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1.0 ACADEMIC MISSION OF THE UNIVERSITY

1.1 Background

The “10-Year Development Plan for a New University in Southwest Florida”, adopted by the Board of Regents on Nov. 20, 1992, provided the basis for the Founding Mission Statement contained in the adopted Campus Master Plan. This document has, in turn, served as the foundation for the institution’s philosophy and academic approach, guiding the development of FGCU’s campus, student population, and academic program. The Founding Mission Statement highlighted the following key aspects of FGCU’s institutional identity:

- Focus on undergraduate education, as reflected by the type and mix of proposed programs and degrees, with selected graduate and continuing education programs offered on the basis of need and available resources. The statement also anticipated that within 10 years of opening, the University’s instructional load would include up to 15% of graduate-level program offerings. (In 1998, the graduate-level program goals were re-evaluated, as the continued demand for these programs was greater than anticipated. The University subsequently re-evaluated the 15% goal.)
- Employment of distance learning and other alternative teaching and learning techniques, including weekend- and evening-college programs, computer-aided instruction, and competence-based exams.
- Emphasis on applied research, public service involvement, and community interaction for both faculty and students.
- Emphasis on the study of the environment, taking advantage of the emphasis intended to give the University the opportunity to develop “as a center for environmentally oriented graduate programs and research”.

In addition, the Founding Mission Statement described the intent to provide a smooth transition from programs offered at the time by the University of South Florida into FGCU. The statement explains how some of the existing programs at USF-Fort Myers were to be expanded to allow full-time students there to receive their degrees during the period during which FGCU’s programs and campus were under development.

In practice, the purpose, goals, and focus of the institution are supported through the implementation of key strategies, programs, and activities such as, but not limited to:

- Establishment of clear, specific learning goals and outcomes for students at both the undergraduate and graduate levels.
- Fostering of community partnerships through the formation of institutes and centers such as the Center for Leadership and Innovation, or the signing of memoranda of understanding with institutions and organization such as the Rookery Bay National Estuary Research Preserve, the Big Cypress National Preserve, the Corkscrew Audubon Sanctuary, and the Center for Environmental Studies.
- Promotion of opportunities for community involvement through the Service Learning Program, established in 1997, to structure partnership arrangements that allow students to participate and work in their communities and develop civic responsibility.
- Preparation of a Strategic Plan for the Use of Technology, which provides the framework for building the technological infrastructure necessary to support the university’s service goals.
- Preparation of a Distance Learning Strategic Plan, which places priority on learning needs, access to knowledge resources, and technology as a fundamental tool for learning.
Established by President Bradshaw in 2009 to coordinate and advise on planning, budgeting, and institutional improvement efforts, the Planning and Budget Council comprises the following:

Provost and VPAA, Dr. Ronald Toll is Chair and Vice Chair is VP for Administrative Services and Finance, Dr. Joseph Shepard. In addition there are 17 other members representing all major campus constituencies, including faculty senate, student government, the staff advisory council, athletics, advancement, and student affairs.

- The Council reports directly to the President’s Cabinet
- The Council carries out its work as a committee of the whole but also comprises 6 constituent committees:
  - Budget
  - Enrollment/Retention Management
  - Environmental Sustainability
  - Information Resource
  - Safety and Facilities
  - Strategic Planning and Institutional Effectiveness
- Together about 90 people were actively involved in updating the university strategic plan

1.2 Guiding Principles

The founding of Florida Gulf Coast University at the advent of a new century is a signal event. It comes at a moment in history when the conditions that formed and sustained American higher education are fundamentally changing, and at a time when rapid shifts wrought by technology and social complexities are altering the very nature of work, knowledge, and human relationships. As a public institution, Florida Gulf Coast University eagerly accepts the leadership opportunity and obligation to adapt to these changes and to meet the educational needs of Southwest Florida. To do so, it will collaborate with its various constituencies, listen to the calls for change, build on the intellectual heritage of the past, plan its evolution systematically for the twenty-first century, and be guided by the following principles:

- **Student success** is at the center of all University endeavors. The University is dedicated to the highest quality education that develops the whole person for success in life and work. Learner needs, rather than institutional preferences, determine priorities for academic planning, policies, and programs. Acceleration methods and assessment of prior and current learning are used to reduce the time it takes to earn a degree. Quality teaching is demanded, recognized, and awarded.

- **Academic freedom** is the foundation for the transmission and advancement of knowledge. The University vigorously protects freedom of inquiry and expression and categorically expects civility and mutual respect to be practiced in all deliberations.

- **Diversity** is a source of renewal and vitality. The University is committed to developing capacities for living together in a democracy whose hallmark is individual, social, cultural, and intellectual diversity. It fosters a climate and models a condition of openness in which students, faculty, and staff engage multiplicity and difference with tolerance and equity.

- **Informed and engaged citizens** are essential to the creation of a civil and sustainable society. The University values the development of the responsible self, grounded in honesty, courage, and compassion, and committed to advancing democratic ideals. Through service learning requirements, the University engages students in community involvement with time for formal reflection of their experiences. Integral to the University’s philosophy is instilling in students and environmental consciousness that balances their economic and social aspiration with the imperative for ecological sustainability.

- **Service to Southwest Florida**, including access to the University, is a public trust. The University is committed to forging partnerships and being responsive to its region. It strives to make available its knowledge resources, services, and educational offerings at times, places, in forms and by methods that will meet the needs of all its constituents. Access means not only admittance to buildings and programs, but also entrance in the spirit of intellectual and cultural community that the University creates and nourishes.

- **Technology** is a fundamental tool in achieving educational quality, efficiency, and distribution. The University employs information technology in creative, experimental, and practical ways for delivery of instruction, for administrative and information management, and for student access and support. It
promotes and provides distance and time-free learning. It requires and cultivates technological literacy in its students and employees.

- **Connected knowing and collaborative learning** are basic to being well educated. The University structures inter-disciplinary learning experiences throughout the curriculum to endow students with the ability to think in whole systems and to understand the interrelatedness of knowledge across disciplines. Emphasis is placed on the development of teamwork skills through collaborative opportunities. Overall, the University practices the art of collective learning and collaboration, in governance, operations, and planning.

- **Assessment** of all functions is necessary for improvement and continual renewal. The University is committed to accounting for its assessment. Tradition is challenged; the status quo is questioned; change is implemented.

Environmental scans informed the development of the strategic plan by identifying variables internal and external to the University that can affect the ability of the institution to continue to meet its mission and make progress toward the fulfillment of its vision.

The Planning and Budget Council conducted the internal scan and Dr. Gary Jackson, a faculty member in the Lutgert College of Business and Director of FGCU’s Regional Economic Research Institute, conducted the external scan. Both scans employed a SWOT approach, i.e., an assessment of the Strengths, Weaknesses, Opportunities, and Threats that lie before us as we move into the next few years.

The external scan involved an analysis of extensive data series and was informed by interviews Dr. Jackson had recently conducted with many regional external stakeholders of the University.

**External Scan Conclusions**

- **Strengths**
  - Reputation within the community
  - Proximity to major population centers
  - Size of institution
  - Community outreach and economic development
  - Responsiveness to workforce needs

- **Weaknesses**
  - Institutional identity still being established
  - Adjusting to pressures of growth
  - Readiness of students for college

- **Opportunities**
  - Traditional college age population increasing
  - More adults returning to college
  - Increasing ethnic diversity in the region
  - Value of higher education in the marketplace
  - Research park and regional business incubator
  - Programs in fields marked for high growth
  - Growing awareness in renewable resources and sustainability

- **Threats**
  - State support for higher education
  - Regional positioning of competition
  - Slower economic growth
  - Increasing regulatory burdens
Internal Scan Conclusions
The internal scan was intended to identify institutional strengths and areas of challenge that can affect the successful realization of our mission and the attainment of FGCU’s vision. It was carried out by the Planning and Budget Council as a whole based upon an assessment by each Vice President of their respective areas of responsibility.

- **Strengths**
  - Faculty and staff
  - Physical plant
  - Quality of programs
  - Student outcomes
  - Technological infrastructure and information resources
  - Community engagement

- **Weaknesses**
  - Continued growth of resource base
  - Potential space shortages
  - Youth of alumni base

- **Opportunities**
  - Differential tuition and technology fee
  - Increasing bandwidth
  - Improving economy

- **Threats**
  - Potentially impaired growth in program base and facilities expansion

1.3 Vision and Mission

FGCU’s Board of Trustees approved a strategic plan for the university in January 2005. The plan covered the years 2005-2010 and has served us well as a roadmap to our future. The Planning and Budget Council has established a strategic planning process that will lead to an updated strategic plan in June 2010.

Vision
Florida Gulf Coast University will achieve national prominence in undergraduate education with expanding recognition for graduate programs.

Mission
Established on the verge of the 21st century, Florida Gulf Coast University infuses the strengths of the traditional public university with innovation and learning-centered spirit, its chief aim being to fulfill the academic, cultural, social, and career expectations of its constituents.
Outstanding faculty uphold challenging academic standards and balance research, scholarly activities, and service expectations with their central responsibilities of teaching and mentoring. Working together, faculty and staff of the University transform students’ lives and the southwest Florida region. (the change indicates that faculty and staff together work to transform students’ lives)
Florida Gulf Coast University continuously pursues academic excellence, practices and promotes environmental sustainability, embraces diversity, nurtures community partnerships, values public service, encourages civic responsibility, cultivates habits of lifelong learning, and keeps the advancement of knowledge and pursuit of truth as noble ideals at the heart of the university’s purpose.

1.4 Strategic Plan 2005-2010

A long-range Strategic Plan subsequently was adopted in June 2010. The Planning and Budget Council, under the direction of co-chairs Dr. Ronald B. Toll, Vice President for Academic Affairs, Dr. Joseph Shepard, Vice President of Administrative Services, outlined eight goals. Each goal has a clear strategy, indicator, and benchmarks.

**Goal 1: Academic Excellence**
- FGCU will pursue academic excellence by offering diverse, high quality degree programs and unique opportunities for student research, engagement, and leadership.
Academic pursuits will be led by faculty who are committed to excellence in teaching, scholarship and service, and by staff who are dedicated to providing effective support for academic achievement. Student learning will be designed to include unique opportunities for research, student engagement, and leadership.

Academic excellence will be furthered through internationalization of the campus, opportunities for contributions from the community, and by providing effective library and information technology services to support the University’s academic endeavors.

FGCU will utilize its information technology resources to support student learning, faculty and staff productivity, and University growth through access to state-of-the-art tools, and enhanced programs/services.

Goal 2: Student Life, Growth, and Development

- Students will discover a myriad of opportunities for personal growth and development that fosters openness to diversity through co-curricular activities, leadership, residential life, learning communities, health promotion, recreation, study abroad, community engagement, and support of NCAA Division 1 athletics.

Goal 3: Strategic Growth

- The University will pursue a course of strategic growth, in line with its capacity, that affords a wide range of Southwest Floridians access to its programs and services, recognizes variation in student enrollment across its colleges and schools, and makes effective use of its facilities and human resources. FGCU will continue as the first choice for students in SW Florida and increasingly become a preferred choice for students from beyond the region seeking baccalaureate, master’s, and advanced graduate/professional education that meets their aspirations and fulfills the needs of the region and the State of Florida.

Goal 4: Provide an Enhanced Campus Climate

- FGCU fosters a welcoming and inclusive environment for the pursuit of higher education that embraces diversity, is respectful of the rights of others, expresses tolerance, promotes the development of its students, faculty, and staff, and serves as a model for the community it serves.

Goal 5: Environmental Sustainability and Innovation

- To meet the challenges of the 21st Century and benefit the local economy, the University will demonstrate responsible leadership and innovation by infusing environmental sustainability throughout critical dimensions of University life and community interactions. This will be accomplished through curriculum; research; public service; campus development; administration and operations; and student life that embrace service learning and engagement opportunities.

Goal 6: Community Engagement

- The University will increasingly become a force for positive change in Southwest Florida through the leadership and actions of its faculty, staff, and students, in terms of the following: workforce development; cultural/recreational events; scholarship; lifelong learning and the Renaissance Academy; and public service that are intended to promote economic diversity and the welfare of its people. In turn, the community will increase its engagement with the University and contribute to its success.

Goal 7: Discovery and Application of Knowledge

- As a public comprehensive regional university, FGCU will emphasize the discovery and application of knowledge in its degree programs, through its research and sponsored programs, and through its efforts designed to diversify and develop the region’s economy in cooperation with local industry whenever possible.
2.0 ACADEMIC PROGRAM ELEMENT

2.1 Background

When Florida Gulf Coast University opened in January 1997, recommendations for the school’s academic program were defined by the Board of Regents in a “10-Year Development Plan for New University in Southwest Florida” and contained in the 1995 Campus Master Plan. It was a three-phase program (see Table 2-1), meant to provide a transition for academic programs offered by USF-Fort Myers to be phased out or incorporated and to define what courses would be offered in that first academic semester. The final phase included plans for programs to be developed between three and five years after opening date. This included the addition of seven degrees at the graduate level, with the goal of providing 15 percent of instructional load at the graduate level within 10 years of opening.

By 2000, the University had met and exceeded its goals. By fall that year, FGCU offered two baccalaureate degrees and seven master’s degrees. Concentrations by college included:

- Arts & Sciences (12 baccalaureate/ 0 masters)
- Business (5 b/ 2 m)
- Education (3 b/ 7 m)
- Health Professions (4 b/ 3 m)
- Public Services (2 b/ 2 m)

There were sixteen undergraduate degree programs and 14 master’s degree programs with four advanced certification programs in the Health Professions curriculum, representing a 30 percent graduate instructional load.

FGCU also achieved accreditation in record time, receiving notification of success from the Commission on Colleges of the Southern Associations of Colleges and Schools (SACS) in 1999. Additionally, FGCU was assigned a Comprehensive Universities and Colleges I classification by the Carnegie Foundation for the Advancement of Teaching, to facilitate the next stages of institutional development.

With the inauguration of President William C. Merwin in September 1999, steps were put in motion to begin a comprehensive strategic planning process.

In June 2000, the University released the findings of an “Area Educational Program Needs Assessment” commissioned by Dr. Gene Hemp, interim provost. The report, based on interviews with community leaders in southwest Florida, considered academic offerings of other area public institutions and educational needs of the coastal corridor from Sarasota to Naples. The list of immediate opportunities for new or expanded programs at FGCU included: counselor education; criminal justice; e-commerce; environmental studies; gerontology; health information management; health services administration; music education; nurse practitioner; special education; speech pathology; teacher education. Long-term programming opportunities were identified as well. These included: agriculture production management; construction management; education administration (doctorate); engineering; golf course management; international business; language studies; library science; technology information transfer, and theater/performance.

In January 2003, a second evaluation called the Koch Report was released. This study, based on interviews with citizens, elected officials, business leaders and others, identified needs in engineering, nursing, construction management, graphic information systems, and an MBA track in real estate development.

The strategic planning process resulted in the development of an updated mission statement (see element 1.0) in 2002, and a list of Strategic Directives in 2003.
In 2004, the University conducted its own “Environmental Scan” to evaluate baseline demographics, economic and competitive indicators, needs assessment and impediments. The “Enrollment and Degree Planning Committee,” headed by Interim Provost Jack Crocker, released its recommendations in June 2004, six months ahead of the board-approved Florida Gulf Coast Strategic Plan for 2005-2010 in January 2005.

In June of 2010 the University adopted the new strategic plan for the planning years of 2010-2020. Academically the University wants to focus on providing academic excellence with diverse high quality programs. In doing so, this could provide unique opportunities for students in areas of research, engagement, and leadership.

Table 2-1: 1995 Campus Master Plan Recommended Academic Program

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>ARTS &amp; SCIENCES</td>
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</tr>
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<td>Criminology (B, M)</td>
<td>Psychology (B)</td>
<td>Psychology (M)</td>
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<td>Psychology (B)</td>
<td>Art (B)</td>
<td>Biology (M)</td>
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<tr>
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<td>Biology (B)</td>
<td>Earth and Atmospheric Science (M)</td>
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<td>Public Administration (M)</td>
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<td>Mathematics (B)</td>
<td>Physics (B)</td>
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<td>Art (B)</td>
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<td>Music (B)</td>
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<td>Economics (B)</td>
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<td>Anthropology (B)</td>
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<td>Guidance and Counseling (M) (Full)</td>
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<td>Educational Leadership (M)</td>
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<tr>
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</table>
New goals set by the University are to expand the breadth of academic programs. The short term goal of three years is to implement seven (7) new programs.

### 2.2 Current Conditions

The due diligence undertaken by FGCU in planning its academic program is reflected in Table 2.2, which tracks actual course offerings from 1997 through those anticipated up to and beyond 2015.

Baccalaureate, Masters and Doctoral concentrations in each college are:

- Arts & Sciences (22 baccalaureate/ 4 masters)
- Business (7 b/ 4 m)
- Education (7 b/ 15 m/ 1 doctoral)
- Health Professions (6 b/ 6 m/ 1d)
- Professional Studies (7 b/ 5 m)

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<tbody>
<tr>
<td>Engineering (M) (via FEEDS)</td>
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</table>

Source: 1995 FGCU Comprehensive Campus Master Plan.

1. To be phased out by 1997.
2. Implementation prior to 1997.
### Academic Program Growth

<table>
<thead>
<tr>
<th>Achieved</th>
<th>2011-2015</th>
<th>2015+</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Planned</td>
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</tbody>
</table>

**College of Arts & Sciences**

*Bachelor of Arts*
- Anthropology
- Art
- Biology
- Chemistry
- Communication
- English
- Environmental Studies
- History
- Marine Science
- Mathematics
- Psychology
- Spanish
- Theatre
- Philosophy
- Sociology
- Music-Education
- Music-Performance
- Music-Piano Pedagogy
- Environmental Humanities
- Music Education B.M.E.
- Journalism
- Graphic Design

*Bachelor of Science*
- Biotechnology
- Biology
- Mathematics
- Biology Accelerated
- Earth and Space Science

*Master’s Degrees*
- English MA
- Environmental Science MS
- Environmental Studies MA

*History*
- Biology
- Psychology

**College of Business**

*Bachelor of Science*
- Accounting
- Computer Information Systems
- Computer Science
- Finance
- Management
<table>
<thead>
<tr>
<th>Achieved</th>
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<th>2015+</th>
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<tbody>
<tr>
<td></td>
<td>Original</td>
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<td>Marketing</td>
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<td>Advertising</td>
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<td>Real Estate</td>
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<tr>
<td>Advertising Management</td>
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<td>Master’s Degrees</td>
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<td>Accounting &amp; Taxation MS</td>
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<td>X</td>
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</tr>
<tr>
<td>Curriculum + Instruction M.Ed.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Elementary Education M.Ed.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Special Education M.Ed.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Educational Leadership MA/M.Ed.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Reading M.Ed.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Education Ed.S.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Mental Health Counseling MA</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>School Counseling MA/M.Ed.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Curriculum &amp; Instructional-Educational Technology M.A.Ed.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Curriculum &amp; Instructional-English Education M.Ed.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Doctoral Degrees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
Achieved | 2011-2015 | 2015+
---|---|---
1997-2000 | Actual | Planned | Planned | Planned | Planned | Planned |

**College of Health Professions**

**Bachelor of Science**
- Clinical Laboratory Science: X
- Health Science: X
- Nursing (BSN): X

- Human Performance: X
- Community Health: X
- Athletic Training: X

**Master’s of Science**
- Health Science: X
- Nursing M.S.N.: X
- Occupational Therapy: X
- Nursing Anesthesia M.S.N.: X
- Acute Care Nurse Practitioner M.S.N.: X
- Primary Health Care Nurse Practitioner M.S.N.: X

- Sports Psychology: X

**Doctoral Degrees**
- Physical Therapy DPT: X
- Nursing Practice: X

**College of Professional Studies**

**Bachelor of Science**
- Criminal Justice: X
- Legal Studies: X
- Political Science: X
- Resort and Hospitality Management: X
- Criminal Forensic Studies: X
- Social Work B.S.W: X
- Professional Golf Management: X

**Master’s Degrees**
- Public Administration MPA: X
- Social Work MSW: X
- Criminal Justice/Forensic Studies: X
- Criminal Justice: X
- Criminal Justice-Compliance: X

Sources: Major/Degree Programs. Supplied by Office of Curriculum and Instruction 2010
To assist with academic program decisions, the original Campus Master Plan anticipated an enrollment growth from 1,000 Full-Time Equivalent (FTE) total in 1997-98, to 4,500 FTE total in 2006-07, the 10th anniversary of the University’s opening. The headcount (HC) projection assumed a ration of 1.8 students per FTE, which was provided by the Board of Regents. The ration was slightly higher than the 1.64 ration average for the State University system at the time. After final calculations of headcount per FTE in 2006-07 the ration ended up at 1.66 aligning itself with the State University System. In the academic year 2009-10 the ration was finalized at 1.58. This trend of the FTE rations dropping since 2006.

Actual FTE enrollment counts indicate the numbers have tracked closely to those anticipated, between 8 and 9 percent each year. Headcount diverged widely in the first three years of operation suggesting a high percentage of older, non-traditional, transfer and non-credit students. Since 2000, however, undergraduate headcount growth has tracked FTE, stabilizing between 8 and 9 percent each year. It is thought that the addition of on-campus student housing is attracting more traditional students. Now, after 2005, the development of more curriculums, more freshmen style dormitories and Sustainable notorieties are just a few things that have boosted and maintained enrollment at the University. Headcount and FTE consistently continue to rise at an apparent rate of 8%.

<table>
<thead>
<tr>
<th>Year</th>
<th>FTE</th>
<th>Undergraduate</th>
<th>Graduate</th>
<th>Non-Degree</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>4,313</td>
<td>5,952</td>
<td>760</td>
<td>539</td>
<td>7,254</td>
</tr>
<tr>
<td>2006-2007</td>
<td>5,018</td>
<td>6,962</td>
<td>795</td>
<td>557</td>
<td>8,316</td>
</tr>
<tr>
<td>2007-2008</td>
<td>5,754</td>
<td>7,986</td>
<td>822</td>
<td>577</td>
<td>9,388</td>
</tr>
<tr>
<td>2008-2009</td>
<td>6,439</td>
<td>8,659</td>
<td>986</td>
<td>587</td>
<td>10,238</td>
</tr>
<tr>
<td>2009-2010</td>
<td>7,019</td>
<td>9,486</td>
<td>1,047</td>
<td>565</td>
<td>11,105</td>
</tr>
<tr>
<td>2010-2011</td>
<td>7,494</td>
<td>10,403</td>
<td>1,153</td>
<td>582</td>
<td>12,038</td>
</tr>
</tbody>
</table>

Source: Office of Planning, Budgeting and Policy Analysis, as of 2 / 2011

Enrollment by College

In fall 2000, the largest share of the student population enrolled in the College of Business (25 percent). This was followed by approximately 16 percent in the Colleges of Education and Arts & Sciences, 10 percent in the College of Health Professions, and 8 percent in the School of Public and Social Services. By the fall of 2005, the College of Business remained steady (25 percent), but the College of Education decreased 4.5%. A dramatic shift occurred in Arts & Sciences, with commanding 23 percent of students. Health Professions increased to 13 percent and Professional Studies (renamed from School of Public and Social Services) to 13 percent. The shifts reflect the University’s efforts to grow with the needs of the marketplace.
2.3 Future Academic Program

An updated FTE and headcount enrollment projection through the planning horizon of 2020 anticipates steady growth at 8 percent per year, both at the undergraduate and graduate level. Anticipated growth in faculty and staff is at the same rate. As outlined in the Strategic Plan 2010-2015, the goal continues to be to “Provide quality educational opportunities serving the region, underrepresented populations, the State of Florida and beyond.” Programs will be developed to support the goals and strategic directives of the Strategic Plan.

Table 2-5: Projected Student Enrollment

<table>
<thead>
<tr>
<th>Year</th>
<th>FTE 9</th>
<th>Undergraduate</th>
<th>Graduate</th>
<th>HC (Fall Term) 10</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-12</td>
<td>7,958</td>
<td>11,402</td>
<td>1,141</td>
<td>12,543</td>
<td></td>
</tr>
<tr>
<td>2012-13</td>
<td>8,571</td>
<td>12,295</td>
<td>1,215</td>
<td>13,511</td>
<td></td>
</tr>
<tr>
<td>2013-14</td>
<td>9,264</td>
<td>13,313</td>
<td>1,292</td>
<td>14,605</td>
<td></td>
</tr>
<tr>
<td>2014-15</td>
<td>10,024</td>
<td>14,345</td>
<td>1,370</td>
<td>15,715</td>
<td></td>
</tr>
<tr>
<td>2015-16</td>
<td>10,777</td>
<td>15,331</td>
<td>1,467</td>
<td>16,798</td>
<td></td>
</tr>
<tr>
<td>2016-17</td>
<td>11,639</td>
<td>16,537</td>
<td>1,554</td>
<td>18,091</td>
<td></td>
</tr>
<tr>
<td>2017-18</td>
<td>12,570</td>
<td>17,837</td>
<td>1,647</td>
<td>19,484</td>
<td></td>
</tr>
<tr>
<td>2018-19</td>
<td>13,376</td>
<td>19,239</td>
<td>1,745</td>
<td>20,984</td>
<td></td>
</tr>
<tr>
<td>2019-20</td>
<td>14,462</td>
<td>20,751</td>
<td>1,849</td>
<td>22,600</td>
<td></td>
</tr>
<tr>
<td>2020-2021 (10-year)</td>
<td>15,204</td>
<td>21,759</td>
<td>1,959</td>
<td>23,718</td>
<td></td>
</tr>
</tbody>
</table>

Source: Projections to 2020-21 were provided by the FGCU Office of Institutional Research and Analysis.

Table 2-6: Projected Faculty and Staff

<table>
<thead>
<tr>
<th>Year</th>
<th>Projected Positions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-11</td>
<td>1069</td>
</tr>
<tr>
<td>2011-12</td>
<td>1110</td>
</tr>
<tr>
<td>2012-13</td>
<td>1134</td>
</tr>
<tr>
<td>2013-14</td>
<td>1199</td>
</tr>
<tr>
<td>2014-15</td>
<td>1243</td>
</tr>
<tr>
<td>2015-16</td>
<td>1287</td>
</tr>
<tr>
<td>2016-17</td>
<td>1332</td>
</tr>
<tr>
<td>2017-18</td>
<td>1376</td>
</tr>
<tr>
<td>2018-19</td>
<td>1421</td>
</tr>
<tr>
<td>2019-20</td>
<td>1465</td>
</tr>
<tr>
<td>2020-2021 (10-year)</td>
<td></td>
</tr>
</tbody>
</table>

Source: FGCU Office of Institutional Research and Analysis, for faculty and staff projections through 2020-21.
The institution’s vision for the next decade is to become the only truly comprehensive public university serving SW Florida. In order to meet this vision, FGCU will continue to emphasize growth in all its myriad forms: enrollment; degree production; diversity; programs and services; information resources; faculty; staff; alumni; facilities; athletics; scholarships; sponsored research; endowment; and reputation. Virtually every major aspect of FGCU will be touched by this expansion.

To achieve this ambitious vision, FGCU must grow strategically. FGCU must ensure that the resources to facilitate and sustain this growth are present; that priorities are clear; and that its mission is well-aligned with BOG statewide goals and that it serves regional interests.

FGCU’s focus on student learning will continue, and it will move to serve a wider range of student needs. In so doing, FGCU aims for a more complete mix of programs. Where there currently are 52 undergraduate degree programs, we envision 70. Master’s programs should move from just over 30 now to approximately 40, and FGCU should be offering a handful of professional doctoral programs and perhaps a research doctorate as well. Many of these programs will be at least partially available online and more classes will be offered on weekends and off-campus to meet the special needs of regional students.

Strategic and sustainable growth means that academic excellence will continue as a principal institutional goal. Assessment and continuous improvement will be tools in the vanguard of FGCU’s further evolution. Regional accreditation, state licensure/national certification, and BOG planning and accountability requirements will ensure the integrity of our academic enterprise. Specialized accreditation will be sought, earned, and maintained for all appropriate disciplines. Within the next few years alone, FGCU will witness accreditation of its Whitaker School of Engineering; of its Bower School of Music; and of its College of Education.

At the same time, FGCU will dramatically increase its degree production across the board including STEM areas to provide the educated workforce that drives economic development. Graduation rates will continue their rising trend, and FGCU will continue to demonstrate high levels of post-graduation employment and success that will support the projected growth of the region: in health care; education; management, finance, and real estate; information technology; the resort and hospitality industry; the life sciences; the environmental sciences and engineering; and the professions. FGCU’s faculty will discover and transmit the products of their scholarly pursuits in partnership with local industry and will serve as a magnet for attracting and retaining industries that are vital to the economic diversification of the region and the state. FGCU’s participation in the 240-acre research park known as the HUB will be a crucible for the practical application and commercialization of new green technologies. It will have the potential to generate hundreds of well-paying jobs.

FGCU’s student population will grow from its current level of just over 11,000 students to about 20,000 in the next ten years. The main campus will be built out to its capacity and the Buckingham site will be used to leverage the university’s main campus for greater outreach into the region. This expansion will reflect an ongoing trend of increasing diversity reflecting the demographics of the region that will be complemented with modest growth in the number of international and out-of-state students.

The University anticipates a growing dependence on all forms of Instructional Technology and delivery of service. The addition of these programs is the outgrowth of external and internal evaluations as part of the strategic planning process.

<table>
<thead>
<tr>
<th>Year</th>
<th>A&amp;S</th>
<th>B</th>
<th>HP</th>
<th>Ed</th>
<th>PS</th>
<th>U</th>
<th>ND</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-11</td>
<td>3977</td>
<td>1304</td>
<td>632</td>
<td>628</td>
<td>775</td>
<td></td>
<td></td>
<td>7494</td>
</tr>
<tr>
<td>2011-12</td>
<td>4224</td>
<td>1378</td>
<td>677</td>
<td>672</td>
<td>818</td>
<td></td>
<td></td>
<td>7958</td>
</tr>
<tr>
<td>2012-13</td>
<td>4561</td>
<td>1482</td>
<td>717</td>
<td>729</td>
<td>879</td>
<td></td>
<td></td>
<td>8571</td>
</tr>
<tr>
<td>2013-14</td>
<td>4944</td>
<td>1599</td>
<td>769</td>
<td>786</td>
<td>947</td>
<td></td>
<td></td>
<td>9264</td>
</tr>
<tr>
<td>2014-15</td>
<td>5368</td>
<td>1728</td>
<td>828</td>
<td>842</td>
<td>1022</td>
<td></td>
<td></td>
<td>10024</td>
</tr>
<tr>
<td>2015-16</td>
<td>5778</td>
<td>1853</td>
<td>899</td>
<td>898</td>
<td>1095</td>
<td></td>
<td></td>
<td>10777</td>
</tr>
<tr>
<td>2020-2021 (10-year)</td>
<td>5778</td>
<td>1853</td>
<td>899</td>
<td>898</td>
<td>1095</td>
<td></td>
<td></td>
<td>15,204</td>
</tr>
</tbody>
</table>

Source: Projected/extrapolated from figures provided by FGCU, based on each college’s proportion of total FTE in the 2010-11 academic year. A&S= Arts & Sciences; B= Business; HP= Health Professions; Ed= Education; PS= Professional Studies; U= Undeclared; ND= Non-Degree Seeking. 125-Year enrollment is two times the 10-year figures.
3.0 URBAN DESIGN ELEMENT

3.1 Background

The purpose of the Urban Design element is to develop an understanding of the overall physical form of the campus, describe its relationship to the surrounding host community, and develop principles for the future development of the campus.

Prior to the beginning of University operations in 1997, no man-made architectural or landscape elements existed on the Fort Myers campus site. The Urban Design element of the 1995 campus master plan focused on broad goals, objectives and policies for campus spatial organization, and the 2000 master plan emphasized design principles for the academic core area of campus (i.e., within the loop road).

In 2010 the University developed new design principal guidelines for all new construction. (Refer to Architectural Design Element). These design principles will change the campus in the future as a whole based on scale of buildings and the future growth of the Eastern Quad.

3.2 Existing Campus Environment

The Florida Gulf Coast University campus is rapidly maturing, with major building, infrastructure and urban design projects having been completed each year since the University opened its doors in 1997. Construction with the campus core has been consistent with the site organization and architectural vocabulary established in the 1995 and 2000 campus master plans. Over the last 10 years the University allowed building heights to increase which changed the architectural vocabulary and scale of the campus open space.

The rapid growth of the student population has affected the campus over the last 10 years. The build out of the South Village Housing, the development of the Athletic Complex, the completion of North Lake Village, and further completion of the western Academic Core has created a more unified campus feeling. The functionality of the campus has been affected by the growth and providing clearly marked circulation paths for pedestrian, bicyclist and vehicular traffic is of great importance. Lutgert Hall terminates the Western Quad of the academic core and acts as a focal point at the University entrance. Visual markers, pedestrian paths, arcades and landscaping are beginning to tie the Western Quad of the academic core together and provide a precedent for future design and layout of the Eastern Quad of the academic core.

Campus Core District

- Symbolic Campus Open Spaces

As shown on Figure 3-1 8-1, there is, throughout the University Campus, a commendably high percentage of area dedicated to open space, both natural and man-made. These two types of open space environments serve different campus needs and should be developed and designed as such. However, the lack of distinction between the natural and manmade green spaces undermines the urban design character of the symbolic campus open spaces. While the loosely defined edges of the natural landscape serves to enhance and integrate it into the campus environment, the poorly defined man-made landscapes lack the visual quality and integrity to function as a symbolic campus open space, i.e. the Library Green, symbolic entrances and core pedestrian ways.

Central Campus “Library Green”

While the Oval Lawn is appropriately sited, and scaled to function as the Campus’ principal Great Space, it lacks the connective trough walkways to Campus and edge definition that would make it a memorable space. Without these two elements it will remain a viewed environment rather than a used space. A significant campus building at its eastern end could serve as a gateway to the eastern (currently undeveloped) zone of the central academic core.
Symbolic Entrance Treatments
Lutgert Hall was placed as a symbolic element at the intersection of FGCU Boulevard and the Academic Core Loop Road. Lutgert Hall acts as a termination element at the end of the Student Quad, as well as the focal point at the vehicular entrance to campus. At the terminus of the north campus entry road, the Student Center and the environs serves a similar symbolic function as the center of student life. As the Student Center grows, as needed, due to student population, the clock tower and the building as a whole will begin to develop into a final termination to FGCU Lake Parkway West.

Core Pedestrian Ways
The primary urban design objectives of the 1995 Master plan, including building massing with inter-connected covered walkways have been incorporated in the campus core. The major pedestrian axis established by the early academic buildings should be extended and improved as future construction extends to the east across the campus lake. The character of the green spine between the buildings should be re-envisioned from what currently exists, to provide a more inhabitable space with a more coherent landscape treatment. Now that the Western Spine of the Academic Core is in its final completion the University has chosen to move forward with the final landscaping of the spine. The scope of this new landscaping will start to define the overall coherent appearance of complete landscape and urban scale of the University. The future Eastern Spine of the Academic Core will be designed with the goal of providing a network of walkways that minimize transit time between buildings and enhance outdoor thermal comfort of pedestrians.

• Organization and Placement of Buildings
The urban design character of the campus’ architectural component has been developed in interconnected compact building masses that establish and define major open spaces, as outlined in the 1995 master plan section 301.3. Overall, there is a common architectural vocabulary used throughout, with little variation in feature and treatment. While this consistency of design does help to unify the campus’s built environment, the introduction of distinctive architectural features and treatments could help enliven the campus. This would be especially appropriate if they are included in the design of “signature” buildings.

Since the 2005 master plan, making the buildings multiple stories has helped to vary the architectural language of the buildings. It has made design features a little more flexible as well as allowing for flat roofs to be included. A continued focus on sustainability in future buildings will also result in design choices regarding form, orientation and façade treatment that lead to visual interest. Combining all these features together, the campus will express the architectural variety without sacrificing cohesiveness.

• Service and Loading Functions and Facilities
Service and loading areas on the core campus are accessed from a network of service roads that are separate from the primary pedestrian paths. As new buildings are constructed in the campus core, attention should be given to both continuing the separation of pedestrian, bicycle and service traffic, and suitably screening service zones from public view. Each building design should also consider the parking of golf carts as well as how parking and movement of golf carts effect the urban environment.

• Parking in the Campus Core
As enrollments grow, there will be increasing pressure to use the limited area of developable land within the campus core for academic and campus support space. Inevitably, this pressure will displace surface parking. To keep parking convenient to all uses within the campus core, FGCU has developed three new parking structures within the campus core, with a fourth structure planned and committed to be built in 2011-2012. Parking lots and structures will provide safe and easy access to pedestrian and bicycle paths to eliminate the need to circulate in an automobile around the campus core. Parking structures will also reduce the amount of surface parking needed and can be built with sustainability in mind such as using reflective materials, incorporation of solar panels and incorporation of “green” walls or screens.
North Lake Village District

As of 2005, there is little developable land remaining in the North Lake Village district of campus, and little expectation of new development in this area over most of the coming decade. The district had a distinct vehicular orientation, and there are few significant pedestrian armatures or mature open spaces. The lakefront itself represents significant amenity whose value has not yet been realized; a more mature landscape and open space treatment along this edge would increase the perceived amenity provided by the housing here. Pedestrian connections to the campus core could be enhanced by a planned second boardwalk to the campus loop road.

Vehicular circulation for sporting events remains a challenge in the North Lake Village district, because of the single point of access; in the long term, this would be relieved by the creation of a campus access road from the east.

South Village Housing

In 2007 FGCU completed construction of the first freshman dormitory in the south district now referred to as South Village Housing. Phase one, consisting of three, five story freshman dorms are complete, along with the first parking structure. The South Village Housing has now been defined by these structures.

Pedestrian and bicycle paths are being developed along with the construction of each structure, and will continue to be developed as each new building is completed into phase 2. It will be very important for the University to connect the South Village to the academic core as shown in the master plan. The connection needs to take students to both the eastern academic core and the Fine Arts Quad. This can be accomplished as a series of interconnected sidewalks, bike paths and boardwalks similar to the ones already established on campus (two boardwalks in the core of campus and the single boardwalk from the core to North Lake Village).

Welcome Center Area

Since the last update to the campus master plan in 2005, the Welcome Center Area has been populated with two buildings serving outreach functions of the University- the Sugden Welcome Center and the Keist Health Education Center. Other facilities of similar “outreach” nature are expected to be built in this area in the next decade. Although the target population for these facilities is largely the greater Gulf Coast Community, rather than existing University students, faculty or staff, the district should be seen as connected to and accessible from academic core of campus. As the academic core grows west toward FGCU Boulevard, the perceived and actual distance to the southwest district will shrink, and walking, bicycling, or taking a campus shuttle bus may become more realistic options for accessing the area. Land uses in this district are expected to be relatively low in density, served by surface parking.

Solar Field

The Solar Field consists of 14+ acres of developable land between FGCU Boulevard and the north campus access road. The only development on the site currently is an access road and the Sprint telecommunications tower. The Solar Field has good visual connections to Ben Hill Griffin Parkway, but it is perceived as remote from the academic core of campus, separated by protected wetlands. The development of this parcel has now taken a new direction for the University and will not be considered to change at least for the next twenty years. This parcel has been modified to become the new Solar Field for the University. The Solar Field is producing electricity for the University and the visibility from Ben Hill Griffin Parkway emphasizes the University’s goal of becoming an environmental leader in the County and State.

3.3 Existing Context Area

The 1995 Master plan defined the immediate context area of the University as that area bounded on the west by I-75, on the south by Corkscrew Road, on the north by Alico Road, and on the east by a north-south line which roughly followed an FPL easement about 2 miles from I-75. This area essentially corresponded with the boundaries of the University Community land use designation defined in the 1992 Special Amendment to the Comprehensive Plan. At the time, virtually all of that land was vacant or devoted to low-intensity rural/agricultural uses.

The Lee Plan is designed to depict Lee County as it will appear in the year 2030. The Plan projects and increase in
population to 979,000 permanent and 176,220 seasonal residents. The Plan anticipates the county’s traditional
economic base diversifying beyond traditional industries, such as agriculture, commercial fishing, tourism, and
construction, as new business opportunities are afforded by the expanded international airport and the new
university with a focus on research and technology.

For the purposes of the 2010 master planning process, the context area for FGCU has been defined as the San
Carlos/Estero planning community, as defined in the Lee Plan. This context area includes the University Community
sub-area. The 2005 master plan included the Gateway/Airport planning community within the FGCU context area,
but the rapid development in the Gateway/Airport area now underway is largely unrelated to growth of the
University, and it is expected that the impact of future development as FGCU will be minor in this area.

The San Carlos/Estero area is currently experiencing rapid development and population growth. While many of
the large vacant tracts that surround the university campus have had in place some type of development approval for
many years, the presence of FGCU has undoubtedly served as a catalyst for some of the development activity now
occurring in the immediate vicinity of the campus. Such development consists mostly of high-end planned
communities, but also includes some significant amounts of retail space and other non-residential uses.

The 2004 Lee County comprehensive Plan describes the existing and anticipated character and development
dynamics of these planning communities as follows:

**San Carlos**

This Community is located in the southern portion of Lee County, east of Hendry Creek and, for the most part, south
of Alico Road. It is north of the Estero River on the west side of US 41 then north of the new Brooks of Bonita
development east of US41. The community does extend east of I-75 to include the approved developments along
Corkscrew Road and all lands designated University Community. The majority of the land in this community is
designated as Suburban and then Urban Community (both having a maximum standard density of 6 units per acre)
with the remaining areas designated as Rural, Outlying Suburban, and Industrial Development. There are three
distinct areas within this community: San Carlos Park, Island Park, and the new university area. All of these areas
will be experiencing tremendous development pressures as this community continues to grow.

This community will be challenged with addressing the needs of the Lee County community that contains the
newest major state university, a new semi-professional ice-hockey arena, and immediate access to the Southwest
Florida International Airport. Most of the vacant property in this community (nearly 70%) has some type of
development approval most of which were granted prior to the advent of many of these new development engines.
The San Carlos/Estero will struggle with these conflicts throughout the life of this plan but will emerge a vibrant
urban core for Lee County's high-tech research and development employment base. (Added by Ordinance No. 99-
15, Amended by Ordinance No. 07-12)
4.0 LAND USE ELEMENT

4.1 Location and Jurisdiction

The entirety of FGCU’s property is located within the jurisdiction of Lee County. Lee County is located in southwest Florida, bisected by the Caloosahatchee River and bordered by Charlotte Harbor and the Gulf of Mexico, and by Charlotte, Hendry and Collier counties. Lee County includes the municipalities of Fort Myers, Fort Myers Beach, Cape Coral, Bonita Springs, and Sanibel Island, and the remaining unincorporated areas.

The Comprehensive Plan amendment whereby Lee County established provisions specifically to address the Tenth University became effective on November 9, 1992. The Lee Plan Future Land Use Map reflects a “University Community” land use category which includes FGCU and immediately adjacent lands, and a “University Campus” designation specific to FGCU’s campus. The University Community land use district is bounded by Alico Road and the Southwest International Airport to the north, the Timberlands tract to the south, Ben Hill Griffin Parkway directly west and, abutting to the east, portions of the Miromar Lakes property and the undeveloped area referred to as the Southeast Area. Interstate 75, running in a north-south direction parallel to Ben Hill Griffin Parkway, provides convenient access to the University from communities located to the north and south of the campus.

The University’s primary service area, as defined in the Purpose Statement, comprises the Southwest Florida counties of Charlotte, Hendry, Collier, and Glades, in addition to Lee County itself. The 2009 population of these five counties, as estimated by the U.S. Census Bureau, was 1,166,242. For 2020, the Bureau of Economic and Business Research at the University of Florida projects a population for these counties of 1,432,100, representing a 19% percent increase over the 2009 data. The largest population growth numerically, as well as on a percentage basis, is projected for Lee County, as noted in the table below.

<table>
<thead>
<tr>
<th>County</th>
<th>2009 Population</th>
<th>Projected 2020 Population</th>
<th>Percentage Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlotte</td>
<td>165,455</td>
<td>188,800</td>
<td>12%</td>
</tr>
<tr>
<td>Collier</td>
<td>333,032</td>
<td>406,500</td>
<td>18%</td>
</tr>
<tr>
<td>Glades</td>
<td>11,311</td>
<td>11,900</td>
<td>5%</td>
</tr>
<tr>
<td>Hendry</td>
<td>41,320</td>
<td>45,900</td>
<td>10%</td>
</tr>
<tr>
<td>Lee</td>
<td>615,124</td>
<td>779,000</td>
<td>21%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,166,242</strong></td>
<td><strong>1,432,100</strong></td>
<td><strong>19%</strong></td>
</tr>
</tbody>
</table>

(source: 2009 population: U.S. Census Bureau. 2020 projection, Bureau of Economic and Business Research, University of Florida)

4.2 Legal Description of University Property

A complete legal description of FGCU’s campus property is provided in the Appendix to this document.

4.3 Campus Land Use

The campus consists of 760 acres of land, with a central academic core area of approximately 150 acres, bounded by a perimeter road. A lakefront parcel to the northeast of the academic core, called North Lake Village, is devoted to mixed uses, including student housing, athletics and recreation, and specialized academic support facilities. An additional approximately 67 acres of developable upland area exist on campus, including approximately 36 acres within the academic core, and approximately 31 acres in two outparcels located to the south and west of the academic core. These outparcels are called South Village Housing, and the Welcome Center Area in this planning document. All of these areas are surrounded by approximately 400 acres of jurisdictional wetland upland buffers. Pursuant to the adopted 1995 Master Plan, these natural habitat areas are being restored and preserved as development mitigation areas and/or permanent open space. Associated permits and phasing of mitigation activities are described in further detail in Element 13.0 of this report.
Development in the Academic Campus Core

As shown on Figures 5-1, 6-1, 7-1 and 8-1, the initial phases of campus development, spanning from 1996 to 2010 include the following academic and support facilities, as well as associated utilities and infrastructure within the academic core area:

- University Library and Administration
- Howard Hall
- McTarnaghan Hall (Student Services)
- Wellness Center
- Ben Hill Griffin III Hall (Academic 1)
- Reed Hall (Academic Building 2)
- Academic Building 3
- Family Resource Center
- Central Energy Plant
- Broadcast Building
- Campus Support Complex
- Whitaker Hall
- Egan Observatory
- Fine Arts Phase 1
- Student Union
- Academic 5
- Library Addition
- Engineering – Holmes Hall
- Academic 6 (Business) Lutgert Hall
- Academic 7 Building
- Fine Arts Phase 2 Auditorium
- The Central Energy Plant Expansion Phase II

Initial development also included the construction of the main and north entrance roads, the loop road and a system of ponds and lakes to meet the needs of the core’s stormwater management system. Along with all the Academic Building construction the University has constructed 3 parking Garages within the Academic Core. The use of these garages was needed due to the growth of the student population and the quantity of students that are commuters. One of the University’s biggest challenges associated with campus growth has been maintaining adequate amounts of parking required for the total number of students, faculty and staff.

In addition, several projects are under construction in the academic core, or are committed/ planned for construction over the next three to five years (see DIA Figures 5-1, 6-1 and 7-1 and GOP Figures 14-1 and 14-2. These projects include the following academic, support, and infrastructure facilities:

Under construction:
- Academic 8 - College of Health Professions
- Parking Structure 4
- Student Union Addition

Planned/ Proposed:
- Hospital Management
- Multipurpose Education Facility
- Human Performance Wing
- College of Business (addition to Academic 6)
- Science and Technology Building
North Lake Village District

In the lakefront mixed-use parcel, current development includes a student housing complex, which provides 1,958 beds in 25 buildings, as well as housing support facilities including a swimming pool, volleyball courts, satellite laundry facilities, and a commons building with mail room, laundry facility, business center, and a reception area with kitchen. No additional student housing is anticipated in this area in the next 5 to 10 years, although enrollment growth pressures may lead the University to seek increasing land use density in the lakefront area, including additional housing toward the end of the planning horizon.

FGCU Athletics Complex

The rest of the lakefront parcel is occupied by the University’s Athletics and Recreation complex, including the Alico Arena, tennis and basketball courts, the Lee County FGCU Aquatics Center, baseball, softball, and the soccer field.

FGCU Athletics are looking to complete by 2013 the Track and areas around the new soccer field to complete the Requirements for Track and Field events to be considered in Div. I A status.

Welcome Center Area

The following facilities exist, as of 2010, in the southwest area of campus known as the Welcome Center Area. These largely serve outreach and community-oriented functions:

- The Sugden Welcome Center, completed in 2004
- The Kleist Health Education Center, opened in 2005
- An information/ parking permit booth

Future facilities planned for the Welcome Center Area include:

- Demonstration and Learning Center
- Student Garden

Solar Field

Originally dedicated in the 2005 master plan, the buildable area of this parcel of land was to be considered as outreach to the public in the form of research facilities. However in 2007 the University made arrangements to access the buildable area differently as the Campus “solar field” which provides power for several buildings on campus.

South Village Housing

A more dense student housing complex has been underway since 2007 with the first structure completed and having 407 total beds. Following this, the University has completed two more structures that give South Village a total of 1,231 beds for the fall 2011 semester. Due to the quantity of students in this area, a parking structure is underway and scheduled to be complete in 2011 as well.

Planned Facilities
Housing Phase Grouping 2
   Student Housing Phase 12 – 532 beds.
   Student Housing Phase 13 – 532 beds
   Student Housing Phase 14 – 532 beds
Housing Phase Grouping 3
   Student Recreation Center
   Central Energy Plant Expansion
   Dining Facility Expansion
   Parking Deck “A”

From the current pace and character of the development, it is apparent that the pattern of land use of the academic core is set. The core is, and will continue to be, the most appropriate location to place additional academic facilities based on the constraint of a reasonable walking distance between classes (i.e., approximately a one-half mile, or the equivalent of a 10-minute walk).

4.4 University Context Area Land Use

4.4.1 Exiting Land Use
Several factors have more recently encouraged development in the area, most significantly the arrival of the University, the provision of improved, expanded service and facilities at the nearby airport, and the recent introduction of additional schools and community facilities to attract and serve a growing population. Road and other infrastructure improvements associated with these projects have further contributed to hastened the pace of development.

Today, an ice-hockey and event arena (Everblades/ Germain) and regional outlet mall frame the entranceway to the University from I-75 at Corkscrew Road. Residential development is also proceeding on the Timberlands and Miromar Lakes tracts immediately south and north of the University. Other development proposals are or have been considered by Lee Count for properties in the University context area.

4.4.2 Zoning
The existing zoning pattern within the University context area includes the following major zoning classification, as shown in Figure 4-3:

- **Agricultural District 2 (AG-2):** This zoning reflects the predominant character of the area east of Highway I-75 and includes the tracts that today comprise the University campus. The purpose of this zoning district is to provide areas for the establishment or continuation of agricultural operation, with residential uses being permitted only as ancillary to agricultural uses. This category was superseded by the provisions of the University Community future land use category, which were amended into the Lee County Comprehensive Plan in 1992, as described in subsections 4.4.3 and 4.6 later in this chapter.

- **Mixed-Use Planned Development (MPD):** This zoning reflects existing planned development approvals in the area surrounding the University campus, including those which apply to the Alico property (now Miromar Lakes) to the north, west, and south of the University, as well as the Timberlands and the Everblades/Germain Arena. The intent of the MPD is to permit planned developments with a mixture of uses in order to reduce the number of vehicular trips on the County’s arterial and collector road network. All MPDs must meet or exceed at least 2 of the following DCI thresholds:
  1. A residential development of 300 or more dwelling units.
  2. A commercial development or activity which is either located on a parcel of 10 or more acres or which may include 100,00 square feet or more of floor area; or
  3. An industrial development or activity which is located on a parcel of 10 or more acres or which may include 100,00 square feet or more of floor area.
Mixed-used developments containing residential should be designed to capture within the development’s substantial percentage of the vehicular trips that are projected to be generated by those uses at project build out.

- **Residential Planning Development (RPD):** This zoning classification applies to residential developments located to the west of Highway I-75 and south of Corkscrew Road, including Creekside, most of Three Oaks, and Stoneybrooks. The intent of the RPD district is to further implement the goals, objectives, and policies of the Lee Plan while providing flexibility for the planning and design of developments. Section 34-612 of the Land Development Code outlines the general principles to be observed in planning and designing integrated developments. It is also the intent of this district to permit property owners and/or land developers to increase residential density and its ancillary development in low-density areas, provided that the development is completely independent from County-subsidized facilities and services, and that the project is demonstrated not to have adverse economic, environmental, fiscal, or social impacts on its environment and the County.

- **Commercial Planned Development (CPD):** The Miromar Outlet Mall which abuts Corkscrew Road and I-75 is in this zoning category. Principal uses in any commercial planned development are generally the retail sale and distribution of consumer goods and services, or the provision of standard office space for various purposes. Ancillary uses which may be permitted in the CPD district include permanent human habitation in multiple-family buildings and townhouses, transient housing in hotel or motel rooms, health care facilities, and other limited institutional uses and selected light industrial uses.

- **Planned Unit Development (PUD):** This zoning category applies to the Wildcat Run development located south of Corkscrew Road.

- **General Industrial (IG) and Light Industrial (IL):** This zoning reflects the Florida Rock and Sand operations located northeast of the University on Alico Road. The GI district is intended to provide suitable locations for development of heavy industrial uses which have the potential of producing adverse impacts on surrounding land uses or resources. The purpose of the Light Industrial district is designate suitable locations for the proper development of light industrial and quasi-industrial commercial uses.

### 4.4.3 Future Land Use

The future land use designation of parcels within the University context area includes the following, as shown on Figure 4-4:

- **San Carlos/Estero Planning Community**
  The majority of land in this community, to the south and west of the University Community, is designated as Suburban and Urban Community (both having a maximum standard density of 6 units per acre), with some scattered areas of Outlying Suburban land. In these areas, some, but not all of the required infrastructure needed for higher density range of Outlying Suburban Areas in from 1 du/ac to 3 du/ac. Lands located to the east of the University are predominantly designated Density Reduction/Groundwater Recharge Area. These lands include upland areas that provide substantial recharge to aquifers most suitable for future well field development. Only a limited range of low-density, low-intensity land uses are permitted in this area as compatible with this purpose and intent. Minimal public facilities exist or are planned in these areas. The University Community land use category provides for FGCU and development associated with or in support of the University. All development within the University Community should be coordinated with and designed to enhance and support the University.

Within the University Community are two land use sub-categories: University Campus and the University Village, as well as a University Window overlay. Together these functions are intended to provide a diversity of viable mixed-use centers. Overall average density for the University Village is limited to 10,000 square feet of
building area per non-residential acre allowed.

**4.5 Characteristics of the Host Community: Lee County**

### 4.5.1 Population

Population in Lee County rose despite the economic failures, the dropped value of land, housing and one of the state’s highest unemployment rates on record. In 2004 the U.S. Census Bureau estimated the population for the County at 514,295. In 2009 the estimated population is 615,142. This is an increase in 16% of population.

The projected county population is expected to continue to grow based on the reports by the University of Florida’s Bureau of Economic and Business Research. The projected 2020 population growth, as shown in figure 4.1 above is expecting Lee County to grow to a population of 779,000 residents.

The majority of Lee County’s population, 47 percent, of its residents resides in unincorporated areas. Cape Coral follows with the majority of Lee County’s residents at 162,852 people, followed by Fort Myers with 68,819.

### 4.5.2 Education

In 2008, according to the U.S. Census Bureau, Lee County residents had the following educational profile:

- Graduate/ professional degree: 8.4%
- Bachelor’s degree: 17.7%
- Associate’s degree: 6.5%
- Some college, no degree: 23.2%
- High school diploma: 32.1%
- Less than a high school diploma: 12.1%

High school graduation rates in Lee County were 77.6% in Lee County for the 2009 school year, compared with 76.3% for the state as a whole, according to Florida Department of Education statistics.

### 4.5.3 Economy

With the downturn of the country’s economy, Lee County has suffered from major unemployment rates. A majority of the growth in the past has been from residential construction and that growth of the population in the past has fueled this area’s economy. In July, 2009 Lee County hit an unemployment rate of 13 percent. The state as a whole has an unemployment rate of 10.6 percent. This was a record high for Lee County.

The county’s largest employer is Lee Memorial Health System. This by far surpasses other employers due to the recent purchase of Southwest Florida Regional Medical Center in late 2006.

Governmental and institutional entities including Lee County Government, Lee County School District, and the city of Cape Coral also ranked among the top-10 employers. There are three retailers (Publix Super Markets, Wal-Mart, and Target) and FGCU round out the top 10 employers in Lee County for 2011.

### 4.5.4 Quality of Life

Median household income in 2008 was $50,863 in Lee County, compared with $47,802 for the state of Florida as a whole and $52,029 for the nation, according to the U.S. Census Bureau.

The composite cost of living in the Fort Myers-Cape Coral metro area is slightly below the national average for 2009, with a composite score of 97.0, according to the American Chamber of Commerce Researchers Cost of Living Index for the second quarter of. Median house sales price for exiting single family homes dropped tremendously in
2010 to $67,000 in Fort Myers, according to the National Association of Realtors.

The crime rate for Lee County (i.e., crimes per 100,000 persons) is among the lowest of Florida’s major metropolitan areas.

4.6 Consistency with Host Community’s Comprehensive Plan
As originally adopted in 1989, the Lee Plan contained no provisions for the Tenth University. The future land use map designated the current FGCU site as Density Reduction/Groundwater Resource Protection, which allows a maximum of one (1) dwelling unit per 10 (10) acres. The concept of Tenth University was first set forth in the 1990-1991 round of amendments to the Lee Plan. The 1990-1991 Amendments added a new policy to Goal 44, which required that “…Lee County coordinate with the State Board of Regents and private initiatives in investigating the feasibility of, and possible locations for, a new four-year state university in Lee County.” (former Policy 44.1.5)

On October 27, 1992, Lee County adopted the “1992 University Comprehensive Plan Amendment Ordinance” (Ordinance No. 92-47) which amended its comprehensive plan to provide for the Tenth University. The DCA has found that the Plan Amendment to be in compliance with Chapter 163, F.S., and Rule 9J-5, F.A.C. The following highlights key policy outcomes of this and subsequent amendments which pertain to Florida Gulf Coast University, they appear in the Lee Plan 2004 Codification. Of particular significance to FGCU today are those policies related to the development of land in the immediate vicinity of the university, in light of the accelerated pace of development activity now taking place.

Lee County- A Vision for 2020

The Vision Statement establishes the key “themes” of the Comprehensive Plan as a reflection of the community’s aspirations for the future of Lee County, including:

“…the County’s traditional economic base will be diversified in order to increase the percentage of high-paying jobs, reduce tax burdens on residents, and enhance the stability of the community. Traditional industries such as agriculture, commercial fishing, tourism, and construction, will continue to play a significant role in the county’s economy, but will become less important in relation to new business opportunities afforded by the expanded international airport and the new university.” (Added by Ord. 99-15)

“Cultural, educational and recreational opportunities will expand dramatically, the result of the county’s increased urbanization.”

Future Land Use Element

Establishes the following land use categories to designate, and set development standards for, the University property and surrounding lands:

“Policy 1.1.9: The University Community land use category provides for Florida’s 10th university and for associated support development. The location and timing of development within this area shall be coordinated with development of the University and the provisions of necessary infrastructure. All development within the University Community shall be designed to enhance and support the University. In addition to all other applicable regulations, development within the University Community shall be subject to cooperative master planning with, and approval by, the Board of Regents of the State University System.

Prior to development in the University Community land use category, there shall be established a Conceptual Master Plan which includes a generalized land use plan and a multi-objective water management plan. These plans shall be developed through a cooperative effort between the property owner, Lee County, and South Florida Water
Within the University Community are two distinct sub-categories: University Campus and University Village. The University Window overlay, although not a true sub-category, is a distinct component of the total university environment. Together these functions provide the opportunity for a diversity of viable mixed-use centers. Overall average density for the University Village shall not exceed 2.5 units per acre. Clustered densities within the area may reach fifteen units per acre to accommodate university housing. The overall average intensity of non-residential development within the University Village shall be limited to 10,000 square feet of building area per non-residential acre allowed pursuant to Map 16 and Table 1(b). Specific Policies related to the University Community are included within the Lee Plan under Goal 18.” (added by Ord. 92-47. Amended by Ord. 94-30, 98-09, 00-22).

“Policy 1.3.5: The University Village Interchange land use category is designed to accommodate both interchange land uses and non-residential land uses related to the University. Development within this interchange area may or may not be related to, or justified by the land use needs of the University. Land uses allowed within this area include those allowed in the Industrial Commercial Interchange category and the associated support development allowed in the University Village. The overall average intensity of non-residential development shall be limited to 10,000 square feet of building area per non-residential acre allowed pursuant to map 16 and Table 1(b). […] Cooperative master planning and approval by the Board of Regents shall be required prior to development within this land use category which meets or exceeds the Development of Regional Impact thresholds, either alone or through aggregation, shall conform to the requirements of Chapter 380 F.S.” (Added by Ord. 92-47. Amended by Ord. 94-30, 00-22).

“Goal 18: University Community. In order to ensure that development within the University Community land use category protects and enhances the ability of Florida’s tenth university to provide secondary education as described in the Mission Statement of that institution, and to assure that land uses or development activities do not interfere with, disrupt, or impede the efficient operation of that institution, the following Objectives and Policies shall apply to all development within the University Community land use category…(This Goal and its Objectives and Policies were added by Ord. 92-47. Amended by Ord. 94-30, 00-22).

Objective 18.1: Future Land Use. In order to ensure that the location and timing of development within the University Community is coordinated with the development of the University and the provision of necessary infrastructure; and that all associated support development within the University Community is designed to enhance the University, all development within the University Community shall be subject to cooperative master planning which shall conform to the following policies: (Amended by Ordinance No.00-22)

Policy 18.1.1: Lee County will through public and private economic and business development initiatives, promote the University Community as a catalyst for economic diversification and the promotion of employment throughout Lee County and the Region. Within the University Community land use category, the focus of this endeavor (the emphasis) will be on university-related scientific research and high technology development activities.

Policy 18.1.2: The University Community will provide a mix of housing types with densities sufficient to meet the needs of and designed to accommodate the varying lifestyles of students, faculty, administration, other university personnel, and employees of the associated support development.

Policy 18.1.3: By the end of 1995, Lee County shall adopt appropriate regulations providing for university
housing, including student dormitories and boarding houses.

Policy 18.1.4: By the end of 1995, Lee County shall adopt regulations further defining how densities for individual parcels within the University Community will be determined. The regulations will address how the total number of units will be tallied to insure that the overall average density of 2.5 units an acre will be maintained. The regulations shall provide a mechanism for clustering densities within the University Community.

Policy 18.1.5: In order to create a cohesive community, site design within the University Community must utilize alternative modes of transportation such as pedestrian networks, mass transit opportunities, sidewalks, bike paths and similar facilities. Site design shall link related land uses through the use of alternative modes of transportation, thus reducing automobile traffic within the University Community. The county will work cooperatively with the University on these matters as the University proceeds through the Campus Master Plan process. (Amended by Ord. 94-30, 00-22).

Policy 18.1.6: Lee County will facilitate mass transit opportunities connecting the University Community to other parts of the county, in accordance with the goals, objectives, and policies of the Mass Transit Element. (Amended by Ord. 94-30, 00-22).

Policy 18.1.7: A diverse mixture of land uses will be encouraged within the University Community. Compatibility will be addressed through project design, including adequate buffering or other performance measures, therefore allowing adjacent appropriate industrial, residential, and commercial land uses where such locations represent good planning. In reviewing zoning requests with the University Community, Lee County shall consider noise, odor, visual, security, and traffic impacts in determining land use compatibility. Because of the required cooperative master planning with and approval by the Board of Regents, the required compatibility review and the requirement that commercial land uses within the University village be related to the University, development within the University Community shall not be subject to the site location standards set forth in Goal 6 of the Lee Plan [Commercial Land Uses]. (Amended by Ord. 94-30, 0-22).

Policy 18.1.8: All currently permitted mining activities within the University Community area will be allowed to continue until such time as the University opens. Agricultural activity including but not limited to tree farms, nurseries, or agricultural research facilities shall be permitted within the University Community. (Amended by Ord. 00-22).

Policy 18.1.9: Prior to commencement of development within the University Community land use category, an area-wide Conceptual Water Management Master Plan must be submitted to and approved by Lee County and South Florida Water Management District staff. This water management plan will be integrated with the Conceptual Master Plan and be prepared through a cooperative effort between the property owner, Lee County, and South Florida Water Management District. This master plan shall ensure that the water management design of any development within the University Community shall maintain or improve the currently existing quality and quantity of groundwater recharge […] (Amended by Ord. 94-30, 00-22).

[...]

Policy 18.1.12: If not otherwise addressed by the Conceptual Master Plan, the landowner(s) within the University village shall coordinate infrastructure connections and interconnections, including but not limited to roadways, utilities, and water management, with the University Campus through the established Board of Regents master planning, review, and approval process.

[...]

ASTORINO
Policy 18.1.15: The cost for the provision and expansion of facilities for potable water and sanitary sewer that benefits development in the University Community will be borne by those who benefit. Such funding may include (but is not limited to) outright construction by the developer, special taxing or benefit districts, or Uniform community Development Districts (Chapter 190, F.S.). The cost for these types of improvements will not be borne by the county. (Added by Ord. 94-30, Amended by Ord. 00-22).

Objective 18.2: University Community Sub-Categories. The University Community meets an educational infrastructure need for the Southwest Florida five county area by providing the necessary and appropriate land uses to carry out the mission of Florida’s 10th University as stated by the Board of Regents. Within the University Community land use category there are two sub categories: University Campus and University Village. The University Window overlay is also a part of the University Community land use category. (Amended by Ord. 94-30).

Policy 18.2.1: The University Campus area provides for the land uses of the University and its related functions. Development within the University Campus shall be in accordance with provisions of any development agreement(s) between the Department of Community Affairs and the Board of Regents under the provisions of Chapter 380 F.S. and any other applicable state law.

Policy 18.2.2: The University Village is an area which provides the associated support development and synergism to create a viable University Community. This sub-category allows a mix of land uses related to and justified by the university and its development. Predominant land uses within this area are expected to be residential, commercial, office, public and quasi-public, recreation, and research and development parks. In addition to complying with the Conceptual Master Plan required by Policy 18.1.10, all property within the University Village shall undergo a Development of Regional Impact Review.

Policy 18.2.3: The University Window overlay includes the area within 100 feet on both sides of the right-of-way of the following roadway segments:

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ben Hill Griffin</td>
<td>From Alico Rd. to Corkscrew Rd.</td>
</tr>
<tr>
<td>Alico Road</td>
<td>From I-75 to Treeline Avenue</td>
</tr>
<tr>
<td>Corkscrew Road</td>
<td>From I-75 to Treeline Avenue</td>
</tr>
<tr>
<td>Koreshan Boulevard</td>
<td>From I-75 to Treeline Avenue</td>
</tr>
</tbody>
</table>

With input from affected property owner, by 1995 Lee County and the Board of Regents shall develop mutually agreed upon standards for the University Window addressing landscaping, signage, and architectural features visible from the designated roadway segments.

Transportation Element

Consistent with Policy 18.1.6, in this element Lee County commits to coordinate with the Board of Regents to provide transit to FGCU.

Policy 43.1.10: Work with the Florida board of Regents to provide public transit service for Florida Gulf Coast University. (Amended by Ord. 98-09, 99-15).

[...]

Objective 43.4: Coordination. All mass transit plans will be coordinated with state, regional, and other local government agencies and special interest groups such as the administration of Florida Gulf Coast University (on
those matters that could impact the University). (Amended by Ord.99-15).

**Community Facilities and Services Element**

Within this element, requirements are established for Lee County to coordinate with the Board of Regents and other relevant agencies the physical and institutional development of FGCU.

Policy 66.1.5: Lee County will coordinate with the State Board of Regents on the development of Florida Gulf Coast University through the Campus Master Plan process, and the required Development Agreement, and through other means of intergovernmental coordination. (Amended by Ord. 94-30, 00-22).

[...]

Objective 66.2: Cooperation. The county will develop programs of collaboration between economic development agencies, the Lee County District Board of Education, the Edison Community College District, the administration of Florida Gulf Coast University, and [USF at Fort Myers] to ensure participation and achievement of shared economic goals. (Amended by Ord. 94-30, 00-22).

Policy 66.2.1: Lee County will continue programs to allocate responsibility and costs for supporting the use of schools as emergency shelters. (Added by Ord. 99-15).

**Capital Improvements Element**

This element recognized the “unique advantages and obligations which accompany the development and maturation of Florida’s Tenth University” (Objective 95.4, added by ord. 92-47).

Policy 95.4.1: Upon completion of the Conceptual Master Plan required by Policy 18.1.9, the Capital Improvements Element and Capital Improvements Program will be amended to reflect the unique obligations which will accompany the development and maturation of Florida’s Tenth University. (added by Ord. 92-47 Amended by Ord. 00-22).

Policy 95.4.2: The infrastructure improvements necessitated by Florida’s Tenth University which will require expenditure of public funds will be consolidated, as a package, for public review and comment prior to amending the Capital Improvements Element. (Added by Ord. 92-47, Amended by Ord. 00-22).

**Economic Element**

Goals, objectives, and policies in this element reflect Lee County’s desire to achieve a diversified and stable economy through the provision and support of a variety of educational opportunities.

Policy 158.5.2: Lee Count will promote the development of programs and facilities at Lee Vo-Tech, Edison Community College, [the University of South Florida], Florida Gulf Coast University, and any future institutions of higher learning, including business and commerce, health services, technologies, and education careers. (Amended by Ord. 00-22).

Policy 158.5.3: Lee County will encourage Lee Vo-Tech, Edison Community College, [the University of South Florida], Florida Gulf Coast University, and any future institutions of higher learning, to develop cooperative and integrated curriculums that enhance and increase the productivity of the local work force an attract industries and skilled workers. (Amended by Ord. 00-22).
5.0 ACADEMIC FACILITIES ELEMENT

5.1 Background

In 2005, when the campus master plan was last updated, the following buildings containing academic space had been planned or completed:

<table>
<thead>
<tr>
<th>Building</th>
<th>NASF</th>
<th>GSF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kleist Health Education Center</td>
<td>5,752</td>
<td>8,072</td>
</tr>
<tr>
<td>Academic 5</td>
<td>21,012</td>
<td>44,512</td>
</tr>
<tr>
<td>Lutgert Hall</td>
<td>35,982</td>
<td>70,200</td>
</tr>
<tr>
<td>Holmes Hall</td>
<td>41,657</td>
<td>70,644</td>
</tr>
<tr>
<td>Academic 7</td>
<td>37,741</td>
<td>60,000</td>
</tr>
<tr>
<td>Fine Arts 2</td>
<td>25,556</td>
<td>29,377</td>
</tr>
<tr>
<td>Harvey Kapnick Education Center</td>
<td>10,090</td>
<td>11,667</td>
</tr>
<tr>
<td>Music Modular</td>
<td>8,446</td>
<td>10,000</td>
</tr>
</tbody>
</table>

(nasf= net assignable square feet)
(gsf= gross square feet)

Since that time, the following buildings containing academic space have been planned or completed on the Fort Myers campus:

<table>
<thead>
<tr>
<th>Building</th>
<th>NASF</th>
<th>GSF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic 8</td>
<td>49,500</td>
<td>74,250</td>
</tr>
<tr>
<td>Academic 9</td>
<td>54,000</td>
<td>81,000</td>
</tr>
</tbody>
</table>

5.2 Current Conditions

The current campus space inventory contains the following academic space:

Classroom space: 85,150 nasf
Teaching Lab: 82,054 nasf
Study: 61,704 nasf
Research Lab: 24,621 nasf
Office: 197,017 nasf
Total: 445,546 nasf
(sources: FGCU Facilities Form B, 2010-11 CIP)

The University has one academic facility under construction as of January 2011:

Academic 8: This 74,250 gross square foot (gsf) building will house the College of Health Professions and will be completed by Spring Semester 2012. The building will consist of a Lecture Hall, Lab Spaces, Offices, Dean’s Suite, Conference Rooms and storage.

Additional proposed academic facilities are reflected in FGCU’s Capital Improvements Plan for the years 2011-2012.

Academic 9: 81,000 gsf building
Innovation Hub Research Facility: 45,740 gsf building
(source: FGCU Facilities Form B, 2010-11 CIP)

Other projects that are expected to be required to meet growing University enrollment in the coming decade, but as yet are not reflected on the CIP list:
Academic Building 10 – 100,000gsf
Academic Building 11 – 100,000gsf
Research Building 12 – 75,000gsf
Student Union Expansion – 30,000gsf
Academic Building 13 – 100,000gsf
Academic Building 14 – 120,000gsf
Fine Arts Phase 3 – 50,000gsf
Research Building 15 – 80,000gsf
Academic Building 16 – 120,000gsf
Library Expansion – 100,000gsf
Performance Hall – 130,000gsf

5.3 Projected Academic Space Needs

Per FGCU’s Analysis of Space Needs by Category (Form B), the following total and net academic space needs will exist on the main campus by 2015-2016, assuming completion of projects funded for construction through 2016 and a projected FTE of 10,776:

<table>
<thead>
<tr>
<th>Building</th>
<th>Total academic Space needed</th>
<th>Net academic Space need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Space:</td>
<td>129,540 nasf</td>
<td>33,390 nasf</td>
</tr>
<tr>
<td>Teaching Lab:</td>
<td>105,507 nasf</td>
<td>20,453 nasf</td>
</tr>
<tr>
<td>Study:</td>
<td>209,828 nasf</td>
<td>148,124nasf</td>
</tr>
<tr>
<td>Research Lab:</td>
<td>322,663 nasf</td>
<td>297,542nasf</td>
</tr>
<tr>
<td>Office:</td>
<td>303,265 nasf</td>
<td>71,248nasf</td>
</tr>
<tr>
<td>Total:</td>
<td>1,070,803 nasf</td>
<td>570,757 nasf</td>
</tr>
</tbody>
</table>

(source: FGCU Facilities Form B, 2011-12 CIP)

Current space inventory and funded projects as a percent of projected space needs:

- Classroom space: 74%
- Teaching Lab: 81%
- Study: 29%
- Research Lab: 8%
- Office: 77%

(source: FGCU Facilities Form B, 2011-12 CIP)

For the 2015-16 academic year, the following enrollment (FTE) and academic space need have been extrapolated from University projections:

<table>
<thead>
<tr>
<th>Year</th>
<th>Projected FTE</th>
<th>Total academic space need</th>
<th>Net academic space need</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>10,777</td>
<td>1,070,803 nasf</td>
<td>570,757 nasf</td>
</tr>
<tr>
<td>2020-21</td>
<td>15,203</td>
<td>1,510,570 nasf</td>
<td>805,160 nasf</td>
</tr>
</tbody>
</table>

(Source: HEWV projection, based on FGCU Form B 2011-12 CIP)

The calculations above have relied on the space formula defined by the state of Florida.

The University commissioned an independent study of projected Space Factors based on the growth of the University. FGCU was founded on Space Factors to calculate capital budgeting, and the University based their original master plan and original space factors on University of North Florida. After being open for over a decade, in the new research, it was discovered that the University tends to follow the model more of Florida Atlantic University (FAU). Therefore changing the space factors would help resolve the growth of the campus in a direction geared more towards the proper space allocations for future teaching needs.
Core Campus Capacity

The critical factor for this planning cycle is not just the 10-year academic building program, but the capacity of the core campus (the area of land inside the campus loop road) to accommodate expected enrollment growth and the consequent space needs.
6.0 SUPPORT FACILITIES ELEMENT

6.1 Background

For the 1995 Campus Master Plan, the projection of future support facility space needs was provided by the Board of Regents in the following categories:

- Support Services: Spaces for the institution-wide support, including maintenance shops, general storage areas, central receiving area, and vehicle storage facilities, supply storage areas, closets, and equipment rooms.
- Student Services: Provide recreation, relaxation and sale of products or services. Included in this category are lounges, bookstores, cafeterias, kitchens, game rooms, plus related storage and equipment rooms.
- Auditorium/Exhibition: Spaces designed and equipped for public assembly, dramatic or musical performances, or commencement activities. Also included are art exhibition rooms, and related service areas such as coat rooms, dressing rooms, projection booths, property storage, control rooms, work room, etc.
- Instructional Media: Spaces used for production and distribution of audio visual, radio, and TV materials. Included are TV studios, radio studios, sound studios, and graphic studios. Also included are service areas required to support the main function such as film libraries, tape libraries, control rooms.

The space needs provided by BOR represented the “minimum facility” requirements for 5,000 FTE enrollments. The 20-year projection of support space need was developed using FIU as a comparable, as was done for the current Master Plan academic space need projections. Table 6-1, below, summarizes the support space needs analysis contained in the 1995 Master Plan.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Enrollment (FTE)</th>
<th>Support Services</th>
<th>Student Services</th>
<th>Auditorium / Exhibits</th>
<th>Instructional Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-2010</td>
<td>7,608</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017-2018</td>
<td>9,000</td>
<td>38,000 nsf</td>
<td>53,000 nsf</td>
<td>36,000 nsf</td>
<td>5,000 nsf</td>
</tr>
<tr>
<td></td>
<td>57,000 gsf</td>
<td>79,500 gsf</td>
<td>54,000 gsf</td>
<td>7,500 gsf</td>
<td></td>
</tr>
</tbody>
</table>

Sources: 1. Board of Regents’ Budget Office “Minimum Facility Requirements” estimate based on 5,000 FTE total, March 1993. 2. 20 year space need calculates using the sample space/FTE ratios as exist at FIU.

Athletic activities were also included as part of the support facilities program. The proposed program of major athletic facilities was based on a review of the athletic facilities at UNF, and discussions with the director of planning for that institution. Based on this example it was proposed that the initial program of athletic facilities should include the following components:

- Baseball- 2 fields (1 practice, 1 game field)
- Softball- 2 fields
- Soccer- 2 fields (1 practice, 1 game)
- Track- 1 field (in combination with soccer field)
- Tennis courts- 14
- Swimming pool- 1

The program for the gymnasium was provided by the Board of Regents as part of the “minimum facilities requirements” for a university of 5,000 FTE enrollments. The “standard” gymnasium identified in this requirement is 38,000 net square feet. This is considered a teaching gym, and not a full arena-type facility for intercollegiate sports. The space needs for gymnasium facilities at that time would be 52,000 net square feet.
No civic or cultural facilities were considered for inclusion in the University program in the 1995 Campus Master Plan, based on an assessment of existing or planned facilities in the University context area and the immediate community.

6.2 Current Conditions

Academic Campus Core

- University Library and Administration (159,310 GSF): the library includes a circulation and reference center, periodical room, computer lab, the University archives, audio listening and video viewing stations, 200 seats in study areas, a 600 SF gallery, 4 seminar rooms.
- Howard Hall (25,770 GSF)
- McTarnaghan Hall (22,050 SF): This building, completed in 1997, houses the Division of Enrollment Services (admissions, financial aid and scholarships, freshman advising and orientation services, and registration and records).
- Wellness Center (5,880 GSF): The Wellness Center is home to Student Health Services.
- Family Resource Center (4,000 GSF): This building was completed in 1998, and houses a daycare facility with separate classroom for Pre-K, toddlers and infants, a multi-purpose room and a kitchen. It also provides outdoor playgrounds.
- Central Energy Plan (4,900 GSF): Includes on 600-ton and one 300-ton chillers and an ice storage plant.
- Broadcast Center (32,000 GSF): Home to WGCU-TV and WGCU-FM, Southwest Florida’s public television and radio stations, this building contains a television studio, a radio performance studio, a teleconference center, and distance learning classrooms.
- Campus Support Facility (43,812 GSF): This building, which opened in 1999, houses general campus support functions, including central receiving, storage, and maintenance. It also houses University Advancement, including the University Foundation, Community Relations and Marketing.
- Student Union Annex: This 22,000 GSF addition, currently under construction, to the Student Union building will provide space for growth of student government and student activity offices and support space along with space to expand the Vice President for Student Affairs and his support staff. It also includes adding a catering kitchen to the food service operation and additional space for the bookstore. There will also be additional meeting space in the form of one meeting room and 3 conference rooms. It will also greatly increase the lounge and open space available for students to use informally.
- Central Energy Plant II
- Fine Arts Phase II Auditorium:

Plans for future support facilities in the campus core include:

- Central Energy Plant Expansion Phase III
- Innovation Hub Research Center

Welcome Center Area

- Information Center: Perhaps the smallest building on campus, this 105 gsf information booth was completed in 2001 to welcome visitors and provide information about parking on campus.
- Sugden Welcome Center: The Welcome Center is a 6,900 gsf building that opened in 2004.
- Kliest Health Education Center - This 8,000 GSF building provided a building for teaching health education to elementary and secondary students in the southwest area off the main entrance to campus.

FGCU Athletics Complex

The Athletics Complex area includes the following support facilities:
Alico Arena: A 120,000 square-foot complex, Alico Arena is the centerpiece of FGCU’s NCAA Division I athletics program. Opened in 2002, Alico Arena serves as the home of the Campus Recreation, Intramurals, Athletics and Athletic Training Program. It is also home to the FGCU volleyball and basketball programs. Alico Arena has 4,500 seats in a rectangular configuration and a permanent hardwood floor. It includes a main gym, (three full sized basketball courts, three full sized volleyball courts, main competition court for basketball and volleyball), auxiliary gym (basketball and volleyball court for intramurals), and six sky boxes. In addition to the arena, the facility includes offices for the Athletics Department and campus recreation, 12 locker rooms, and a hospitality suite. Alico Arena is capable of hosting music and entertainment events such as concerts, lectures, speakers, trade shows and corporate events.

Swanson Stadium: Swanson Stadium is home to FGCU’s baseball program. The facility opened in 2004, and has permanent seating for 1,032 and standing room only (SRO) of 500 for a total capacity of 1,532.

Lee County FGCU Aquatics Center: Opened in January 2004, the Aquatics Center includes two outdoor pools and shelter/changing area. It was jointly developed by the University and Lee County recreation department, and is open for public use.

FGCU Soccer Field: The facility opened in 2008 with a competition game field that also serves as a practice field for the men’s and women’s soccer programs. A portable press tent structure and shaded soccer benches were added in 2010. There is currently bleacher seating for 300 with SRO of approximately 900 for a total capacity of 1,200.

Outdoor Sports Complex (OSC) – The 20,000gsf facility opened in 2008 to accommodate FGCU’s move to Division-I athletic competition. The OSC serves as office space, locker room facilities, showers and laundry/equipment operations for the men’s and women’s soccer, baseball, softball, men’s and women’s cross-country, men’s and women’s golf, men’s and women’s tennis and the swimming and diving programs. There is a resource center utilized by student-athletes for study sessions, conference room for meetings, and a VIP Suite for multi-use by athletics and campus departments.

FGCU Softball Stadium: The facility was renovated in 2010 to include a new seating structure that increased seating from 240 to 361 with chair back seating, a permanent roof structure, and two additional ADA parking spaces for guests with disabilities. A newly constructed press box includes technological infrastructure (i.e. data and phone lines) that allows the ability for FGCU to submit bids to host future conference tournaments. In addition to the softball press box the Swanson Stadium press box was also upgraded with technological infrastructure to include phone and data lines; which will allow for radio broadcasts, media use and the ability to host future conference tournaments.

FGCU Baseball and Softball Batting Cages: These two programs constructed batting cage/pitching facilities at each respective facility location in 2008. Both batting cage facilities allow the baseball and softball programs to conduct hitting and pitching instruction.

Access road to Athletics Complex: In 2010 FGCU restriped the access road to the athletics complex to help assist in traffic patterns during events. This has assisted University Police Department and Athletic Facilities and Operations staff in managing and coordinating traffic ingress and egress during athletic, recreational, community and University events.

Plans for future support facilities in the FGCU Athletics Complex include:

- The athletics Department desires to construct a Soccer Stadium/Track Facility at the current FGCU Soccer Field location.
- The Athletics Department looks to renovate Swanson Stadium to include a permanent roof structure, renovation of existing seats, renovation of existing outfield fence, renovation and relocation of home and visiting team bullpens and relocating of existing press box.

South Village

Since the previous master plan the South Village has been developed and growth based on student need for housing has shown the most dramatic changes to the campus. The following support spaces have been constructed:

- Student Recreation Center: By 2012, it is expected that a student recreation center will be constructed in the South Village of campus, to provide student recreation facilities separate from the facilities such as Alico Arena that currently serve both the athletics and recreation needs of the campus.
• South Village Dining Facility: The 12,778gsf facility was constructed along with the First Freshman Dormitory. The facility can seat 500 students, and prepare up to 4,000 meals per day. Planned at time of construction, the facility can also be expanded to sit another 500 students giving a total of 1,000 seat cafeteria.
• Central Energy Plant 2: This facility was constructed to produce chilled water for South Village Housing Dormitories with a planned expansion in the future.

Plans for future support facilities in the South Village include:
• South Village Dining Facility Phase II
• Central Energy Plant 2, Phase II

The following table indicates the current availability of support space, and to what extent this space serves the University’s needs based on the current need:

<table>
<thead>
<tr>
<th>Space Type</th>
<th>2011-12 Net Space Need</th>
<th>Existing NASF</th>
<th>% of Current Space Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditorium/Exhibition</td>
<td>53,669</td>
<td>7,499</td>
<td>14%</td>
</tr>
<tr>
<td>Instructional Media</td>
<td>22,524</td>
<td>20,109</td>
<td>89%</td>
</tr>
<tr>
<td>Student Academic Support</td>
<td>6,466</td>
<td>514</td>
<td>8%</td>
</tr>
<tr>
<td>Gymnasium</td>
<td>107,447</td>
<td>50,383</td>
<td>47%</td>
</tr>
<tr>
<td>Campus Support</td>
<td>56,040</td>
<td>25,695</td>
<td>46%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>239,680</strong></td>
<td><strong>104,200</strong></td>
<td><strong>43%</strong></td>
</tr>
</tbody>
</table>

Source: FGCU Analysis of space Needs by Category—Form B, 2010-11 CIP
21 NASF= net assignable square feet

**FGCU Athletics Complex**

As part of its membership agreement when accepted into the Atlantic Sun Conference at the start of the 2007-08 year, FGCU agreed to commence outdoor track for men and women. A waiver has allowed the programs start date to be delayed until the 2013-14 academic year. Also women’s sand volleyball is expected to be added in 2011-12:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Men’s Golf</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
<tr>
<td>Women’s Golf</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
<tr>
<td>Men’s Tennis</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
<tr>
<td>Women’s Tennis</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
<tr>
<td>Men’s Basketball</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
<tr>
<td>Women’s Basketball</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
<tr>
<td>Men’s Baseball</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
<tr>
<td>Women’s Softball</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
<tr>
<td>Men’s Cross Country</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
<tr>
<td>Women’s Cross Country</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
<tr>
<td>Women’s Volleyball</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
<tr>
<td>Women’s Swimming &amp; Diving</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
<tr>
<td>Men’s Soccer</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
<tr>
<td>Women’s Soccer</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
<tr>
<td>Men’s Track</td>
<td>Recruiting</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
<tr>
<td>Women’s Track</td>
<td>Recruiting</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
<td>Competition</td>
</tr>
</tbody>
</table>

Source: FGCU Athletics, 1/2011
6.3 Projected Needs

The SUS Fixed Capital Outlay Budgeting formula was used to project future support space needs based on the projected FTE enrollment for the years 2015 and 2020, as summarized in Table 6-4.

<table>
<thead>
<tr>
<th>Year</th>
<th>Projected FTE Enrollment</th>
<th>Total Support Space Need (NASF)</th>
<th>Increment (NASF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>10,777</td>
<td>141,546</td>
<td>78,265</td>
</tr>
<tr>
<td>2020-21</td>
<td>15,204</td>
<td>199,690</td>
<td>72,786</td>
</tr>
</tbody>
</table>

Source: Projection based on FGCU’s 2006-07 CIP From B, Analysis of Space Needs by Category. Enrollment projection for 2015-16 from data provided by FGCU’s Institutional Research and Planning office.

FGCU Athletics Complex

One significant need of the athletic programs on campus is transportation access and parking infrastructure that serves the current athletic facilities at the FGCU Athletic Complex. There are approximately 675 surface parking spaces at the FGCU Athletic Complex that are currently shared by Alico Arena (4,500 seats), Tennis Complex (12 courts), Swanson Stadium (1,500 seats), FGCU Soccer Field (1,200 seats), FGCU Softball Stadium (361 seats) Lee County FGCU Aquatics Center, University Housing and the shuttle transportation vendor (shuttle staging area.) The lack of parking infrastructure creates traffic safety issues as well as impacts the ability for FGCU to successfully host large events (i.e. Commencement, athletic games/tournaments, speakers, etc.). It also impacts the ability to successfully manage multiple occurring events (i.e. swim meet, basketball game, baseball game and soccer match). There is a need for parking structures to support the FGCU Athletics Complex. In addition to a parking structure there is a plan to add an entrance road to the campus from the east, which would increase traffic in that area and create further traffic safety issues that would need to be addressed.

FGCU currently has an existing competition soccer field as outlined in Section 6.2 above. With the athletic program’s move to Division –I the department must add a track team by the 2013-14 season. Therefore the addition of a track facility is needed to accommodate the addition of a track team. This would be addressed as an addition to the existing FGCU Soccer Field to create an FGCU Soccer Complex that would include a press box complete with infrastructure, permanent and portable seating for at least 1,200 fans, locker rooms, office and meeting space, 8-lane competition track around the soccer field, permanent public address system, and other amenities based on the needs of the soccer and track programs.

The construction of two electronic message boards at the entrance to FGCU Boulevard from Ben Hill Griffin Parkway is also intended to support events and programs at the Athletics complex. With the exponential growth of FGCU the location of these message boards could be relocated to accommodate the demands of core campus culture.

As the Athletics Department completes the process of Division-I certification there are growing demands for support facilities. Among these demands are office space and reconfiguration/renovation of current space allocated for offices, training room, equipment room, etc. Once the Campus Recreation department and programs are relocated to the South Village Housing (see Section 8.0) there will be a need to allocate the vacant space for Athletics Department use.

Swanson Stadium has served as the marquee facility for the FGCU Baseball program since 2004. With the transition to Division-I competition there is a need to renovate the existing facility to include a permanent roof structure over the existing grandstand seats, replacement of current seats, relocation of existing outfield fence, renovation and relocation of existing bullpens, renovation of existing scoreboard and eventual expansion of current seating with relocating the press box to top of seat structure. Other amenities will be determined based on the needs of the baseball program.

The FGCU Tennis Complex currently has 12 courts that are lighted and utilized by Athletics, Campus Recreation, students, faculty, staff and community groups. There will be a need for a Tennis Complex facility that will provide office space, locker rooms, hospitality space, and meeting space for the men’s and women’s tennis programs. In addition the existing courts will need to be extensively renovated to accommodate the needs of the campus and community.
7.0 HOUSING ELEMENT

7.1 Background

In order to establish a policy regarding the amount of on-campus housing to be provided at FGCU, the 1995 Master Plan process included a review and comparison of other housing programs within the State University System. In particular, the University of North Florida and the University of West Florida were used as models after being found to be most similar to the anticipated enrollment and academic programs at FGCU. At both universities, the amount of student housing represented, at the time, approximately 8.6 percent of the total student headcount. While this percentage was well below the 30 percent national average and the 12.3 percent on-campus housing average for the State University System, it reflected a condition of high percentage of part-time student ratios at those institutions. Therefore, in 1994 FGCU used the 8.6 percent as a base assumption for estimating its student housing needs:

<table>
<thead>
<tr>
<th></th>
<th>Opening Year</th>
<th>10 Years</th>
<th>20 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected Head Count</td>
<td>1,800</td>
<td>8,100</td>
<td>16,200</td>
</tr>
<tr>
<td>Total Head Count</td>
<td>155 beds</td>
<td>697 beds</td>
<td>1,393 beds</td>
</tr>
</tbody>
</table>

Future on-campus housing space needs were subsequently estimated using a 525-bed Student Apartment Facility at Florida Atlantic University as a model. Using information about the square footage of this facility, the future net and gross housing space needs for FGCU were estimated, as follows:

<table>
<thead>
<tr>
<th></th>
<th>Opening Year</th>
<th>10 Years</th>
<th>20 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Beds</td>
<td>155</td>
<td>697</td>
<td>1,391</td>
</tr>
<tr>
<td>Net sf (261 sf each)</td>
<td>40,455</td>
<td>181,697</td>
<td>363,573</td>
</tr>
<tr>
<td>Gross sf (320 sf each)</td>
<td>49,600</td>
<td>233,040</td>
<td>445,760</td>
</tr>
</tbody>
</table>

*Includes space for administration and student services

The land area requirements for housing facilities, including support and recreation facilities, were estimated as follows:

<table>
<thead>
<tr>
<th></th>
<th>Opening Year</th>
<th>Year 10</th>
<th>Year 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Beds at 8.6% of total headcount</td>
<td>155 Beds</td>
<td>697 Beds</td>
<td>1,393 Beds</td>
</tr>
<tr>
<td>Acres Needed for on-campus housing (2.8 acres/100 Beds)</td>
<td>4.3 Acres</td>
<td>19.2 Acres</td>
<td>38.3 Acres</td>
</tr>
</tbody>
</table>

Source: FGCU 1995 Campus Master Plan

In addition to providing on-campus housing, FGCU estimated that approximately 12% of the total headcount would be non-locals requiring housing off campus. Based on this percentage, the following potential need for off-campus housing related FGCU was projected:
Table 7-2: 1995 Campus Master Plan Analysis of Potential Off-Campus Housing Needs

<table>
<thead>
<tr>
<th></th>
<th>Opening Year</th>
<th>10 Year</th>
<th>20 Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected Headcount</td>
<td>1,800</td>
<td>8,100</td>
<td>16,200</td>
</tr>
<tr>
<td>Housing Estimate (12% of HC)</td>
<td>216 Beds</td>
<td>972 Beds</td>
<td>1,944 Beds</td>
</tr>
<tr>
<td>No. of Units (@ 3 beds/unit)</td>
<td>72</td>
<td>324</td>
<td>648</td>
</tr>
<tr>
<td>Land Requirements(^{21})</td>
<td>6-38 ac</td>
<td>29-173 ac</td>
<td>58-345 ac</td>
</tr>
</tbody>
</table>

Source: FGCU 1995 Campus Master Plan

\(^{21}\) Land requirement range based on a low density of 2.5 units/acres and a high density of 15 units per acre, as stipulated in the Lee County Comprehensive Plan.

The following phases of student housing have been built on the FGCU campus, all in apartment configuration in the North Lake Village area.

<table>
<thead>
<tr>
<th>Semester/Year</th>
<th>Facilities</th>
<th>New Beds</th>
<th>Gross # of Beds</th>
<th>Rental Bed Spaces*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 1998</td>
<td>Phase I (A, B, C, D, E, F)</td>
<td>265</td>
<td>256</td>
<td>248</td>
</tr>
<tr>
<td>Fall 1999</td>
<td>NA</td>
<td>0</td>
<td>256</td>
<td>248</td>
</tr>
<tr>
<td>Fall 2000</td>
<td>Phase II (G, H, J, K, L)</td>
<td>288</td>
<td>544</td>
<td>532</td>
</tr>
<tr>
<td>Fall 2001</td>
<td>Phase III (ME, MW, NE, NW, ON, OS)</td>
<td>96</td>
<td>832</td>
<td>816</td>
</tr>
<tr>
<td>Fall 2002</td>
<td>Phase IV (PE, PW)</td>
<td>192</td>
<td>928</td>
<td>912</td>
</tr>
<tr>
<td>Spring 2003</td>
<td>Phase IV (QE, QW, RE, RW)</td>
<td>288</td>
<td>1102</td>
<td>1100</td>
</tr>
<tr>
<td>Fall 2003</td>
<td>Phase V (SN, SS, TN, TS, Honors E, Honors W)</td>
<td>288</td>
<td>1408</td>
<td>1384</td>
</tr>
<tr>
<td>Fall 2004</td>
<td>Phase VI (Cypress, Mangrove, Oak)</td>
<td>288</td>
<td>1696</td>
<td>1668</td>
</tr>
<tr>
<td>Fall 2005</td>
<td>Phase VII (Falcon, Sandpiper, Pelican, Egret)</td>
<td>288</td>
<td>1984</td>
<td>1952</td>
</tr>
<tr>
<td>Fall 2008</td>
<td>Phase VIII (Everglades Hall)</td>
<td>407</td>
<td>2391</td>
<td>2348</td>
</tr>
<tr>
<td>Fall 2009</td>
<td>Phase IX (Biscayne Hall)</td>
<td>407</td>
<td>2798</td>
<td>2744</td>
</tr>
<tr>
<td>Fall 2010</td>
<td>Phase XI (West Lake Village)</td>
<td>504</td>
<td>3302</td>
<td>3233</td>
</tr>
<tr>
<td>Fall 2011</td>
<td>Phase X (Palmetto Hall)</td>
<td>417</td>
<td>3719</td>
<td>3638</td>
</tr>
</tbody>
</table>

*does not include full-time staff apartments; model apartment

Source: FGCU Office of Housing and Residence Life

Fall 2011 housing capacity: 3,638
Fall 2010 headcount enrollment: 12,038
2011 housing capacity as percent of headcount: 30%

7.2 Current Conditions

Opening occupancy during the last master plan dropped as new housing stock came online however over the past 5 years the numbers have been fairly consistent at 100% in the fall terms, fall 2009 showing 100.51%. The trend for the spring terms shows a small drop in percent, but very little, spring 2010 at 96.92%.

With the addition of the freshman dorms, phase ten underway to complete the South Village quad and the purchase of West Lake Village, the University is expected to meet all housing needs on campus that are being projected from application totals for the fall term of 2011. This is the first time the University will be able to meet all the housing needs without a waiting list.
Demographic Profile of Fall 2010 Campus Residents

In this master plan, FGCU’s housing system is very familiar with the status of students that are living on campus now. In deterring the percentages of students and class living on campus, again the planning team researched the information along with Dr. Robert Vines, Director of Institutional Research and Analysis.

As you can see the demographics are very similar from 2004. The increase of freshman living on campus could be a result of the new freshman dormitories located at South Village housing. These were established as a need in the previous master plan making note of “First Year Experience Halls”. The beginning stages of Phase 2 housing has been established. The dormitory style is for transitional

Campus Residents by class year:
Greek Housing

FGCU does not currently offer housing for fraternities and sororities on campus. There is limited University land available for development because of the campus’ unique environmental context. The low density land use that would be created by freestanding houses for Greek-letter organizations would not represent effective stewardship of these limited land resources. However, portions of the existing North Lake Village campus housing, with limited or no reconfiguration, might be appropriate setting for the groups of 20 to 35 students that typically comprise each residential fraternity or sorority, and the University could consider dedicating some of the existing housing for Greek life.

7.3 Projected Needs

The University would like to maintain the capacity to house 20 to 25% of its total headcount enrollment on campus.

For the forecast period, that capacity is projected as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Projected Enrollment</th>
<th>Total On-Campus Housing Need</th>
<th>Increment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-11</td>
<td>12,038</td>
<td>3,638 existing beds</td>
<td>-</td>
</tr>
<tr>
<td>2011-12</td>
<td>12,543</td>
<td>3,011</td>
<td>surplus</td>
</tr>
<tr>
<td>2015-16</td>
<td>16,798</td>
<td>4,031</td>
<td>393</td>
</tr>
<tr>
<td>2020-21</td>
<td>23,718</td>
<td>5,692</td>
<td>2,054</td>
</tr>
</tbody>
</table>

Based on 24 percent of projected headcount enrollment.

Source: FGCU Institutional Research and Planning Office for 2015-16 headcount projection, HEWV extrapolation of FGCU date for 2020 headcount.

Off-campus housing facilities

The majority of land directly adjacent to the FGCU campus has been developed (or is planned to be developed) as luxury golf-oriented housing communities that are not targeted to students or other members of the University community. However, since the 2000 master plan was completed, there have been several developments off campus that have addressed the need for student-oriented housing. Since then, College Club Apartments have been purchased by FGCU. The development company fought financial hardship and placed the property for sale. FGCU liked to opportunity to purchase the property as an optional housing for students. This leaving only 1 off campus option within a relative close location to campus:

- In 2004, the first phase of Coastal Village, a student-oriented housing development, opened on a 25-acre site on Three Oaks Parkway north of Corkscrew Road in Bonita Springs. The 17-building complex will have 200 apartment units for 800 residents when it is completed Coastal Village is marketed specifically to students at FGCU. These have become more popular to students now that Estero Parkway is complete and makes for an easier commute to campus.
Proposed phasing of new housing in southeast district of campus:

The following timeline is projected for the development of new campus housing facilities in the southeast district:

<table>
<thead>
<tr>
<th>Year</th>
<th>Beds Added</th>
<th>Housing Type</th>
<th>GSF Added</th>
<th>Total Campus Housing Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>532</td>
<td>Transitional sophomore/transfer student housing</td>
<td>176,393</td>
<td>4170</td>
</tr>
<tr>
<td>2014</td>
<td>532</td>
<td>Transitional sophomore/transfer student housing</td>
<td>176,393</td>
<td>4702</td>
</tr>
<tr>
<td>2015</td>
<td>532</td>
<td>Transitional sophomore/transfer student housing</td>
<td>176,393</td>
<td>5234</td>
</tr>
</tbody>
</table>

Fall 2013     Dining Center Phase II
8.0 RECREATION AND OPEN SPACE ELEMENT

8.1 Background

The 2005 Master Plan separated the elements for Athletics from the Campus Recreation and sports clubs. During the 2005 academic year, the Campus Recreation department included 10 intramural teams and shared Alico Arena along with Athletics. However with the growth of the student population, number of intramural teams, and the need for more playing fields to accommodate all the above, it has become necessary for the University to expand and separate the facilities for Campus Recreation from Athletics. This established goals and objectives for Campus Recreation to complete a phased student recreation complex and playing fields for sports clubs and intramural teams.

Campus Recreation follows guidelines established by NIRSA (National Intramural Recreational Sports Association.) NIRSA is the leading resource for campus recreational departments worldwide. The organization was established to “provide… quality recreational programs, facilities and services for diverse populations.” Along with NIRSA, the University established a vision and mission of their own, to allow the Campus Recreational Department to commit to providing each student with the opportunity to have an active and fit lifestyle. Their motto is summed up as “Be Active, Stay Active, Live Active.”

8.2 Current Conditions

The 2004 Codification of the Lee County Comprehensive Plan defines the following level of service standards for the provisions of parks and recreation amenities:

- Boat Ramps: Lee County will provide one boat ramp lane with adequate parking per 35,000 population of the entire County (non-regulatory level of service).
- Community Parks: By 1998, the County will provide 2.0 acres of developed Standard Community Parks per 1,000 of unincorporated Lee County permanent population (desired future level of service).
- Recreation Centers: Lee County will provide 250 square feet of community recreation center per 1,000 of unincorporated Lee County permanent population (non-regulatory minimum acceptable level of service).
- Community Pool: No standard adopted.
- Regional Parks: Lee County must provide 6 acres minimum per 1,000 population (minimum level acceptable), increased to 8 acres per 1,000 population (non-regulatory, desired future level of service) in 1998.

Through its Campus Development Agreement, FGCU agrees that development of the University shall not degrade the operating conditions for open space and recreational facilities below the level of service standards adopted by the County.

On-campus recreation

The following recreation facilities and programs have been or are being developed in the short term to serve the needs of the University community. Some of these facilities will also go toward helping Lee County meet its established levels of service for parks and recreation amenities.

- Wellness Center: The Wellness Center, currently located between Howard Hall and McTarnaghan Hall (Student Services), and Student Health Services. The center provides students, faculty, and staff opportunities to participate in a variety of, lectures, workshops and seminars on fitness and health related topics.
• The Recreational Outdoor Complex: This complex is located just to the east of the North Lake Village Student Housing. It currently includes, 12 tennis courts (5 of which are lighted for night use), two basketball courts and two volleyball courts.

• The Waterfront: This area is a beach front area on Miromar Lake. It is available for sunbathing and swimming. In addition a dock and launching ramp are provided for a variety of water sports including: wakeboarding, waterskiing, kayaking, and sailing.

• Lee County FGCU Aquatics Center: This joint-use facility was funded through Lee County Parks and Recreation Impact Fees. The facility is intended to serve the University community, including its swimming teams, as well as Swim Florida, Lee County Schools, and the public-at-large.

• Recreation Fields: Recreation Field #1 is located at east end of campus core, it was constructed after several existing recreation fields in the lakefront area were displaced by the construction of Phase 7 of the campus housing at North Lake Village. The field contains two lighted playing fields used primarily for Intramural Sports and Sports Clubs. Recreation Field #2, consisting of one lit field, was constructed in the fall of 2010 at the South Village Housing area and is primarily used for student recreation.

Through the department of Campus Recreation, FGCU offers Intramural Sports programs as well as sports clubs. These programs are designed to provide opportunities for all students, faculty, and staff to participate in organized recreational competition, through a variety of structured tournaments, leagues, and challenges in a diverse array of team, individual and dual activities. Competition is divided in four categories: women’s, men’s, co-recreational, and open play. Sports offered include basketball, table tennis, flag football, beach volleyball, soccer, tennis, softball, golf and ultimate Frisbee. The Sports Club program has grown from approximately 10 clubs in 2005 to 24 in 2010. Sports Clubs are student organizations formed by students because of a common interest in competing at a higher level in the sport or activity. Some of the larger clubs include; ice hockey, men’s and women’s lacrosse, men’s and women’s soccer, tennis, sailing and wakeboarding.

8.3 Projected Needs

The University expects that, in the future, recreation and athletic program will have separate facilities, so that scheduling of fields and facilities for athletic competition does not conflict with the scheduling and needs of an active campus recreation program. Recreation facilities, including a recreation center and recreation fields, are expected to be created in South Village Housing as that area is developed with student housing and dining. Intramural Sports and Sport Club activities are most active from 3 to 11 pm and from 5 am to 7 am, so it is important to have lighted fields for this use. Ideally, a new recreation center should be located near the intramural fields to afford convenient access to locker rooms and for management purposes.

One goal that would support passive recreation needs is the completion of sidewalks around the inner edge of the campus loop road, to encourage recreational pedestrian activity. The roadway shoulder was originally graded or the eventual completion of a sidewalk.
9.0 GENERAL INFRASTRUCTURE ELEMENT

9.1 Background

Florida Gulf Coast University (FGCU) required the construction of general utility infrastructure to serve the campus and ensure the provision of services to the University. Lee County Utilities (LCU) to provide sewer and water service to the campus. The U.S. Army Corp of Engineers (Permit No. 199400807) and South Florida Water Management District (SFWMD) (Permit No. 36-02881-5) have approved the campus storm water management system.

The following chronology summarized the milestones in the water management permitting process of FGCU:

- On October 22, 1992 an agreement was made and entered into between Alico, Inc. and the Board of Regents of the State of Florida. This agreement conveyed 760.1 acres of Alico properties to the Board of Regents for the purposes of constructing a tenth university for the State of Florida.

- On March, 7, 1994 FGCU applied to the SFWMD for conceptual approval of a surface water management (“SWM”) system to serve a 756.7-acre state university project. Construction and Operation approval was requested for Phase 1A, a SWM system serving 45.9 acres, including the main entrance road. Following a formal objection by third parties a subsequent settlement agreement, the application was approved at the April, 1995 meeting of the SFWMD Governing Board.

- In 1995, the SFWMD Governing Board authorized Construction and Operation of the SWM system served the 154.4-acre Basin 2, 62.38 acres of development (including mitigation totaling 15.5 acres), with the remaining 92.12 acres within Basin 2 staying Conceptual. In addition, authorization for Construction and Operation was granted for the SWM system serving a haul road and staging area covering 27.6 acres within Basin 3 and an additional 137.1 acres of mitigation within the adjacent onsite slough system.

- A General Permit Modification was approved July 31, 1997 for specific development within Basins 1 and 2. The Basin 1 (Phase 1A) modifications involved the deletion of Lake 6A. The lake will be temporarily replaced by a 20-foot wide interim conveyance swale due to excavation problems encountered by the contractors. Basin 2 modifications included realignment of the service road to the library and central energy plan and parking facilities for the classrooms, library and central energy plant. No new SWM facilities were required.

- On December 11, 1997 the Governing Board authorized Construction and Operation of a SWM system serving 54.79 acres in Sub-basin 3A (Basin 3). The development included a student housing complex, minor recreational facilities, and associated access roads and parking. In addition, a modification to the conceptual approval redefined the boundaries of Basin 3 totaling 113.61 acres.

- On January 15, the 1998 the Governing Board authorized Construction and Operation of a SWM system serving the north entrance road and east service road totaling 16.69 acres. In addition, construction of mitigation activities was authorized on 45.11 acres in the western slough.

- On May 14, 1998 the Governing Board authorized Construction and Operation of a SWM system serving the FGCU recreational area (Basin 3B) totaling 72.95 acres. In addition, construction of mitigation activities was authorized on 15.6 acres south of the recreational area.

- On August 6, 1998 construction and Operation was approved for 2.5 acres of development of classrooms in FGCU Academic 3.

- On November 10, 1999, a request for the modification to the conceptual approval for 155.4 acre within Basin 2 was approved by the Governing Board. This project consisted of the construction and operation of 19.51 acres of loop road extension, parking areas, lakes and stormwater pretreatment areas.
On December 20, 1999, a modification of the surface water management system was approved by SFWMD to construct the Florida Gulf Coast University Science Math and Technology Building. This application involved 2.1 acres of drainage area within Basin 2.

On July 13, 2000, an application to modify the construction and operation permit for surface water management system for Phase I for the Florida Gulf Coast University Recreational Area located in Basin 3 was approved.

On March 2, 2001, a modification to the surface water management system within Basin 3 was approved for Phase 3 of Florida Gulf Coast University Student Housing. This modification involved a project area of 4.55 acres.

On July 8, 2001, the SFWMD approved a modification to the conceptual permit to construct the Florida Gulf Coast University Fine Arts Building. This modification provided for stormwater management for the creation of 23% of imperviousness for this 6.75 acre upland site.

On July 1, 2001, the SFWMD approve a permit application to construct and operate the recreational areas and teaching gymnasium located in Basin 3. This approval included a project area of 15.09 acres.

On February 4, 2002, a modification to the conceptual permit for construction and operation of the 53.43 acres Student Housing Addition project was approved by the SFWMD. This project includes the construction of 18 housing structures with in Basin 3. Mitigation, apart from the conceptual permit, involved the restoration of disturbed upland preserve site.

On January, 29, 2003, the SFWMD approved a modification to the conceptual permit to construct Student Housing Building T. The project involved 1.8 acres of land within Basin 3.

On October 28, 2004, modification to the surface water management system within Basin 2 was approved for the construction of Academic Building 5. This construction project impacted 2.14 acres.

A complete list of all permits received from the Water Management district is included in the table below.
9.2 Current Conditions

9.2.1 Stormwater Management Sub-Element

The FGCU campus site was originally permitted to provide stormwater management in four separate development basins. Onsite wetlands were permitted to be a key feature of the stormwater management system within each basin, along with created lakes and dry detention pre-treatment area.

Currently, the building sites in Basins 2 and 3 have been predominantly developed with stormwater management infrastructure in place. These two basins (Basin 2 = The Academic Core and Basin 3 = the Student Housing/Recreation Area) have obtained permits that account for much of the developable land. No additional mitigation will be required for development of the remainder of these basins, provided this development is consistent with the direction provided in the initial conceptual permit. Future development in these areas that varies from the term of the initial conceptual permit will require SFWMD stormwater attenuation and mitigation as specified when those permits are issued.

Basin 4 consists of the development of approximately 48 acres. Stormwater management criteria are included with this permit application including the utilization of dry detention, wet detention, and incorporation of existing wetlands as attenuation features.

Consumptive Use Permit

Florida Gulf Coast University is currently permitted by the SWFMD to irrigate 107 acres of turf grass and landscape under Consumptive Use Permit No. 36-03033-W. The irrigation of water is supplied by three (3) existing Sandstone Aquifer wells. One (1) surface water pump withdrawing water from on-site lake will be used to obtain supplemental irrigation water. This permit allows an annual withdrawal of 128 million gallons, not to exceed 17.5 million gallons per month.

The existing withdrawal facilities include:

- 1 - 4” diameter well with a total depth to 80’ below ground surface, cased to 74’ and equipped with a vertical turbine pump.
- 1 - 12” diameter well with a total depth to 92’ below ground surface, cased to 74’ and equipped with a vertical turbine pump.
- 1 – 8” diameter well with a total depth to 120’ below ground surface, cased to 82’ and equipped with a submersible pump.
- 1 – 3” diameter 15-hp centrifugal surface water pump.

9.2.2 Potable Water Sub-Element

The potable water and fire systems in the central core have been installed and are designed to be extended to future development in the central core area as that development takes place. A proposed South Entrance road to the South Village Housing Area will also include a future water main connection that provides redundancy to the area.

Similarly, the Student Housing Area and Phase I of the Recreation Area have the water mains in place to adequately serve those areas. Lee County Utilities (LCU) has installed an adequate system in place and is committed to serving the remaining areas to be developed.

LCU owns and maintains 3 water plants. The Pine Woods Water plant serves the FGCU Campus and provides adequate fire flow to the University.

Various water main loops exist throughout the campus supplied by a 12” main.

During June, 2004 to May, 2005 time period, 7.8 million gallons of water was consumed within the Chiller Plant.
9.2.3 Wastewater Sub-Element

Similarly to the potable water system, the wastewater system in the central core has been installed and is serving the current buildings in that area.

Similarly, the Student Housing Area and Phase I of the Recreation Area have the wastewater mains in place to adequately service those areas.

Additional lift stations will be required and strategically located to accommodate campus expansion. A master lift station is proposed near the solar field.

9.2.4 Solid Waste Sub-Element

Florida Gulf Coast University has contracted with waste hauler for the pick-up of waste and recyclable materials. The University custodial crew collects the waste material throughout the campus and places it in container strategically located throughout the campus.

As the University grows and needs change, the waste collection system is modified to accommodate those needs.

9.3 Projected Needs

9.3.1 Potable Water Sub-Element

Table 9-1: Projected Potable Water Needs

<table>
<thead>
<tr>
<th>Year</th>
<th>Projected Enrollment</th>
<th>Projected Housing (Beds)</th>
<th>Projected Potable Water Need (GPD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-2010</td>
<td>14,000 (@ 25GPD)</td>
<td>3,185 (@ 75 GPD)</td>
<td>588,875</td>
</tr>
<tr>
<td>2011-2015</td>
<td>20,000 (@ 25 GPD)</td>
<td>4,423 (@ 75 GPD)</td>
<td>831,725</td>
</tr>
</tbody>
</table>

Lee County Utilities is continuously upgrading their treatment plant capacity due to the general growth of the area.

9.3.2 Wastewater Sub-Element

Table 9-2: Projected Wastewater Treatment Needs

<table>
<thead>
<tr>
<th>Year</th>
<th>Projected Enrollment</th>
<th>Projected Housing (Beds)</th>
<th>Projected Flow (GPD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-2010</td>
<td>14,000 (@ 25GPD)</td>
<td>3,185 (@ 75 GPD)</td>
<td>588,875</td>
</tr>
<tr>
<td>2011-2015</td>
<td>20,000 (@ 25 GPD)</td>
<td>4,423 (@ 75 GPD)</td>
<td>831,725</td>
</tr>
</tbody>
</table>
9.3.3 Stormwater Management Sub-Element

As the University proceeds to develop the remaining drainage basins (i.e., southeastern and western outparcels) over the planning horizon of this Master Plan, development will be required to provide adequate water treatment in each basin prior to discharge into wetlands, as well as attenuation before stormwater is discharged off-site:

- The basins (outparcels) along Ben Hill Griffin Parkway will need to provide dry detention prior to discharge into the main water management system. Attenuation for these areas is in place in adjacent wetlands.
- The southeast basin (outparcel across the slough) will need to provide treatment and attenuation prior to discharge off-site.
- Only one roadway crossing (at the main north-south slough) has been conceptually approved by SFWMD. Due to the potential for wetland impacts, it is anticipated that difficulties would arise in obtaining permits for additional roadways in this area.
- Plans are in progress to continue development in the Academic Core ad Housing/Recreation Area basins, including mitigation requirements.
10.0 UTILITIES ELEMENT

10.1 Background

The following sections describe the inventory and analysis of existing conditions related to the FGCU’s current chilled water production and distribution, the Energy Management System (EMS), HVAC Systems, electrical power and distribution, and telecommunications systems and sub elements. This analysis will be used as the basis for offering recommendations regarding these systems based on needs resulting from future development and reenrollment growth. This section will focus on the expansion of these systems since the 2000 Master Plan.

The three key recommendations of the 1995 Master Plan (expanded upon since 2000 Master Plan) included:

- That the campus should utilize a chilled water/central plant cooling system. Steam was not to be provided. The chilled water/central plan cooling system was to be entirely self-contained on-campus.

- That provision of power to the campus is undertaken by Florida Power and Light (FPL), with electricity being the only fuel used to provide power to the University.

- That the campus telecommunications system consists of single-mode and multi-mode fiber optic backbone logical loop system. It was also recommended that the University provide its own telephone switch system, with service provided by Sprint. The current recommendation is that the University convert the existing telephone system from the Sprint switch to a voice-over data telephone system.

An analysis of the existing system conditions indicate that the utilities have closely followed the 1995 Campus Master Plan recommendations, with the exception of those regarding the campus telephone system.

10.2 Current Conditions

10.2.1 Chilled Water/Central Energy Plant Sub-Element

The HVAC system for the FGCU campus is based upon central HVAC plant with high-efficiency, water-cooled centrifugal chillers incorporating cooling towers, partial thermal storage, and campus distribution piping networks of 42°F chilled water for central HVAC cooling system. The Central Energy Plant model was designed to provide chilled water to all the campus buildings within the Loop Road.

The primary method for providing cooling needs to the University is a chilled water distribution system with a thermal-energy ice storage system that employs four chillers to meet the cooling load. These four chillers, two 1200-ton centrifugal chillers, a 600-ton rotary screw chiller and a 300-ton rotary screw chiller, can be arranged in a variety of peak and off-peak operating modes to optimize chiller part load performance and shift electrical demand to off-peak hours. The 24 Thermal Energy Storage Tanks are capable of up to almost 50 gpm to be delivered at 40°F.

The plant equipment is listed in the following charts:

<table>
<thead>
<tr>
<th>Chiller</th>
<th>Mode</th>
<th>Nominal Tons</th>
<th>Nominal GPM</th>
<th>Entering Deg. F</th>
<th>Leaving Deg F</th>
<th>Year Installed</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH-1</td>
<td>Chiller Mode</td>
<td>300</td>
<td>515</td>
<td>54</td>
<td>40</td>
<td>1996</td>
<td></td>
</tr>
<tr>
<td>CH-2</td>
<td>Chiller Mode</td>
<td>600</td>
<td>1200</td>
<td>52</td>
<td>40</td>
<td>1996</td>
<td></td>
</tr>
<tr>
<td>CH-3</td>
<td>Chiller Mode</td>
<td>1200</td>
<td>2160</td>
<td>54</td>
<td>40</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>CH-4</td>
<td>Chiller Mode</td>
<td>1400</td>
<td>2090</td>
<td>56</td>
<td>40</td>
<td>2004</td>
<td></td>
</tr>
<tr>
<td><strong>Total Chilled Water Capacity (Tons, GPM)</strong></td>
<td><strong>3,500</strong></td>
<td><strong>5,965</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH-2</td>
<td>Ice Making Mode</td>
<td>420</td>
<td>1800</td>
<td>30</td>
<td>24</td>
<td>1996</td>
<td></td>
</tr>
</tbody>
</table>
CH-3 Ice Making Mode  894  3850  30  24  2000

| Total Ice Storage Capacity (Tons, GPM) | 1,314  5,650 |

### Thermal Storage Tanks

<table>
<thead>
<tr>
<th>TES</th>
<th>Charge Capacity (T-hrs)</th>
<th>Charge Flow (gpm)</th>
<th>Charge EWT/LWT (gpm)</th>
<th>Discharge Capacity (T-hrs)</th>
<th>Discharge Flow (gpm)</th>
<th>Discharge EWT/LWT (gpm)</th>
<th>Year Installed</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-1 thru T-24</td>
<td>3600</td>
<td>1800</td>
<td>32/24</td>
<td>848</td>
<td>56/40</td>
<td>1996</td>
<td>25% Glycol Solution</td>
<td></td>
</tr>
</tbody>
</table>

### Cooling Towers

<table>
<thead>
<tr>
<th>No.</th>
<th>GPM</th>
<th>No. of Cells</th>
<th>No. Of Fans</th>
<th>Fan HP</th>
<th>Entering Water Temp</th>
<th>Leaving Water Temp</th>
<th>Year Installed</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-1</td>
<td>900</td>
<td>1</td>
<td>1</td>
<td>20</td>
<td>95</td>
<td>85</td>
<td>1996</td>
<td>95</td>
</tr>
<tr>
<td>CT-2</td>
<td>1800</td>
<td>1</td>
<td>1</td>
<td>40</td>
<td>95</td>
<td>85</td>
<td>1996</td>
<td>1996</td>
</tr>
<tr>
<td>CT-3</td>
<td>3600</td>
<td>2</td>
<td>2</td>
<td>50</td>
<td>95</td>
<td>85</td>
<td>2000</td>
<td>1996</td>
</tr>
<tr>
<td>CT-4</td>
<td>4500</td>
<td>2</td>
<td>2</td>
<td>60</td>
<td>95</td>
<td>85</td>
<td>2004</td>
<td>2004</td>
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</table>

Total Capacity: 10,800 GPM

### Chilled Water/Condenser Water/Ice Storage System Pumps

<table>
<thead>
<tr>
<th>Pump No.</th>
<th>Service</th>
<th>Type</th>
<th>GPM</th>
<th>TDH (ft)</th>
<th>HP</th>
<th>Year Installed</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-1</td>
<td>Cooling Tower #1</td>
<td>HSC</td>
<td>900</td>
<td>55</td>
<td>20</td>
<td>1996</td>
<td></td>
</tr>
<tr>
<td>P-2</td>
<td>Redundant for P-1 and P-3</td>
<td>HSC</td>
<td>1800</td>
<td>60</td>
<td>40</td>
<td>1996</td>
<td></td>
</tr>
<tr>
<td>P-3</td>
<td>Cooling Tower #2</td>
<td>HSC</td>
<td>1800</td>
<td>60</td>
<td>40</td>
<td>1996</td>
<td></td>
</tr>
<tr>
<td>P-4</td>
<td>Chiller #1 Primary</td>
<td>HSC</td>
<td>515</td>
<td>40</td>
<td>15</td>
<td>1996</td>
<td></td>
</tr>
<tr>
<td>P-5</td>
<td>Redundant for P-4</td>
<td>HSC</td>
<td>515</td>
<td>40</td>
<td>15</td>
<td>1996</td>
<td></td>
</tr>
<tr>
<td>P-6</td>
<td>Heat Exchanger #1</td>
<td>HSC</td>
<td>900</td>
<td>40</td>
<td>15</td>
<td>1996</td>
<td></td>
</tr>
<tr>
<td>P-7</td>
<td>Secondary Campus Water Loop</td>
<td>HSC</td>
<td>1715</td>
<td>70</td>
<td>50</td>
<td>1996</td>
<td></td>
</tr>
<tr>
<td>P-8</td>
<td>Redundant for P-7</td>
<td>HSC</td>
<td>1715</td>
<td>0</td>
<td>50</td>
<td>1996</td>
<td></td>
</tr>
<tr>
<td>P-9</td>
<td>Chiller #2 Primary</td>
<td>HSC</td>
<td>1800</td>
<td>80</td>
<td>50</td>
<td>1996</td>
<td></td>
</tr>
<tr>
<td>P-10</td>
<td>Redundant for P-9</td>
<td>HSC</td>
<td>1800</td>
<td>80</td>
<td>50</td>
<td>1996</td>
<td></td>
</tr>
<tr>
<td>CHWP-11</td>
<td>Chiller #3 Primary</td>
<td>HSC</td>
<td>3850</td>
<td>85</td>
<td>125</td>
<td>2000</td>
<td>Ice Making + Chiller Mode</td>
</tr>
<tr>
<td>CWP-12</td>
<td>Cooling Tower #3</td>
<td>HSC</td>
<td>1800</td>
<td>52</td>
<td>40</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>CWP-13</td>
<td>Redundant for CWP-12</td>
<td>HSC</td>
<td>1800</td>
<td>52</td>
<td>40</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>HXP-14</td>
<td>Heat Exchanger #2</td>
<td>HSC</td>
<td>1800</td>
<td>40</td>
<td>25</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>CHWP-4</td>
<td>Chiller #4 Primary</td>
<td>HSC</td>
<td>2090</td>
<td>34</td>
<td>25</td>
<td>2004</td>
<td></td>
</tr>
<tr>
<td>CWP-4A</td>
<td>Cooling Tower #4</td>
<td>HSC</td>
<td>2250</td>
<td>67</td>
<td>50</td>
<td>2004</td>
<td></td>
</tr>
<tr>
<td>CWP-4B</td>
<td>Redundant for CWP-4A</td>
<td>HSC</td>
<td>2250</td>
<td>67</td>
<td>50</td>
<td>2004</td>
<td></td>
</tr>
</tbody>
</table>

The underground chilled water distribution piping utilizes pre-insulated, welded steel piping for durability and reliability. The campus chilled water supply and return has been designed to use a chilled water supply and return differential temperature of 14°F, thus optimizing the flow of water throughout the campus distribution.

The chilled water distribution method uses a primary/secondary/tertiary system to match the required flow with the total diversified campus load. The chilled water secondary pumps (campus distribution pumps) are modulated using variable frequency drives to supply only the required amount of chilled water that the campus load requires. The primary (chiller) pumps and tertiary (building) pumps are constant flow pumps. To further optimize building chilled water flow, the tertiary pumps are monitored by the campus Energy Management System (EMS) to optimize the differential temperature returned to the central energy plant or to provide the coldest water possible to the building air handling units. Additionally, the campus operates dorm rooms that utilize direct expansion (DX) heat pumps with additional electric heaters.

**Campus Energy Management System**

The campus’ EMS is a centrally controlled system. This EMS has been designed to allow for custom reports to trend, graph, and log data to refine the operating parameter, such as matching the chiller performance to meet the building needs. In general, air handlers throughout the campus use the EMS to monitor fan status, filter differential pressures,
return-supply temperatures, VFD status, and return air CO\textsubscript{2} levels. All buildings connected to the campus EMS communicate points to a central workstation in the Central Energy Plant and the Campus Support Facility via fiber-optic cabling, rendering the system extremely reliable during Florida’s active lighting season. All EMS building controls and monitored points have built-in alarms which alert the plant operations staff if anything goes awry, such as, if CO\textsubscript{2} levels get to high, an air handler fails to start, or the outdoor air damper operates improperly. The date that is provided by the monitoring process identifies the operational problem immediately so that the staff can react quickly in solving the problem.

**Campus Building HVAC System Design**

Maintaining indoor air quality in Florida’s humid climate is a critical concern in an educational environment. To comply with ASHRAE 62-2001 air quality standards, some buildings employ dual-path air handlers with separate coils for outdoor air and return air within a single air-handling unit to control outside air humidity. These units have been employed predominantly in area where required ventilation rates are high such as in classroom buildings and office wings of buildings. This eliminates the need for separate air handling systems for dedicated outdoor air pre-conditioning and enables the system to manage the outside air more efficiently. Dual-path air handlers provide a threefold savings: in space, first cost, and energy. To further guarantee ventilation requirements, most buildings on campus utilize series fan powered boxes to ensure that constant airflow is provided to each room within a buildings regardless of the total cooling requirement of the buildings. The current and projected building loads have been provided by the Campus Chilled Water Master Plan Report completed by SSR, Inc. in May of 2005.

### Existing Building Loads

<table>
<thead>
<tr>
<th>Building</th>
<th>SOFT</th>
<th>Design Ton</th>
<th>Design Flow</th>
<th>Tested Tons</th>
<th>Tested Flow</th>
<th>Tested GPM/Ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Griffin Hall</td>
<td>53,076</td>
<td>267</td>
<td>456.6</td>
<td>112.5</td>
<td>400</td>
<td>3.6</td>
</tr>
<tr>
<td>Reed Hall</td>
<td>40,871</td>
<td>232</td>
<td>396.7</td>
<td>126</td>
<td>233</td>
<td>1.8</td>
</tr>
<tr>
<td>Library</td>
<td>51,309</td>
<td>124</td>
<td>212.0</td>
<td>116</td>
<td>232</td>
<td>2.0</td>
</tr>
<tr>
<td>Howard Hall</td>
<td>33,276</td>
<td>95</td>
<td>162.5</td>
<td>49.5</td>
<td>133</td>
<td>2.7</td>
</tr>
<tr>
<td>McTarnaghan Hall</td>
<td>24,088</td>
<td>55</td>
<td>94.1</td>
<td>72</td>
<td>114</td>
<td>1.6</td>
</tr>
<tr>
<td>Wellness Center</td>
<td>6,725</td>
<td>28</td>
<td>47.9</td>
<td>28.7</td>
<td>63</td>
<td>1.8</td>
</tr>
<tr>
<td>Broadcast Center</td>
<td>32,261</td>
<td>111</td>
<td>189.8</td>
<td>40.6</td>
<td>195</td>
<td>4.8</td>
</tr>
<tr>
<td>Campus Support Facility</td>
<td>52,636</td>
<td>366</td>
<td>625.9</td>
<td>117.5</td>
<td>217</td>
<td>1.8</td>
</tr>
<tr>
<td>Academic 3</td>
<td>53,230</td>
<td>307</td>
<td>252.0</td>
<td>275</td>
<td>420</td>
<td>1.5</td>
</tr>
<tr>
<td>Whitaker Hall</td>
<td>59,222</td>
<td>308</td>
<td>526.7</td>
<td>276.8</td>
<td>443</td>
<td>1.6</td>
</tr>
<tr>
<td>Egan Observatory</td>
<td>545</td>
<td>25</td>
<td>42.8</td>
<td>25</td>
<td>43</td>
<td>0.2</td>
</tr>
<tr>
<td>Visual Arts Building</td>
<td>37,792</td>
<td>138</td>
<td>236.0</td>
<td>39.4</td>
<td>110</td>
<td>2.8</td>
</tr>
<tr>
<td>Student Union</td>
<td>52,561</td>
<td>205</td>
<td>350.6</td>
<td>137</td>
<td>313</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>2,261</td>
<td>3,866</td>
<td>1,416</td>
<td>2,867</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data is from 2005 Chilled Water Master Plan Report completed by SSR, Inc. 
Campus Design basis is 14 deg. F chilled water temperature differential (1.71 gpm/ton); Chilled water supply temperature is 42 deg. F

Due to the location of the campus, heating using natural gas has not been a feasible option. Therefore the campus utilizes electric strip heat as the only heating source.

**Student Housing HVAC Systems**

The current model for air conditioning the student housing complex is to use incremental direct expansion split system air conditioning units for cooling, and electrical strip heaters for heating. As these systems are typical for developer led apartment complexes due to their low first cost, and independent temperature control per room, their reliability, durability (when exposed to students) is questionable.

### 10.2.2 Electrical Power and Other Fuels Sub-Element

Primary electrical power service to the University campus is provided by Florida Power & Light (FPL). FPL offers a range of rate schedules that are intended to encourage its large industrial and commercial customers to select the on-site electrical distribution system and a rate schedule which should optimize energy cost-savings over the life of the
facility. These FPL rate schedules are intended to be compatible with time of use energy management programs which shift loads from on-peak time periods to off-peak time periods using alternate fuels, thermal energy storage, load shedding, and co-generation schemes.

Four FPL rate structures are applied on campus services:

GS-1: General Service- Non Demand (Less than 20 KW)
GSD-1: General Service Demand (20 KW-500KW)
GSLDT-1: General Service Large Demand- Time of Use (500 KW- 2000KW)
SL-1: Street Lighting

The GS-1 rate structure is applied to the information booth and the temporary soccer field. The GSD-1 rate structure is applied to the majority of campus buildings. The GSLDT-1 rate structure is applied to the Central Energy Plan and the Alico Arena. The SL-1 rate structure is applied to roadway lighting on FGCU Boulevard and Lake Parkway. The rate structures are properly applied to achieve the best rate for the type of service provided.

The campus 23 KV electric distribution is owned, operated and maintained by FPL. The campus 23 KV circuit (FDR 7463) is currently served from the FPL Corkscrew Substation located southeast of campus. Manual switches provide capability to serve FDR 7463 from the Estero Substation and/or the Jetport Substation. FPL has stated the potential to provide a second 23 KV circuit from the Estero Substation to campus.

Based on FPL billing records, the peak demand for the campus is 8.3 MVA. The table below indicated the estimated peak demand load for each building.

### ELECTRICAL DATA ANALYSIS

**Project:** Florida Gulf Coast University- Campus Master Plan

**Location:** Fort Myers, Florida

<table>
<thead>
<tr>
<th>Building</th>
<th>Address</th>
<th>Total Sq. Ft.</th>
<th>FPL Account Number</th>
<th>Rate Description</th>
<th>Yearly Electrical Cost</th>
<th>Max KWD</th>
<th>Assumed Power Factor</th>
<th>Estimated Max KVA</th>
<th>Estimated VA/sq. ft.</th>
<th>Yearly Electrical Cost/sq.ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building 1/4</td>
<td>10501 FGCU BLVD S BLG 1&amp;4</td>
<td>86,352</td>
<td>55234-35252</td>
<td>GSD-1</td>
<td>$106,500.93</td>
<td>272</td>
<td>0.89</td>
<td>306</td>
<td>3.54</td>
<td>$1.23</td>
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<tr>
<td>Building 2/3</td>
<td>10501 FGCU BLVD S BLG 2 &amp;3</td>
<td>92,180</td>
<td>38594-80281</td>
<td>GSD-1</td>
<td>$134,354.75</td>
<td>379</td>
<td>0.89</td>
<td>426</td>
<td>4.62</td>
<td>$1.46</td>
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<td>Building 5/6</td>
<td>10501 FGCU BLVD S BLG 5 &amp; 6</td>
<td>30,733</td>
<td>69142-41382</td>
<td>GSD-1</td>
<td>$47,483.23</td>
<td>144</td>
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<td>162</td>
<td>5.26</td>
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<tr>
<td>Academic 3</td>
<td>10501 FGCU BLVD S BLG Academic 3</td>
<td>53,230</td>
<td>32458-23089</td>
<td>GSD-1</td>
<td>$73,310.71</td>
<td>294</td>
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<td>330</td>
<td>6.21</td>
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<td>Whitaker Bldg</td>
<td>10501 FGCU BLVD S WHITAKER BLDG</td>
<td>59,222</td>
<td>93747-26256</td>
<td>GSD-1</td>
<td>$82,623.16</td>
<td>323</td>
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<td>363</td>
<td>6.13</td>
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<tr>
<td>Arts Complex</td>
<td>10501 FGCU BLVD S ARTS</td>
<td>37,792</td>
<td>15243-55227</td>
<td>GSD-1</td>
<td>$33,109.20</td>
<td>139</td>
<td>0.89</td>
<td>156</td>
<td>4.13</td>
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<td>Building</td>
<td>Address</td>
<td>Total Sq. Ft.</td>
<td>FPL Account Number</td>
<td>Rate Description</td>
<td>Yearly Electrical Cost</td>
<td>Max KWD</td>
<td>Assumed Power Factor</td>
<td>Estimated Max KVA</td>
<td>Estimated VA/sq. ft.</td>
<td>Yearly Electrical Cost/sq.ft</td>
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<tr>
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<td>COMPLEX</td>
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</tr>
<tr>
<td>Mod Office</td>
<td>10501 FGCU BLVD S MOD OFFICE</td>
<td>55659-65018</td>
<td>GSD-1</td>
<td>$8,248.13</td>
<td>98</td>
<td>0.89</td>
<td>110</td>
<td>N/A</td>
<td>N/A</td>
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</tr>
<tr>
<td>Health ED</td>
<td>10501 FGCU BLVD S HEALTH ED</td>
<td>03516-04392</td>
<td>GSD-1</td>
<td>$4,915.65</td>
<td>61</td>
<td>0.89</td>
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<td>N/A</td>
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</tr>
<tr>
<td>FAM RES</td>
<td>10501 FGCU BLVD S FAM RES</td>
<td>5,316</td>
<td>85721-26475</td>
<td>GSD-1</td>
<td>$7,723.68</td>
<td>39</td>
<td>0.89</td>
<td>44</td>
<td>8.24</td>
<td>$1.45</td>
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<td>Broadcast</td>
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<td>32,261</td>
<td>85430-32315</td>
<td>GSD-1</td>
<td>$71,549.63</td>
<td>182</td>
<td>0.89</td>
<td>204</td>
<td>6.34</td>
<td>$2.22</td>
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<tr>
<td>CAMPUS SUPPORT</td>
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<td></td>
<td></td>
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<tr>
<td>Energy</td>
<td>10501 FGCU BLVD S BLG ENERGY</td>
<td>497,592</td>
<td>86553-9906</td>
<td>GSDLT-1</td>
<td>$280,803.38</td>
<td>1,854</td>
<td>0.89</td>
<td>2,083</td>
<td>4.19</td>
<td>$0.56</td>
</tr>
<tr>
<td>Facilities</td>
<td>10501 FGCU BLVD S BLG FACILITIES</td>
<td>52,636</td>
<td>14047-81054</td>
<td>GSD-1</td>
<td>$39,108.68</td>
<td>136</td>
<td>0.89</td>
<td>153</td>
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<td>10501 FGCU BLVD S BLG WELCOME</td>
<td>+</td>
<td>45609-73192</td>
<td>GSD-1</td>
<td>$17,479.62</td>
<td>66</td>
<td>0.89</td>
<td>74</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Info Booth</td>
<td>10501 FGCU BLVD S BLG BOOTH</td>
<td>105</td>
<td>72572-90457</td>
<td>GS-1</td>
<td>$460.17</td>
<td>0.89</td>
<td>0</td>
<td>0.00</td>
<td>4.38</td>
<td>$4.38</td>
</tr>
<tr>
<td>Student Union</td>
<td>10501 FGCU BLVD S BLG STUDENT UNION</td>
<td>52,561</td>
<td>95289-83118</td>
<td>GSD-1</td>
<td>$66,557.25</td>
<td>256</td>
<td>0.89</td>
<td>288</td>
<td>5.47</td>
<td>$1.27</td>
</tr>
<tr>
<td>S U Cafeteria</td>
<td>10501 FGCU BLVD S BLG S U CAFETERIA</td>
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## Electrical Data Analysis

### Project: Florida Gulf Coast University - Campus Master Plan

### Location: Fort Myers, Florida

### Athletic Buildings

<table>
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<tr>
<th>Building</th>
<th>Address</th>
<th>Total Sq. Ft.</th>
<th>FPL Account Number</th>
<th>Rate Description</th>
<th>Yearly Electrical Cost</th>
<th>Max KWD</th>
<th>Assumed Power Factor</th>
<th>Estimated Max KVA</th>
<th>Estimated VA/sq. ft.</th>
<th>Yearly Electrical Cost/sp.ft</th>
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<th>Yearly Electrical Cost</th>
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<th>Yearly Electrical Cost/sp.ft</th>
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The FGCU distribution system is based on a secondary metering arrangement. FPL provides a 23 kV radial feed, entering the campus along the Main Entrance Road. Outdoor switch cabinets and pad-mounted transformers are located to serve buildings and/or groups of buildings at 480/277 volts, with the secondary meter pedestal located at each transformer. The University provides private easements for this system up to the pad-mounted transformers, and the University is then responsible for secondary feeders into each building.

As the primary system is expanded to serve new buildings, FPL will typically furnish all material required for an underground duct system, including conduit and manholes. The University’s contractor will install this duct system and FPL will then install cabling, switches, and transformers. This method ensures close coordination of underground work between all contractors and is used for all electrical utilities including telephone and cable television. These systems are routed in a common trench with spacing between ducts as required by utility standards and dedicated manholes/pull boxes for each system.

Sanitary pump lift stations are served at 240V by FPL transformers off the 23 kV system. These are typically dedicated transformers with associated metering, for service to stations that are remote from buildings.

Roadway lighting on the main entrance road and on the loop road is served at 480V, single phase, by FPL transformers off the 23 kV system. University owned service cabinets are located along roadways to provide for control and distribution of the individual lighting circuits (Figure 5-b.2). Parking area lighting, walkway and roadway lighting interior to the campus is served by 480V circuits from adjacent buildings.

Emergency power systems do not exist as a centralized campus system. Diesel generator sets are provided at individual buildings as needed to provide for specific program requirements within that building. Generators are currently installed at the following locations:

- Building 1- Academic Building for service to the Network Operations Center (NOC)
- Building 6- Wellness Center which serves as a hurricane shelter
- Building 8- WGCU Broadcast Facility for service to Public Broadcasting TV and radio station main control functions
- Building 10- Campus Support Facility for service to the police station
- Building 12 (Whitaker Building)- Science, Math, and Technology Building for service to critical lab exhaust and research areas
- Housing Commons for service to potable water well service
- Alico Arena- which serves as a hurricane shelter

Alico Arena is also provided with provisions for a portable generator to supplement the onsite generator service. The onsite generator supports life safety functions, the potable water well service and ventilation loads. The portable connection is available to provide service for additional space comfort and operational management when Alico Arena is functioning as a hurricane shelter.

Where diesel-engine generators are not provided for campus buildings, life safety egress and exit lighting is provided from batter back-up lighting.

10.2.3 Telecommunications Systems Sub-Element

The primary distribution system for telecommunications is a fiber-optic cable backbone loop, coupled with distributed copper pair cabling for telephone service. The fiber loop provides a transmission path capable of
transmitting information from telephone, data, video, and a number of types of systems. This backbone exists as a logical loop, originating in the Network Operations Center (NOC) located in Academic Building 1. It is distributed to all buildings via an underground conduit/inner duct system. Residing on this backbone are the campus data network, fire alarm system, security system and energy management (EMS). The NOC houses the University’s data network hubs and servers. The underground duct system for telecommunications parallels the power distribution system, and also includes separate ducts for telephone and television cable.

The following paragraphs outline information available about the various subsystems served by this backbone:

**Physical Topography**

The physical layout of the campus infrastructure, i.e. manholes, utilities, & duct banks has been designed in a logical grip pattern. This type of infrastructure is easily maintained in a communications ring environment and loop-feed power distribution system. Access to the duct bank system is gained via communications-style manholes. The actual manhole placement hinges largely on the physical layout of the buildings, but as a minimum, a manhole is placed at every intersection in the grip pattern. Intermediate manholes are placed at a maximum of 1,000 linear feet on center, based on the use of a fiber optic distributed interface of the campus. The campus infrastructure is independent of all buildings, meaning that one building does not serve as the means for adjacent building to access the campus infrastructure. This is critical to maintain the operations of a campus as a whole, in the even to fire or other mishap in one of the buildings.

**Physical Backbone Media**

The backbone media for the campus consists of a logical loop comprised of multi-mode fiber optic cables, and series of multi pair telephone cables. The multimode fiber is placed in a logical loop or ring configuration. If there is a break in the fiber at any one point, information will be retransmitted in the reversed direction on the loop. This type of redundancy helps to limit network outages.

**Telephone Service**

The master plan recommendation that the University have its own telephone switch system was not implemented. Instead, the NOC also contains the main switch for the telephone system, which is provided by Sprint. Using this switch, Sprint provides CENTREX-type service as typically available from the local carrier. The NOC was located in one of the first facilities to be constructed on the campus property to insure that service was available when other facilities were complete and ready for occupancy. The NOC serves as the campus demarcation point from the local carrier and contains all incoming fiber cable lines provided by Sprint. Sprint provides a fiber optic cable from off campus to its switch in the NOC, and multi-pair copper cable to each building for telephone. Sprint currently provides and maintains all telephone equipment.

A system of ductbanks from the NOC to the site property line is included in the overall ductbank from the NOC to the site property line is included in the overall ductbank system. The NOC room is located on the first level of the building and is sized to allow ample growth for copper based telephone pairs to serve the immediate facilities surrounding this area. Each building as it is constructed is also provided with a main communication room on the first level. This room serves in the same capacity as the main telephone room to serve as the demarcation point in the building for many of the systems we will discuss.

The use of the distributed technology allows the owner to minimize the amount of underground work required and can be expanded based upon growth by extending the existing SONET ring to each new area under development and by providing copper pairs from a new communications room located in each new building, as it is constructed.

**Data**

The data distribution system operates on the fiber optic backbone described above. The main campus administrative LAN, student LANs and registry, are located in the NOC and distributed campus wide. The telephone equipment rooms in each building serve as the data demarcation points for adding and retrieving information from the backbone. Individual local area networks are established as required for a particular function within a specific building, and are provided with interconnectivity to the campus network via fiber backbone riser provided within the building to the local network rack. This allows the using agency to benefit from high performance LANs via fiber without contributing to the
backbone log on the campus network. A gateway is placed between any departmental LAN and the backbone to access the campus wide information systems.

Building data/telephone systems are comprised of a common wiring system throughout the campus. The voice/data services are combined into this section, as the practice of voice/data on the same outlet plate is considered an industry standard. Voice/data outlets are located in all offices, labs and classrooms, to cover the entire facility. Each jack is served with (4) Category 5 cables rated at 100Mbs second. All associated jacks and termination methods are also rated under this standard. All outlets are terminated using the EIA/TIA 568A standard to insure compatibility with telephone vendors, as well as data standards. A series of cable trays are placed in each facility to provide a path from the outlet to the telephone/data closet on the level of the facility. Condit stub ups are provided from the outlet to the cable tray; cable trays terminate in the communications closet for each level; and a series of floor to floor sleeves are provided between telephone closets for vertical distribution.

Data networking equipment is provided by the University within each facility to support local area networks coupled with intelligent routers and gateways to provide access to the campus wide network. The backbone will migrate to the NOC where the backbone controller stations will be located, as well as the campus wide system file servers.

**Fire Alarm**

The fire alarm system for the campus distribution also occupies space on the fiber backbone. The fiber is in a loop configuration, which provides two paths for signals to travel around the campus in a redundant system. The front end of command center is located in the University’s Police department to monitor all systems in the campus. The command center functions as a proprietary supervising station, in that any alarm condition on campus is transmitted to this station, and the decision to contact the local fire department is made by the police department personnel. A second monitoring station is located in the Chiller Plant control office.

All facility systems are fully addressable and utilizing intelligent devices such as smoke and heat detectors and manual pull stations. These multiplex, addressable systems report ALARM and TROUBLE events down to the device level, offering a maximum amount of information, such as the location of the device in any building on the campus.

The command center, in the Police Command center, is equipped with a direct connection to the campus fiber backbone system, and includes color graphics computer terminals where information regarding the campus fire alarm and security systems reports. Each buildings functions as a stand-alone system, which is networked to all other buildings. The University, by agreement with the State Fire Marshal, operates the police dispatch as a “supervisory station”, meaning that all alarm conditions are received and investigated by the University police prior to notifying off-campus fire department. Te command center provides adequate space for two operators, seated in front of a workspace containing two personal computers, one for fire alarm and the other access control. Each system has event printers and associated equipment panels. Closed circuit television has been implemented into the site by the University’s Police, and space is available to house monitor vertical racks. These racks are placed directly in front of the system operators in order to view images from the system at will.

**Access Control**

An access control system has been developed whereby students, faculty, and staff carry an identification card, which bears the holder’s picture, and other pertinent information. The card can be used to gain access to facilities via card-entry systems and be used for student identification cards. This system resides on the fiber backbone, with computer terminal workstations located in the University Police command center and in the Lock & Key Shop.

Card access devices such as card readers, magnetic locks and door monitoring devices are located at the primary entrances to all dorms, educational facilities, and administrative facilities. The card access system is PC based, and contains a database file for all users logged into the system. The database files grant rights to the cardholder for access to facilities. All system features are individually programmed by user, as well as user groups. The system also allows time of day events occur, such as releasing all educational facility doors at the beginning of the day, and locking them at the end of the day. All door control groups can be programmed in this manner.

A forced entry, or a door being held open for longer than a predetermined time, can trigger the system to generate an alarm event, which will simultaneously be displayed on the system monitor and printed in hard copy. The appropriate personnel may then be dispatched to investigate the nature of the event.
The card access system can also be interfaced with a campus closed circuit television system to automatically select the nearest camera to the forced entry/exit on the access control system.

**Broadband Television**

A broadband television system has been provided to allow for the forward distribution of television channels to all facilities on the campus. The forward distribution originates from the utility cable carrier, AT&T Broadband (fka MediaOne), or a local source such as programs originating at the public broadcasting television station on campus. The system operates on an independent set of coaxial cables placed around the campus infrastructure system. Amplifier main stations are located in communications rooms. The system is bi-directional, which allows the University to broadcast head-end equipment is located in the WGCU Public Broadcasting Facility located on campus, so as to allow for the easy distribution of educational material. This head-end serves as the demarcation point for the cable carrier.

Each facility connected to the system is equipped with a main-station amplifier at the building entrance to provide ample signal level for that building. The cable distribution within the building continues with the coaxial systems, and is distributed to each office via the cable tray system.

The broadband system also serves as a critical link in the development of distance learning tele-courses, and/or teleconferencing links between this and other educational facilities.

**Multimedia Systems**

Other systems were briefly discussed in the 1995 Campus Master Plan for inclusion in the campus stems as needs became evident. Systems such as paging and background music systems, conference center audiovisual presentation systems, video teleconferencing and auditorium and gymnasium sound reinforcement systems.

During the early stages of the Phase I campus design, it was decided that one of the primary goals of the University was to utilize electronic media presentation systems both in the typical classroom environment and for use in distance learning. For this reason, electronic teaching podiums have been included in the majority of teaching classrooms. Podiums include a computer workstation with direct connection to the campus network and VCR with connection to the campus broadband system. Each classroom also has a ceiling mounted projector interconnected with all the program devices in the podium, for display of local sources or programming from the campus systems. Specific classrooms were also designed for distance learning capabilities. This included the teaching podiums, with multiple ceiling projector for display of near site and far site, tracking cameras to display the instructor and students, instructor viewing monitors and student response stations. Video conferencing facilities were also provided with similar equipment.

### 10.3 Project Needs

#### 10.3.1 Chilled Water Sub-Element

The existing Central Energy Plant currently covers Ben Hill Griffin Hall, Academic Building III and V, the Library, the Campus Support Facility, the Whitaker Building, Howard Hall, the Wellness Center, the Student Services building, Reed Hall (formally Academic II), the Broadcast Center, McTarnaghan Hall and the Visual Arts Building. The current chilled water infrastructure serves approximately 551,214 gross square feet of academic and administrative space through the year 2011. An expansion to the existing central energy plant will be required to serve the additional 826,400 gross square feet through the year 2020. During this expansion, the existing central plant will be required to meet an estimated total HVAC cooling load of approximately 5,000 cooling tons to buildings located within the Academic Core. Buildings outside the loop road will provide their own cooling, independently from the Central Energy Plant, yet will be monitored and controlled from the Central Energy Plant’s Energy Management System (EMS). The Chilled Water Master Plan Report, dated May of 2005 listed the following data as the current loads.

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<th>Design Flow</th>
<th>Tested Tons</th>
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<td>53,076</td>
<td>267</td>
<td>456.6</td>
<td>112.5</td>
<td>400</td>
<td>3.6</td>
</tr>
<tr>
<td>Reed Hall</td>
<td>40,871</td>
<td>232</td>
<td>396.7</td>
<td>126</td>
<td>233</td>
<td>1.8</td>
</tr>
</tbody>
</table>
Data is from 2005 Chilled Water Master Plan Report completed by SSR, Inc.

Campus Design basis is 14 deg. F. chilled water temperature differential (1.71 gpm/ton); Chilled water supply temperature is 42 deg. F.

The analysis of future needs for this sub-element was based upon computer profiles that were developed for the existing campus buildings and profiles for future buildings projected upon the total square footage and estimated size of future buildings projected upon the total square footage and estimated size of future buildings through 2015. The initial task in this analysis was to generate a set of block load models for the various occupancies and populations sets during a typical University workday running from the first classes, beginning at 8 AM, and continuing until the final evening classes, which end at 10PM. The block load models were developed by means of an HVAC computer model simulation program, Trane Trace 600 and Trace 700. These simulation programs incorporate AHRAE weather data for Fort Myers, Florida, ventilation rates in 62-1989, and typical heating and cooling losses given a particular building envelope.

Using the Trane Trace 600 and the Trace 700 programs, a set of load profiles was generated for each of the existing buildings of the University. These load profiles established quantities of cooling requirements for each hour of the monthly design day. Using these profiles to establish a base profile, future building profiles could be interpolated based on building type, population, and total area. The Chilled Water Master Plan report detailed the project loads as follows:

### Projected Building Loads

<table>
<thead>
<tr>
<th>Building</th>
<th>SQFT</th>
<th>Est. Design Ton</th>
<th>Est. Design Flow (GPM)</th>
<th>Exp. Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic 8</td>
<td>74,250</td>
<td>300</td>
<td>600</td>
<td>1</td>
</tr>
<tr>
<td>Env. Demonstration</td>
<td>15,000</td>
<td>40</td>
<td>80</td>
<td>2</td>
</tr>
<tr>
<td>Research Building 15</td>
<td>80,000</td>
<td>400</td>
<td>800</td>
<td>3</td>
</tr>
<tr>
<td>Parking Garage 4</td>
<td>90,000</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Ph II Student Housing 1</td>
<td>176,393</td>
<td>400</td>
<td>800</td>
<td>5</td>
</tr>
<tr>
<td>South Village CEP Addition</td>
<td>6,500</td>
<td>10</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>CEP Addition</td>
<td>10,000</td>
<td>15</td>
<td>30</td>
<td>6</td>
</tr>
<tr>
<td>Academic 9</td>
<td>81,000</td>
<td>325</td>
<td>650</td>
<td>7</td>
</tr>
<tr>
<td>Research Building 12</td>
<td>75,000</td>
<td>375</td>
<td>450</td>
<td>8</td>
</tr>
<tr>
<td>Performing Arts Center</td>
<td>130,000</td>
<td>350</td>
<td>700</td>
<td>9</td>
</tr>
<tr>
<td>South Village Rec Center</td>
<td>150,000</td>
<td>425</td>
<td>850</td>
<td>10</td>
</tr>
<tr>
<td>Recreation Storage</td>
<td>3,000</td>
<td>0</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Project Description</td>
<td>Space (sq ft)</td>
<td>Plant Capacity (tons)</td>
<td>Year</td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------</td>
<td>-----------------------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>Ph II Student Housing 2&amp;3</td>
<td>176,393</td>
<td>400</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Ph II Stu. Housing Parking</td>
<td>90,000</td>
<td>0</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Student Dining Addition</td>
<td>3,500</td>
<td>10</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Track and Field</td>
<td>N/A</td>
<td>N/A</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Event Seating/Press Box</td>
<td>10,000</td>
<td>25</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Multipurpose Education</td>
<td>100,000</td>
<td>325</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Ph III Student Housing 1</td>
<td>176,000</td>
<td>400</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Ph III Student Housing 2</td>
<td>176,000</td>
<td>400</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Ph III Stu. Housing Parking</td>
<td>90,000</td>
<td>0</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Parking Garage</td>
<td>90,000</td>
<td>0</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Parking Garage</td>
<td>90,000</td>
<td>0</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Academic 10</td>
<td>100,000</td>
<td>325</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Parking Garage</td>
<td>90,000</td>
<td>0</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Ph III Student Housing 3</td>
<td>176,000</td>
<td>400</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Ph III Student Housing 4</td>
<td>176,000</td>
<td>400</td>
<td>2010</td>
<td></td>
</tr>
</tbody>
</table>

**Total:**

- Space: 2,435,036 sq ft
- Plant Capacity: 5,325 tons
- Projected Growth: 10,550 tons

Data is from 2005 Chilled Water Master Plan Report completed by SSR, Inc.

Campus Design basis is 14 deg. F chilled water temperature differential (1.71 pgm/ton); Chilled water supply temperature is 42 deg. F.

Each new building project on campus has traditionally been responsible for the extension of the chilled water-piping loop to meet the cooling requirements of that building. With the exception of the 2005 infrastructure expansion noted below, there are few obstacles to prevent the continuation of this approach.

Based upon the Master Plan concept and current projections for growth, incremental expansions in the form of new chillers and cooling towers will be required at the existing Central Energy Plan to accommodate increasing campus chilled water demand through past the year 2020. The latest expansion of the Central Energy plant has made accommodations for a future addition of a centrifugal chiller and cooling tower. Sometime around the year 2012, the University should make arrangements for an infrastructure expansion to allow for the routing of a 14” chilled water pipe between Academic Building #6 (Visual Arts) and the construction of the 2010-2015 Academic Building cluster on the east quadrant of the Academic Core, as noted on the Capital Improvements Element maps.

Also at approximately year 2005, the University should make arrangements for a second expansion of the existing Central Energy Plant to accommodate the addition of future chillers that will serve campus growth between 2005 and 2010. The 2005 Chilled Water Master Plan Report also proposes the option to expand the existing plan, but add an additional 14” lines to offset some of the existing loads.

As the campus expands based on current master plan projections, the chilled water system will see significant growth through 2015 as indicated by the table below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Space Air Conditioned (GSF)</th>
<th>Plant Capacity (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>551,214 Current</td>
<td>3300</td>
</tr>
<tr>
<td>2015</td>
<td>1,083,990 additional</td>
<td>+5325</td>
</tr>
</tbody>
</table>

Additional growth for residential projects and athletic/recreational projects is projected to be 882,000 gst, which will require 1,650 tons of air conditioning. Based on current growth projections, the chilled water production capability will need to expand by a factor 350% by the year 2015.
As FGCU continues to grow to the west, a new central plant will need to be developed. With the evolution of FGCU towards a major learning institutions, science, engineering, biotech, and research buildings will emerge.

These spaces are high percentage outdoor air facilities. These facilities will need to be conditioned then reheated to maintain indoor air quality. Therefore, the next Chilled Water Plant should explore heat energy for heating hot water in conjunction with central boilers for reheat and the minimal heating requirements of the local environment.

10.3.2 Electric Power and Other Fuels Sub-Element
The following analytical considerations have gone into the recommendations for provision of adequate electrical power to serve the needs of the University through the planning timeframe:

- Initial analyses in the 1995 Campus Master Plan indicated that a campus primary electrical power distribution system should be, over the life of the system, the most cost-effective selection for the proposed University. However, the cost of this scheme represented only 1% lower total life-cycle cost than the next favorable heating and cooling life-cycle cost recommendation.

- Associated initial costs of $1.5 to $2.0 million for provision of a University-owned primary distribution system resulted in the decision to not consider this option in the initial phases. FPL provided 23kV loop feeds to pad-mounted switch cabinets. 23kV radial feeds from switch cabinets serve pad-mounted transformers. Costs of $175,000 were incurred from FPL for provision of underground service onto and throughout the campus.

- Provisions of a throw-over service from FPL, providing for the capability of switching to a second primary feeder if one feeder fails, were also investigated. Initial costs of $500,000 were projected. It was determined that provisions would be made for future dual feeders onto the University campus, by installing spare conduit ductbanks. This would allow for upgrades to the FPL switch cabinets and transformers when the second feeder is available.

- **Electric Utility Rates:** Florida Power and Light has two rate structures for both primary and secondary metering that are applicable to the project. The following is a brief description of those rates:

  - **GSLD- General Service Large Demand**
  This rate structure is for facilities with large demands. They have 3 subcategories; 1) building with a load between 500 and 2000 kVa, 2) building with a load greater than 2000 kVa which receive their power at a primary metering voltage. If the University were to receive power at a primary metering voltage, it would be responsible for building a substation to terminate the FPL cables and provide and maintain the primary distribution, transformers and secondary distribution to the facilities. FPL also will sell power at primary rates, install all the distribution equipment and lease it back to the University. These options have not been considered, based on the associated initial costs discussed above.

  - **CILC- Commercial and Industrial Load Control**
  FPL provides reduced rates to customers who allow FPL to off load at least 200kW of load from their systems. FPL has control of this and can off load at any time. The university would have to provide a central generator plant to pick up this load. This option was not considered.

- **Other Secondary Metering Considerations**
  - Different rate structures can be provided for each building. Buildings with substantial generators could use load control service.
  - 1000 kVA is the largest pad mounted transformer supplied by FPL. Otherwise a vault must be provided in
the building to house the FPL transformer.
− No concrete encasement will be provided for ductbank site distribution. Primary cable installation in a 6” PVC conduit. This method of primary cable installation eliminates the majority of the initial costing of primary cable when supplied by the utility company.
− The FPL policy is to provide electrical service overhead. The university desires underground service, and must pay the difference in cost between overhead and underground service. However, if the building service is greater than 300 kVa for each building, underground in usually provided by FPL free for individual radial feeds from the switch cabinets to the transformers.
− The university must give FPL the easement to run its electrical service. The University is responsible for description of the easement, etc.
− The service recommended by FPL for this facility was dual feeders at 23kV. These feeders will terminate into a primary selector switch. The selector switch, in a weatherproof enclosure, will feed campus pad mounted building transformers. This is the design that has formed the basis for all distribution on the campus.

Based upon the major extent of FPL-owned distribution existing on the campus, combined with the prohibitive costs associated with converting this condition to a University-owned primary distribution system, it is recommended that the future planning of the University continue to provide a campus secondary electrical power distribution system. FPL will provide 23kv to pad-mounted transformers located at or adjacent to each building and at the central chiller plant. These pad-mounted transformers will step the 23kv distribution down to 480 volt, 3-phase, 4-wire service. The 23kV distribution should be a loop feed arrangement, originating from weatherproof enclosures containing primary selector switches. Site electrical metering devices will be located at the secondary of each transformer.

### Projected Building Loads

<table>
<thead>
<tr>
<th>Building</th>
<th>SQFT</th>
<th>Est. Peak Load Density (W/sf)</th>
<th>Est. Peak Demand (KW)</th>
<th>Exp. Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic 8</td>
<td>74,250</td>
<td>4.00</td>
<td>300</td>
<td>1</td>
</tr>
<tr>
<td>Env. Demonstration</td>
<td>15,000</td>
<td>3.00</td>
<td>45</td>
<td>2</td>
</tr>
<tr>
<td>Research Building 15</td>
<td>80,000</td>
<td>8.00</td>
<td>640</td>
<td>3</td>
</tr>
<tr>
<td>Parking Garage 4</td>
<td>90,000</td>
<td>0.50</td>
<td>45</td>
<td>4</td>
</tr>
<tr>
<td>Ph II Student Housing 1</td>
<td>176,393</td>
<td>3.00</td>
<td>530</td>
<td>5</td>
</tr>
<tr>
<td>South Village CEP Addition</td>
<td>6,500</td>
<td>100.00</td>
<td>650</td>
<td>5</td>
</tr>
<tr>
<td>CEP Addition</td>
<td>10,000</td>
<td>100.00</td>
<td>1000</td>
<td>6</td>
</tr>
<tr>
<td>Academic 9</td>
<td>81,000</td>
<td>4.00</td>
<td>324</td>
<td>7</td>
</tr>
<tr>
<td>Research Building 12</td>
<td>75,000</td>
<td>8.00</td>
<td>600</td>
<td>8</td>
</tr>
<tr>
<td>Performing Arts Center</td>
<td>130,000</td>
<td>4.00</td>
<td>520</td>
<td>9</td>
</tr>
<tr>
<td>South Village Rec Center</td>
<td>150,000</td>
<td>8.00</td>
<td>1200</td>
<td>10</td>
</tr>
<tr>
<td>Recreation Storage</td>
<td>3,000</td>
<td>1.00</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Ph II Student Housing 2&amp;3</td>
<td>176,393</td>
<td>3.00</td>
<td>530</td>
<td>12</td>
</tr>
<tr>
<td>Ph II Stu. Housing Parking</td>
<td>90,000</td>
<td>0.50</td>
<td>45</td>
<td>12</td>
</tr>
<tr>
<td>Student Dining Addition</td>
<td>3,500</td>
<td>3.00</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Track and Field</td>
<td>N/A</td>
<td>N/A</td>
<td>100</td>
<td>13</td>
</tr>
<tr>
<td>Event Seating/Press Box</td>
<td>10,000</td>
<td>3.00</td>
<td>30</td>
<td>14</td>
</tr>
<tr>
<td>Multipurpose Education</td>
<td>100,000</td>
<td>3.00</td>
<td>300</td>
<td>15</td>
</tr>
<tr>
<td>Ph III Student Housing 1</td>
<td>176,000</td>
<td>3.00</td>
<td>530</td>
<td>16</td>
</tr>
<tr>
<td>Ph III Student Housing 2</td>
<td>176,000</td>
<td>3.00</td>
<td>530</td>
<td>16</td>
</tr>
<tr>
<td>Ph III Stu. Housing Parking</td>
<td>90,000</td>
<td>0.25</td>
<td>45</td>
<td>16</td>
</tr>
<tr>
<td>Parking Garage</td>
<td>90,000</td>
<td>0.25</td>
<td>45</td>
<td>17</td>
</tr>
<tr>
<td>Parking Garage</td>
<td>90,000</td>
<td>0.25</td>
<td>45</td>
<td>18</td>
</tr>
<tr>
<td>Academic 10</td>
<td>100,000</td>
<td>4.00</td>
<td>400</td>
<td>19</td>
</tr>
</tbody>
</table>
10.3.3 Telecommunication Systems Sub-Element

The 1995 Campus Master Plan required the evaluation of the following three methods of transmission:

- Fiber Optics
- Broadband Technology
- Microwave Technology

The initial analysis utilized two of the methods proposed in the master planning guideline: fiber optics and broadband. Microwave technology was eliminated as this type of transmission can lend itself to several problem situations. Microwave “hops” or links, are generally used to traverse terrain that is not conducive to a fixed plant installation, or high inner-city transmission where right-of-way access or leased line facilities are unattainable or expensive. In addition, microwave transmission requires line-of-sight clear path at all times, which may inhibit landscape architecture on low elevation facilities, and places constraints on the physical location of new buildings in the future. Microwave transmission is also subject to erroneous transmissions due to rainfall and other atmospheric conditions. The site location of the facility places it well within the 100-year floodplain, and subject to severe weather conditions.

Therefore, and because this is a relatively new facility, microwave transmission option was eliminated, and instead focused on the planning requirements for fixed plant installation that offers a higher reliability in the transmission of media, and which can withstand the elements as needs to be expected in the South Florida area.

As previously discussed, a series of fiber optic backbones serves the entire campus, coupled with mini local area fiber networks, and copper pair distribution for telephone service. A broadband system is utilized for the distribution of RF television signals, and it is coaxial cable based.

- **Fiber:** Fiber continues to serve as the primary media for distribution on campus. As higher-speed applications are being developed for data and media, and newer generation LAN equipment is utilized, the characteristics of multimode fiber are becoming more restrictive. Institute of electrical and electronics Engineers (IEEE) standards committee for Gigabit Ethernet transmission indicated that industry standard 62.5 micron multimode fiber will have limited lengths of run for the required bandwidths need to support higher-speed gigabit transmissions. Factors to consider include distances involved in the network, current application begin run across the network, and protocols the network will be required to support in the future. Typical protocols currently being used can be supported up to about 1000 feet, while gigabit transmissions will be limited to lengths of 650 feet or as short as 350 feet.

It is recommended utilization of singlemode fibers, 50-micron multimode fiber, or enhanced 62.5-micron fibers, in future buildings, depending upon the University’s plans for future network applications. Singlemode is he recognized industry standard for transmission over long distances of up to 1800 feet. However, although the fiber is cost effective, cost of the associated electronics may be prohibitive. Singlemode systems use lasers as the transmitter, rather than the light-emitting diodes used for multimode systems, and therefore may cost up to five times more. Cable manufactures also now have available an enhanced 62.5-micron fiber that provides the higher bandwidths at distances up to 1650 feet. 50-micron multimode fiber is also an alternative, although its major disadvantages are requirements for non-standard installation and testing methods. Provision of a hybrid cable containing singlemode and multimode fibers...
should also be considered, to provide the diversity needed to serve whatever applications are being used. It is also recommended that considerations be given to providing remote/redundant satellite network server rooms. The existing NOC houses the University’s main file servers and routers, along with Sprint’s main telephone switch facility. The physical constraints within this room will ultimately require expansion to accommodate equipment with the space, and allow routing capability to the underground duct system. Survivability of the campus network is also a concern, if fire or other incident occurred in that area. Between 2005 and 2010, this master plan update shows over 300,000 square feet of academic and administration space being constructed on the east side of the academic core. This concentrated area would lend itself to providing a remote server room; with a dedicated singlemode fiber loop connected interconnecting the existing NOC.

- **Data:** Category 5 cabling standards for the building distribution systems have already been upgraded since the initial phases of construction at the University. Enhanced Category 5 cabling has been developed and recognized as an industry standard for 150 Mbs second rating, and is not being used in current construction projects a the University. It is recommended that the University continue to stay abreast with current technology, to allow for running newer and faster applications across the campus and local area networks, by utilizing higher performance cabling as it is developed and recognized by EIA/TIA industry standards.

- **Fire Alarm:** The 1995 Master Plan discussed the need for standardized specification. It recommended that fire alarm system in each facility on the campus, in both present and future projects, develop a specification that requires the fire alarm system vendor to provide a standard RS-232 output stream for the local system that reports all system events to the front end. By specifying this type of communications protocol, the Owner would be able to realize competitive bidding for the individual building fire alarm systems in future construction projects, in lieu of selecting a single manufacturer at the beginning and installing a single source proprietary system throughout campus. However, during the initial design phase it was determined that the state Fire Marshal would not allow a true networked system that was not UL listed as a complete system. Also, a true open protocol was and is not yet available for interface of multiple fire alarm system manufacturers. Recently, fire alarm systems have developed methods for network connectivity to energy management systems, which have open protocol (BACNET) standards already in place and for interconnection with other fire alarm systems for transfer of limited amounts of information. These do not provide the UL listing an full network connection required for a campus fire alarm system.

The University has established a long-term agreement with Simplex, the provider of the initial campus fire alarm network. This agreement has fixed unit pricing for Simplex materials, which are then used to determine costs for all new systems as facilities are constructed on campus. This arrangement guarantees that a fully UL listed system, that is recognized by the Fire Marshal, can be networked directly to the existing central command station.

- **Access Control:** The campus access control system has been utilized to a limited extent, while details of the compatibility with door hardware and administrative procedures for distributing identification cards are developed. Recently constructed facilities have included only the rough-in of boxes and conduit for this system. As the campus facilities expand, based on this updated master plan, there will develop greater needs for automatic control of access and identification. It is recommended that the procedures and requirements for this system continue to be reviewed and updated, and the system extended into appropriate facilities.

- **Broadband:** The coaxial system is used extensively, both for forward distribution of programming from on-campus sources and the local cable TV carrier. All electronic teaching podiums located in classrooms throughout the campus are provided with a service tap to the broadband system. Outlet locations in classrooms also provide for recording of special events or lectures on the reverse path bandwidth, to use in
distance learning programs.

Dedicated coaxial cable taps to each of the existing buildings, and multiple taps installed by the University to the outlets with the Broadcast Facility, has resulted in an excessive number of splitters off the main trunk at the head-end. As a result, signal quality and strength have been reduced below acceptable levels. It is recommended that sufficient taps be eliminated at the head-end to establish the required signal levels. Broadband service to future facilities should then be extended from a building adjacent to the new construction by tapping the existing coaxial feed. This will eliminate the need to provide additional connections directly from the head-end. Signal strength can be insured by providing amplifiers at any new taps. This method of extending the existing system has already been utilized to serve buildings remote from the head-end, such as the Campus Support Facility. The University’s Instructional Technology staff is currently reviewing the head-end.

- **Multimedia systems:** As the campus expands, the need for additional facilities with full distance learning capabilities will occur. The primary means for distributing this media on campus and to off-campus sources will be the fiber backbone. Inclusion of singlemode fiber on this backbone should accommodate the current and future needs. Refer to the fiber backbone analysis for additional details.

- **Ancillary Systems:** A number of other ancillary systems should be provided for the campus as growth continues. Examples are paging and background music systems, and auditorium and gymnasium professional sound-reinforcement systems.
11.0 TRANSPORTATION ELEMENT

11.1 Background

The purpose of the Transportation Element of the Master Plan is to:

- Provide a multimodal transportation system in support of the University’s sustainability goals
- Plan for future traffic circulation systems to ensure provision of adequate transit, bicycle and pedestrian, and auto circulation.
- Ensure the provision of parking facilities.
- Coordinate the staging and location of these facilities with Lee County and other organizations in the area.

The University Transportation Plan was developed as part of the 2010 Campus Master Plan, through the completion of a work program that included:

- Evaluation of existing transportation conditions in the University area.
- Identification of planned transportation improvements.
- Determination of the transportation characteristics of the University.
- Identification of the transportation needs within the University campus.
- Identification of the transportation need in the context area surrounding the University.
- Preparation of transportation goals, objectives, and policies to guide development of the transportation system.
- Coordination of the transportation improvement program with Lee County, Florida Department of Transportation, and Southwest Florida Regional Planning Council.

The components of this transportation work program, updated to reflect current conditions, are described in the following sections.

11.2 Current Conditions

(a) Inventory of existing on-campus parking facilities

The parking system at the Florida Gulf Coast University campus is operated by the University’s Department of Safety and Security. It consists of parking lots 1-7 in the core campus, athletics complex parking and student housing parking. Currently, there are 7,214 student and staff spaces available on campus. Table 11-1 depicts capacity available on campus. Figure 11-1d illustrates existing campus and parking.

Table 11-1 Campus General Parking Inventory
FGCU has not yet experienced the parking deficiencies often associated with universities. In addition, its location has not yet developed to the point of convenient off-campus parking facilities. Due to these factors, there is no off-campus parking.

<table>
<thead>
<tr>
<th>Use</th>
<th>Parking Lot 1</th>
<th>Reserved</th>
<th>Restricted</th>
<th>Handicap</th>
<th>Visitor</th>
<th>Open</th>
<th>Construction</th>
<th>Total Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>F/S</td>
<td>LOT 1</td>
<td>79</td>
<td>11</td>
<td>16</td>
<td>0</td>
<td>61</td>
<td>-133</td>
<td>167</td>
</tr>
<tr>
<td>Both</td>
<td>Family Resource</td>
<td>9</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>F/S</td>
<td>LOT 2S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Student</td>
<td>LOT 2N</td>
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<td>0</td>
<td>219</td>
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<td>18</td>
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<td>7</td>
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<td>F/S</td>
<td>LOT 3</td>
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<tr>
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<td>LOT 5</td>
<td>51</td>
<td>10</td>
<td>23</td>
<td>119</td>
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<tr>
<td>Student</td>
<td>LOT 6</td>
<td>1</td>
<td>4</td>
<td>11</td>
<td>51</td>
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<tr>
<td>Both</td>
<td>LOT 7</td>
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<td>15</td>
<td>0</td>
<td>286</td>
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<td>52</td>
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<tr>
<td>F/S</td>
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<td>0</td>
<td>3</td>
<td>0</td>
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<td></td>
<td></td>
<td>24</td>
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<tr>
<td>Both</td>
<td>Parking Garage 1</td>
<td>0</td>
<td>11</td>
<td>0</td>
<td>667</td>
<td></td>
<td></td>
<td>678</td>
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<tr>
<td>Both</td>
<td>Garage Auxiliary</td>
<td>0</td>
<td>0</td>
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<td>506</td>
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<td>506</td>
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<td>Both</td>
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<td>16</td>
<td>0</td>
<td>984</td>
<td></td>
<td></td>
<td>1000</td>
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<tr>
<td>Both</td>
<td>Parking Garage 3</td>
<td>0</td>
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<td>0</td>
<td>785</td>
<td></td>
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<td>800</td>
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<td>Campus Support</td>
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<td>4</td>
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<tr>
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<td>Physical Plant</td>
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<td>11</td>
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<td>0</td>
<td>0</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Both</td>
<td>Arts Complex</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td>4</td>
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<td>F/S</td>
<td>Howard Hall Rear</td>
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<td>1</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td></td>
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<td>Whitaker/Reed</td>
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<td>0</td>
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<tr>
<td>F/S</td>
<td>Library</td>
<td>21</td>
<td>4</td>
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<td>25</td>
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<tr>
<td>F/S</td>
<td>Information Booth</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
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<tr>
<td>Both</td>
<td>Kleist Center</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Both</td>
<td>Welcome Center</td>
<td>1</td>
<td>6</td>
<td>0</td>
<td>65</td>
<td></td>
<td></td>
<td>72</td>
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<tr>
<td>Both</td>
<td>North Lake Village</td>
<td>13</td>
<td>44</td>
<td>0</td>
<td>1480</td>
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<td></td>
<td>1537</td>
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<tr>
<td>Housing Auxiliary</td>
<td>0</td>
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<td>0</td>
<td>273</td>
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<td>280</td>
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<td>Alico</td>
<td>0</td>
<td>20</td>
<td>0</td>
<td>410</td>
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<td></td>
<td></td>
<td>430</td>
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<tr>
<td>Biscayne Hall</td>
<td>0</td>
<td>8</td>
<td>0</td>
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<td></td>
<td></td>
<td></td>
<td>285</td>
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<td>Everglades Hall</td>
<td>2</td>
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<td>0</td>
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<td></td>
<td>277</td>
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<tr>
<td>SOVI Parallel</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>45</td>
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<tr>
<td>SoVi Dining</td>
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<td>15</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

*Person with handicapped placard can park in any disabled parking space in any lot.

**Total Available Parking Spaces**: 7214

**(b) Inventory or estimate of the amount of student, faculty and staff parking off-campus and a description of these parking location**

FGCU has not yet experienced the parking deficiencies often associated with universities. In addition, its location has not yet developed to the point of convenient off-campus parking facilities. Due to these factors, there is no off-campus parking.
(c) Inventory of accident locations and number of accident occurrences on campus

Accident records were provided by the University Police for on-campus roads for the period between 1st January 2010 and 31st December 2010. A total of 94 crashes were reported on the FGCU campus. The accident statistics are presented in Table 11-2.

Table 11-2: 2010 On-Campus Accident Statistics

<table>
<thead>
<tr>
<th>Location</th>
<th>No. of Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BHG Parkway</td>
<td>7</td>
</tr>
<tr>
<td>FGCU Blvd</td>
<td>12</td>
</tr>
<tr>
<td>N Lake Pkwy W</td>
<td>9</td>
</tr>
<tr>
<td>N Lake Pkwy E</td>
<td>9</td>
</tr>
<tr>
<td>Parking Lot 2</td>
<td>2</td>
</tr>
<tr>
<td>Parking Lot 5</td>
<td>1</td>
</tr>
<tr>
<td>Parking Lot 7</td>
<td>5</td>
</tr>
<tr>
<td>Garage 1</td>
<td>6</td>
</tr>
<tr>
<td>Garage 2</td>
<td>3</td>
</tr>
<tr>
<td>Garage 3</td>
<td>9</td>
</tr>
<tr>
<td>NLV</td>
<td>19</td>
</tr>
<tr>
<td>So Vi</td>
<td>10</td>
</tr>
<tr>
<td>WLV</td>
<td>1</td>
</tr>
<tr>
<td>Welcome</td>
<td>1</td>
</tr>
<tr>
<td>SH Bldg T</td>
<td>1</td>
</tr>
<tr>
<td>SH CY</td>
<td>1</td>
</tr>
<tr>
<td>SH Honors</td>
<td>1</td>
</tr>
<tr>
<td>SH MG</td>
<td>1</td>
</tr>
<tr>
<td>SH PL</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>94</strong></td>
</tr>
</tbody>
</table>

(d) Existing classification of campus roadways

There are three roadways on the FGCU campus: FGCU Blvd., which is the main entrance road and the loop or circulator road, North Entrance Road, and Lake Drive. Classification of the campus roadways can be seen in Figure 11-1a.

(e) Existing roadway classifications within the context area

Interstate 75 is the primary north-south traffic route within and through Lee County. In the vicinity of the University, this freeway has six through lanes. I-75 is planned to be ten lanes as contained in the Lee County DOT 2035 Needs Plan.

The University is located between two I-75 interchanges- Alico Road to the north and Corkscrew Road to the south. These interchanges are signalized and are separated by a distance of 4.2 miles. Alico Road is an east-west arterial that travels east from U.S. 41 and terminates at Corkscrew Road east of Interstate 75. East of Ben Hill Griffin Parkway, this roadway currently has two lanes.

Corkscrew Road is also an east-west arterial that begins at US 41 and runs east to the county line. In the vicinity of the University, from US 41 to Ben Hill Griffin Parkway, this arterial has four lanes. Widening of Corkscrew Road East from Ben Hill Griffin Parkway to the Habit entrance is contained in the Lee County 2035 Needs Plan.

Ben Hill Griffin Parkway, formerly designated as Treeline Avenue, is a north-south, four-lane divided arterial that begins at Corkscrew Road east of Interstate 75 and runs north connecting to Alico Road. This arterial is being widened to 6 lanes from Alico Rd to FGCU Boulevard, as contained in the Lee County 2035 Needs Plan.
extension from Alico Road to Daniels Parkway and the Southwest Florida International Airport provides access to
the new terminal at the airport.

Three Oaks Parkway is a north-south, two-lane undivided arterial west of Interstate 75. This arterial is being
widened to 6 lanes from Estero Parkway to Coconut Road, as contained in the Lee County 2035 Needs Plan.

CR 951 is a proposed new road extending between Corkscrew Road and Alico Road, running north-south
approximately .75 miles east of the FGCU campus. It is proposed as a new four lane road in the Lee County 2035
Needs Plan.

Current levels of service on roadways within the context area, as well as on-campus roadways
Existing PM peak hour traffic volumes for the above roadways were obtained from the Lee County 2004 Traffic
Count Report, by applying suitable “K” and “D” factors to the AADT volumes provided. The levels of service for
these roadways were based on line-specific service volumes on arterials in Lee County. The existing PM peak hour
traffic volumes and Levels of Service (LOS) along roadway segments in the context area are presented in Table 11-3.

Table 11-3: Area Roadway System Conditions

<table>
<thead>
<tr>
<th>Roadway</th>
<th>From</th>
<th>To</th>
<th>Road Type</th>
<th>Length (miles)</th>
<th>LOS Std</th>
<th>Maximum Service Volume</th>
<th>Existing Traffic Volume</th>
<th>LOS PK Dir Two-Way PK Dir Two-Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alico Rd</td>
<td>I-75</td>
<td>Ben Hill Griffin</td>
<td>6LD</td>
<td>0.5</td>
<td>E</td>
<td>2830</td>
<td>5150</td>
<td>1220</td>
</tr>
<tr>
<td>Ben Hill Griffin</td>
<td>Corkscrew Rd</td>
<td>FGCU Blvd</td>
<td>4LD</td>
<td>2.2</td>
<td>E</td>
<td>1870</td>
<td>3400</td>
<td>1732</td>
</tr>
<tr>
<td>FGCU Blvd</td>
<td>North Entrance</td>
<td>4LD</td>
<td>0.8</td>
<td>E</td>
<td>1870</td>
<td>3400</td>
<td>1732</td>
<td>3230</td>
</tr>
<tr>
<td>North Entrance</td>
<td>College Club Rd</td>
<td>6LD</td>
<td>0.8</td>
<td>E</td>
<td>2830</td>
<td>5150</td>
<td>1732</td>
<td>3230</td>
</tr>
<tr>
<td>College Club Rd</td>
<td>Alico Rd</td>
<td>6LD</td>
<td>0.8</td>
<td>E</td>
<td>2830</td>
<td>5150</td>
<td>1732</td>
<td>3230</td>
</tr>
<tr>
<td>Corkscrew Rd</td>
<td>I-75</td>
<td>Ben Hill Griffin</td>
<td>6LD</td>
<td>0.5</td>
<td>E</td>
<td>2830</td>
<td>5150</td>
<td>1270</td>
</tr>
<tr>
<td>Estero Pkwy</td>
<td>US 41</td>
<td>Ben Hill Griffin</td>
<td>4LD</td>
<td>2.7</td>
<td>E</td>
<td>1870</td>
<td>3400</td>
<td>462</td>
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<tr>
<td>Three Oaks</td>
<td>Corkscrew Rd</td>
<td>Alico Rd</td>
<td>4LD</td>
<td>4.8</td>
<td>E</td>
<td>1870</td>
<td>3400</td>
<td>675</td>
</tr>
<tr>
<td>I-75</td>
<td>Corkscrew Rd</td>
<td>Alico Rd</td>
<td>6LF</td>
<td>4.3</td>
<td>C</td>
<td>4580</td>
<td>8320</td>
<td>3795</td>
</tr>
<tr>
<td>Alico Rd</td>
<td>Daniels Parkway</td>
<td>6LF</td>
<td>3.8</td>
<td>C</td>
<td>4580</td>
<td>8320</td>
<td>3795</td>
<td>6802</td>
</tr>
</tbody>
</table>

(f) Traffic counts at all major university entrances and exits
Traffic counts were conducted as part of intersection analyses peripherally associated with the Master Plan update.
These are included in the Appendix.

(g) Existing university trip generation data
Trip generation estimates for the campus were based on the ITE Trip Generation Manual, 8th Edition. The student
head count rate was the most accurate for this purpose and was used to estimate the daily and peak hour of generator
trips. Using recently completed traffic counts, HPE compared estimated trip generation rates with actual daily trip
generation. HPE determined the actual trip counts were less than would be predicted through the ITE method, and
calibrated the trip generation by excluding on-campus housing student. Excluding these students resulted in a
predicted trip generation very close to observed trips; therefore, on-campus housing students were also excluded
from the future traffic estimates.
Table 11-5: Existing Year (2004-2005) Trip Generation Estimate

<table>
<thead>
<tr>
<th></th>
<th>(Previous Master Plan Baseline) 1999-2000</th>
<th>(Existing Year) 2010</th>
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<tbody>
<tr>
<td>Student Headcount</td>
<td>6,198</td>
<td>12,000</td>
</tr>
<tr>
<td>Off-Campus Student Headcount</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily Trip Rate for Students</td>
<td>2.38</td>
<td>2.38</td>
</tr>
<tr>
<td>External ADT for Students</td>
<td>9,015 trips/day</td>
<td>19,395 trips/day</td>
</tr>
<tr>
<td>(Calculated – on-campus)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External ADT for Students</td>
<td>NA</td>
<td>19,000</td>
</tr>
<tr>
<td>(measured)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(h) Existing traffic analysis zones (TAZs) of the host local government in which the university is located. FGCU is located within TAZ number 1384 in the Lee County urban transportation model.

(i) Established public transit or university provided transit routes on campus and within context area.

Bus transit service in the Fort Myers area is provided by Lee Tran which is operated by the Lee County Department of Public Services Transit Division under the policy direction of the Lee County Board of County Commissioners. Lee Tran operates a fixed route-fixed schedule service with primary orientation of service to the more urban areas of Lee County. These areas include Fort Myers Cape Coral, North Fort Myers, Fort Myers Shores, Lehigh Acres, San Carlos Park, and Fort Myers Beach. The system is structured around a central corridor route with all other routes connecting, either directly or indirectly, with the central corridor. The routes providing service to the Fourth Myers area are summarized in Table 11-6.

The only Lee Tran route providing service directly to the University is Route Number 60. This route provides service with 80 minute headways between San Carlos Plaza and Florida Gulf Coast University. This route operates Monday through Saturday from 6:20 AM to 8:10PM. Ridership on the route averages 1,484 riders per month and this route is one of the least utilized in the Lee Tran system. Roadways and activity center provided with service by Route 60 include:

- San Carlos Plaza
- Lee Road
- Alico Road
- Ben Hill Griffin Parkway
- Florida Gulf Coast University
- South County Regional Library
- Three Oaks Middle School
Table 11-6: Lee Tran System Service- Fort Myers Area

<table>
<thead>
<tr>
<th>Route</th>
<th>Major Destinations Served</th>
</tr>
</thead>
<tbody>
<tr>
<td># 10 Michigan Links Edison Mall</td>
<td>Michigan Links, STARS Complex, Intermodal Center, HRS &amp; VA Clinic, SW Regional Hospital, Edison Mall</td>
</tr>
<tr>
<td># 15 Tice/Ortiz Edison Mall</td>
<td>Tice/Ortiz Avenue, Michigan/March, Health Department, Intermodal Center, Broadway, Edison Mall</td>
</tr>
<tr>
<td># 20 Dunbar/ Downtown Fort Myers</td>
<td>Eastgate Shopping Center, Michigan Links, Dunbar Shopping Center, Harborside Convention Center, Edison/Ford Plaza Intermodal Center</td>
</tr>
<tr>
<td># 50 Southwest Florida Airport/ Summerlin Square</td>
<td>Southwest Florida International Airport, Bell Tower Mall, Health Park Hospital, Summerlin Square, Tanger Outlet Mall</td>
</tr>
<tr>
<td># 80 Bell Tower/ Edison Mall</td>
<td>South Trail Publix, Swamp Cabbage Court, Page Park, Bell Tower, Gulf Coast Hospital</td>
</tr>
<tr>
<td># 130 Edison Mall/Berkeley Cir/ Pine Manor/ Royal Palm Square/ Southpointe</td>
<td>Edison Mall, various residential areas, Southpointe Blvd</td>
</tr>
<tr>
<td># 140 Merchants Crossing/ US 41/ San Carlos Plaza</td>
<td>Central corridor route providing service along US 41</td>
</tr>
</tbody>
</table>

Trolleys: Fort Myers Beach and Bonita Beach area

Source: www.rideleetran.com

(j) Bicycle and Pedestrian Facilities

The nearest existing pedestrian and/or bicycle facilities within the context area of the University are described in Table 11-7. Ben Hill Griffin Parkway, which provides direct access to the campus, has an eight foot wide multi-use path on the east side, and also has paved shoulders.

Campus bicycle and pedestrian facilities exist on FGCU Boulevard, which is the main entrance to campus, and include on-road bike lanes, as well as sidewalks on both the north and south sides. The campus circulation road is a three lane undivided facility. There is a four foot wide paved shoulder designated for bicycle use and sidewalks located on the inside right of way of the loop road. North Entrance Road and Lake Drive both have designated areas for cyclists, as well as sidewalks.

Table 11-7: Existing Pedestrian/ Bicycle Facilities

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Segment</th>
<th>Type of Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three Oaks Parkway</td>
<td>Alico Road-Corkscrew Road</td>
<td>Sidewalk-west side</td>
</tr>
<tr>
<td>Sammel Boulevard</td>
<td>US Route 41- Lee Road</td>
<td>Paved shoulder-both sides</td>
</tr>
<tr>
<td>Lee Road</td>
<td>Alico Road- San Carlos Boulevard</td>
<td>Paved shoulder- both sides</td>
</tr>
<tr>
<td>San Carlos Boulevard</td>
<td>Lee Road- Three Oaks Parkway</td>
<td>Paved shoulder- both sides</td>
</tr>
<tr>
<td>Ben Hill Griffin Parkway</td>
<td>Corkscrew Road to Alico Road</td>
<td>Multi-use path-east side; on road designated bike lane</td>
</tr>
</tbody>
</table>

11.3 Project Needs

(a) Future parking needs for students, faculty and staff and types of special events for the planning period.

Parking needs for the University were projected using ITE’s Parking Generation handbook, using the recommended ratio of 0.3358 parking spaces per student head count. With a projected 23,718 students in the design year, this results in a total need for 8,016 parking spaces. The University already has 7,214 parking spaces, yielding a deficit of 802 spaces. An additional parking garage is being constructed that will meet this demand.
(b) Capacity of university lands to accommodate the amount of parking calculated and a determination of how much parking would have to be provided in structures.
All future parking demands will be accommodated in parking structures.

(c) Methods to accommodate the amount of future parking needs calculated for the university campus.
The ITE Parking Generation manual was used to determine parking needs.

(d) Off-campus lands in the context area that may be available for university parking, and the capacity of those sites.
The parking on the FGCU campus is adequate to serve the needs of the university population and no off-campus parking is projected for the near future.

(e) Impacts of off-campus University parking on the context area, and alternatives for minimizing those impacts.
Because of the current lack of off-campus parking for the University, as well as none projected for the near future, there are no parking impacts within the context area. All University parking needs will be met within the campus.

(f) Projected traffic volumes/capacities and levels of service on university and context area roads.
Trip generation for the planning year was calculated using the ITE Trip Generation Manual, 8th Edition, using the Universities projected student headcount of 19,000 off campus students. Estimated daily trips in 2015 are 42,810. Estimated peak hour trips are 3,900.

Projected 2015 traffic volumes on context area roadways are depicted in Figure 11-4. The traffic volumes in Figure 11-4 include the impacts of several nearby large-scale developments, including the Timberland & Tiburon DRI, Gulf Coast Town Center DRI, Miromar Lakes DRI and the Stoneybrook/ Corkscrew Pines DRI as well as other planned developments. Typically with these large-scale developments, their anticipated level of buildings is not achieved at the rate assumed in the early analyses, so the traffic volumes in Figure 11-4 should be considered conservatively high.

Table 11-11 lists the projected 2015 University traffic context area roadways and projected 2015 “background” traffic. Adopted LOS thresholds for the Peak Hour/Peak Direction are shown for the network roads and the University’s traffic. The percent of available capacity at the adopted LOS level is indicated.
### 2010-2020 Campus Master Plan Update
#### Vol. I - Data Inventory and Analysis Report
April 17, 2012

<table>
<thead>
<tr>
<th>Roadway Link Name</th>
<th>From</th>
<th>To</th>
<th>Existing + Committed Conditions</th>
<th>2015 PM Peak Hour Pk Dir Volume</th>
<th>FGCU 2015 Pk Dir % of Cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alico Rd</td>
<td>I-75</td>
<td>Ben Hill Griffin</td>
<td>6LD 2830</td>
<td>1495</td>
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*(g) Required on-campus roadway improvements necessary to meet future traffic circulation needs.*

Both the campus population and the trips per day are projected to grow to approximately twice their current size. Even with this level of growth, it is expected that the overall capacity of the current campus roadway network will be adequate to handle the additional traffic. A two-lane undivided roadway with turn lanes at its intersection with FGCU Blvd is adequate to connect the southwest housing district to the core campus. Similarly, a two-lane undivided roadway with turn lanes at FGCU Blvd is adequate to connect to the Northwest district.

*(h) Required off-campus roadway improvements necessary to meet additional traffic demands in the context area generated by the university.*

The Lee County DOT Major Road Improvements Needs List contains several roadway improvement projects within the FGCU context area. These planned improvements will ensure that the future transportation needs of the area from both university growth and other development are met. These planned improvement projects include:

- I-75 widening from existing six lanes to ten lanes
- Major interchange improvements at I-75 and Corkscrew Rd.
- Extension of Ben Hill Griffin Parkway from Alico Road to Daniels Parkway and the Southwest Florida International Airport.
- Widening of Ben Hill Griffin Parkway from four lanes to six lanes from Alico Road to FGCU Blvd.
- Extension of Three Oaks parkway from Alico Road to Daniels Parkway.
- Extension of Koreshan Blvd from Three Oaks Parkway to Ben Hill Griffin Parkway
- Widening of US 41 from four lanes to six lanes.

*(i) Additional transit required to meet the future needs of the university.*

The transit system in Lee County, Lee Tran, is operated by the Lee County Department of Public Services.
Transit Division under the policy direction of the Lee County Board of Commissioners. Currently, the only Lee Tran route providing service to FGCU campus is Route Number 60.

To overcome on-campus travel distance created by the campus climate (environmental areas), the on-campus circulator should continue to be used. This system may need expansion, possibly with larger buses, as on-campus housing increases.

(j) **Opportunities to implement transportation system management and demand management techniques and strategies to minimize off-site impacts on roadways within the context area.**

There are several transportation system management strategies that can be employed to accommodate university transportation needs with fewer automobile trips. These strategies can result in a reduction of the number of auto trips to and from the university during the peak hours.

*Carpooling*

One of these strategies is carpooling. A university service of carpool matching and the provision of priority parking for carpools, in addition to setting the parking fees to discourage the single occupant automobile use, the incidence of carpooling to and from campus could increase.

*Flex Time*

A second strategy is the use of flex time for university staff. Flexible working hours have been used to lessen the number of peak hour trips with success in many instances. With staggered working hours for staff members, the number of peak hour trips could be reduced.

*Transit Service*

A third strategy is the continuation of the transit service currently provided to the University by Lee Tran.

Implementing Transportation System Management (TSM) or Transportation Demand Management (TDM) strategies will require a coordinated effort by the university administration. The elements of the University Transportation Plan, such as bicycle and pedestrian projects, should be completed in order to promote the use of alternative modes of transportation. Additionally, the increasing amount of on-campus housing will also translate into fewer external automobile trips. The establishment of a university transportation coordinator could be an effective mechanism in implementing these strategies in a coordinated manner.

(k) **Planned location of future facilities and parking for those facilities**

The FGCU Athletics Complex hosts multiple simultaneously occurring events as well as large events in its many adjacent facilities. There is a need for a parking structure in that area to accommodate the parking demands of those adjacent facilities. In addition there will be a need for a clearly defined walking/bike path around the campus loop road to assist with pedestrian traffic to from special events (see 8.3 – paragraph four). There is also a need for a boardwalk from the east side of campus core to the FGCU Athletics Complex that would serve as a pedestrian access point. This would allow guests from core campus and South Housing Village to walk to the complex and most importantly promote sustainability.
12.0 INTERGOVERNMENTAL COORDINATION ELEMENT

12.1 Background
The table below identifies the entities that FGCU anticipated to have a relationship within the 2005-2015 Campus Master Plan. The table also indicates the nature of the relationship, i.e., the mechanism through which coordination is conducted (formal agreement or permit), and whether there was a perceived need for further coordination.

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12.2 Current Condition
The following discussion identifies the role of each participating entity identified in the table by describing the coordinating mechanism with Florida Gulf Coast University, and the nature of the relationship.

A number of agreements and policies are currently in place. The intent of these agreements and policies is to help ensure an integrated, multi-jurisdictional planning process; however, some additional coordination mechanisms and/or agreements may be needed.

- **Miromar Development**
  Miromar Development Corporation has become a large landholder in the FGCU area since 1995. It is developing the 2,459 acre Miromar Lakes Beach and Golf Club on land that lies just north, east and south of the FGCU campus and it controls the Miromar Outlets development at Corkscrew Road and Interstate 75 and the International Design Center just south of Corkscrew.

  Miromar Development also controls 22 acres of property directly west of campus along Ben Hill Griffin Parkway, and has plans to develop the property as a mixed-use retail and housing development called University Village, with 100,000 square feet of retail space, more than 80 apartments and 100 garden homes.

- **Lee County**
  Lee County has a number of departments that provide on-going planning, coordination, and delivery of services to the University. These include the Lee County Department of Transportation, Solid Waste, Disaster Preparedness, Transit, Long Range Planning, Zoning, Development Review, and Department of Parks and Recreation, Lee County Utilities, among others. In addition to individual relationships established by the University with these Departments, FGCU is required to enter into a Campus Master Development Agreement with Lee County that, in addition to the provisions of the Lee Plan, further ensures intergovernmental
coordination between these entities.

Coordination is achieved through the Campus Development Agreement, which was executed in 2008. Pursuant to Chapter 240 of the Florida Statutes and the FGCU Campus Master Plan, The Campus Development Agreement is required to be consistent with the adopted Campus Master Plan and to not conflict with the County’s Comprehensive Plan. The Agreement, among other requirements, insures that the University is responsible for paying its fair share of costs necessary to ensure facilities and services are available and concurrent with the expected impacts of development.

- **Lee County Department of Transportation**
  The County’s long range plans for transportation are required by Federal legislation to be coordinated with those of the Metropolitan Planning Organization (MPO). The Southwest Florida Regional Planning Council staffs the MPO. The Florida Department of Transportation (FDOT) coordinates its plans for upgrading state roadways with Lee County and the MPO. In addition, meetings are required to take place between the Lee County Long Range Planning Department, FDOT, Lee County DOT, and representatives of property owners along Ben Hill Griffin Parkway, including the University, to ensure the provision of adequate levels of service on this road upon development of those properties.

  The relationship between Lee County DOT and the University is guided by the Lee County Comprehensive Plan through the policies contained in the Transportation element, including the provision of level of service standards that must be maintained for roads (Policy 37.1.1), and which determine the “fair share” that FGCU shall contribute to improvements necessary to maintain said levels of service.

- **Lee County Solid Waste Management**
  The relationship between Lee County Solid Waste Management and its customers is based on standard operating procedures and contractual relationships with local haulers and operators. In 1991, Lee and Hendry counties adopted an interlocal agreement to develop a waste-to-energy facility in Lee County and a landfill in Hendry County for joint use. The Lee County waste-to-energy plan became operational in 1994, and Phase I of construction at the Hendry County were completed in 1997. Since then, solid waste facilities in both counties have been expanded to improve recycling and materials recovery abilities, increase waste capacity, and reduce landfill volumes. A new Lee County landfill expansion began operations in 2002, and a 25-acre expansion in both counties was completed in October 2005.

- **Lee County Disaster Preparedness**
  Memoranda of understanding between other local, regional, and other disaster preparedness agencies, including standard operating procedures, form the basis of emergency preparedness coordination. In addition, the County’s Comprehensive Plan contains policies, to ensure coordination and development of emergency plans and programs, to include FGCU.

  Florida Gulf Coast entered into a Hurricane Shelter and Emergency Management Agreement with Lee County in June of 1998. The 1998 agreement indicates that the location of the FGCU campus renders it both suitable and desirable for use as a place to shelter the public from hurricanes, and that the Campus Master Plan includes policies for coordination with Lee County to plan, design, and use University buildings as a shelter. Through the agreement, FGCU is required to:
  
  (a) Provide a parking space for an Emergency Medical Service vehicle on campus, as well as a “duty station” to be used for ministerial activities on a 24-hour a day basis during non-emergency periods.
  (b) Permit Lee County EMS and Public Safety staff to use source designated paved parking as a disaster-response staging area during hurricanes and other natural disasters.
  (c) Annually submit its Emergency Preparedness Plan to the County for integration with the County’s

(d) Identify, through the University’s Emergency Preparedness Plan, the extent to which buildings will be used to provide shelter for the general public.

(e) Meet with Lee County representatives, as new buildings are planned and designed, to discuss whether such building may be used to address public shelter and recovery needs.

(f) Shelter members of the public in campus shelters as long as there is space available in qualifying shelters.

The County, on the other hand, commits to:

(a) Suggest improvement to the design of new buildings that would augment the potential to use those buildings as shelter and recovery needs facilities.

(b) Identify and train shelter managers to operate designated shelters in the event of a qualifying emergency.

(c) Stock the shelters with food and supplies

(d) If feasible, contribute money and materials to defray the costs associated with construction of new facilities or retrofitting of existing facilities to shelter standards.

In March 2002, The Board of Lee County Commissioners approved an interlocal agreement with Florida Gulf Coast University to use the FGCU Alico Arena as a hurricane shelter. The county agreed to pay $947,296 to make the necessary upgrades during construction. The 110,000-square-foot, $13-million Alico Arena opened in October 2002.

Alico Arena provides as additional 1,838 shelter spaces to house county residents when hurricanes threaten the area. In 2002, this represented a 5 percent reduction in the county’s hurricane shelter deficit of 38,000 spaces.

The largest shelter in Lee County is the Germain Arena with 6,500 spaces. Alico Arena is the second largest shelter in the county.

- **Lee Transit (Lee Tran)**
  The 2004 Codification of the Lee County Comprehensive Plan notes that “Lee County shall facilitate mass transit opportunities connecting the University community to other parts of the county, in accordance with the goals, objectives, and policies of the mass transit element”. Therefore, the principal coordinating mechanisms are the Mass Transit Element of the Lee Plan and the Lee County Transit Development Plan.

  In 2006, Lee County Transit (Lee Tran) engaged in a partnership with FGCU to provide transit service to the campus. Under the agreement, Lee Tran Route 60 serviced FGCU and San Carlos Park, connecting with linehaul service via route 140. Lee Tran and FGCU shared the funding for this service. Lee County and FGCU negotiated a new interlocal agreement whereby FGCU provided a payment of $1,516,720 for mass transit service and facilities until 2011.

- **Lee County Planning Department**
  The Lee County Planning Department plays an instrumental role in preparing, updating and monitoring the Lee County Comprehensive Plan. This department has also played a crucial role in evaluation both the Conceptual Master Plan for the University Community, and DRI documents for the University Village.

  The Lee Plan and its amendments for the development of the University and the University Village are coordinated with a host of other local, regional, and state entities, since the Lee Plan must be consistent with the SWFRPC and the State of Florida’s Growth Management Plans. The DRI process implements a multi-jurisdictional land use review of impacts associated with development around the university in the review of which Lee County Planning Departments participates.

  One area of concern is the provision of affordable housing to service the University. Lee Plan policies were
adopted which are significant in this regard. Policy 18.1.2 requires the University Community “to provide a mix of housing types with densities sufficient to meet the needs of and designated to accommodate the varying lifestyles of students, faculty, administration, other university personnel, and employees of the associated support development.” To foster a variety and a mix of housing types, the County adopted Policies 18.1.3 and 18.1.4 which required Lee County to adopt regulations that provide for University housing, including dormitories and boarding houses at appropriate densities.

The relationship established between the Planning Department, the Lee Plan, and with the DRI process is established by Florida statute. Historically, the Planning Department has worked well with the Florida Department of Community Affairs and the Southwest Florida Regional Planning Council in reviewing amendments to the Comprehensive Plan and DRIs.

- **Lee County Zoning**
  The Lee County Zoning Department is responsible for reviewing all zoning and rezoning petitions associated with University Village and participates in the review of the DRI and Development Orders for University Village.

  Policy 18.1.7 of the Lee Plan notes that “a diverse mixture of land uses shall be encouraged within the University Community. Compatibility shall be addressed through project design, including adequate buffering or other performance measures, therefore allowing adjacent appropriate industrial, residential and commercial land uses where such locations represent good planning. In reviewing zoning requests within the University Community, Lee County shall consider noise, odor, visual, security, and traffic impacts in determining land use compatibility. Because of the required cooperative master planning with and approval by the Board of Regents, the required compatibility review and the requirements that commercial land uses within the University Village be related to the University, development within the University Community shall not be subject to the site location standards set forth in Goal 6 of the Lee Plan.”

  An additional coordinating mechanism is found in Policy 18.2.3. This policy notes that “the University Window Overlay includes the area within 100 feet on both sides of the right of way of the following roadway segments:

  - Ben Hill Griffin Parkway from Alico to Corkscrew
  - Alico Road from I-75 to Ben Hill Griffin Parkway
  - Corkscrew Road from I-75 Ben Hill Griffin Parkway
  - Koreshan Blvd. from I-75 Ben Hill Griffin Parkway

  “With input from affected property owner, by 1995 Lee County and the Board of Regents shall develop mutually agreed upon standards for the University window, addressing landscaping, signage and architecture features visible from the designable roadway segments.”

  This policy has been implemented through a “Window Overlay” agreement, entered into between Lee County, Florida Gulf Coast University, Alico, Inc., Timberland Ltd., Tiburon Ltd., James R. Colosimo, Trustee, and Corkscrew Properties Ltd. in April of 1997. The agreement established rights, limitations and responsibilities of the parties with regard to utilities, street lighting, and median landscaping. In addition, the agreement established that other aspects of development within the Window Overlay would be governed by the County’s Development Code.

- **Lee County Parks & Recreation**
  The Lee County Plan for Parks and Recreation establishes the County’s recreational plans and programs. The relationship between the University and the Park and Recreation Department is through the Campus Development Agreement between the University and Lee County. In addition, Lee County has funded, through
parks and recreation impact fees, a $4.5 million Olympic-size, swimming pool project on campus for use by the university community and swimming teams, Swim Florida, Lee County Schools and the community at large.

- **Lee County Comprehensive Plan**
  The Lee County Board of Commissioners adopted certain amendments to the Lee County Comprehensive Plan in 1992 in order to provide for FGCU. The purpose of the amendment was to establish the appropriate Future Land Use Map (FLUM) category to accommodate the University and its support/complementary uses. The amendment established the University Community and set forth certain additional planning efforts that were to occur prior to vertical development of the University, including a generalized land use plan and a multi-objective water management plan to be developed through a cooperative effort between the property owner, Lee County and the South Florida Water Management District (SFWMD). The requirements set forth by the Comprehensive Plan policies have been net through the preparation of a Conceptual Master Plan, the DRI process for approval of developments on properties within the University Community, and permitting by other relevant agencies including SFWMD and the U.S. Army Corps of Engineers (USACOE).

- **Southwest Florida Regional Planning Council**
  The Southwest Florida Regional Planning Council (SWFRPC) serves as a forum for identifying as well as promoting, public understanding of local regional issues and problems. The SWFRPC was created by an inter-local agreement between Charlotte, Collier, Glades, Henry, Lee and Sarasota counties, to promote the implementation of a number of local, state and federal programs. The SWFRPC is also responsible for preparing the Regional Plan, reviewing local plans for consistency with regional and state plans and programs, and participates in the review of DRIs. Florida Statutes provide provisions for the Council’s operating procedure and statutory responsibilities.

- **South Florida Water Management District**
  The South Florida Water Management District (SFWMD) reviews applications for surface water management and water use permits. The SFWMD coordinates permit review responsibilities with the Florida Department of Environmental Protection. The SFWMD is responsible for issuing water management permits for the FDEP based on recent rule changes with review provided for between the two permitting entities.

  The conceptual plans for the FGCU’s proposed stormwater management system were coordinated, reviewed, and approved by SFWMD (Permit No. 36-02881-5). The established coordinating relationship is expected to continue, based upon the University’s satisfactory compliance with the conditions of the permits, through future development phases.

- **Florida Department of Community Affairs**
  The Florida Department of Community Affairs (DCA) has a number of responsibilities which include among others, the review of local comprehensive plans for consistency with the state’s Growth Management Act, the review of DRIs and coordinating a variety of other plans and programs at the state and local level. DCA also coordinates plans and programs for housing assistance.

  In 1992, the Board of Regents entered into a Development Agreement with Florida DCA. The purpose of this agreement was to “clarify their respective roles and responsibilities and establish a coordinated, inter-agency planning process for FGCU with an opportunity for full public participation.”

  To carry out this purpose, the Development Agreement recognizes that the Board of Regents shall prepare and adopt a Campus Master Plan pursuant to the requirements of Chapter 240.155, Florida Statutes. The Master Plan shall identify land uses and address the need for plans to provide roads, parking, public transportation, solid waste, stormwater facilities, sewer facilities, portable water, and recreation and open space needs for periods of 10 and 20 years. The requirements of this agreement were satisfied upon finding of compliance and adoption of
the Campus Comprehensive Master Plan. Following the dissolution of the Board of Regents this function was delegated to the Board of Trustees of the University.

- **Lee County Utilities**
  Lee County Department of Public Works (LCDPW) assumed the operations of Gulf Environmental Services in 2003. Lee County Utilities has a formal service agreement with the University to provide sanitary sewer, potable water and fire protection water service to the FGCU campus. Continued coordination of expansion of sewer and water systems in and around the University is insured by the Conceptual Master Planning and through the DRI review process. Lee County Utilities is committed to expanding and extending water and sanitary sewer services on campus as necessary to serve FGCU’s development, population and provide necessary fire flows.

- **United States Army Corps of Engineers**
  The United States Army Corps of Engineers (USACE) is responsible for reviewing applications for dredge and fill that are necessitated because of impacts to federal wetland jurisdictional areas. The USACE is required by law and memorandums of understanding to coordinate impacts of wetlands with the EPA and the USDI, and Florida Fish and Game Commission. Therefore, coordination mechanisms are available through the permitting process, with which the University has so far complied. Plans for the stormwater management system for the FGCU campus have been approved by USACE (permit #199400807).

- **Florida Department of Environmental Protection**
  The FDEP is responsible for reviewing applications for impacts to wetlands that are jurisdictional to the State of Florida. However, SFWMD is responsible for issuing Water Management Permits on behalf of FDEP with interagency review provided for between the two permitting agencies. There is a coordination mechanism in place (in addition to review provided for by the Florida Fish & Game Commission) that they may comment on wildlife issues affected by permit requests.

- **San Carlos Fire Protection and Rescue Service District**
  The San Carlos Fire Protection and Rescue Services District reviews applications for development orders, zoning requests and DRIs planned around the University. FGCU has a contract for services with this agency, which was originally entered into in October 1996. The contract was renewable through 2011, contingent upon satisfactory performance evaluation by the University. The costs for renewed services are calculated using the Lee county property appraiser’s appraised value of all buildings and the acreage of developed property, times the District’s current fire district millage rate. Student support services are at an extra cost to the University. The University coordinates with the San Carlos Fire Protection District through the Lee county Emergency Notification System as part of its Emergency Response Plan to address spills, fires and other emergencies associated with hazardous waste.

### 12.3 Projected Needs

The existing agreements, contracts, and permitting processes are deemed adequate to ensure the necessary exchange of information and timely and adequate delivery of services to the University.
13.0 CONSERVATION ELEMENT

13.1 Background

In 1991, the Florida State Legislature commissioned the Development of the tenth university of the Florida State University System. On October 22, 1992, an agreement was entered into between Alico, Inc., and the Board of Regents of the State of Florida for the conveyance of 760 acres of property owned by Alico to the Board of Regents, for the purpose of constructing Florida Gulf Coast University. The site chosen is located east of Interstate 75 and north of Corkscrew Road, in Sections 13, 14, 23, and 24, Township 46 South, Range 25 East, Lee County, Florida.

As part of the site selection and campus planning processes for the FGCU campus, an extensive ecological inventory was conducted and documented in the 1995 Campus Master Plan Inventory report. Preliminary surveys included a general delineation and characterization of the site’s major upland and wetland plant communities, a general review of the Natural Resource Conservation Service (NRCS) soils survey, and a survey for threatened and endangered plant and wildlife species. The goal of this work effort was to provide the ecological information necessary to plan and design the university in the most efficient, ecologically friendly manner. Unavoidably, however, the construction of the campus and its associated infrastructure would impact a variety of upland and wetland systems occurring onsite. In order to compensate for these impacts, a comprehensive mitigation plan was developed and is being rigorously implemented through permits issued by both the US Army Corps of Engineers (USACOE) and the South Florida Water Management District (SFWMD). Policies contained in the 1995 Campus Master plan reflect the mitigation plan’s response to such impacts.

The following summarizes the findings of the ecological inventory:

Soils

The presence of hydric soils is one of the general parameters that agencies use when making jurisdictional wetland determinations. Therefore, a review of the soils was a necessary part of the jurisdictional process. The soil survey was utilized as part of the extensive environmental studies undertaken for the jurisdictional process and planning of the FGCU campus. The majority of soil types occurring within the University site were identified as hydric (nine out of fourteen), and are distributed mainly in the northwest, south and northeast portions of the site, delineating the boundaries of future development areas. The results of the soil survey are presented below, with a brief description of each soil type and the vegetative cover or land use that generally occurs on each of them.

6-Hallandale fine sand
This is nearly level, poorly drained soil on low, broad flatwoods areas. In most years, under natural conditions, the water table is less than 10 inches below the surface for 1 to 3 months. It recedes below the limestone for about 7 months. Florida Land Use, Cover and Forms Classification System (FLUCFCS) units occurring on the soil type include disturbed pine flatwoods (4119), disturbed palmetto prairie (3219), and hydric melaleuca (4241). The soil has severe limitations for urban uses because of shallowness to bedrock and wetness.

13-Boca fine sand
This is a nearly level, poorly drained soil on flatwoods. In most years, under natural conditions, the water table is within 10 inches of the surface for 2 to 4 months. It recedes below the limestone for about 6 months. FLUCFCS units occurring on the soil type include disturbed pine flatwoods (4119), disturbed palmetto prairie (3219), and hydric melaleuca (4241). The soil has severe limitations for sanitary facilities, building site development, and recreational uses primarily because of the high water table.

14-Valkaria fine sand
This is nearly level, poorly drained soil on sloughs. In most years, under natural conditions, the water table is at a depth of less than 10 inches for 1 to 3 months. It is at a depth of 10 to 40 inches for about 6 months and recedes to a depth of more than 40 inches for about 3 months. During periods of high rainfall, the soil is covered by slowly moving water for periods of about 7 to 30 days or more. FLUCFCS units occurring on this soil type include cleared areas (747), hydric cleared areas (7461), and hydric melaleuca (4241). The soil has severe limitations for urban development because of the high water table.
26-Pineda fine sand
This is a nearly level, poorly drained soil on sloughs. In most years, under natural conditions, the water table is within 10 inches of the surface for 2 to 4 months. It is 10 to 40 inches below the surface for more than 6 months, and it recedes to more than 40 inches below the surface for more than 6 months, and it recedes to more than 40 inches below the surface during extended dry periods. During periods of high rainfall, the soil is covered by a shallow layer of slowly moving water for periods of about 7 to 30 days or more. FLUCFCS units occurring on this soil type include disturbed pine flatwoods (4119), disturbed palmetto prairie (3219), malaleuca (424), hydric melaleuca (4241) borrow area (742), and hydric cleared area (7461). This soil has severe limitations for urban development primarily because of the high water table.

27-Pompano fine sand, depressional
This is a nearly level, poorly drained soil in depressions. In most years, under natural conditions, the water table is within 10 inches of surface for 2 to 4 months and stands above the surface for about 3 months. It is 10 to 40 inches below the surface for more than 5 months. FLUCFCS units occurring on this soil type include disturbed palmetto prairie (3219), disturbed pine flatwoods (4119), and hydric melaleuca (4241). In its natural state, this soil has severe limitations for septic tank absorption fields, swellings without basements, small commercials buildings, and local roads and streets.

28-Immokalee sand
This is nearly level, poorly drained soil in flatwoods areas. In most years, under natural conditions, the water table is within 10 inches of the surface for 1 to 3 months and 10 to 40 inches below the surface for 2 to 6 months. It recedes to a depth of more than 40 inches during extended dry periods. FLUCFCS units occurring on this soil type include cleared areas (746). This soil has severe limitations for urban development because of high water table.

39-Iles fine sand, depressional
This is a nearly level, very poorly drained soil depressions. In most years, under natural conditions, the soil is ponded for about 3 to 6 months. It is within a depth of 10 to 40 inches below the water table to a depth of more than 40 inches during extended dry periods. FLUCFCS units occurring on this soil type include hydric melaleuca (4241), cypress (621), disturbed cypress (6219), disturbed wet prairie (6439), and borrow area (742). Because of ponding, this soil has severe limitations for urban and recreational uses. Areas of this soil provide excellent habitat for wading birds and other wetland wildlife.

42-Wabasso sand, limestone substratum
This is a nearly level, poorly drained soil of broad flatwoods. In most years, under natural conditions, the water table is within 10 inches of the surface for 1 to 3 months. It is 10 to 40 inches below the surface for 2 to 4 months. It is below the limestone during extended dry periods. FLUCFCS units occurring on this soil type include disturbed pine flatwoods (4119), hydric melaleuca (4241), and mixed wetland hardwoods (4381). This soil has severe limitations for urban development because of the high water table.

45-Copeland sandy loam, depressional
This is a nearly level, poorly drained soil in depressions. In most years, under natural conditions, the soil is ponded for about 3 to 6 months or more. The water table is within a depth of 10 to 40 inches below the surface for 4 to 6 months. FLUCFCS units occurring on this soil type include hydric melaleuca (4241) and disturbed cypress (6219). This soil has severe limitations for urban and recreation uses because of prolonged ponding.

49-Felda fine sand, depressional
This is a nearly level, poorly drained soil in depressions. In most years, under natural conditions, the soil is ponded for about 3 to 6 months or more. The water table is within a depth of 10 to 40 inches below the surface for 4 to 6 months. FLUCFCS units occurring on this soil type include hydric melaleuca (4241) and disturbed cypress (6219). This soil has severe limitations for urban and recreation uses because of prolonged ponding.

51-Floridana sand, depressional
This is a nearly level, very poorly drained soil in depressions. In most years, under natural conditions, the water table is above the surface for 3 to 6 months or more. It is 10 to 40 inches below the water table during extended dry periods. FLUCFCS units occurring on this soil type include freshwater marsh (641) and wet prairie (643). The soil has severe limitations for urban and recreation uses because of prolonged ponding.
69-Matlacha gravelly fine sand
This is a nearly level, somewhat poorly drained soil formed by filing and earthmoving operations (cleared area FLUCFCS code 746). The depth to the water table varies with the amount of fill material and the extent of artificial drainage. However, in most years, the water table is 24 to 36 inches below the surface of the fill material for 2 to 4 months. It is more than 60 inches below the surface during extended dry periods. Most of the natural vegetation has been removed. This soil has severe limitations for sanitary facilities and recreational uses and moderate limitations for most buildings site development. The high water table and sandy surface texture are the major limitations. Unstable surface material can severely limit shallow excavations, and the high water table severely limits use for dwellings with basements. In scattered areas where the fill material contains boulders or compacted material, the installation of underground utilities or functioning of septic tank absorption fields may be a problem.

73-Pineda fine sand, depressional
This is a nearly level, very poorly drained soil in depressions. In most years, under natural conditions, the soil is ponded for about 3 to 6 months or more. The water table is within a depth of 10 to 40 inches for 4 to 6 months. FLUCFCS units occurring on this soil type include Cypress (621), disturbed cypress (6219), hydric melaleuca (4241), freshwater marsh (641), fill area (744), and hydric cleared area (746). This soil has severe limitations for urban and recreation uses because of prolonged ponding and sandy texture.

74-Boca fine sand, slough
This is a nearly level, poorly drained soil in depression. In most years, under natural conditions, the water table is within 10 inches of the surface for 2 to 4 months. It is 10 to 40 inches below the surface from more than 4 months. During high rainfall, the soil is covered by a shallow layer of slowly moving water for periods of about 7 days to 1 month or more. FLUCFCS units occurring on this soil type include hydric melaleuca (4241), cypress (621), disturbed cypress (6219), disturbed fresh water marsh (6419), disturbed wet prairie (6439), borrow area (742), and cleared area (746). This soil has severe limitations for sanitary facilities and building site development, primarily because of the high water table.

Vegetation

The campus site was vegetated by a mosaic of vegetation communities composed of upland and wetland habitats. These communities represent both native habitats and areas significantly altered by past and current human activities. Protected plant species were found most commonly in native habitats, but also occur in areas that have undergone change and disturbance. Several areas, to some varied extent, were determined to have become infested with the problematic exotic tree Melaleuca (Melaleuca quinquenervia).

All major wetland and upland vegetation communities within the project site were mapped in the field during March and April, 1993, utilizing 1”=200’ scale unrectified aerial photography (March 1993). Extensive ground truthing and review of true color and false color infrared 1”=200’ scale aerial photograph (March 1, 1993) were utilized to confirm the location of boundaries between adjacent vegetative communities. The jurisdictional wetland vegetation communities onsite were flagged as the basis for binding jurisdictional determinations. These determinations were received, and the wetland boundaries surveyed. The results of these tasks are described in the permits for the site (USACOE Permit No. 199400807 and SFWMD Permit No. 36-02881S).

A total of 22 vegetative associations and/or land uses were delineated within the project site as identified in the SFWMD Permit. Sixteen are jurisdictional wetland areas, while the remaining six are upland.

- Palmetto Prairie, Disturbed- 21.3 acres or 2.8 percent of the site.
- Pine Flatwoods, Disturbed- 396.0 acres or 52 percent of the project site.
- Pine Flatwoods, Hydric, Disturbed 18.1 acres or 2.3 percent of the project site.
- Melaleuca- 2.9 acres or 0.3 percent of the project site.
- Melaleuca, Hydric- 72.1 acres or 9.4 percent of the project site.
- Melaleuca, Hydric, Cypress- 1.3 acres or 0.01 percent of the project site.
- Melaleuca, Hydric, Post-Burn- 10.8 acres or 1.4 percent of the project site.
- Melaleuca, Hydric, Pine-Cypress- 4.0 acres or 0.5 percent of the project site.
- Melaleuca, Hydric, Post-Scrape- 8.5 acres or 1.1 percent of the project site, located just south of a borrow lake north of the project site.
- Live Oak- 1.8 acres or 0.2 percent of the project site.
• Willow, Hydric- 0.5 acres or less than 0.1 percent of the project site
• Mixed Hardwoods, Hydric- 1.7 acres or 0.2 percent of the project site
• Drainage Canal – 3.1 acres or 0.4 percent of the project site
• Cypress, Disturbed- 123.0 acres or 16.1 percent of the project site.
• Freshwater Marsh- 18.7 acres or 2.4 percent of the project site.
• Freshwater Marsh, Disturbed- 10.6 acres or 1.3 percent of the project site.
• Wet Prairie- 6.4 acres or 0.8 percent of the project site, located between freshwater marsh (641) and disturbed pine flatwoods (4119).
• Wet Prairie, Disturbed- 28.0 acres or 3.6 percent of the project site.
• Borrow Areas- 0.8 acres or less than 0.1 percent of the project site, and consists mostly of open water.
• Fill Area- 0.5 acres or less than 0.1 percent of the project site, and consists of bare scraped earth and fill material both devoid of vegetation.
• Cleared Areas, Hydric- 12.7 acres or 1.6 percent of the project site.
• Berm- 0.4 acres or less than 0.1 percent of the project site.

The major upland community within the project site is disturbed pine Flatwoods (FLUCFCS Code 4119) and the major wetland community is disturbed cypress (FLUCFCS Code 6219).

**Threatened and Endangered Plant Species**

Twenty-nine species of protected plants were observed on the project site, and consist of 1 endangered, 22 threatened, 5 commercially exploited, 1 candidate for listing.

The most frequently encountered protected plants were dahoon holly (*Ilex cassine*), stiff-leaved wild-pine (*Tillandsia fasciculata*), golden polypody (*Phlebodium aureum*), shoestring fern (*Vittaria lineata*), southern shield fern (*Thelypteris kunthii*), and brake fern (*Pteris vittata*). The least common were branded wild-pine (*Tillandsia flexuosa*), cigar orchid (*Cyrtochilum punctatum*), pine lily (*Lilium catesbaei*), giant ladies’ tresses (*Spiranthes praeox*), and strap fern (*Camplypneuron pellitidu*), only one or two locations for each species were found.

Bromeliads (*Bromeliaceae*) orchids (*Orchideaceae*), and ferns and fern-allies (*Osmundaceae, Polypodiaceae, Psilotaceae, Pteridaceae, Schizaceae, Thlypteridaceae, and Vittariaeae*) were the best represented groups, yielding the most numbers of species overall.

While the majority of protected plants were found in wetland areas such as cypress dominated wetlands, pine lily and brake fern occurred only in upland habitats such as disturbed pine Flatwoods (FLUCFCS Code 4119) or disturbed palmetto prairie (FLUCFCS Code 3219). Brake fern and southern shield fern were often found in microhabitats such as the tops and sides of berms and mounds, which afford suitably drier conditions, even when located within wetland areas.

**Wildlife**

Detailed wildlife surveys were conducted during the weeks of March 15 March 22, July 13 and August 30, 1993. The pedestrian surveys consisted of two to three qualified ecologists walking a sufficient number of parallel overlapping belt transects through all suitable habitats to insure that 100 percent visual coverage of all ground and flora was observed. The ecologists were spaced between 25 feet and 100 feet apart depending on habitat visibility. Approximately 345 man hours were spent onsite conducting the surveys. Five protected wildlife species were observed during these surveys. Species observed during the surveys included two American alligators, one Eastern indigo snake, and a gopher tortoise population estimate of ±12 gopher tortoises (20 active gopher tortoise burrows).

Listed wading bird species (e.g., white ibis, snowy egret) were observed during the study, as well as a bald eagle and a potential snail kite perch. These species may possibly forage within wetlands on the campus site.

**13.2 Current Condition**

From the early planning stages of the University, the direction of the permitting and utilization of the University site has been towards the stewardship and conservation of all the aspects of the sensitive environment receptors of Southwest Florida. This University’s charge was, and is, to be the “Environmental University”. To that end and in
preparation for submittal of the initial conceptual permit for the property, plans were made in conjunction with the various regulatory permitting agencies to develop the University within the existing mosaic of uplands and wetlands on the property. Unavoidable impacts to isolated wetland were mitigated by enhancing and preserving connected wetland and upland systems throughout the campus. This mitigation includes the preservation of conservation areas within the FGCU campus. A majority of the existing wetlands systems were identified to be conserved and integrated into the University campus system. These wetlands were designated for preservation and enhancement via restoration of hydroperiods and removal of exotic vegetative species. This effort includes the restoration of two degraded major slough area. Upland preserve areas were also included into the overall restoration and enhancement effort to provide buffers to wetland preserves and wildlife habitat.

The phased development of the university has required that mitigation activities be completed in a phased manner consistent with construction activities on a basin by basin basis. The first phase of development involved construction within Basins 1 and 2 and involved approximately 29 acres of wetland impacts. Development within these basins involved the construction of a perimeter berm (on which the Loop Road was constructed); the development of the academic core buildings, and the construction of the main east/west entrance road. Mitigation activities for this phase of the development consisted of selective exotic vegetation removal from approximately 40 acres of historic pine flatwoods and disturbed wetlands. In addition, 19 acres of lakes and wetlands were created in areas of disturbed uplands and wetlands. The mitigation conducted in conjunction with this phase of development occurred within South Florida Water management District (SFWMD) Wetland numbers 4,5,6,8 and 0, as well as surrounding uplands.

The FGCU on-campus student housing development located within Basin 3 encompasses approximately 45 acres. Construction of the first and second phase of student housing and associated infrastructure impacted 13 acres of SFWMD jurisdictional wetlands. Mitigation for these impacts was accomplished via wetland creation (4 acres), upland preservation (21 acres), and wetland enhancement (39 acres).

The next phase of development consisted of the north entrance road. The north entrance road extends from Ben Hill Griffin PKWY on the west to the University Loop Road to the east. In addition an east/west service road was constructed in the lakefront mixed-use parcel. A total of approximately 9 acres of wetland impacts resulted from this phase of development. The mitigation conducted in associated with the construction of the north entrance road and east service road involved land located in the western slough (SFWMD Wetland number 8) and an upland area located adjacent to the slough. Total mitigation acreage was 45 acres, of which 39 acres consisted of wetland enhancement, and 6 acres of wetland creation.

Following construction of the north entrance road, development of the athletic and recreation fields within Basin 3 was initiated. Construction of the recreation fields and athletic facility area resulted in wetland impacts totaling 103 acres. In order to offset these impacts, 13 acres of wetlands were enhanced and/or preserved (SFWMD Wetland numbers 16, 18 and 22) and 13 acres of upland were preserved and enhanced. Three additional acres of wetlands and flow-ways were created in an area of disturbed pine flatwoods. The wetland and flow-way creation areas were part of the overall hydrological restoration planned for the eastern slough, and allow for a hydrologic connection between SFWMD Wetland numbers 15, 16, 18, 22 and 24.

The next phase of development involving wetland impacts was the completion of the Loop Road, an additional parking area, and associated sidewalks and water management. This phase totaled approximately 20 acres. Wetland impacts for this phase totaled approximately 4 acres. Mitigation for the wetland impacts included 26 acres of wetland enhancement (SFWMD Wetland numbers 8, 11, 13 and 14), 14 acres of upland enhancement and preservation, and <1 acre of wetland creation.

Development of the student housing in Basin 4, located in the southeast portion of the project, involved a crossing over the eastern slough (SFWMD Wetland number 24) a student housing facility and associated water management.
The project area for this phase totaled approximately 52 acres and involved 4 acres of wetland impacts. Mitigation for this phase included 87 acres of wetland enhancement (SFWMD Wetland numbers 24, 27 and 28) and 46 acres of upland preservation.

A 2-megawatt solar facility has been constructed on approximately 72 acres located near Ben Hill Griffin PKWY. Wetland impacts associated with the solar facility totaled less than 1 acre. The mitigation for this phase included approximately 12 acres of wetland enhancement (SFWMD Wetland numbers 1, 2 and 7) and 14 acres of upland preservation.

Since 2005, FGCU has received 22 permit modifications from the SFWMD. These permits include, but are not limited to, recreation areas, academic buildings, roadway improvements, solar facility, boardwalk, student union and student housing.

13.3 Projected Needs

FGCU was initially planned with a focus on distance learning and with 3,000 beds for onsite student housing. While distance learning through online classes is still part of FGCU’s program, there has been an increase in demand for traditional classroom participation by students. It is more beneficial to address this increase in demand by providing onsite facilities for the students to live in because this will reduce future congestion for offsite roads. The reduced congestion on offsite roads allows for safer travel and reduced energy consumption. This has lead to an increase in the number beds planned for FGCU from 3,000 to 5,671. The North Lake Village student housing complex will contain 1,984 beds at build out and the South Village student housing complex will contain 3,687 beds at build out. The increase in capacity for the South Village student housing complex has necessitated the need for a secondary access. The South Village is currently accessed via a single road that connects to the Campus Loop Road. The increase in onsite student housing has also increased the need for other facilities, including recreational facilities.

To address the increased demand for onsite student housing and recreational facilities, FGCU is currently planning a secondary access to the South Village through an adjacent property to Ben Hill Griffin PKWY. Any additional wetland impacts associated with this development will require permitting through the SFWMD and USACOE.
14.0 CAPITAL IMPROVEMENTS ELEMENT

14.1 Background

The 1995 Campus Master Plan identified the following as potential sources of funding for Capital Improvements at Florida Gulf Coast University:

- **Public Education Capital Outlay Funds (PECO)**
  PECO, the primary source of funding for university capital improvements is money received from a 2.5% tax on gross utility receipts. This fund is available for, and used by all levels of public education. To received funds, the Board of Governors submits an annual fixed capital outlay request, based on the three-year priority list of candidate projects compiled from the priority lists of all the state universities.

- **Capital Improvement/Building Fees**
  This source of funds, typically referred to as the Capital Improvements Trust Fund (CITF) is provided by fees that each state university collects. These fees, paid by each student include:
    - Matriculation Fee
    - Out-of-state fee (as applicable)
    - Academic operations fee
    - Capital improvement fee
    - Building fee

  The building and capital improvement fees collected from students are pledged to debt service on bonds, which provide the funds for capital improvements. The funds are in turn distributed to each University in proportion to their share of original contributions. CITF funds are normally appropriated on a 3-year basis.

- **Revenue Bonds**
  Revenue bonds can be used by universities to fund capital improvements projects provided the projects are approved by the State Legislature and the Board of Governors. These bonds are backed by revenue from auxiliary services and therefore used to fund improvements related to those ancillaries such as housing, bookstore, parking garage, etc.

- **Facilities Enhancement Challenge Grants**
  This is a program that encourages gifts from private sources for specific projects that the University can justify as instructional or research-related. The State provides matching funds from general revenue or lottery funds. While this program has been greatly beneficial over the past ten years, because to the fiscal problems the State has faced with the down turn of the economy no projects have received matching funds in several years.

- **Grants and Donation**
  Either the Board of Governors or individual universities may receive grants and donations from third party sources.

- **Auxiliary Enterprises**
  These funds are received by the University from the operation of self-supporting enterprises that support or provide goods and services to the campus community. Potential sources of auxiliary funds are:
    - Bookstore
    - Parking fees
    - Student Health fees
    - Food Service
    - Student Housing
    - Computer Services
    - Other
• General Revenue and Lottery Funds
  These are funds that must be appropriated by the Legislature for a specific project.

• Other Options
  Several other options that could be sources of funds for university capital improvements might be considered, but are dependent on the actions of local or federal governments. Federal grants for research and other activities, is one such source.

14.2 Current Condition

For 2010-2011, the Florida Legislature appropriated approximately $2.7 billion in general revenue, lottery funds, student fees and other trust funds to support the state’s 28 public community colleges and 11 universities, not including the Major Gift Matching Program. Florida currently subsidized the cost per credit hour for every student equally, regardless of financial need or their program of study. (Source: Office of Program Policy Analysis and Government Accountability, an office of the Florida Legislature, Report No. 04-54)

The Florida Board of Education is the chief implementing and coordinating body of public education in Florida. In addition, Florida public universities are overseen by boards of trustees at each institution, with statewide oversight being provided by the Florida Board of Governors.

FGCU is financially supported by the State of Florida. The majority of the funding for the University is derived from State appropriations, determined by the Governor and the Legislature through the Board of Governors. Once these funds are appropriated, it is the responsibility and duty of the University to allocate and maximize the use of those resources to meet the mission and goals of the institution.

14.2.1 Current University Funding Allocation Practices

A. Off-Campus Capital Improvements

  Potable water and sanitary sewer service are provided to and within the University campus by the Lee County Utilities.

B. Capital Improvement Costs

  The Appendix documents the cost estimates prepared for Capital Improvements on the University Campus over the next five years, as submitted to the Board of Governors of the State University System (SUS).

14.3 Projected Needs

For the 2010-11 funding cycle, the State University System requested an initial appropriation of $60,563,186 from the Legislature of behalf of FGCU and a total allocation of $73,219,583. For 2010-11, the SUS requested funding for the following FGCU strategic objectives:
15.0 ARCHITECTURAL DESIGN GUIDELINES ELEMENT

15.1 Background

When the first Master Plan for the University was prepared in 1993-94, there were no buildings on campus, and therefore no existing architectural character issues. Consequently the architectural guidelines were developed based on a review of the historic architectural precedents at other nationally recognized universities, campus architecture in the state of Florida, and historic and contemporary architecture in southwest Florida. Those guidelines called for the development of buildings which emphasized pitched roofs and covered outdoor connective breezeways, and creating shaded outdoor courtyards and walkways. Originally, all new construction required that buildings would be developed with a maximum of two floors. In 2004 it became evident that, with the campus experiencing rapid growth, the need for more office, classrooms and auxiliary spaces would require new construction projects to consider more than two floors. The first building to be built with more than two stories was Academic 5, completed in 2005. Housing however, completed its first three story facility in 1999 and is currently planning five to six story complexes at South Village Housing to accommodate the student housing needs.

15.2 Current Condition

Overall, the buildings of the campus have been designed in close conformance with the original guidelines. Most of the academic buildings incorporate the same metal roof and overhang design, and have been designed with outdoor covered walkways and exterior courtyards, as the guidelines intended. Combined, the campus has a substantial degree of architectural unity, which was one of the overall goals/objectives of the Master Plan guidelines.

One architectural aspect of the campus the original guidelines did not address was the ultimate need for additional variety and interest in the building’s design. Strategic architectural elements, such as towers or pavilions, have been designed, to strengthen the campus’ spatial organization and serve as “navigational” devices. The creation of the Student Center provided a distinctive tower element that visually organizes the northern end of the academic core. As the University has grown in the last five years, architectural unity and details have increased. Especially in the more recent projects where buildings were increased to multiple stories, giving the facades, colonnades and walkways a variety of appealing architectural appearance. Also the University has established a “node” building for the end of the Western portion of the academic core, Lutgert Hall.

Due to the increase in the student population over the last five years the design of the residential buildings have gone from a smaller apartment style archetype to a more traditional large scale dormitory archetype. The University has completed three, five story dormitory style buildings mainly for freshman. The dormitory archetype is lending itself to providing a more traditional design towards student living.

See DIA Figure 15-1 for a record of current campus building architectural styles.
16.0 LANDSCAPE DESIGN ELEMENT

16.1 Background

Because no man-made landscape existed on the site of the University campus at the time that the original 1995 Campus Master Plan was prepared, the landscape design guidelines element contained in the Goals, Objectives and Policies report simply described various concepts for the introduction of new plants on the campus, in addition to recommendations for retention of native vegetation, consisting of native upland and wetland plant communities, to the maximum possible extent. Now that the campus has existed for 15 years, some of the original plantings have matured around the spine of the Academic Core. This is the plant life that should be maintained through the majority of the campus. The spine has never been fully developed with a final landscape due to the space being allocated for construction water retention during the construction process.

This section described the current status and visual character of the campus.

16.2 Current Condition

Overview

Overall, the campus core was found to suffer from a shortage of significant tree canopy and memorable landscapes. Wherever landscapes have been created thus far, the choice of plant palette and design decisions make it unclear if the purpose is to reinforce or to mitigate the contrast between the natural and the manmade environments. This observation does not imply that the campus landscape should break from its contextual native environment. In fact, the Master Plan encourages the retention/incorporation of high-quality native plant material into the campus landscape. However, the design and plant palette might be enhanced to provide a more ‘mannered’ interpretation or vision of the native habitats, in compliance with the Master Plan goal of creating a distinctive institutional landscape treatment that provides an appropriate transition between the natural and the manmade.

Entry Corridor

Ben Hill Griffin Parkway
Although this roadway is outside the campus itself, it is a key component of the comprehensive campus experience as the first point of arrival into the university. This institution should take every opportunity to enhance the campus arrival/departure experience beyond its actual gateway.

Main Campus Gateway

One factor that undermines the campus’ sense of place is a weak sense of arrival and spatial sequencing, which is essential to a successful campus experience. While the signage at the intersection of Ben Hill Griffin II Parkway and FGCU Boulevard is of a scale and design appropriate to this significant campus entry, the informal appearance of the foundation plantings does little to frame the signage.

By comparison, the boulevard design of the entry drive is strong, appropriately contrasting form to the surrounding natural environment. This contrast could be reinforced through a more regimented streetscape planting design. The current loose groupings of trees and understory detract from the formal boulevard form and lessen the sense of arrival and sequence.

Loop Road Signage

The directional signage at the intersection of FGCU Boulevard and the campus loop road has too many buildings names on it to be legible at the speeds at which vehicles enter the campus. Better signage should be provided along FGCU Boulevard directing visitors left or right, and a large lighted campus map might be provided at the Information Booth.
Campus Core and Open Space
The campus core’s campus green intended by the Master Plan as the signature “central great space” that would establish the framework for development of subsequent campus open spaces- is poorly defined and still largely undeveloped, lacking pedestrian walkways and other amenities through the space. The surrounding architectural frame is undermined by the informal landscape treatment and limited plant palette employed in the areas located between the formal lawn and the buildings.

By contrast, the landscape treatment of the academic core garden corridor that leads to the “Lawn” is characterized by excessive plan variety and texture, while lacking a unifying landscape element and tree canopy shade. The absence of shade is evident throughout the campus on all the open space pedestrian walkways, due to inadequate number of spaces on canopy trees. Also, the quality of the pedestrian environment would benefit from an increase in the quality and number of amenities (benches, lighting, and shelters) located throughout the system.

Parking Lots
Since surface parking is a significant, highly visible campus land use, parking areas should be incorporated as an important component of the unified campus environment. In the current parking layouts, the limited quantity and size of parking island and lack of bay medians preclude the inclusion of canopy mass adequate to dedicated large expanses of asphalt, and result in an uninviting environment for drivers and their vehicles.

Boardwalks
The existing boardwalks on campus give a great sense of character to the campus landscape: they focus pedestrian activity, making those routes more lively and inviting, and they serve as a reminder that the campus sits in the midst of a sensitive ecological area. Future development of the southeast district of campus as a student life district should continue the use of boardwalks for access. The University should continue to promote boardwalks as a convenient way to reach portions of the campus remote from the academic core (such as Alico Arena), as well as fostering pedestrian flow from the western to the eastern ends of the academic core.

North Lake Village
The lakefront is a potentially a significant campus amenity. Access to the lakefront is currently limited and poorly marked. FGCU should improve the landscape edge of the lake to promote pedestrian circulation and informal recreational use.

South Lake Village
South Lake Village is still young in its development. The landscape that has been created is very young and not mature. However, the student experience should be considered once the first south quad is complete. Hard-scaping has been completed as each building is built, and a sense of unity has been created with each. The plant palette is very limited and immature.

West Lake Village
With the purchase of West Lake Village, the University will need to inventory the plant palette and start to integrate the standards into the existing landscape.
17.0 FACILITIES MAINTENANCE ELEMENT

17.1 Background

Now that the campus has experienced over a decade of use, the early phase buildings are experiencing quite a bit of wear and tear from consistent use by the students, faculty and staff. Within the timeframe of this master plan, the University should prepare to re-invest in these buildings. Doing so will grant the University the longevity of each building’s use during a low funding economy from the State.

17.2 Current Condition

Today, operation and maintenance of the University’s buildings and grounds is the responsibility of the Physical Plant section of the Administrative Services Division. The day-to-day mission of this section is to provide services to all campus buildings, grounds and equipment, and to provide the means to seek, contract, and work with outside contractors for areas or items that the university does not have the in-house resources to undertake at any given time. The staff of Physical Plant is comprised of HVAC and electrical operators, general maintenance, sign shop, and lock and key personnel. Physical Plant uses a computer-based maintenance management/work order system to track system functioning and routine/preventive maintenance tasks; place and process work orders, and perform inventory control.

In addition to maintenance of the buildings and landscaped grounds, the Physical Plant Department currently has responsibility for managing and monitoring extensive University areas (approximately 420 acres) devoted to restored, created, and preserved wetlands and upland areas, to ensure compliance with the U.S. Army Corps of Engineers, Department of Environmental Protection, and South Florida Water Management District permit requirements. The University has an active program of *Melaleuca* eradication using Department of Corrections’ inmates and physical and chemical methods. Master Plan policies dictate the use of “natural” or informal landscape designs and indigenous plant materials in order to minimize maintenance and achieve the University’s aesthetic vision and goals. The Athletic Department maintains the athletic and recreation fields on campus. All work on the wetlands and grounds is done through contractual services with consultants and qualified private firms.

The Physical Plant Department functions as the administrative arm for the Division of Administrative Services. Physical Plant personnel are also assigned to initiate contracts for off-campus property leases. However, the day-to-day administration functions for leased property are the responsibility of the entity utilizing the space.

Physical Plant is also the lead University unit in developing and implementing programs for the collection of recyclable materials and for reduction of solid waste, in compliance with 1995 Campus Master Plan’s policies that address FGCU’s commitment to environmentally sound practices. Physical plant provides marked collection containers in strategically placed locations throughout the campus for the deposit of recyclables.
18.0 COASTAL MANAGEMENT ELEMENT

18.1 Background

The Coastal Management Element was first developed for the 2000 Campus Master Plan, and has been implemented since.

18.2 Current Condition

Florida Gulf Coast University is located outside the Lee County coastal high hazard area and the Category 3 storm surge. The aspects of the Coastal Management Element related to the natural environment of the site are covered in the Conservation element of this report. The issue of disaster preparedness and hurricane evacuation is addressed within the Intergovernmental Coordination Element Inventory. As stated in that element, FGCU has entered into an agreement with Lee County to ensure coordination and development of emergency plans and programs. The Hurricane Shelter and Emergency Management Agreement with Lee County was executed in June of 1998. The agreement indicated that the inland location of the FGCU campus renders it both suitable and desirable for use as a place to shelter the public from hurricanes, and that the Campus Master Plan includes policies for coordination with Lee County to plan, design, and use University buildings as a shelter.

Through the agreement, FGCU is required to:
(a) Provide a parking space for an Emergency Medical Service vehicle on campus, as well as a “duty station” to be used for ministerial activities on a 24-hour a day basis during non-emergency periods.
(b) Permit Lee County EMS and Public Safety staff to use source designated paved parking as a disaster-response staging area during hurricanes and other natural disasters.
(c) Annually submit its Emergency Preparedness Plan to the County for integration with the County’s Emergency Management Plan.
(d) Identify, through the University’s Emergency Preparedness Plan, the extent to which buildings will be used to provide shelter for the general public.
(e) Meet with Lee County representatives, as new buildings are planned and designed, to discuss whether such building may be used to address public shelter and recovery needs.
(f) Shelter members of the public in campus shelters as long as there is space available in qualifying shelters.

The County, on the other hand, commits to:
(a) Suggest improvement to the design of new buildings that would augment the potential to use those buildings as shelter and recovery needs facilities.
(b) Identify and train shelter managers to operate designated shelters in the event of a qualifying emergency.
(c) Stock the shelters with food and supplies
(d) If feasible, contribute money and materials to defray the costs associated with construction of new facilities or retrofitting of existing facilities to shelter standards.

In March 2002, The Board of Lee County Commissioners approved an interlocal agreement with Florida Gulf Coast University to use the FGCU Alico Arena as a hurricane shelter. The county agreed to pay $947,296 to make the necessary upgrades during construction. The 110,000-square-foot, $13-million Alico Arena opened in October 2002. Alico Arena provides as additional 1,838 shelter spaces to house county residents when hurricanes threaten the area. In 2002, this represented a 5 percent reduction in the county’s hurricane shelter deficit of 38,000 spaces.

In 2002, the county had about 27,192 shelter spaces for a Category 3 hurricane. The largest shelter in Lee County is the Germain Arena with 6,500 spaces. Alico Arena is the second largest shelter in the county.
18.3 Project Needs

The agreement with Lee County requires that the design of future buildings be discussed with the County to determine whether such buildings may be suitable for use as public shelters. This will likely occur as other, larger and more appropriate types of facilities are planned and developed on the campus (Gymnasium, Auditoriums, etc.).

FGCU has prepared an Emergency Management Plan that outlines emergency preparedness procedures and operations. This plan has been submitted to Lee County for incorporation into the County’s Emergency Management Plan on an annual basis. The University’s Director of Environmental Health and Safety is responsible for coordinating the preparation and updating of the Emergency Management Plan. Hurricane preparedness policies have been prepared and disseminated to the University community by the office of Campus Police and Safety.