

MICHIGAN CAPITAL BUILDING
HOUSE APPROPRIATIONS ROOM 352

04.19.22 – 4:00P

STEM Capital Outlay Project

for Jackson College

Testimony to the

House Appropriations

SubCommittee on Joint Capital

Outlay.

DANIEL J. PHELAN, PH.D.
President, Jackson College

Testimony: House Appropriations Subcommittee

April 19, 2023

Chairwoman Price and members of the committee, good afternoon. My name is Daniel Phelan, and I serve as president of Jackson College. I come before you today to speak about the critical work being done by Jackson College in providing higher education opportunities for students that is both consistent with the State's need for a well-educated population, as well as ensuring the priority of instructional programs that meet employer expectations. But first, a brief background and context.

Jackson College is one Michigan's 28 public community colleges, created in 1928 in Jackson County, though we also have campuses in Lenawee and Hillsdale Counties. The College serves about 7,000 unduplicated credit students each

year, as well as another 10,000 people in various continuing education, contract training, and performing arts activities throughout the College district. The College is governed by a locally elected 7-member Board of Trustees who not only chart the future for the College on behalf of the regional citizenry, but also ensure the administration of its policies through me, the College President, now having served for 22 years at the College.

We describe our work at Jackson College as one of being in the business of human development and we are uniquely focused on it. In fact, our slogan at Jackson College is: A Total Commitment to Student Success (TCS²). More than a catch phrase TCS² defines the way we work, the way we hire, the way we evaluate our performance, the way we establish our budget, and the way we compensate employees.

Additionally, you may be interested to know that Jackson College is one of only 19 community colleges out of 1,038 nationally, serving as a member of the League for Innovation in Community Colleges, an international organization of the most influential, resourceful, and dynamic community colleges in the world that are focused on the cultivation of innovation in the community college environment.

Given Jackson College's pedigree to the work, permit me to share our focus on improving our aged campus facilities in order to meet the current and emerging needs of our students, the employers, and community.

Our FY '23 Request: James McDivitt Hall

Our highest priority is the extensive renovation and minor expansion of the Jackson College STEM (i.e., Science, Technology, Engineering, and Mathematics) Building, known

as James McDivitt Hall, named after one of the many graduates who went on to become one of our nation's astronauts. In fact, he commanded the Gemini 4 mission, during which Ed White performed the first U.S. spacewalk, and later the Apollo 9 flight, which was the first crewed flight test of the Apollo lunar module.

Constructed in the late 1960s, the building is filled with archaic infrastructure, inefficient HVAC systems, as well as other antiquated and inferior energy systems. While the College has continued to provide regular maintenance on the facility, we have concluded that a better financial decision is to completely reinnovate the building and its systems.

McDivitt Hall is literally at the heart of Jackson College's mission, which declares that we are an institution of higher education whose mission it is to assist all learners in

identifying and achieving their educational goals. This proposed Capital Outlay project will result in creating new jobs for the State of Michigan through the employment of new, permanent, full- and part-time College personnel and, concomitantly, adds significant construction jobs for the duration of the project. It is estimated that the project will minimally result in 5 new full-time faculty positions, 3 full-time technician positions, and 3 staff positions (i.e., full and part-time) resulting in an addition of \$1,000,000 annually to the state's resident workforce revenues. Further, the economic impact of the project through construction and equipment, utilizing a conservative multiplier is estimated at \$315,000,000 in overall economic impact to the State.

Ultimately, the renovated building, and its attendant instructional programming, will provide students with

educational opportunities in high-demand instructional programmatic areas designed to lead them to completing a career-based credential of market value, entering the workplace, or transferring to a baccalaureate-degree granting institution to continue their studies. Such programming will include: Makerspace Labs, Math Peer Study Center, Science and Study Labs, Engineering Labs, Biology/Botany Greenhouse, AI/VR Learning Labs, Computer Networking Labs, Cyber Security Labs, STEM Commons, Astronomy Lab, Physics Manipulation Lab, Multi-function/flexible learning studios, Science Lab improvements, Cadaver Lab improvements, Geology Labs, Chemistry Manipulation Labs, Lecture Halls, University Center, various Classrooms, Storage, plant operations, reception, restrooms and circulation areas.

Students that participate in the instruction programs offered in this facility would be able to secure jobs as Geographers, Computer Systems Specialists, Environmental Specialists, Water Analysts, Forensic Science Technicians, Web Developers, Chemistry Technicians, Battery Cell Technicians, Computer Systems Analysts, GeoTechs, Computer Network Architects, Pre-Engineering Technicians, Cartographers, Cost Estimators, IT managers, Artificial Reality Techs, Science Lab Techs, Cyber Security Techs, and Physics Lab Techs, to name a few. Each of these career areas offer family sustaining wages and are consistent with the current and emerging needs of the state.

Jackson College will cover 50% of the cost of this \$45MM stand-alone project, which will endeavor to incorporate

sustainable design elements and operational provisions consistent with LEED certification.

As I noted previously, this is our most important capital outlay project, and was approved by DTMB for 2023 funding consideration. Based upon our assessment of the likelihood of capital outlay funding, when the deadline arrived for FY 2024 consideration, in the fall of last year, we submitted our second-highest need for capital outlay funding consideration – Justin Whitting Hall, which has also been approved for funding by DTMB.

Our FY '24 Request: Justin Whitting Hall

The proposed Justin Whitting Hall project is estimated to total \$50.5MM, again with Jackson College paying for 50% of the cost. Justin Whiting Hall is the oldest building on the Jackson College Central campus and was constructed in 1967. The

building was constructed at a time where there were no concerns about instructional and operational technology that is considered contemporary today, let alone concerns for the accessibility of persons with limited mobility and other disabilities. The building houses much of the College's mid- and heavy-vocational, technical, and career programs, whose labs were constructed using older technology, antiquated instructional design, uninsulated spaces, and outmoded operating systems. Given the rapid change in instructional technology, new instructional programs and instructional typologies that the College needs to deploy to satisfy current and emerging employer needs, the labs and related space are in need of significant renovation. A principal instructional program in the building is in the College's nursing and allied health program area. To make these programs more effective with student outcomes, the College needs to construct a full

continuum-of-care (i.e., birthing through palliative care) comprehensive simulation center complete with multiple health simulation stations, equipment, student monitoring systems, and instructional storage. Finally, the building also houses the College's medical clinic and mental health clinic, both of which are in desperate need of expansion due to expanding and vital student need.

Specific programmatic areas in this building include: Industry 4.0 Manufacturing, Nursing, Dental Hygiene, Mental Health Clinic, Henry Ford Health Clinic, Health Occupations, Electronics Technology, Utilities Technologies, including Line Working Training, Workforce Development, Welding Technologies, Patient Care Technologies, Medical Records Technology, Energy Management Systems, Cybersecurity, Medical Coder, Computer Networking, and Robotics

Technology, to name a few. These programs clearly meet a local, if not a regional and state need. These programs also provide students with the potential for a good job, but also skill and talent enhancement, as in the case with nursing and allied health programs.

The building design will contemplate sustainable elements and incorporate many LEED recommendations. It is anticipated that the cost of operation of the facility, after renovation, will cost less than the existing facility, due to higher efficiency heating, cooling, and lighting systems.

Summary and overall Request for Capital Outlay:

As noted previously, both of these capital outlay projects have scored and meet the approval of DTMB, but due to timing and our understanding of a likely funding at that moment, our highest project priority lost position in the current with the FY

'24 request. Therefore, I firstly, and respectfully request that the legislature and the governor authorize the use of Capital Outlay funds as soon as is possible. Secondly, I respectfully request that our approved FY '23 submission (i.e., James McDivitt Hall – the STEM Center) be advanced for FY '24 funding consideration as Jackson College's highest Capital Outlay priority. Thank you.

Thank you for allowing me to speak with you today.



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04.19.23

Chairwoman Natalie Price
Committee Members
House Appropriation Subcommittee on Joint Capital Outlay
Michigan Capital Building
House Appropriations Room 352
Lansing, MI

Dear Chairwoman Price and Members of the Committee:

Enclosed are copies of today's testimony for Jackson College for your consideration. You'll also see copies of our FY '23 and FY '24 Capital Outlay submissions, both of which were favorably scored by the Department of Technology, Management and Budget (DTMB) for Capital Outlay Funding.

Jackson College respectfully requests the advancement of its FY '23 application, the James McDivitt Hall – STEM Building, as our highest priority.

Thank you in advance for your time today.

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel J. Phelan".

Daniel J. Phelan, Ph.D.,
President & CEO

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**JACKSON COLLEGE
FY'23 CAPITAL OUTLAY PROJECT REQUEST**

Project Title: STEM Remodel of James McDivitt Hall

Project Focus: Academic STEM Instructional building

Type of Project: Renovation and minor expansion

Approximate Square footage: 117,000

Total Estimated Cost: \$45,000,000

Estimated Duration of Project: 30 Months

Is the Five-Year Plan posted on the institution's public website? YES

Is the requested project the top priority in the Five-Year Capital Outlay Plan? YES

1. Describe the project purpose:

The purpose of renovating and expanding the Jackson College STEM Center Building is literally at the heart of Jackson College's mission, which declares that we are an institution of higher education whose mission it is to assist all learners in identifying and achieving their educational goals. This proposed Capital Outlay project will result in creating new jobs for the State of Michigan through the employment of new, permanent, full- and part-time College personnel and, concomitantly, adds significant construction jobs for the duration of the project. It is estimated that the project will result in 5 new full-time faculty positions, 3 full-time technician positions, and 3 staff positions (full and part-time) resulting in an addition of \$1,000,000 annually to the state's resident workforce revenues. Further, the economic impact of the project through construction and equipment, utilizing a conservative multiplier will result in \$315,000,000 of economic impact in the State.

Ultimately, the building, and its attendant instructional programming will provide students with educational opportunities in high-demand instructional programmatic areas designed to lead them to completing a career-based credential of market value, entering the workplace or transferring to a baccalaureate-degree granting institution to continue their studies.

The College seeks to join with the State of Michigan, through this project, to prioritize STEM education for its citizens, among our overall instructional programming in order to future-proof our graduates going forward. According to the National Science Foundation, "...STEM Education brings together our advanced understanding of how people learn with modern technology to create more personalized learning experiences, to inspire learning, and to foster creativity from an early age. It will unleash and harness the curiosity of young people and adult learners across the United States, cultivating a culture of innovation and inquiry, and ensuring our nation remains the global leader in

science and technology discovery and competitiveness.”

As part of this new program for Jackson College, undertake an inclusive approach to student recruitment and support. Additionally, we will be able to ensure access for all students, with special attention given to at-risk students, students of color, and disabled students, including the hiring of faculty to serve as role models for these students.

2. Scope of the project:

The intended renovation and addition of this approximately 117,000 square foot instructional, classroom and instructional lab facility will be comprised of the following elements:

- Bimodal and hybrid ready learning environments to include:
 - Multi-function/flexible learning studios
 - Science Lab improvements
 - Cadaver Lab improvements
 - Study / breakout rooms
- University Center expansion and dedicated spaces to include Wayne State University, Siena Heights University, and Spring Arbor University
- Faculty/Staff Offices
- Conference Rooms
- Math Peer Study Center
- Science and Study Labs
- Engineering Labs
- Biology/Botany Greenhouse
- VR Learning Lab
- Computer Networking Labs
- Cyber Security Labs
- Building Maintenance and Operating Systems
- Storage
- Human Circulation Spaces
- Building Security / Reception area
- Restrooms
- STEM Commons
- Astronomy Lab
- Physics Manipulation Lab
- Makerspace Lab

3. Program focus of occupants: The particular focus of the proposed renovation and addition is, of course, providing education in courses and instructional programs that not only meet a strong market demand in the STEM field, but also in providing specific STEM courses and pre-baccalaureate programming for transfer students. The particular design focus of the instructional spaces is built around faculty input,

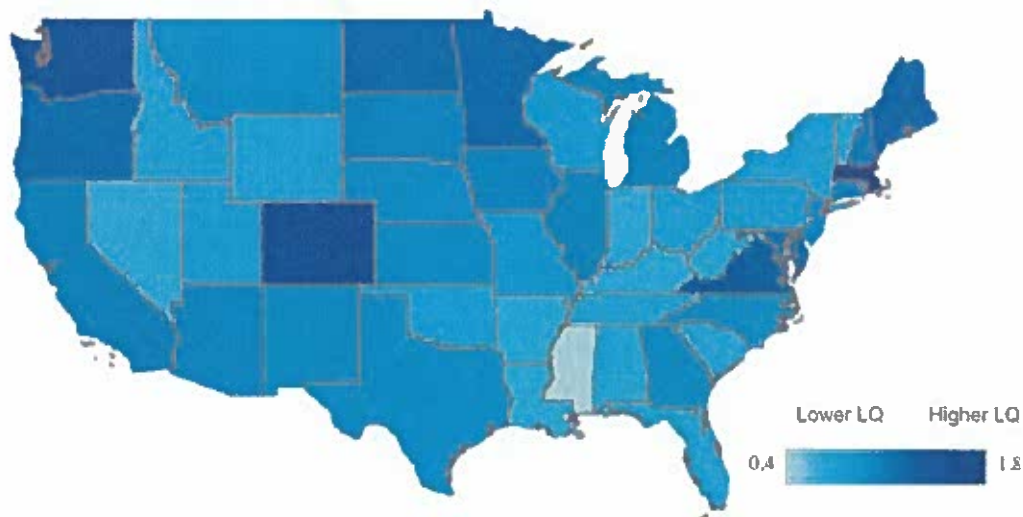
recommendations from related instructional advisory groups, as well as the general structure of the existing building. Ultimately, the space will provide practical, practicum, laboratory, and programmatic instructional experiences designed to advance student success in their program of study, degree and/or credential completion, and/or transferring to a baccalaureate university, or immediate employment in the industry, including business ownership.

Students emerging from STEM education at Jackson College would be able to secure jobs as Geographers, Computer Systems Specialists, Environmental Specialists, Water Analysts, Forensic Science Technicians, Web Developers, Accountants, Computer Systems Analysts, GeoTechs, Computer Network Architects, Cartographers, Cost Estimators, IT managers, Artificial Reality Techs, Science Lab Techs, Cyber Security Techs, Physics Lab Techs, and Technical Writers. Students choosing to transfer to a baccalaureate-granting institution will have additional opportunities. According to Indeed, their 21 STEM jobs in high demand currently (see: <https://www.indeed.com/career-advice/finding-a-job/stem-jobs>)

4. How does the project support Michigan's talent enhancement, job creation and economic growth initiatives on a local, regional and or/statewide basis?

This project will provide for the education and practical experience necessary for students to enter into a high-demand job market that is comprised of various specialization areas, as noted previously. This project is consistent with the Governor's and the MI department of education's priority to make Michigan a World Leader in STEM education and careers (see: https://www.michigan.gov/mde/0,4615,7-140-37818_34785-378071--,00.html) as well as the focus of the MI-STEM Council. Our focus on advancing STEM education at Jackson College also supports the State's

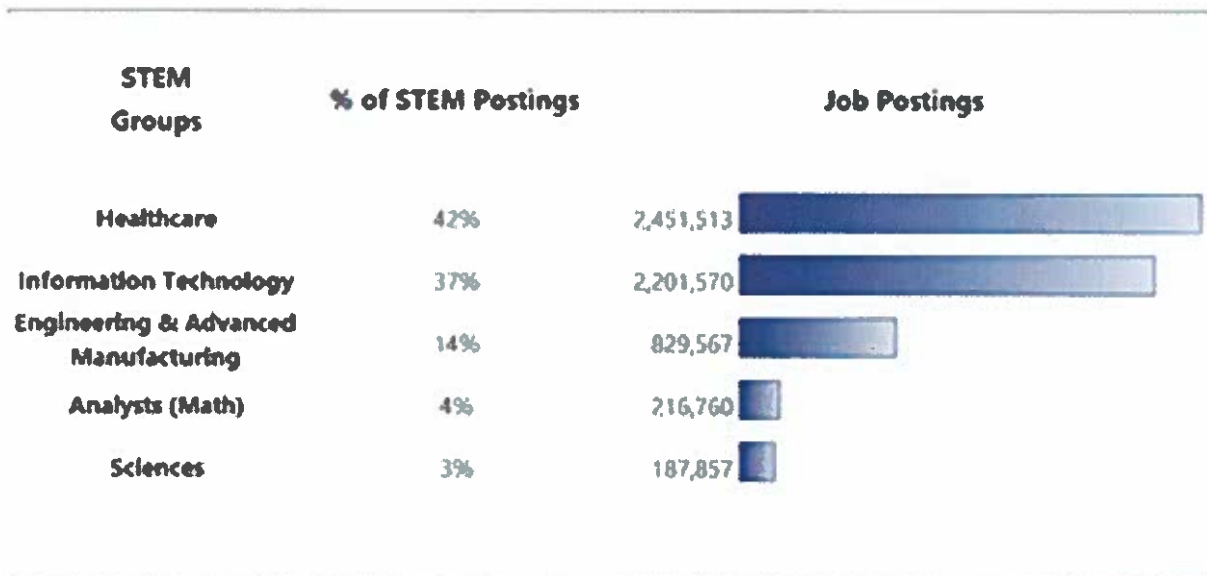
Per Capita Concentration of Online STEM Job Postings



economic development priorities as well (see: <https://www.michiganbusiness.org/news/2021/05/a-conversation-on-the-importance-of-stem-talent-and-internship-opportunities-in-michigan/>)

Further, it is our intention to partner with K-12 institutions, as well other colleges and universities to provide for STEM academies for dual enrolled students, advance STEM opportunities particularly for women and minorities, and enhance graduation rates for STEM students.

Data on the demand for STEM jobs is hefty with over 5.7 million job postings, according to Burning Glass. The graphic above of the United States demonstrates a strong demand for STEM trained graduates. The graphic on the next page outlines the specific areas for job demand within STEM. Furthermore, and salary for STEM degree holders includes a substantial premium when at the associate degree level where annual wages are over \$66,000 annually.

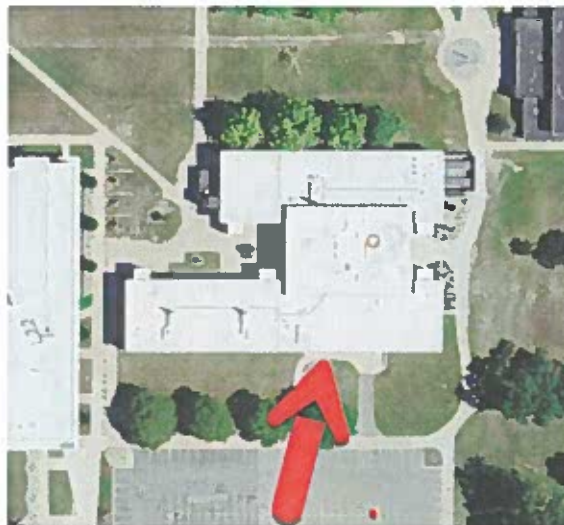


5. How does the project enhance the core academic and/or research mission of the institution?

Jackson College is an institution of higher education whose mission is to assist learners in identifying and achieving their educational goals. This project will provide enhanced academic and career options for students, especially with regard to STEM education. Previously, we have had a loose coupling of related courses, but the creation of this STEM facility, allows us to better recruit, and retain students, as well as to provide the necessary classrooms, labs, and related spaces in support of this program area. In addition, the building will provide the capacity necessary to increase these course and program offerings.

6. Is the project focused on a single, stand-alone facility? If no, please explain.

Yes - This STEM facility is a single, stand-alone building, as indicated in the areal image to the right...



7. How does the project support investment in or adaptive re-purposing of existing facilities and infrastructure?

This building will remodel and reenergize an existing facility that is in need of modernizations. Approximately 80% of this project's total square footage will be performing basic to significant upgrades to a 1967 constructed structure. There will be economies of scale with many utilities, as well as energy efficiency upgrades done during the project. Major upgrades will be done to the underlying HVACR system which will help to modernize controls and eliminate the last of the steam systems on our campus.

8. Does the project address or mitigate any current health/safety deficiencies relative to the existing facilities? If yes, please explain.

The renovation and addition to James McDivitt Hall building will provide for disabled students to participate more fully in this facility than is possible now. Additionally, this building will provide for an all-gender focus on restroom and changing spaces for students. The project will also include upgrading existing heating and cooling (HVAC) systems, with special attention to management of particulate filtration in the building, as well as including 'touchless' systems so as to better control the spread of disease.

9. How does the institution measure utilization of its existing facilities, and how does it compare relative to established benchmarks for educational facilities? How does the project help to improve the utilization of existing space and infrastructure, or conversely how does current utilization support the need for additional space and infrastructure?

The College currently uses scheduling software to track both space and energy utilization, as well as overall operational efficacy. Further, each building is separately metered and monitored. We believe each building has unique programming and academic needs so we focus our attention on our annual utilization reports and academic programming to determine the particular need and use for space.

In addition, the planned renovation and addition will incorporate the required, and

established, benchmarks of higher educational buildings, included, but not limited to essential life-safety provisions, space and density considerations, enrollment growth provisions, energy use and carbon emissions, energy consumption, sustainability, maintenance staffing levels per square foot, equipment standards, and commissioning requirements.

10. How does the institution intend to integrate sustainable design principles to enhance the efficiency and operations of the facility?

The College has a proud history of obtaining USGBC LEED certifications for our buildings over the years. With this renovation and expansion, the College plans to use energy efficient construction practices and sustainable design principles consistent with USGBC LEED certification requirements for the basis of design and construction.

Particular attention will be given to solar gain, building automation systems, footing and foundation design, right-sized HVAC, cross-ventilation, fenestration, envelope construction, alternative operational technologies, and waste material recycling. These and related principles will enhance the efficiency of the space and keep operating costs low. Furthermore, ongoing operations will incorporate sustainable practices and materials. It is our intention to pursue LEED certification for the building.

11. Are match resources currently available for the project? If yes, what is the source of the match resources? If no, identify the intended source and the estimated timeline for securing said resources.

The College will utilize a combination of building funds and long-term debt to fund the entire 50% match portion of the project. No increases in tuition will be made for this facility. Ideally, as with all of our work at the College, we will seek multiple naming opportunities for the facility and for interior spaces, which, over time, will help us to satisfy the long-term debt.

12. If authorized for construction, the state typically provides a maximum of 75% of the total cost for university projects and 50% of the total cost for community college projects. Does the institution intend to commit additional resources that would reduce the state share from the amounts indicated? If so, by what amount?

YES. Jackson College will cover 50% of the cost of this stand-alone project, as required, plus \$100,000 in institutional funding. The College would generally provide additional support, however, even though we have local taxing capability, the local taxpayers have opted not to support additional taxation since 1964.

Jackson College Cost Share: \$22,600,000

State of Michigan Cost Share:\$22,400,000

13. Will the completed project increase operating costs to the institution? If yes, please provide an estimated cost (annually, and over a five-year period) and indicate whether the institution has identified available funds to support the additional cost.

No. Based upon initial energy estimates and design models, we have determined that this renovation and modest expansion, it will actually cost less to operate this building than it currently does. The annual operating cost for the building is approximately \$239,000 (i.e., \$1,196,000 over 5 years). We are projecting the operating cost after the renovation to cost \$200,000 annually (i.e., \$1,000,000 over 5 years).

14. What impact, if any, will the project have on tuition costs?

There will be no impact on tuition from the construction of this stand-alone facility, thus students will not be negatively impacted financially.

15. If this project is not authorized, what are the impacts to the institution and its students?

If this project is not authorized, the institution will not be able to expand its STEM (i.e., Science, Technology, Engineering) and efforts of providing a competitive academic program that is competitive and sets students up to be successful. Furthermore, the College will not be able to assist the State in its goal to be a world leader in STEM education leading to more qualified Michigan citizens possessing the skills needed for the new economy.

What alternatives to this project were considered? Why is the request project preferable to those alternatives?

We did look at new facilities, however, in light of COVID implications for supply chain and labor costs, the overall projected cost of such a facility was higher than this planned remodel. We also considered other buildings in the community for retrofitting, however these did not meet our instructional needs – and, they were significantly removed from the Central Campus, thereby creating negative impacts upon students with limited or no transportation supports.

JACKSON COLLEGE



Capital Project Request - Fiscal Year 2024

October 2022

**FISCAL YEAR 2024
CAPITAL OUTLAY MAJOR PROJECT
REQUEST**

Institution Name: Jackson College

Request Code: 368X24X005

Capital Outlay Code: 368X24C005

Project Title: Whiting Hall Renovation

Project Focus:	<input checked="" type="checkbox"/>	Academic	<input type="checkbox"/>	Research	<input type="checkbox"/>	Administrative/Support
Type of Project:	<input checked="" type="checkbox"/>	Renovation	<input type="checkbox"/>	Addition	<input type="checkbox"/>	New Construction

Approximate Square Footage: 101,266

Total Estimated Cost: \$50.5M

Estimated Duration of Project: 1.8 yrs.

Is the Five-Year Plan posted on the department's public Internet site?	<input type="checkbox"/> YES
Is the requested project included in the Five-Year Capital Outlay Plan?	<input type="checkbox"/> YES

Project Purpose

Justin Whiting Hall, the oldest building on the Jackson College Central campus and was constructed in 1967. The building is filled with archaic infrastructure, inefficient HVAC systems, as well as other antiquated and inferior energy systems. The building was constructed at a time where there were no concerns about instructional and operational technology that is considered contemporary today, let alone concerns for the accessibility of persons with limited mobility and other disabilities. The building houses much of the College's mid- and heavy-vocational, technical, and career programs, whose labs were constructed using older technology, antiquated instructional design, uninsulated spaces, and outmoded operating systems. Given the rapid change in instructional technology, new instructional programs and instructional typologies that the College needs to deploy to satisfy current and emerging employer needs, the labs and related space are in need of significant renovation. A principal instructional program in the building is in the College's nursing and allied health program area. To make these programs more effective with student outcomes, the College needs to construct a full continuum-of-care (i.e., birthing through palliative care) simulation center complete with multiple health simulation stations, equipment, student monitoring systems, and instructional storage. Finally, the building houses the College's medical clinic and mental health clinic, both of which are in desperate need of expansion due to expanding and vital student need

Scope of the Project

The Whiting Hall renovation, and its modest 20,000 square foot expansion, is a full and comprehensive removal of old infrastructure to the building walls, and the reconstruction of the building with new infrastructure, electrical gridwork connection, installation of energy management systems, with new instructional and technological design. Also included in the project is related instructional equipment, and area pedestrian circulation flatwork. The minor expansion will provide for additional learning spaces, labs, and cocurricular study spaces. Additionally, the project will allow the College to address multiple deferred maintenance issues, improve building security issues, and enhance operational efficiencies.

Program Focus of Occupants

As alluded to earlier, the specific programs included in this facility renovation and expansion include the following:

- Industry 4.0 Manufacturing
- Nursing
- Dental Hygiene
- Mental Health Clinic
- Henry Ford Health Clinic
- Faculty Offices
- Jackson Preparatory & Early College
- Phlebotomy
- Health Occupations
- Electronics Technology
- Utilities Technologies, including Line Working Training
- Workforce Development
- Welding Technologies
- Engineering
- Patient Care Technologies
- Medical Records Technology
- Energy Management Systems
- Cybersecurity
- Medical Coder
- Computer Networking
- Robotics Technology
- Student Computer Lab
- Student Lounge
- Circulation, Restrooms, HVAC, Maintenance and Storage Spaces
- Administrative Offices

- Faculty Offices
- Lobby Space

New/Expanded Programs to be added:

- Mechatronics
- Expanded Robotics
- Emergency Medical Technician
- Massage Therapy
- Physical Therapy
- Industry Training Center
- Facility Maintenance Technology

Additional Information:

How does the project support Michigan's talent enhancement, job creation and economic growth initiatives on a local, regional and/or statewide basis?

As noted by the Brookings Institute, economic development organizations, [like Jackson College] "...must evolve their value proposition to meet the most pressing concern of existing or potential businesses: workforce quality. Businesses cannot grow without a capable workforce, and right now regional economies are undermined by frictions that limit both the development and deployment of workers. Research has always shown that local economies develop only if their people do first, and today's tight labor markets have presented the case for inclusive talent development...the inability and to effectively attract talent due to declining interstate mobility, economic development organizations are being forced to rethink homegrown talent development. That includes examining the systemic biases and barriers that have prevented residents— particularly those disadvantaged by structural racism and economic inequities—from acquiring the skills and social supports that propel them into good jobs. In short, the combination of tight labor markets and the continued importance of human capital to business growth has provided economic development leaders with a new mandate to center talent development in their institutions, or risk irrelevance." (https://www.brookings.edu/wp-content/uploads/2019/10/2019.10.15_Brookings-Metro_Talent-driven-economic-development_Parilla-Liu.pdf).

Jackson College has, as an ongoing focus, to only provide instructional degree programs that minimally provide for 150% of the Federal Poverty Level for a family of four. Beyond that, our focus has been to provide programs that lead to, if not outrightly qualify, for good paying, family sustaining, jobs that support the Michigan economy. Our instructional programs,

their viability, and attendant instructional equipment and curriculum are well researched and influenced heavily through Design Thinking practice, employed by the College. Additionally, the Voice of the Customer (VoC) continues to provide meaningful input into the instructional process. Indeed, each instructional program includes an advisory committee comprised

of members of the community of practice. The contributions of the advisory committee also assist with our efforts around workforce development and helping us to better understand workforce demand.

The instructional programs currently in this facility, and those proposed to be added are fully supported by the vision of the Jackson College board of trustees with respect to workforce focus. Indeed, as a locally-elected board, members are uniquely positioned to prioritize the work of the College around meeting local, as well as regional workforce development. Consequently, the College is an active partner with Michigan Works Southeast, the Jackson Enterprise Group – the local economic development organization, as well as the economic development groups in Lenawee and Hillsdale Counties. Further the College partners with peer community colleges, such as Detroit Drives Degrees, WIN, and other higher education groups concentrating efforts on workforce development. The existence of Wayne State University, and Siena Heights University, on the College's Central Campus, also provides opportunities for students and the area workforce to continue to pursue knowledge and skills as the workplace continues to change.

More particularly, the College President & CEO is a member of the previously mentioned Enterprise Group, and as such helps to position the College with proper education, training, customized skills training, and supports for the region, based upon area current and anticipated demand. The programs provided in this building are based upon current and projected area employer demands.

The College also makes use of LightCast, formerly EMSI data, to engage in planning regarding workforce demand at the local, area, state, and regional area. These data continue to support instructional programs in this facility and those anticipated to be added over the next 3-5 years. These data also reveal the economic impact that the College has on the region it serves. More specifically: During the analysis year, Jackson College spent \$30.3 million on payroll and benefits for 597 full-time and part-time employees, and spent another \$8.2 million on goods and services to carry out its day-to-day operations. This analysis shows that, for the most recent report, operations and student spending of Jackson College, together with the enhanced productivity of its alumni, generated \$276.4 million in added income for the Jackson College Service Area economy. The additional income of \$276.4 million created by Jackson College is equal to approximately 2.4% of the total gross regional product (GRP) of the Jackson College Service Area. For perspective, this impact from the college is nearly as large as the entire Real Estate & Rental & Leasing industry in the region. The impact of \$276.4 million is equivalent to supporting 3,517 jobs. For further perspective, this means that one out of every 38 jobs in the JC Service Area is supported by the activities of Jackson College and its students. The improved education and workforce training efforts, made possible by this Capital Outlay projects are anticipated to further grow these data in support of economic growth and workforce development, consistent with the goals of the State of Michigan.

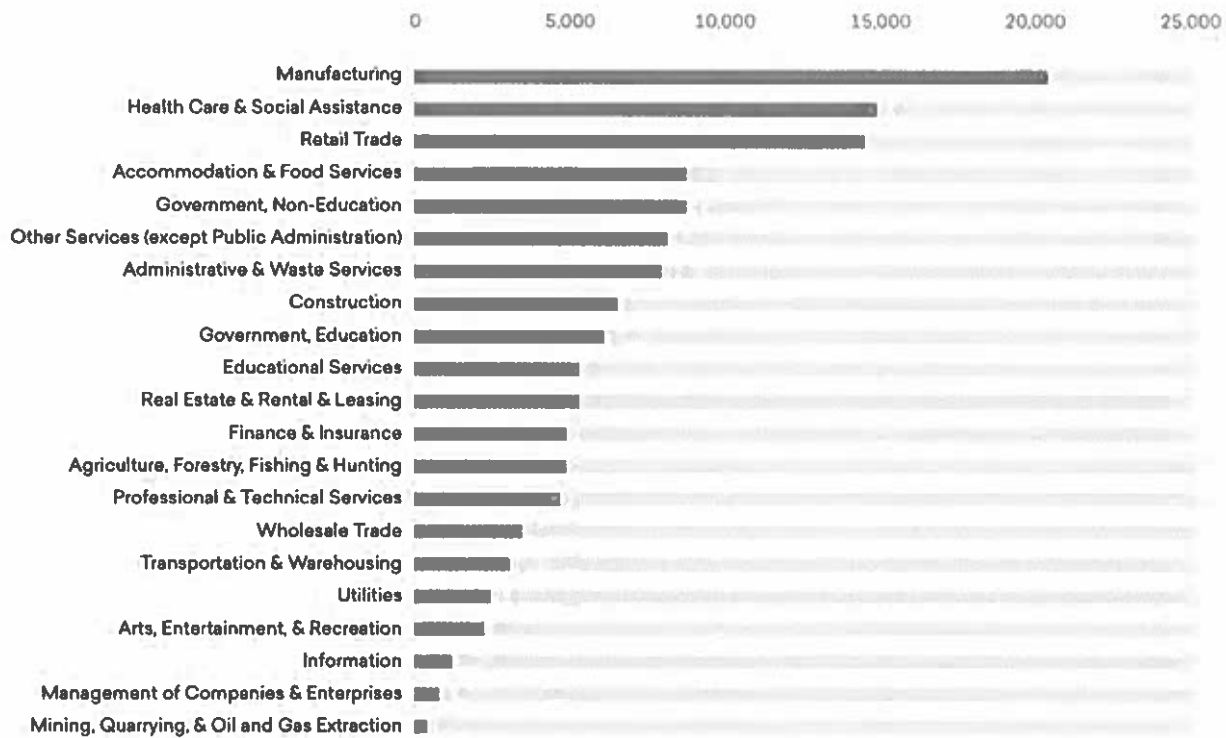
The following table outlines the LightCast data outline verifiable data as to the nature of the essential instructional and customized training areas needed to be provided by the College, according to income. Of particular note are manufacturing, electrical and utility education, nursing, and allied health, which are the very program areas included in this Capital Outlay request for Whiting Hall. These current, expanded, and new instructional programs are essential to serving the Jackson community and throughout the region, as noted by the data. Additionally, the subsequent table provides information regarding job demand by industry in the Jackson College's service area.

Industry sector	Labor income (millions)	Non-labor income (millions)	Total Income (millions)**	% of total income	Sales (millions)
Manufacturing	\$1,547	\$1,096	\$2,643	23%	\$8,479
Utilities	\$400	\$1,090	\$1,490	13%	\$2,357
Other Services (except Public Administration)	\$193	\$1,116	\$1,309	11%	\$1,835
Health Care & Social Assistance	\$832	\$115	\$947	8%	\$1,588
Government, Non-Education	\$587	\$121	\$708	6%	\$3,752
Retail Trade	\$430	\$258	\$688	6%	\$1,118
Finance & Insurance	\$297	\$196	\$492	4%	\$910
Wholesale Trade	\$226	\$246	\$473	4%	\$767
Government, Education	\$398	\$0	\$398	3%	\$447
Construction	\$281	\$76	\$356	3%	\$693
Real Estate & Rental & Leasing	\$143	\$151	\$295	3%	\$678
Administrative & Waste Services	\$230	\$59	\$289	3%	\$459
Professional & Technical Services	\$223	\$56	\$279	2%	\$435
Accommodation & Food Services	\$154	\$69	\$223	2%	\$426
Educational Services	\$169	\$45	\$214	2%	\$307
Transportation & Warehousing	\$152	\$62	\$214	2%	\$421
Agriculture, Forestry, Fishing & Hunting	\$127	\$73	\$200	2%	\$548
Information	\$52	\$75	\$128	1%	\$221
Management of Companies & Enterprises	\$64	\$5	\$68	<1%	\$102
Arts, Entertainment, & Recreation	\$35	\$13	\$48	<1%	\$81
Mining, Quarrying, & Oil and Gas Extraction	\$9	\$9	\$18	<1%	\$32
Total	\$6,553	\$4,929	\$11,481	100%	\$25,656

* Data reflect the most recent year for which data are available. Emsi data are updated quarterly.

** Numbers may not add due to rounding.

Source: Emsi industry data.



* Data reflect the most recent year for which data are available. Emsi data are updated quarterly.
 Source: Emsi complete employment data.

How does the project enhance the core academic, development of critical skill degrees, and/or research mission of the institution?

The extensive renovation of Jackson College's Whiting Hall is essential in order to enhance the critical instructional and workforce training demand for the region. Jackson College is the preeminent leader in education and workforce development that is looked upon by area employers as the educator of first choice. The College is looked upon to provide for a strong cadre of interns, contract training, economic development, and employee certificate and degree graduates. And while not a research-based institution of higher education, Jackson College's Office of Institutional Research and Effectiveness (IRE), does provide extensive outcomes and performance data on the instructional and workforce efforts of the College. Through this Capital Outlay project, Jackson College remains relevant and essential to the employer community by providing the competencies, skills, and abilities for their current employees, as well as with a steady stream of qualified students to meet their workforce needs.

Is the requested project focused on a single, stand-alone facility? If no, please explain.

The project contemplated by this proposal, is a single, stand-alone facility, though there is a physical "connector-walkway" to another nearby building, known as the Health Laboratory Center HLC. No funds proposed in this Capital Outlay request will be associated with the HLC building.

How does the project support investment in or adaptive re-purposing of existing facilities and infrastructure?

As outlined previously, this building is a complete repurposing of the existing facility, with a minor square foot expansion of 20,000 square feet to better accommodate an increased number of simulation centers, training, and prototype lab spaces. Please note that the existing infrastructure (water, sewer, power distribution, boilers, air handlers, etc.) is all in critical need of replacement, and is failing in some areas, and as such, cannot be repurposed. However, much of the classroom furniture will be repurposed into the renovated facility.

Does the project address or mitigate any current health/safety deficiencies relative to existing facilities? If yes, please explain.

The new renovation will indeed correct a number of current design flaws in the existing building, particularly related to access for persons with limited mobility. Further, the new HVAC system contemplated for the facility will include elements that provide for the extreme reduction of airborne disease transmission, by incorporating a variety of filtration and intensive light technologies. Beyond this, the new elevators planned for the existing two-story building, will replace the two smaller ones wherein the cars are insufficient in size so to allow EMT patient transport stretchers/gurneys to enter.

How does the institution measure utilization of its existing facilities, and how does it compare relative to established benchmarks for educational facilities? How does the project help to improve the utilization of existing space and infrastructure, or conversely how does current utilization support the need for additional space and infrastructure?

College has engaged the CampusWorks organization (see: <https://www.campusworksinc.com/>) to ensure the creation of a fully-integrated, relational ERP system, that will permit the College to provide real-time data regarding facility utilization, utilization rates, as well as improving utilization efficacy. At present, the process is a manual scheduling system and is a lagging indicator. The remodeled facility will include proximity polling systems that allow the college staff to monitor room utilization, energy consumption, occupancy times, etc. As this building is equipped with room and space monitoring systems, other campus facilities will be likewise equipped with an aftermarket product that will be added into the College's ERP data and campus facilities management systems.

This building, even in its current configuration is an essential tool in the College's ability to address critical instructional program needs in multiple applied and technical areas.

How does the institution intend to integrate sustainable design principles to enhance the efficiency and operations of the facility?

Jackson College is committed to becoming carbon neutral by 2028. To that end, the College will utilize Leadership in Energy and Environmental Design (LEED) guidance principles in both design and construction of the facility. The LEED certified building will be designed to save the college operational money, improve operating efficiency, lower the College's carbon emissions, and create healthier spaces for our students, guests, and employees. This work is likewise critical to our ability to address climate change and meeting the Board of Trustee's ESG goals, enhancing organizational resilience, and supporting more an equitable region of the State of Michigan. Additionally, the construction methodologies utilized on this project will likewise be LEED compliant insofar as scrap materials will be sorted and recycled, as will the refuse from the demolition of the building.

Finally, as part of the design process, the project planning cycle will consider more sustainable options for building operations including the use of carbon credits, photovoltaic and ground thermal options. Minimally, the building development process will prioritize the use of highly efficient energy utilization systems, ensure a full building and equipment commissioning process, and closely monitor energy utilization through advance building censoring systems technologies.

Are match resources currently available for the project? If yes, what is the source of the match resources? If no, identify the intended source and the estimated timeline for securing said resources.

Yes, the intended source for the Jackson College 50% match is general operations and bond indebtedness.

If authorized for construction, the state typically provides a maximum of 75% of the total cost for university projects and 50% of the total cost for community college projects. Does the institution intend to commit additional resources that would reduce the state share from the amounts indicated? If so, by what amount?

Given the limited local property tax support for Jackson College operations (i.e., 10% of the College's total revenue stream), and despite the fact that multiple requests for additional tax support and/or Headlee Override requests have been declined by Jackson County voters – who have continually denied such requests since 1964, the College is unable to provide additional project match funding.

It should be noted that such matching is not a requirement of the Capital Outlay legislation, and it is believed that our smaller institution should not be held to the same level of match expectation as other community colleges in the State which have local tax support in excess of 50-60% of their total revenue streams, not to mention the significant tax base of those larger metropolitan areas, as well as their substantial foundation capacities. Such practice is not statutorily required, nor is it equitable in awarding additional application review points for this. We respectfully request the elimination of this practice, or minimally providing some other weighting measure to allow for such huge variation in the resources available to large and smaller institutions.

Will the completed project increase operating costs to the institution? If yes, please provide an estimated cost (annually, and over a five-year period) and indicate whether the institution has identified available funds to support the additional cost.

As a single, discrete building, the total operating costs will be reduced due to incredibly improved HVAC systems, including the introduction of energy management systems, and a reduction of energy costs. The addition of modest supplementary square footage will not create additional operation costs in excess of the savings obtained from energy efficiencies. The additional cleaning team service required for the minor additional spaces will be covered by another half-time support person.

What impact, if any, will the project have on tuition costs?

Students will not feel the effects of any tuition increase beyond those of normal inflationary adjustments.

If this project is not authorized, what are the impacts to the institution and its students?

Should Jackson College's request for Capital Outlay be denied, the College will continue to make application for future consideration. Beyond this, college will be unable to add other instructional programs at a cadence that would allow for timely response to industries' changing needs. Part of this project and its renovation is designed to address long-standing and extensive deferred maintenance issues that are beyond the immediate financial capabilities of the College. Consequently, the College will be strapped with addressing an unnecessary level of expenses related to energy costs and repairs.

What alternatives to this project were considered? Why is the requested project preferable to those alternatives?

The College has contemplated other options in opposition to pursuing the capital outlay request, which has included seeking private/donor funding, additional millage support, and partnering with private organizations. None of these options were successful. As an example, the College has only 9% of its total revenue coming from the local taxpayer base. On 14 different occasions since its original millage of 1.33 mills in 1964, however all 14 requests for additional support were denied by voters. The millage, due to the Headlee effect, is now 1.1 mills. This, in part, describes why the College is now working through the option of Capital Outlay to achieve its mission and objectives.