Board of Governors Facilities Workshop 2017

ENGINEERING BUILDING – Phase I & II

FIU

2018-19 LBR: $53 M

ENGINEERING BUILDING
Phase I & II

Prior Funding	$10 M
Future Request	
2019-20 Request	$42 M
Other – (Private)	$45 M
Total Project Budget	$150 M
Projected Annual PO&M Costs	$4.9 M

Phase I Completion - June 2021

Phase II Completion – June 2022

*FIU Project Priority #2

ENGINEERING BUILDING
Phase I & II

Project Size:

Net Square Footage	171,500
Gross Square Footage	274,400

Educational Plant Survey Approved by the Board of Governors: 1/20/2016**

*Utility/Infrastructure is the #1 Priority System-wide.
**Supplemental survey needed for NASF adjustment.

FIU

Return on Investment (ROI)

- **Money Generated**
  The addition of 109 full-time faculty along with current tenured/tenure-earning engineering faculty are expected to increase annual research expenditures to $48 million, an increase of $30 million annually.

- **Graduation Statistics**
  4-yr and 6-yr graduation rates are increasing, with the 4-yr graduation rate nearly doubling from 9% for the 2007 cohort to 15% for the 2013 cohort. With the new facilities and the new pedagogical approaches, including experiential and interactive learning, it is expected that the 4-yr graduation rate will surpass 40% by 2025.

- **Jobs Created (Anticipated)**
  Based on national data, each additional million dollars in research expenditures generate 18.2 jobs. Thus, the proposed building investment will create 550 high salary jobs in South Florida. Further, the projected increase in research expenditures will generate 27 additional patent applications annually and one new company based on university intellectual property every other year.

- **Academic Areas Impacted**
  Biomedical Engineering, Electrical and Computer Engineering, Environmental Engineering, and Mechanical and Materials Engineering, Civil Engineering and Construction Management will occupy the new building. Notably, Engineering has growing collaborations with the Colleges of Medicine, Nursing and Health Sciences, Public Health and Social Work, Arts and Sciences, The College of Business, and School of International and Public Affairs.

- **Correction of Existing Problem**
  Programs such as “Accelerated Bridge Construction University TransSelf-Powered Systems of Integrated Sensors and Technologies (ASSIST),” “Wall of Wind Facility,” “Applied Research Center,’ and the new NSF Engineering Research Centers on “Nanosystems for Cellular Metamaterials (CELL-MET),” and Precise Advanced Technologies and Health Systems for Underserved Populations (PATHS-UP),” and others at the existing Engineering Center will grow in the space freed up by the relocation of some research and education to the new building.

Board of Governors Facilities Workshop 2017

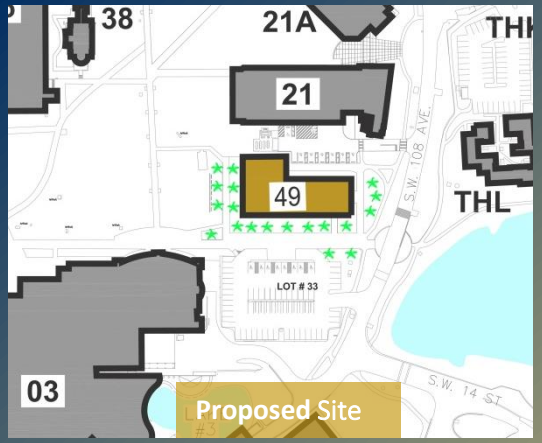
SCIENCE LABORATORY COMPLEX

FIU

2018-19 LBR: $15 M

SCIENCE LABORATORY COMPLEX

Prior Funding	$0 M
Future Request	
2019-20 Request	$20 M
2020-21 Request	$42 M
Total Project Budget	$77 M
Projected Annual PO&M Costs	$2.3 M



Completion – June 2022

*FIU Project Priority #3

SCIENCE LABORATORY COMPLEX

Project Size:

Net Square Footage	79,500
Gross Square Footage	127,200

Educational Plant Survey Approved by the Board of Governors: 1/20/2016

*Utility/Infrastructure is the #1 Priority System-wide

FIU

Return on Investment (ROI)

Money Generated

- The addition of 26 full-time STEM faculty are expected to generate $7 million annually in additional research funding.

- **Graduation Statistics**
  STEM majors have shown improved second-year retention from 82.2% in 2011 to 88.1% in 2015. Similarly 4-yr graduation rates have increased from 17.0% for the 2010 cohort to 25.3% for the 2013 cohort (6-yr graduation increased from 45.5% for the 2007 cohort to 52.0 for the 2011 cohort). With these new facilities and the new pedagogical approaches these facilities allow, it is expected that the 4-yr graduation rate will surpass 40% by 2025.

- **Jobs Created (Anticipated)**
  Based on national data, each additional million dollars in research expenditures generates 18.2 jobs thus creating 127 high quality jobs in South Florida. Projected increase in research expenditures will generate 6 additional patent applications per year and result in the establishment of one new company based on university intellectual property every eight years.

- **Academic Areas Impacted**
  STEM fields are undergoing a radical pedagogical change in the way students interact in the classroom and in particular in the laboratory. The new design incorporates active learning and inverts the teaching sequence from acquiring information during a lecture to acquiring the information online prior to the lecture and using the face-to-face time with the instructor and classmates to applying that information to structured problems thereby turning information into knowledge and preparing the student for the collaborative problem solving.

- **Correction of Existing Problem**
  Approximately 700 STEM majors will be taking classes in the new building and approximately 26 faculty will have their offices and research labs in the building. Given the current space needs as defined in the Net Assignable Square Feet Eligible for Fixed Capital Outlay Budgeting (Form B), all aspects of the building will be 100% utilized.