

October 25, 2019

MEMORANDUM

APPROVED

OCTOBER 25, 2019

**BOARD OF TRUSTEES
MICHIGAN STATE UNIVERSITY**

To: Committee on Budget and Finance

From: Teresa A. Sullivan, Interim Provost and Executive Vice President
for Academic Affairs *TAS*

Samuel L. Stanley, Jr., M.D., President

Kathleen Wilbur, Executive Vice President for Government,
Communications and Advancement *KMN*
SLS

Subject: State of Michigan Fiscal Year (SFY) 2021 Capital Outlay Request
and Five-Year Plan

RECOMMENDATION

The Trustee Committee on Budget and Finance recommends that the Board of Trustees adopt Michigan State University's SFY2021 Capital Outlay Request for State of Michigan cost participation for the project titled "Greenhouses – Renovation of Existing and Addition - Research Expansion and Learning", and the Five-Year Capital Plan.



OFFICE OF THE
PROVOST

OFFICE OF THE
PRESIDENT

Action on the request authorizes the Administration to respond to the State of Michigan Budget Office reporting requirements and submit a Capital Outlay request for state cost participation. The report and request are due to the State Budget Office no later than October 31, 2019.

RESOLUTION

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby adopts the 2021 Capital Outlay Request and Five-Year Capital Plan included as Attachment A hereto.

BACKGROUND

The State of Michigan Capital Outlay process requires that public universities and community colleges submit a Five-Year Capital Outlay Plan that is intended to provide state policymakers with the most current information available on institutional priorities and needs. Institutions may request state funding of a capital outlay project. The requested project must be a logical extension of information contained in the Five-Year Capital Outlay Plan and address a specific academic or research need of the institution. The plan must be approved annually by the institutions governing body and is to include state supported and institutional funded projects. To optimize flexibility the University provides a more significant potential list of priority projects, hence the list appears greater than the number of projects that would move forward in the five-year time frame.

OFFICE OF THE
EXECUTIVE
VICE PRESIDENT FOR
GOVERNMENT,
COMMUNICATIONS
AND ADVANCEMENT

The MSU capital outlay request and capital priorities support programs that have strong national reputations, expanding research bases, and have high enrollment demand that will sustain the University and its contributions to Michigan. Funding of these requests will provide economic development in the state, now and in the long term. Our capital outlay request is for renovation and addition of plant science greenhouses to modernize and expand this capital asset that supports research and teaching and learning. MSU is a global leader in plant sciences in Michigan and across the globe. Further, agriculture is the second largest contributor to the Michigan economy with approximately \$104 billion in revenue attributed annually to food and agriculture. Investment in this core research and teaching resource will increase research capacity in areas critical to improving Michigan's economy, such as innovative research in agronomic crop resilience to maximize productivity of crops in response to a growing world population.

One of the major challenges of the 21st century is to double food production and maintain global food security in the face of a growing population. Meeting that challenge will require the development of crops that are regionally adapted to future environmental conditions, including numerous abiotic and biotic stressors, and are more resilient to greater variation in their environment. This pressing societal need intersects with some of the most important questions in modern plant science and emphasizes the need for a better understanding of the interaction of genes and the environment. Accomplishing these goals requires reliable, modern, and energy-efficient greenhouse facilities and services.

The future success of agricultural research and teaching and learning is dependent on maintaining and expanding the overall quality and functionality of our experimental plant rearing facilities. Renovations of the existing greenhouses, coupled with addition of new state of the art greenhouses with modern environmental control capacity, are necessary to provide increased research capacity in this strategic area of the MSU research mission, support the shift of fundamental plant science from small scale model plant systems to agronomic crops, and address an aging infrastructure. The current greenhouse infrastructure limits the University's ability to meet the needs of the Michigan agricultural community, the region, our global reach; conduct critical research; and provide student learning in modern facilities that reflect real world experiences.

Attachment A

cc: Board of Trustees, N. Barr, M. Zeig, B. Quinn, D. Bertram, D. Byelich,
B. Johnston, B. Kranz, V. Gore, D. Bollman, B. Beekman, C. Reid

MSU SFY21 Capital Outlay Request - Renovation and Addition	FY20 Estimate (mil.)
• Greenhouses – Renovation of Existing and Addition – Research Expansion and Learning	\$ 20.9
MSU 5-Year Capital Planning – Renovations and Additions	
• Biomedical Frontier	
○ Biomedical Animal Resources – Provision for Large Animal (\$15.7M - \$21.9M)	
▪ Housing and Surgery	\$ 11.3 – 16.5
▪ Imaging	\$ 4.4 – 5.4
○ Clinical Center A-Wing – Renovate for Research Expansion	\$ 65.0 – 75.0
○ Clinical Center B-Wing – Renovate for Research Expansion & Learning	\$ 15.0 – 20.0
○ Research Laboratory Renovation – Various (STEM and ISTB related backfill)	\$ 15.0 – 18.0
• BSL-3 – Research Expansion-Multi-Species Flexible Housing/Procedure Space (phase 2)	\$ 9.2 – 10.5
• Detroit Initiative – MSU Places of Learning (long-term lease)	TBD
• Engineering – New Construction/Addition/Renovation	TBD
• Healthy Campus – Recreation, Fitness, Sport	
○ IM Circle – Convert former Pool to Multi-Purpose Space	\$ 10.0 – 11.0
○ IM Fields – Service Road Synthetic Turf	\$ 9.5 – 10.5
• Large Animal - Teaching and Learning Support	TBD
• Learning Spaces	
○ Learning Space Improvements – Annual Investment for Updates and Improvements (5-year, \$12.0M annually)	\$ 60.0
○ Library Improvements – Learning and Collections Support	\$ 5.0 – 8.0
• Life Science Buildings (A & B) HVAC Replacement and Related (phased approach)	TBD
• MSU Chapel and Columbarium – Renovation and Accessibility	TBD
• Music Building – Renovation of Existing for Improved Program Support	\$ 9.4 – 33.3
• Old Botany – Comprehensive Renovation	\$ 9.6 – 10.6
• Plant Biology Building – Comprehensive Renovation	\$120.0 – 130.0
• Single Occupant/ADA Restrooms – High Priority Buildings	TBD
• 600 Crescent Road – Modifications to 1 st and 2 nd Floors for IT Services Space Consolidation	TBD
• Student Services Building – Renovate for Student Support	\$ 8.8 – 35.5
New Construction – New Building	
• MSU Health Care – Medical Services Building	TBD
• Transportation Services and Mobility Research Center	\$ 20.0 – 22.0
Major Systems Maintenance and Utilities	
• 20MW Solar Array Installation (material change to the landscape and long-term lease)	NA
• Capital Renewal (5-year, \$35.0M annually)	\$ 175.0
• Farm Lane Infrastructure and Mobility Upgrades including Bridge Replacement	\$ 35.0 – 40.0
• Service Road and Service/Bogue Intersection Reconstruction	\$ 6.0 – 7.0
• Utilities (5-year) – Power Plant Modernization	
○ Battery Energy Storage System	TBD
○ Combustion Turbine Rotor and Engine – Replace Unit 6	TBD
○ Electrical Centrifugal Chillers – 8,400 Tons	TBD
○ Shared Natural Gas Pipeline	TBD

