Florida International University

2005 Evaluation and Appraisal Report

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EXECUTIVE SUMMARY

EAR Issues and Recommended Comprehensive Plan Amendments

The 2005 Evaluation and Appraisal Report (EAR) for Florida International University provides an assessment of the 2000-2010 Campus Master Plan. Pursuant to Chapter 1013.30, Florida Statutes, the EAR document evaluates the successes and shortcomings of the Master Plan, identifies issues that may affect the future development of the university and provides recommendations for amendments based on the findings.

The following is a summary of the major recommendations for amending the Campus Master Plan.

General Recommendations

- Create a unifying theme that calls for a sustainable campus environment and fosters learning through the physical environment
- Reorganize the Campus Master Plan so that it is better organized and easier to read
- Update data and information in the Academic Mission Element
- Conduct an annual review of the Campus Master Plan in conjunction with the annual preparation of FIU's Five-Year Capital Improvements Program (CIP) and budget process.

Academic Mission and Programs[1]

- Develop a new methodology for FTEs and Headcount projections that factors the university's market share goals
- Develop a strategic plan for Biscayne Bay Campus, which provides recommendations for increasing enrollment at the campus.

[1] Academic space includes the following: classroom, research and lab space; undergraduate and graduate space; and academic support space

- Require an annual review of enrollment by campus to assure that the programs are generating sufficient students to meet the enrollment goals of each site.

Urban Design

- Develop a sustainable campus environment by incorporating more sustainability principles in the Urban Design Element
- Establish greater connectivity and integration with the host communities
- Reorganize the Urban Design Element into an illustrated handbook. The handbook should include the architecture and landscape guidelines.

Land Use

- Update the land use designations and the land use maps
- Reassess land use at UP to create a more compact urban environment. Consider infill and mixed-use options, as well as redevelopment of University Park Apartments.
- Create models for Biscayne Bay Campus and the Engineering Center that plan for maximum build out.
- Amend the Land Use Element to encourage the development of joint-use parking and recreation facilities with Tamiami Park
- Pursue an agreement with the City of Sweetwater that would enable FIU to develop off-campus housing, parking and other types of support facilities as needed.

Housing

- Amend the goal of providing housing to 20% of the FTEs by limiting development to a maximum of 7000 beds.
- Plan the timing and phasing of future housing projects based on demand
- Develop affordable housing for graduate students, families and faculty.
- Consider reconfiguring or redeveloping University Park Apartments to better meet the housing needs of the university.
- Partner with the private sector to build affordable off-campus housing
- Develop a comprehensive housing program for students, faculty, and staff that includes assistance in finding a home and financial incentives

Recreation and Open Space

- Adopt level of service standards for recreation and open space and for athletic facilities
- Replace the fields and track at University Park and Biscayne Bay that were lost due to construction
- Develop an open space master plan that addresses landscaping and the use of open space (including recreation space, educational space, and outdoor gathering spaces)

Infrastructure

- Update the level of service for potable water, sanitary sewer, and solid waste based on actual consumption patters.
- Continue to interconnect water bodies at University Park, Biscayne Bay Campus, and the Engineering Center to eliminate isolated subbasins and minimize the possibility overburdening or underutilizing any one subbasin
- Work with WASD and the host communities to assure there is sufficient capacity to meet the water consumption needs of future development at FIU
- Continue to make improvements to the sanitary sewer system at all FIU sites in order to address infiltration and inflow deficiencies
- Expand recycling programs to include the Wolfsonian Museum and Annex

Utilities and Facilities Management

- Build an additional chiller plant at University Park to accommodate future expansion.
- Review and update building standards and policies. The focus should be on creating a sustainable campus environment.
- Develop design guidelines that incorporate FPL building standards and require the university to participate in FP&L's energy saving incentive programs.
- Consider making all university sites WiFi capable.

Transportation

- Improve roadway capacity by exploring alternative roadway patterns
- Develop a shuttle system that facilitates transportation within campus and with the context area

- Develop a pedestrian friendly walkway system that links the campus core to parking facilities and key activity areas
- Explore strategies for meeting the parking needs at UP, including a joint parking agreement with Tamiami Park and off-campus parking in the City of Sweetwater
- Continue to work with the Miami-Dade Transit Department to increase transit services at FIU campuses, including adding a Metrorail station at UP and EC.

Intergovernmental Coordination

- Consider establishing a Development Agreement or Memorandum of Understanding with the City of Miami Beach for the Wolfsonian Museum and Annex building.
- Establish a Development Agreement as needed with the City of Sweetwater for off-campus facilities. The Agreement should include a provision that encourages the City to promote the "FIU" brand.

Capital Improvements

- Update the Campus Master Plan to include the proposed 2005-2015 Capital Improvements Plan

Architecture and Landscaping

- Update the District Design guidelines for University Park
- Foster learning through the physical environment by creating instructional signage that provides information on natural and structural features.
- Improve the visibility of the university through signature open spaces and landmarks
- Increase the amount of shaded walkways and outdoor gathering spaces through landscaping and outdoor furnishing
- Identify funding sources to carry out landscape projects

Medical School

- Develop a master plan for the newly Medical School Complex once a site for the school has been identified and approved. The FIU Campus Master should be updated accordingly.

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INTRODUCTION

Profile of Florida International University

Florida International University (FIU) is an urban, multi campus, research university, serving South Florida, the state, the nation and the international community. With over 35,000 students, 3,077 faculty and staff, and 109,727 alumni, FIU is the largest public university in South Florida

The university has two primary campus locations strategically located to serve the South Florida community. The main campus is University Park (UP). This campus is located in western Miami-Dade County. Three other off-campus sites make up part of UP; the Engineering Center (EC), the Wolfsonian Museum, and the Wolfsonian Annex. Biscayne Bay Campus (BBC), located on Biscayne Bay, is the second campus. In addition to these sites, the university also leases several properties, including the Metropolitan Center in downtown Miami and the Broward-Pines Center in Broward County. For the purpose of this report, the evaluation and appraisal of the FIU Master Plan will only focus on those properties that are owned by FIU.

Table 1: Sites Owned and Operated by FIU

FIU Site	Location	Acreage
University Park (UP)	Western Miami-Dade County	342.2
Engineering Center	North of the City of Sweetwater	36.0
Wolfsonian Museum	Miami Beach	0.1
Wolfsonian Annex	Miami Beach	0.1
Biscayne Bay Campus (BBC)	Northeast Miami-Dade County	195.0

Source: Facilities Planning & Construction (11/01/2004)

Purpose of EAR

The Evaluation and Appraisal Report (EAR) is a State-mandated review and update of the Comprehensive Master Plan. The Plan provides the blueprint for existing and future development, while establishing the vision, goals and objectives of how it will meet the

needs of the university and larger social and physical environment. The EAR considers the changes that have taken place since the adoption of the Master Plan and how the plan can be modified to reflect those changes. Specifically, the Evaluation and Appraisal Report seeks to accomplish the following:

- Describe public and local government participation process
- Assess the accomplishments and problems in meeting the goals, objectives and policies in the Comprehensive Plan
- Discuss the obstacles in meeting goals, objectives and policies
- Identify needed modifications to goals, objectives and policies based on unforeseen Opportunities/Changes
- Identify proposed plan amendments necessary to address identified problems and Opportunities/Changes
- Identify changes to the State Comprehensive Plan and to the comprehensive plans of the host local governments
- Describe means of monitoring and evaluating the plan during the remainder of the planning period

PUBLIC AND LOCAL GOVERNMENT PARTICIATION PROCESS

Description of EAR Process

On August 2005, the Facilities Planning Department of Florida International University (FIU) retained the consulting services of the FIU Metropolitan Center (MC) to assist the professional staff of the university with the preparation of the 2005 Evaluation and Appraisal Report (EAR), as per the requirements of Chapter 1013.30, Florida Statutes.

In order to assure public and local government participation in the EAR process, the project team engaged in the following activities:

- **Interviews:** FIU Vice Presidents, Deans and Department Directors were interviewed in order to identify future challenges and opportunities for the University.
- **Focus Groups with Stakeholder Groups:** A series of focus groups meetings with key stakeholder groups, including university administration, faculty, and students, were organized. The aim of the focus groups was to refine the issues and opportunities identified in the interviews. The following groups participated in the process: Faculty Senate (Building and Environment Committee), Student Government, and Operations Committee.
- **Issues Workshop/Urban Studio:** A public workshop was held on April 24, 2006 to enable the university community, local government agencies, and the general public to provide feedback regarding the issues and opportunities to be included in the EAR. The participants had an opportunity to provide comments for each FIU site.
- **Interagency Meetings:** The project team attended several meetings with local agencies regarding issues discussed in the EAR. Meetings were also held regarding the Development Agreements with the host communities.

The FIU Board of Trustees will review the findings and recommendations of the 2005 EAR.

Major Issues Affecting FIU

The following is a list of the major issues facing FIU based on the feedback from the public participation process. These issues guided the 2005 evaluation and appraisal of the Campus Master Plan:

- Shortage of Academic Space
  - Classroom, Research and Lab Space
  - Undergraduate and Graduate Space
  - Academic Support Space
- Availability and Accessibility to Parking Facilities
- Traffic Congestion: Roadway Capacity
- Demand for Student Housing
- Preservation of Recreation and Open Space
- Land Use Constraints
- Future of Biscayne Bay Campus and Engineering Center
- Campus Identity: Architecture and Landscaping
- Future Development of the Medical School

EVALUATION AND APPRAISAL OF ELEMENTS

The following section provides a brief analysis of the goals, objectives and policies in the required and optional elements of the Campus Master Plan. The section discusses the successes or shortcomings in achieving the goals, objectives and policies and provides recommendations for future amendments.

Elements Contained in the Campus Master Plan

1. Academic Mission	Optional
2. Academic Program	Optional
3. Urban Design	Optional
4. Land Use	Required
5. Academic Facilities	Optional
6. Support Facilities	Optional
7. Housing	Required
8. Recreation and Open Space	Required
9. Infrastructure	Required
10. Utilities	Optional
11. Transportation	Required
12. Intergovernmental Coordination	Required
13. Conservation	Required
14. Capital Improvements	Required
15. Architectural Design Guidelines	Optional
16. Landscape Design Guidelines	Optional
17. Facilities Maintenance	Optional
18. Coastal Management	Required

Element 1: Academic Mission of University

The purpose of this element is to describe the present and future academic mission of the University. It provides the framework for the physical recommendations of the Campus Master Plan.

Accomplishments in Meeting Goals, Objectives and Policies

Since opening in 1972, FIU has developed into a comprehensive, multi-campus urban research institution that offers over 202 baccalaureate, masters and doctoral degrees. It provides programs for full and part time degree seeking students and addresses the needs of the lifelong learners, both by traditional classes and distance learning methods. In the area of research, the university is ranked within the “High Research Activity” category of the Carnegie Foundation classification system, with nearly $80 million in outside contracts and grants.

The current University mission was approved by the Florida Board of Education, Division of Colleges and Universities in the Fall of 2002

> ***2002 Mission Statement***
> *Florida International University is an urban, multi-campus, research university serving South Florida, the state, the nation and the international community. It fulfills its mission by imparting knowledge through excellent teaching, promoting public service, discovering new knowledge, solving problems through research, and fostering creativity.*

FIU's rapid growth in enrollment, academic programs and research is evidence that the university is fulfilling its mission.

Problems and Obstacles in Meeting Goals, Objectives and Policies

None reported

Needed Modifications Based On Unforeseen Opportunities/Changes

The University is currently in the process of updating its Campus Master Plan through the Evaluation and Appraisal Process. The updates will be guided by FIU's mission statement and strategic themes. Some of the major updates will include:

- Creating a Unifying Theme: To make the Master Plan more consistent with FIU's mission and strategic themes, the Master Plan will focus on creating a sustainable campus environment that fosters learning opportunities through the physical environment.
- Reorganizing the Campus Master Plan: The document will be reorganized so that it is better organized and easier to read.
- Creating a Plan for the Medical School: In the Spring of 2006, FIU received approval from the Board of Governors (BOG) to develop a medical school. This development is likely to have an impact on the mission of the university, creating a greater emphasis on health, medical research, and health services. The Campus Master Plan must be revised to include information on the siting, academic and support facilities, capital improvement costs, and enrollment projections of medical school.

Proposed Plan Amendments

- Update the Campus Master Plan upon the revision of the FIU mission statement. The revision should include a reference to the creation of the Medical School.

Element 2: Academic Program

The purpose of this element is to describe the existing and the future development of academic programs at the University. The element also provides projections for enrollment which serve as the foundation for much of the university's planning efforts.

Accomplishments in Meeting Goals, Objectives and Policies

Academic Programs

FIU has been successful at providing a vast array of educational opportunities to its students. The university has restructured its colleges and schools and has added new academic programs to its list of offerings. The most current addition has been the recently approved School of Medicine. Today, FIU offers 202 baccalaureate, masters, and doctoral majors and 190 academic degree programs.

Major Colleges and Schools at FIU in 1999:

College of Arts and Sciences,
College of Business Administration
College of Education
College of Engineering,
College of Health and Urban Affairs,
Honors College,
School of Architecture,
School of Hospitality Management,
School of Journalism and Mass Communication
School of Law

Major Colleges and Schools at FIU in 2006*

College of Architecture and the Arts
College of Arts and Sciences
College of Business Administration
College of Continuing and Professional Studies
College of Education
College of Engineering & Computing
College of Health and Urban Affairs
Honors College
Rafael Diaz Balart College of Law Building
School of Hospitality and Tourism Management
School of Journalism and Mass Communication
University Graduate School

***Not including the School of Medicine**

Enrollment

From 1999 to 2004, the number of students enrolled at FIU increased by 12 percent, growing from 31,274 to 35,002. This surpassed the projections for that time period. Much of the growth took place at University Park. This can be attributed to the success of the new Law School and to recruiting efforts of other programs. It is expected that the university will continue to grow at a rapid rate in the next ten years, growing to an estimated 56,374 students by 2015. This does not include the enrollment projections of the Medical School.

Problems and Obstacles in Meeting Goals, Objectives and Policies

Low Enrollment at Biscayne Bay Campus (BBC)

The enrollment at Biscayne Bay Campus for 2004-05 was 32 percent less than the projections in the Campus Master Plan. Indeed, enrollment at the campus has decreased since 2001. The decrease can be attributed to the relocation of some programs from BBC to University Park. Because enrollment affects the allocation of capital improvement funding and other planning mechanisms, it is important for the university to help increase enrollment at Biscayne Bay Campus in order to carry out the development plans for the site. FIU needs a strategic plan for BBC which provides recommendations for stimulating growth.

Table 2: Student Head Count: 2001-02 Compared to 2004-05

University Site	2001-02	2004-05	% Change
University Park	25,374	27,307	8%
Biscayne Bay Campus	7,667	7,540	-2%
University Wide	31,274	35,002	12%

Source: FIU Office of Institutional Research Fall 2004, PeopleSoft Reporting Database

Needed Modifications Based On Unforeseen Opportunities/Changes

Medical School

In 2006, the Board of Governors approved the creation of a Medical School at FIU. This will be the only public medical school in South Florida and will be the fifth allopathic program in the State. The initiative will require a restructuring of FIU's health and medical science programs, as well as partnerships with health service providers in the community. The goal is to create a multidisciplinary research consortium. It is estimated that the first class of the Medical School will graduate 36 students and 120 students after its first stage of development, which will take approximately seven years. FIU's Master Plan will need to be amended to include the Medical School Program.

Off-Campus and On-Line Programs

The university has a growing number of students who are enrolled in off-campus and on-line degree programs. Many of the off-campus offerings are accelerated programs designed for working adults, also known as executive programs. As technology advances and the demand for executive programs increases, more students are expected to enroll in these types of programs. The Campus Master Plan should provide policies and objectives that address this trend.

Restructuring of Colleges and Schools

The FTE and headcount projections provided in Academic Program Element are based on enrollment data from the Fall of 2004. It should be noted, however, that after 2004 the university restructured its colleges and schools. As such, the projections for academic programs do not accurately reflect the current academic structure of FIU. As soon as the data becomes available, this element should be updated to reflect the new enrollment figures for colleges and schools.

Methodology for Headcount and FTE Projections

Enrollment projections are updated yearly; however, they do not account for FIU's market share estimates. Because the university has a goal of capturing 12 percent of the State's market share, it is important that student projections reflect this goal. This will enable FIU to monitor its progress over time. To accomplish this, the university will need to develop a new methodology that factors in the market share estimates for student enrollment.

Proposed Plan Amendments

- Update the Campus Master Plan to include the Medical School Program.
- Develop a strategic plan for Biscayne Bay Campus, which provides recommendations for increasing enrollment at the campus.
- Require an annual review of enrollment by campus to assure that the programs are generating sufficient students to meet the enrollment goals of each site.
- Add a policy which promotes the creation of off-campus and on-line programs and which monitors the creation of such programs
- Develop a new methodology for FTEs and Headcount projections that factor the university's market share goals.
- Update the enrollment data in the Campus Master Plan to reflect the reorganization of the university's colleges and schools.

Element 3: Urban Design

The purpose of this element is to assess the physical development of the university and to provide urban design principles that will guide the organization of the university, including the design, and construction of facilities and open space, as well as pedestrian and vehicular circulation.

Accomplishments in Meeting Goals, Objectives and Policies

University Park

Since the last update of the Campus Master Plan, several significant projects have been completed at University Park. Most of this construction has taken place on the inner core of the campus. Due to the limited amount of buildable space at UP, the emphasis has been on creating an "urban" pattern of development through increased densities and interconnections between buildings and pedestrian walkways. Major accomplishments at University Park include:

- The construction of six academic buildings, two support facilities, two parking garages, a student housing complex, an art museum, a recreation complex, and a football stadium.
- The creation of a secondary entrance on SW 8th Street and 109th Avenue
- The completion of four major pedestrian axes that facilitate movement throughout campus:
  - Avenue of the Professions: This is the primary East-West Axis that runs through the center of the campus
  - East-West Axis 2: Located on the northeastern section of the campus, this walkway extends from Owen Ehan to the Education Building
  - East-West Axis 3: This walkway is located on the southern section of UP and runs from the Entrance on 107th Avenue to the Panther Residence Hall.
  - Diagonal Axis 2: The walkway links the Wertheim Performing Arts Center to Lakeview Housing.

Biscayne Bay Campus

The focus at Biscayne Bay Campus has been to retain a compact physical environment, to maximize the connection to the Bay, and to increase the visibility of the campus. Major accomplishments include:

- The construction of the Marine Biology Building
- The Expansion of the Wolfe University Center
- Improvements to the campus entrance

Engineering Center

The primary objective of the Engineering Center has been to strengthen connectivity to the main campus. This has been achieved by maintaining consistency in landscaping and signage. The university has also established a shuttle service, in partnership with the City of Sweetwater that serves University Park, the Engineering Center and the City. Major accomplishments include:

- The creation of a main entrance on West Flagler Street
- The expansion of the Maintenance Facility

Problems and Obstacles in Meeting Goals, Objectives and Policies

FIU has been able to meet most of the goals and objectives in the Master Plan; however, improvements are needed in the following areas:

Sustainability: As the university has grown, the cost of facilities maintenance and utilities has also increased. Other challenges include traffic congestion, demand for accessible parking, and limited recreation space. These challenges can be addressed by creating urban design principles that incorporate energy efficiency, life cycle standards, recycling, conservation, and multimodal transportation options. Universities that have embraced the concept have saved millions of dollars annually as a result of their efforts. Although the FIU Urban Design Element calls for the implementation of some sustainability measures, the element needs to be strengthened in order to create a sustainable campus environment.

Connectivity to Host Communities: The existing buffers on the perimeter of all FIU sites create a sense of enclosure that has isolated the various sites from the host communities. This sense of isolation was expressed at the focus groups that were held during the EAR process. To create more connectivity with the host communities, the university may want to re-examine the policies related to buffer zones. This may include creating more entry points and placing buildings along the streets of the host communities.

Urban Design Guidelines: The Urban Design Element needs to be reorganized so that it is easier for developers and university officials to read and interpret the policies. The revised element should have more graphics and illustrations and less text. The document should be developed into a handbook and should include the architecture and landscape guidelines.

Needed Modifications Based On Unforeseen Opportunities/Changes

Urban Design for the Medical School: The newly approved Medical School will require the creation of a medical complex to house the program. Although the site for the school has not been determined, the university will need to develop an urban design plan for the medical school once a location has been identified and approved.

Learning through the Physical Environment: Professors from various programs expressed the desire to use the physical environment of FIU as a teaching tool. From construction management, engineering, environmental science, and art, the university offers ample learning opportunities. This can be facilitated through signage that describes the various environments. Areas such as the Nature Preserve and parts of the waters edge on Biscayne Bay Campus can also be made more accessible for educational purposes.

Proposed Plan Amendments

- Develop a sustainable campus environment by incorporating more sustainability principles in the Urban Design Element
- Establish greater connectivity and integration with the host communities
- Reorganize the Urban Design Element into an illustrated handbook.

The handbook should include the architecture and landscape guidelines.

- Develop an urban design plan for the medical school
- Foster learning through the physical environment of each campus.

Element 4: Future Land Use

The purpose of this element is to describe the existing and future land use pattern to be developed on the University and to address how this land use pattern will be coordinated with that planned by the host community.

Accomplishments in Meeting Goals, Objectives and Policies

The patterns of development within FIU have been relatively consistent with the Campus Master Plan. Guided by the Future Land Use Map, the university has contained development activity within the areas designated for their respective land use. The only exception has been the Recreation Complex at UP.

Since the last Master Plan Update in 2003, approximately 718,023 gross square feet (GSF) of academic space has been developed or is currently under construction. In addition, 1.3 million GSF of parking space, 494,400 GSF of residential space, 90,765 GSF of recreation space and over 23,000 GSF of support space has been added. The table below and the accompanying maps provide more details regarding the development activity since 2003.

Table 3: Major Development from 2003-2005 and Consistency of Development with the 2003 Future Land Use Map

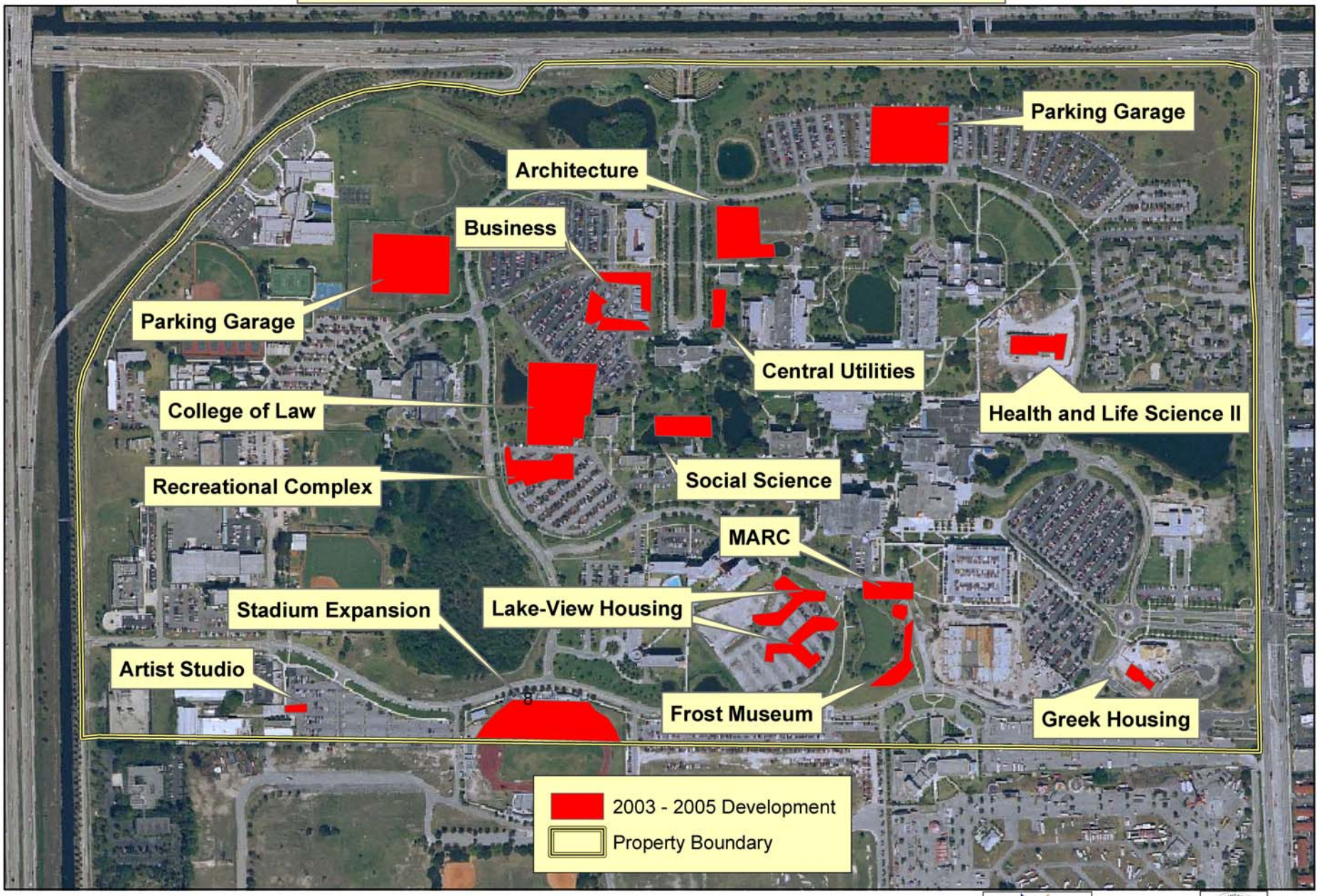
Development	Land Use in 2003 FLUM	2005 Land Use	Consistent with FLUM
University Park			
Development 2000-2005			
Health and Life Sciences I	Academic	Academic	Consistent
Management and Advanced Research	Academic	Academic	Consistent
Paul Cejas Architecture Building	Academic	Academic	Consistent
Recreation Center – Phase I	Academic	Recreation & Open Space	Not Consistent
Panther Parking Garage	Parking	Parking	Consistent
Red Parking Garage	Parking	Parking	Consistent
Greek Housing II	Residential	Residential	Consistent
Development Under Construction			
Artist Studio	Academic	Academic	Consistent

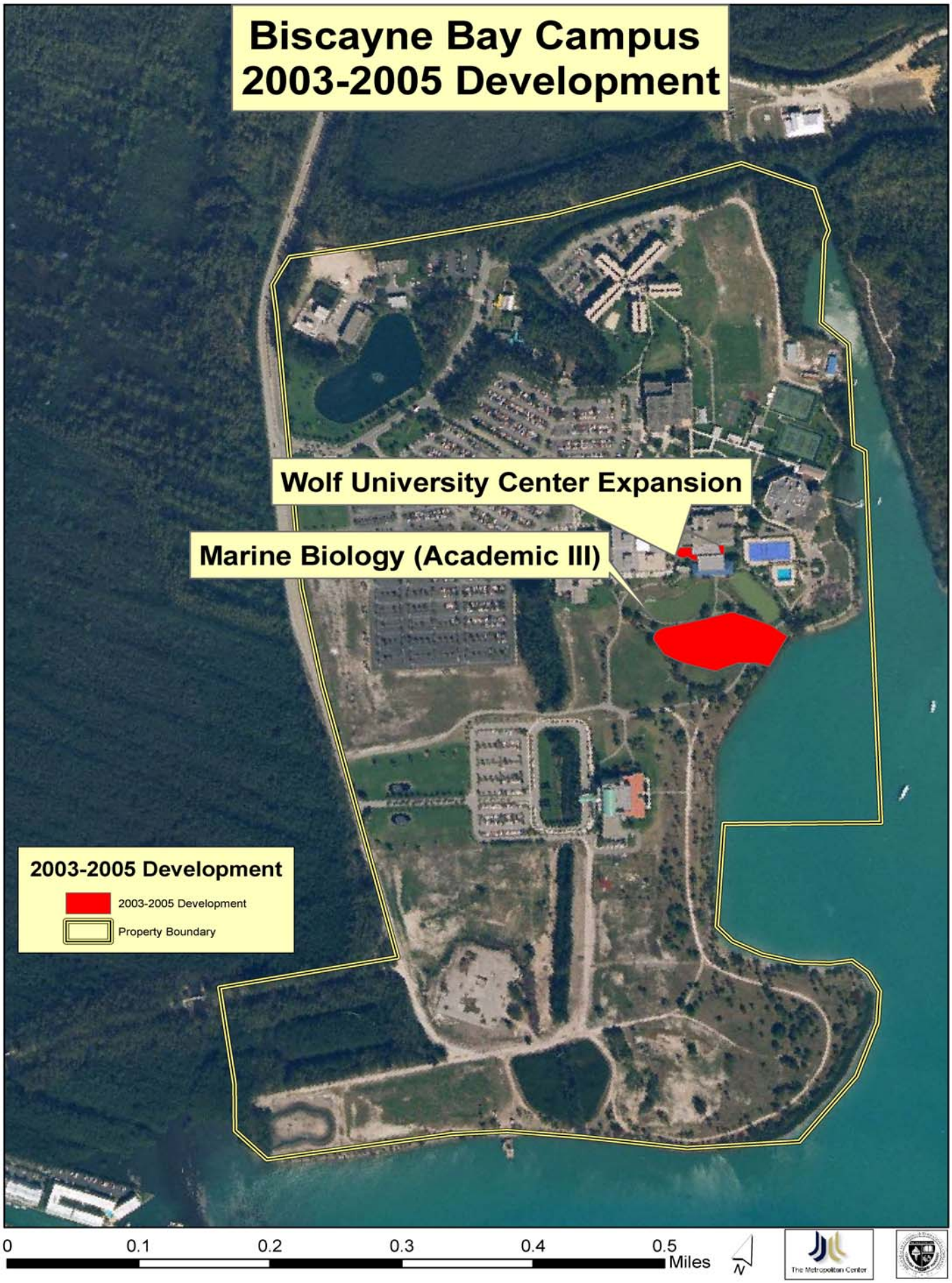
Development	Land Use in 2003 FLUM	2005 Land Use	Consistent with FLUM
Rafael Diaz Balart College of Law Building	Academic	Academic	Consistent
The Patricia and Phillip Frost Art Museum	Academic	Academic	Consistent
Graduate School of Business – Building I	Academic	Academic	Consistent
Social Sciences	Academic	Academic	Consistent
Stadium Expansion	Recreation & Open Space	Recreation & Open Space	Consistent
Lakeview Housing	Residential	Residential	Consistent
Central Utility Plant	Support	Support	Consistent
Biscayne Bay Campus			
Development 2000-2005			
Marine Biology Building	Academic	Academic	Consistent
Wolfe University Center Expansion	Academic	Academic	Consistent
Engineering Center			
Development 2000-2005			
Maintenance Building Expansion	Support	Support	Consistent

Source: FIU Facilities Planning

FLUM: Future Land Use Map

University Park 2003-2005 Development




Biscayne Bay Campus
2003-2005 Development
Wolf University Center Expansion
Marine Biology (Academic III)
2003-2005 Development
2003-2005 Development
Property Boundary
0
0.1
0.2
0.3
0.4
0.5
Miles
N
The Metropolitan Center


Engineering Center 2003-2005 Development
Extension of Support
2003-2005 Development
Property Boundary
Development
0
0.05
0.1
0.15
0.2
Miles
N

During the next planning cycle, FIU plans to continue its aggressive capital improvement campaign, developing an additional 2,174,854 GSF of academic, support, parking and recreation space. The proposed development will result in the build out of University Park. Additional development beyond what is planned may need to take place at BBC and EC. To facilitate efficient development of those two sites, FIU should consider developing a maximum build out plan for BBC and EC. The following is a list of some of the major projects planned and pending official approval for 2005-2015.

Table 4: Major Development Planned for 2005-2015

Project
University Park
Support
Career Services Building
Chemistry and Physics Addition
Computer Services
Fitness Center Addition
Future Development (NE Quadrant)
Future Development (near Graham Center)
Graduate Classroom Building
Graduate School of Business – Phase II
Graham University Center Expansion, Phase II
Greek Housing III, IV, V(3 Buildings)
Health-Science Laboratory Clinic
Honors College
Housing Phase V
Resident Dining
Humanities Center/Offices
International Hurricane Center
Parking Garage Five
Parking Garage Six
Public Safety Building
Recreation Field (Replacement Field)
Recreation Complex Phase II
Support
Training Complex
Engineering Center

Project
Phase I, II, and III Development (EC)
Construction Management Building
Future Development
Recreation Fields (EC)
2 Surface Parking Lots (EC)
Biscayne Bay Campus
Academic Four Building
Student Health Center Addition
Hotel
Theater**
Housing (821 beds)
Recreation Fields (2)
Surface Parking

Problems and Obstacles in Meeting Goals, Objectives and Policies

Revision of Land Use Maps

Within the next ten years, University Park will be built out. As land becomes more limited, it has become clear that FIU needs to reassess its Existing and Future land use maps to more accurately address the changing needs of the university. Below are some of the issued that will need to be addressed through land use changes:

University Wide

- **Mixed Use Facilities:** There are various facilities at each of the FIU sites that can be considered mixed-use. The Graham Center is an example. By combining classrooms, administrative space, and other uses, these buildings provide a solution for maximizing the use of land at UP. They also help to stimulate campus life by creating a critical mass of students and staff. Currently, the Land Use Element does not have a mixed-use designation. Such a designation needs to be added.
- **Indoor and Outdoor Research:** The current land use maps do not indicate the areas in the university designated for indoor or outdoor research. As a research institution with a newly approved medical school, these areas should be identified. This is particularly important for outdoor research space, since it may be susceptible to development if it is not protected.
- **Undeveloped Land:** The Land Use maps do not distinguish between areas designated for "Recreation and Open Space" and undeveloped land that has been identified for future development. It is important for the Land Use maps to identify the uses accordingly in order to protect the university's open space.

University Park

- **Reassess Use of Land:** FIU should evaluate the use of space at UP in order to assure the most efficient use of land. Options include infill and mixed-use development as well as redevelopment of low-density areas, such as University Park Apartments.
- **The Nature Preserve:** If funding is not identified to implement the recommendations of the 2003 Charrette within the next ten years, the university will re-evaluate its plans for the Nature Preserve and reconsider the conservation status of the area. To protect the areas currently used for outdoor research while

also allowing for development, it is recommended that the Nature Preserve be re-designated as a "Research" area.

- **Preservation of Open Space at University Park:** As development occurs, the university needs to assure that sufficient land is set aside at UP for courtyards, pedestrian malls, plazas and other forms of landscaped open space. The existing and future land use maps need to be amended to include such uses.
- **Addition of a Chiller Plant:** FIU will need to add a chiller plant in order to meet the required level of service that is proposed for the northeast quadrant of UP. The addition of the chiller plant will result in the loss of some housing. The future land use map needs to be amended as such.

Land Use Designations

A review of the land use maps for University Park, Biscayne Bay Campus and the Engineering Center revealed that some of land use designations were not clearly defined. To assure consistency and clarity, the land use categories in Campus Master Plan should be revised to include the definitions listed below:

Table 5: Recommended Amendments to Land Use Categories

Land Use	Definition of Allowable Uses
Academic	Includes classrooms, faculty and departmental offices, assembly space, exhibit spaces, and libraries
Community Interface	Areas that serve a public purpose and/or generate significant visits from the outside community
Conservation	Areas preserved and managed to protect natural features, including topography, soil conditions, archaeological sites, plant and animal species, wildlife habitats, heritage trees and wetlands
Mixed-Use	Mixed-Use has been added as an existing land use designation. This category identifies buildings within the campus that comprise more than one use
Other Public	Facilities operated by non-FIU organizations
Parking	Surface parking lots or garage structures
Recreation and Open Space	Areas for active and passive recreation. Active recreation includes sports, athletics, organized sporting events, gymnasiums, and workout facilities. Passive recreation refers to plazas, courtyards, pedestrian malls and other open areas for the passive enjoyment of nature.

Research	Indoor and outdoor areas used for research. Indoor Research areas include laboratories, offices, assembly spaces, exhibit spaces, and library spaces. Outdoor Research areas refer to spaces used for environmental studies or nature related research.
Residential	Student and faculty housing and other housing facilities
Support	Non-academic administrative offices, student services, and physical plant spaces
Undeveloped Land	This designation refers to vacant land (without any development) that has not been designated for a specific land use but that is suitable for future development.
Utilities	Facilities that support the electrical, storm water, sanitary sewer, potable water, chilled water, steam, natural gas, telecommunication and solid waste systems

Needed Modifications Based On Unforeseen Opportunities/Changes

City of Sweetwater "College Town" Proposal

The City of Sweetwater is amending its Comprehensive plan to create mixed-use corridors along portions of 107th Avenue, 109th Avenue, and SW 7th Terrace. The mixed-use corridors would allow for greater density and intensity in the designated areas. The intent of the City is to create a "College Town" by developing housing and commercial areas that will attract the FIU community. The plans include establishing a partnership with FIU to provide off-campus housing, parking and office space. FIU needs to work closely with the City of Sweetwater in developing its college town concept.

Joint Use Facilities with Tamiami Park

The university is pursuing discussions to develop joint parking and recreation facilities with Tamiami Park.

Land Use Plan for the Medical School

Once a site for the newly approved Medical School is determined, the university will need to develop a land use plan for the site.

Proposed Plan Amendments

- Revise the land use designations as recommended on Table 5
- Update the land use maps based on the recommended amendments (See Tables 6, 7 and 8 and Maps 7-15). The "Present Land Use" Maps on the following pages

represent the existing land use as of 2005. Once adopted they will become the "Existing Land Use Maps."

- Reassess land use at UP to create a more compact urban environment. Consider infill and mixed-use options, as well as redevelopment of University Park Apartments.
- Create models for Biscayne Bay Campus and the Engineering Center that plan for maximum build out.
- Amend the Land Use Element to encourage the development of joint-use parking and recreation facilities with Tamiami Park
- Pursue an agreement with the City of Sweetwater that would enable FIU to develop off-campus housing, parking and other types of support facilities as needed.
- Update the Land Use Element to include the Medical School, once a site has been identified and approved.

Table 6: Land Use Amendments to the Future Land Use Map of University Park

Amendment and Affected Project	Land Use in 2003 FLUM	Proposed Land Use Change	Status
Change designation to "Academic"			
Future Development (Northeast Corner)	Parking	Academic	Proposed
Change designation to "Mixed Use" to preserve open space			
Community Stadium	Recreation and Open Space	Mixed Use	Under Construction
The Patricia and Phillip Frost Art Museum	Academic	Mixed Use	Under Construction
Graham Center	Academic	Mixed Use	Existing
Primera Casa	Academic	Mixed Use	Existing
Wertheim Performing Arts Center	Academic	Mixed Use	Existing
Change designation to "Other Public"			
FPL Site	NL	Other Public	Existing
International Hurricane Center	Academic	Other Public	Existing
Change designation "Recreation and Open Space to reflect development			
Recreation Center – Phase I	Academic	Recreation and Open Space	Existing
Change designation to "Recreation and Open Space.			
Avenue of the Arts	Academic	Recreation and Open Space	Existing
Avenue of the Professions	Academic	Recreation and Open Space	Existing
Avenue of the Students (Northeast)	Parking and Academic	Recreation and Open Space	Proposed
Graduate School of Business Courtyard	Academic	Recreation and Open Space	Proposed
Graham Center Courtyard	Academic	Recreation and Open Space	Existing
Green Library Lake Courtyard	Academic	Recreation and Open Space	Existing
Housing Courtyard	Residential	Recreation and Open Space	Existing
Main Entrance Mall	Academic	Recreation and Open Space	Existing

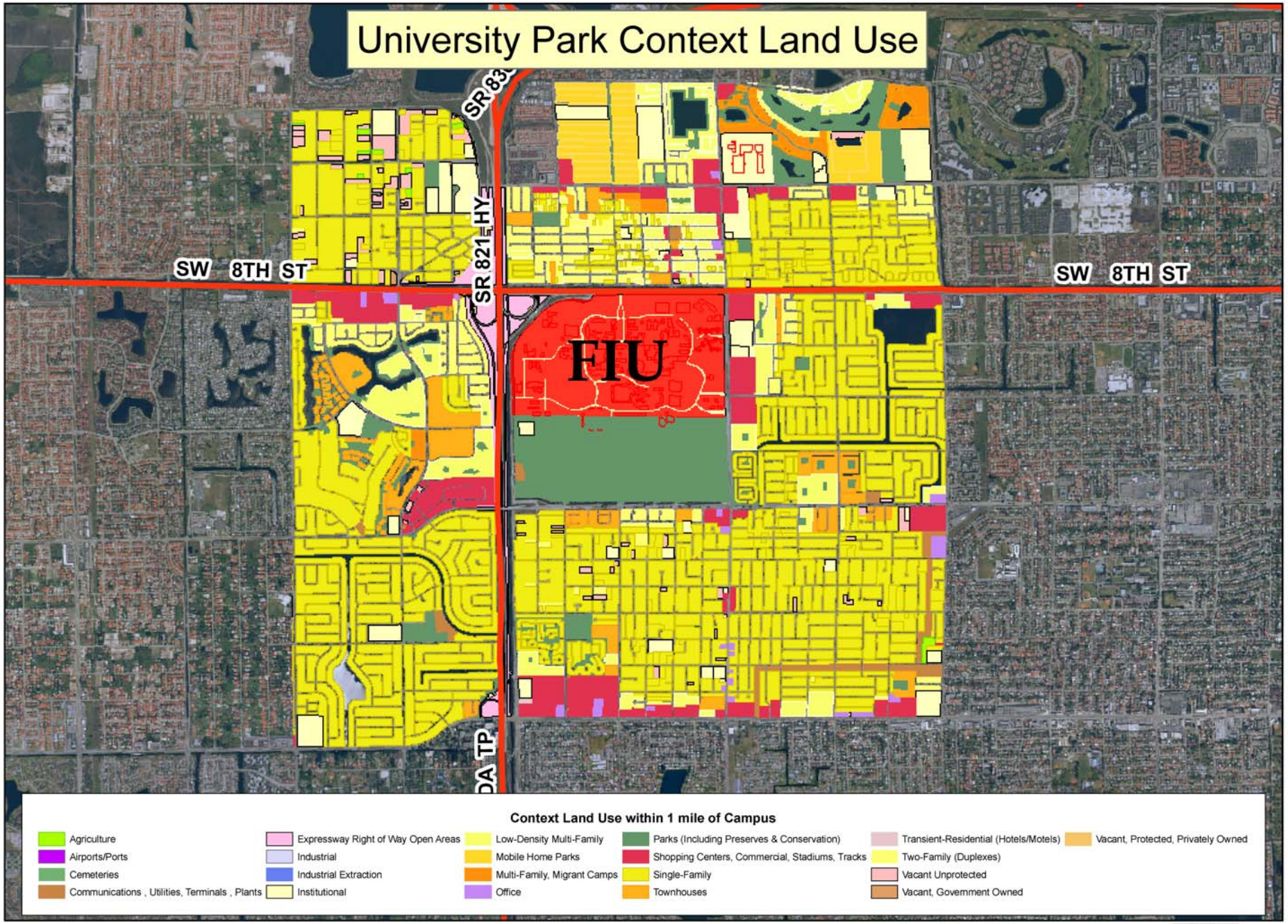
Amendment and Affected Project	Land Use in 2003 FLUM	Proposed Land Use Change	Status
The Pitt	Academic	Recreation and Open Space	Existing
Change designation to “Research”			
Hennington Island	Recreation and Open Space	Research	Existing
Management and Advanced Research	Academic	Research	Existing
Molecular Biology	Academic	Research	Under Construction
Nature Preserve	Conservation	Research	Existing
Wertheim Conservatory/Bio Greenhouse	Academic	Research	Existing
Change designation to “Support”			
Public Safety	Parking	Support	Under Construction
Satellite Chiller Plant	Residential	Support	Proposed

Table 7: Land Use Amendments to the Future Land Use Map of Biscayne Bay Campus

Amendment and Affected Project	Land Use in 2003 FLUM	Proposed Land Use Change	Status
Change designation to “Community Interface”			
Theater	Support	Community Interface	Proposed
Change designation to “Mixed Use”			
Wolfe University Center	Academic	Mixed Use	Existing
Change designation to “Research”			
Ecology Lab	Academic	Research	Existing
Marine Biology	Academic	Research	Existing
Change designation to “Undeveloped Land”			
Area extending from the south of the peninsula along the shoreline to the Hospitality Management Building	Recreation and Open Space	Undeveloped	Existing

Table 8: Land Use Amendments to the Future Land Use Map of Engineering Center

Amendment and Affected Project	Land Use in 2003 FLUM	Proposed Land Use Change	Status
Change designation to “Academic”			
Construction Management Building	Recreation and Open Space	Academic	Proposed
Change designation to “Mixed Use”			
Engineering Center Building	Academic	Mixed Use	Existing
Change designation to “Research”			
Area behind the Maintenance Building	Support	Research	Existing


University Park Context Land Use
SR 83
SR 821 HY
SW 8TH ST
SW 8TH ST
FIU
DA TP
Context Land Use within 1 mile of Campus
Agriculture
Airports/Ports
Cemeteries
Communications , Utilities, Terminals , Plants
Expressway Right of Way Open Areas
Industrial
Industrial Extraction
Institutional
Low-Density Multi-Family
Mobile Home Parks
Multi-Family, Migrant Camps
Office
Parks (Including Preserves & Conservation)
Shopping Centers, Commercial, Stadiums, Tracks
Single-Family
Townhouses
Transient-Residential (Hotels/Motels)
Two-Family (Duplexes)
Vacant Unprotected
Vacant, Government Owned
Vacant, Protected, Privately Owned
0
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1.5
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Miles
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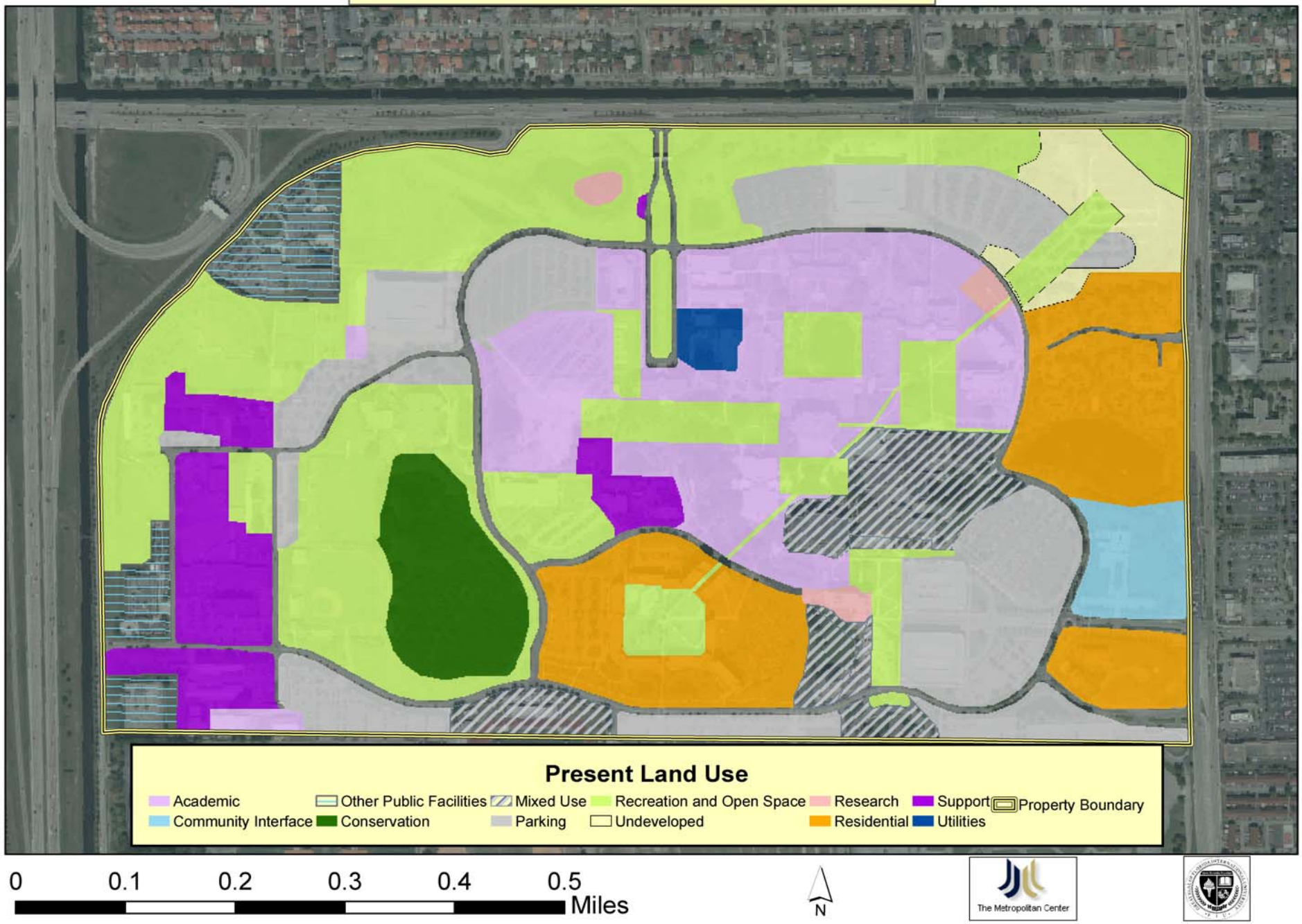
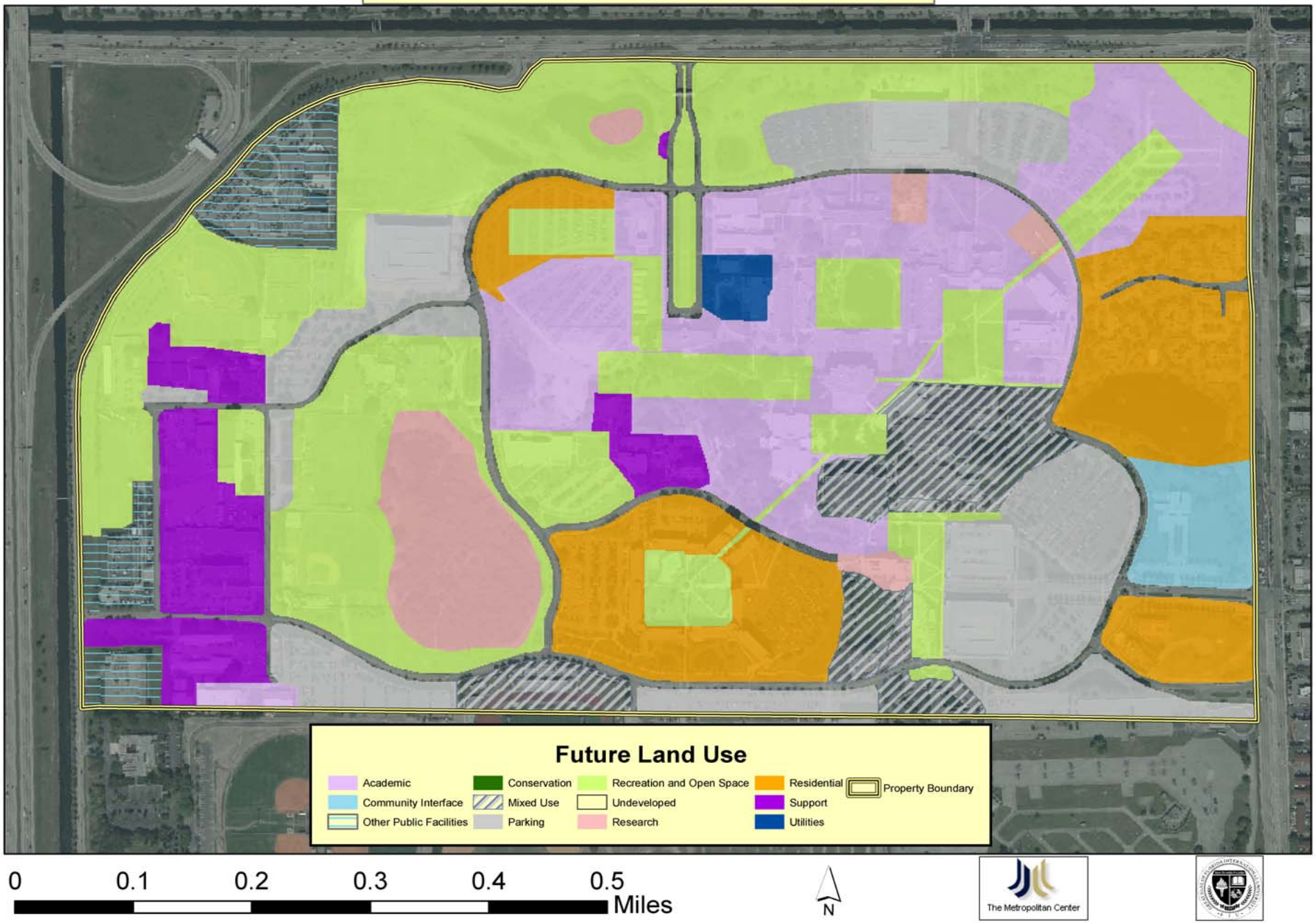
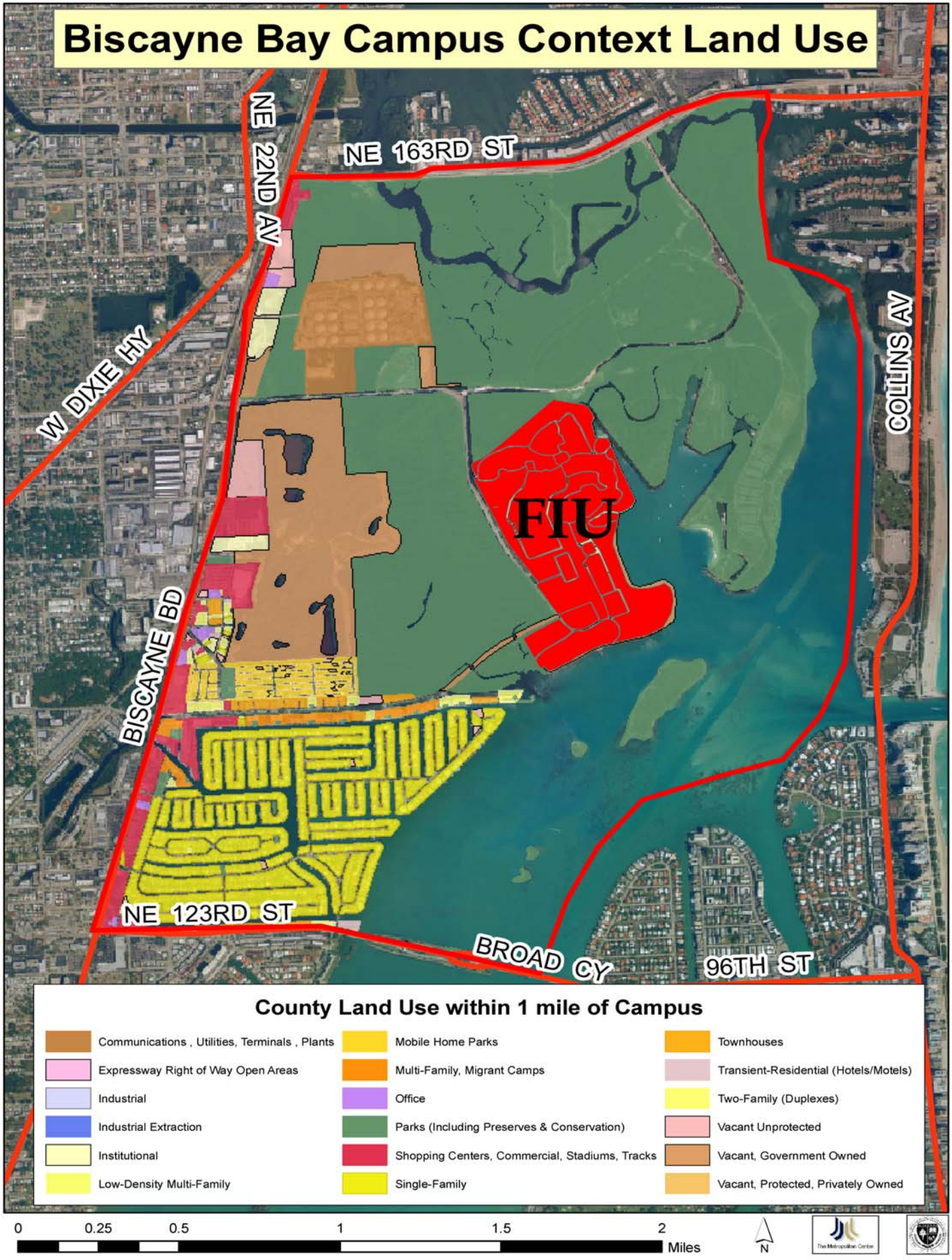
The Metropolitan Center

University Park Present Land Use



University Park Future Land Use




Biscayne Bay Campus Context Land Use
NE 22ND AV
NE 163RD ST
W DIXIE HY
COLLINS AV
FIU
BISCAYNE BD
NE 123RD ST
BROAD CY
96TH ST
County Land Use within 1 mile of Campus
Communications , Utilities, Terminals , Plants
Expressway Right of Way Open Areas
Industrial
Industrial Extraction
Institutional
Low-Density Multi-Family
Mobile Home Parks
Multi-Family, Migrant Camps
Office
Parks (Including Preserves & Conservation)
Shopping Centers, Commercial, Stadiums, Tracks
Single-Family
Townhouses
Transient-Residential (Hotels/Motels)
Two-Family (Duplexes)
Vacant Unprotected
Vacant, Government Owned
Vacant, Protected, Privately Owned
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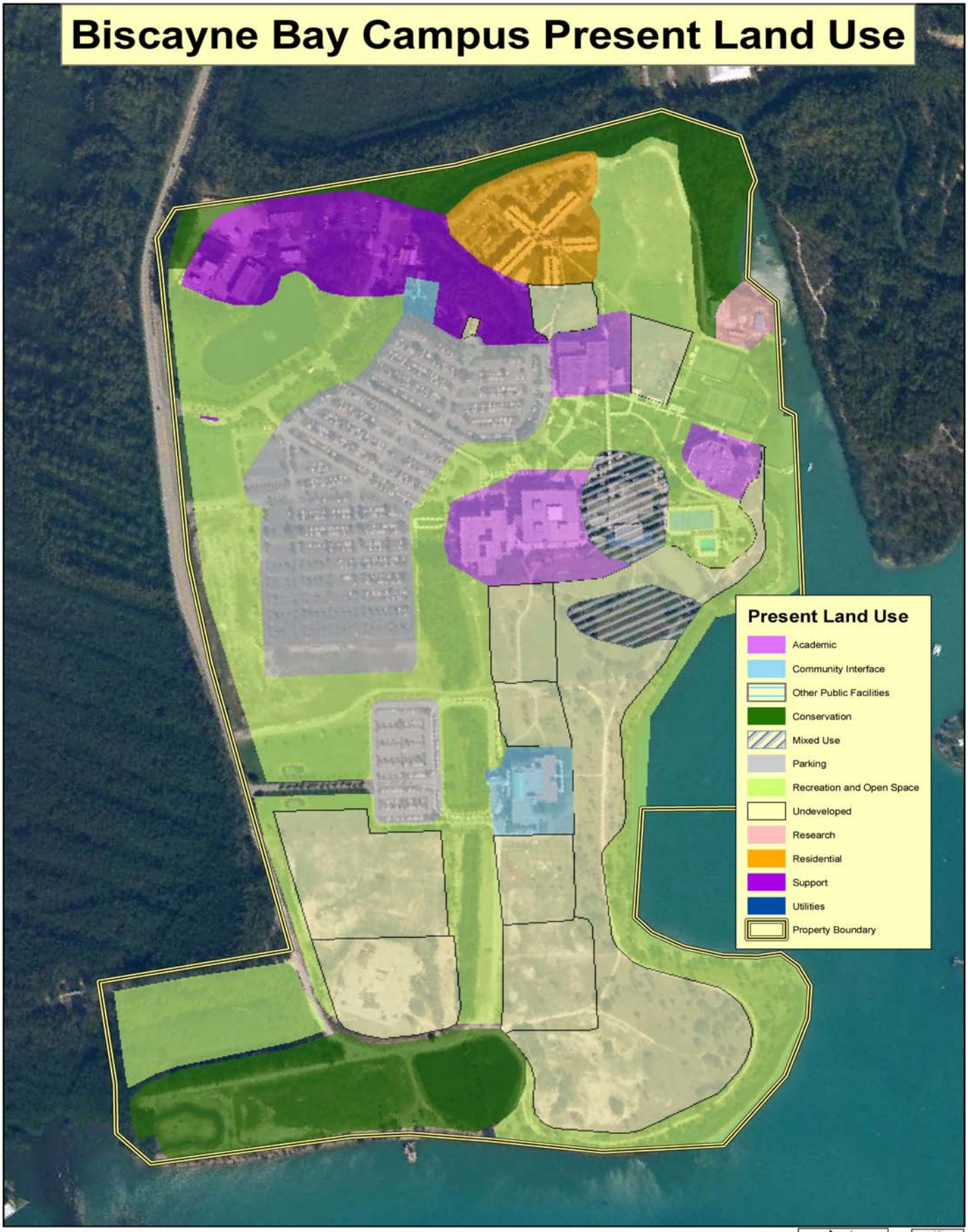
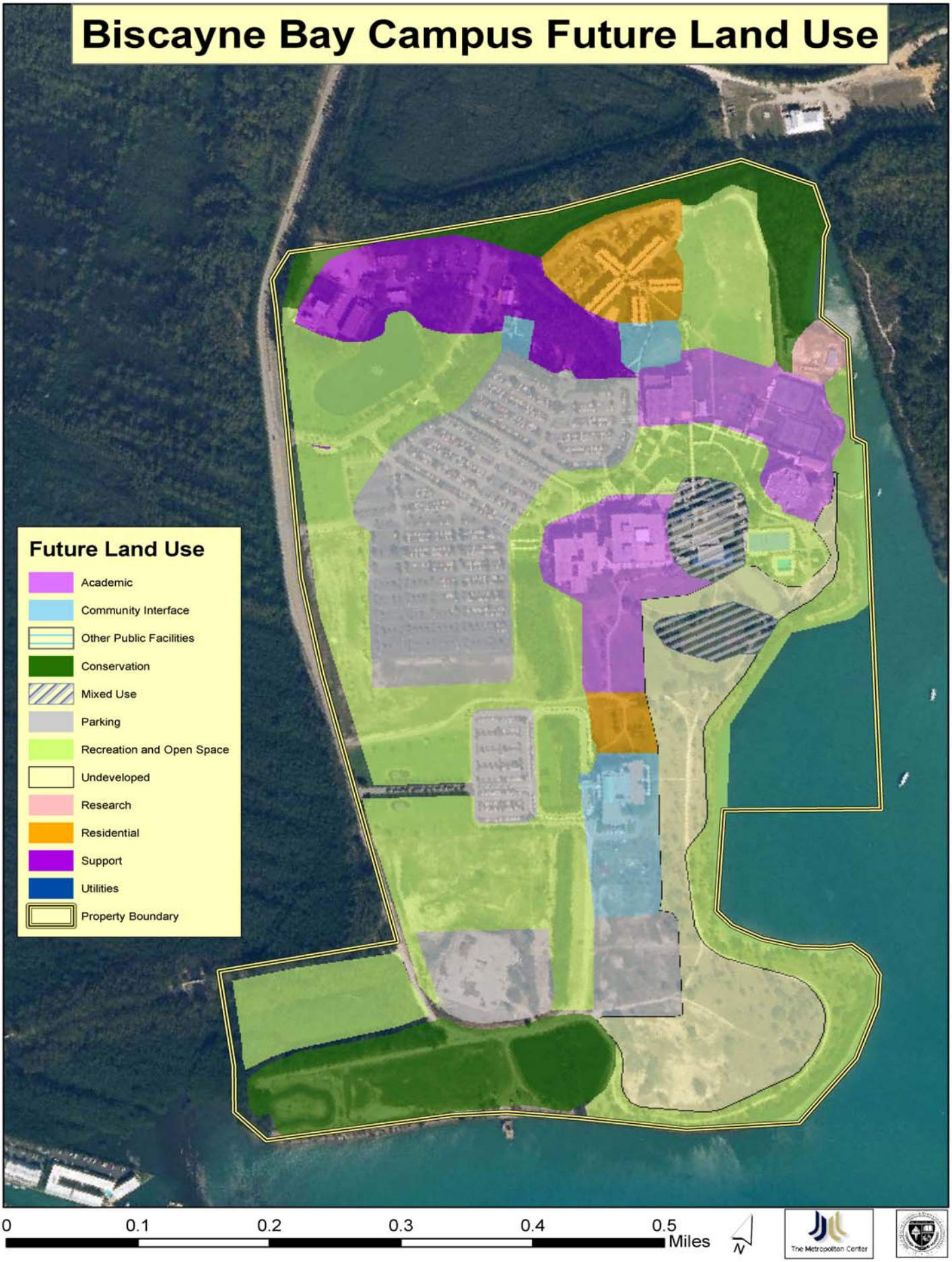
Biscayne Bay Campus Present Land Use




Biscayne Bay Campus Future Land Use
Future Land Use
Academic
Community Interface
Other Public Facilities
Conservation
Mixed Use
Parking
Recreation and Open Space
Undeveloped
Research
Residential
Support
Utilities
Property Boundary
0
0.1
0.2
0.3
0.4
0.5
Miles
N
The Metropolitan Center


Engineering Center Present Land Use
Present Land Use
Academic
Community Interface
Other Public Facilities
Conservation
Mixed Use
Parking
Recreation and Open Space
Undeveloped
Research
Residential
Support
Utilities
Property Boundary
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Miles
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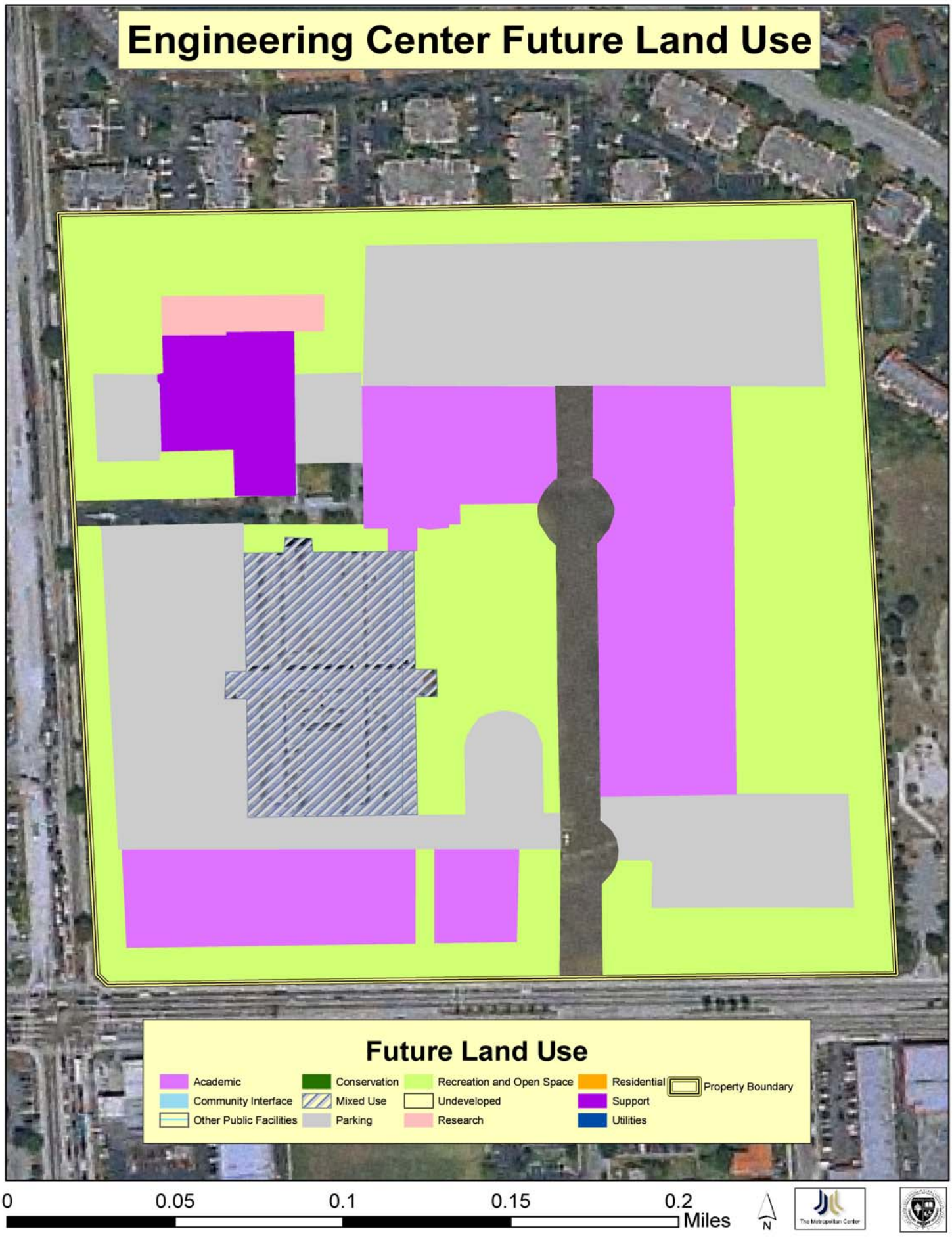
Engineering Center Future Land Use
Future Land Use
Academic
Community Interface
Other Public Facilities
Conservation
Mixed Use
Parking
Recreation and Open Space
Undeveloped
Research
Residential
Support
Utilities
Property Boundary
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Miles
N

Element 5: Academic Facilities

The purpose of this element is to ensure provision of academic facilities to meet University needs for the planning period.

Accomplishments in Meeting Goals, Objectives and Policies

Since the 2000-2010 Master Plan Update, FIU has faced a shortage of academic space at UP. This can be attributed to the increased enrollment over the years. In order to address this issue, the university has undertaken an aggressive capital campaign. Since 2003, FIU has completed three academic facilities and has started design and construction on an additional five buildings, for total of 527,484 GSF of academic space. There are plans to build an additional 1,022,313 by 2015.

Table 9: Academic Facilities Developed or Under Construction from 2003-2005

Academic Space	GSF	Status
University Park		
Health and Life Sciences II	100,029	Complete
Artist Studio	3,000	Under Construction
Rafael Diaz Balart College of Law Building BR-832	153,768	Complete
Graduate School of Business – Phase	87,528	Under Construction
Social Sciences (International Studies)	57,712	Design
Molecular Biology	45,120	Under Construction
Subtotal	**447,157**	
Engineering Center		
None	**---**	---
Biscayne Bay Campus		
Marine Science Building (Academic III)	83,327	Complete
Subtotal	**83,327**	
Total	**530,484**	

Source: FIU Master Plan Map, February 2006.
Total amount does not include any improvements or remodeling of existing academic facilities.

Table 10: Academic Facilities Planned for Future Development 2005-2015

Academic Space	GSF	Status
University Park		
Chemistry and Physics Addition	60,000	Planned
Graduate Classroom Building	59,120	Planned
Graduate School of Business – Phase II	36,768	Planned
Health-Science Laboratory Clinic	63,200	Planned
Honors College	40,425	Planned
Humanities Center/Offices	77,600	Planned
Science/Classroom Complex	138,800	Planned
Science/Classroom Complex Phase II	60,000	Planned
Subtotal	**535,913**	
Engineering Center		
Construction Management Green Building	32,800	Planned
EC Classroom Expansion	84,000	Planned
Phase I, II, III and IV Development (EC)	300,000	Planned
Subtotal	**416,800**	
Biscayne Bay Campus		
Academic Four Building	64,000	Planned
Hospitality Management - Beverage Management Center	5,600	Planned
Subtotal	**69,600**	
Total	**1,022,313**	

Source: Capital Improvements Plan for 2005-2015

Total amount does not include any improvements or remodeling of existing academic facilities.

Problems and Obstacles in Meeting Goals, Objectives and Policies

Although FIU's shortage of academic space should be addressed once the projects that are planned or under construction are completed, it is important to note that the land available for academic development at University Park is limited. Indeed, UP is expected to be completely built out by 2015. To ensure optimum efficiency of buildable land, the university needs to create plans to build a more compact academic core at UP. As the options for development decline at UP, it is likely that FIU will shift its focus to developing Biscayne Bay Campus and the Engineering Center.

Needed Modifications Based On Unforeseen Opportunities/Changes

Within the next planning period, FIU will need to construct the academic facilities to house the newly approved medical school. At this time, the location of the medical school has not been determined.

Proposed Plan Amendments

- Update the Academic Space Element, including the projections for academic space needs for 2015

Element 6: Support Facilities

The purpose of the Support Facilities Element is to ensure the provision of support facilities to meet university needs during the planning period. Support facilities include non-academic office space, campus support services, student academic support, and other non-academic uses. Space needs related to recreation, housing, parking space, and other support services will be evaluated in the discussion of their respective elements.

Accomplishments in Meeting Goals, Objectives and Policies

As the academic and research programs of the university grow, FIU must provide sufficient support facilities to meet the needs of students and staff. To meet these needs, FIU has added approximately 74,041GSF of support space. This includes projects that are currently under construction. An additional 81,520 GSF is planned for development by 2015.

Table 11: Support Facilities Developed or Under Construction from 2003-2005

Project	GSF	Status
University Park		
The Patricia and Phillip Frost Art Museum	46,874	Under Construction
Student Health Services Center Expansion	27,167	Complete
Subtotal	**74,041**	
Engineering Center		
Maintenance Building Expansion	N/A	Complete
Biscayne Bay Campus		
Total	**74,041**	

Source: Capital Improvements Plan for 2005-2015

Table 12: Facilities Planned for Future Development 2005-2015

Project	GSF	Status
University Park		
Career Services Building	11,360	Planned
Computer Services	73,371	Planned
Public Health Shared Facility	90,000	Planned
Food Services Miscellaneous Projects	20,000	Planned
Graham University Center Expansion, Phase II	40,000	Planned
International Hurricane Center	31,760	Planned
Subtotal	**266,491**	
Engineering Center	-	
Biscayne Bay Campus		
Hotel	64,000	Planned
Student Health Center Addition	6,000	Planned
Theater	11,520	Planned
Subtotal	**81,520**	

Source: Capital Improvements Plan for 2005-2015

Problems and Obstacles in Meeting Goals, Objectives and Policies

As has been discussed previously, the primary challenge that FIU faces is the limited amount of available space for development at University Park. Should there be a need for expansion beyond what is planned in the Master Plan; FIU may need to consider development at other university sites or off-campus.

Needed Modifications Based On Unforeseen Opportunities/Changes

The FIU Campus Master Plan will need to be amended to include a plan for the support facilities of the newly approved medical school.

Proposed Plan Amendments Necessary to Address Identified Problems and Opportunities/Changes

- Update the Support Facilities Space Element, including the projections for support space needs for 2015

Element 7: Housing

The purpose of this element is to ensure the provision of housing facilities on the University campus and within the host community adequate to meet the needs of the projected University enrollment.

Accomplishments in Meeting Goals, Objectives and Policies

Future Housing Needs Committee

The high cost of housing in the market place and increased enrollment at FIU and have required the university to reassess its strategies related its residential programs. As a result, the university formed the "Future Housing Needs Committee" in 2006. The Committee was created to assess the current housing program and develop recommendations for meeting existing and projected housing needs. The recommendations and analysis provided in this discussion are based on the findings of the Committee.

Housing Inventory

FIU's residential facilities rank among the best in the country. They have set the standards for design and construction by building energy efficient, highly durable and easily maintained structures with an operational life span of 40 years or more. The buildings also focus on creating a living environment that is responsive to student needs by providing privacy, community living space and state of the art technology.

In total, the university offers 2,995 beds for student housing. This includes Lakeview Housing, an 825 facility that is scheduled to open in the Fall of 2006. Within the next four years, the university plans to build an additional 1,000 beds. A more aggressive plan calls for the construction of over 2000 beds by 2010. However, this will be contingent on funding, availability of land, and housing demand.

Table 13: Inventory of Existing Beds

Location	Beds
University Park	
Everglades Hall	388
Lakeview Hall	825
Panther Hall	410
University Park Apartments	593
University Park Towers	491
Total	**2,707**

Biscayne Bay Campus	
Bay Vista Housing	288
University Wide	
Total Beds	2,995

Source: FIU Housing Census

In addition to the housing facilities that are owned and operated by FIU, University Park has two fraternity houses, one of which was completed during the last three years. Each house has 35 beds for a total of 70 beds. Three additional fraternity houses are planned for the future. However, financial issues related to the existing houses will require an assessment of the funding structure for future Greek housing.

Problems and Obstacles in Meeting Goals, Objectives and Policies

20% Housing Goal

The 2000-2010 Master Plan calls for FIU to provide on-campus housing to 20% of its full-time enrollment students (FTE). Currently, the residential program houses approximately 9 percent of the FTEs. For FIU to meet the 20% goal, it would need 5,836 beds by 2010. Given the current inventory, this would require the construction of 500 beds per year. It is unlikely that FIU will be able to meet this goal given the following factors:

- **Availability of Land:** The Master Plan for University Park does not provide adequate space to achieve the growth projections discussed above. As a result, future housing expansion may need to take place at Biscayne Bay Campus. The success of this strategy, however, is contingent on the ability of the university to develop an academic plan for BBC that drives the demand for student housing.

- **Housing Demand:** Although there is a waiting list for on-campus housing, the findings of the Housing Needs Committee revealed that the current number of out-of state applications may not be sufficient to drive the planned housing expansion. To assure that there are sufficient students for the proposed housing, the timing and phasing of the planned projects should be based on a thorough assessment of future demand. This will require FIU to improve the data and methodology for developing demand projections. Furthermore, the university will need to increase recruitment of out-of area students and attract a greater number of local students to live on campus.

In order to make the 20% goal more realistic for the 2005-2015 planning cycle, the university has placed a cap of 7,000 beds. This will enable the university to meet the growing needs of FIU, while acknowledging the limitations of further expansion. Should there be a need for additional housing; FIU will need to consider building off-campus housing.

Affordable Housing

The cost of real estate in South Florida has affected FIU's ability to recruit and retain students, faculty and staff. Indeed, residential real estate prices have escalated to a level that is making housing unaffordable for much of the workforce in Miami-Dade County. The problem is that salaries have not kept pace with rising real estate prices.

Table 14 below indicates the income that is necessary to afford current market rate housing in Miami-Dade County without incurring a cost burden. Cost burden occurs when households pay more than 30 percent of their income toward housing. For homeownership, a household would need an annual income of $78,000 to afford a median priced home of $318,000 without incurring a cost burden. To comfortably afford the average monthly rent for a two-bedroom apartment ($1,300), a household would need an income of $50,000. However, 65 percent of the households in Miami-Dade County earn less than $43,000 a year. This includes many of the students, staff and entry-level faculty at FIU.

Table 14: Affordable Housing Based on the County Median Income for a Family of Four

Median Income for a Family of 4	Affordable Price	Median Price	Required Household Income
Homeownership			
$46,350	$139,050	$318,000	$78,000
Rental			
$46,350	$1,159	$1,300	$50,000

* Median rental price for an average two-bedroom rental unit*

Table 15: Median Income for Miami-Dade County

	Miami-Dade County	
Household Income	Households	%
$0 - $17,983	222,613	21%
$18,343 - $28,773	111,646	14%
$29,132 - $43,159	166,310	29%
Above $43,159	276,809	35%
Total	777,378	100%
Median Household Income:	$37,148	
Median Income for a Family of Four	$46,350	

Source: Shimberg Center for Affordable Housing.

The high cost of housing in Miami-Dade is making it difficult for FIU to recruit faculty and students from outside of the area. College students, who typically live on limited incomes, are facing challenges in finding affordable housing. This is particularly problematic for graduate and professional students since FIU offers few options on-campus for affordable graduate and family housing.

Possible solutions for addressing issue of affordable housing include:

- **Providing on-campus housing for graduate students and faculty:** One option would be to reconfigure the University Park Apartments and lower housing rates as the debt burden for the complex is paid down. A second option is to build the facilities at Biscayne Bay Campus.

- **Developing a Comprehensive Affordable Housing Program:** Although the university provides some assistance to faculty and staff in finding housing, it is not a comprehensive effort. A comprehensive program would include creating a registry of affordable housing options for students faculty and staff; developing partnerships with local real estate companies and lenders; working with housing providers to develop special incentives for the FIU community; and providing financial incentive programs, such as down payment matching funds.

Needed Modifications Based On Unforeseen Opportunities/Changes

Pursuant to HB 1362, the FIU and the City of Sweetwater are discussing the possibility

of establishing a public-private partnership to provide affordable housing opportunities to students off-campus. Specifically, the City of Sweetwater is planning to create a mixed use area with high density multi-family units. Their goal is to build housing that would attract students, faculty and staff to the area.

Proposed Plan Amendments

- Amend the goal of providing housing to 20% of the FTEs by limiting development to a maximum of 7000 beds (University Wide).
- Plan the timing and phasing of future housing projects based on demand
- Develop affordable housing for graduate students, families and faculty.
- Consider reconfiguring or redeveloping University Park Apartments to better meet the housing needs of the university.
- Partner with the private sector to build affordable off-campus housing
- Develop a comprehensive housing program for students, faculty, and staff that includes assistance in finding a home and financial incentives

Element 8: Recreation and Open Space

The purpose of this element is to ensure the provision of adequate and accessible recreation facilities and open space to meet the future needs of the University.

Accomplishments in Meeting Goals, Objectives and Policies

The students, faculty and staff of FIU have a wide variety of opportunities for passive and active recreation, including a football stadium, a basketball arena, a baseball stadium, a state-of-the-art recreation center, and various types of fields for athletic and intramural sports. Below is an inventory of existing recreation facilities and open space at FIU.

Table 16: Inventory of Recreation Facilities and Open Spaces

	University Park:	Biscayne Bay Campus:	Engineering Center
Recreation Facilities			
Baseball Stadium	1		
Basketball Arena (Pharmed Arena)	1		
Basketball Courts	6	1	
Court gym	2		
Fitness Space	1	1	
Football Stadium*	1*		
Multipurpose Fields	2***	1	
Multipurpose fitness rooms	2		
Racquetball Courts	3 indoor		
Recreation Center	1		
Running Track		1	
Soccer Stadium	1		
Softball Fields	1		
Swimming Pools**	1**	1	
Tennis Courts	12	6	
Total Acres of Recreation Space	26.8 acres	8.8 acres	
Open Space and Lakes			
Lakes	14	4	
Total Acres of Open Space	69.8acres	55.8 acres	13.46 acres
Recreation and Open Space			
Total	96.6 acres	64.6 acres	13.46 acres

*Football Stadium is a shared facility with Tamiami Park,

**In addition to the Panther Hall pool, FIU has access to the Tamiami Park pool adjacent to University Park.

***1 field is shared with the elementary school on the northwest corner of campus.

The university has been successful in achieving the objectives for recreation and open space outlined in the Campus Master Plan. As anticipated, FIU has completed the Phase I of the Recreation Center and the Women's Softball and Tennis Center at University Park. The expansion and renovation of the FIU Community Stadium is currently in progress.

In the next planning period, FIU will continue to add more recreation facilities to the inventory. Planned activities for University Park include a Training Complex, a Running Track and the Fitness Center Addition. At Biscayne Bay Campus, the Master plan calls for one multipurpose field and a softball field.

At this time, the Engineering Center does not have any recreation facilities; however, the site has sufficient open space for active and passive recreation areas. If necessary, the University may construct additional recreation fields and facilities at this site to meet its level of service needs.

Problems and Obstacles in Meeting Goals, Objectives and Policies

LOS for Recreation and Open Space

The Master Plan does not provide level of service standards (LOS) for recreation and open space. Without such benchmarks, it is difficult to determine existing and future needs of the university. Table 17 below provides a recommended LOS for FIU (2.75 acres per 1000 students). This LOS is consistent with the standards of the host communities. Based on this standard, FIU will be able meet the current needs of the university. However, by 2015, University Park will be at its maximum capacity.

It is important to note that the recommended LOS only reflects the needs of the general student body. It does not reflect the special needs of the university's athletic program. A specific LOS for athletic facilities needs to be developed during the Master Plan Update.

Table 17: Existing and Projected Recreation and Open Space LOS

Year	Student Headcount	Acres	LOS
University Wide			
2004-05	35,002.0	174.7	5.0 acres/1000 students
2014-15	56,374.0	174.5	3.1 acres/1000 students
University Park			
2004-05	27,307.0	96.6	3.5 acres/1000 students
2014-15	42,146.0	98.2	2.3 acres/1000 students

Biscayne Bay Campus			
2004-05	7,540.0	64.6	8.6 acres/1000 students
2014-15	8,728.0	68.2	7.8 acres/1000 students
		Recommended LOS	**2.75 acres/1000 students**

Need for Recreation Fields at University Park

New recreation fields are needed at UP to support field sports and intramural /club activities at University Park. Currently the campus has two fields. Only one is designated for recreational use for the University; however, this field is often unusable due to poor drainage and overuse. The second field primarily serves the elementary school. At least two new recreation fields need to be constructed within this planning period to support the planned growth of the University. One field will be a replacement for the recreation area that was lost after the construction of the Panther Parking Garage.

- Relocate Running Track
- The running track at UP needs to be relocated. The track is currently located in the football stadium; however, in order to expand the stadium, the track must be eliminated. The University is in the process of identifying a site for a new track.

Recreation Needs at Biscayne Bay Campus

There are two new Division I programs proposed for Biscayne Bay Campus, Women's Swimming and Women's Rowing. Facilities are adequate to initiate these programs; however, improvements in the aquatics center will be required to support the swimming program and an upgraded boat launch/practice area required for the rowing program.

There is also a need to replace the two recreation fields that were lost at Biscayne Bay Campus due to the construction of the new Marine Biology Building.

General Renovations and Upgrades of Existing Facilities

Existing facilities, such as the Panther Arena, need to be improved. Additional storage space and office space for staff is needed.

Plan for the Use of Open Space

Although the Master Plan calls for the protection of existing open space. It does not protect landscaped open areas, such as malls and plazas, from development. To protect such areas, the university needs to develop a built-out development plan that designates

the use of open spaces. These areas should also be designated in the land use maps (See Maps 8-9, 11-12, 14-15)

Needed Modifications Based On Unforeseen Opportunities/Changes

If the demand for recreation facilities increases beyond that which is planned at University Park, the University may need to look off campus for additional space. This would include creating new facilities at the Engineering Center or developing an interlocal agreement with Miami-Dade County for joint use of Tamiami Park and other park facilities.

Proposed Plan Amendments

- Adopt level of service standards for recreation and open space and for athletic facilities
- Replace the fields and track at University Park and Biscayne Bay that were lost due to construction
- Develop an open space master plan that addresses landscaped areas and the use of open space (including recreation space, educational space, and outdoor gathering spaces)

Element 9: General Infrastructure

The purpose of this element is to ensure adequate provision of public facilities and services required to meet the future needs of the University.

Stormwater Management

Level of Service

The stormwater management systems at University Park, Biscayne Bay Campus, and the Engineering Center are designed to handle all major stormwater rainfall events on site. The capacities of the existing swale and lake system at each of the sites are sufficient for the present development. There is also sufficient area at each site to provide additional lake area and/or exfiltration trench for future development.

The Wolfsonian Museum and Annex are connected to the stormwater system of the City of Miami Beach. Recent improvements to the system have eliminated flooding at the site and should sustain any future development.

Challenges/Opportunities

The water bodies at UP and BBC are not interconnected. This does not allow the drainage subbasins to compensate each other for inconsistencies in rainfall and runoff areas. As a result, some areas have drainage problems.

Recommendations

- All water bodies at University Park, Biscayne Bay Campus, and the Engineering Center should be interconnected whenever possible to eliminate isolated subbasins and minimize the possibility of one subbasin being overburdened and another underutilized.
- Best Management Practices (BMP) should be incorporated into the drainage infrastructure design to minimize the impacts to ground and surface water quality.

Potable Water

Level of Service

Currently, FIU consumes 11 gallons of water per capita per day. This is slightly higher than the recommended LOS of 10 gallons per capita per day.

The overall physical condition of the water main distribution systems at all FIU sites is

adequate. Pressure tests are performed regularly to assure the distribution systems meet all of the required potable water demands.

Challenges/Opportunities

Pursuant to Senate Bill 360, the Miami-Dade Water and Sewer Department will restrict development unless there is sufficient water supply to meet the needs of future projects. The university will need to work closely with WASD and the host communities to assure there is sufficient capacity to meet the water consumption needs of future development at FIU

Recommendations

- Revise the level of service for potable water based on actual consumption patters.
- Work with WASD and the host communities to assure there is sufficient capacity to meet the water consumption needs of future development at FIU

Sanitary Sewer System

Level of Service

Sanitary wastes at University Park and Biscayne Bay Campus have increased significantly over the years. This can be attributed to the growth of the university and deficiencies in the infiltration and inflow system. The University is undertaking a study to evaluate the system. The study will provide recommendations for taking corrective measures to improve infiltration and inflow problems. FIU has identified funding to carry out the recommendations.

Table 18: Comparison of Projected and Actual Sanitary Sewer LOS for 2005

	Projected for 2005	Actual
University Park:	199,175 Avg. GDP	664,027 Avg. GDP
Biscayne Bay Campus:	49,448 Avg. GDP	79,448 Avg. GDP

The sanitary sewer LOS for 2015 needs to be updated to reflect current consumption patterns. Furthermore, the LOS should be reported per capita.

Table 19: Projected Sanitary Sewer LOS for 2015

	2015 Projections for Avg. GDP	2015 Gallons per Capita per Day
University Park:	1,053,650 Avg GDP	26
Biscayne Bay Campus:	104,946 Avg GDP	11

Challenges/Opportunities

Miami-Dade County Water and Sewer Department (WASD): University Park and the Engineering Center receive sanitary sewer services from WASD. The department has made some significant improvements to the County's sewer system; however, these improvements may not be sufficient to meet the needs of the projected growth in Miami-Dade County. As a result, WASD is evaluating development orders that generate additional wastewater flows on a case-by-case basis. The University may need to develop more specific agreements with WASD and the other host communities to assure that all the University sites have sufficient capacity to meet the existing and future development needs of FIU.

The City of North Miami: Biscayne Bay Campus is connected to the sanitary sewer system of the City of North Miami. In recent years, the City has upgraded the existing sanitary sewer force main leaving the FIU pump station. The pump station will require comparable upgrades to assure adequate service and capacity.

Recommendations

- Revise the level of service for sanitary sewer based on actual consumption patterns.
- Continue to work with the City of North Miami and Miami Dade County to make improvements to the sanitary sewer system at all FIU sites in order to address infiltration and inflow deficiencies.

Solid Waste

Level of Service

FIU utilizes a combination of staff, private contractors and public entities to collect and dispose of its solid waste. The solid waste material is either recycled or sent to the landfill for disposal. The existing level of service for solid waste is 0.58 pounds per FTE per day. This is 68 % below the required level service standard of 1.85 pounds per FTE per day.

A notable achievement has been the success of the recycling program. The University recycles approximately 28% the material generated. This exceeds the 5% objective in the Campus Master Plan. The amount of recycled material is likely to increase in the future as the University expands its efforts. For example, FIU has implemented a pilot program for recycling plastics, steel cans and glass. This program will be expanded in the near future. There are also plans to intensify recycling of card board paper.

Table 20: Solid Waste and Recycling Material Generated by FIU Site: 7/1/05-6/30/06

FIU Site	Solid Waste (Tons)	Recycling				Total Tons
		Cardboard (Tons)	Paper (Tons	Light Bulbs (Tons)	Aluminum, Plastic, Glass (Tons)	
University Park	1,316	67	371	5	13	1,771
Engineering Center	118	10	49	1		179
Biscayne Bay Campus	211	49	81			341
Wolfsonian Museum	9.4					9
Subtotal	1,654	126	501	5.9	13	2,300
Total	1,654	645				2,300

Table 21: Solid Waste Projections for 2014-2015

	FTE's	Tons/Year	Tons/Day	LOS
University Park	29,769	3,151	8.63	0.58 lbs per FTE per Day
Biscayne Bay Campus	5,889	623	1.71	0.58 lbs per FTE per Day
Total	35,658	3,774	10.34	0.58 lbs per FTE per Day

Challenges/Opportunities

Some of the recycling programs are not observed at the Wolfsonian Museum and Annex due to the size and nature of the facilities.

Recommendations

- Expand recycling programs to include the Wolfsonian Museum and Annex

Element 10: Utilities

The purpose of this element is to ensure adequate provision of utility services required to meet the future needs of the University:

Hot Water and Chilled Water

Level of Service

The system capacity at Biscayne Bay Campus, the Engineering Center, and the Wolfsonian are adequate to meet future needs. There are plans to build an additional chiller plant at University Park to accommodate future development.

Since the last Master Plan update, FIU has upgraded the ability to pump chilled water to all the growth areas. It has optimized the efficiency the generating and pumping equipment and has increased the capacity of the system to satisfy the higher chilled water demands of new buildings. For example, the university expanded the Chilled Water Loop at University Park and has improved the capacity of the chiller plant and chiller no. 3

Challenges/Opportunities

FIU's building standards need to be updated. The standards provide parameters for piping, controls, and pumping arrangements. They also stipulate piping loop materials and methods of installation. The updates should include the use of alternative sources of energy (cogeneration), as well as thermal storage, and other energy conservation measures.

Recommendations

- Build an additional chiller plant at University Park to accommodate future expansion.
- Update building standards to include the use of alternative sources of energy, as well as thermal storage, and other energy conservation measures.

Electrical Power

Level of Service

Electrical energy is furnished to FIU by Florida Power and Light (FP&L). The University maintains a close relation with FPL to assure adequate levels of services for future development.

FIU is currently in the process of extending the existing electrical power grid through new construction. The university has also installed Octrom T-8 lamps to increase energy efficiency in all buildings.

Challenges/Opportunities

The university is in the process of designing guidelines that will incorporate FPL requirements for building standards. By complying with the recommended standards, FIU will be able to participate in FP&L's incentive programs. The incentives will reduce the cost of energy saving improvements and will help FIU to reduce the cost of utilities.

Recommendations

- Develop design guidelines that incorporate FPL building standards and require the university to participate in FP&L's energy saving incentive programs.

Telecommunications

Level of Service

FIU has improved the capacity of its telecommunications system by expanding the grid and reinforcing the existing system with new ductbanks. Fiber optic has been installed throughout FIU with new construction projects.

Challenges/Opportunities

As wireless technology becomes more prevalent, FIU should consider making all the FIU sites WiFi capable.

Recommendations

- Add an objective to the Utilities Element for FIU to make all university sites WiFi capable.

Element 11: Transportation

The purpose of this element is to plan for future motorized and non-motorized traffic circulation systems to ensure the provision of adequate transit, circulation and parking facilities; to ensure the provision of adequate pedestrian and non-vehicular circulation facilities to meet the future needs of the University; and to coordinate the location of these facilities planned in the host community in the context area.

Accomplishments in Meeting Goals, Objectives and Policies

FIU is a commuter-oriented institution. As such, it must maintain a transportation system provides that adequate roadway capacity, parking and transit services. Below is a list of the various improvements that FIU has made to its transportation system since 2003:

- Completed 4 pedestrian walkways, including the Avenue of the Professions
- Added the Panther Parking Garage and the Red Parking Garage at University Park
- Added a second entrance from 8th Street at University Park
- Completed a new bus station at University Park
- Created an on-call shuttle service at University Park
- Made improvements to parking lots at all university sites
- Constructed a new main entrance from Flagler Street at the Engineering Center

Planned improvements for 2005 to 2015 include two parking garages at University Park, reconfiguration of the parking lots at Biscayne Bay Campus, and two additional parking lots at the Engineering Center.

FIU is in the process of completing a traffic analysis that will provide updated level of service data on roadways, parking and transit use. The findings of the analysis will be used to update the Transportation Element.

Problems and Obstacles in Meeting Goals, Objectives and Policies

Traffic Congestion

Traffic congestion is an issue of great concern to FIU and its host communities. The problem is that all of the FIU sites are served by roadways that provide regional connection and attract a substantial amount of through traffic. As surrounding communities continue to develop, it is expected that their growth will generate additional traffic in and around the various FIU sites.

Parking Facilities

With the growth of enrollment, parking accessibility has become a great concern to faculty and staff at University Park. As parking lots have given way to new development, it has become difficult to find parking that is within a comfortable walking distance of the desired destination. The university can address this issue by creating safe pedestrian walkways from the parking garages and surface lots into the campus core. A shuttle service with regular scheduled stops at parking areas can also alleviate this problem.

The general perception, however, is that parking has not kept pace with development. A parking analysis that is currently being conducted will provide information regarding existing and future parking needs. Based on the findings of the study, the university may need to accelerate the construction of planned parking facilities.

Pedestrian Circulation

Pedestrian circulation remains a major design goal at all of the FIU sites. Although significant improvements have been made, more needs to be done to make the campuses more conducive to pedestrian use. Indeed, many of the existing walkways do not allow for direct access to key areas due to obstruction from buildings and other barriers. Some of the walkways also lack adequate shade and lighting. During the next planning cycle, FIU will focus on enhancing its pedestrian corridors and improving way-finding to key locations on campus.

Need to Reduce Automobile Use

Many of the transportation problems that the university faces today stem from the high concentration of vehicles on campus. The problem is that all of the FIU campuses are relatively isolated from the host communities. Students and staff need to use a vehicle to access stores, restaurants and other facilities in the community. At University Park, people use automobiles to travel within campus due to the distance between some buildings. Although UP has an on-campus shuttle service, users need to call to request the service. While this has been successful for individuals with physical challenges, it has not addressed the needs of the general university population.

To improve mobility and create connectivity between the campuses and the host community, the university has partnered with the City of Sweetwater to provide a shuttle service with regularly scheduled stops at UP, EC and the context area. If successful, FIU should consider designating specific areas on campus for the bus stops. This model can be replicated at Biscayne Bay Campus.

Other options for reducing automobile use include the creation of car pool programs and improving transit opportunities on campus.

Needed Modifications Based On Unforeseen Opportunities/Changes

Metrorail Stations at FIU

Miami-Dade Transit is currently considering the possibility of building a Metrorail line along 107th Avenue with a station at the Engineering Center and another at the southeast quadrant of University Park. Such plans would create an alternative mode of transportation to students and staff and improve accessibility to the university. If plans are approved, FIU will need to amend its Campus Master Plan.

Joint Parking Facilities with Tamiami Park

FIU is discussing the possibility of developing joint parking facilities with Tamiami Park near the FIU Community Stadium.

Off-Campus Parking

Currently, FIU does not offer any off-campus parking facilities; however, this policy may be revised based on discussions with the City of Sweetwater. The City would like to build mixed-use parking facilities as a means to attract university students and staff to the area.

Proposed Plan Amendments

- Develop a shuttle system that facilitates transportation within campus and with the context area
- Develop a pedestrian friendly walkway system that links the campus core to parking facilities and key activity areas
- Explore strategies for meeting the parking needs at UP, including a joint parking agreement with Tamiami Park and off-campus parking at Sweetwater
- Continue to work with the Miami-Dade Transit Department to increase transit services at FIU campuses, including adding a Metrorail station at UP and EC.

Element 12: Intergovernmental Coordination

The intent of Intergovernmental Coordination Element is to establish a joint process for collaborative planning, decision making, and development review between university and governmental agencies.

Accomplishments in Meeting Goals, Objectives and Policies

FIU enjoys a good working relationship with its host communities and other local government agencies. Formal procedures are in place for planning coordination and development reviews. Currently, the university is in the process of renewing its Development Agreements with Miami-Dade County and the City of North Miami. FIU also has formal agreements with DERM, Miami-Dade Transit, and the Monroe County Office of Emergency Management.

Problems and Obstacles in Meeting Goals, Objectives and Policies

Although no problems or obstacles were noted, a review of the Intergovernmental Coordination Element revealed that FIU did not have a Development Agreement with the City of Miami Beach. Since the City of Miami Beach is the host community for the Wolfsonian Museum and Annex, a Development Agreement is needed. Within the next planning period, FIU will work to establish such an agreement.

Needed Modifications Based On Unforeseen Opportunities/Changes

City of Sweetwater Comprehensive Plan

The City of Sweetwater is amending its Comprehensive plan to create mixed-use corridors along the portions of 107th Avenue, 109th Avenue, and SW 7th Terrace. The mixed-use corridors would allow for greater density and intensity in the designated areas. The intent of the City is to create a “College Town.” The plans include establishing a partnership with FIU to provide off-campus housing, parking and office space. The City’s plans reflect FIU’s goal to establish greater connections to the surrounding community. The relationship with the City has resulted in a joint shuttle service which serves University Park, the Engineering Center and the City of Sweetwater. If the university decides to build off-campus facilities in the City, a formal Development Agreement between FIU and the City of Sweetwater will be needed. Such an agreement should include a provision which calls for the City to help promote the FIU “brand”.

2005 Growth Management Legislation

Senate Bill 360, approved in 2005, requires greater coordination related to water management. The regulations call for adequate water supply to be in place no later than certificate of occupancy. They also require consultation with WASD on population projections, timing of development, and any issue that may impact water supply. The University will need to work closely with WASD to assure that there is sufficient capacity to meet the needs of proposed development.

Proposed Plan Amendments

- To the extent that development is being planned, establish a Development Agreement with the City of Miami Beach
- Establish a Working Relationship with the City of Sweetwater for off-campus facilities. The discussion should include a provision that encourages the City to promote the “FIU” brand.
- Work with Miami Dade County to establish procedures for complying with the water management regulations stipulated in Senate Bill 360

Element 13: Conservation

The purpose of this element is to ensure the conservation, protection and wise use of all natural ecosystems and natural resources on the University campus and in the context area.

Accomplishments in Meeting Goals, Objectives and Policies

FIU has been able to manage development while protecting its natural resources at University Park and Biscayne Bay Campus. This has been achieved by enforcing environmental protection standards, creating buffers to protect sensitive areas, managing mitigation sites, removing invasive species, and using native vegetative species for landscape projects.

Other measures of conservation that FIU has implemented include the installation of water efficient fixtures and a successful recycling program.

Problems and Obstacles in Meeting Goals, Objectives and Policies

A principal challenge in the master planning process is to determine which parcels of land are suitable for development and which must be protected, particularly when there is no clear evidence of protected species or sensitive areas. This requires a thorough assessment of the natural resources and the intrinsic value of the land to key stakeholders. Below are some of the areas where this issue must be addressed:

- **The Nature Preserve:** The Nature Preserve is an area at UP that has been designated as a conservation site through the efforts of faculty and students who use the area for research. Through their work, they have been able to create a reclaimed ecosystem on the site. Although the Preserve has the potential of becoming a natural and educational focal point for the university, the area has remained untouched for years. Recently, problems related to public safety have made the area into a liability concern for the university. Furthermore, inspections have revealed that not all of the land contains sensitive areas. Due to these factors, the university is reconsidering the status of the Preserve. If within 10 years funding is not found to carry out the recommendations of the 2003 Charrette (See Map 16), FIU will reconsider the “conservation” designation of the Nature Preserve. To assure that areas currently used for research are protected from future development, FIU is considering designating those areas as “outdoor research”.

- **Undeveloped Land at BBC:** There is a great deal of undeveloped land at BBC. For the university to be able to grow, it is important to clearly identify the areas that are suitable for development and the areas that are environmentally sensitive. It is also important for FIU to clearly identify the buffers that protect the shoreline and other protected areas.

Needed Modifications Based On Unforeseen Opportunities/Changes

Creation of the Building and Environment Committee

The Faculty Senate has created the "Building and Environment Committee." This committee will serve as a 'watchdog' organization on practices of sustainable building and environmental preservation and development. The committee will replace the "Natural Protection and Management Committee," which is no longer active.

Sustainable Campus Environment

During the EAR workshops, faculty and staff expressed the desire to develop a sustainable campus environment at FIU. The goal of creating a sustainable campus is to reduce utility and maintenance costs through a comprehensive program of recycling, energy efficiency, conservation, and building standards. FIU has some of the basic elements for creating a sustainable program, but they are not part of a comprehensive plan. During the Master Plan updates, the university will have an opportunity to review its policies and adopt a sustainable strategy.

Proposed Plan Amendments Necessary to Address Identified Problems and Opportunities/Changes

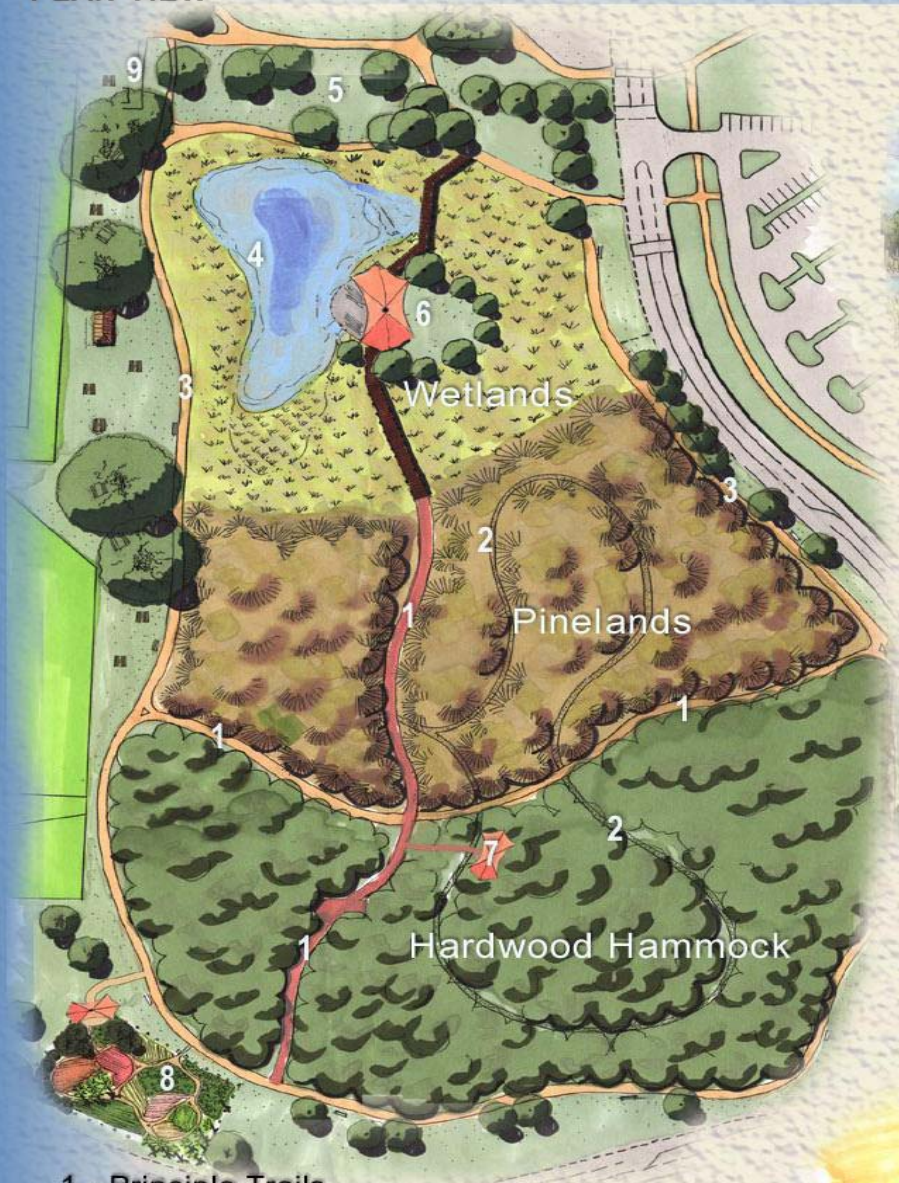
- Develop the Natural Preserve based on the recommendations of the 2003 Charrette.
- Encourage the development of a sustainable campus environment program
- Evaluate the undeveloped land at Biscayne Bay Campus and clearly identify on a map areas that are suitable for development and environmentally sensitive areas.

FLORIDA INTERNATIONAL UNIVERSITY
NATURAL PRESERVE CHARRETTE

American Society of Landscape Architects - Miami Section
May 2003

ASLA

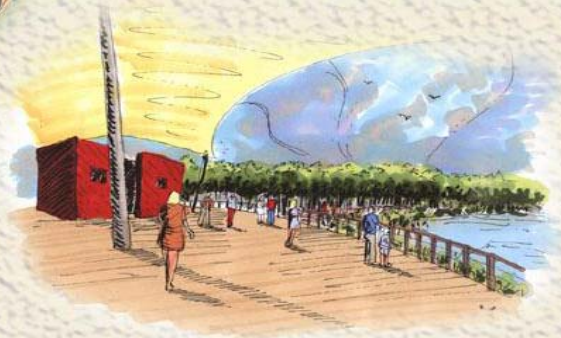
PLAN VIEW



1 - Principle Trails
2 - Secondary Trails
3 - Jogging Track
4 - Pond
5 - Future Development
6 - Mixed-Use Facility w/ Lawn Seating Area
7 - Small Educational Facility
8 - Garden Area
9 - Recreation/ Picnic Area

Recreation/
Picnic Area

Educational Facility



Mixed-use Facility

Element 14: Capital Improvements

The purpose of this element is to evaluate the need for public facilities as identified in other campus Master Plan elements; to estimate the cost of improvements for which the University has fiscal responsibility; to analyze the fiscal capability of the University to finance and construct improvements; to adopt financial policies to guide the funding of improvements; and to schedule the funding and construction of improvements in a manner necessary to ensure that capital improvements are provided when required based on needs identified in the other campus Master Plan elements.

Accomplishments in Meeting Goals, Objectives and Policies

FIU has undertaken an aggressive capital improvements campaign in order to address the space shortage at University Park. Indeed, the 2000-2010 Capital Improvements Plan in the Campus Master Plan called for the construction of 43 projects. Approximately half (21) of the projects have been completed or are under construction.

Table 22: Status of Projects from the 2000-2010 Capital Improvements Plan

Project	Status
University Park/The Engineering Center (EC)	
Facilities Infrastructure/Capital Renewal	Complete
Graham Center Renovation	Complete
Greek Housing II	Complete
Health and Life Sciences	Complete
Panther Parking Garage (Parking Garage Three)	Complete
Red Parking Garage (Parking Garage Four)	Complete
Recreation Center – Phase I	Complete
Student Health Services Center	Complete
Central Utility Plant	Under Construction
Rafael Diaz Balart College of Law Building	Complete
The Patricia and Phillip Frost Art Museum	Under Construction
Graduate School of Business – Building I	Under Construction
Lakeview Housing	Complete
Molecular Biology	Designated
Social Sciences	Designated

Project	Status
Stadium Expansion	Designated
Arts Complex – Phase II	Planned
Classroom/Office (EC)	Planned
Classroom/Office (Future Development A)	Planned
Classroom/Office, (Graduate Classroom) UP	Planned
Computer Services	Planned
Future Development B - D	Planned
Future Development E (Training Complex)	Planned
Graham Center Expansion – Phase II	Planned
Greek Housing III	Planned
Greek Housing IV	Planned
Greek Housing V	Planned
International Hurricane Center	Planned
Parking Garage Five	Planned
Parking Garage Six	Planned
Public Safety Building	Planned
Recreation Center – Phase II	Planned
Training Complex	Planned
Undergraduate Housing/ (Chapman Grad. School of Business)	Planned
BISCAYNE BAY CAMPUS (YEAR 2000-2005)	
Marine Science Building	Complete
Hospitality Management (Equipment/Remodeling)	Complete
Parking Lot Reconfiguration	Complete
Recreation	Planned
Academic Four Building	Planned
Future Development A	Planned
Future Development B	Planned

Problems and Obstacles in Meeting Goals, Objectives and Policies

The cost of construction has almost doubled since the last Campus Master Plan update. This has been due to several factors, including the rising cost of fuel, the shortage of construction workers after the 2005 hurricane season, and the housing construction boom. All of these factors have raised the cost of labor and materials for construction. Projections for capital improvements must be adjusted to reflect the current market conditions.

Needed Modifications Based On Unforeseen Opportunities/Changes

The university will need to identify funding to build the necessary facilities to house the newly approved Medical School. Facilities for the core program are expected to cost $64 million. The State has approved $20 million for the biomedical research component. FIU will need to raise the balance from private donations, state match and federal grants.

Proposed Plan Amendments

In order to address the capital improvement needs discussed throughout this document, FIU has developed a Ten-Year Capital Improvement Plan (CIP). The Campus Master Plan needs to be updated to reflect the proposed 2005-2010 CIP. As can be seen on the following table, the university anticipates using various sources to fund the proposed capital improvement projects, including PECO, CITF, Foundation Loans, Revenue Bonds and Auxiliary funds.

The items contained in the CIP will be subject to the yearly review and approval of the Board of Trustees and funded as resources become available.

Table 14.2 Florida International University Capital improvement Plan 2005-2015

2005-2011 Capital Improvement Plan

Project	Source	GSF		Project Cost
University Wide				
Facilities Infrastructure/Capital Renewal*	PECO-Eligible	N/A	$	74,630,465
Faculty Housing*	Revenue Bonds and Foundation	60,000	$	9,120,000
		60,000	$	83,750,465
University Park				
5. Academic Facilities Element				
Graduate School of Business-Phase 1	PECO-Eligible	87,528	$	22,931,689
Rafael Diaz Balart College of Law Building BR-832*	Challenge Grant, Univ. advancement	153,768	$	38,410,534
Molecular Biology**	PECO-Eligible	45,120	$	20,468,243
Social Sciences(International Studies)**	PECO-Eligible	57,712	$	19,849,972
Science/Classroom Complex*	PECO-Eligible	138,800	$	50,000,000
Graduate Classroom Building*	PECO-Eligible	59,120	$	23,300,000
Health-Science Laboratory Clinic*	PECO-Eligible	63,200	$	26,000,000
Humanities Center/Offices*	PECO-Eligible	77,600	$	29,500,000

Project	Source	GSF		Project Cost
Graduate School of Business-Phase II*	Challenge Grant, Univ. advancement	36,768	$	13,500,000
Health and Life Sciences II Nursing Labs (H&L Remod.)	Challenge Grant, Univ. advancement	5,220	$	1,600,000
		724,836	$	245,560,438
6. Support Facilities Element				
Patricia and Phillip Frost Art Museum*	Challenge Grant, Univ. advancement	46,874	$	17,834,751
International Hurricane Center*	PECO-Eligible	31,760	$	15,000,000
County Health General Office Building+	Revenue Bonds and Foundation	90,000	$	28,710,000
Food Services Miscellaneous Projects+	Revenue Bonds and Foundation	20,000	$	20,000,000
Family Business Institute Building**	Challenge Grant, Univ. advancement	3,520	$	1,200,000
Career Services Building**	Challenge Grant, Univ. advancement	11,360	$	4,000,000
		156,640	$	68,910,000
7.Housing Element				
Lakeview Housing	Non-PECO Eligible	480,000	$	79,000,000
Housing Phase V+	Revenue Bonds	488,000	$	72,240,000
		968,000	$	151,240,000
8. Recreation and Open Space				
FIU Community Stadium Renovation and Expansion+	Revenue Bonds and Foundation	40,000	$	40,000,000
Training Complex*	PECO-Eligible	40,432	$	10,503,645
Recreation Fields (Replacement Field)	Non-PECO Eligible	64,349	$	13,210,206
		144,781	$	63,713,851
10. Utilities Element				
Central Utilities Expansion@@	Non-PECO Eligible	10,000	$	9,300,000
Satellite Chiller Plant	PECO-Eligible	12,000	$	7,110,000
		22,000	$	16,410,000
11. Transportation Element				
Public Safety Building **	PECO-Eligible	10,000	$	3,131,261
Parking Garage Five+	Revenue Bonds	512,828	$	24,528,000
Parking Garage Six+	Revenue Bonds	1,098,917	$	50,400,000
		1,621,745	$	78,059,261
		3,684876	$	641,728,301
Engineering Center				
5. Academic Facilities Element				
EC Lab Remodeling and Expansion, EC*	Challenge Grant, Univ. Advancement	1,200	$	500,000
EC Classroom Expansion+	Contract and Grant	84,000	$	13,000,000

Project	Source	GSF		Project Cost
Construction management Green Building**	Challenge Grant, Univ. Advancement	32,800	$	12,000,000
		118,000	$	25,500,000
Biscayne Bay Campus				
5. Academic Facilities Element				
Classroom/Office (AC IV)*	PECO-Eligible	64,000	$	27,000,000
Hospitality Management-Beverage Management Center*	Challenge Grant, Univ. Advancement	5,600	$	2,100,000
Ecology laboratory+	Contract and Grant	3,872	$	500,000
Marine Biology Dock**	Challenge Grant, Univ. Advancement	N/A	$	500,000
		73,472	$	30,100,000
6. Support Facilities Element				
Theater**	Challenge Grant, Univ. Advancement	11,520	$	4,000,000
		84,992	$	34,100,000
Total 2005-2011		**3,947,868**	**$**	**785,078,766**

University Park				
5. Academic Facilities Element				
Chemistry and Physics Addition@@#x	TBD	60,000	$	18,213,300
Science/Classroom Complex Phase II	TBD	60,000	$	18,213,300
Honors College@@#x	TBD	40,425	$	9,572,236
		160,425		45,998,836
6. Support Facilities Element				
Computer Services@@#x	PECO-Eligible	73,371	$	17,927,103
Graham University Center Expansion, Phase II^@@#x	Non-PECO	40,000	$	8,983,800
Campus Support Complex Administration	TBD	15,000	$	2,741,400
		128,371	$	29,652,303
7.Housing Element				
Greek Housing III,IV,V(3 Buildings)^@@#x	TBD	43,200	$	Note 1
8. Recreation and Open Space Element				
Fitness Center Addition^@@#x	Non-PECO	95,831	$	19,673,146
4.Land Use Element				
Future Development A^@@#x	TBD	360,000	$	85,244,400
Future Development B-D^@@#x	TBD	170,000	$	40,254,300
		530,000	$	125,498,700

University Park				
Engineering Center		957,827	$	220,822,985
5. Academic Facilities Element				
Phase I,II,III,IV Development (EC)@@#x	PECO-Eligible	300,000	$	71,037,000
8. Recreation and Open Space Element				
Recreation Fields (EC)@@#x	TBD	96,524	$	19,815,309
11.Transportation Element				
2 Surface Parking Lots (EC)@@#x	TBD	TBD		TBD
		396,524	$	90,852,309
Biscayne Bay Campus				
6. Support Facilities Element				
Student Health Center Addition@@#x	TBD	6,000	$	1,914,000
Hotel@@#x	TBD	64,000	$	9,473,920
		70,000	$	11,387,920
7.Housing Element				
Housing (821 Beds)@@#x	TBD	480,000	$	71,054,400
8. Recreation and Open Space Element				
Recreation Fields (2)@@#x	TBD	128,698	$	26,420,412
4. Land Use Element				
Future Development A@@#x	PECO-Eligible	70,000	$	16,575,300
Future Development B@@#x	Non-PECO-Eligible	71,805	$	17,002,706
		141,805	$	33,578,006
		820,503	$	142,440,738
Total 2011-2015		**2,174,854**	**$**	**454,116,033**
GRAND TOTAL 2005-2015		**6,075,848**	**$**	**1,221,360,048**

Source: FIU, Five-Year Capital Improvement Plan (CIP-2), Legislative Budget Request, and SUS 2006-2007/2010-2011 Five Year Capital Improvement Plan, and Current Projects in Planning by Facilities Management 2/3/2006

TBD: To Be Determined
Note1: Costs to be determined by independent sublease tenants, privately financed.
[!]Faculty housing is planned for University Park and Biscayne Bay Campus
*FIU Capital Improvement Plan for 2007-08 through 2010-2011
**FIU Capital Improvement Plan for 2006-07 through 2010-2011
[@]FIU Capital Improvement Plan for 2005-06 through 2009-2010
[+]FIU Board of Trustees Board Meeting: Fixed Capital outlay (FCO) Budget Request 2007-2008. August 21,2006
[@@] FIU master Plan: Future Land Use and Capital Improvement Element 2000-2010
[^]Development Agreement for University Park and Biscayne Bay Campus
x Project cost determined based on the 2005 BOG Cost for Construction per GSF (adjusted for and inflation factor of 1.5)
[#]Project Gross Square Feet estimated based on size of similar projects

Element 15: Architectural Guidelines

The purpose of this element is to establish guidelines to assist in achieving a high level of quality in architectural design.

Accomplishments in Meeting Goals, Objectives and Policies

FIU has established a set of Architectural Design Guidelines that include a number of checkpoints for design. Each of these checkpoints are intended to help inform the design and review process as well as preserve and enhance the image of the university. Below are some of the elements of the Architectural Design Guidelines.

Table 23: Key Elements in the Architectural Design Guidelines of FIU

Standards	Source
Quality of Materials	American Society for Testing and Materials (ASTM) standards
Energy Efficiency	Standards set by FIU. Requires mandatory compliance with energy conservation/energy efficiency standards
Life Cycle Cost	Minimum requirements consistent with the State University System's 40-year life standard. All firms providing design and/or construction services must adhere to these guidelines
Color and Texture	Guidelines set by FIU. Require the use of cost-efficient materials.
Scale/Proportion	Standards set by FIU. Provides standards for gathering spaces adjacent to building, the use of landscaping, and landscape and light. There are no building height requirements, but guidelines prevent a massing of multi-story buildings.
Graphics and Signage	Standards for interior/exterior signage are set by FIU but adhere to the requirements of the Florida Americans with Disabilities Accessibility Code and Americans with Disabilities Act Accessibility Guidelines.
Safety Statements	Standards set by FIU regarding materials and building systems.
Building Siting and Linkages	Standards set by FIU Created by FIU. Provides for open areas, access for emergency and maintenance vehicles as well as disabled/handicapped persons and the relationship of new facilities to adjacent facilities and the surrounding natural environment.

Problems and Obstacles in Meeting Goals, Objectives and Policies

Need to Revise District Guidelines

The Master Plan identifies various districts for UP and provides basic design parameters for each area. As the university has grown, however, more districts have emerged and there are no design guidelines for those areas. As such, the District Guidelines need to be revised to include the new districts. The revised guidelines should include illustrations and more specific parameters on allowable designs and materials. Such guidelines help to preserve the unique character of each location while creating a transition between other areas of the campus. The districts that need to be added include:

- Science Quad District
- Main Academic Core District
- Medical School District
- Stadium District
- Campus Support District
- University House District

Needed Modifications Based On Unforeseen Opportunities/Changes

Creating Links to the Bay at Biscayne Bay Campus

The campus offers spectacular bay views to its visitors and users. Such an attractive asset should be enhanced with new architectural elements included into new facility construction. This can include boardwalks, outdoor cafes and recreational areas. Such amenities can be incorporated into new construction by careful and thoughtful design, giving definition for functionality to its users.

Future Development at Engineering Center

With new facilities planned for the site, there will be the need to re-assess how the university projects its image to the community. The design of the new facilities should be consistent with University Park to create visual connectivity between the two sites. There is also an opportunity to place landscape and vegetative buffers along edges that enhance the site and create a facility which opens up to the community.

Instructional Signage

In keeping with the faculty's desire to use the physical environment of the university as a

learning tool, FIU should consider modifying its guidelines for interior and exterior signage to include instructional markers at key locations. The markers can be used to describe natural and structural features of the university.

Proposed Plan Amendments

- Update building design standards based on the most current industry standards. The emphasis should be on creating a sustainable campus environment.
- Update the District Design guidelines for University Park
- Encourage designs at Biscayne Bay Campus that create greater connectivity to the Bay.
- Foster learning through the physical environment by creating instructional signage that provides information on natural and structural features.

Element 16: Landscape Design Guidelines

The purpose of this element is to provide guidelines to assist the University in establishing and maintaining a high level of quality in the design of landscape treatments.

Accomplishments in Meeting Goals, Objectives and Policies

The FIU Master Plan provides a template for landscape and hardscape treatments at UP, BBC, and EC. It creates guidelines for the landscape design in common areas and specifies the types of plant, building material and site furniture to use. It also creates a hierarchy of spaces and calls for landscaped features to reinforce main circulation routes.

Since 2003, the university has completed four pedestrian corridors at UP that are reinforced with landscape treatments. These pedestrian corridors are designed to link the academic core to other activity centers on campus. The Avenue of the Professions is one of the corridors. At BBC, the university improved the main entrance of the campus with new landscaping and signage.

Problems and Obstacles in Meeting Goals, Objectives and Policies

Signature Open Spaces and Landmarks

All of the FIU sites need to improve their visibility in the community through signature open spaces and landmarks. This is particularly true at EC and BBC. Although University Park has made some significant strides in this effort, the university needs to complete the signature landmark on the corner of 8th Street and 107th Avenue in order to augment its visibility in the host community.

Need for Shaded Areas and Outdoor Gathering Spaces

An assessment of the landscape features at FIU revealed that there is a limited amount of shaded walkways, gathering spaces and outdoor furniture at all of the FIU sites. Such features are important in South Florida's climate. They provide shelter from the heat, generate points of interest, and create a transition from buildings to open space.

Limited Funding

Lack of funding has limited the university's ability to complete some landscape

improvements and outdoor facilities. The university needs to identify additional funding sources to carry out these projects.

Needed Modifications Based On Unforeseen Opportunities/Changes

None reported.

Proposed Plan Amendments

- Improve the visibility of the university through signature open spaces and landmarks
- Increase the amount of shaded walkways and outdoor gathering spaces through landscaping and outdoor furnishing
- Identify funding sources to carry out landscape projects

Element 17: Facilities Maintenance

The purpose of this element is to assess the existing conditions and required improvements of all existing buildings on the University campus.

Accomplishments in Meeting Goals, Objectives and Policies

FIU is committed to maintaining its facilities and has established a strong maintenance program which includes inspections, code compliance, and deferred maintenance programs. A Maintenance Endowment Account provides funds for the ongoing maintenance of existing buildings. Finally, the university has established standards for building material, finishes and systems which are intended to reduce the cost of maintenance.

Problems and Obstacles in Meeting Goals, Objectives and Policies

The Master Plan needs to set more specific life cycle standards. The current policies do not provide clear criteria for compliance.

Needed Modifications Based On Unforeseen Opportunities/Changes

The university should consider incorporating the federal government's ISO 140000 standards as well as Green building standards (such as LEED's).

Proposed Plan Amendments

- Adopt a life cycle policy which provides specific compliance standards
- Consider incorporating ISO 140000 standards and Green Building Standards

Element 18: Coastal Management

The purpose of this element is to provide for the protection of residents and property in those campuses or portions of campuses within the coastal area of the host community, and to limit expenditures, and where appropriate, restrict development, in those areas subject to destruction by natural disaster within the coastal high hazard area.

Accomplishments in Meeting Goals, Objectives and Policies

Coastal and Estuary Resources at Biscayne Bay Campus

Located on the shores of the Biscayne Bay Preserve, the Biscayne Bay Campus is one of a few university sites nationwide located on a subtropical coastal setting. Any development which takes place on this campus must take into account hurricanes and flooding. It must also be sensitive to the natural resources that surround the campus. As such, FIU has implemented programs that manage and protect the coastal and estuary resources of the campus.

Hurricane Evacuation

FIU provides shelter at University Park to students, faculty and staff who need to evacuate, including students housed at Biscayne Bay Campus. The university also serves as a hurricane shelter to residents of Monroe County. As required by the State University System, FIU conducted an assessment to identify the facilities most suitable to serve as shelters and explored various alternatives for expanding shelter space.

Problems and Obstacles in Meeting Goals, Objectives and Policies

None reported.

Needed Modifications Based On Unforeseen Opportunities/Changes

None reported.

Proposed Plan Amendments

- Update the list of facilities suitable for hurricane shelter space

Changes Comprehensive Plans of Host Local Governments and State Comprehensive Plan

The following are some of the changes in the comprehensive plans of the host communities and the state that are likely to have an impact on FIU.

Level of Service Standards

Since the 2003 Master Plan Updates, the host communities have amended some of their level of service standards. Below are the new level of service standards for potable water and sanitary sewer. It is important for the university to monitor these changes since it may affect the service provisions in the Development Agreements.

Table 24: Potable Water Level of Service by Host Community

Host Community	Required Facility LOS	FIU Site Served by Host Community
Miami-Dade County	200 Gallons per Capita per day	University Park and Engineering Center
City of North Miami	125 Gallons per Capita per day	Biscayne Bay Campus
City of Miami Beach	140 Gallons per Capita per day	Wolfsonian Museum and Annex

Source: Development Agreement Between the FIU Board of Trustees and Miami-Dade County the Development Agreement Between the FIU Board of Trustees and the City of North Miami, and the City of Miami Beach Comprehensive Plan.

Table 25: Sanitary Sewer Level of Service by Host Community

Host Community	Required Facility LOS	FIU Site Served By *Host Community*
Miami-Dade County	102% of Avg. Daily Demand for 5 Yrs	University Park and Engineering Center
City of North Miami	100 Gallons per Capita per Day	Biscayne Bay Campus
City of Miami Beach	140 Gallons per Capita per Day	Wolfsonian Museum and Annex

Source: Development Agreement Between the FIU Board of Trustees and Miami-Dade County the Development Agreement Between the FIU Board of Trustees and the City of North Miami, and the City of Miami Beach Comprehensive Plan.

High Density Mixed-Use Areas

The State of Florida and the host communities, through the comprehensive plans and smart growth policies, are encouraging mixed-use development and higher densities as a means to address urban sprawl. FIU's plans to develop the university are consistent with these policies.

Affordable Housing

The State of Florida and all of the host communities have identified the need to address the affordable housing issue. During the Master Plan Updates, FIU will explore the various strategies for providing affordable hosing options to students, faculty and staff. The university will also cooperate with the host communities in carrying out these efforts.

State Mandated Amendments

Pursuant to Senate Bill 360, all jurisdictions in the State of Florida will need to amend their comprehensive plans to include the directives set forth in the 2005 Growth Management Legislation. Below are some of the requirements in the legislation that are likely to affect FIU.

- Restrictions will be placed on the issuance of a certificate of occupancy or its functional equivalent unless adequate water supplies are in place and available to serve new development
- Jurisdictions must coordinate with WASD on population projections, the timing of development, annexation, and any other issues that may impact water supply
- All jurisdictions must evaluate their success in identifying alternative water supply projects and adopting conservation and reuse efforts.

FIU will need to work closely with the host communities to comply with the new requirements and assure that there is sufficient capacity for the university's future development plans.

Master Plan Compliance

The FIU Campus Master Plan will be reviewed on an annual basis to ensure that the policies and objectives are being implemented as planned and to determine whether facilities are operating at the adopted Level-of-Service standards.

The annual review will be undertaken in conjunction with the annual preparation of FIU's Five-Year Capital Improvements Program (CIP) and budget process.

The review will provide an analysis of how well the CIP complies with the Master Plan and in particular- the Capital Improvements Element. This analysis will address the following issues:

- Any corrections, updates, and modifications concerning costs, revenue sources, or the date of construction of any facility enumerated in the element;
- The Capital Improvement Program's consistency with the Master Plan elements and its support of the Future Land Use Element;
- The priority assignment of existing public facility deficiencies;
- The university's progress in meeting those needs determined to be existing deficiencies
- The criteria used to evaluate capital improvement projects in order to ensure that projects are being ranked in their appropriate order of priority;
- The university's effectiveness in maintaining the adopted Level-Of-Service standards;
- The university's effectiveness in reviewing the impacts of plans and programs of local agencies that provide services to FIU;
- Efforts made to secure grants or private funds, whenever available, to finance the provision of capital improvements;
- The criteria used to evaluate proposed plan amendments and requests for new development or redevelopment; and;
- Capital improvements needed for the latter part of the planning period, for inclusion in the five-year Schedule of Improvements.

The Five-Year Capital Improvement Plan and any recommended amendments to the Campus Master Plan will be submitted to the Board of Trustees for adoption and to the appropriate state and local government for review.