

**Fiscal Year 2020**

**Capital Outlay Project Request**

Institution Name: University of Michigan-Flint  
Project Title: University Tower Renovation  
Project Focus: General Academic, Dual Enrollment Partnership,  
Public Safety  
Type of Project: Renovation  
Approximate Square Footage: 143,280 (gross), 103,280 (assigned)  
Total Estimated Cost: \$30 million  
Estimated Start/Completion Date: January 2016 (design start)/August 2022 (completion)

Is the Five Year Plan posted on UM-Flint's website? Yes  
Is the requested project the top priority in the Five Year Capital Outlay Plan? Yes  
Is the requested project focused on a single, stand-alone facility? Yes

**PROJECT PURPOSE**

The University of Michigan-Flint seeks \$19.8 million in state support to renovate the recently acquired First Merit North Tower Building (renamed the University Tower Building, or UTB) to support its academic and administrative needs, to provide public safety services to the surrounding area in the City of Flint, and to spur economic growth. This cost-effective renovation, which represents adaptation of and re-purposing of existing facilities, addresses immediate space limitations, meets growing demand for instructional space for all disciplines within the university, frees up space in a cascading fashion to enable key health care-related disciplines to grow enrollment and serve the economic needs of the city, region, and state, and it addresses an urgent need for more effective and centralized space by our Department of Public Safety, while simultaneously improving local safety and facilitating greater community relations. The need for these academic and service spaces have been articulated in a number of studies and reports, including our most recent master plan. Renovation of the University Tower Building will position the University to achieve its long term strategic goals for many years, and more significantly, it will enable the University to grow academic programs and contribute toward creating a more vibrant downtown Flint using an existing building in which the total cost will be significantly less than the cost to build a comparable new building.

The University Tower building will be renovated to include eight new classrooms of varying capacities, new space for academic units, space for the Department of Public Safety, space for key academic-related service departments, space for the upper administration, public spaces for community engagement activities, and space for the Genesee Early College, a highly successful dual-enrollment partnership that has become a vital pipeline of students into the university while

simultaneously providing cost-effective advanced college preparation. These renovations will also enable a very important cascading effect that will allow us to use space in other buildings to enable significant enrollment increases for key healthcare-related fields. This will be accomplished by allowing a number of healthcare departments to expand into the spaces that will be vacated by units moving to the University Tower Building or to other University locations. The project will have immediate positive impact on the following units:

- School of Education and Human Services
- College of Health Sciences
- School of Nursing
- College of Arts and Sciences
- Office of Research and Sponsored Programs
- Office of Extended Learning
- Thompson Center for Learning and Teaching
- Department of Public Safety
- Information Technology Services
- Genesee Early College

UM-Flint has assigned top priority to expansion of programs that train future science educators, health professionals, scientists, and engineers. Acquiring the UTB and its renovation represents the next essential phase in our strategic growth as a regional comprehensive university serving the needs of our region and the state. After the success of the three-phase plan to renovate and expand capacity in French Hall and Murchie Science Building, this new development is essential to address existing constraints on our facilities in the greater campus community: general-purpose classroom utilization is at or near capacity and prevents effective scheduling of new classes; desirable and important health professions fields cannot increase enrollment nor roll-out new programs due to lack of space in existing facilities; important academic and service units, as well as the Department of Public Safety, lack well-suited permanent homes; and a key K12 partnership is prevented from expanding due to lack of space in existing facilities.

The proposed UTB academic build-out will enable UM-Flint to: (1) provide a permanent and visible home for our School of Education and Human Services; (2) accommodate expansion of the College of Health Sciences (CHS) and the School of Nursing (SON); (3) accommodate growing need for additional general classrooms and conference spaces; (4) consolidate spaces of three departments responsible for providing faculty and student support services; (5) provide better designed and permanent space for the campus Department of Public Safety (DPS); (6) provide a permanent home for the Genesee Early College (GEC); (7) consolidate executive administrative offices.

Notably, the relocation of DPS will have several additional benefits to the City of Flint. It will establish a greater and more visible presence of public safety officers in the downtown Flint area on Saginaw Street. This presence will consequently create a safer zone for several blocks north and south of the building. It will also provide the K12 students in Genesee Early College with a safer pickup/drop-off zone, in addition to giving them access to newer/better technology-enabled

instructional facilities. DPS also creates the opportunity to become the primary backup/host of the Genesee County emergency dispatch service, which will provide better coordination of public safety activities among university, city, and county units as well as enhancing the level of DPS capability to serve the UM-Flint campus. The primary cost of the backup Genesee County dispatch is in equipment, which will be funded outside the cost of the UTB project by Genesee County.

### **School of Education and Human Services**

Since its inception over 19 years ago, the School of Education and Human Services (SEHS) has been located on the fourth floor of our French Hall with less than 6,500 square feet of space. SEHS has experienced significant growth over time and is comprised of the Education Department, the Social Work Department, and the Center for Educator Preparation, and Early Childhood Community Programs, which includes the Early Childhood Development Center and other programs. The School has had numerous accomplishments including development of several new graduate programs, a post-Master's Education Specialist degree, and the Doctor of Education in Leadership. The School launched its Center for Educator Preparation over three years ago with a mission of significantly expanding and enhancing its partnerships with K-12 community. The Center utilizes a student centered approach and brings together all of the services the university has to offer into one place to assist and support the success of future and current educators.

SEHS will be moved to the UTB, which will allow it to achieve its current and future goals. The School will occupy approximately 14,000 square feet of space and will have access to the planned classrooms and shared conference space in the UTB. Moving SEHS to the UTB will give it a distinct identity with a positive effect similar to that resulting from the move of the School of Management to the Riverfront Center.

Key initiatives will benefit from this move. SEHS has started three new academic programs in 2016-17 and has developed nearly 60 partnerships with non-profit organizations in Genesee County alone. The SEHS Center for Educator Preparation has partnered with numerous Flint-area school districts in programs intended to build pipelines for students of color into our education programs. The School also administers the Great Expectations Program at Cummings Community Center, serving children from two months to five years of age and who have been impacted by the Flint water crisis. The greater downtown visibility of SEHS will help to facilitate these important community engagement efforts and serve as a more effective recruiting tool in the development of its newly offered programs.

Economic effects will also be positive. In addition to the new programs from our Department of Education in SEHS, the Social Work department, which offers programs that supply graduates in professions growing in Michigan, will receive significant new facilities in this building. Further, the spaces that will be vacated by SEHS on the 4<sup>th</sup> floor of French Hall will be reassigned to other units within our College of Arts and Sciences (CAS) that are experiencing significant enrollment growth.

### **College of Health Sciences**

The University of Michigan-Flint College of Health Sciences (CHS), formerly the School of Health Professions and Studies (SHPS) has experienced significant enrollment growth over the

past decade, growing from 485 students in Fall 2007 to 842 students in Fall 2018, which also accounts for a significant enrollment decrease subsequent to the Flint water crisis in 2014. These numbers exclude Nursing because the Nursing Department separated from SHPS and formed the School of Nursing (SON) as of January 2017. SHPS has subsequently changed its name from the School of Health Professions and Studies to the College of Health Sciences. CHS requires additional spaces to accommodate continued growth and be able to support planned future program expansions. CHS specifically needs classroom and teaching laboratory space, faculty offices, faculty and student research space, integrated learning labs, and student spaces. CHS anticipates the following immediate and near future programmatic developments:

- CHS will implement its approved Doctor of Occupational Therapy program and will form a new academic department. The program will require dedicated teaching lab space (2), access to classroom space (class size of 40), and some faculty research space in addition to the faculty office suite as specified in our original space request.
- The College anticipates adding a joint Respiratory Therapy bachelor degree program with Mott Community College within the next two years. This is still in the proposal development phase, and we do not know the exact space requirements but do anticipate needing faculty offices, one teaching laboratory, and access to classrooms.
- CHS will implement its approved Physician Assistant program beginning in June 2020. This program will be primarily offered on campus and will require dedicated laboratory space in addition to classroom usage, some faculty research space and faculty office space.
- Public Health and Health Sciences (PHHS) is also considering adding some programs, but their needs would primarily be for classroom space without added laboratory space.

Resulting from the UTB renovation, spaces currently occupied in the William S. White building by departments from the College of Arts and Sciences, as well as the Genesee Early College and Office of Research and Sponsored Programs, will be vacated. These spaces will be reallocated and partly assigned to CHS, enabling them to locate and expand existing and new programs within the building.

### **School of Nursing**

Enrollment in UM-Flint's Nursing programs has also increased significantly over the past 10 years, from 908 students in Fall 2007 to 1,503 students in Fall 2017, again accounting for an enrollment drop subsequent to the Flint water crisis. Having separated from CHS (formerly SHPS) to become the School of Nursing (SON) in January 2017, the school is developing a number of new academic programs including an MS in Nursing Education, a graduate certificate in Nursing, and several concentrations within its current MS Nursing and Doctor of Nursing Practice. They have also been approved by their accrediting organization, the Commission on Collegiate Nursing Education (CCNE), to expand their BSN enrollment by up to 96 students, subject to available classroom and lab facilities. Expansion of the Nursing programs will require additional laboratory space, faculty offices and use of larger classrooms.

As with CHS, the UTB renovation will enable certain departments to vacate space in the William S. White building. These spaces will be partially assigned to the School of Nursing, enabling them to expand their highly successful undergraduate and graduate programs and to offer new programs in Nursing Education and the graduate certificate in Nursing.

### **College of Arts and Sciences**

The College of Arts and Sciences (CAS) maintains two departments in the William S. White Building: Art and Art History, and Communications. These spaces are not ideal for the two departments for two reasons. First, the Art and Art History department requires specialized facilities to instruct students in the studio art disciplines. The facilities currently occupied are not ideal for development of artistic objects, i.e. ceramics, painting, drawing, development of statues and other objects. Accordingly, the University is currently conducting a space assessment study to determine the best way to consolidate and relocate the Art and Art History department in order to free up space in WSW.

The Communications department is significantly removed from French Hall and Murchie Science Building, where the majority of the CAS departments are located. The renovations in UTB will enable SEHS to vacate the 4<sup>th</sup> floor and the Office of Extended Learning (OEL) to vacate its current offices on the 2<sup>nd</sup> floor, of French Hall. These two actions will allow Communications to move into portions of the newly available spaces in French Hall, with additional space becoming available for more needed classrooms in French Hall.

### ***Accommodate growing need for additional classrooms space***

The University is in need of additional classroom and conference spaces. The increased demand for and utilization of classrooms have created academic bottlenecks for students in all fields. Various departments from across the University are experiencing scheduling difficulties, such that tight scheduling of classrooms and laboratories limits our ability to offer course and lab sections at times convenient for many of our students. Without adequate “wiggle room,” if one program needs to change the time of a single section, times for many other course or lab sections must be changed as well. The end result is that students cannot always take a required course or lab when they need it.

An extensive analysis of the enrollment levels by program, covering five recent academic years from 2010-11 through 2014-15 clearly delineates the need for the following additional classroom spaces:

Type of Room	Seats	Square Footage	Quantity	Total Square Footage	Total Seats
Classroom	70	2,880	2	5,760	140
Classroom	50	1,600	1	1,600	50
Classroom	30	960	1	960	30
Piper Lab	30	1,100	1	1,100	30
Classroom - seminar	25	720	2	1,440	50
Instructional Computer Lab/ITV	40	1,700	1	1,700	40
Open Computer Lab	40	1,700	1	1,700	40
<b>Totals</b>			<b>9</b>	<b>14,260</b>	<b>380</b>

The university also needs conference spaces. In recent years, the University has adopted a more efficient process of assigning conference space, in which control of conference rooms is no longer assigned to individual departments. This allows us to allocate a greater percentage of building spaces for instructional activities to benefit our students. The planned conference spaces in the UTB will be shared and are intended to support the needs of several academic and service departments across the campus.

***Better integration of service units in support of online learning, excellence in teaching, and sponsored research***

The Thompson Center for Learning & Teaching (TCLT) and Office of Extended Learning (OEL) share a common mission to support student success through the development of our faculty. A shared space would help foster effective design and program consistency available to faculty as both departments advance Strategic Plan Priority #2.

Both departments look for ways to collaborate in order to provide uniformity in the delivery of information and approaches that are shared with faculty. The TCLT provides comprehensive faculty development for course design, peer observation and coaching for face-to-face courses, active learning strategies, and more recently, scaffolding high impact practices into curriculum design and curriculum mapping. Likewise, OEL has broadened its services to support not only faculty development for online and mixed-mode course design and delivery, but synchronous remote sessions, lecture capture of face-to-face courses, and technology support for programs used in both online and face-to-face teaching. For example, currently both TCLT and OEL:

- Subscribe to and advocate for the model of “backward design” in course development
- Develop effective models of peer observation for all forms of course delivery
- Support faculty use of technology in the classroom, regardless of delivery mode
- Seek to increase options for faculty development in the online environment

- Collaborate to identify and satisfy faculty professional development needs

A welcoming, central location will help ameliorate faculty reticence to try new tools or methods. For faculty who are averse to the concept of online learning or hesitant to implement novel teaching strategies, a joint center would be beneficial. Demonstrating cohesiveness among philosophies and instructional design may help to improve faculty receptiveness to online teaching and/or alternate learning strategies. The synergy of the TCLT and OEL offices working together will promote and ultimately increase online course offerings. Lastly, housing TCLT and OEL in a shared location would be a logical and responsible use of space as it would make other space available for master planning initiatives.

The Office of Research and Sponsored Programs (ORSP) at UM-Flint is currently housed in a suite on the fourth floor of the WSW Building that once served as a broadcast studio. The space is long and narrow and does not have a good meeting space (centrally located or otherwise) for collaborative work. The director's office is situated in the former broadcast studio and is separated from the rest of the office staff by a storage area currently used as an office kitchen (with a refrigerator, sink and water cooler), and a poster printer, work table, storage cabinets and computer workstation. The department lacks access to a common meeting space for casual or unscripted interaction and does not have enough space to conduct faculty workshops on research development, professional development and research initiatives. Moreover, the faculty most often using ORSP's services come from CAS, SOM, and SEHS, all of whom occupy space across the Flint River in French Hall, Murchie Science Building, and the Riverfront Center. Movement of ORSP to UTB would place them closer to the gathering places of these units, as well as align them more closely with community partners concentrated on Saginaw Street in the downtown area.

Having ORSP and TCLT in the same space will allow for better discovery of faculty research interests and more closely align them to support broader faculty interests in basic and pedagogical research. Having TCLT and ORSP in the same building or ideally on the same floor would allow for better integration of workshops and professional development. Locating both units in the same space argues for a more state of the art meeting room or computer lab for hands-on-learning with the latest pedagogical approaches or research methods. Co-location of TCLT, OEL, and ORSP could provide opportunities to integrate digital platforms.

Expanding the portfolio of Sponsored Research at the University of Michigan Flint is important to the vitality of its higher education mission. In order to stay current in an information age, in an era when the corpus of human knowledge is estimated to double every 12-13 months, more collaborative and original teaching and research will be necessary to keep pace with advances in scientific and creative knowledge. Instrumentation needs in the physical sciences, data needs in the social and health sciences, and communication and innovation in creative arts and humanities, require the adoption of new methodologies, new information technologies, and new information gathering, original research and theoretical exploration. In the immediate future, these needs can be better served in many instances by expanding the diversity of external funding, by collaborating with other nearby universities in seeking external funding, and investing strategically in areas of faculty expertise where professional development and research support can bolster research productivity. We believe that City of Flint and mid-Michigan are

better served by a UM-Flint campus with a much higher proportion of research active faculty whose expertise is actively sought by the community to build social resilience, to recover from disinvestment, to create a more diverse, educated, socially intelligent workforce, to serve as an incubator for empowerment, new technology and economic development, able to build safer, smarter and sustainable communities, promote healthier populations, and improve standards of living.

Greater support for sponsored research in mid-Michigan can help recruit the kind of young investigators who welcome the challenge of building capacity and the opportunity to work in a smaller, more interdisciplinary, urban campus environment, where departments are smaller and administrators more responsive to the research ideas and initiatives of beginning investigators. Providing a common physical space to meet, to conduct research or methods workshops, to demonstrate new software, to house common data projects, to offer to provide research development services, and research design support, all incentivize active research agendas and inspire new forms of inquiry, synthesis and problem solving.

### ***Address Michigan's increased demand for graduates in Health Professions***

Currently, our health professions are at or nearing capacity imposed by space constraints. Our highly rated Anesthesia program, which includes the newly approved Doctor of Nurse Anesthesia Practice (DNAP), was recently moved from off campus in a building originally intended as a dorm for medical residents, on the grounds of Hurley Medical Center. The Hurley site was noisy, poorly air-conditioned and too small. Accordingly, the Anesthesia program was moved into offices in WSW, which have further exacerbated our space needs. The recently approved Master of Science, Physician Assistant (MSPA) program is intended to start with a cohort of 40 students in June 2020, growing to an annual cohort of 50 students by its 3<sup>rd</sup> year. This will be the only PA program offered within the University of Michigan system, yet the WSW building where it would be housed is currently at capacity. The PA program cannot be offered without facilities that include one lab, two instructional classrooms, and at least 11 offices for faculty and staff. Renovation of UTB will facilitate finding better university-located facilities for these important programs, as well as other programs in SON and CHS. For example, Physical Therapy requires additional laboratory and classroom space to enable it to meet current enrollment demands.

Job statistics on health professions support the need for expansion and development in these areas. As one example, the Bureau of Labor Statistics states that the number of jobs in the Physician Assistant profession is expected to grow by 37% between 2016 and 2026 (Source: BLS Occupational Outlook Handbook. Available at <https://www.bls.gov/ooh/healthcare/physician-assistants.htm>; further supporting evidence is provided below in the answer to Question 1.) To ensure we are meeting the evolving needs of the healthcare industry, representatives of the School of Nursing and College of Health Sciences have regularly examined the needs of Michigan for healthcare professionals and have been highly responsive to market demands in these key industries. Accordingly, the proposed project will enable UM-Flint to respond to industry demand as well as to “enhance Michigan's job creation, talent enhancement, and economic growth initiatives.”



### ***Increase UM-Flint Downtown Presence and Improve Public Safety***

The University Department of Public Safety will be headquartered in the newly renovated facility. The DPS offices will include space for 20 officers, a large combined training and conferencing room, and a dispatch office for the University of Michigan-Flint Department of Public Safety, the Genesee County 911 dispatch center back-up, and report writing offices for Michigan State Police. To enhance the visibility of public safety presence on campus and in the downtown City of Flint, DPS also intends to park squad cars on Saginaw Street in front of the building. Numerous studies have supported the assertion that this additional visibility will create a safer environment in the downtown Flint area, for several blocks north and south along Saginaw Street as well as westward into local neighborhoods, improving business conditions, and making the area perceptibly safer for our University community.

Neighborhoods adjacent to the university are considered fragile, with a low median income and standard of living. Economic activity adjacent to the downtown area will increase with the greater presence of UM-Flint DPS. The location of UM-Flint DPS in the UTB places its headquarters two blocks from University Avenue, the eastern end of the Flint University Corridor between UM-Flint and Kettering University. Accordingly, the UM-Flint DPS bolsters the presence of police in the university corridor and consequently increases safety in this prioritized area of Flint.

### **SCOPE OF THE PROJECT**

The proposed project centers on the design and renovation of an existing 143,280 square-foot building, the University Tower Building, recently acquired from First Merit Corp. in downtown Flint. To ensure that we offer a flexible learning platform supporting high-impact pedagogical practices and interdisciplinary collaboration for all university disciplines, to ensure optimal learning spaces for our programs, to provide a home for a highly successful dual-enrollment operation, the Genesee Early College, and to provide sufficient additional administrative office space, we engaged Neumann Smith in the conceptual pre-design of this renovation.

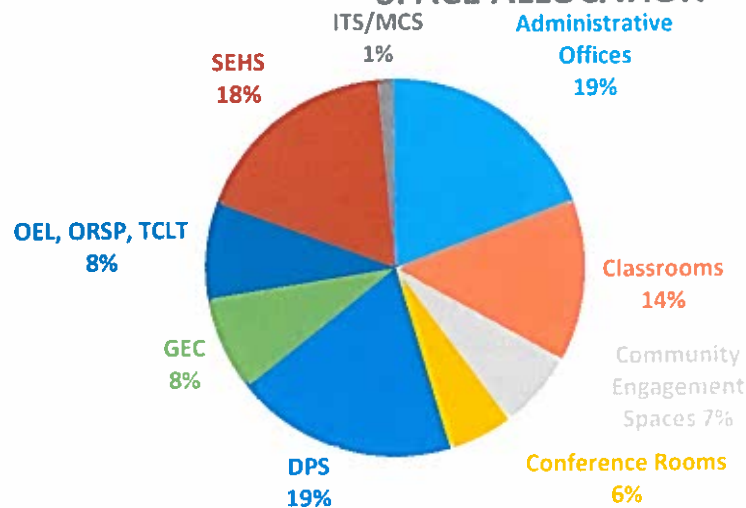
The project will feature new space allocated equitably for a number of university departments. It includes spaces for academics and administration; eight new classrooms that will be employed across all university departments to accommodate program growth across the entire university; space for the Genesee Early College, including six new classrooms; space for the Department of Public Safety; and locations for public engagement that include a first-floor event center within the former bank lobby and teller station. This space would also create the opportunity for student art to be on display.

These classrooms are an important feature; they will be flexibly designed to support interactive learning, facilitate interdisciplinary collaboration, and to especially meet evolving needs. An in-depth study of classroom utilization was conducted to ensure that the size and number of new classrooms in UTB would facilitate the growth of student enrollment for the next 5-10 years. The use of the new classrooms will complement use of all other academic buildings' traditional spaces and relieve over-scheduling in traditional classrooms across campus.

## Design Objectives for the proposed UTB Renovation

- Showcase the expanded contiguous space for the School of Education and Human Services
- Accommodate evolving instructional needs by providing new flexible classrooms to fully support the needs of departments across the university
- Provide a highly visible downtown presence for UM-Flint Public Safety
- Centralize key related service departments that include the Thompson Center for Learning and Teaching, the Office of Research and Sponsored Programs, and the Office of Extended Learning
- Accommodate Genesee Early College
- Foster innovation and cross-disciplinary teamwork with spaces that encourage collaboration
- Attract students with technology-rich, interactive spaces
- Support and enhance existing community partnerships
- Attract faculty with state-of-the art education and research facilities
- Ensure safe, secure, and accessible spaces for all occupants
- Centralize executive administration offices and meeting facilities, in order to facilitate efficient operation and improve student-centered spaces in the University Pavilion

## PROPOSED UNIVERSITY TOWER RENOVATION: SPACE ALLOCATION



Spaces within the renovated building will feature state-of-the-art, technology-enhanced facilities that will enable us to produce job-ready graduates for our economic prosperity region, as well as the state. They will also facilitate more effective and efficient interaction of administrative departments, improve safety in the downtown City of Flint area, and enable Genesee Early College to expand its offerings.

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

The UTB renovation will enable UM-Flint to supply talent needed for Michigan's growing and emerging industries. More than 77% of UM-Flint graduates stay in Michigan to pursue their careers, ensuring that Michigan retains valuable talent. Of the graduates who stay in Michigan, 58% stay in our surrounding region, especially in Genesee County.

The programs that will be positively affected by this renovation project contribute to the university's mission while simultaneously advancing local and regional economic development. Programs in Nursing, Anesthesia, Physical Therapy, Occupational Therapy, Physician Assistant, and Public Health all require a significant science basis that is partially addressed through greater science offerings in the recently approved MSB addition. This project will further enhance the benefits of the MSB addition by expanding and enhancing several important health care professional programs, which will contribute a significant presence of skilled workers to Flint and Genesee County, meeting the state's first metric to make a positive impact on job creation. For counties in the East Michigan Prosperity Region, which include Genesee, Huron, Lapeer, Sanilac, Shiawassee, St. Clair, and Tuscola counties and also encompasses the I-69 International Trade Corridor, the following are relevant predictions of job growth for 2016-2026:

***Job Creation***

Physician Assistants	20.8% growth
Physical Therapists	17.3% growth
Occupational Therapists	16.4% growth
Nurse Practitioners	27.3% growth
Healthcare social workers	12.3% growth
Mental health and substance abuse social workers	12.9% growth
Community and social service specialists	15.8% growth
Nursing instructors and teachers, postsecondary	11.8% growth

Source: State of Michigan, DTMB, Employment Projections Excel Files, Long-Term Occupational Employment Projections 2016 to 2026. Available at <http://milmi.mt.gov/datasearch/projections-excel>

It is worthwhile to note that statewide, these numbers are generally higher. For example, Physicians Assistants are projected to experience 37.7% growth statewide over the same time period. With the exception of the "community and social service specialists" category, the statewide projections are higher across all disciplines in the table above, indicating healthy projected statewide and local demand for these occupational categories.

According to the Michigan Bureau of Labor Market 2016-2026 Industry Occupation Wage and Employment Projections (available at <http://milmi.org/datasearch/PROJ>), Michigan occupations in general will experience 6.2% growth and introduce approximately 231,000 new jobs during this period. Significant growth is projected in the sectors serviced by the departments that will benefit from this project, including the Healthcare and Social Assistance sector and the Educational Services sector. The Healthcare and Social Assistance sector is projected to create over 113,000 new jobs during the period, representing 18.2% growth. The Educational Services sector will be above average, creating over 26,000 new jobs representing 7.0% growth.

The current list of “Michigan’s Hot 50 Jobs” for 2026 shows high growth rates for job categories served by departments that will benefit from this project: Health care social workers, 18.7% growth; Nurse Practitioners, 34.3% growth; Occupational Therapists, 22.9% growth; Physical Therapists, 27.4% growth; Physician Assistants, 37.8% growth; Registered Nurses, 13.5% growth; Medical and health services managers, 18.1% growth; Educational Administrators, Postsecondary, 10.6% growth; Educational, Guidance, School, and Vocational Counselors, 15.2% growth (source: Michigan’s Hot 50 brochure, available at <http://milmi.org/research/michigans-hot-50-through-2026>).

At the national level, similarly high growth is expected, with Physical Therapists (28% growth), Physician Assistants (37%), and Nurse Practitioners (36%) showing exceptionally high growth potential from 2016 to 2026 (source: US Department of Labor, Bureau of Labor Statistics, and Occupational Outlook Handbook Fastest Growing Occupations table, available at <https://www.bls.gov/ooh/fastest-growing.htm>).

At the local level, the UM-Flint School of Nursing will be able to enroll an additional 96 nursing students yearly. With an estimated 80% graduation rate, they will produce approximately 77 newly qualified nurses yearly from this program alone. Similarly, the College of Health Sciences will enroll 40 new OTD (Doctors of Occupational Therapy) students yearly, producing an expected 36 graduates. They will also enroll 50 new M.S. Physician Assistant students, producing an expected 45 new Physician Assistants yearly. In addition to the revenue to the university that will be reinvested locally, these students all represent locally produced and largely locally-remaining talent contributing to the Michigan economy.

Average expected starting salary for OTD are \$84,872 annually for a positive economic impact of \$3.05 million annually to the Michigan economy. Average expected Physician Assistant starting salary is \$102,090, resulting in an expected positive economic impact of \$4.6 million annually to the Michigan economy. Average expected starting BSN salary is \$75,484, resulting in a positive economic impact of \$5.8 million annually to the Michigan economy.

Secondary benefits are derived from the presence of the Genesee Early College (GEC) and the UM-Flint DPS in the building. The GEC facilitates greater community engagement because members of the Flint community interact at the building site on a daily basis. Additionally, children from underserved areas of the greater Flint community attend high school and college courses in UTB and in other UM-Flint buildings. The Early College produces a steady stream of graduates from these communities, many of whom matriculate at UM-Flint or at other state

universities. The DPS presence similarly produces a halo effect in the downtown Flint area and expanding into nearby neighborhoods. Local populations will be more inclined to come downtown with a greater police presence; it cannot be easily quantified, but we anticipate more revenue produced at downtown businesses as a result.

Additionally, with a current and projected shortage of K12 teachers in Michigan for the coming years, the UM-Flint School of Education and Human Services (SEHS) move into UTB positions us to take greater advantage of anticipated increases in education student enrollments.

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

The proposed renovation is integral to the core academic mission of UM-Flint – meeting and exceeding the State's second metric in several ways. As a regional comprehensive campus of the University of Michigan, our focus is on academic excellence and community engagement. The proposed renovation enhances our capability in both of these areas, and it will also enhance our research mission. Three academic units will benefit directly or indirectly, including the School of Education and Human Services (SEHS), the College of Health Sciences (CHS), and the School of Nursing (SON). The Genesee Early College, an innovative early college (K13) school that produces high school graduates who earn up to 65 college credits, will also receive space and enhance our mission by continuing to produce a steady stream of well-prepared students who matriculate at UM-Flint and other state universities. Also receiving space are key support units that include our Thompson Center for Learning and Teaching (TCLT), our Office of Research and Sponsored Programs (ORSP), and our Office of Extended Learning (OEL).

**Academic Mission**

The expanded and improved quarters of SEHS will accommodate growing student enrollment while simultaneously enabling us to employ highly effective pedagogical approaches. SEHS will have new facilities capable of better serving their students through increased student-focused meeting rooms; a simulation lab to support more engaged and realistic pedagogical approaches in our Department of Social Work; a tutoring center, a media laboratory, and an innovation/collaboration center to support our Center for Educator Preparation; a professional library and curricular lab to support our Education department; and increased space for student organizations. The SEHS will also have priority access to eight shared classrooms in the building, so that students will be able to complete their in-class activities in the same building as their academic departments.

The TCLT is a department that develops and promotes best practices in teaching and learning. The location of SEHS adjacent to TCLT will be of great benefit to students in SEHS, and its location closer to the center of the university will facilitate greater faculty participation in TCLT events. Similarly, ORSP and OEL will share a floor with TCLT. It will enable us to more efficiently utilize staff in these three offices, and the ORSP in particular will benefit from a more central location closer to our STEM faculty.

Classroom design in the building facilitates and supports high-impact practices (HIPs), interactive practices proven to increase student engagement and retention. These UTB spaces will enhance academic excellence by facilitating HIPs, including interactive teaching methods, improved student-faculty and student-student collaboration, and research collaborations.

The renovation of UTB enables us to re-purpose vacated space in our WSW building. Notably, our health professions units (SON and CHS) will be able to expand their teaching and research laboratory spaces to better engage their students and increase the sizes of their student cohorts. All new lab facilities are typically designed to facilitate HIPs, which will increase the intellectual and practical competencies of our students and produce graduates with the knowledge and skills needed to succeed in the 21<sup>st</sup> century working environment.

### **Community Engagement**

As a Carnegie-classified Community Engaged campus, UM-Flint's core mission involves the application of knowledge to the real world, and the proposed renovation of UTB will help the campus to more fully realize our community engagement goals. With flexible interactive classrooms and instructional class laboratories, community-accessible meeting spaces, and greater presence and visibility of SEHS in the downtown area, the renovation will strengthen our programs of community engagement within SEHS. Although directly related to, but not within the scope of this proposed project, the improvement in space within the WSW building will enhance our health professions ability to continue to offer their community engaged free clinics.

While our university is classified as a Community Engaged university by the Carnegie Foundation, it is also true that Flint's reputation may have a depressing effect on community interactions. The DPS presence in the UTB places our police force in a more centralized location on campus. Currently, DPS occupies the Hubbard building, which is located on the far eastern end of campus near our physical plant facilities. This non-centralized location places them (relative to the Flint campus overall) in a nearly invisible position.

The presence of UM-Flint's DPS in the UTB improves community well-being by creating a safer downtown area within a radius of several blocks and also creating safety improvements to the Flint University Corridor. It also enhances the desirability of the community spaces that will be available on the street level of UTB. The spaces planned will be centers for numerous social and cultural activities in the evenings in downtown Flint. This will enhance economic activity at local bars/restaurants and also create a greater amount of social activity in the immediate downtown area. This assertion is supported by a publication of the U.S. Department of Justice Community Oriented Policing Services (COPS): "The Relationship Between Economic Conditions, Policing, and Crime Trends", September 2012.

### **3. Is the requested project focused on a single, stand-alone facility?**

Yes. The project request is for a single stand-alone facility, the University Tower Building. The project involves the re-purposing and renovation of a recently acquired building in downtown Flint. It will also enable changes in other buildings (primarily the William S. White building) that are not within the scope of this project.

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

The proposed renovation is specifically an adaptation and re-purposing of an existing building that we have purchased. The total project cost, at \$30 million for renovations plus the original investment of \$6 Million for its purchase, is well under 50% of the cost of building a new structure of the same size.

Additionally, the renovation enables us to significantly re-purpose spaces in the William S. White (WSW) Building and French Hall. The specific moves and re-purposing are as follows:

- Genesee Early College moves from WSW to the University Tower Building
- SEHS moves from French Hall to the University Tower Building
- Department of Communications moves from WSW to French Hall
- CHS expands its space in WSW
- SON expands its space in WSW

Critically important economically, newly available space in WSW will be employed by the College of Health Sciences and the School of Nursing to initiate new graduate programs in Physician Assistant and Occupational Therapy; and expand their Physical Therapy, Bachelor of Science Nursing, and Nurse Practitioner programs. All of these programs represent professions whose growth projections are much higher than average over the 10 year period 2014-2024 and for which high job growth rates are projected in our economic prosperity zone, as well as across the whole state.

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

The planned renovation will include many life safety and operational upgrades to bring the building up to current codes, including: new audible fire alarm system; improvement of and confirmation of exit access travel distance, egress capacities, exits per floor, dead-end travel distances, emergency egress routes, and exit door arrangements all being code compliant; upgrades to emergency lighting and exit signs; verification of lighting levels; a new generator and automated transfer switch provided for all life-safety loads; and various modifications to achieve barrier-free compliance, such as toilet room renovations, door hardware upgrades, etc.

The renovation will also improve access to the building for people with physical disabilities through specific location siting and orientation, as the build-out will reduce the travel distance between the building and nearby parking facilities.

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

Classroom utilization is measured by the departments hosting the instructional classrooms in the academic buildings. These measurements are recorded and reported using the University of Michigan M-Pathways space management system. Additionally, the University of Michigan Ann Arbor Office of the Provost maintains a building and space information site (at <http://www.provost.umich.edu/space/resources/building.html>), providing reports and guidelines with which departments on all three campuses track and record their space inventory in the M-Pathways space management system. This is the authoritative source for all University of Michigan space data.

Utilization factors include: class time, prep and clean-up time, target enrollment utilizations per classroom, whether labs are open for tutoring, computer usage, or research, and outside activities such as clinical practice that may affect ability to schedule courses. Unit administrators ensure that spaces are used effectively and efficiently according to the University of Michigan guidelines available at <http://www.provost.umich.edu/space/resources>.

In this particular case, the question is less about classroom utilization and more concerning the need for additional space and infrastructure due to current utilization. In the health professions that occupy WSW, class times are pre-determined to run on particular week days. This is required to support clinical rotations at medical facilities outside the university, which are determined (scheduled) by the medical facilities themselves, as opposed to the university. This is true for existing programs in Nursing and Physical Therapy, as well as near-future programs in Occupational Therapy (OT) and Physician Assistant (PA). A side effect of this time requirement is that classes in these programs are scheduled at non-standard times and in large time blocks. This has created time conflicts for courses in these disciplines that may result in lower efficiency of building utilization but which have effectively prevented additional courses from being scheduled in existing classrooms.

The project will provide additional infrastructure by moving other departments (and the GEC) out of WSW and into the UTB. This improves facilities by enabling us to create additional general classrooms, in UTB, for use by all departments within the university, as well as the cascading effect of vacating space in WSW that will be re-purposed and renovated for use by the health professions departments. In particular, the PT program employs two 60-seat classrooms that are currently 100% utilized. When it begins, the OT program will share some courses with PT, creating the need for a 100-seat computerized classroom that does not currently exist. It will also require a simulation lab and an Occupational Therapy practical lab, each of which do not currently exist. The Nursing program, in order to offer its larger cohort as approved by CCNE, requires a 100-seat computerized classroom and is currently limited to two (2) 48-seat classrooms (this computerized classroom will be shared with PT and OT). The PA program will reach enrollments of 50 students per cohort, spread over 2 ½ years. Accordingly, the PA program requires a minimum one new 50-seat classroom that doesn't currently exist, as well as lab facilities to accommodate two cohorts of students, which also do not currently exist.

The project helps improve utilization of existing space and infrastructure by removing these roadblocks to current (Nursing) and future (Occupational Therapy and Physician Assistant)



programs. Necessary space will be made available with the move of GEC and other programs into UTB, which will free up space within the WSW building.

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

The University of Michigan-Flint is committed to environmental stewardship in its approach to all building projects. As this is a renovation and not a new construction project, we are somewhat constrained by the existing architecture. However, all large-scale construction projects that include new construction and major renovations are required to meet the American Association of Heating, Refrigeration and Air conditioning Engineers (ASHRAE) Standard 90.1-2007. We plan to target improved performance exceeding the base ASHRAE requirements by 30%. A study has been performed by Consumers Energy to help determine how energy consumption can be reduced. The University, in an effort to become more environmentally conscious, will require that all major renovations follow LEED guideline and practices during the design process, regardless of whether LEED certification is planned.

The project will meet or exceed LEED certification guidelines through various means that include the following:

- Replacing Air Handling Units (AHUs) with more efficient components, including removal of turning vanes and replacing them with variable frequency drives.
- Incorporate a Building Management System (BMS) throughout the building, allowing spaces to be controlled based on utilization, occupancy, modified set points, etc., as well as monitor the environment of the space for modifications remotely.
- Addition of metering to the BMS by floor or by tenant to achieve sustainability; meters will promote increased tenant awareness to drive accountability for usage of utilities.
- Add or upgrade controls of each AHU, and associated components, to modern direct digital, to ensure reduced energy consumption.
- Incorporate demand response programming in the new direct digital controls to reduce usage and save energy during peak usage times.
- Use direct digital controls to schedule domestic hot water and zone heating during unoccupied times, to decrease energy usage.
- Add a side stream that filters out sediments and contaminants from the recirculating water system, to enable higher cycles of concentration and reduce chemical use in the cooling tower.
- Implement control to other existing building elements, such as chiller pumps, to reduce electrical power consumption.
- Installing a lighting control system, and use daylight harvesting measures and designs, daylighting controls, and occupancy sensors, to reduce electrical power consumption in the lighting system.
- Use LED lighting as a standard to replace existing fluorescent fixtures, to reduce electrical power consumption and improve environmental sustainability.

- Improve Indoor Environment Quality (IEQ) through installation of air quality monitoring sensors, in coordination with programming added to the sequence of operations for the air handling units. This will increase energy savings and improve occupant comfort.
- Use of green building materials, including low-VOC paints, adhesives, and finishes.
- Use of local and regional materials where possible.
- Design for lower water consumption, through the installation of low-flow fixtures, as well as use of shared utilities.
- Addition of leak detection sensors and monitoring to conserve water usage.

8. **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.**

All internal matching funds are currently available and will not limit the project from moving forward.

The financing has come primarily from internal capital renewal funds, as well as funds recovered from existing efficiencies gained through energy efficiency improvements made at other buildings around campus.

9. **If authorized for construction, the state typically provides a maximum of 76% 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; the university anticipates committing resources that significantly reduce the state share. The total project cost is \$30 million. The university has funds available to commit \$10.2 million or 34% of the project's cost, with an expected state contribution of \$19.8 million or 66% of the project cost.

10. **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.**

Building costs are expected to be partially offset with reductions in energy waste. Operational costs will increase with the additional square footage that is added by approximately \$940K/year or about \$4.7 M over five (5) years. Figures for any additional recurring annual operating funds will be available upon completion of the project. The table below presents anticipated operating costs (based on the existing 143,280 gross square feet). The university believes that increased enrollment in health-care related fields and cost savings from energy and water efficient features will help to offset the expected increase in overhead.

	\$/gsf	Future Cost
Custodial Building Cleaning	1.48	\$229,400
Outside grounds	0.12	\$18,600

Plant maintenance	1.66	\$257,300
Purchase utilities	1.83	\$283,650
Security	0.4	\$62,000
Communications	0.34	\$52,700
Insurance	0.13	\$20,150
Service Contracts	0.32	\$20,150
		<b>\$943,950</b>

Note: Future security costs per square foot anticipate cost savings due to the presence of DPS in the building. Future utility costs per square foot anticipate cost savings due to energy- and water- efficient features integrated into the design of the renovation project. Although estimated operating budget figures do not reflect those further cost savings, LEED-certified buildings have been proven to use as much as 25% less energy and realize up to a 19% reduction in aggregate operational costs in comparison with non-certified buildings.

Source: GSA. August 2011. *Green building performance: a Post occupancy evaluation of 22 GSA buildings*. Available at:

[http://www.gsa.gov/graphics/pbs/Green\\_Building\\_Performance.pdf](http://www.gsa.gov/graphics/pbs/Green_Building_Performance.pdf)

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

There will be no impact on tuition costs as a result of this project.

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

If this proposed project is not funded, through the State of Michigan Capital Outlay process, we may fund it through a staged implementation. This staged implementation will take up to 12 years to complete and will significantly delay the expansion of existing programs from our health profession schools. High-priority programs, such as the MSPA, will necessarily be delayed, and the University will be forced to turn away prospective students, resulting in fewer qualified graduates to meet growing demand for health-related professionals in Michigan.

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

Alternatives to the proposed renovation were deemed counterproductive and considerably costlier. The only feasible alternative would be to build a new academic/administrative building of approximately 143,280 gross square feet in size, which would require a total project cost of approximately \$77 million over and above the costs of acquiring new land, mitigating environmental issues, design work, and the time to design and build. The existing UTB was acquired at a cost of \$6 million from First Merit Corporation; including the proposed renovation, the total cost will be approximately \$36 million. Additionally, the building as situated is very close to existing university buildings and effectively extends the university footprint by a

moderate amount into the downtown area; i.e. it's more centrally located and closer to the center of our operations. A new building would likely require use of space north of the river and offset from the center of campus. Given the desire by many departments to use the facilities in this building, its central location is an additional asset, the impact of which cannot be measured.