

14.0 CAPITAL IMPROVEMENTS ELEMENT

(1) DATA REQUIREMENTS

The following represents an effort to compile University and Board of Governors information relating to the data requirements for the Capital Improvements Element. The analyses requirements for this element are based upon planning and facility requirements derived from analysis of the other elements of the Master Plan and input received from Florida International University (FIU). This includes the identification of necessary or recommended capital improvements, projected operating costs and infrastructure requirements and impacts. Each of these areas cannot be addressed from a funding perspective by the Consultant, but should be evaluated each year hereafter to best facilitate the implementation of this plan by PECO/CITF monies and those made available by FIU. The data requirements are addressed below.

a) Facility Needs As Identified In The Other Elements And Support For Future Needs As Identified In The Future Land Use Element

Facility needs by building area requirements by space type are identified in Table 14.1a and Table 14.1b.

Table 14.1a: Future Space Needs by Space Type (Form B) 2008 - 2015
Modesto A. Maidique Campus

| Space Code | Space Category | Floods Standard* | Fall 2008 | | FTE | | Under Const ASF + CIP Plan ASF | | 2015 | | 2024 | | |
|-----------------------------|----------------------------------|------------------|--------------|---------------------------|-----------------------------------|-------------|--------------------------------|---------------------------|-------------|--------------------|---------------|--------------------|---------------|
| | | | Existing ASF | Guideline ASF/FTE | Surplus (Deficit) | Faculty FTE | Staff Admin + Prof | General Staff | Faculty FTE | Staff Admin + Prof | General Staff | Projected Enrg ASF | Guideline ASF |
| 110 | Classrooms + Service | 12.08 | 429,939 | 7.20 | 217,859 | 12.06 | 92,120 | 202,029 | 259,254 | 282,261 | 344,635 | (42,607) | |
| 210 | Teaching Labs + Service | 13.77 | 162,194 | 8.59 | 248,383 | 13.77 | 59,310 | 221,554 | 285,314 | (63,760) | 415,949 | (194,145) | |
| 220 | Open Labs | | 77,590 | 4.32 | 126,266 | 7.00 | | 77,590 | 145,040 | (67,062) | 211,256 | (83,316) | |
| 250 | UP Research Labs + Service | 8% | 159,125 | 8.07 | 150,354 | 8.83 | 46,528 | 205,654 | 184,242 | 21,412 | 268,405 | (82,732) | |
| 250 | EC Research Labs + Service | 10% | 68,128 | 3.78 | 17,822 | 0.59 | 0 | 68,128 | 20,471 | 47,657 | 29,823 | 38,355 | |
| 300 | Offices / Computer | 35.88 | 498,938 | 27.86 | 665,241 | 35.88 | 219,243 | 718,201 | 784,153 | (65,952) | 1,113,327 | (395,028) | |
| 400 | Study / Library | 17.54 | 183,538 | 10.20 | 316,387 | 17.54 | 85,630 | 269,678 | 363,429 | (93,751) | 529,447 | (259,765) | |
| 520 | Teaching Gymnasium | 5.77 | 109,139 | 6.05 | 104,979 | 5.77 | 0 | 109,139 | 119,554 | (10,415) | 174,168 | (65,029) | |
| 530 | Media Production | 1.13 | 9,375 | 0.55 | 25,383 | 1.13 | 3,350 | 13,325 | 23,414 | (10,089) | 34,109 | (20,784) | |
| 540 | Clinic | | 0 | 0 | 7,215 | 0.40 | | 0 | 8,288 | (8,288) | 0 | 12,074 | (12,074) |
| 550 | Demonstration | 4.033 | 0.22 | 1,864 | 0.10 | 2,229 | | 4,033 | 2,072 | 1,961 | 0 | 1,014 | 1,014 |
| 560 | Field Buildings | | 0 | 0.00 | 0 | 0.00 | | 0 | 0 | 0 | 0 | 0 | 0 |
| 570 | Animal Quarters | 1.294 | 0.07 | 11,000 | 0.61 | (9,706) | | 1,294 | 12,656 | (11,362) | 18,408 | (17,114) | |
| 580 | Greenhouses | 3.486 | 0.19 | 9,919 | 0.50 | (3,553) | | 3,486 | 19,260 | (6,854) | 15,063 | (11,627) | |
| 590 | Other | 6.639 | 0.37 | 6,639 | 0.37 | 0 | | 6,639 | 7,626 | (987) | 11,110 | (4,471) | |
| 610 | Assembly | 3.00 | 67,399 | 3.74 | 54,114 | 3.00 | 18,699 | 86,088 | 62,160 | 23,928 | 90,555 | (4,467) | |
| 620 | Exhibition | (610/620) | | Included Above in Cat 610 | | | | Included Above in Cat 610 | | | | | |
| 630 | Food Service | | 45,405 | 2.52 | 124,820 | 6.52 | (79,415) | 45,405 | 143,379 | (97,974) | 206,877 | (63,472) | |
| 640 | Day Care | | 0 | 0 | 0.00 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| 650 | Student Lounge | | 19,259 | 1.07 | 36,076 | 2.00 | (15,777) | 19,259 | 41,440 | (22,141) | 60,370 | (41,071) | |
| 660 | Merchandising | | 38,402 | 2.13 | 54,114 | 3.00 | (15,712) | 38,402 | 62,160 | (23,758) | 90,555 | (62,153) | |
| 670 | Recreation | | 35,048 | 2.00 | 35,076 | 2.00 | (28) | 35,048 | 41,440 | (6,392) | 60,370 | (24,322) | |
| 680 | Meeting Room (other than 681) | 6.60 | 25,263 | 1.40 | 16,823 | 0.60 | 14,440 | 27,263 | 12,432 | 14,831 | 18,111 | 9,152 | |
| 690 | Student Academic Meeting Room | 850 | | Included Above in Cat 680 | | | | Included Above in Cat 680 | | | | | |
| 710 | Central Computer / Telecomm | 7.08 | 73,560 | 4.08 | 127,769 | 7.08 | (54,149) | 73,560 | 146,659 | (73,139) | 213,714 | (48,151) | |
| 720 | Shop / Central Service | | | Included Cals 710-750 | | | | | | | | | |
| 730 | Central Storage | | | Included Cals 710-751 | | | | | | | | | |
| 740 | Vehicle Storage (ramps not incl) | | | Included Cals 710-752 | | | | | | | | | |
| 750 | Central Service | | | Included Cals 710-753 | | | | | | | | | |
| 760 | Hazardous Materials | | | Included Cals 710-754 | | | | | | | | | |
| 800 | Health Care | | 5,730 | 0.32 | 6,811 | 0.38 | (1,081) | 5,730 | 7,824 | (2,094) | 11,369 | (5,666) | |
| TOTAL ACADEMIC SPACE | | | 1,725,935 | 95.68 | 2,363,075 | 131.01 | 637,149 | 2,262,865 | 2,714,430 | (461,565) | 3,564,412 | (1,791,547) | |
| | | | | | | | Increase | | 851,355 | | 1,298,962 | | |
| | | | | | | | Assumed annual growth rate | | | | | | |
| | | | | | | | Accumulated Rate | | | | | | |
| 900 | Housing UP | | 2,709 | 20% | 3,688 | | 416 | 3,125 | 4,144 | (1,019) | 6,037 | (2,912) | |
| | | | Enrg ASF | Target % | Target Enrg | Enrg ASF | Enrg ASF | Enrg ASF | Target Enrg | Surplus (Deficit) | Enrg ASF | Surplus (Deficit) | |
| | | | 530,939 | 15% | 780% | 280 | | | | | | | |
| Plg | Parking | | Enrg ASF | Target | Target Enrg | Enrg ASF | Enrg ASF | Enrg ASF | Target Enrg | Surplus (Deficit) | Enrg ASF | Surplus (Deficit) | |
| | | | 10,596 | 17,455 | 14,586 | 19,813 | 14,586 | 14,586 | 19,813 | (4,618) | 25,151 | (14,155) | |
| | | | 0.609 | 0.642 | 0.609 | 0.642 | 0.609 | 0.609 | 0.642 | | | | |
| | | | 0.348 | 0.461 | 0.348 | 0.461 | 0.348 | 0.348 | 0.461 | | | | |
| | | | | | Less Stalls Removed for New Bldgs | | | | | | | | |
| | | | | | Net Stalls | | | | | | | | |
| | | | | | 14,586 | 14,586 | 14,586 | 14,586 | 14,586 | | | | |

Table 14.1b: Future Space Needs by Space Type (Form B) 2008 - 2015
Biscayne Bay Campus

| Space Code | Space Category | Florida Standard | F/F 2008 | | Under Const ASF + CIP Plan ASF | | 2015 | | 2014 | | |
|--|----------------------------------|------------------|----------------|---------------|--------------------------------|---------------|---------------|---------------------------|-------------------|----------------|--------|
| | | | Existing ASF | FTE | ASF/FTE | Gubline ASF | FTE | HC | Projected Eng ASF | Gubline ASF | FTE |
| 145 | Classrooms + Service | 11.84 | 43,940 | 14.80 | 35,177 | 11.84 | 7,915 | 51,893 | 58,865 | 4,972 | 12,459 |
| 210 | Teaching Labs + Service | 9.73 | 45,713 | 16.73 | 23,908 | 9.73 | 23,805 | 50,713 | 42,375 | 2,338 | |
| 220 | Open Labs | | 22,548 | 20,797 | 7.00 | 1,751 | 22,548 | 23,889 | 1,341 | | |
| 250 | Research Labs + Service | 13.08 | 16,108 | 5.42 | 38,861 | 13.06 | 22,753 | 24,108 | 44,639 | 20,531 | |
| 300 | Offices / Computer | 29.08 | 81,355 | 27.40 | 65,397 | 29.06 | 15,602 | 95,165 | 99,243 | 4,078 | |
| 400 | Study / Library | 95.51 | 31,174 | 10.49 | 49,851 | 16.51 | 17,877 | 38,174 | 62,083 | 23,909 | |
| 500 | Teaching Gymnasium | 0.00 | 8,779 | 2.95 | 8,779 | 2.95 | 0 | 8,779 | 10,864 | 2,085 | |
| 530 | Instructional Media | 0.50 | 1,329 | 0.51 | 1,485 | 0.50 | 44 | 2,329 | 1,796 | 533 | |
| 540 | Clinic | | 0 | 0.00 | 1,188 | 0.40 | 1,188 | 0 | 1,365 | 1,969 | |
| 550 | Demonstration | | 0 | 0.00 | 257 | 0.10 | 257 | 0 | 341 | 84 | |
| 560 | Field Buildings | | 0 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 570 | Animal Quarries | | 0 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 580 | Greenhouses | | 49 | 0.02 | 1,465 | 0.50 | 11,437 | 49 | 1,706 | 1,657 | |
| 590 | Other | | 0 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 610 | Assembly | 3.00 | 16,279 | 5.48 | 8,913 | 3.00 | 7,366 | 16,279 | 10,238 | 6,041 | |
| 620 | Exhibition | | | | | | | Included Above in Cat 610 | | | |
| 630 | Food Service | | 23,437 | 7.69 | 24,977 | 8.41 | 1,540 | 23,437 | 26,691 | 3,254 | |
| 640 | Day Care | | 0 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 650 | Student Lounge | | 1,400 | 0.47 | 8,913 | 3.00 | 7,513 | 1,400 | 10,238 | 8,838 | |
| 660 | Merchandising | | 6,813 | 2.29 | 7,428 | 2.50 | 615 | 6,813 | 8,532 | 1,719 | |
| 670 | Recreation | | 1,371 | 0.65 | 4,467 | 1.50 | 2,485 | 1,371 | 5,115 | 3,744 | |
| 680 | Meeting Room (other than 680) | 0.60 | 1,499 | 0.50 | 1,783 | 0.60 | 284 | 1,499 | 2,046 | 1,451 | |
| 690 | Student Academic Meeting Room | | | | | | | Included Above in Cat 680 | | | |
| 710 | Shop / Central Service | | 24,220 | 8.15 | 21,855 | 7.08 | 2,365 | 24,220 | 24,152 | 668 | |
| 730 | Central Storage | | | | | | | Includes Cals 710-750 | | | |
| 740 | Vehicle Storage (ramps not incl) | | | | | | | Includes Cals 710-751 | | | |
| 750 | Central Service | 7.08 | | | | | | Includes Cals 710-752 | | | |
| 760 | Hazardous Materials | | | | | | | Includes Cals 710-753 | | | |
| 800 | Health Care | | 1,111 | 0.37 | 2,251 | 0.77 | 1,140 | 1,111 | 2,632 | 1,521 | |
| TOTAL ACADEMIC SPACE | | | 331,121 | 111.45 | 353,222 | 118.55 | 22,107 | 376,321 | 494,592 | 118,271 | |
| 900 Housing | | | 300 | 20% | 584 | 29.4 | (29.4) | 0 | 683 | (683) | |
| 910 Parking | | | 80,161 | 267 | 70% | 382 | 0 | 0 | 1,187 | 1,187 | |
| 920 Net Stalls | | | 2,229 | 2,780 | 125% | 651 | 0 | 2,229 | 3,744 | 1,515 | |
| 930 Less Stalls Removed for New Bldgs | | | 0.298 | 0.815 | 273% | 0.517 | 0 | 0.260 | 0.436 | 0.176 | |
| 940 Net Stalls | | | 2,229 | 2,780 | 125% | 651 | 0 | 2,229 | 3,744 | 1,515 | |
| 950 Assumed annual growth rate | | | | | | | | | 7 | 2.00% | |
| 960 Accumulated Rate | | | | | | | | | 15 | 144.87% | |

b) Inventory Of Existing And Anticipated Revenue Sources And Funding Mechanisms Available For Capital Improvement Financing

Florida International University currently relies on the following existing revenue sources and funding mechanisms for capital improvements:

- Direct service Organization Financing:
 - *Public Education Capital Outlay (PECO)
 - *Capital Improvement Trust Fund (CITF)
- Auxiliary Enterprises:
 - *Revenue Bonds (housing, parking, etc.)
 - *Parking Decal Fees
 - *Student Health Fees
 - *Bookstore
 - *English Language Institute
 - *Food Service
 - *Other
- Foundation Loans(Direct Service Organization financing- DSOF)
- Contracts and Grants for Sponsored Research

In addition to these existing sources, FIU currently has no other anticipated sources of revenue funding for future facilities proposed by this Master Plan.

c) Inventory Of Operations And Maintenance Costs For Existing Facilities

Operating and maintenance (O&M) costs typically originate from three categories:—Below is an itemized list of each category along with the costs for each category for fiscal year 2004-2005

- Preventive Maintenance Costs \$ 9,855,971
- Differed Maintenance Costs \$15,117,000
- General Maintenance Costs \$39,423,084

(2) ANALYSIS REQUIREMENTS

a) Current University Practices That Guide The Timing And Location Of Construction, Extensions Or Increases In The Capacity Of University Facilities

Timing and location of new construction on campus is guided by previous master planning documents to determine location and the annual update of the legislative budget request for the capital improvement plan which determines funding. Additionally, a three year Capital Improvement Fee list is prepared every third year for student services projects while auxiliary facilities projects and facilities projects using other fund sources are generally planned on an "as needed" basis or as an appropriate opportunity arises. Minor projects are funded annually for the specific purpose of renovations, repairs, maintenance and site improvements. Specific policy decisions regarding use of space, including existing and new facilities are channeled for approval through the University Space Committee as an advisory committee to the University President.

A budget estimate is pre-approved and updated annually for the purpose of assessing anticipated project costs including planning fees, construction, surveys, testing services, contingencies, furnishings and equipment.

b) Cost Estimate Of Each On-Campus Capital Improvements Identified In The Other Plan Elements, Including Consideration Of Inflation Factors And The Relative Priority Of Need Ranking

Capital improvement costs for 2005 through 2015 are depicted in Table 14.2.

Table 14.2 Capital Improvement Plan 2005-2011

| <i>Bldg No. Building Name</i> | <i>ASF</i> | <i>GSF</i> | <i>Project Cost</i> |
|--|------------|------------|---------------------|
| Under Construction (not in use yet, but not in Exstg Inventory) | | | |
| Univ Park | | | |
| 1 College of Nursing & Health Sciences (Molecular Biology) / Health Sciences Laboratory Clinic | 62,192 | 103,653 | \$0 |
| <i>Total Under Construction</i> | | | |
| | 62,192 | 103,653 | \$0 |

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| <i>Bldg No. Building Name</i> | <i>ASF</i> | <i>GSF</i> | <i>Project Cost</i> |
|---|------------|------------|---------------------|
| Univ Park | | | |
| 2 Student Academic Support Center | 50,000 | 80,000 | \$30,887,426 |
| 4 Public Safety Bldg Supplement | 2,500 | 4,000 | \$2,066,679 |
| 5 Social Sciences / Phase I Completion | na | na | \$28,449,971 |
| 6 Satellite Chiller Plant Expansion | 7,500 | 12,000 | \$7,000,000 |
| 10 Humanities Center (Arts + Sciences) | 48,500 | 77,600 | \$33,814,021 |
| 11 Graduate School of Business / Phase II | 55,820 | 89,312 | \$40,033,112 |
| 12 Science Laboratory Complex | 79,500 | 127,200 | \$61,168,234 |
| 14 Const Mgmt + Engineering Expansion | 17,400 | 27,840 | \$14,233,194 |
| 15 Training Complex (Human Resources) | 25,270 | 40,432 | \$17,998,308 |
| 16 Honors College | 24,780 | 39,648 | \$20,162,055 |
| 17 Science Science / Phase II | 35,678 | 57,085 | \$28,646,751 |
| 18 College of Law BR-832 | 98,415 | 153,768 | \$38,962,981 |
| 19 IHRC- Wall of Wind Testing Facility | 1,651 | 1,981 | \$1,480,726 |
| 20 College of Nursing + Health Sciences (Molecular Biology) Health Sciences Laboratory Clinic | — | — | \$39,931,185 |
| 22 Engineering Center / Lab Remodeling and Expansion | 260 | 312 | \$180,000 |
| 24 Graduate School of Business / Phase 1 | 54,705 | 87,528 | \$32,270,346 |
| 25 Patricia and Phillip Frost Art Museum UP BR-839 | 30,839 | 48,874 | \$18,180,751 |
| <i>Total CIP Plan Projects UP Campus</i> | | | |
| | 530,818 | 847,580 | \$415,465,740 |

| <i>Bldg No. Building Name</i> | <i>ASF</i> | <i>GSF</i> | <i>Project Cost</i> |
|--|------------|------------|---------------------|
| Biscayne Bay | | | |
| 13 Classroom / Office (Academic IV) | 39,600 | 54,000 | \$33,272,408 |
| 21 Hospitality Management / Carnival Student Center | 1,700 | 2,550 | \$1,000,000 |
| 23 Hospitality Management / Beverage Management Center | 3,500 | 5,600 | \$2,100,000 |
| <i>Total CIP Plan Projects BB Campus</i> | | | |
| | 44,800 | 62,150 | \$36,372,408 |

| | | | |
|--------------------|---------|-----------|---------------|
| GRAND TOTAL | 637,810 | 1,013,383 | \$451,838,148 |
|--------------------|---------|-----------|---------------|

c) Cost Estimate Of Future Capital Improvements That May Be Required Functions Of The University

Off-campus capital improvements necessary to support the future traffic and utility functions of the University are limited. The provisions for utilities are somewhat minimal within the ten (10)-year planning period but may change with the new level-of-service standards that have been adopted. However, a transportation improvement program should become a reality within the next ten (10) years.

b) Basis Of The Cost Estimates

Cost estimates are based on the Board of Governors cost data provided each year with instructions for preparation of the 5-year capital improvement plan. This data is compiled by the Board of Governors. Projects selected for the database are classified by space type and averaged with ENR indexed adjustments for inflation and differences in the geographic locations of the University campuses throughout the state. Special facility type (e.g., athletic, recreational, greenhouse, infrastructure, etc.) are estimated based on contractor estimates, comparable projects of similar nature, or standard database publications such as "R.S. Means," "Dodge Reports," or other widely accepted available data sources.

e) Assessment Of The University's Ability To Finance Capital Improvements Including:

1. Forecasting of revenue and expenditures for the planning period.
 - a. 3-year committed
 - b. 10-year projected

Please refer to Table 14.2.

2. Projection of operating costs for existing and future facilities.

The analysis found in Element 5.0 Academic Facilities and Element 6.0 Support Facilities indicates the need for 4,381,977 GSF of space to accommodate the projected enrollment for 2015. This in turn will generate new operating costs that must be planned for the future, as shown in Table 14.3.

TABLE 14-3: Projected Operating Costs

| Projected Operating Costs | 2004-2005 | 2010-2011 | 2014-2015 |
|----------------------------------|------------------|------------------|------------------|
| Preventive Maintenance Costs | \$9,855,971 | \$22,569,520 | \$29,657,486 |
| Deferred Maintenance Costs | \$15,117,000 | \$34,616,928 | \$45,488,386 |
| General Maintenance | \$39,423,084 | \$90,276,248 | \$118,627,537 |

| | | | |
|-------|--------------|---------------|---------------|
| Costs | | | |
| Total | \$64,396,055 | \$147,462,696 | \$193,773,410 |

Source: Facilities Management
Based on cost per GSF. Includes existing and planned GSF for 2015.

3. Projections of other tax bases and revenue sources, such as impact and user fees.

Capital improvements funding for the University currently comes from various revenue sources of which, Public Education Capital Outlay (PECO) is the greatest contributing sources. Florida International University currently relies on other revenue sources and funding mechanisms for capital improvements including the following Auxiliary Enterprises:

- Revenue Bonds (housing, parking, etc.),
- Parking Decal Fees,
- Student Health Fees,
- Bookstore,
- English Language Institute,
- Food Service,
- Other Auxiliaries,
- Foundation Loans(Direct Service Organization financing- DSOF)
- Contracts and grants for Sponsored Research.

In addition to these existing sources, FIU currently has no other anticipated sources of revenue funding for future facilities proposed by this Master Plan.

f) Comparisons between the host community's and the University's cost estimates for future improvements generated by University infrastructure impacts

All infrastructure impacts generated by the University are contained within University lands. Host community infrastructure capacities are adequate to serve future infrastructure needs of the University. All costs of infrastructure impacts contained on University lands are the responsibility of the University and the Florida Board of Education, Division of Colleges and Universities State University System. Infrastructure costs of special "shared-use" facilities may be assessed on a prorated basis.