

**BOARD OF REGENTS**  
EASTERN MICHIGAN UNIVERSITY

SECTION: 19
DATE: October 25, 2019

**RECOMMENDATION**  
**FISCAL YEAR 2021 STATE CAPITAL OUTLAY PLAN**

**ACTION REQUESTED**

It is recommended that the Board of Regents approve the University's Capital Outlay Plan and delegate authority to the President to submit the renovation of Roosevelt Hall as Phase II of the College of Engineering & Technology Growth and Expansion as the University's top project request for state cost participation for Fiscal Year 2021.

**STAFF SUMMARY**

The State Budget Office issued its Fiscal Year 2021 Capital Outlay Budget memorandum to University Presidents on August 30, 2019. The Management and Budget Act, Public Act 431 of 1984, as amended, requires universities to present a Five-Year Capital Outlay Plan no later than November 1 of each year. Universities may also elect to submit a capital outlay project request for state cost participation.

Roosevelt Hall is currently utilized by the College of Engineering & Technology for its non-engineering programs including: Computer Science, Information Assurance, Simulation/Animation/Gaming, Construction Management, Military Science, and Textile Sciences programs. Roosevelt Hall is a strategic piece of the overall vision of the College of Engineering & Technology, providing classroom and office space supporting the College's programs. The project would include the renovation of approximately 75,500 sq. ft. The project also provides space for student advising centers, collaboration and maker's spaces, and faculty offices.

The Renovation would address approximately \$11.0 million in deferred maintenance and asset preservation needs which include:

- Obsolete or failing building systems including – mechanical, plumbing, electrical;
- Replacement of roof;
- Installation of new fire suppression systems;
- Outdated room layouts, orientations and sizing;
- Energy inefficient windows and other internal building envelope systems;
- Inadequate handicap (ADA) accessibility;
- Interior finishes

To comply with the statutory requirements, Eastern Michigan University will post its Five-Year Capital Outlay Plan on the institution's internet site by October 31, 2019.

**FISCAL IMPLICATIONS**

The approved cost to complete Phase II of the College of Engineering & Technology at Roosevelt Hall is \$42.5 million. At a funding mix of 75% State (capped at \$30.0 million) / 25% Eastern, the University's cost share would be \$12.5 million.

**ADMINISTRATIVE RECOMMENDATION**

The proposed Board action has been reviewed and is recommended for Board approval.



University Executive Officer

*OCTOBER 25, 2019*

Date



## **IMPLEMENTATION PLAN**

**College of Engineering and Technology**

**Engineering and Technology Complex**

**Phase II: Advanced Technology Center and Roosevelt Hall**

**Eastern Michigan University**

**Building Maintenance Projects > \$1 Million**

## **COLLEGE of ENGINEERING and TECHNOLOGY**

<i>Is the Project a renovation or new construction?</i>	Ren (X)	New (X)
<i>Is there a 5-Year Master Plan available?</i>	Yes (X)	No ( )
<i>Are professionally-developed Program Statements and/or Schematic Plans available now?</i>	Yes (X)	No ( )
<i>Are Match Resources currently available?</i>	Yes (X)	No ( )
<i>Has the University identified available Operating Funds</i>	Yes (X)	No ( )

### **Executive Summary**

EMU is pleased to submit our State Capital Outlay Request for FY 2021. While the renovation and expansion of Sill Hall is underway and scheduled for completion Fall 2020, it is only the first phase of the overall effort to meet the demands of modern engineering and technology programs. Phase II of this effort will renovate, expand and repurpose Roosevelt Hall for immediate and expanding program needs of numerous advanced technology programs.

The need for these programs is growing at a rapid pace, with the impact of the shortfall of students impacting companies and industries across the state. Nearly 90% of EMU's students come from Michigan, and approximately 72% of our graduates remain in Michigan after graduation. These new high-demand technology-focused programs will therefore prepare Michigan residents for high-demand, high-wage engineering and technology careers to continue growing Michigan's economy.

### **Introduction**

Michigan has seen considerable transformation in both demographics as well as business and industrial needs. Certain disciplines in technology are no longer attracting enough students to remain sustainable while businesses and industries are coping with a deficiency of qualified engineers. Furthermore, many high school graduates are demanding more career-driven disciplines that can assure reasonable career success. With the ever-changing and increasing world of technology, there is a vastly increasing need for educated and qualified engineers and technologists in Michigan and throughout the country. To respond to these realities, and to enhance the investments made and committed in EMU's laboratories, classrooms and faculty, the EMU College of Engineering and Technology is committed to improving and expanding its engineering and technology program offerings to meet the current and future needs of Michigan's economy.

### **College of Engineering and Technology Master Plan**

Through planning and benchmarking, the College has reviewed current and planned programs to develop a Master Plan to support short and long-term CET goals. With rapid growth in our existing advanced technology programs such as Cybersecurity, Information Assurance, Embedded Technology, Drone and Aviation Studies as well as expansions and additions to engineering programs such as Mechanical,

Electrical and Computer, Civil Engineering, the College projects a 65% growth in enrollment in the next 10-15 years.

In comparing the current College of Engineering and Technology facilities to peer institutions, the College is undersized by about 25% of available gross square footage per student with an average of 74 gsf/student. EMU has developed a plan to “right-size” the College for the current student population, and renovate, reprogram and provide new spaces to meet the needs of new programs and advanced technology. The plan provides two phases to meet the demands of new and expanded engineering programs, and to adapt and respond to the tremendous growth and high-tech systems needs of our advanced technology programs.

The initial phases of the Master Plan to meet the current and future needs of the College of Engineering and Technology involves renovations and additions to Sill Hall to right size for current offerings, and renovations and renovations, expansion and adaptive reuse of Roosevelt Hall to create room for current and future growth.

### **Engineering and Technology Complex – Phase I**

#### **Sill Hall Renovation and Additions**

(Local Capital Funded – FY 2018)

The modernization of Sill Hall was identified as the first priority to right size facilities for the current engineering and technology programs, and new programs added in Engineering. To that end, EMU’s Board of Regents approved a \$40 million renovation and addition project for Sill Hall in December 2017. This project is currently under construction scheduled for completion in August 2020.

### **Engineering and Technology Complex – Phase II**

#### **Advanced Technology Center – Roosevelt Hall Renovations and Expansion**

(State Capital Outlay Request – FY 2021)

While the renovation of Sill Hall is underway, we must continue to provide new, effective and efficient educational facilities to meet the immediate and future needs of the advanced technology programs. To that end we are pleased to submit our State Capital Outlay Request for FY 2021, the renovation, expansion and adaptive reuse of Roosevelt Hall. This project is key to the current growth patterns and planned expansion of EMU’s growing technology programs.

With both phases of the CET Master Plan, the College will create a “micro campus” for engineering and technology students, encouraging cross discipline collaboration, and giving an identity to the students and their programs.

The project will include a full renovation of Roosevelt Hall including all building mechanical and electrical systems, interiors, building envelope, IT/AV systems. The adaptive reuse will reimagine the space from an early 1900’s secondary school layout to a new, highly efficient plan providing flexible learning spaces, support and access to high tech systems and components, and provide greater educational and research facilities. The expansion of the facility will provide new entry portals for greater student access and collaborative living/learning spaces, as well as increase ADA accessibility to the building.

In addition to adding dedicated program space, it is essential that the right types of space are provided to support them. Beyond lab and classroom space, it is important to include areas for students to learn by doing hands on activities and student collaboration/teaming areas. Highlights of these support spaces include;

- Maker Spaces
- Specialty Labs
- Cybersecurity networks and labs
- Computer/Simulation Labs
- Virtual and Augmented Reality Labs
- Research Labs
- Student Success Suites
- Student Collaboration areas
- Student Organization and Academic Support areas

Last renovated in 1973, Roosevelt Hall contains 75,639 sf, and houses the Schools of Cybersecurity & Applied Computing (CSAC), Technology & Professional Services Management (STPSM), and components of Visual and Built Environments (SVBE). Additionally, Roosevelt Hall has been the base of operation for the Military Science and Leadership Department and the Reserved Officers Training Corp (ROTC) program.

Programmatically, the Cybersecurity/Information Assurance and Information Technology programs have witnessed a 15% increase in student enrollment and a 25% increase in overall course load. New degrees in Cybersecurity and Information Technology continue this trend.

The Aviation programs have also increased 15% in enrollment over the last two years in response to a significant shortage of pilots worldwide. Current and future integration of our Drone Technology programs with the flight programs demonstrates our commitment to be on the cutting edge of technology in all programs.

Condition Assessments have identified Roosevelt Hall as among the top ten University facilities in greatest need for renovation with nearly \$11 million in deferred maintenance needs. Combining the programmatic improvement needs with the necessary replacement and improvements in building systems, building envelope and learning environment will provide an effective and efficient means of meeting the second phase requirements of the CET Master Plan.

The projected project cost for the Engineering and Technology Complex – Phase II: Advanced Technology Center is \$42.5 million. The project timeline is three years from design approval through construction completion. Initial programming is complete with further programming and schematic design exercises are to follow. The University and College of Engineering and Technology stands ready to begin work upon approval.

### **Operating Costs – Roosevelt Hall**

Currently Roosevelt Hall mechanical, electrical and utility systems are at the end stage of their life cycle. The facility is connected to the campus central electrical system resulting in efficient delivery of power, however distribution and capacities are antiquated limiting use and function of the facility and programs. The building is also served from the campus central steam system for heating however once again distribution and steam to hot water transfer equipment is outdated and inefficient. Cooling of Roosevelt Hall is accomplished through several systems, most of which are far past their useful life and require

considerable effort and funding to keep operational. New high-efficiency mechanical systems would be installed to provide general cooling for the building with specific systems designed for precise temperature and humidity control for tech heavy programs.

Interior finishes, and space layout create inefficiencies in custodial and maintenance services as well. While many of the interior finish surfaces have great life expectancies, their daily and long term care exceed the new standards for sustainability in modern buildings. New finishes would focus not only on the initial product selection, but also the long term cost of operation.

Over the past three years, the University has invested approximately \$30 million in various energy savings projects which include the replacement of its Co-Generation system and replacement of lighting, plumbing and controls systems. These projects have addressed financial and operational risks on both the demand and supply side of the University's energy needs. The University can now generate over 90% of its electrical and heat needs at approximately half the cost of buying this energy from a utility provider. Additionally, by replacing inefficient lighting, plumbing and controls systems, the University has decreased its electrical needs across the campus. Typically, newly renovated buildings operate at 20-25% energy savings while providing better, more adaptable learning environments.

All operating costs are funded through the University's General Fund.

### **Overall Program "Capital Project" Costs**

The total CET Master Plan project is estimated to cost \$82,500,000 broken down into the following phases:

#### **Phase I: Sill Hall Renovation and Additions** (Currently under construction)

Construction Costs	\$31,650,000
Administrative Costs and Fees	\$ 3,900,000
Owners Costs	\$ 4,450,000
Total:	\$40,000,000 (Locally Funded)

#### **Phase II: Advance Technology Center – Roosevelt Hall** (Proposed)

Construction Costs	\$33,300,000
Administrative Costs and Fees	\$ 4,000,000
Owners Costs:	\$ 5,200,000
Total:	\$42,500,000 (State Capital Outlay Request)

### **Other Alternatives Considered**

The adjacent and offline Jones and Goddard Halls were considered for the growth and expansion of engineering and technology programs, however the technical aspects of adapting a facilities designed for

residence life including low floor-to-floor heights, limited structural capabilities, and advancing technology needs dictated a plan to more efficiently utilize space currently allocated but underutilized for advanced technology programs.

Roosevelt Hall is centrally located within the College of Engineering and Technology existing facilities in the academic core of campus – close to residence halls, other academic facilities, library and parking. The buildings structure is in very good condition and therefor warrants renovation and adaptive reuse rather than pursuit adding new square footage to the university’s academic inventory.

Roosevelt Hall, built in 1924 is a landmark within the Ypsilanti community. EMU is the second oldest public university in the State of Michigan. The state’s investment in buildings and infrastructure should be preserved when possible and financially feasible to do so. The construction costs associated with a new building were carefully studied and found not to be fiscally prudent, given the constraints on available state and institutional funds for capital projects. We believe, when possible, existing buildings that are structurally sound should be renovated and modernized as opposed to razing buildings for new structures.

### **Programmatic Benefit to State Taxpayers and Specific Clientele or Constituencies**

The programmatic benefit of this project will be to better serve current and future students through enhanced learning spaces and technology and to help the University recruit and retain students and faculty. Importantly, nearly 90% of EMU’s students come from Michigan and approximately 72% of our graduates remain in Michigan after graduation. This project will therefore provide an important infusion of highly-trained engineers to stay in Michigan and help fuel Michigan’s economy.

EMU’s Engineering and Technology Complex will provide economic benefit to the City of Ypsilanti and the eastern Washtenaw County area through the creation of critically needed new construction jobs over three years. EMU has a significant impact on the local economy. For this area of Washtenaw County, it is imperative that EMU remain a vital and vibrant institution. It should be noted upon successful completion of this project, EMU will have renovated three of our four oldest non-improved buildings on campus, thereby continuing our systematic approach to sustainable design through renovation and adaptive reuse of these aging but historic structures.

### **Funding Resources**

EMU would utilize its existing financial reserves to fund the project with the State.



**BUILDING MAINTENANCE PROJECTS GREATER THAN \$1M (FY2021-2025)**

<u>Project Name:</u>	<u>Amount:</u>
Sill Hall Renovations	\$40,000,000
Rec IM Renovations	\$16,000,000
Mark Jefferson Fifth Floor Fitout	\$ 2,150,000
Campus Electrical System Improvements *	\$ 2,500,000
Fire Alarm Replacement – Various Buildings *	\$ 2,100,000
Electrical Panel (Secondary) Replacements – Various Buildings *	\$ 1,800,000
Roof Replacements – Various Buildings *	<u>\$ 3,200,000</u>
<b>Total Building Projects Greater than \$1 Million:</b>	<b>\$67,750,000</b>

*\* Multiyear Project – Remaining Balance/Total Funding*