay, sand, and shell material called marl, sandstone, and limestone. This formation is about 100 feet thick and the impermeable lower strata form the confining base of the Biscayne Aquifer. The geology of the area is shown in Figure 6.1.

The Fort Thompson formation lies above the Tamiami formation and slopes gradually deeper from west to east. The strata are composed of limestone and sandstone, with pockets of quartz sand. This geologic formation is highly water-permeable and is the main component of the Biscayne Aquifer. This aquifer is the source of drinking water for the city. Parts of the formation, which begins about 50 feet below the surface of Coral Gables, are 150 feet thick. The Key Largo formation lies above the Fort Thompson formation beginning at a depth of about 20 feet in Coral Gables. It is composed primarily of coral reef limestone, which is highly permeable. The water in the Key Largo formation is more brackish (salty) than that of the Fort Thompson formation.

The geologic formation which forms the Atlantic coastal ridge under the shallow soil surface of Coral Gables is composed of a limestone called Miami oolite. The rock is named for the "ooid" (egg-like) shape of its constituent particles. It is a valuable building material as quarried blocks or crushed as an ingredient of cement. Many buildings and other structures such as City Hall and the entrances in Coral Gables are constructed of this rock. Much of the stone which is locally referred to as "coral rock" is actually oolitic limestone. Its beauty as a building material is also a weakness. As its surface erodes when exposed to weathering, which happens relatively quickly, intricate and intriguing shapes are revealed.

Soils : The soil surface of Coral Gables is extremely shallow in most areas. In many parts of the city it is necessary to dig into the limestone bedrock just below the surface to plant trees and shrubs. The general distribution of soils is shown in Map 6.1., which is based on the Soil Survey of Dade County. The soils north of Sunset Road are mostly fine sands with rapid to very rapid drainage and percolation characteristics, high structural bearing capacities, and few limitations for development. These soils are suitable for septic tank systems, with the possible exception of periods when the water table is highly elevated. Most of the sands have a high percolation rate, with downward movement of water usually exceeding one inch per thirty minutes.

A narrow band of Perrine marls lies just east of Old Cutler Road. The drainage and percolation characteristics for this soils group are slow and present some constraints for septic tank usage, with percolation rates ranging from 60 to 90 minutes per inch. Slow drainage characterizing the marls results in some problems with localized flooding during periods of heavy rainfall. The marls form a layer of thick, black muck over the oolitic limestone and have low to moderate bearing capacities. Another soils group is associated with the mangrove swamps. These peat or muck soils are water-saturated and have very low bearing capacities. These organic soils have a high

filtering capacity and are valuable for the removal of nutrients and solids which would otherwise flow into the bay from surface runoff and groundwater. Continued loss of the remaining mangrove areas would have an adverse effect on water quality.

Filled Land: Along the bayfront east of Old Cutler Road, the soils of the developed land areas are largely "made land" built up from dredged fill material. These soils are typically composed of sands with similar drainage and percolation characteristics similar to the fine sand groups found throughout most of the city. Indiscriminate filling of Biscayne Bay would destroy natural habitat and alter hydrographic conditions in the bay. Dade County has established bulkhead lines defining a boundary beyond which no fill may be placed to help protect the bay. The golf course areas are also predominantly filled land.

Floodplains: Map 6.2. identifies floodplains within the City. As a coastal area, the threat to property and human life from flooding in the City is from tidal inundation and storm surges associated with severe storm events, not from upstream drainage conditions. Upstream drainage conditions are controlled by the extensive water management structures and facilities administered by the South Florida Water Management District. Major waterways within the City, the Snapper Creek and Coral Gables Waterway Canals, are part of the District water management system. The District operates the water management system to alleviate the threat of flooding damage and to protect the natural resources within the District. Natural reserves subject to flooding from tidal inundation and storm surges in the coastal area of the City are designated in the Future Land Use Element for conservation, preservation, and recreation use, consistent with the conservation of natural habitat.

2.2. Water Resources

Dominant surface water resource features in Coral Gables include Biscayne Bay, Coral Gables Waterway, and the Snapper Creek Canal. The South Florida Water Management District has authority over the Coral Gables Waterway and Snapper Creek canals, which are part of its comprehensive system of drainage facilities. The drainage and aquifer recharge sub-elements of the Wastewater, Solid Waste, Drainage, Potable Water, and Natural Groundwater Aquifer Recharge Element provides specific details on the functioning of the canals and their relationship to the surface and subsurface hydrologic patterns in Coral Gables.

Subsurface Hydrology: The hydrologic unit of water-bearing rocks known as the Biscayne Aquifer underlies all of the coastal area and most of the Everglades in Dade County. Almost all of the water supply for the county is drawn from the unconfined groundwater in the aquifer. The Alexander Orr Wellfield Water Treatment Plant, which supplies potable water for Coral Gables, uses the aquifer as its source of water. One of the most permeable and productive aquifers in the world, the Biscayne Aquifer is quickly recharged by rainfall due to the high rate of rainfall surface penetration and

surface water infiltration. Figure 6.1 illustrates water movement in the Biscayne Aquifer. Rainfall penetrates the ground and flows down into the oolitic limestone of the Fort Thompson geologic formation. Further downward penetration is prevented by the confining beds of the Tamiami Formation. The groundwater then flows laterally on a slight gradient toward the coast, where it mixes with saltwater. Withdrawal of fresh water near the coast can result in saltwater intrusion. There are no public water supply wells in Coral Gables to withdraw groundwater in an amount which would lead to saltwater intrusion.

Groundwater Quantity: The water table is only a few feet above sea level in the western area of Coral Gables and has a slight gradient toward sea level at Biscayne Bay. Although urbanization has increased the amount of surface water runoff, the rate of infiltration remains high. The variation in hydrologic conditions makes a quantitative assessment of groundwater in the city very difficult to determine with a significant degree of accuracy. Areas of natural groundwater recharge and discharge constantly change in relation with the intensity, distribution, and duration of rainfall, the water table stage, water management, and sea level changes. Water discharge through the canals helps to maintain a high water table. Groundwater quantity conditions are also affected by evapotranspiration from plants since the water table is so near the ground surface and penetrated by root systems. The water table is usually highest during September and October at the peak of the rainy season, and lowest during April and May at the end of drier winter months.

Groundwater Quality: The water table lies between two and fifteen feet below the surface of Coral Gables. Groundwater is used as a secondary source of fresh water throughout much of the city. Septic tank effluent and stormwater runoff are the main sources of pollution which can affect this water. Septic systems serve approximately half of the city residents for wastewater disposal. The extent of pollution from septic tank effluent is not accurately known. Some of the effluent from drainfields is taken up by surface vegetation or evaporates. The rest filters down through the soils and unsaturated rock sediments, which removes impurities.

Dispersion, dilution, and natural biochemical processes have prevented accumulation of significant amounts of this effluent at depths greater than 20 feet. In much of the city, it is estimated that suspended solids in the effluent are unlikely to reach the water table except during periods of heavy rainfall, when the increased quantity of groundwater dilutes this pollution threat. A city ordinance requires that all buildings must connect with the public wastewater collection system when new sewers are extended into an area. New subdivisions which is reasonably accessible to sanitary sewers are also required to provide sewerage and connections for each lot in the development.

Aquifer Recharge: Aquifer recharge in Coral Gables occurs from surface water infiltration, the stormwater drainage system, and the canals. During the dry season, water seeps outward from the canals to the water table. During the wet season,

groundwater flows into the canals and is discharged into Biscayne Bay. Downward percolation of water from the shallow groundwater to the Biscayne Aquifer occurs, but unlikely to be significant given the bayfront location of the city. Recharge characteristics vary considerably from area to area in Dade County. Coral Gables is not identified as being a prime aquifer recharge area.

Surface Water: Surface waters within Coral Gables consist of the canal system which connects with Biscayne Bay, the area of Biscayne Bay within city limits, and a small lake north of Dixie Highway and east of Le Juene Road. There are no freshwater streams flowing into the canals. The effect of surface water runoff is slight due to the high porosity of the soils and underlying rock. Most precipitation percolates directly into the water table. Runoff collected by the surface drainage system discharges directly into the canals. The city prohibits dumping refuse into the canals and does not discharge wastewater effluent into the canals, which helps maintain water quality.

Water quality sampling is conducted by the Metro-Dade Department of Environmental Resources Management. Water quality in the Coral Gables Waterway was last tested in 1984. Test results from the sampling site near 57th Avenue and 60th Street indicated that overall water quality was good. Levels of nutrients (nitrates) were slightly elevated above background conditions, and some increased salinity was noted just downstream from the salinity dam. The pollution of the canals from inland flow of brackish water is controlled by salinity dams on the Coral Gables Waterway and Snapper Creek Canal. Water quality in the Snapper Creek Canal at Dade County Site 3 was last tested in 1980. Levels of lead and total coliform were slightly elevated above background conditions. Levels of phosphates, nitrates, and turbidity were within water quality standards. Due to improved upstream conditions outside the city limits, county staff expects that sampling would now indicate even better water quality conditions in the Snapper Creek Canal.

Saltwater Intrusion: Before construction of the system of water management facilities in South Florida, surface water flowed freely south from Lake Okeechobee over grassland and through natural sloughs into Florida Bay or east through a few gaps in the Atlantic coastal ridge. After drainage canals were cut through the limestone of the ridge, a much greater volume of water began to flow east to the ocean from the interior, reducing groundwater recharge. In the urbanizing areas along the coast, groundwater was being withdrawn at increasing rates to meet growing demands. This combination of increased surface flow, reduced recharge, and greater groundwater withdrawal resulted in more infiltration of saltwater from along the coast into the Biscayne and surficial aquifers.

Between 1904 and 1953, the area at the base of the Biscayne Aquifer that had a chloride concentration of 1,000 ppm or more had extended from the edge of Biscayne Bay west to a point near the intersection of Red Road and Dixie Highway and from there northeast to Douglas Avenue. Construction of salinity dams since 1945 on the canals flowing into Biscayne Bay has greatly reduced the penetration of saltwater into

the groundwater under Coral Gables. This saltwater intrusion has been stabilized in many areas, but much of the water table under the city remains brackish.

2.3. Air Quality

Air quality in Coral Gables is generally satisfactory, although Dade County has been designated as a Non-Attainment Area. Constant coastal breezes and the absence of low altitude air inversion layers, the overall low density of development, and limited industrial land uses help to maintain the air quality. Major arterial roads running through Coral Gables include Southwest 8th Avenue, Coral Way/Miracle Mile, Bird Road, Dixie Highway (U.S. 1), Douglas Road, Le Jeune Road, and Red Road. Traffic flow on these roads can become congested at peak hours but vehicular emissions are not a significant effect on air quality within the city. The city has adopted ordinances which prohibit open burning and excessive vehicle exhausts. Maintenance of air quality is primarily a state and county responsibility.

2.4. Sources of Commercially Valuable Minerals

A commercially valuable mineral source in Coral Gables is the bed of Miami oolite limestone which underlies the city. Mineral extraction is not a permitted land use.

2.5. Soil Erosion Problem Areas

There are no known significant areas of soil erosion identified within Coral Gables.

2.6. Vegetative Communities and Natural Habitat

The natural habitat of Coral Gables has been largely replaced by developed land uses. The golf courses, parks, and open spaces provide some vegetative areas which support species typically found in an urban environment in South Florida. Natural reservations in the coastal area are vitally important for the maintenance of habitats. That part of Biscayne Bay within the city limits provides a significant marine habitat for species including manatees, snook, and pelicans. Federal, state, and county regulatory agencies have authority over activities which effect the continued viability of the Biscayne Bay marine habitat. Table 6.1. lists known dominant species; and species listed by federal, state, or local government agencies as endangered, threatened or species of special concern.

Natural Vegetation : Naturally occurring plant communities in Coral Gables include pineland, marshland, mangrove swamp, and the marine habitat of the bay. Prior to extensive development, vegetation throughout most of the city area was typical of the

pinelands which dominate the higher, well-drained elevations of the Atlantic coastal ridge. In the pineland areas, slash pine, palmetto, wiregrass, and a few hardwoods such as oak prevailed. East of Old Cutler Road where the Atlantic coastal ridge reaches its highest point and then abruptly ends, coastal wetlands (marshes and mangrove swamps) occur, with an occasional hardwood hammock area. Development replaced the pinelands with urban land uses and landscaped open spaces. No significant natural pineland areas remain in the city. Dredging and filling replaced much of the coastal marshes and mangrove swamps, although several natural areas have been preserved east of Old Cutler Road along the shore of Biscayne Bay.

Mangroves: The natural preserves east of Old Cutler Road contain remnants of the mangrove swamp which formerly formed a zone along Biscayne Bay about one mile wide. The mangroves are constantly flooded by brackish water from the bay except during extremely low tides. Mangroves provide important natural functions including natural habitat, filtration of surface water, and building up land. The roots of the mangroves trap and accumulate organic material over time. This material decays and forms peat which builds up to eventually extend the shore line. The detritus, or decaying material, trapped in the mangrove roots is a highly fertile and productive habitat for small marine organisms These organisms form the base of an aquatic food chain that directly supports many other animal species, including commercially valuable game fish during the juvenile period of their life cycle.

The present condition of the mangrove swamps is distinguished from the natural conditions prior to extensive urbanization by altered surface and groundwater flow, and a narrower zone of mangroves along the coast. Before construction of the comprehensive system of water management and drainage facilities shortly after the turn of the century, mangroves covering the coast extended some 200 to 300 feet farther out into Biscayne Bay than the existing shoreline. Hurricanes and increased tidal erosion since 1920 have contributed to the retreat of the mangroves. A new equilibrium is now being established with a much reduced flow of fresh water from inland areas to the bay.

Coastal Estuarine Marsh: A zone of coastal marsh lies between the mangrove swamps and the pinelands. The remaining wetland areas in this zone are several feet higher than the mangrove swamps. The groundwater in these wetlands is brackish due to proximity to the bay. The less brackish areas support freshwater aquatic plants similar to those found in the Everglades. The increased salinity in this zone is an alteration resulting from a landward shift of the line of equilibrium between salt water and fresh water. As noted above, the extent of the mangroves into the bay is much reduced from previous conditions. The boundary between the mangroves and the coastal marsh is a gradual one, marked by a progression of the more salt-tolerant red mangroves through increasingly less salt-tolerant black and white mangroves, as the salinity of the surface water lens and groundwater decreases as the distance from the bay increases. The Snapper Creek property contains a significant area of white mangroves.

Coastal Upland Habitat: Natural habitat in the coastal upland area of Coral Gables supports a significant diversity of plant and animal life. State legislation protects several of the plant species present in this area, including coonties, mangroves, and sea lavender. Silver palms are not protected, but are another notable species. State legislation also protects three bird species; least terns, black-whiskered vireos, and gray kingbirds (which summer in the area). Other notable bird species include occasional spotted-breast orioles, parrots, and parakeets; warblers (during the winter); and yellow-crowned night herons and double-breasted cormorants, which have breeding areas at Chapman Field and near the power plant southwest of the city.

Biscayne Bay Aquatic Habitat: The municipal boundary of Coral Gables extends eastward in Biscayne Bay to the boundary of Biscayne National Park. Submerged lands in this area are state- or county-owned, with the possible exception of a few dredge and spoil sites. The benthic vegetation and shallow water environments of the bay provide essential feeding areas for the survival of wildlife. The type and extent of benthic communities in the bay has been delineated by Metro-Dade Department of Environmental Resources Management.

Seagrass beds are the dominant benthic community, covering over 90 percent of the bay bottom within the city. Limited areas of dredged and undredged barren bottom occur along the shoreline and undredged barren bottom begins at the eastern edge of the city boundary. Algae is interspersed with seagrasses in two small areas; just offshore of the Chapman Field property, and south of the mouth of the Coral Gables Waterway. Slightly further east of the Chapman Field property, a small area of hardbottom benthic community occurs. The bay supports a significant number of marine species, including four which are protected by federal legislation. These are loggerhead, Kemp's Ridley, and leatherback sea turtles, and the West Indian manatee. Commercially valuable species abound. Shrimp, stone crab, blue crab, spiny lobster, grouper, mullet, snapper, spotted seatrout, red drum, and pompano are among the marine species found in the bay.

2.7. Water Needs and Sources

Specific information detailing water use and demand management is contained in the potable water sub-element of the Wastewater, Solid Waste, Drainage, Potable Water, and Natural Groundwater Aquifer Recharge Element. The Metro-Dade Water and Sewer Authority is responsible for providing potable water in Coral Gables and the South Florida Water Management District regulates water flows through the Coral Gables Waterway and Snapper Creek. Coral Gables is supplied by the Alexander Orr Wellfield Water Treatment Plant. The cone of influence for this wellfield does not extend into the city. The city will cooperate with Dade County and the South Florida Water Management District for the implementation of water demand management policies and programs.

TABLE 6.1.
ENDANGERED, THREATENED, RARE AND ENDEMIC PLANTS IN THE COASTAL AREA OF DADE COUNTY

EXCEEDINGLY RARE TO ON VERGE OF EXTINCTION

PLANT	HABITAT	STATUS
FERN FAMILY		
Pteris grandifolia	marl prairie	probably extirpated in Dade
ORCHID FAMILY		
Tropidia polystachya	leafy terrestrial in coastal hanmocks	1
CACTUS FAMILY		
Rhynsalis baccifera		not recently sighted
MORNING GLORY FAMILY		
Jaquemontia reclinata	beach ridge location	
Rhypsalis baccifera		not recently sighted
VERY RARE		
SEDGE FAMILY		
Remirea maritima	beaches, Cape Florida State Park	1
PALM FAMILY		
Pseudophoenix sargentii	Elliott Key in Biscayne National Park	rarest native palm in Florida in the wild but extensively cultivated
Thrinax radiata	hammocks and shores along Madeira Bay in Everglades National Park	3
ORCHID FAMILY		
Encyclia boothiana	mangrove forests in Everglades National Park, SW shore of Bis cayne Bay/Card Sound, found on Elliott Key	over collected
Oncidium luridum	mangrove forests, buttonwood hammocks	2
FOUR O'CLOCK FAMILY		
Okenia hypogaea	beaches, Key Biscayne	1
RUE FAMILY		
Zanthoxylum coriaceum	beaches. Virginia Key	
QUASSIA FAMILY		
Picramnia pentandra	musky coastal hammocks	
SPURGE FAMILY		
Croton arenicola	beaches	endemic
Chamaesyce garberi	beaches, ridges and pinelands/ hammock transitions	1 endemic; taponomic confusion about this species
Hippomane mancinella	coastal hammocks of upper Keys, Biscayne National Park	2
MALLOW FAMILY		
Pavonia spicata	low coastal mangrove forests	questionably native

Table 6.1. (continued)

PLANT	HABITAT	STATUS
COMBRETUM FAMILY		
Bucida spinosa	southern coastal region	questionably native
MYRTLE FAMILY		
Eugenia rhombea	Biscayne National Park	1
BIGNONIA FAMILY		
Amphitecna latifolia (Enallagma latifolia)	coastal hammocks	questionably native
MADDER FAMILY		
Ernodea littoralis	two varieties, one found only on beaches, the second in pinelands	2
Exostema caribaeum	pinelands, hammocks, Elliott Key	
RARE		
PALM FAMILY		
Thrinax morrisii (microcarpa)	found in hammocks and shores of Florida Keys	3
ORCHID FAMILY		
Cyrtopodium Punctatum	coastal mangrove, buttonwood hammocks, cypress stands	1; if left alone will probably reestablish locally
Vanilla barbellata	buttonwood hammocks of south Dade, hammocks of East Everglades	1; other vanilla species extirpated from the wild in Dade
MAHOGANY FAMILY		
Swietenia mahogany	coastal hammocks of upper Keys and Everglades National Park	2; widely cultivated
BITTERSWEET FAMILY		
Schaefferia frutescens	hammocks lower east Coast of Dade	
CANELLA FAMILY		
canella winterana	Everglades National Park Biscayne National P[illegible]	
CACTUS FAMILY		
Cereus gracilis	Shore hammocks in Everglades National Park and Biscayne National Park	1
MYRTLE FAMILY		
Calyptranthes zuzygium	Keys hammocks south of Key Largo	
Eugenia confusa	coastal hammocks of mainland and upper Keys, Everglades National Park, Brickell Hammock	2
BORAGE FAMILY		
Cordia Sebestena	hammocks, shores, Biscayne National Park	2; rare in wild but wldely planted
ASTER FAMILY		
Eupatorium frustratum	coastal hammocks, Everglades National Park	endemic

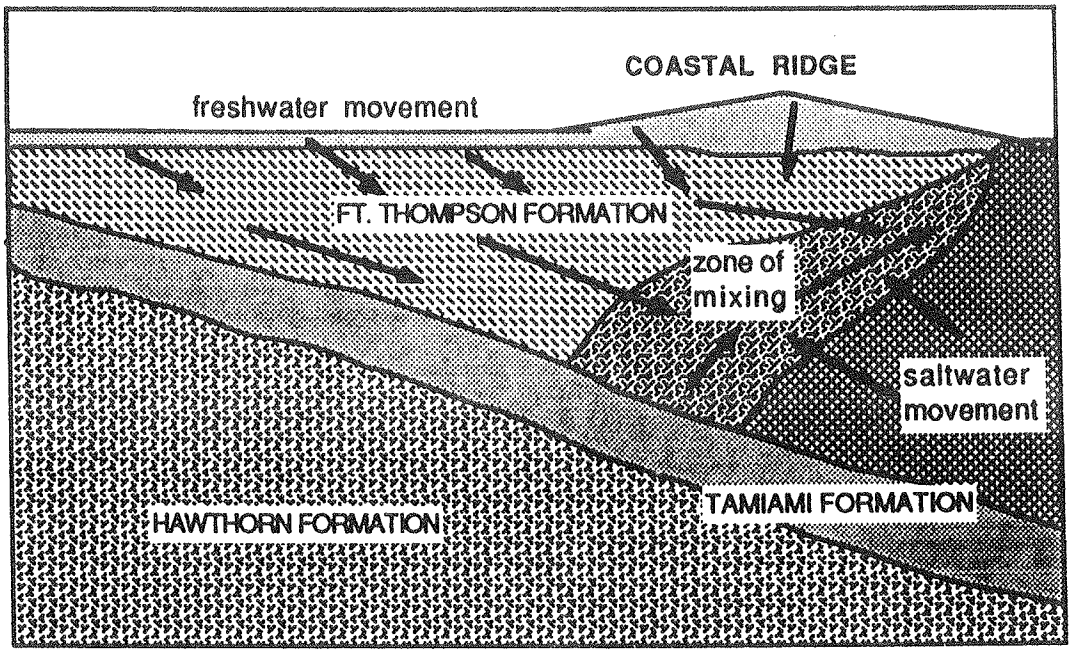
Table 6.1. (continued)

PLANT	HABITAT	STATUS
UNCOMMON To COMMON		
FERN FAMILY		
Acrostichum aureum	marl prairies, shores of brackish waters, mangrove forests	2
PINEAPPEL FAMILY Tillandsia flexuosa	buttonwood and oak hammocks	2
AMARYLLIS FAMILY Hymenocallis latifolia	Key Biscayne, Elliott Key	endemic; taxonomic confusion
MALLOW FAMILY Gossypium hirsutum	shore hammocks of Dade County, Everglades National Park	2; has survived extensive eradication attempts
BORAGE FAMILY Mallotonia gnaphalodes	beaches on Elliott Key, Miami Beach; cannot be moved or seeded	1

Note:
1 = Endangered (581.185, Florida Statutes)
2 = Threatened (" " ")
3 = Commercially Exploited (581.185 Florida Statutes)

Source: Metropolitan Dade County Comprehensive Plan; William N. Gray, AICP

FIGURE 6.1
WATER MOVEMENT IN THE BISCAYNE AQUIFER



WATER MOVEMENT IN THE BISCAYNE AQUIFER

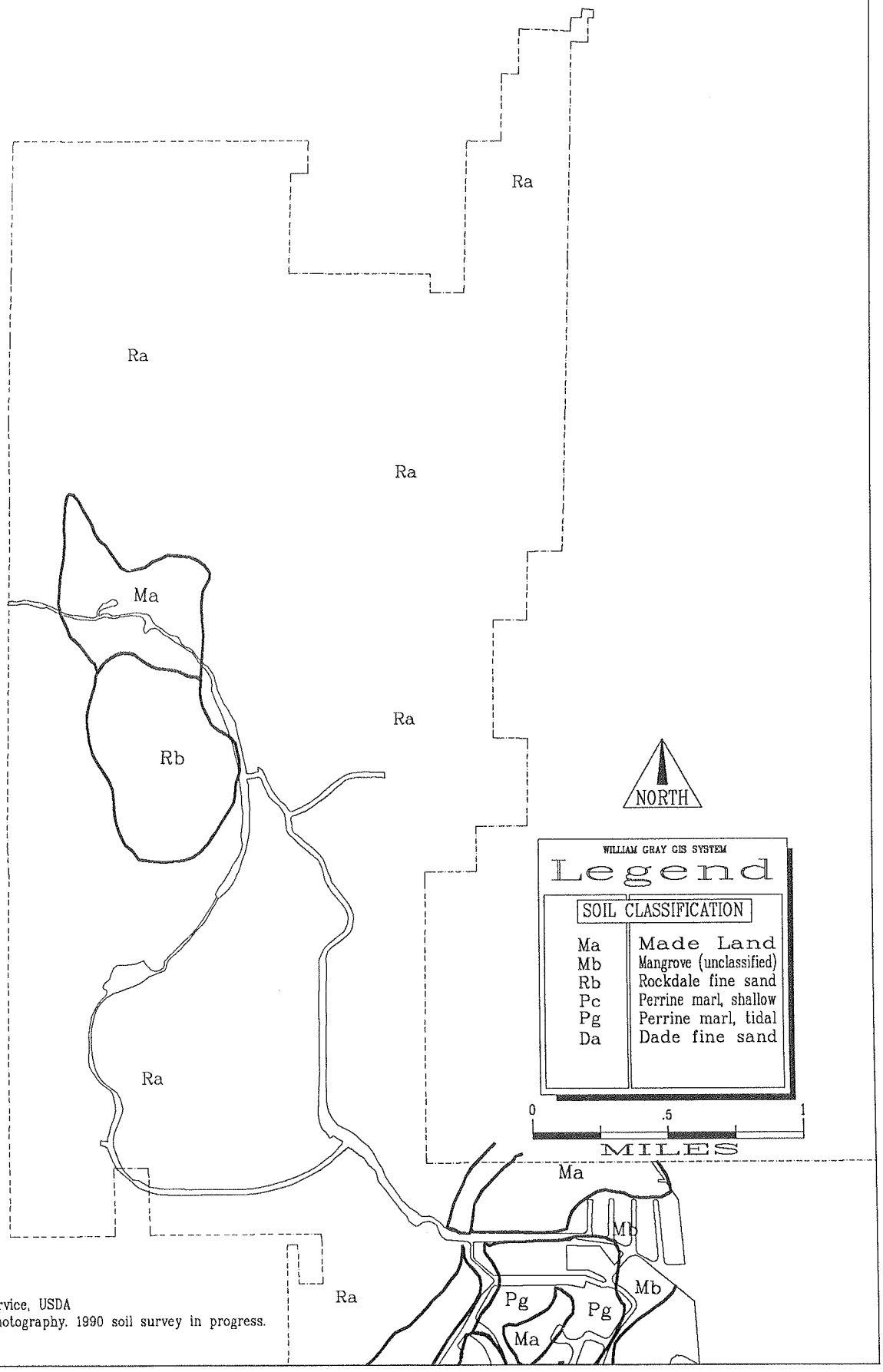
SOURCES: Dade County Comprehensive Development Master Plan, 1979
Van Horn Associates, Inc., 1987

MAP 6.1.

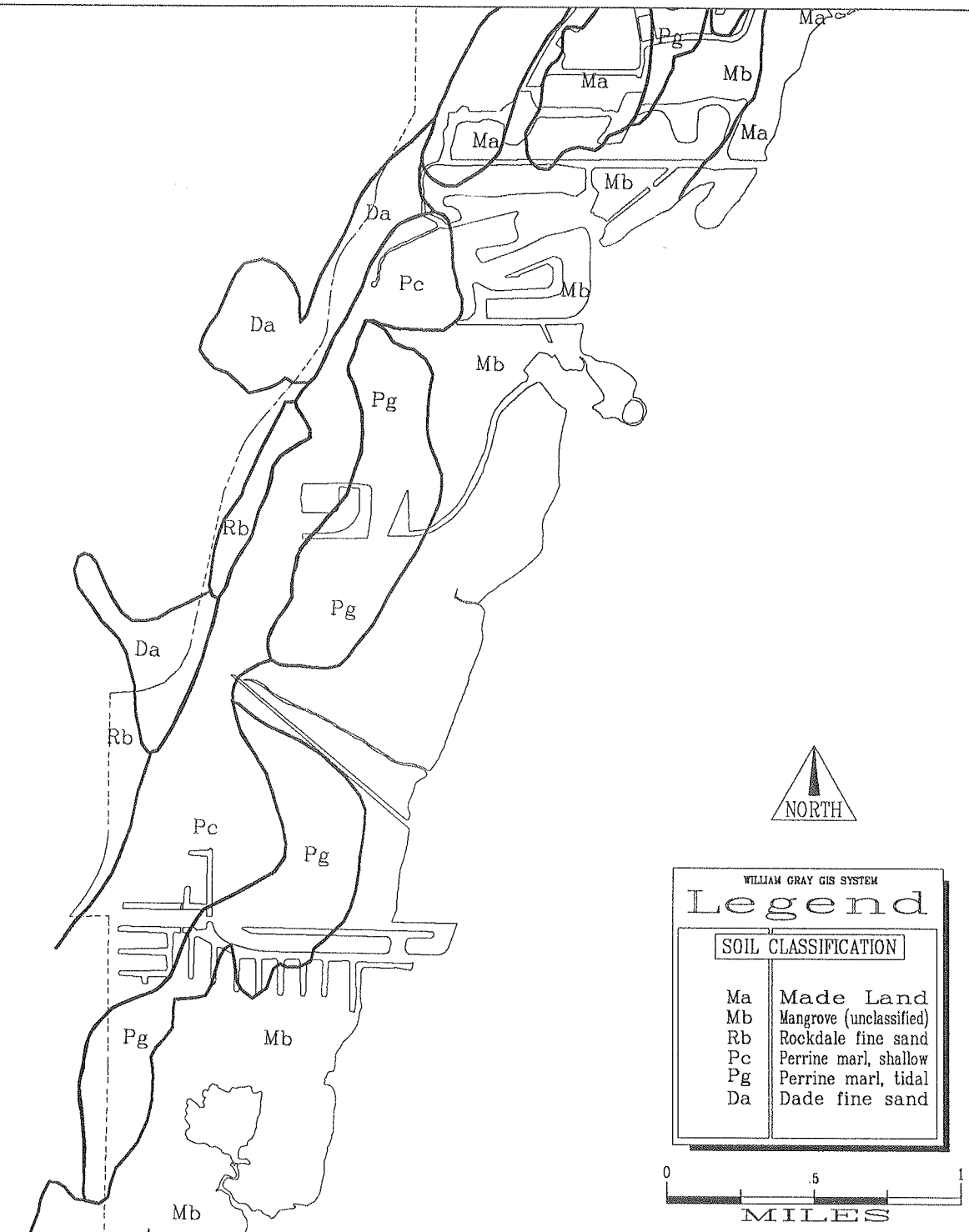
CONSERVATION

SOIL MAP

WILLIAM GRAY, AICP
WILLIAM GRAY / GIS



Source: Soil Conservation Service, USDA
Data from 1940-46 aerial photography. 1990 soil survey in progress.



MAP 6.1.

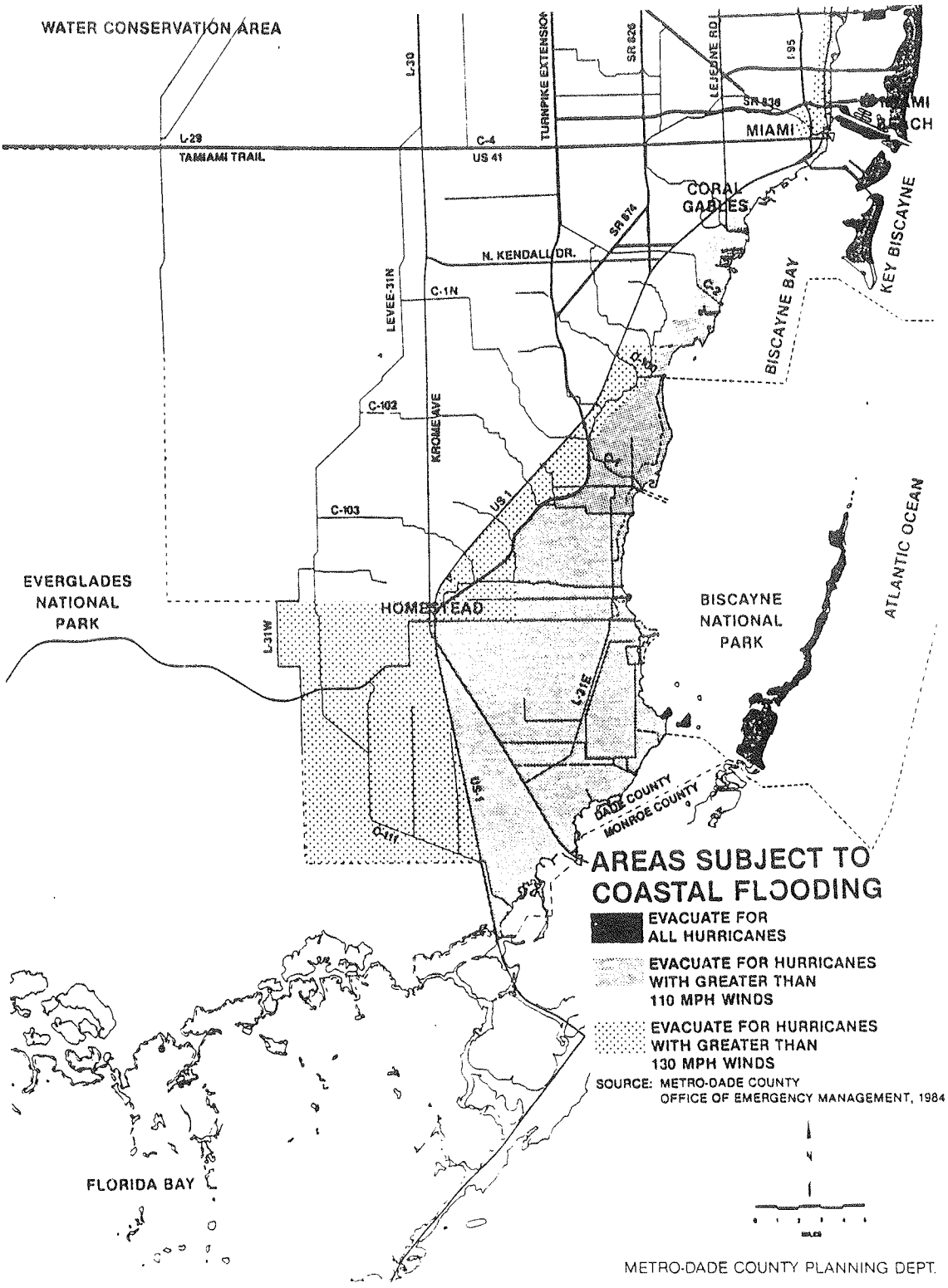
CONSERVATION

SOIL MAP

WILLIAM GRAY, AICP
WILLIAM GRAY / GIS

Source: Soil Conservation Service, USDA
Data from 1940–46 aerial photography. 1990 soil survey in progress.

MAP 6.2.
FLOODPLANE (N)



The following section is to be adopted by City ordinance:

CONSERVATION ELEMENT
GOAL, OBJECTIVES, & POLICIES

3.
GOAL:
To conserve, manage, use, and protect the natural and environmental resources of Coral Gables to ensure continued resource availability and environmental quality.

3.1.
OBJECTIVE:
Maintain the best possible air quality, meeting or exceeding state and federal air quality standards.

3.1.1.
Policy:
The City shall support enforcement of applicable standards for air quality to control significant emissions of air pollutants in order to maintain and improve the existing air quality, including enforcement of City ordinances which prohibit open burning and excessive vehicle exhausts.

3.1.2.
POLICY:
Open burning and excessive vehicle exhausts shall be prohibited.

3.2.
OBJECTIVE:
Secure provision of potable water in sufficient quantity to meet present and projected needs, commensurate with reasonable demand.

3.2.1.
POLICY:
Cooperate with local, regional, state and federal agencies for the management of fresh water resources to maintain adequate fresh water supplies during dry periods and to conserve water where practicable.

3.2.2.
POLICY:
Cooperate with Dade County and the South Florida Water Management District for the implementation of water demand management policies and programs.

3.2.3.
POLICY:
All federal, state, and regional water quality standards shall be enforced in Coral Gables.

3.2.4.
POLICY:
Cooperate with the Miami-Dade Water & Sewer Authority and the South Florida Water Management District to conserve water resources in emergencies.

3.3.
OBJECTIVE:
Assure that generation, storage, transport, and disposal of wastes in Coral Gables is managed with the best available technology to protect environmental quality.

3.3.1.
POLICY:
When new sewers are extended into an area currently using septic systems for wastewater disposal, all buildings must connect with the public wastewater collection system within 120 days.

3.3.2
POLICY:
New subdivisions which are reasonably accessible to sanitary sewers are required to provide sewerage and connections for each lot in the development.

3.3.3.
POLICY:
New septic tank systems shall meet applicable state standards for permitting.

3.3.4.
POLICY:
The City shall cooperate with appropriate public agencies to assure that solid and hazardous wastes generated within the Village are properly managed to protect the environment.

3.4.
OBJECTIVE:
Conserve and protect the remaining natural systems of Coral Gables, in recognition of the inherent values of these areas left in their natural state, through appropriate land use designations and regulation.

3.4.1.
POLICY:
Conserve and protect the natural resources of Biscayne Bay.

3.4.2.
POLICY:
Coordination with other local government, state, federal, and private plans and programs for conservation of natural resources shall be incorporated into the city planning process.

3.4.3.
POLICY:
Wetlands and submerged lands should be used for purposes which are compatible with their natural values and functions, and city land development regulations should be revised where warranted to provide these areas with the maximum possible protection.

3.4.4.
Policy:
Protect and conserve the natural functions of existing soils, fisheries, rivers, lakes, floodplains, estuarine marshes, and marine habitats through enforcement of existing local, state, and federal regulations designed to protect and conserve these functions.

3.5.
OBJECTIVE:
Preserve areas of significant environmental and public value, through appropriate land use designations and regulation.

3.5.1.
POLICY:
The City shall continue to cooperate with adjacent municipalities and Dade County to preserve and protect natural resources and natural areas.

3.5.2.
POLICY:
The City shall cooperate with the appropriate state and federal agencies for the protection of endangered and threatened species and significant plant and animal habitat.

3.5.3.
POLICY:
Wildlife shall be protected in Coral Gables.

3.5.4.
POLICY:
Existing native vegetative communities in Coral Gables shall be protected.

3.5.5.
POLICY:
Provide continued beautification of streets, rights-of-way and public open spaces and facilities within Coral Gables.

3.6.
OBJECTIVE:
Ensure that development activities mitigate adverse ecological changes or actually improve previously degraded environmental conditions.

3.6.1.
POLICY:
Those areas designated on the Future Land Use Map for conservation will not be subject to development, with the only allowable exception for open space and recreational uses after the review and approval of the City Commission.

3.6.2.
POLICY:
The City shall require site-plan review of all proposed development or redevelopment to prevent unnecessary destruction or inappropriate use of existing natural resources and natural sites.

3.6.3.
POLICY:
Landscaping standards shall be developed which require the preservation of existing natural growth where practical, and the removal of invasive, exotic plant species.

3.6.4.
POLICY:
The City shall use the best available technical criteria and information for the formulation of regulations and ordinances to ensure that future development is compatible with the functioning of existing natural systems and resources conservation.

3.7.
OBJECTIVE:
Conserve, appropriately use and protect minerals, soils and native vegetative communities. Assure the maintenance and conservation of trees within Coral Gables, through continued maintenance of trees within City properties and the site plan review process for new development.

3.7.1.
POLICY:
Native trees shall be preserved during development or redevelopment wherever possible, and if any native tree must be removed during development or redevelopment, another native tree shall be replanted to replace the removed tree.

This concludes the adopted sections of this element

Chapter 7

RECREATION AND OPEN SPACE ELEMENT

1.
INTRODUCTION

1.1
Background

The beauty of the landscaped areas and public open spaces in Coral Gables is a source of community pride. As an established, master-planned city, residents and visitors have enjoyed the extensive landscaping, fountains, plazas and parks from the beginning of development in Coral Gables. The recreational and aesthetic attributes of the city's parks and landscaped open spaces provide diverse opportunities for leisure activities, and have helped to maintain property values and the high standard of living for which Coral Gables is famous.

At this point in its history, Coral Gables is almost completely developed. The land devoted to recreation in the city has already been established, and much of it has been in use for many years. Since the opportunities for additional recreation sites and increasing the amount of open space is very limited, emphasis must be placed on working to maintain and improve existing recreation sites and open spaces.

Continued development of recreational opportunities does not always require the acquisition of the additional lands. As Coral Gables evolves and needs change, existing recreational and open space facilities may have to be altered, renovated or completely redone. The city has already upgraded some of its existing parks to make more effective use of available space. Some public open space areas formerly used for open space and passive recreation activities have been converted to active parks in order to meet new needs and increased demands for recreation.

As Coral Gables plans for the future, a high priority should be placed on preserving the fine recreational facilities and open spaces which have made the city a quality residential community. Since the city has few opportunities to acquire new sites, this priority should include making the most effective use of existing public areas.

Coral Gables provides for a wide range of recreational and leisure time opportunities by maintaining parks and open space throughout the city and offering programs of recreational activities. The Coral Gables Parks and Recreation Department is responsible for administering the city recreation facilities and programs, and the Public Works Department and Public Service Department provide maintenance for the parks and open space.

1.2. Purpose of the Element

The Recreation and Open Space Element of the Coral Gables Comprehensive Plan addresses recreation and open space planning issues for the city. Existing recreation sites and open space available to the public are identified, and the types of use for each site are characterized. An assessment of current and projected levels of service and recreation needs provides a basis for standards defining the level of services desired by the city. Statements of a goal, objectives, and policies for guiding the city's implementation actions conclude the element. These statements provide direction for the municipal recreation programs and maintenance of parks, open space, and recreation facilities to assure that the needs of Coral Gables residents will be met in the future.

The purpose of the Recreation and Open Space Element is to plan for a comprehensive system of public and private recreation and open space sites which are available to the public. It is the intent of the city that this plan element set forth a comprehensive framework for guiding decisions on public policy and capital improvements for recreation facilities and programs in a manner consistent with the city's goals and objectives.

1.3. Recreation and Open Space

Public parks, recreation programs, open space, and private recreational facilities are related aspects of the urban environment. These components perform essential functions for defining the built environment and supporting a satisfactory quality of life for residents and visitors. Public spaces and recreational facilities that are responsive to the needs of residents by being properly located, designed, and maintained are a vital asset for any community. The provision of recreation opportunities and open space can be a significant influence on the way residents and visitors alike perceive a community.

The physical and psychological benefits of active and passive recreational activities for individuals are well-accepted. Landscaped open space and land used for recreational purposes are recognized for more than individual benefits, however. There are also public values inherent in the maintenance of environmental quality and reduction of noise provided by these spaces, in addition to the visual relief provided.

2. EXISTING CONDITIONS

The Coral Gables Recreation Department has the reputation of offering one of the best municipal recreation programs in Dade County. The city has excellent facilities

for its size and population, including the historic Venetian Pool, extensive landscaped open areas, a community center, and two municipal golf courses open to residents and visitors. Coral Gables will continue to provide programmed recreational activities and to maintain and improve public facilities and land to meet the recreation and open space needs of residents and others.

2.1. Existing Recreation and Open Space Resources Inventory

An inventory of recreation sites and open spaces in Coral Gables is provided in Tables 7.1 and 7.2, which lists the significant public recreation and open space resources of the city. The inventory indicates that the city owns approximately 269 acres of park and open space land, in addition, there are many smaller landscaped open spaces throughout the city. The golf courses provide a substantial open space resource. Private recreation facilities include those at the University of Miami, the Riviera Golf Course, and numerous private residential swimming pools. Additional public recreation resources include the Fairchild Tropical Garden, Matheson Hammock County Park, and county-owned properties at Snapper Creek and Chapman Field. Map 7.1 illustrates the location of the municipal recreation sites and open space.

2.2. Types of Recreational Facilities

There are several ways of categorizing existing recreational and open space facilities. Since very few of the existing city facilities are centered around natural land or water features, it is most useful to compare and list the city's resources as either active or passive use areas and then note the available facilities at each location. Active recreation facilities afford the user an opportunity to participate in an activity such as golf, tennis, basketball or swimming. Passive recreational facilities occasionally have some facilities for active recreational participation, but typically provide such amenities as landscaping, picnic tables, and sitting areas. Included in the passive park category are the many public landscaped open spaces such as Cartagena Plaza and County Club Prado, which are an integral part of the planned environment of Coral Gables.

Table 7.3 lists the types of parks among the municipal recreation and open space properties. The city has defined four park categories, based on size and typical facilities. They are listed below in descending order of type starting with the larger, special purpose community facilities, followed by the neighborhood parks, the "mini-parks," and concluding with the open space park category. Information such as available facilities and size are also provided on Table 7.3.

Special Purpose Facilities: This category includes parks and other facilities that serve the entire city. Minimum site sizes and typical facilities standards are not appropriate for this category. Sites in this category may provide for both active and passive recreation opportunities, though the emphasis is on active participation in activities

such as golf, tennis, and swimming, and structured programs supervised by the Recreation Department. The service area and population served by these parks and other facilities encompasses the city and its residents. On-site parking should be provided.

Neighborhood Parks: The neighborhood parks in the city are designed to serve residents of adjacent neighborhoods within walking distance. The minimum site area should be about 0.5 acre. These parks typically contain both active and passive activity areas and facilities for playground equipment, picnics, sitting areas, adequate on-street parking (where on-site parking is limited by site size and design), open play areas, and multi-use hard surface courts for basketball and other court activities where appropriate for the site. The actual facilities at each park may vary, depending on site size and location. It should be recognized that high land values and the developed character of the city substantially prohibit the availability of new sites for parks in this category. Future emphasis should be placed on the maintenance of existing parks and improvement of facilities.

Mini-parks: This category includes park sites with site areas generally less than 0.5 acre with a minimum size of 0.1 acre. These parks supplement the neighborhood parks and may include designs for "vest-pocket parks," and "tot-lots." The service area and population served is somewhat less than that of neighborhood parks. Typical facilities at these parks, which are usually designed for passive activities, may include playground equipment, sitting and picnic areas.

Open Space Parks: These parks include the landscaped open sites in the city which are suitable for passive recreation activities. They may also include some limited facilities improvements for sitting and picnic areas. Open space parks may be converted to neighborhood or mini-parks with the addition of appropriate facilities as demand warrants.

Shared Facilities: One other type of facility is important to note. These are the "shared facilities" at the public schools in Coral Gables. The Recreation Department cooperates with the Dade County School Board to provide access to recreation facilities at the schools and programmed activities supervised by the Recreation Department after school hours and in the summer. The facilities at the schools provide a significant additional recreation resource for the city.

2.3. Sites and Facilities Ownership

The City of Coral Gables owns or controls the most of recreational facilities with the city. However, privately owned facilities such as the Rivera Golf and Country Club and Fairchild Tropical Garden, and county-operated facilities such as Matheson Hammock Park and the branch library are a very important part of the city's recreation resources. These properties supplement city-owned facilities and provide

additional diversity. Coral Gables does not have the same level of control over private and county-owned facilities as it does with its own recreational lands. Consequently, planned goals, objectives and policies involving these properties are not as easily effectuated. Only those sites and facilities controlled by the city have been considered in the recreation and open space inventory and analysis for this plan element. It must be recognized, though, that private and other public parks and recreation facilities contribute significantly to level of available recreational opportunities for city residents and visitors alike.

2.4. Specific Recreation Sites and Facilities

Biltmore Golf Course: The Biltmore Golf Course is an 18-hole, par-71 municipal course located on 149.9 acres at 1210 Anastasia Avenue. It was once a part of the facilities of the famous Miami-Biltmore Hotel. In the 1930's, some of the greatest players in golf, including Jones, Sarazen, and Quiment, participated in world championship tournaments on the course. In recent years, touring golf professionals have competed in the Coral Gables Open. The course, which is 6,652 yards in length, is now the site of the Junior Orange Bowl International Golf Championship. Facilities include a driving range, practice area, pro shop, snack shop, and dining area. P.G.A. teaching professionals available for lessons. The course is open to the public, with reduced fees for residents. A clubhouse is to be constructed in 1988 to serve the course.

Biltmore Tennis Center: The Biltmore Tennis Center is one of two municipal tennis centers. It is located adjacent to the Biltmore Golf Course on 3.5 acres. There are 10 lighted hard-surface courts and a pro shop. A large banyan tree shades a courtyard equipped with tables and chairs. Lessons are offered through the Recreation Department staff at the Center. Tennis clinics are also offered.

Coral Gables Trail System: Over 40 miles of roadway in the city have been designated for bicycling and walking. Maps showing the trail routes are available free of charge at City Hall. The map also illustrates the route for a self-guided tour of historic and other points of interest for motorists, cyclists, or pedestrians.

Coral Gables War Memorial Youth Center and Park: The Youth Center is a 5.6-acre special purpose park with buildings and outlying facilities located at 400 Anastasia Avenue. The facilities include a community activities center, picnic area, a tennis court, three basketball courts, two baseball/ softball diamonds, one multi-purpose playing field, two equipped playground areas, and several sitting areas. A wide range of recreation programs and activities are scheduled year-round, and special programs for adults, the handicapped, and seniors are offered. A major sports program is available for children.

Granada Golf Course: The Granada Golf Course is municipally-owned and is located

on a 59.9-acre site bisected by Granada Boulevard between North and South Greenway Drives. The par-36 golf course is 3,081 yards in length, and is bordered by some of the city's most unique and scenic homes. There is a fully-equipped pro shop and a clubhouse.

Salvadore Tennis Center: The Salvadore Tennis Center is located on a 3.3 acre site at 1120 Andalusia Avenue. There are 13 lighted courts (eight clay surface and five hard-surface). Other facilities at the Center include a fully-equipped pro shop and locker rooms. Lessons are offered through the Recreation Department staff at the Center. Since 1962, the Salvadore Tennis Center has hosted the Junior Orange Bowl Tennis Championships.

Venetian Pool: Venetian Pool is one of the most unique and attractive public swimming pools in the United States. A nationally-designated historic site, it was converted from a coral rock quarry in the 1920's to one of the centerpieces of the original Coral Gables development. This unusual recreation facility has a huge free-form pool which was constructed to resemble a lagoon, and is located on 1.4 acres at 2701 DeSoto Boulevard. The pool is edged by Mediterranean-style loggias and towers. The buildings contain offices, locker rooms, and rooms available for special events such as weddings, banquets, and meetings. Classes offered by the staff at the pool include swimming, SCUBA, and water-aerobics.

Neighborhood Parks: There are ten neighborhood parks in the city, with a total estimated land area of approximately 38.1 acres. Each of the parks has extensive landscaping.

_ Coral Bay Park fronts Red Road and Old Cutler Road and serves the neighborhoods in the south part of the city. It is a 1.3 acre park designed for active and passive recreation with an equipped playground area, picnic tables, and benches.

_ Country Club Prado, which includes the Country Club Prado Entrance at the north end and Ferdinand Plaza at the south end, is a linear passive park which covers 19.2 acres. The historic stone gateway and terrace at the entrance (also known as Gordon Park) on S.W. Eighth Street provides sitting areas in a beautiful landscaped setting. This park has been proposed as a potential location for a "Vita" course (exercise trail).

_ Ingraham Park is a 2.5 acre park designed for active and passive recreation with open play space and sitting areas. It is located east of LeJeune Road at the Coral Gables Waterway. The park is named after J. E. Ingraham, chief land agent for the Florida East Coast Railroad, who helped persuade Henry Flagler to extend a rail line to Miami in the 1890's, thus insuring the development of Dade County.

_ Jaycee Park comprises approximately 2.0 acres at Caballero Boulevard, just south of U.S.1 (Dixie Highway). Facilities at the park include a picnic area, a tennis court, a basketball court, a playing field for football and soccer, playground equipment, and a

shelter. Together with Ingraham and Riviera Parks, it serves the south central neighborhoods of the city.

_ Phillips Park is located on 3.2 acres at Menores Avenue and Galiano Street in the northwest are of the city. Facilities at the park include a picnic area, two tennis courts, a basketball court, a baseball/softball diamond, a playing field for football and soccer, and playground equipment. The tennis courts and playing field are lighted for evening use.

_ Riviera Park covers 3.0 acres at Monza and Nervia Streets. While there is sufficient open area for active recreation, the park is primarily used for passive activities since the only improvements are benches for sitting.

_ Salvadore Park is bounded by Andalusia Avenue, Valencia Avenue, Columbus Boulevard, and Cordova Street. This 0.5 acre site provides parking and on-site restrooms, playground equipment and sitting areas.

_ Sunrise Park is located on 0.9 acres at Sunrise Avenue and Douglas Road. Active recreation facilities provided at the park are a basketball court and playground equipment. Other facilities include picnic and sitting areas, and a shelter.

_ University Park is a neighborhood-size park located at Riviera and University Drives adjacent to the Youth Center . It covers approximately 5.0 acres and has a multi-use playing field.

_ Winokur Park is a 0.5 acre site designed for active recreational use with a basketball court and playground equipment. It is located on a rectangular shaped parcel between Ponce De Leon Boulevard and East Ponce.

Mini-parks : There are six designated mini-parks in the city. These include the Granada Entrance, located on the east and west side of Granada Boulevard south of S.W. Eighth Street; Merrick Park south of City Hall; Nellie B. Moore Park at Jefferson and Lincoln Drives; Pierce Park at Brooker Street and Oak Avenue; Washington Park at LeJeune Road and Grant Avenue; and Young Park located at Castile Avenue and Granada Boulevard. These parks are designed for passive use with sitting areas and landscaping, except for Pierce Park, which also has picnic tables and a basketball court.

Open Space Parks: This park category designates those sites in the city which are over 0.1 acre in size and typically characterized by landscaping without facilities improvements. Only two of the open space parks are named, Cartagena Plaza and Ponce Circle. The recreational use of some of the sites is limited by their location and size. Cartagena Plaza, for example, is a 1.5 acre site which is located in the middle of a busy traffic circle. The primary value of these sites is in their aesthetic appeal. It should be noted, however, that some of open space properties may be

suitable for conversion to passive or active recreational uses with the addition of facilities improvements. The total area of these parks is estimated to be 5.5 acres.

Shared Facilities: The Dade County School Board cooperates with the Recreation Department for the provision of programs and access to facilities at Coral Gables High School and Ponce Junior High School. Facilities at the schools include 11 tennis courts, six basketball courts, five baseball/ softball diamonds, and four playing fields for football and soccer.

Non-Municipal Recreation and Open Space Sites: Coral Gables has five significant sites within its municipal boundaries which are not owned by the city but contribute to the city's recreation and open space resources. These are Matheson Hammock Park, Chapman Field, Snapper Creek (also known as the ITT property), Fairchild Tropical Gardens, and Riviera Golf Course. Matheson Hammock Park is a Metro-Dade County park located between Old Cutler Drive and Biscayne Bay. It covers about 516 acres and includes a marina, beach, activity center, playground equipment, bike trail, picnic area, and nature study area. A portion of the park is an environmental preserve.

Chapman Field is a county-owned property which is a designated environmental preserve in the southernmost area of the city. Although the county is considering whether part of the site is suitable for another marina, it is environmentally sensitive and should probably be preserved in its entirety, given its location on the Biscayne Bay Aquatic Preserve and proximity to Biscayne National Park. The county-managed Snapper Creek property is an environmental preserve south of Matheson Hammock Park covering 454 acres. Fairchild Tropical Gardens is a 68 acre botanical garden adjacent to Matheson Hammock Park which is internationally recognized for its collection of tropical plant species. Riviera Golf Course is a 9-hole private course located south of Bird Road between University and San Amaro Drives.

2.5.
Cultural and Recreational Events

In addition to its parks and open spaces, Coral Gables has numerous cultural and educational facilities within its municipal boundaries. These facilities include the Coral Gables Branch of the Dade County Library, the University of Miami, the Metropolitan Art Museum, the Lowe Art Museum and a number of privately owned art galleries. Annual recreational events and festivals include the Santa Parade (November), Junior Orange Bowl Parade and Festivities (November, December), Miracle Mile Festival (April), and University of Miami Carni-Gras (February).

2.6.
Existing Open Space

The Coral Gables Public Service Department maintains numerous landscaped open

space areas. The more significant open space sites are identified in Table 7.2. Open space acreage contained in landscaped center parkways, parkway islands, and other public areas has not been determined. Natural reservations in the city include that part of Biscayne Bay which is within the city limits; property owned by Arvida Corporation in its residential development, Cocoplum; Fairchild Tropical Garden; and county-owned land at Matheson Hammock Park and Chapman Field, and the Snapper Creek property. Biscayne Bay is a designated state Aquatic Preserve. Other open space in the city consists of the few remaining vacant, undeveloped parcels of land. The golf courses, while designed for active recreational use, also provides a large expanse of landscaped open space in the city.

2.7. Sites and Facilities Users

Users of recreational facilities can be divided into three groups: city residents, county residents and visitors. City and county residents are regular users of the facilities. Visitors may be guests of year-round residents, seasonal residents, or tourists. This distinction is important to understand because policy decisions for all recreational facilities within the city should be made with a conscious knowledge of who benefits and who bears the cost. This information will also help to formulate objectives and policies such as whether or not additional efforts should be made to promote use of city recreation facilities by visitors to increase tourism, and whether special facility user fees should be created just for city residents.

The Coral Gables Recreation Department tracks use of Special Purpose Facilities. The records of uses at these sites is presented in Table 4. The use and attendance figures are kept for each fiscal year, covering from October through the next September. The total rounds of golf played at the Biltmore Golf Course have ranged from 63,582 in FY 1986-87 to a high of 66,839 in FY 1984-85. Rounds at Granada Golf Course ranged from 53,360 in FY 1985-86 to 65,404 in FY 1984-85. The total hours played at the Biltmore Tennis Center ranged from 30,068 in FY 1985-86 to 40,081 in FY 1984-85. Hours played at the Salvadore Tennis Center ranged from 24,302 in FY 1986-87 to 28,226 in FY 1983-84.

Attendance at the Youth Center has declined from a high of 90,202 in FY 1983-84 to 80,751 in FY 1986-87. Admissions at Venetian Pool, which includes attendance at non-aquatic events, has increased from a 46,982 in FY 1983-84 to 59,266 in FY 1986-87. Except for Venetian Pool, which has its heaviest attendance in the summer, the "peak season" months of January through April show the highest usage at the other city facilities. Use of the city Special Purpose Facilities has declined somewhat over the past two fiscal years.

The Recreation Department also keeps records on use by residents and non-residents. City residents are charged a reduced fee for programs and use of facilities. These records indicate that slightly more than half of the rounds at Biltmore Golf Course

are played by non-residents. The opposite is true at Granada Golf Course, where rounds played by residents accounted for between 56 and 62 percent of the rounds from FY 1981-82 through FY 1986-87.

City residents accounted for between 86 and 89 percent of the hours played at Biltmore Tennis Center in the prior three fiscal years (FY 1984-85 through FY 1986-87), and between 76 and 80 percent at Salvadore Tennis Center during the same time period. Annual memberships held by residents at the Tennis Centers has increased from 69 percent in FY 1984-85 to 83 percent in FY 1986-87. Youth Center memberships are divided into six categories: Resident Family, Additional Child-Resident Family, Non-Resident Family, Additional Child-Non-Resident Family, Municipal Athletic Association-Resident, and Municipal Athletic Association-Non-Resident. Between 63 and 75 percent of the total memberships issued annually over the past five years have been purchased by city residents. Resident Family memberships typically comprise more than one-third of the total memberships. Total memberships have declined from a high of 1,040 in FY 1983-84 to 555 in FY 1986-87.

3.
RECREATION AND OPEN SPACE ANALYSIS AND NEEDS ASSESSMENT

The Coral Gables Recreation Department has continued to provide a wide selection of quality recreation programs. Residents and visitors in Coral Gables can enjoy recreational facilities that are not often available in a city of our size. Coral Gables is an urbanized municipality in a major metropolitan area. As a mature city which is almost entirely developed, the permanent and seasonal residents are well-established and the population has largely stabilized. Resident population estimates indicate that the city has been growing only slightly in size over the past eight years, from 43,241 reported in the 1980 Census to an estimated 44,120 in April 1988. It is very unlikely that the population will change substantially over the next ten years, as indicated in the Population Projection section of the Future Land Use Element.

3.1.
Current Recreation Demand

Current needs for recreation sites can be based on an analysis of recent recreation demand. The use of city recreation facilities has been fairly stable over the past five years, as documented in the preceeding section. This information indicates that the availability and adequacy of the existing recreation sites and facilities is meeting the overall demand for services in the city. Given this stability and the excellent level of recreation facilities and services provided by the city, the most important need is for maintenance and improvement of the existing facilities and programs.

3.2.

3.2.
Projected Future Needs

Future needs for recreation sites, open space, and recreation facilities can be projected based on increased recreation demands due to population change and availability to the public of existing sites and facilities. The population in Coral Gables is not expected to increase significantly over the ten-year planning horizon for the Comprehensive Plan. Coral Gables is currently providing a outstanding level of recreation facilities and activities for the residents of the city. Future recreation needs are unlikely to differ significantly from existing conditions over the next ten years, given existing population trends. Table 7.5 illustrates the level of services provided for recreational facilities in the city compared to the city's recreation level of service standards.

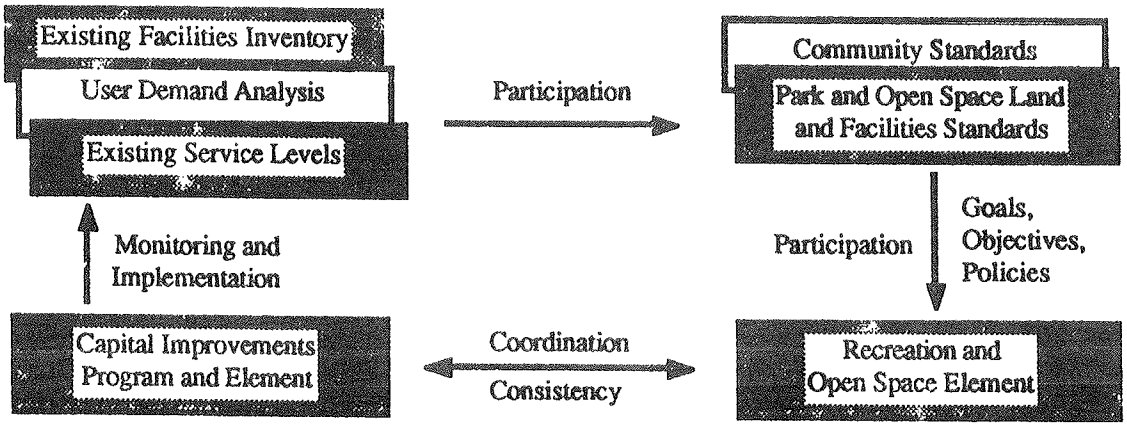
The service standards defined in Table 7.5 have been compared to the existing facilities and land currently used for recreation in the city. Based on the service standards, there are no facility (unit) deficiencies.

An analysis of capital facilities needs over the next ten years is shown in Tables 7.6 and 7.7. These tables illustrate existing facilities and land needs based on the level of service standards presented in Table 7.5. Costs for facilities improvements have been determined by the Recreation Department, and are based on current estimates for proposed capital improvements . Land costs are based on a unit value of $250,000 an acre. Since the only land deficiency occurs in the minipark category, the conversion of some open space park land with the addition of appropriate facilities could remedy the deficiency without decreasing the amount of open space park land below its defined area standard. The total cost of the indicated deficit is in 1988 is estimated at $2,438,500. Table 7 repeats this analysis for 1998 based on a projected population increase of 268 residents over the next ten years. This slight increase only affects the small amount of additional land required for a minipark. No additional facilities level of service requirements thresholds are exceeded. Figure 7.1 illustrates the relationship between the public participation process, Recreation and Open Space Element, and the Capital Improvements Element.

3.3.
Future Recreational Uses

Future recreational uses are depicted on the future land use map. The land designated for recreation use comprises the existing sites. The future land use map does not anticipate any changes in the recreation sites located in the city.

FIGURE 7.1
ELEMENT RELATIONSHIPS



Source: Van Horn Associates, Inc., 1988

Table 7.1.

Municipal Parks and Recreation Sites

Coral Gables, 1988

Site/Facility		Location	Size/AC	Type
Special Purpose	Biltmore Golf Course	1210 Anastasia Ave.	149.9	active
	Biltmore Tennis Center	1150 Anastasia Ave.	3.5	active
	Coral Gables Trail System	throughout city	40 mi.	active
	Coral Gables Youth Center	400 Anastasia Ave.	5.6	active
	Granada Golf Course	2001 Granada Blvd.	59.9	active
	Salvadore Tennis Center	1120 Andalusia Ave.	3.3	active
	Venetian Pool	2701 DeSoto Blvd.	1.4	active
	Special Purpose Facility acres:		223.6	
Neighborhood	Coral Bay Park	Red Road/Coruna Ave.	1.3	active
	Country Club Prado (a)	Coral Way to SW 8th St.	13	passive
	Country Club Prado Ent. (a)	C.C. Prado to SW 8th St.	2.7	passive
	Ferdinand Plaza (a)	Coral Way/Red Road	3.5	passive
	Ingraham Park	Ingraham Terr./LeJuene Rd.	2.5	passive
	Jaycee Park	Caballero Blvd./Hardee Rd.	2	active
	Phillips Park	Menores Ave./Galiano St.	3.2	active
	Riviera Park	Monza St./Nervia St.	3	passive
	Salvadore Park	1120 Andalusia Ave.	0.45	active
	Sunrise Park	Sunrise Ave./Douglas Rd.	0.9	active
	University Park	Riviera Dr./University Dr.	5	active
	Winokur Park	Ponce/Ponce de Leon Blvd.	0.5	active
	Neighborhood Park acres:		38.05	
Mini-park	Granada Entrance	Granada Blvd./SW 8th St.	0.4	passive
	Merrick Park	Biltmore Way/LeJeune Rd.	0.6	passive
	Nellie B. Moore Park	Jefferson Dr./Lincoln Dr.	0.4	passive
	Pierce Park	Brooker St./Oak Ave.	0.3	active
	Washington Park	LeJeune Rd./Grant Ave.	0.1	passive
	Young Park	Castile Ave./Granada Blvd.	0.1	passive
	Loretta Sheehy Park (b)	LeJeune Rd/Sunset Dr.	0.8	passive
	Mini-park acres:		2.7	
Open Space	Cartegena Plaza	Sunset Drive/Old Cutler Rd.	1.5	passive
	Ponce Circle	Ponce de Leon/Sevilla Ave.	1.4	passive
	unnamed park	Red Road/Taragona Dr.	0.2	passive
	unnamed park	San Amaro/Mendavia	0.2	passive
	unnamed park	Leucadendra Dr.	0.25	passive
	unnamed park	Orduna Dr./Miller Rd.	0.25	passive
	unnamed park	Solano Prado	0.25	passive
	unnamed park	Alcazar Ave./Casilla St.	0.3	passive
	unnamed park	Campo Sano Ct. and Ave.	0.3	passive
	unnamed park	Granada Blvd./ Carillo Ave.	0.4	passive
	unnamed park	Alhambra Cir./Ferdinand St.	0.5	passive
	Open Space Park acres:		5.5	
Total acres:			269.85	

Note: (a) these three areas are proposed to be combined as one park.
(b) Amended 5/15/90 added Loretta Sheehy Park

Sources: City of Coral Gables Planning Department, & Recreation Department.1988, William . Gray AICP 1990

Table 7.2.
MUNICIPAL LANDSCAPED OPEN SPACE SITES

Coral Gables, 1988

Site	Location
Center Parkway	Arvida Parkway and Arvida Lane
Center Parkway	Bird Road from Ponce de Leon Blvd. to Red Road
Center Parkway	San Amaro Dr. from Miller Rd. to Ponce de Leon Blvd.
Center Parkway	Sevilla Ave. from San Domingo St. to Red Road
Center Parkway	Alhambra Circle and Alhambra Plaza
Parkway Island	Granada Blvd. and Pisano
Parkway Island	Alhambra Circle and Veronese St.
Parkway Island	Madrura and Yumuri St.
Parkway Island	Unversity Dr. and Segovia St.
Parkway Island	Ponce de Leon Blvd. and Campina St.
Parkway Island	Paradiso and Donatelli
Parkway Island	Andalusia Ave. and DeSoto Blvd.
Parkway Island	Toledo St. and Almeria Ave.
Parkway Island	Durango St. and Banos Ct.
Parkway Island	Alhambra Ct. and Sopera Ave.
Parkway Island	Old Cutler Rd. and Almansa St.
Parkway Island	Alhambra Plaza and Merrick Way

Sources: City of Coral Gables Planning Department, 1988.
City of Coral Gables Recreation Department, 1988.

Table 7.3.

Municipal Parks and Recreation Facilities

Coral Gables, 1988

Site	Ac.	Class	Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Biltmore Golf Course	149.9	SP	A	X	X	X						18				b	
Biltmore Tennis Center	3.5	SP	A	X	X	6	10									1	
Coral Gables Trail Systen	40 mi.	SP	A														
Coral Gables Youth Ctr	5.6	SP	A	X	X	4	1		3	2	1			1	2	1	
Granada Golf Course	59.9	SP	A	X	X							9				b	
Salvadore Tennis Center	3.3	SP	A	X	X	2	13	4								1	
Venetian Pool	1.4	SP	A	X	X	X							1			1	
Coral Bay Park	1.3	NP	A	a		2									1	1	
Country Club Prado	13	NP	P														
Country Club Prado Ent.	2.7	NP	P													1	
Ferdinand Plaza	3.5	NP	P														
Ingraham Park	2.5	NP	P	a												1	
Jaycee Park	2	NP	A	X		2	1		1		1				1	1	1
Phillips Park	3.2	NP	A	X		2	2		1	1	1				1	1	
Riviera Park	3	NP	P	X												1	
Salvadore Park	0.5	NP	A	X	X										1	1	
Sunrise Park	0.9	NP	A	X		2			1						1	1	1
University Park	5	NP	A								1						
Winokur Park	0.5	NP	A						1						1		
Granada Entrance	0.4	MP	P													1	
Merrick Park	0.6	MP	P	X												1	
Nellie B. Moore Park	0.4	MP	P													1	
Pierce Park	0.3	MP	A	X		1			1						1	1	1
Washington Park	0.1	MP	P													1	
Young Park	0.1	MP	P													1	
Loretta Sheehy Park	0.8	MP	P													1	
Cartegena Plaza	1.5	OS	P														
Ponce Circle	1.36	OS	P													1	
unnamed park	0.15	OS	P														
unnamed park	0.2	OS	P														
unnamed park	0.25	OS	P														
unnamed park	0.25	OS	P														
unnamed park	0.25	OS	P														
unnamed park	0.3	OS	P														
unnamed park	0.3	OS	P														
unnamed park	0.4	OS	P														
unnamed park	0.5	OS	P														
Coral Gables High Schoo	na	SF	A	X			5		2	2	3						
Ponce Junior High Schoo	na	SF	A	X			6		4	3	1						
Total:	269.85					21	38	4	14	8	8	27	1	1	9	20	3

Sources:
Coral Gables Planning Department, 1988
Coral Gables Recreation Department, 1988
Van Horn Assoc., Inc., 1988
William N. Gray, AICP, 1990

Table Last Amended 5/15/90

Legend

A	Parking	I	Golf Courses (# holes)	Park Type:	
B	Restrooms	J	Swimming Pools	A	active
C	Picnic Tables	K	Activity Centers	P	passive
D	Tennis Courts	L	Equipped Play Area	MP	Minipark
E	Raquetball Courts	M	Sitting Areas	NP	Neighborhood Park
F	Basketball Courts	N	Shelters	OS	Open Space Park
G	Ball Diamonds	a	unimproved on site	SF	Shared Facility
H	Playing Fields	b	throughout course	SP	Special Purpose Park

Table 7.4.
RECREATION SITES AND FACILITIES USE - FY 1983 - FY 1987

Coral Gables

Site/Facility	FY 1983-4	FY 1984-5	FY 1985-6	FY 1986-7	FY 1987-8
Biltmore Golf Course	64,431	66,839	64,826	63,582	42,292
Granada Golf Course	62,700	65,404	56,360	55,237	34,965
Biltmore Tennis Center	36,932	40,081	30,068	31,394	20,887
Salvadore Tennis Ctr.	28,226	26,899	26,299	24,302	15,317
Coral Gables Youth Ctr.	90,202	77,573	84,817	80,751	51,144
Venetian Pool	46,982	57,242	53,632	59,266	na

Notes: FY = fiscal year, from October through September.
FY 1987-8 figures are year-to-date as of April 1988.
Golf course figures are rounds played.
Tennis center figures are hours played.
Youth Center figures are attendance.
Venetian Pool figures are admissions, including non-aquatic events.

Sources: Coral Gables Recreation Department, 1988.
Van Horn Associates, Inc., 1988.

Table 7.5.

Level of Services, Municipal Recreational Facilities

Coral Gables 1988

Facilities	Service Standard - 1988	Service Level - 1988	Unit Deficiency
Golf Course	9 holes/15,000 residents	9 holes/14,707 residents	none
Tennis Courts	one/1500 residents	one/1,161 residents	none
Raquetball Courts	one/11,500 residents	one/11,030 residents	none
Basketball Courts	one/3,500 residents	one/3,151 residents	none
Ball Diamonds	one/5,600 residents	one/5,515 residents	none
Playing Fields	one/5,600 residents	one/5,515 residents	none
Swimming Pool	one/50,000 residents	one/44,145 residents	none
Equipped Play Area	one/5,000 residents	one/4,902 residents	none

Parks	Service Standard - 1988	Service Level - 1988	Unit Deficiency
Special Purpose	3.00 acres/1000 residents	5.07 acres/1000 residents	none
Neighborhood	0.75 acres/1000 residents	0.86 acres/1000 residents	none
Minipark	0.04 acres/1000 residents	0.05 acres/1000 residents	none
Open Space	0.10 acres/1000 residents	0.12 acres/1000 residents	none

Sources: City of Coral Gables Planning Department, 1988.
City of Coral Gables Recreation Department, 1988.
Van Horn Associates, Inc., 1988.
William N. Gray, AICP, 1990
Table last amended 5/15/90

Table 7.6.
CORAL GABLES PARKS AND RECREATION CAPITAL FACILITIES ANALYSIS, 1988

Park Type	Current Pop.	Acres Req'd LOS Std.	Existing Parks Acreage	Acreage Surplus (Deficit)	Cost of Acreage Deficit	Facilities	Facs. Deficit	Cost of Facility Deficit	Facility Deficit Total Cost	Total Cost of Deficit (AC+facs)
Citywide Special Purpose Sites	44,388	133.2 (3 AC/1000)	223.6	90.4	0	Parking	0	0	2,320,000	2,320,000
						Restrooms	0	0		
						Picnic Area	0	0		
						Tennis Courts	0	0		
						Raquetball Courts	1	20,000		
						Ball Diamonds	2	150,000		
						Multi-use Play Fields	2	250,000		
						Golf Courses	0	0		
						Swimming Pool	0	0		
						Activity Center	1	1,900,000		
Neighborhc Parks	44,388	33.3 (.75 AC/1000)	38.1	4.8	0	Parking	0	0	30,000	30,000
						Picnic Area	0	0		
						Basketball Courts	0	0		
						Equipped Play Area	2	30,000		
						Sitting Areas	0	0		
Mini-parks	44,388	2.2 (.5 AC/1000)	1.9	-0.3	79850	Picnic Area	0	0	12,000	91,850
						Equipped Play Area	1	12,000		
						Sitting Areas	0	0		
Open Space Parks	44,388	4.4 (.1 AC/1000)	5.5	1.1	0	Sitting Areas	0	0	0	0
						Landscaping	0	0		
TOTALS		177.0	269.1	96.0	79850				2,362,000	2,441,850

Sources: City of Coral Gables Planning Department, 1988
City of Coral Gables Recreation Department, 1988
Van Horn Associates, Inc., 1988

Table 7.7.
CORAL GABLES PARKS AND RECREATION CAPITAL FACILITIES ANALYSIS, 1998

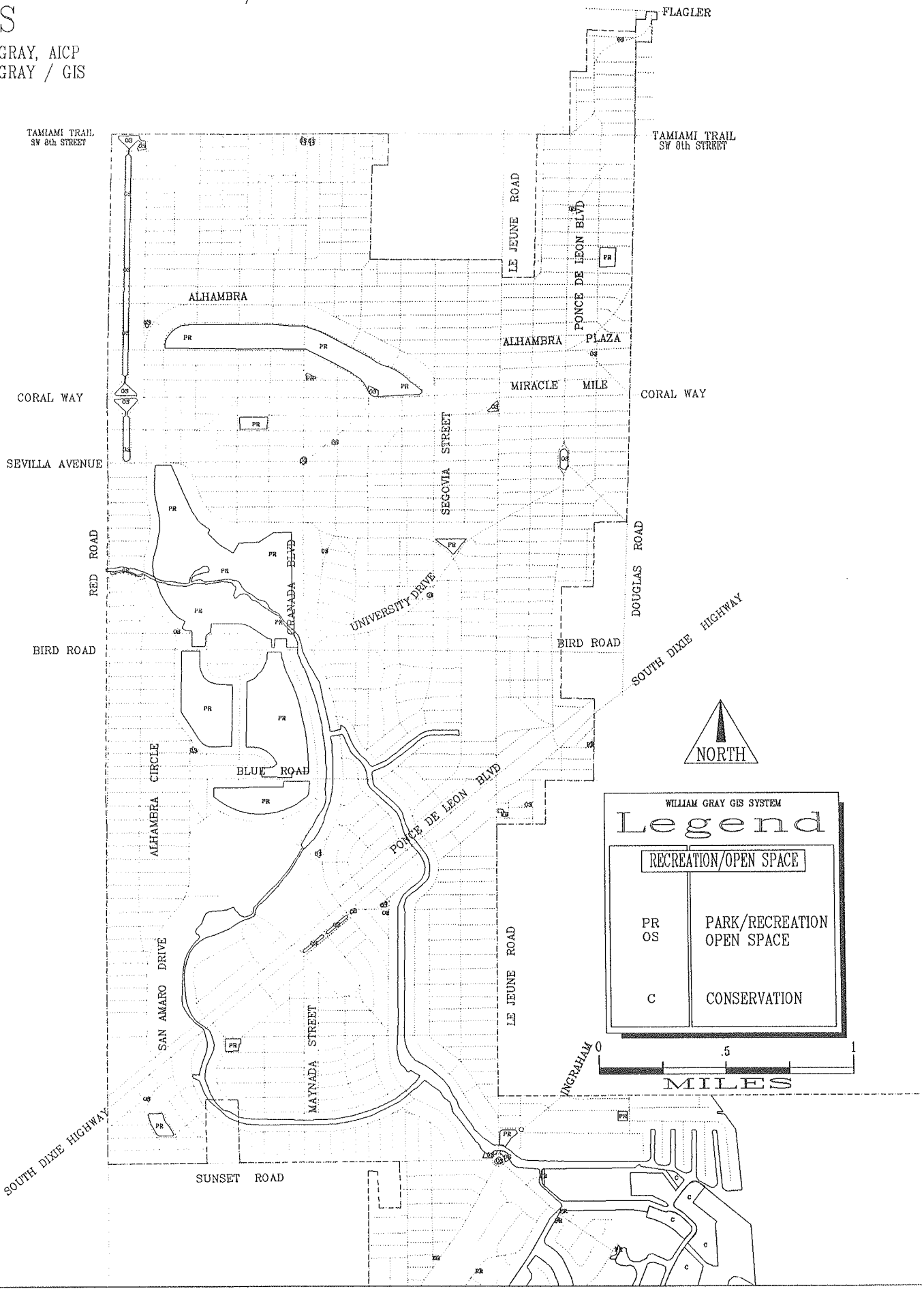
Park Type	Current Pop.	Acres Req'd @ LOS Std.	Existing Parks Acreage	Acreage Surplus (Deficit)	Cost of Acreage Deficit	Facilities	Facs. Deficit	Cost of Facility Deficit	Facility Deficit Total Cost	Total Cost of Deficit (AC+facs)
Citywide Special Purpose Sites	44,120	132.36 (3 AC/1000)	223.6	91.24	0	Parking	0	0	2,320,000	2,320,000
						Restrooms	0	0		
						Picnic Area	0	0		
						Tennis Courts	0	0		
						Raquetball Courts	1	20,000		
						Ball Diamonds	2	150,000		
						Multi-use Play Fields	2	250,000		
						Golf Courses	0	0		
						Swimming Pool	0	0		
						Activity Center	1	1,900,000		
Neighbor-hood Parks	44,120	33.09 (.75 AC/1000)	38.1	5.01	0	Parking	0	0	30,000	30,000
						Picnic Area	0	0		
						Basketball Courts	0	0		
						Equipped Play Area	2	30,000		
						Sitting Areas	0	0		
Mini-parks	44,120	2.206 (.05 AC/1000)	1.9	-0.306	76,500	Picnic Area	0	0	12,000	88,500
						Equipped Play Area	1	12,000		
						Sitting Areas	0	0		
Open Space Parks	44,120	4.412 (.1 AC/1000)	5.5	1.088	0	Sitting Areas	0	0	0	0
						Landscaping	0	0		
TOTALS		175.968	269.1	97.032	76,500				2,362,000	2,438,500

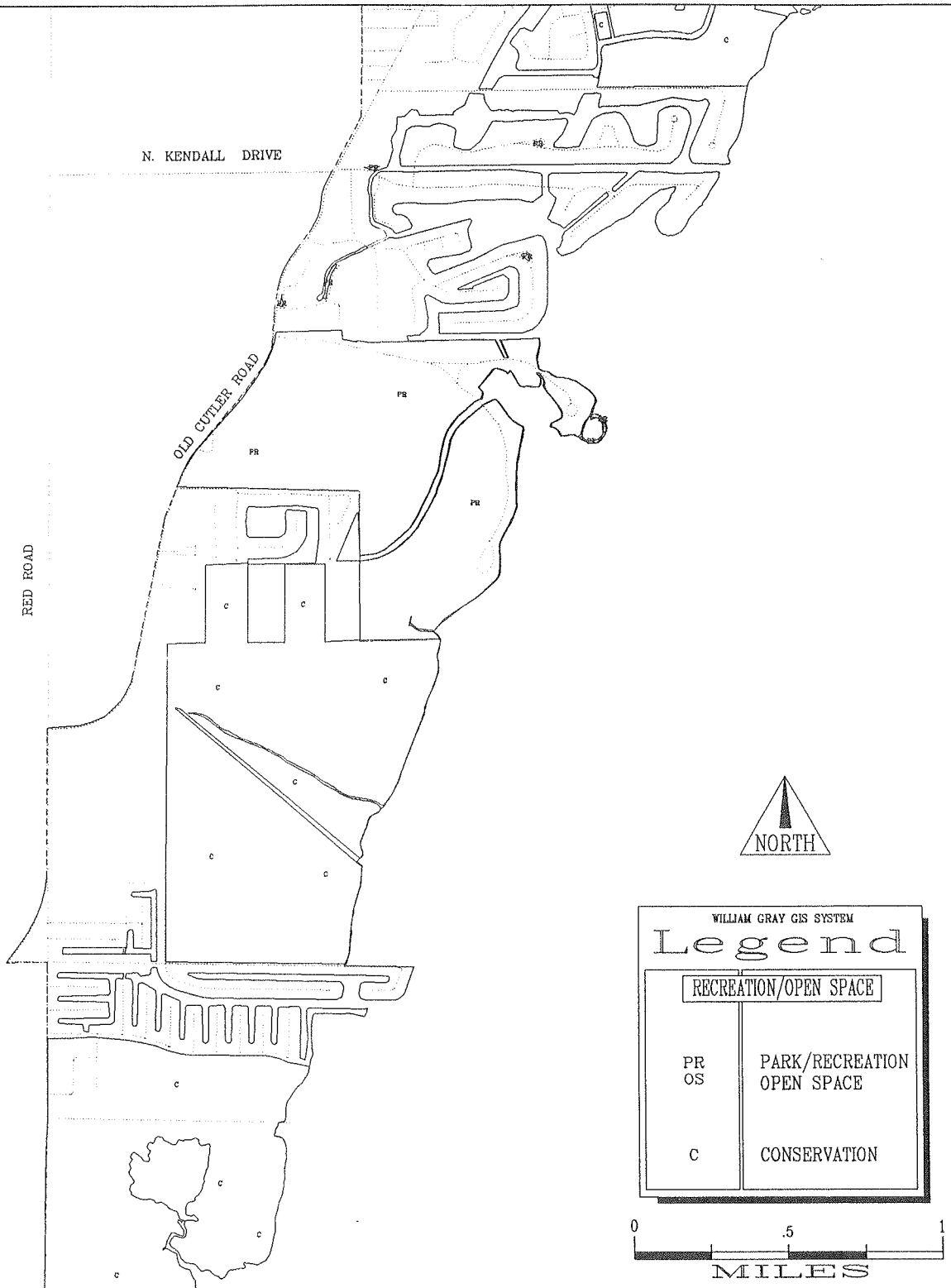
Sources: City of Coral Gables Planning Department, 1988
City of Coral Gables Recreation Department, 1988
Van Horn Associates, Inc., 1988

MAP 7.1.

RECREATION/OPEN SPACE SITES

WILLIAM GRAY, AICP
WILLIAM GRAY / GIS





MAP 7.1.

RECREATION/OPEN SPACE SITES

WILLIAM GRAY, AICP
WILLIAM GRAY / GIS

The following section is adopted by City ordinance:

RECREATION AND OPEN SPACE ELEMENT
GOAL, OBJECTIVES, & POLICIES

4.
GOAL:
To provide an environment in the City of Coral Gables responsive to the needs, desires, and interests of all residents for the constructive use of their leisure time.

4.1.
OBJECTIVE:
Provide quality recreation programs and adequate provision of recreation facilities to meet the needs of residents.

4.1.1.
POLICY:
Maintain the existing level of services provided by recreation programs and activities to meet the continuing needs of all residents. The minimum acceptable Level Of Service standards for recreation and open space are as herein provided:

Recreation Facility:	Standard:
Golf Course	9 holes per 15,000 residents
Tennis Courts	1 court per 1,500 residents
Racquetball Courts	1 court per 11,500 residents
Basketball Courts	1 court per 3,500 residents
Ball Diamonds	1 field per 5,600 residents
Playing Fields	1 field per 5,600 residents
Swimming Pools	1 pool per 50,000 residents
Equipped Play Area	1 area per 5,000 residents

Parks and Open Space:	
Special Purpose	3.00 acres per 1,000 residents
Neighborhood	0.75 acres per 1,000 residents
Minipark	0.04 acres per 1,000 residents
Open Space	0.10 acres per 1,000 residents

4.1.2.
POLICY:
Identify existing recreation facilities needs in the five-year capital improvements program for the Recreation Department, and correct or improve deficiencies as funding becomes available.

4.1.3.
POLICY:
Maintain or expand existing city parks, recreation facilities, and open space.

4.1.4.
POLICY:
Expand and improve recreation facilities at the Youth Center.

4.1.5.
POLICY:
Identify potential sites for playground equipment and open space parks.

4.1.6.
POLICY:
Redesign the softball field and expand the facilities at Phillips Field.

4.1.7.
POLICY:
Identify appropriate sites for walking/jogging paths on existing city property.

4.1.8.
POLICY:
Designate new bicycle and jogging paths.

4.1.9.
POLICY:
Identify potential sites for a public beach.

4.1.10.
POLICY:
Provide adequate lighting at city facilities used for evening activities and programs.

4.1.11.
POLICY:
Maintain and improve playground facilities.

4.1.12.
POLICY:
Maintain landscaped open spaces for passive recreation in the central business district.

4.1.13.
POLICY:
Maintain the adopted level of service standards for recreation and open space as established in this Element by correcting or improving existing deficiencies in parks and recreation facilities.

4.2.
OBJECTIVE:
Ensure public access to recreation programs and facilities.

4.2.1.
POLICY:
Provide year-round access to city recreation sites and facilities.

4.2.2.
POLICY:
Increase the use of the Youth Center as a facility for community activities, while maintaining its emphasis on youth activities.

4.2.3.
POLICY:
Venetian Pool should be open to promote swimming on a year round basis.

4.2.4.
POLICY:
Provide special recreational facilities for the elderly.

4.2.5.
POLICY:
Provide adult evening activities and programs.

4.2.6.
POLICY:
Maintain existing beach and shore access, including beach access routes and facilities identified in the Coastal Management Element, and access to waterways shown on the future land use map.

4.3.
OBJECTIVE:
Maintain a high standard of aesthetic quality and continue to improve the appearance of municipal recreation areas and public open space.

4.3.1.
POLICY:
The Recreation and Public Works Departments shall continue to provide for the maintenance and improvement of recreation and open space areas, including center parkways and parkway islands.

4.3.2.
POLICY:
Additional public open space and natural reservations shall be designated and where feasible, acquired by the city.

4.3.3.
POLICY:
Maintain and improve appearance of public entrance gates, fountains and plazas.

4.4.
OBJECTIVE:
Coordinate public and private recreation and open space resources for the optimum use of residents.

4.4.1.
POLICY:
The land development regulations of Coral Gables should define and include open space standards.

4.4.2.
POLICY:
The city shall coordinate and cooperate with the School Board to provide resources for expanding and improving recreational facilities at the junior and senior high schools.

4.4.3.
POLICY:
New development shall be encouraged by the City Planning and Zoning Departments to provide for public open space, and accommodate pedestrian and bicycle circulation, during the development review process.

4.4.4.
POLICY:
The city shall continue to develop cooperative recreation programs with the School Board.

4.4.5.
POLICY:
Promote more extensive use of Matheson Hammock Park for city residents through cooperation and coordination of public information with the Metro-Dade Parks Department regarding available facilities and programmed activities at the park.

This concludes the adopted sections of this element

Chapter 8

INTERGOVERNMENTAL COORDINATION ELEMENT

1.
PURPOSE:
The purpose of the Intergovernmental Coordination Chapter is to identify and resolve incompatibilities between Coral Gables' comprehensive planning processes and those of other governmental entities with interests in or related to the City's area of concern.

2.
AGENCIES:
The following agencies are involved in coordination activities to varying degrees involving the City's comprehensive plan and on going programs influenced by its requirements.

LOCAL GOVERNMENT AGENCIES:

Dade County School Board
Miami
Metropolitan Dade County
Metropolitan Planning Organization
South Miami
West Miami

FLORIDA DEPARTMENTS AND AGENCIES:

Administration
Archives & Records Management
Historic Resources
Agriculture & Consumer Services
Business Regulation
Community Affairs
Education
Emergency Management, Division of
Environmental Regulation
Florida Marine Patrol
Internal Improvement Fund
Fire Marshal
Game & Fresh Water Fish Commission
General Services

Governor's Office
Health & Rehabilitative Services
Health Systems Agency
Hotels & Restaurants
Labor & Employment Security
Library & Information Services
Natural Resources
Law Enforcement
Legislature
Revenue
South Florida Regional Planning Commission
South Florida Water Management District
State
Transportation

UNITED STATES DEPARTMENTS AND AGENCIES:

Housing & Urban Development
Commerce
Coast Guard
Defense
Environmental Protection Agency
Federal Aviation Administration
Federal Communications Commission
Interior
Transportation

REGULATED UTILITIES

Florida Power and Light Company
Southern Bell Telephone Company
Cable Television Franchisee
Gas Transmission / Distribution Franchisee

3.
MECHANISMS FOR COORDINATION

For each agency listed above the following briefly describes the existing coordination mechanisms indicating the subject, the nature of the relationship and the office with primary responsibility for coordination.

TABLE 8.1.
COORDINATING AGENCIES

The following abbreviations are used in the table:

FN - Formal Notice
IN - Informal Notice
AP - Approval, Permit
TA - Technical Assistance
AE - Advise & Encourage
PM - Periodic Meetings to Coordinate Programs
OA - Outside Agency
CA - City Agency
MD - Mutual duty to coordinate as the occasion warrants

AGENCIES	SUBJECT COORDINATION	NATURE OF RELATIONS	PRIME DUTY
LOCAL GOVERNMENT AGENCIES:			
Dade County School Board	School grounds use	AE,IN,AP	MD
Miami	Land Use Changes	FN,IN,AE	MD
	Emergency Management	FN,IN,AE,PM	MD
	Design, Aesthetic	IN,AE	MD
	Historic Resources	IN,AE	MD
Metropolitan Dade County	Utilities	FN,IN,AE,PM	MD
	Land Use Changes	FN,IN,AE,PM	MD
	Transportation	FN,IN,AE,PM	MD
	Emergency Management	FN,IN,AE,PM	MD
	Design, Aesthetic	IN,AE	MD
	Historic Resources	IN,AE,PM	MD
	Administrative Process	TA,AE	MD
Metropolitan Planning Organization	Transportation	FN,IN,AP,AE,PM	MD
	Administrative Process	TA,AE	MD

Table 8.1 COORDINATING AGENCIES - continued

South Miami	Land Use Changes	FN,IN,AE	MD
	Emergency Management	FN,IN,AE,PM	MD
	Design, Aesthetic	IN,AE	MD
	Historic Resources	IN,AE	MD
	General Operations	TA,PM	MD
West Miami	Land Use Changes	FN,IN,AE	MD
	Emergency Management	FN,IN,AE,PM	MD
	Design, Aesthetic	IN,AE	MD
	Historic Resources	IN,AE	MD
	General Operations	TA,PM	MD
FLORIDA DEPARTMENTS AND AGENCIES:			
Administration	Administrative Process	TA,AE	MD
Archives & Records Management	Administrative Process	TA,AE	MD
Historic Resources	Historic Resources	TA,AE,IN	MD
	Land Use Changes	FN,IN,AE	MD
Agriculture & Consumer Services	General Operations	TA,PM	MD
Business Regulation	General Operations	TA,PM	MD
Community Affairs	Emergency Management	FN,IN,AE,PM	MD
	Land Use Changes	FN,IN,AE	MD
	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Utilities	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
	Administrative Process	TA,AE	MD
Education	Land Use Changes	FN,IN,AE	MD
	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Utilities	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
Emergency Management, Division of (Civil Defense, Community Affairs)	Emergency Management	FN,IN,AE,PM	MD
Environmental Regulation	General Operations	TA,PM	MD
Florida Marine Patrol	Emergency Management	FN,IN,AE,PM	MD
Internal Improvement Fund	General Operations	TA,PM	MD
Fire Marshal	Emergency Management	FN,IN,AE,PM	MD
Game & Fresh Water Fish Commission	General Operations	TA,PM	MD

Table 8.1 COORDINATING AGENCIES - continued

General Services	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Utilities	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
	Administrative Process	TA,AE	MD
Governor's Office	Emergency Management	FN,IN,AE,PM	MD
Health & Rehabilitative Services	General Operations	TA,PM	MD
	Administrative Process	TA,AE	MD
Health Systems Agency	Emergency Management	FN,IN,AE,PM	MD
	Administrative Process	TA,AE	MD
Hotels & Restaurants	General Operations	TA,PM	MD
	Administrative Process	TA,AE	MD
Labor & Employment Security	General Operations	TA,PM	MD
Library & Information Services	General Operations	TA,PM	MD
Natural Resources	General Operations	TA,PM	MD
	Administrative Process	TA,AE	MD
Law Enforcement	Emergency Management	FN,IN,AE,PM	MD
	Administrative Process	TA,AE	MD
Legislature	Administrative Process	TA,AE	MD
Revenue	General Operations	TA,PM	MD
South Florida Regional Plan'g Comm.	Land Use Changes	FN,IN,AE	MD
	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Utilities	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
	General Operations	TA,PM	MD
	Administrative Process	TA,AE	MD
South Fla Water Management Dist.	Land Use Changes	FN,IN,AE	MD
	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Utilities	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
	General Operations	TA,PM	MD
	Emergency Management	FN,IN,AE,PM	MD
	Administrative Process	TA,AE	MD
State	Administrative Process	TA,AE	MD

Table 8.1 COORDINATING AGENCIES - continued

Transportation	Land Use Changes	FN,IN,AE	MD
	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Utilities	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
	General Operations	TA,PM	MD
	Administrative Process	TA,AE	MD
UNITED STATES DEPARTMENTS AND AGENCIES:			
Housing & Urban Development	Emergency Management	FN,IN,AE,PM	MD
	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Utilities	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
	General Operations	TA,PM	MD
	Administrative Process	TA,AE	MD
Commerce	Emergency Management	FN,IN,AE,PM	MD
	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Utilities	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
	General Operations	TA,PM	MD
	Administrative Process	TA,AE	MD
Coast Guard	Emergency Management	FN,IN,AE,PM	MD
Defense	Emergency Management	FN,IN,AE,PM	MD
Environmental Protection Agency	Emergency Management	FN,IN,AE,PM	MD
	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Utilities	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
	General Operations	TA,PM	MD
	Administrative Process	TA,AE	MD
Federal Aviation Administration	Emergency Management	FN,IN,AE,PM	MD
	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
	Administrative Process	TA,AE	MD
Federal Communications Commission	Emergency Management	FN,IN,AE,PM	MD
	General Operations	TA,PM	MD
	Administrative Process	TA,AE	MD

Table 8.1 COORDINATING AGENCIES - continued

Interior	Emergency Management	FN,IN,AE,PM	MD
	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Utilities	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
	General Operations	TA,PM	MD
	Administrative Process	TA,AE	MD
Transportation	Emergency Management	FN,IN,AE,PM	MD
	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Utilities	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
	General Operations	TA,PM	MD
	Administrative Process	TA,AE	MD
REGULATED UTILITIES			
Florida Power and Light Company	Emergency Management	FN,IN,AE,PM	MD
	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Utilities	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
	General Operations	TA,PM	MD
	Administrative Process	TA,AE	MD
Southern Bell Telephone Company	Emergency Management	FN,IN,AE,PM	MD
	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Utilities	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
	General Operations	TA,PM	MD
	Administrative Process	TA,AE	MD
Cable Television Franchisee	Emergency Management	FN,IN,AE,PM	MD
	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Utilities	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
	General Operations	TA,PM	MD
	Administrative Process	TA,AE	MD
Gas Transmis./Distrib. Franchisee	Emergency Management	FN,IN,AE,PM	MD
	Design, Aesthetic	IN,AE	MD
	Transportation	FN,IN,AE,PM	MD
	Utilities	FN,IN,AE,PM	MD
	Historic Resources	IN,AE,PM	MD
	General Operations	TA,PM	MD
	Administrative Process	TA,AE	MD

The current process of coordination among the identified agencies and the City has proven generally effective in the past. Greater formality shall be required in the future as the technical and administrative foundation of the comprehensive plan becomes more complex and demanding.

As a very stable and well planned community few specific problems and needs exist within the comprehensive plan elements which would benefit from substantial improvement or additional intergovernmental coordination at this time. Those which would benefit from increased coordination include traffic and transportation systems improvement planning and financing; potable water distribution replacement and financing; and design aesthetics for projects within and adjacent to the City.

The following section is adopted by City ordinance:

INTERGOVERNMENTAL COORDINATION ELEMENT GOAL, OBJECTIVES, & POLICIES

GOALS, OBJECTIVES, AND POLICIES

This section includes all goals, objectives and policies addressing issues specified in Rule 9J-5 and a program for monitoring and evaluating implementation of the comprehensive plan.

4.
GOAL:
Intergovernmental coordination shall be maintained as a major means of achieving consistency among all government agencies implementing plans and programs affecting the City of Coral Gables.

4.1.
OBJECTIVE:
Continue and improve coordination activities among government agencies with planning and impact assessment duties affecting the City, with other units of local government providing services but not having regulatory authority over the use of land, and with the comprehensive plans of adjacent municipalities, the county, and adjacent counties.

4.1.1.
POLICY:
Maintain an active program of monitoring and communication with agencies operating under the provisions of the Local Government Comprehensive Planning and Land Development Act, Chapter 163 FS.

4.1.2.
POLICY:
Participate in community workshops and the regional planning council's informal mediation process to provide an open forum for communication and coordination of programs involving the comprehensive plan, and resolution of conflicts with other local governments.

4.1.3.
POLICY:
Participate in the comprehensive plan technical committee being organized within the Dade League of Municipalities, to ensure full participation in county-wide deliberations which may involve the City.

4.1.4.
POLICY:
The City shall increase intergovernmental coordination activities regarding issues involving: traffic and transportation systems improvement planning and financing; potable water distribution replacement and financing; and design aesthetics for projects within and adjacent to the City.

4.1.5.
POLICY:
The City shall participate in review and discussions with involved agencies in the potential annexation of unincorporated lands adjacent to the City.

4.1.6.
POLICY:
The City shall continue to participate in consistent and coordinated management of local bays, estuaries and harbors that fall under the jurisdiction of more than one agency, as reflected in the coastal management chapter of this plan.

4.1.7.
POLICY:
The review of proposed developments shall include findings which indicate relationships of such proposed developments to the comprehensive plans of adjacent local governments.

4.2.
OBJECTIVE
Ensure that the impacts of development, proposed in the City's comprehensive plan, upon development in adjacent municipalities, the county, adjacent counties, the region, and the state are addressed through coordination mechanisms.

4.2.1.
POLICY:
Maintain an active program of monitoring and communication with agencies operating under the provisions of the Local Government Comprehensive Planning and Land Development Act, Chapter 163 FS.

4.2.2.
POLICY:
Participate in community workshops and the regional planning council's informal mediation process to provide an open forum for communication and coordination of programs involving the comprehensive plan, and resolution of conflicts with other local governments.

4.2.3.
POLICY:
The City shall increase intergovernmental coordination activities regarding issues involving: traffic and transportation systems improvement planning and financing; potable water distribution replacement and financing; and design aesthetics for projects within and adjacent to the City.

4.2.4.
POLICY:
The City shall participate in review and discussions with involved agencies in the potential annexation of unincorporated lands adjacent to the City.

4.2.5.
POLICY:
The City shall continue to participate in consistent and coordinated management of local bays, estuaries and harbors that fall under the jurisdiction of more than one agency, as reflected in the coastal management chapter of this plan.

4.2.6.
POLICY:
The review of proposed developments shall include findings which indicate relationships of such proposed developments to the comprehensive plans of adjacent local governments.

4.3.
OBJECTIVE
Coordination shall be undertaken in the establishment of level of service standards for public facilities with any state, regional or local entity having operational and maintenance responsibility for such facilities.

4.3.1.
POLICY
The City shall coordinate with state, regional or local entities having operational and maintenance responsibility for public facilities for which the Level of Service standards are being established to ensure mutually compatible standards.

4.3.2.
POLICY
Coordination activities pursuant to the Objectives and Policies in this element shall include consideration for equitable level of service standards for facility and service delivery systems consistent with the provisions of this plan.

5. MONITORING AND EVALUATION

In order to enable the preparation of the periodic Evaluation and Appraisal Report (EAR) as required by Section 163.3191, Florida Statutes (F.S.), the Minimum Criteria Rule (Rule 9J-5, Florida Administrative Code IF.A.C.1) requires that local comprehensive plans contain adopted procedures for monitoring and evaluating the Plan and its implementation (Section 9J-5.005, F.A.C.).

This section outlines the substantive components of Coral Gables' monitoring program related to the Intergovernmental Coordination Chapter.

The monitoring program will consist of periodic reviews of the measurable objectives. The scheduling for these reviews is as follows:

5.1. SCHEDULE:
Biennial reviews of measurable objectives will occur concurrent with the amendment cycle. Other appropriate scheduled reviews may be conducted but not less than biennially. These shall include the following issues:

Organization of functioning League of Municipalities comprehensive plan technical committee.

Agreement with Dade County, and Florida Department of Community Affairs that use of two level plans -- areawide and local -- in the updating of local comprehensive plans is desirable and permitted.

Informal agreements or an enacted ordinance providing for mutual exchange of notice and information about proposed rezoning within an area to be determined as a significant distance from any unincorporated or Coral Gables municipal boundary.

Coordination with the completion of a school facilities plan that is consistent and compatible with the Coral Gables Comprehensive Plan

Assist the South Florida Regional Planning Council in identifying regional issues affecting the City and providing appropriate City participation in their analysis and

resolution.

Execute interlocal agreements for municipal servicing of unincorporated enclave areas where appropriate.

5.2. PROCEDURES FOR MONITORING AND EVALUATION

The comprehensive planning process is continuous and dynamic in nature. Maintaining the effectiveness of the plan requires its periodic review. This program, required under 9J-5.005(7) FAC, provides orderly procedures for monitoring, updating and evaluation of the plan and attendant Evaluation and Appraisal Report (EAR) (s.163.3191,F.S.).

For the purpose of monitoring, evaluating and appraising the implementation of the comprehensive plan a five-year program for monitoring, updating and evaluation shall be followed. The following are general procedures to be followed. More detailed procedures shall be adopted by the city to direct the ongoing activity.

5.2.1. Evaluation Periods:

All chapters of the Comprehensive Plan shall be evaluated and updated as necessary at least every five years.
In addition to the general EAR, The Capital Improvements chapter shall be reviewed on an annual basis.

5.2.2. Citizen participation:

The public shall be encouraged to participate in the evaluation process by the holding of at least one workshop prior to the preparation of the EAR, at which public comments and recommendations regarding the Comprehensive Plan shall be received for consideration during the preparation of the EAR. Notice of such workshop shall be by advertisement at least one week prior to the date of such meeting. At least one advertised Public Hearing shall be held by the Local Planning Agency prior to the LPA recommending the EAR to the City Commission for their consideration, amendment and adoption. At least one advertised Public Hearing shall be held by the City Commission prior to their adoption of the EAR.

5.2.3. Maintenance of data:

Updating appropriate baseline data and measurable objectives to be accomplished for each five-year period of the plan, and for long-term periods as necessary, shall be undertaken at intervals appropriate to the subject area of analysis, but no less frequently than every five years. For example, Capital Improvement data should be maintained at semiannual and annual periods coincident with the city budget review

process; Population estimates should be maintained annually; Utility systems capacity shall be annually monitored. Administrative procedures shall be adopted to define the local monitoring and data maintenance to be conducted.

5.2.4.
Plan accomplishments:
Accomplishments in the first five-year period, describing the degree to which the goals, objectives and policies have been successfully reached shall be identified and reported.

5.2.5.
Obstacles to the plan:
Obstacles or problems which resulted in under-achievement of goals, objectives, or policies shall be identified and reported.

5.2.6.
Amended goals or policies:
New or modified goals, or policies needed to correct discovered problems shall be identified and reported.

5.2.7.
Continued monitoring and evaluation:
A means of ensuring continuous monitoring and evaluation of the plan during the five-year period shall be identified and reported.

This concludes the adopted sections of this element.

Chapter 9

CAPITAL IMPROVEMENTS ELEMENT

1.
INTRODUCTION:

The Capital Improvements chapter, also referred to as the Capital Improvements Element, is required by Florida law. It is intended to provide fiscal feasibility for plan elements which require capital expenditures. The City of Coral Gables is required to identify the public infrastructure and other facilities which are required by the growth projected in the local plan, at the adopted levels of service. The City must then clearly demonstrate the ability to fund these investments. Both the capital cost of new growth and the cost of correcting existing deficiencies must be considered.

The State law requires that facilities required by new development must be provided concurrently with such growth.

Specific areas of infrastructure are identified in the law. These required items include:

Transportation facilities
Sewerage
Water
Drainage, aquifer recharge
Solid waste disposal
Recreation & open space
Coastal management
Conservation

Absent from this list but still considered by the city in the general deliberations for fiscally prudent management of the City are facilities for police, fire, education, general community service, health and criminal justice, except as such areas place requirements on the listed areas of responsibility.

2.
ANALYSIS:

The City of Coral Gables manages its capital improvements affairs in two programs. The first is a long standing administrative process by which specific capital investments are identified for implementation during certain budget periods. This is the Capital Improvements Program (CIP) which directly interacts with the City's Annual Budget Program.

The second is the new Capital Improvements Element (CIE) of the Coral Gables Comprehensive Plan, of which this work is a part. The CIE contains only a subset of those items which may appear in the CIP. This is the result of the more narrow focus of the CIE on growth and comprehensive plan related capital items.
This distinction is made to make clear the differences in capital commitment patterns in a mature and well planned community such as Coral Gables where normal capital expenses are more a form of operation and maintenance expenses than support for new, or unplanned for development. In addition, the City generally supports a quality and over all level of service which may exceed those adopted levels of service within the context of the comprehensive plan. This difference is reflected in the understanding that the CIE is effectively a minimum standard to be upheld.

The City maintains a sound financial management program. As of July 1, 1988 the City has a Moody's Investor's Service general obligation bond rating of "Aa". This is the highest rating level in the state, shared with only one other city and one county in Florida.

2.1.
Debt service represents less than 6% of the annual budget.

The current revenues for fiscal year 1987-88 were $45,130,177. Estimated revenues for fiscal year 1988-89 are $46,308,607.
This increase of 2.6% is variable based upon City Commission policies adjusted at least annually.

The projected budgets for 1988 through 1995 are given in table 9.1.

2.2.
The revenue sources are as shown in table 9.2.

No city established development impact fees are currently being employed within the city to offset the cost of new development.

Projected ad valorem tax and debt capacity is shown in table 9.4.

2.3.
Capital improvement funding may come from one or more of the following sources:

State grants or coordinated funds.
Federal grants or coordinated funds.
County grants or coordinated funds.
Property Tax (millage increase)
Gasoline Tax

Special Purpose Taxes
User Fees
Development Impact Fees
Construction in place of fee
Bonds, General Obligation
Bonds, Revenue
Enterprise Revenue
Donations, Gifts, and Memorials
Fines, & Forfeitures
Litigation Damages and Awards
Investments, & Royalties
Privatization, Lease
Exchange

Clearly the major sources for Capital Improvements have been bonds, property taxes, and user fees. Newer sources for funds include development impact fees and user fees. Where an income stream can be assured, revenue bonds remain effective.

The key to any form of fee based revenue, including impact fees is the ability to clearly determine the relationship between the money paid and the service received. A well documented and maintained development management program can raise substantial funds to offset the proportional cost to the community of developments.

TABLE 9.1.
PROJECTED BUDGETS FOR 1988-1995

	1987-88	88-89	89-90	90-91	91-92	92-93	94-95
Operating Expenses	$40,402,925	$41,398,793	$43,248,077	$45,179,969	$47,198,158	$49,306,500	$51,509,021
Capital Expenses	$3,675,252	$4,966,184	$5,188,023	$5,419,772	$5,661,874	$5,914,790	$6,179,003
Debit Service	$2,879,327	$2,956,366	$3,088,427	$3,226,387	$3,370,510	$3,521,070	$3,678,356
Budget Total	$46,957,504	$49,321,343	$51,524,527	$53,826,128	$56,230,541	$58,742,359	$61,366,381

TABLE 9.2.
REVENUE BY SOURCE

Source	EST 1987-88	PROJ 1988-89	89-90	90-91	91-92	92-93	94-95
Property Taxes							
Operating Levy	$14,997,000	$15,200,000	$15,878,984	$16,588,298	$17,329,297	$18,103,397	$18,912,076
Debt Service Levy	$598,424	$604,807	$631,824	$660,047	$689,532	$720,333	$752,510
Other Taxes							
Sales Taxes (Gasoline)	$740,000	$740,000	$773,056	$807,588	$843,663	$881,350	$920,719
Franchise Fees	$2,964,000	$3,000,000	$3,134,010	$3,274,006	$3,420,256	$3,573,039	$3,732,647
Utility Service Taxes	$5,064,000	$5,734,000	$5,990,136	$6,257,717	$6,537,249	$6,829,268	$7,134,332
Licenses & Permits							
Business Licenses	$1,354,000	$1,354,000	$1,414,483	$1,477,668	$1,543,676	$1,612,632	$1,684,668
Permits	$1,513,200	$1,649,200	$1,722,870	$1,799,830	$1,880,229	$1,964,219	$2,051,960
Intergovernmental Revenues							
Federal	$80,000	$80,000	$83,574	$87,307	$91,207	$95,281	$99,537
State & County	$2,955,953	$2,909,000	$3,038,945	$3,174,695	$3,316,508	$3,464,657	$3,619,423
Use Charges							
Refuse Collection	$3,209,000	$3,271,000	$3,417,116	$3,569,758	$3,729,219	$3,895,803	$4,069,829
Sanitary Sewer Fees	$2,072,900	$2,072,900	$2,165,496	$2,262,229	$2,363,283	$2,468,851	$2,579,134
Parking Fees	$2,275,600	$2,254,500	$2,355,209	$2,460,416	$2,570,322	$2,685,139	$2,805,084
Recreation Fees							
Youth Center	$138,000	$141,000	$147,298	$153,878	$160,752	$167,933	$175,434
Tennis	$103,800	$104,000	$108,646	$113,499	$118,569	$123,865	$129,398
Swimming	$109,000	$106,000	$110,735	$115,682	$120,849	$126,247	$131,887
Golf	$1,747,300	$1,837,000	$1,919,059	$2,004,783	$2,094,337	$2,187,891	$2,285,624
Investment Earnings							
General Fund	$1,300,000	$1,300,000	$1,358,071	$1,418,736	$1,482,111	$1,548,317	$1,617,480
Enterprise & Debt Funds	$1,858,000	$1,878,000	$1,961,890	$2,049,528	$2,141,080	$2,236,722	$2,336,637
Other							
General Government Fees	$147,000	$149,000	$155,656	$162,609	$169,873	$177,461	$185,388
Public Safety Fees	$57,000	$57,000	$59,546	$62,206	$64,985	$67,888	$70,920
Fines & Forfeits	$1,132,000	$1,137,000	$1,187,790	$1,240,848	$1,296,277	$1,354,182	$1,414,673
Rental & Concessions	$701,000	$715,200	$747,148	$780,523	$815,389	$851,812	$889,863
Miscellaneous	$13,000	$15,000	$15,670	$16,370	$17,101	$17,865	$18,663
Reserves	$3,077,721	$4,052,736	$4,233,772	$4,422,894	$4,620,465	$4,826,861	$5,042,477
TOTAL	$48,207,898	$50,361,343	$52,610,984	$54,961,117	$57,416,230	$59,981,013	$62,660,365

Sources:
The City of Coral Gables
William N. Gray, AICP, 1988

TABLE 9.3.
AD VALOREM TAX BASE PROJECTION

	1987-88	1988-89	89-90	90-91	91-92	92-93	94-95
AD VALOREM TAX BASE	$2,788,626,149	$2,974,343,876	$3,107,207,817	$3,246,006,790	$3,391,005,913	$3,542,482,148	$3,700,724,825
ASSESSMENT RATIO (estimated)	100	100	100	100	100	100	100
MILLAGE RATE / 1000	5.82	5.456	5.456	5.456	5.456	5.456	5.456

The City of Coral Gables
William N. Gray, AICP, 1988

TABLE 9.4.
PROJECTED AD VALOREM TAX AND DEBT CAPACITY

Source	EST 1987-88	PROJ 1988-89	89-90	90-91	91-92	92-93	94-95
AD VALOREM TAX BASE	$2,788,626,149	$2,974,343,876	$3,107,207,817	$3,246,006,790	$3,391,005,913	$3,542,482,148	$3,700,724,825
MILLAGE RATE / 1000	5.82	5.456	5.456	5.456	5.456	5.456	5.456
Property Taxes							
Operating Levy	$14,997,000	$15,200,000	$15,878,984	$16,588,298	$17,329,297	$18,103,397	$18,912,076
Debt Service Levy	$598,424	$604,807	$631,824	$660,047	$689,532	$720,333	$752,510
Est. Tax Revenue	$16,229,804	$16,228,020	$16,952,926	$17,710,213	$18,501,328	$19,327,783	$20,191,155
EST. DEBT CAPACITY	$634,380	$423,213	$442,118	$461,868	$482,499	$504,052	$526,568

The City of Coral Gables
William N. Gray, AICP, 1988

The following section is adopted by City ordinance:

CAPITAL IMPROVEMENTS ELEMENT
GOAL, OBJECTIVES, & POLICIES

GOALS, OBJECTIVES, AND POLICIES.

3.
GOAL:
The City shall provide for facilities and infrastructure, normal and customary to local city government, as necessary to serve residents and visitors in a manner which is fiscally prudent and efficient in utilizing public investments and providing for new capital expenditures.

3.1.
OBJECTIVE:
Provide, as affordable, for the necessary repair and replacement of existing facilities, upgrading facilities to maintain locally adopted level of service (LOS) standards.

3.1.1.
POLICY:
Capital requirements of $100,000 or more in annual expenditures shall be included in the Capital Improvements Element (CIE) Five-Year Schedule of Capital Improvements.

3.1.2.
POLICY:
The five-year schedule of improvements contained in the CIE shall include capital projects for renovation, replacement, upgrading, and new facilities as necessary to maintain the adopted level of service standards, balanced to meet local needs and abilities.

3.1.3.
POLICY:
The City shall adopt an annual capital budget which contains the projects from the Five-year Schedule of Improvements for the specified year.

3.1.4.
POLICY:
The City should manage its long term general obligation debt in a manner that ensures that the ratio of the debt service millage to the city-wide millage does not exceed 20 percent.

3.2.
OBJECTIVE

The minimum acceptable Level of Service standards adopted by the City in each respective plan element are the basis for the Five Year Capital Improvement Schedule. These minimum standards are as follows:

3.2.1.
POLICY

The following are the minimum acceptable Level of Service standards to be utilized in planning for capital improvement needs:

TRAFFIC CIRCULATION LOS:

The minimum or lowest quality acceptable peak-period* operating Level of Service (LOS) standards for State Principal Arterial, Minor Arterial, County Minor Arterial and County Collector roads within the City of Coral Gables shall be as herein established;

*Peak period means the average of the two highest consecutive hours of traffic volume during a weekday;

1. For the interim period 1989 through 1994 the minimum acceptable peak-period operating LOS shall be LOS E (100 percent of their capacity) with the following exceptions:
   1.1. The minimum acceptable peak-period operating LOS for any road operating below LOS E on or before September 1, 1989 and constrained roads shall be fifteen percent (15%) below said existing LOS;
   1.2. In lawfully established Special Transportation Areas (STAs) twenty percent (20%) of non-State facilities may operate below LOS E

2. Beginning January 1, 1995, the minimum acceptable peak-period LOS standard shall be the following:
   2.1. Where no public mass transit service exists, roadways shall operate at or above LOS E; In STA's 20 percent of non-State roads may operate below LOS E.
   2.2. Where mass transit service having headways of 20 minutes or less is provided within 1/2 mile distance, roadways shall operate at no greater than 120 percent of their capacity;
   2.3. Where extraordinary transit service such as commuter rail or express bus service exists, generally parallel roads within 1/2 mile shall operate at no greater than 150 percent of their capacity.

SANITARY SEWER, SOLID WASTE, DRAINAGE, AND POTABLE WATER LOS:
Land uses, other than Residential Single-Family RL and RH or Residential Multi-Family RMD (Duplex) that are presently on septic systems, shall be provided with sanitary sewer service on a priority basis as feasible. New developments shall also be required to connect to the sewer system in accord with City administrative rules, which shall not be less restrictive than the Dade County Code. Existing sanitary sewer systems within the jurisdiction of the City shall be operated at levels of service not less restrictive than that provided for in the Code of Metropolitan Dade County Chapter 24 Environmental Protection, as amended. All sanitary sewer systems within the jurisdiction of the City shall be operated to provide at least the minimum Levels of Service (LOS) as herein described:

1. The Metro-Dade County regional wastewater treatment and disposal system shall operate with a design capacity of 2 percent above average daily flow for the preceding year.
2. Effluent discharged from Metro-Dade County wastewater treatment plants shall meet all federal, State, and County standards.
3. The local system shall maintain the design capacity to collect and dispose of 100 gallons of sewage per capita per day.
4. All collection and treatment facilities shall maintain the capacity to transport and treat peak demand flow without overflow.

A study of the sanitary sewer facilities shall be undertaken beginning no later than October 15, 1990 to develope data and analysis of the level of service currently available from such public facilities. The study and analysis is to be completed by September 30, 1992. Revisions to the LOS standards shall be undertaken, if necessary, at the next available Plan Amendment scheduled following the sanitary sewer LOS study.

SOLID WASTE LOS:
The City shall maintain nominal collection services at the following levels of service: Residential pickup is to be twice a week for household waste and once per week for trash; Commercial service provided by private contract service, shall continue at a level of service as agreed upon by the parties, not less than once per week. In cooperation with the Metro-Dade County, the City shall provide and maintain a minimum acceptable Level of Service for Solid Waste collection at an annual average design generation rate of five pounds (5 lbs) per capita per day for residential service, and disposal facilities collectively maintained at a minimum of five years capacity to be available at the generation rate of 7 pounds per capita per day. Commercial service shall be required to maintain a minimum acceptable level of service at an annual average design generation rate of 7 lbs per capita per day as calculated by the primary service provider Metro-Dade County. Certification of the availability and committment of capacity by Metro-Dade and applicable private vendors, shall be sufficient to demonstrate that such facilities are available to the site, during the concurrency review process.

DRAINAGE LOS:
Require projects to be designed to prevent flood damage in accord with applicable law. The South Florida Water Management District and Metro-Dade County shall be coordinated with to assure regional and local drainage and flood protection programs are maintained. The minimum acceptable Level of Service standards for drainage shall be protection from the degree of flooding that would result for a duration of one day during a storm that statistically occurs once in five years. All land on which urban development is to occur shall be filled to meet or exceed the Metro-Dade County's flood criteria adopted by resolution R-951-82, as may be amended from time to time. All structures shall be constructed at, or above the minimum floor elevations as specified in the Federal Insurance Rate Maps for Coral Gables in Dade County, Florida. All new development must retain at least the first one inch (1") of storm water runoff on-site, or other non-public sites as may be secured for permanent services. Designs to meet this first inch criteria will be reviewed for design solutions to meet actual site conditions. The burden for the construction of such facilities shall be borne by the developer and/or owner of such sites. Failure of such facilities and subsequent corrections shall also be the responsibility of the developer and/owner. The City may require greater than the first one inch on-site retention where the City establishes more restrictive rules in the public interest. The LOS standard shall be fairly and equitably applied to all development sites where increased drainage service is required.

POTABLE WATER LOS:
The minimum acceptable Level of Service standards of potable water and fire protection shall be such that water is to be delivered to users at a pressure not less than twenty pounds per square inch (psi) and not greater than 100 psi; Minimum fire flows shall be maintained at not less than 500 gpm in single family residential areas of densities of less than 5.8 units per acre; 750 gpm for single family and duplex residential areas at densities of 5.8 dwelling units per acre or more; 1500 gpm in multi-family residential and low intensity commercial areas of two floors or less and; 3000 gpm in all other commercial and industrial areas; Automatic fire suppression systems shall be required in all buildings of six floors or more; The regional treatment system shall operate with a rated capacity which is no less than two percent (2%) above the maximum day flow for the preceding year; Water quality shall meet or exceed all federal, state, and County primary standards for potable water; System-wide storage capacity for finished water shall equal no less than fifteen percent (15%) of the County-wide average daily demand; The system shall maintain the capacity to produce and deliver 200 gallons per capita per day.

RECREATION AND OPEN SPACE LOS:

The minimum acceptable Level Of Service standards for recreation and open space are as herein provided:

Recreation Facility:	Standard:
Golf Course	9 holes per 15,000 residents
Tennis Courts	1 court per 1,500 residents
Racquetball Courts	1 court per 11,500 residents
Basketball Courts	1 court per 3,500 residents
Ball Diamonds	1 field per 5,600 residents
Playing Fields	1 field per 5,600 residents
Swimming Pools	1 pool per 50,000 residents
Equipped Play Area	1 area per 5,000 residents

Parks and Open Space:	
Special Purpose	3.00 acres per 1,000 residents
Neighborhood	0.75 acres per 1,000 residents
Minipark	0.04 acres per 1,000 residents
Open Space	0.10 acres per 1,000 residents

3.3.
OBJECTIVE:
The implementation of Future Land Use decisions through the zoning code and development order issuance shall be moderated by the availability of fiscal resources to permit the provision of capital facilities and related resources to maintain the level of services at adopted levels.

3.3.1
POLICY:
The capital facilities and infrastructure implications of land use and development plans will be analyzed and set forth with attention to the following:

* Safety improvements and hazard mitigation.
* Elimination of sub-standard conditions.
* Demonstrated linkage between projected growth or redevelopment and facility location.
* Balance between supporting new development or redevelopment.
* Financial feasibility, including long term operating costs.
* Coordination among agencies of capital programs.
* Contractual and/or mandatory obligations.

3.3.2.
POLICY:
All threshold development shall be contingent upon the provision of the necessary services at adopted levels concurrent with the time needed as set forth in the Land Use Chapter

3.3.3.
POLICY:
The assurance of the provision of necessary public facilities on a timely basis concurrent with the need for such facilities to serve existing and proposed developments shall be by one of the following seven means and conditioned as applicable by the eighth provision as follows:

1. The necessary facilities are under construction at the time the building permit is issued and such construction is the subject of enforceable assurance that it shall be completed and serviceable with out unreasonable delay;
2. The necessary facilities and services are the subject of a binding executed contract for the construction of the facilities or the provision of services at the time the building permit is issued;
3. The necessary facilities are funded and programmed for implementation in the CIE for construction in year one of the City's adopted capital budget, or similarly adopted budget of other government agencies.
4. The necessary traffic circulation and/or mass transit facilities or services are programmed in the CIE for construction in or before year 3 of the

City's adopted budget or similarly adopted budget of other government agencies including the County's capital budget or the State agency having operational responsibility for affected facilities; In all cases, such facilities must be committed for construction in or before year 3;

5. The necessary facilities and services are guaranteed, in an enforceable development agreement, to be provided by the developer. An enforceable development agreement may include, but is not limited to, development agreements pursuant to Section 163.3220, Florida Statutes or an agreement or development order issued pursuant to Chapter 380, Florida Statutes; or
6. Timely provision of the necessary facilities will be guaranteed by some other means or instrument providing substantially equivalent assurances; and
8. In all instances where a decision to issue a building permit is based on the foregoing provisions 3,4 or 5, the following conditions shall apply:
    1. The necessary facilities shall not be deferred or deleted from the CIE, work program or adopted one-year capital budget unless the dependent building permit expires or is rescinded prior to the issuance of a certificate of use and occupancy (CO);
    2. The facilities necessary to serve a development must be contracted for construction no later than thirty-six months after the date that the initial certificate of use and occupancy (CO) is issued for the dependent development; and
    3. Construction of the necessary facilities must proceed to completion with no unreasonable delay or interruption.

3.3.4.
POLICY:
The Five-Year Schedule of Improvements will include the capital investments required by the plan based upon the level of service standards adopted within each portion of the comprehensive plan.

3.3.5.
POLICY:
Threshold Development shall be required to bear an equitable share of the cost of providing public facilities and infrastructure consistent with this plan.

3.4.
OBJECTIVE:
Public resources shall be invested to further the goals, objectives and policies of the comprehensive plan.

3.4.1.
POLICY:
Public capital resources should not be spent to subsidize private development in high hazard coastal areas as identified in the Coastal Management Chapter.

3.5.
OBJECTIVE:
The public fiscal welfare shall be protected by limitations on the amount and kind of debt the city may incur.

3.5.1
POLICY:
The city shall be limited on the use of revenue bonds to no more than twenty-five percent total debt.
The total debt service shall not exceed six percent of total revenue; and outstanding capital indebtedness shall not exceed eight percent of the total property tax base of the city.

3.6.
OBJECTIVE
The City shall assure the provision of public facilities and services at no less than the established Level of Service standards and manage the land development process to assure public facility needs do not exceed the City's ability to adequately fund and provide or require provision of needed capital improvements.

3.6.1.
POLICY
The City shall establish a Concurrency Management Program (CMP) to execute the policies set forth herein and assure compliance with the established level of service standards and commitments made by affected developments. The CMP shall provide for the regulation and administration of the issuance of threshold development orders to be predicated upon the provision of public services consistent with this plan.

3.6.2.
POLICY
The CMP shall provide that public facilities shall be available to serve developments which are existing, and those holding valid development orders prior to the adoption of this comprehensive plan.

3.6.3.
POLICY
There shall be established land development regulations (LDR) which provide for standards and the management of the development and use of land consistent with this plan.

4.
GOAL
THE FIVE-YEAR CAPITAL IMPROVEMENT SCHEDULE:
PROJECTS:
The following projects are required by deficiencies in levels of service identified in other comprehensive plan chapters or are other capital improvements which the City has determined shall be included in its CIE in provision of public services at or above the minimum LOS standards as adopted.

4.1.
YOUTH CENTER
The Youth Center located at Santander Avenue and Le Jeune Road requires major repairs, renovation and enhancement to its Buildings and grounds. The capital cost is budgeted at $4,050,000 over five years. Revenue is not projected for this facility. Capital funds are expected to come from general revenue.

4.2.
RACQUET BALL COURTS - TWO
The Youth Center is being evaluated as the site. No additional funds are budgeted as it is considered part of the overall project. Revenue is not projected for this facility. Capital funds are expected to come from general revenue.

4.3.
FIRE HYDRANTS
On going program to improve service by increasing the frequency of hydrants. The five year budget is for $50,000 per year. Revenue is not projected for this facility. Capital funds are expected to come from general revenue.

No additional Capital Improvements have been identified as deficiencies in adopted levels of service. Additional analysis is being conducted to establish a technical basis for measuring current and proposed levels of service more precisely. It is expected that at that time, capital programs, if any are needed, shall be funded and scheduled.

The greatest deficiency identified is that of the potable water supply system. This utility is the responsibility of the Dade County Water and Sewer Authority. It is not reflected in the City's capital budget. The City shall take action to coordinate with the county and encourage their capital program to reflect this issue.

5.
REQUIREMENTS FOR MONITORING AND EVALUATION
In addition to the general monitoring and evaluation requirements of the plan, this element shall be reviewed on an annual basis as part of the EAR program of the plan.

This concludes the section to be adopted by ordinance

Chapter 9

HISTORIC PRESERVATION ELEMENT

SECTION 1 - INTRODUCTION

Chapter 163, Florida Statutes, encourages that historic preservation be an integral part of local government comprehensive planning." Through its Planning Department and a citizen task force, Coral Gables has developed this historic preservation element.

Like the State of Florida's Comprehensive Plan "Historic Preservation Element" the purpose of Coral Gables' element is to identify, evaluate, register and manage its historic and cultural resources. The following sections will describe the history of the program, its goals and objectives, and recommendations for the enhancement of the program.

SECTION 2 - BRIEF HISTORY OF THE CITY OF CORAL GABLES

> Coral Gables is a city saved from the scourge of ugliness, a city designed deliberately, carefully planned, to be without discord, but in complete harmony in every respect. It is a city in which has been captured the glories of the art or architecture as beauty of the old world, miraculously transplanted to this new world of America, the newest frontier of which is Florida, America's tropic wonderland. (George Merrick, in Coral Gables Today, c. 1924.)

Thus did George Merrick, the developer of the City of Coral Gables, describe his creation in a 1926 promotional brochure. Over sixty years later, Coral Gables, the "City Beautiful" still prides itself on its distinctive Mediterreanean buildings, fountains and plazas, and its tree-lined boulevards.

The brainchild of George Merrick, Coral Gables might never have come into being had it not been for his father, the Reverend Solomon Greasley Merrick's poor health. In 1898, seeking to escape the harsh New England climate, Reverend Merrick purchased (sight unseen) a 160 acre homestead near Miami, Florida, in an unpopulated area called Guavonia. After transplanting his wife and five children from Duxbury, Massachusetts, Reverend Merrick (with the help of his eldest son, George) began to create what would become the largest orange, grapefruit and avocado plantation in South Florida. These groves would later become the genesis for the City of Coral Gables, beginning in 1921 when the first lots were sold.

Although young George spent most of his time helping manage his family's plantation, he was not content to make farming his vocation. Well educated, articulate, and creative, George's boyhood aspiration was to become a poet. In 1907, at the age of nineteen, George enrolled at Rollins College in Winter Park, Florida, with the intention of becoming a poet and writer. The next year found him enrolled at New York Law School (now part of Columbia University.)

Upon the death of Reverend Merrick in 1911, George Merrick withdrew from law school and returned to manage his family's fruit plantation. It was at this time that Merrick began to think seriously of building a subdivision on some of his family's land. Simultaneously, Miami was quickly achieving popularity as a vacation resort, and Merrick speculated that this growth would eventually spread to the area of the plantation. Reverend Merrick shared a similar viewpoint and before his death, had often spoke of subdividing his land and creating a community for retired clergymen like himself. George however had larger ambitions, and looked toward creating an entire city, using a Spanish theme to develop its special character.

Thus at the age of twenty-three Merrick entered the field of real estate, and began to develop small subdivisions in Miami, including North Miami Estates; Riverside Heights; and Twelfth Street Manors. Each of these small ventures netted a profit, and gave Merrick the experience he would need to create his master suburb, Coral Gables.

At the same time Merrick was creating subdivisions in Miami (1911-20), he also continued to expand the family plantation.

> For ten years I worked night and day to build up a nucleus for Coral Gables which consistently grew in my dreams. I never told anyone my plans. As my profits in real estate grew, I bought adjoining land. (interview with George Merrick, Sunday Times-Union, June 28, 1925.)

From 1911 to 1920, Merrick expanded his land holdings from 160 to 1600 acres, and finally was ready to create the suburb of which he had so long dreamed.

In 1921, with 1600 acres of land and $500,000 earned from his previous real estate developments, Merrick began to plat Coral Gables. Assisting him were: his uncle, Denman Fink, a nationally known artist; his cousin, H. George Fink, an architect; and Frank M. Button, the landscape architect who had designed Lincoln Park in Chicago. Together, the four created "Miami's Master Suburb," a Mediterranean-style city with fountains, plazas, and grand entrances surrounding residences Merrick described as resembling "castles in Spain."

From 1921 to 1926, Merrick spent $100 million building his dream city, and a reported $5 million on advertising. Within these five short years, pineland and fruit groves were transformed into a full fledged city, complete with a bustling downtown, schools from elementary to university level, abundant recreational facilities, and one of the finest resort hotels in the country, known as the Miami-Biltmore Hotel. By 1926, Coral Gables was already an incorporated city with an area of sixteen square miles and a population of 10,000. Homes valued at over $150 million had been sold. Merrick praised Coral Gables as a city of..."permanency, stability and continuous progress. (George Merrick, in Coral Gables Today, c. 1924.)

But Merrick's dream city fell victim to the September 18, 1926 hurricane and ensuing Florida land bust. Soon after, the City of Coral Gables went into default, with almost $9 million in debts. George Merrick lost his land and fortune and relocated with his wife to Matecumbe Key. Not until after World War II would Coral Gables again begin to experience the economic prosperity it had known in the heyday of the twenties.

Today, Coral Gables is again a vital and active city. Its population has remained constant (around 40,000), and new construction in the downtown area is an indicator of the city's continued growth and economic well being. Additionally, there has been in recent years a heightened awareness of Coral Gables' unique architectural past. An historic preservation ordinance was enacted in 1973 to protect local landmarks.

SECTION 3 - COMMON ARCHITECTURAL STYLES IN CORAL GABLES

In the planning of Coral Gables George Merrick envisioned an entire city designed on a Spanish theme. Merrick had long felt that the area which would become Coral Gables shared many similarities with Spain, particularly in terms of its climate and vegetation. Hence, Spanish architecture seemed ideally suited to south Florida. With the help of architect Phineas Paist and artist Denman Fink, Merrick conceived and promoted the idea of Mediterranean Revival as the primary stylistic theme for Coral Gables. However, although the concentration of Mediterranean buildings is high, the City does exhibit other architectural styles and types, such as the bungalow, and Art Deco/Art Moderne. Further after the sale of a vast amount of acreage to the American Building Corporation and the Meyers W. Cooper Company of Cincinnati, the idea of "theme villages" was realized. These villages inspired by the architecture of other centuries and countries were planned to cover entire blocks, and possess a spatial relationship to each other which would foster the kind of European or Oriental layout from which they were inspired. Though never constructed in the numbers projected, the villages actually executed are today an impressive reminder of the imagination of our forebears. The villages constructed include the French Normandy Village, the Dutch South African Village; the French City Village; the French Country Village; the Chinese Village, and the Florida Pioneer Village (also known as the Southern Colonial Village.)

The Styles

A. MEDITERRANEAN REVIVAL (popular from 1915-40) Figure #1 is an eclectic style which borrows from Spanish, Italianate, and Moorish precedents to create an architectural hybrid. Thus, since it is such a creative style, Mediterranean Revival structures, which share similarities, are never exactly alike. There is no rigid formula for the Mediterranean Revival type, but common characteristics of the style include:

- -asymmetrical plan
- -rough textured exterior stucco surfaces
- -low pitched or flat roofs with barrel tile (often of warm earth tone hues)
- -casement windows (often paired or tripled)

-incorporation of outdoor spaces into the plan, such as balconies, exterior staircases, porches, arcades, and courtyards.
-use of round, pointed, or venetian arches
-cast cement ornamentation used as door and window surrounds
-turned columns
-detailed chimney caps often arched and terminating in tiled roofs

Examples

Some residential or commercial examples of the Mediterranean Revival style which illustrate the full range of eclectic motifs are:

-The Colonnade Building, 169 Miracle Mile
-Commercial Building (presently -"Books and Books"), 296 Aragon Avenue
-Coral Gables City Hall, 405 Biltmore Way
-La Palma Hotel, 116 Alhambra Circle
-S. A. Ryan Residence, 3305 Alhambra Circle

B. BUNGALOW (FIGURE #2)

The bungalow (popular from 1910-35) was built as an affordable smaller scale residence, and is a type principally found in the northern sections of Coral Gables. One to one and one-half stories tall, the bungalow is a modest structure which features a front porch which extends across the front and possesses prominent piers. The porch commonly has a front gable roof that separates it from the main gable of the structure itself. Bungalows are generally constructed of wood with stone composing the porch piers, bungalows in Coral Gables are constructed of oolitic limestone or concrete block which is then finished with stucco.

Examples

Examples of this type include:
-1100 and 1200 blocks, Obispo Avenue

C. THE THEME VILLAGES OF CORAL GABLES (FIGURE #3)

Coral Gables' "Villages" offer a variety of eclectic architectural types. Built in 1925-26 by the American Building Corporation, the Villages added diversity to the City's predominantly Mediterranean Revival character. Although many were planned, only six villages were built, and at a much smaller scale than originally designed. Originally, the Villages were planned as thematic housing developments, containing houses all of a similar, distinct architectural style. The American Building Corporation envisioned scores of villages representing architectural styles from around the world, including

Italian, Javanese, Persian, Spanish, French, Oriental, and Moroccan designs. Unfortunately, the September 18, 1926 hurricane and subsequent financial disaster halted these ambitious plans. At the time of the hurricane, only six villages had been built (or were under construction):

-Chinese Village
-Dutch South African Village
-Florida Pioneer Village (also known as "Southern Colonial Village)
-French City Village
-French Country Village
-French Normandy Village

Each village contains 5-12 homes, and are frequently surrounded by a perimeter wall. The villages exhibit many architectural types which include Chinese, French Provincial (French 18th c. type), French Normandy, Dutch Colonial Revival; and Colonial Revival/Greek Revival ("Florida Pioneer").

D. ART DECO/ART MODERNE (FIGURE #4)

Two later architectural styles found in Coral Gables are Art Deco and Art Moderne. Buildings designed in these styles comprise only a small percentage of the total number of structures built in the City. Though small in number they represent fine interpretations of the stylistic idiom.

Art Deco (popular between 1925-40) is a style characterized by its angularity and vertical emphasis. It relies heavily on decorative surface ornamentation, frequently created by the use of colored glazed bricks or mosaic tiles. High relief cast ornament is also commonly employed, often in zigzag or chevron patterns. The Art Deco style is more commonly reflected in commercial rather than residential architecture.

Like Art Deco, Art Moderne (popular between 1930-45) is an ornamental architecture style which employs high relief cast cement ornamentation, often in stylized floral patterns. Unlike Art Deco, Art Moderne is a "streamlined" style, with little emphasis on angularity. Rather, it is characterized by rounded corners which are not limited to just the ends of the building, but often include rounded windows and door frames and surrounds as well.

Examples

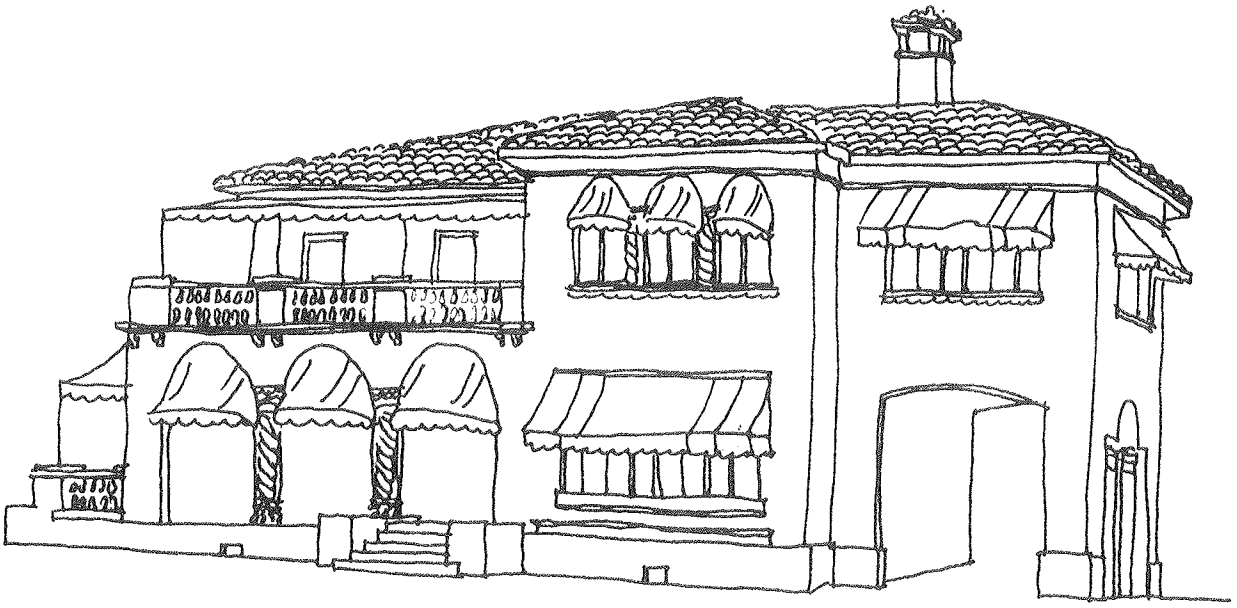
Art Deco

Southern Bell Building, 2117-2141 Galiano Street

Art Moderne

The Accel Building, 166 Alhambra Circle

FIGURE 1
MEDITTERANEAN REVIVAL



(FIGURE #1)

MEDITTERANEAN REVIVAL (Residential)

The Mediterranean Revival design was the predominant style in the City of Coral Gables. The theme for the community centered around an architectural eclectism which had its basis in the Mediterranean countries.

This example illustrates the typical irregularity of massing, the frequent use of the round arch, a low barrel-tiled hip roof, and applied columns focusing on the entrance loggia.

(Reproduced from: Metropolitan Dade County, Office of Community and Economic Development, Historic Preservation Division, From Wilderness to Metropolis- The History of Dade County Florida 1825-1940. (Metropolitan Dade County: 1982.)

FIGURE 2
THE BUNGALOW



(FIGURE #2)

THE BUNGALOW

The bungalow was popular in the South Florida region during the period from approximately 1910-1935. In this illustation of the typical bungalow type, the basic construction material is frame, with stone accents.

The bungalow in Coral Gables was typically constructed of concrete block, and finished in stucco. It shares the same design qualities that are illustrated in this depiction.

(Reproduced from: Metropolitan Dade County, Office of Community and Economic Development, Historic Preservation Division, From Wilderness to Metropolis-The History of Dade County, Florida 1825-1940. (Metropolitan Dade County: 1982.)

FIGURE 3
THE VILLAGES OF CORAL GABLES



(FIGURE #3)

THE VILLAGES OF CORAL GABLES (Specific example of the Chinese Village)

The Chinese Village Historic District is one example of the theme villages which were introduced into the City's predominantly Mediterranean Revival character. Borrowing from different regions and centuries, a series of these villages were constructed within the City. Unfortunately construction ended in 1926, and the scope of these projected communities was never fully realized.

This residence typifies the "Chinese Village" type which freely extracts motifs from ancient Chinese architectural tradition. Note the upturned roof eaves, "bamboo" panels inset around the perimeter wall, and the elaborate screens around the balconies.

FIGURE 4
THE ART DECO STYLE



(FIGURE #4)

THE ART DECO STYLE (Residential)

This figure illustrates the commonly associated characteristics of the style. They included an emphasis on angularity, broad window expanses, and relief ornament focused around doorways and windows, frquently depicting motifs which derive from abstracted forms and geometric patterns.

(Reproduced from: Metropolitan Dade County, Office of Community and Economic Development, Historic Preservation Division, Resourceful Rehab-A Guide to Historic Buildings in Dade County. (Metropolitan Dade County : 1987.)

SEC. 4. THE HISTORIC PRESERVATION PROGRAM IN CORAL GABLES

INTRODUCTION

In seeking to promote those "visible reminders of the history and cultural heritage" of Coral Gables, the City passed an historic preservation ordinance in 1973 to guide both the business community and homeowner in their dealings with the City regarding historic structures and sites of the Gables. In 1984 another ordinance was enacted which provided more detailed guidance, and instituted a zoning map overlay for historic properties.

From the outset, the goal is clear: promotion, preservation and protection of those irreplaceable landmarks and districts so steeped in historical, cultural, architectural, aesthetic or archaeological significance, that their loss signifies the loss of the opportunity to learn from the past, and to enhance the future with their beauty.

To help ensure the preservation of these landmarks, the Ordinance provides for a six month moratorium from demolition. In order to oversee and coordinate the rules and regulations involved in the designation and review process, the Code established an "Historic Preservation Board," made up of Coral Gables residents. The board is comprised of nine members, including one architect; one historian; one city planner or landscape architect; one professional in the field of real estate; one certified public accountant; one attorney; and three citizens at large. The board is advised by the Historic Landmark Officer, a professional with expertise in architectural history, urban design, local history, landscape materials, site planning, and land use regulations. It is this officer's job to prepare designation reports, prepare historic structure and site maps, update surveys of historic structures and districts, and coordinate communication among the various city departments which are affected by historic designations. This officer serves and guides both the Historic Review Board and the City Commission.

ACTIVITIES/RESPONSIBILITIES/OBJECTIVES OF THE HISTORIC PRESERVATION BOARD

Advised by the Historic Landmark Officer, the Historic Preservation Board:

- -recommends properties for local historic designation
- -participates in the National Register program
- -reviews Certificates of Appropriateness for designated properties
- -recommends zoning and building code amendments when appropriate as a means of encouraging historic preservation
- -makes recommendations to the City Commission concerning the utilization of federal and state grants for historic preservation.

It is important to note that while the Historic Preservation Board is granted the power to recommend variances from the Zoning Code, that the Board acts as an advisory panel to the City Commission, which must ultimately ratify the Board's recommendations. The City Commission then, by ordinance, grants or denies the variance, and also approves the designation of the property as an historic landmark.

Finally, the Code also provides for the protection of property owners' appeal rights for those disputing designation or, asking for permission to make changes to designated structures. Included for consideration wuold be any "undue economic hardship" the owner might suffer if designation is enacted or continued.

THE PROCESS OF IDENTIFICATION OR EVALUATION OF HISTORIC RESOURCES

The City of Coral Gables' Historic Preservation Ordinance defines an historic landmark as a property which has

> .....significant character, interest, or value as part of the historical, cultural, archaeological, aesthetic, or architectural history of the city, state, or nation, and meets one or more of the following criteria:
>
> Historical, Cultural significance:
>
> (a) Is associated in a significant way with the life or activities of a major historic person important in the past; or
>
> (b) Is the site of a historic event with significant effect upon the community, city, state, or nation; or
>
> (c) Is associated in a significant way with a major historic event whether cultural, economic, military, social, or political; or
>
> (d) Exemplifies the historical, cultural, political, economic, or social trends of the community; or
>
> (e) Is associated in a significant way with a past or continuing institution which has contributed substantially to the life of the city.
>
> Architectural Significance:
>
> (f) Portrays the environment in an era of history charcterized by one or more distinctive architectural styles; or
>
> (g) Embodies those distinguishing characteristics of an architectural style, or period, or method of construction; or
>
> (h) Is an outstanding work of a prominent designer or builder; or
>
> (i) Contains elements of design, detail, materials or craftsmanship of outstanding quality or which represent a significant innovation or adaptation to the South Florida environment; or
>
> Aesthetic Significance
>
> (j) By being part of or related to a subdivision, park, environmental feature, or other distinctive area, should be developed or preserved according to a plan based on a historic, cultural, or architectural motif; or

(k) Because of its prominence or spatial location, contrasts of siting, age, or scale, is an easily identifiable visual feature of a neighborhood, village, or the city and contributes to the distinctive quality or identity of such neighborhood, village, or the city; or

Archaeological Significance

(l) Has yielded, or may be likely to yield, information important in prehistoric history or history.

To date, (April, 1988) Fifty-two (52) buildings, sites and districts throughout the city have been identified and listed in the "Coral Gables Inventory of Historic Sites." Landmark designation entails review by the Historic Preservation Board for alterations, and new construction, and also provides a six month moratorium from demolition. Additionally, designation establishes an "HL" zoning overlay, which officially becomes a part of the City's "Use and Area Maps." The number of designations presently accomplished represents only a small fraction of those resources eligible for listing.

The process of designation continues, with priorities established to protect those resources deemed to be (1) subject to developmental pressures (2) irreplaceable and deserving of recognition, generally initiated by a property owner who may need the special incentives and variances necessary to facilitate its rehabilitation (3) special circumstances which have come to the attention of the City's Historic Preservation Division, and/or the Historic Preservation Board.

In 1986 the Historic Preservation Division conducted an architectural and historical survey of an area called the "Coral Gables Plantation District." The survey was funded, in part, by a Federal historic preservation grant. The Plantation District comprises an area containing approximately one-hundred blocks in the northern half of the City encompassing the original Merrick family citrus plantation. Six hundred seventeen (617) architecturally and historically significant properties were identified as a result of that survey.

In 1987, the Coral Gables downtown area, or "Central Business District" (CBD), was surveyed utilizing in part, a federal historic preservation grant. As the CBD is undergoing rapid development, it was particularly important that the historic resources of this area be documented. Comprising roughly a fifty block area, the CBD was found to contain fifty-six historically and architecturally significant buildings, many of which were part of George Merrick's (the founder of Coral Gables) original plans for a downtown commercial area.

Both the "Coral Gables Plantation District" and "Central Business District" surveys were conducted utilizing the Florida Master Site File survey form, and the information is contained in the Florida Master Site File maintained by the Department of Historic Resources in Tallahassee, Florida.

The historic resources which have been identified thus far have been mapped. The maps are identified as Appendix B.

HISTORIC PRESERVATION APPENDIX

APPENDICES

Appendix A - "Economic Incentives to Encourage Historic Preservation", a consultant's study which evaluates the potential incentives available for historic preservation, and particularly Transferable Development Rights (TDR's). The study was prepared by William D. Geary, and funded through a Federal Grant for Historic Preservation.

Appendix B - "Historic Resources of Coral Gables - Map Series." The City is divided into 37 sectors. The location of all currently listed properties in the Florida Master Site File are graphically identified by legal description. The maps were prepared by a consultant, William Gonzalez, and funded through a Federal Grant for Historic Preservation.

Appendix C - Chapter 16B, Code of the City of Coral Gables, Florida entitled "Historic, etc., Buildings, Structures, Sites, Etc."

Appendix D - Draft Ordinance to Implement Goal 4.0

HISTORIC PRESERVATION APPENDIX Continued

PROPOSED ORDINANCE AS SUGGESTED IN THE HISTORIC PRESERVATION ELEMENT; COMPREHENSIVE PLAN GOAL 4.

THE CITY OF CORAL GABLES

APPENDIX D

ORDINANCE NO.

DRAFT

WHEREAS, it is the policy of the City of Coral Gables to preserve and protect historic structures on sites which serve as visible reminders of the history and cultural heritage of the city; and

WHEREAS, many distinguished historic properties in Coral Gables have not yet been officially designated under the provisions of Chapter 16B of the City Code; and

WHEREAS, these eligible historic properties face the potential threat of irreversible alteration or demolition because they are not protected by the provisions of the City Code; and

WHEREAS, the Historic Preservation Task Force recommended in the Historic Preservation element of the Comprehensive Plan, dated March 1988, that these eligible properties receive the same consideration as those properties protected by municipal legislation.

NOW, THEREFORE, BE IT ORDAINED BY THE COMMISSION OF THE CITY OF CORAL GABLES:

SECTION 1. That from and after the effective date of this ordinance, the City of Coral Gables, through its Commission, citizen boards, and administration (including its City Manager, and all agencies, departments and officials) shall affirmatively consider and take into account any decisions, policies, or activities which affect any building, structure, object, site or monument which is eligible for listing in the Coral Gables Register of Historic Landmarks.

SECTION 2. That all ordinances or parts of ordinances inconsistent or in conflict herewith shall be and the same are hereby repealed insofar as there is conflict or inconsistency.

PASSED AND ADOPTED THIS DAY OF A.D., 1988

APPROVED:

GEORGE M. CORRIGAN
MAYOR

ATTEST:

VIRGINIA L. PAUL
CITY CLERK

The following section is adopted by City ordinance:

HISTORIC PRESERVATION ELEMENT GOAL, OBJECTIVES, & POLICIES

SECTION 5. GOALS, POLICIES AND OBJECTIVES

GOAL 1.0 To recognize structures, sites, manmade or natural landscape elements, works of art or integrated combinations thereof, which serve as visible reminders of the history and cultural heritage of the city.

Objective 1.1 To increase the number of documented historic resources within the City of Coral Gables for the purpose of recognition and planning for their protection and preservation.

Policy 1.1.1

As of March 1988 there are 49 individual structures, objects and formal landscape features, and 3 historic districts located in the Coral Gables Register of Historic Landmarks.

Policy 1.1.2

The number of local historic landmarks is projected to increase by 50% during 1988-1990 as the efforts relating to Historic Preservation increase.

Policy 1.1.3

Efforts to increase the survey and documentation of historic resources is projected to increase currently available information by the addition of approximately 500 structures, sites, and landscape features to the inventory.

Policy 1.1.4

The number of properties in the City of Coral Gables presently listed in the National Register is seven individual sites. Approximately ten additional listings are expected to be accomplished during 1988-1990. The emphasis will be on the listing of multiple properties, i.e. historic districts; multiple resources and/or thematic groups.

GOAL 2.0 To continue an educational outreach program to the public increasing their awareness of the value in the preservation of our historic resources.

Objective: 2.1 To implement educational programs, create publications, and promote technical assistance in order to increase the awareness of historic preservation in the community.

Policy 2.1

A comprehensive overview of the historic preservation program in Coral Gables, which includes information about assistance available on the national, state, and local levels is projected for publication in 1989.

Policy 2.2

Workshops involving the repair and maintenance of building materials, and the sensitive interpretation of design for additions, alterations, and modifications to historic buildings are projected.

Policy 2.3

Efforts will continue to be made to reach the public through media contacts. Press releases on historic preservation activities will continue to be produced.

Policy 2.4

Greater efforts will be made to reach the student audience by producing presentations and lectures aimed at the elementary and high school levels. Sponsorship of essay contests, and activities designed to foster an awareness of history will be promoted.

Policy 2.5

College-level students will be afforded an opportunity to participate in the City's historic preservation program through research and survey programs.

GOAL 3.0 To provide for the preservation and protection of the historical resources in the City of Coral Gables

Objective: 3.1 To enhance the protective provisions established under Ordinance No. 2508, and codified in Section 16B of the City Code.

Policy 3.1.1

The Ordinance provides for the designation and regulation of historic landmarks within the City of Coral Gables. Under the present circumstances the Ordinance provides the ability to delay the issuance of a demolition moratorium for a period of as long as six months provided that the public interest is served. As experience has proven that the existing length of the demolition moratorium is insufficient to market endangered properties, the City should reconsider the length of the demolition moratorium.

Policy 3.1.2

As an additional safeguard to the demolition of historic landmarks, the City should consider the establishment of an "endangered historic properties emergency fund."

GOAL 4

To increase the communication between City departments in order to identify the potential impact of developmental decisions on Historic properties.

Policy 4.1.1

The City of Coral Gables, through its commission, each of its boards, and its administration, including, without limitation, the city manager and all agencies, departments, and officials, should, when making any decision, establishing any policy, or undertaking, funding or licensing any activity, affirmatively consider and take into account the effect and impact of such decision, policy, or undertaking on any building, archaeological site, landscape, place, object, or proerty which is a historic resource, which historic resources shall include, without limitation, all those buildings, structures, archaeological sites, landscapes, places, objects, and properties now or hereafter (i) designated or eligible for designation by the Historic Preservation Board of the City of Coral Gables, (ii) listed or eligible for listing in the National Register of Historic Places by the United States Secretary of the Interior, (iii) included or eligible for inclusion in any city survey of historic properties, including, without limitation, the Central Business District, Survey and the Plantation District survey, or (iv) included or eligible for inclusion in the Florida Master Site File established by the Bureau of Historic Preservation, Division of Historical Resources, Department of State, State of Florida. (see proposed Ordinance draft). Appendix D

Policy 4.1.2

Historic preservation concerns should be included within the plans processing system of the Building and Zoning Department.

GOAL 5.0 To encourage historic preservation efforts through the promotion, creation, and/or establishment of economic incentives.

Policy 5.1.1

The City should encourage the legislature to allow for the reduction of ad valorem taxes for those properties included in the Coral Gables Inventory of Historic Landmarks. This matter should be pursued in conjunction with appropriate legislative groups and concerned Statewide preservation agencies. (See Appendix A, Part 2,pp.44-58 for consultant's analysis.

Policy 5.1.2

That the City request the Planning Department study the use of Transferable Development Rights (T.D.R.'s) for use with regard to the preservation and protection of historic landmarks. (See Appendix A, Part One, pp.5-44. for consultant's analysis).

Policy 5.1.3

Encourage the private sector to preserve its historic resources through such currently existing programs as the revolving fund program administered through the Dade Heritage Trust and Florida Trust for Historic Preservation, and low interest loans for rehabilitation of structures in low and moderate income neighborhoods for the benefit of low and moderate income persons administered through the Dade Heritage Trust Revolving Fund.

This concludes the section adopted by ordinance

This section is adopted by City ordinance:

GLOSSARY

The following terms are defined for the purposes of use within the context of this comprehensive plan.

ACRE, NET:
The horizontal area of land of measured in units of acres, which:
(a) Includes the Building Site;
(b) Excludes all portions of dedicated streets, alleys, waterways, canals, lakes, or any such dedicated right-of-way by what ever name known.

ACRE, GROSS:
The horizontal area of land of measured in units of acres, which:
(a) Includes the Building Site, and adjacent street and alley rights-of-way (as measured from and perpendicular to the centerline of right-of-way to the right-of-way boundary line, a distance of not greater than 50 feet); and
(b) Includes on-site and adjacent easements which are derived from the parent parcel. (For easements resulting from adjacent parcels, only that portion attributable to the benefit of the subject parcel may be used.)
(c) Limited access public road rights-of-way and Waterways are not included.

DEVELOPMENT ORDER
Any regulatory action taken in official capacity which establishes an authority for all or any portion of a project of improvement and/or renovation to proceed toward its specific conclusion. Typical development orders include, but are not limited to zoning changes taken in preparation for a specific development, building permits, final site plan approval, clearing and grubbing permits, site preparation permits, foundation permits, and water management permits.

DEVELOPMENT REVIEW SITE PLAN:
A set of documents which shall consist of, at a minimum, plan drawings, at a scale of not smaller than 1" = 10' for areas of buildings and related improvements, not smaller than 1"=30' for larger areas which contain only utilities and road improvements, clearly showing the location and character of all existing and proposed improvements including exterior walls, windows, doors, fences, landscaping, refuse container storage; Air-conditioning compressors and cooling towers, walkways, paths, driveways, parking and site access; barriers to and sources of direct and reflected light, sounds, views, and odors; visible utilities, antennas, and other improvements for the subject sites. Such plans shall also locate the facing conditions on adjoining properties to permit the evaluation of the probable impact and nature and extent of mitigation of such impacts upon the existing

residential neighborhood adjoining the property. If the proposed development is designated Conservation, an environmental impact study shall also be required. Perspectives, elevations and current 1"=100' scale color aerial photographs may also be required at the discretion of the Director of Planning. Upon the approval of such proposed improvements and maintenance program, the site is to be developed and maintained in strict compliance with the presentations and proposed designs made, agreed to and approved.

GOAL:
The long-term end toward which programs or activities are ultimately directed.

HAZARDOUS WASTE:
Solid waste, or a combination of solid wastes, which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or may pose a substantial present or potential hazard to human health or the environment when improperly transported, disposed of, stored, treated or otherwise managed.

HISTORIC RESOURCES:
All areas, districts or sites containing properties listed on the Florida Master Site File, the National Register of Historic Places, or designated by a local government as historically, architecturally, or archaeologically significant.

LEVEL OF SERVICE:
An indicator of the extent or degree of service provided by, or proposed to be provided by a facility based on and related to the operational characteristics of the facility. Level of service shall indicate the capacity per unit of demand for each public facility.

OBJECTIVE:
A specific, measurable, intermediate end that is achievable and marks progress toward a goal.

POLICY:
The way in which programs and activities are conducted to achieve an identified goal.

THRESHOLD DEVELOPMENT:
Any construction, improvement, building, or erection of facilities which:
(A) Increases the existing gross occupiable space by more than 800 square feet for RL, RH, and RMD land use classifications; 600 square feet for RML, RMM, and RMH land use classifications; and 400 square feet for all other land use classifications; or
(B) Increases the demand for any utility or public service by: greater than 10% of existing service to that site in single family and duplex land use classes, and greater than 2% of existing service to that site for all other land use classes.

WATERWAYS:
Canals, lakes, rivers, and related water channels which are navigable by any occupied watercraft down to and including skiffs and canoes. Waterways shall be measured by platted boundaries. If undefined by plat, then the less restrictive combination of criteria of: (A) The top-of-bank and (B) The 100 year flood level, shall be used for such boundary determination as established by a Florida Registered Land Surveyor.

This concludes this section to be adopted by ordinance.

Acknowledgements

THE CITY OF CORAL GABLES ACKNOWLEDGES AND THANKS THE FOLLOWING INDIVIDUALS FOR THEIR CONTRIBUTION TO THIS DOCUMENT.

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Tom Springer, Project Engineer
Diana Wheeler, Planning Director

Special Thanks To:

Lorraine Durkan, LPA Recording Secretary
Wesley Kwasniak, Planning Technician

CITY OF CORAL GABLES, FLORIDA

ORDINANCE NO. 2827

AN ORDINANCE ACCEPTING THE DOCUMENT ENTITLED "CORAL GABLES COMPREHENSIVE PLAN, 1989", AS REVISED AND AS AN AMENDMENT TO THE DOCUMENT ENTITLED "CITY OF CORAL GABLES COMPREHENSIVE PLAN 1978-2000"; ADOPTING THOSE PORTIONS SO MARKED IN THE DOCUMENT AND AS AMENDED; AND REPEALING ALL ORDINANCES INCONSISTENT HEREWITH.

WHEREAS, on April 29, 1980, the City of Coral Gables adopted a document entitled "City of Coral Gables Comprehensive Plan 1978-2000" as evidenced by Ordinance No. 2345; and

WHEREAS, in October, 1985, the State of Florida adopted the "Local Government Comprehensive Planning and Land Development Regulation Act" which necessitated that amendments be made to the City's adopted Comprehensive Plan; and

WHEREAS, the State of Florida Department of Community Affairs Division of Resource Planning and Management then established Chapter 9J-5 entitled "Minimum Criteria for Review of Local Government Comprehensive Plans and Determination of Compliance" which outlined specific Comprehensive Plan requirements; and

WHEREAS, the City of Coral Gables desires to comply with the requirements specified in the regulations noted above; and

WHEREAS, the City of Coral Gables has made great effort to follow designated procedures and meet mandated requirements so as to ensure careful consideration of all items prior to final adoption; and

WHEREAS, after fifteen workshop meetings and forty task force meetings over a two year period and after notice of public hearing duly published, a public hearing was held before the Local Planning Agency (Planning and Zoning Board) on February 8, 1989, at which hearing all interested persons were afforded an opportunity to be heard; and

WHEREAS, the Local Planning Agency, at its special public hearing on February 8, 1989, recommended the acceptance of the document entitled "Coral Gables Comprehensive Plan, 1989", as revised, and adoption of those portions so marked in the document and as amended.

NOW, THEREFORE, BE IT ORDAINED BY THE COMMISSION OF THE CITY OF CORAL GABLES:

SECTION 1. That the document entitled "Coral Gables Comprehensive Plan, 1989", as revised, is accepted and those portions so marked in the document and as further amended are adopted, all as amendments to the "City of Coral Gables Comprehensive Plan 1978-2000".

SECTION 2. That all ordinances or parts of ordinances inconsistent or in conflict herewith shall be and the same are hereby repealed insofar as there is conflict or inconsistency.

PASSED AND ADOPTED THIS FOURTEENTH DAY OF FEBRUARY, A. D., 1989

APPROVED:

GEORGE M. CORRIGAN
MAYOR

ATTEST:

VIRGINIA L. PAUL
CITY CLERK