



MICHIGAN STATE UNIVERSITY
BOARD OF TRUSTEES
Executive Action Summary

Budget & Finance Committee-Attachment 1

Committee Name Budget & Finance

Date October 25, 2024

Agenda Item: State of Michigan Fiscal Year (SFY) 2026 Capital Outlay Project Request and Five-Year Capital Plan



Information



Discussion



Action

Resolution:

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby adopts the 2026 Capital Outlay Project Request and Five-Year Capital Outlay Plan included as Attachment A hereto.

Recommendation:

The Trustee Committee on Budget & Finance recommends that the Board of Trustees adopt Michigan State University's State Fiscal Year (SFY) 2026 Capital Outlay Request for State of Michigan cost participation for the project titled "Engineering and Digital Innovation Center", and the Five-Year Capital Plan. 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, 2024.

Prior Action by BOT:

- October 28, 2022: The Board authorized the Engineering and Digital Innovation Center as the capital outlay request to be submitted to the state for cost participation for SFY2024.
- October 27, 2023: The Board authorized the Engineering and Digital Innovation Center as the capital outlay request to be resubmitted to the state for cost participation for SFY2025.

Responsible Officers: Barbara J. Kranz, Assistant Provost, Institutional Space Planning and Management

Summary: It is recommended that the Board of Trustees adopt the Engineering and Digital Innovation Center as MSU's SFY2026 Capital Outlay Request for the State of Michigan cost participation project,

and the Five-Year Capital Plan for submission to the State of Michigan Budget office by October 31, 2024.

Background Information:

Five-Year Capital Outlay Plan

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 Plan and address a specific academic or research need of the institution. The plan must be approved annually by the institution's governing body and is to include state-supported and institutional-funded projects regardless of fund source.

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 timeframe. The MSU capital outlay project request and capital priorities support programs with strong national reputations, expanding research bases, and high enrollment demand that will sustain the university and its contributions to Michigan. Funding of these requests will advance economic development in the state, now and in the long term.

Capital Outlay Project Request

The SFY2026 Capital Outlay request is for construction of a new Engineering and Digital Innovation Center (EDIC). The new center will support the emergence of a strong and transformative ecosystem focused on the convergence of digital and physical technologies. It will bring together a range of teaching, learning, and research activities across multiple colleges and disciplines to create an energized, innovative, and entrepreneurial community focused on digital futures. The academic partnership across six colleges (Engineering, Natural Science, Arts and Letters, Business, Communications Arts and Sciences, and Social Science) is intentional and will lead to interdisciplinarity in learning and research.

The center will:

- Provide new capacity, critical to support MSU's decade-long pattern of growth, both in student enrollment and in research. In Fall 2024, MSU welcomed its largest undergraduate class to date of 41,234 students.

- Support an increase in enrollment of 1000+ new undergraduate engineering students over four years, students in computational sciences and digital literacy disciplines, and in graduate-related programs.
- Support the consolidation of top-ranked researchers and students. The College of Engineering's enrollment has grown 35% over the last decade, along with a 45% increase in faculty. The new facility begins to provide the necessary space for these increases and creates opportunities for teaching and learning by co-locating instructional space alongside research space.
- Continue to attract new faculty and increase research productivity that culminated in research expenditures of \$844 million in 2023, aligning with MSU's upward trend and putting us on track to reach our \$1 billion goal by 2030. The College of Engineering alone has increased research expenditures 21% over the last decade to \$63 million in 2023.
- Align modern building infrastructure and space functionality with the industry needs of today and well into the future, through state of the art experimental and computational research labs, technology-rich instructional spaces, and a cutting-edge entrepreneurship and innovation hub.
- The EDIC will accommodate 75 principal investigators and their research teams, becoming MSU's center for excellence in advanced manufacturing, materials science, artificial intelligence and computational research and quantum computing.
- Equip MSU graduates with the skills in computational sciences and digital literacy necessary for postgraduate success in the growing job market. The Bureau of Labor Statistics forecasts 682,000 new jobs in computer science will be created in computer science over the next decade.

As a result, the center will enable new synergies and enhanced potential for discovery and increase the potential to attract significant federal funding in high-demand research areas. This center will be a physical and symbolic gateway to the digital future at MSU – a home for new ideas and transformational learning and research.

This investment will provide the foundation to respond to industry needs and student demand, support economic development in Michigan, leverage the opportunities provided by FRIB for heavy-ion radiation testing of integrated chip-based systems, and provide research infrastructure for growth in materials research and emerging initiatives such as semiconductor research.

Source of Funds:

The request to the state of Michigan for cost participation in the EDIC through this capital outlay request is for \$70 million of the estimated project cost of \$340 million.

The State of Michigan appropriated \$30 million via the higher education bill in July 2023. This request is for an additional \$70 million for state of Michigan cost participation through the capital outlay process, for a total state contribution of \$100 million.

Resource Impact:

Not applicable.

Attachment A

Michigan State University

Fiscal Year 2026 Capital Outlay Project Request and Five-Year Capital Plan

Section I: MSU Capital Outlay SFY26 5-Year Planning	
	FY25 Est. (mil.)
Capital Outlay Priority – Renovation and Addition	
• Engineering and Digital Innovation Center (EDIC) - New Construction - Research Support and Expansion	\$340.0M
MSU 5-Year Capital Planning (Alphabetical Order)	
Renovations and Additions	
Akers Hall - Student room furniture/case goods replacement (312 rooms)	\$1.0M - \$1.4M
• Auditorium Building - Renovation of the main auditorium to support teaching, learning, outreach	\$32.3M - \$56.9M
• Bio-Engineering Facility (IQ) - Build-out 3rd & 4th Floor - Bio Design	TBD
• Biomedical Discovery	
◦ Biomedical Animal Resources - Provision for Large Animal Housing & Surgery	\$15.2M - \$22.9M
◦ Clinical Center A-Wing – Renovate for Research Expansion	\$87.9M - \$102.3M
◦ Clinical Center B-Wing – Renovate for Research Expansion & Learning	\$20.4M - \$27.3M
• Breslin Center - Arena special event lighting control panel replacement (lifecycle)	\$1.0M - \$1.2M
• BSL-3 - Research Expansion Multi-Species Flexible Housing/Procedure Space (Ph. 2 of 2)	\$13.0M - \$14.4M
• BSL-3 Research Expansion - Additional Labs	\$18.1M - \$21.7M
• Case Hall - 4 Passenger Elevators	\$1.5M - \$1.7M
• College of Social Science - Office & Teaching Lab Renovations in Berkey Hall	\$1.9M
• Core Aquatic Species Research Facility - Renovation and/or Addition Research Support & Expansion	\$30.8M - \$37.3M
• Engineering - Renovations - Research & Learning (New Construction Related Backfill)	\$12.3M - \$15.6M
• Grand Rapids Research Center (GRRC) 5th Floor Lab Fit-out	\$9.3M - \$9.7M
• HCI Hagadorn Renovations for Future Clinical Consolidation & Expansion	TBD
• Holmes Hall - New - Life Safety System (installaton located in all areas of building)	\$15.5M - \$16.0M
• Holmes Hall - Living wings - vertical riser - domestic water supply piping lifecycle replacement	\$7.0M - \$7.5M
• Holmes Hall - Student room furniture/case goods replacement (664 rooms)	\$1.4M - \$1.5 M
• Hubbard Hall - Student room bed replacement (1250 beds)	\$1.0M - \$1.2M
• Kellogg Center - 4 Elevator Replacements	\$1.0M - \$1.1M
• Kellogg Center - tower roof replacement & chilled water loop replacement, masonry repairs on tower	\$1.5M - \$1.7M
• Kinesiology Space Improvements & Expansion at IM Circle	\$30.0M - \$35.0M
• Kresge Art Center - Comprehensive Renovations - Teaching & Learning, Research	\$53.8M - \$58.0M
• Learning Space Improvements - Annual Investment for Upgrades & Improvements (\$6M annually)	\$6.0M
• McDonel Hall - 4 Passenger Elevators	\$1.5M - \$1.7M
• McDonel Hall - New - Life Safety System (installation located in east & west living wings)	\$10.7M - \$11.0M
• McDonel Hall-Living wings-vertical riser-domestic water supply piping lifecycle replacement	\$4.5M - \$6.0M
• McDonel Hall - Student room furniture/case goods replacement (580 rooms)	\$1.2M - \$1.4M
• MSU Union - Back of House 1st Floor Renovation	TBD
• Munn Ice Arena LED replacement	\$1.0M - \$1.1M
• Old Botany - Comprehensive Renovation	\$13.4M - \$14.3M
• Olympic Sport/Multi-Purpose Arena	\$95.0M
• Outdoor Track Relocation	\$5.2M - \$5.3M
• Owen Hall domestic water piping riser replacement	\$4.5M - \$6.0M
• Parking Lot 46 (Integrated Plant Sciences)	\$1.7M - \$1.8M
• Plant & Environmental Sciences - Renovate Existing Plant Biology Building Research, Teaching & Learning	\$93.7M - \$123.8M
• Spartan Stadium - Concession stands point of sale equipment & software	\$1.4M - \$1.5M
• Spartan Stadium deferred maintenance	\$2.0M - \$2.1M
• Spartan Stadium LED Replacement	\$11.0M - \$11.6M
• Spartan Stadium Public Art	\$1.0M - \$1.1M
• Spartan Village Apartment Buildings Decommissioning	\$1.0M - \$1.1M

Section I: MSU Capital Outlay SFY26 5-Year Planning	
• VanHoosen Hall - Apartment renovations, new life safety system installation, mechanical renewals	\$1.8M - \$2.0M
• Wilson Hall - Living wings - domestic water supply vertical riser piping lifecycle replacement	\$4.5M - \$6.0M
• Wilson Hall - New - Life Safety System (installation located in east and west living wings)	\$10.7M - \$11.0M
• Wilson Hall - Student room furniture/case goods replacement (579 rooms)	\$1.2M - \$1.4M
• Workplace Strategic Space Planning Modifications - Various Buildings	TBD
New Construction - New Building	
• Chemical Waste Facility - New Construction	\$40.5M - \$40.9M
Major Systems Maintenance & Utilities (Alphabetical Order)	
• Breslin Center Replace main arena roofs & masonry restoration	TBD
• Chemistry HVAC Renewal	\$43.1M - \$45.5M
• Chemistry Replace MBC lab controllers	\$11.0M
• Communication Arts Replace controls on HVAC units 1-15	\$1.1M
• Computer Center Replace dry cooler & pumps	TBD
• Computer Center Replace PCB transformers & related equipment	\$3.0M
• Holden Hall Replace PCB transformers & related equipment	\$1.5M
• Human Ecology Replace sub-basement sanitary mains	TBD
• Library Replace fire alarm system	\$2.5M - \$4.0M
• Life Science Building (A&B) HVAC replacement & related (phased approach)	\$86.2M - \$91.2M
• Life Science Building Replace PCB transformers & related equipment	\$2.0M
• Mill & re-pave Shaw Lane	\$5.1M
• Packaging Building Replace PCB transformers & related equipment	\$3.0M
• Public Safety Replace fire alarm system	\$1.5M - \$3.0M
• Utilities (5-year) - Infrastructure Renewal & Power Plant Modernization	
◦ #2 SteamA50: A77 Turbine Generator Stator Rewind	\$3.1M - \$3.5M
◦ Demolition - Unit 4 Boiler & Replacement with New High Pressure Boiler	\$30.0M - \$40.0M
◦ East Cooling Tower Replacement	\$9.7M - \$10.2M
◦ Extend campus electrical service to wellhouses 21-24	\$1.5M - \$3.0M
◦ Farm Lane Infrastructure Replacement & Extension (phase 1)	\$10.0M - \$12.0M
◦ Farm Lane Infrastructure Replacement & Extension (phase 2)	\$10.0M - \$12.0M
◦ Install 4th RICE Engine	\$21.5M - \$22.8M
◦ Power Plant Substations Renewal & Expansion	\$12.0M - \$15.0M
◦ Regional Chilled Water Plant - Convert to Electric Chillers	TBD
◦ Replace combustion turbine rotating assembly	\$3.5M - \$4.5M
◦ Replace Gas Compressor Building (0065R)	\$1.5M
◦ Replace Power Plant Motor Control Centers	\$3.1M - \$3.4M
◦ Replace water main distribution - (\$1.0M annually)	\$1.0M
◦ Replace wells/wellhouses (phase 1)	\$2.0M - \$3.0M
◦ Replace wells/wellhouses (phase 2)	\$2.0M - \$3.0M
◦ Replace wells/wellhouses (phase 3)	\$2.0M - \$3.0M
◦ Service/Bogue Intersection & Utility Extension	\$9.0M
◦ Steam distribution renewal - (\$1.0M annually)	\$1.0M
◦ TB Simon automated load shedding system	TBD
◦ Transition to off-site generation for demineralizer	\$1.0M - \$1.5M
• Vet Diagnostic Lab Replace chillers	TBD