RB22
University of Maryland, College Park Campus – Capital
University System of Maryland

Capital Budget Summary

State-owned *Capital Improvement Program*
($ in Millions)

Projects	Prior Auth.	2023 Request	2024 Est.	2025 Est.	2026 Est.	2027 Est.	Beyond CIP
Chemistry Building Wing 2 Replacement	$74.053	$57.817	$9.430	$0.000	$0.000	$0.000	$0.000
Interdisciplinary Engineering Building	8.000	14.000	56.515	77.485	49.000	0.000	0.000
Campuswide Building Systems and Infrastructure Improvements	65.000	5.000	12.500	12.500	12.500	12.500	n/a
Total	**$147.053**	**$76.817**	**$78.445**	**$89.985**	**$61.500**	**$12.500**	**$0.000**

Fund Source	Prior Auth.	2023 Request	2024 Est.	2025 Est.	2026 Est.	2027 Est.	Beyond CIP
GO Bonds	$51.363	$67.317	$46.445	$71.985	$52.500	$7.500	$0.000
Revenue Bonds	30.000	2.500	5.000	5.000	5.000	5.000	0.000
PAYGO GF	45.190	0.000	0.000	0.000	0.000	0.000	0.000
Non-budgeted Funds	20.500	7.000	27.000	13.000	4.00	0.000	0.000
Total	**$147.053**	**$76.817**	**$78.445**	**$89.985**	**$61.500**	**$12.500**	**$0.000**

CIP: *Capital Improvement Program*
GO: general obligation
GF: general funds
PAYGO: pay-as-you-go

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GO Bond Recommended Actions

1. Approve $2,500,000 in general obligation bond funding to design, construct, and equip the campuswide infrastructure improvements project.

2. Approve $57,817,000 in general obligation bond funding to continue construction and equipping of the Chemistry Building Wing 1 Replacement project.

3. Approve $7,000,000 in general obligation bond funding to continue design and begin construction of the Interdisciplinary Engineering Building.

4. Approve the preauthorization of $7,730,000 in general obligation bond funding for fiscal 2024 to complete construction of the Chemistry Building Wing 1 Replacement project.

5. Approve the preauthorization of $29,515,000 in general obligation bond funding to continue construction of the Interdisciplinary Engineering Building.

6. Approve the preauthorization of $64,485,000 in general obligation bond funding to continue construction on the Interdisciplinary Engineering Building.

7. Approve the preauthorization of $32,000,000 in general obligation bind funding to complete construction of the Interdisciplinary Engineering Building.

Summary of Fiscal 2023 Funded State-owned Projects

Chemistry Building Wing 1 Replacement

This is the third phase of a project to renovate and replace space for the chemistry department. Phase I expanded the scope of the St. John Center to include 6 teaching chemistry laboratories. Phase II, funded with $16.5 million of institutional funds, updated selected spaces, and upgraded the HVAC in the second and third floors of Wing 2. Phase III demolishes and replaces Wing 1 and will house 26 research laboratories and support space.

The projected cost of Phase III is $124.8 million, which is $6.4 million higher than the amount programmed in the 2021 *Capital Improvement Program* (CIP). Due to the bid prices coming in higher than expected and based on the cash needs of the project, the budgets for fiscal 2023 and 2024 are $4.0 million and $2.4 million higher than programmed in the 2021 CIP. The capital budget provides $57.8 million to continue construction and a preauthorization of $7.7 million in fiscal 2024 to allow the construction contract to be bid and awarded.

Campuswide Building Systems and Infrastructure Improvements

This is a stand-alone facility renewal initiative to address critical deferred maintenance projects that, if left unaddressed, pose serious health, life, and safety issues. Infrastructure failures have caused disruptions in electricity and HVAC services and caused water damage to buildings, resulting in classes being canceled, relocated to another building, or suspended, and has resulted in lost research. The University of Maryland, College Park Campus (UMCP) estimates that its deferred maintenance backlog totals $849.0 million as of fall 2020.

When the program was initiated in fiscal 2013, it was anticipated that it would be annually funded. From fiscal 2013 through 2016, the State provided $25 million of general obligation (GO) bonds with another $20 million coming from University System of Maryland (USM) Academic Revenue Bonds (ARB) debt. The program was put on hold from fiscal 2017 to 2020 to facilitate the funding of other priority UMCP projects. It should be noted that UMCP budgeted $51.6 million from its operating budget on facilities renewal in fiscal 2022 in addition to $9.5 million in ARBs as part of USM's facilities renewal program.

The program addresses a variety of renewal projects that can be categorized into two general categories – building systems and infrastructure. Building systems include replacing electrical gear; upgrading fire alarm systems, automatic fire sprinkler systems, and fire pump controls; replacing HVAC equipment; and replacing equipment in utility buildings. Infrastructure improvements include replacing underground heating and cooling piping and domestic water pipes; repairing building foundations; replacing underground foundation drain and sanitary piping; replacing exterior security lighting, cameras, and telephones; repairing and/or repaving road; and repairing storm drain outfall and ponds.

The projects funded in fiscal 2023 include:

- installing central HVAC in two floors of the south wing of Jimenez Hall ($4.0 million with UMCP providing an additional $0.5 million);
- replacing a failing air handling unit in the School of Public Health building ($0.5 million plus $0.6 million from the fiscal 2022 authorization); and
- replacing failing air handling units in the Animal Sciences building ($0.5 million plus an additional $0.7 million from UMCP).

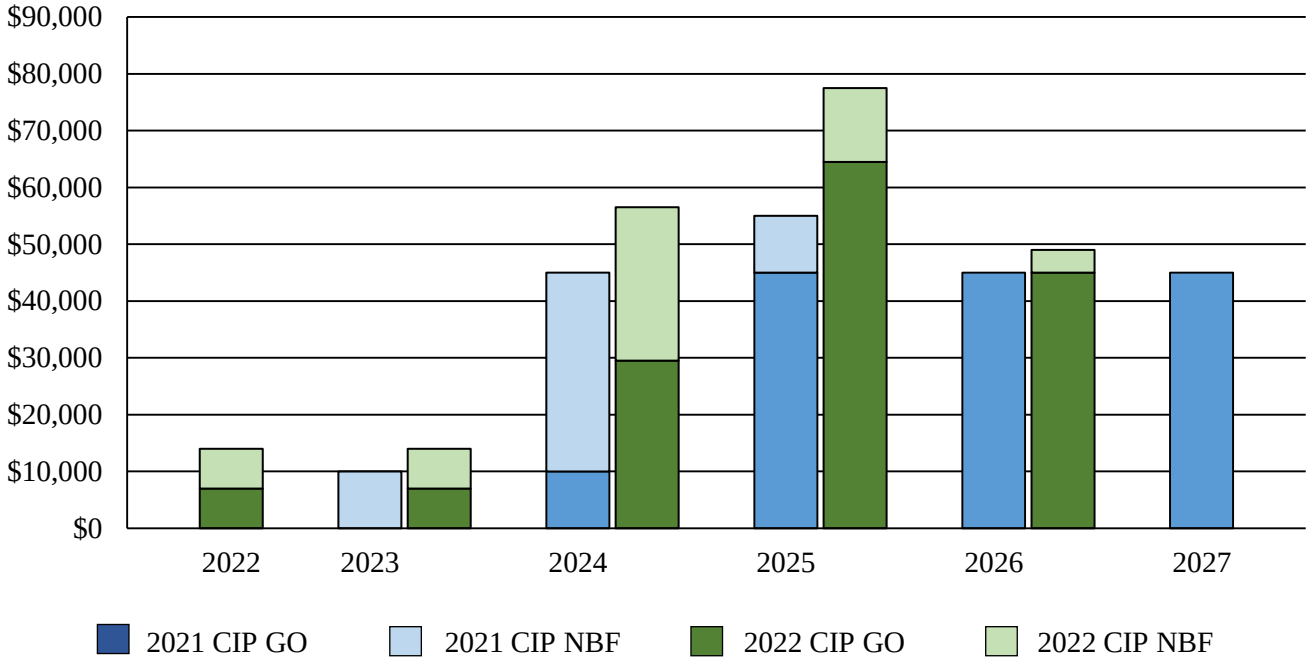
Interdisciplinary Engineering Building

In October 2017, UMCP announced its largest donation of $219.5 million from the A. James & Alice B. Clark Foundation. The gift included provisions to provide 30%, or $55 million, (the lesser of the two), to support the construction of a new building for the A. James Clark School of Engineering, which is to be leveraged with State and institutional funds. The estimated cost of the project is

$205.0 million. The agreement with the Clark Foundation requires construction be completed by July 2025 and expects construction to start no later than July 2023.

The General Assembly accelerated the project by authorizing $4.0 million in GO bond funding in fiscal 2022 to begin design and related preauthorizations for fiscal 2023 through 2025 to complete design and construct the facility. As illustrated in **Exhibit 1**, the 2021 CIP programmed $10.0 million in nonbudgeted donor funds in fiscal 2023 to start design. Construction was budgeted to begin the second half of fiscal 2024 using $10 million in GO bonds along with $35 million in nonbudgeted donor funds. Due to the requirement of the donor agreement that GO bond funding must be spent in step with donor funding, and based on UMCP's supplemental budget request, the fiscal 2023 capital budget provides $7.0 million in GO funding. In addition, $7.0 million in donor funds is programmed for fiscal 2023, which is $3.0 million less than what was programmed in the 2021 CIP. The fiscal 2023 capital budget also includes three preauthorizations in fiscal 2024 through 2026 to allow the construction contract to be bid and awarded.

Exhibit 1
Comparison of Funding in the CIP
Fiscal 2021-2027
($ in Thousands



CIP: *Capital Improvement Program*
GO: general obligation
NBF: nonbudgeted fund

Source: 2021 and 2022 *Capital Improvement Program*

It should be noted that Part I and II of the program are currently under review, and Department of Budget and Management expects to approve this program this spring. In December 2021, UMCP used donor funds to award a contract for preconstruction and design in order to get the project started as soon as possible so as to meet the donor's timeline.

The project will construct a state-of-the-art 157,000 gross square feet/87,000 net assignable square feet (NASF) facility that will house elements of the Department of Civil and Environmental Engineering (ENCE), the Maryland Transportation Institute, the Department of Mechanical Engineering (ENME), and the Quantum Technology Center. It will also include space for collaboration with institutional and industrial partners, including the Center for Advanced Transportation Technology, which is affiliated with ENCE but will be located elsewhere on campus.

The facility will address two key problems:

- ***Lack of Space to Grow:*** UMCP hired a consultant to complete an Academic Facilities Report that outlined a 20-year academic and architectural strategic vision for the Clark School of Engineering and provided an analysis of the school's existing facilities and academic metrics, comparing them to peer institutions. The report projected that over the next 20 years, undergraduate and graduate enrollment will increase by 16% and 26%, respectively, and faculty and staff will grow 13% and 20%, respectively. In order to be competitive with other programs, the departments of chemical and biomolecular engineering, ENCE, electrical and computer engineering, materials science engineering, and mechanical engineering will need to increase their research NASF per principal investigator and graduate students by, on average, 550 NASF and 85 NASF, respectively. Currently, the Clark School of Engineering occupies 616,000 NASF. In order to accommodate the projected growth, the Clark School of Engineering will need an additional 223,000 NASF over the next 20 years.

- ***Insufficient Modern Facilities:*** ENCE and ENME are primarily housed in Martin Hall, and the Engineering Laboratory buildings, which were constructed in 1948 and 1949, respectively, can no longer meet the requirements to educate engineering students or effectively support sponsored research. All engineering students participate in one or more team-based design courses. The available space is overcrowded, and, in particular, there is no dedicated space for ENCE or ENME students. In addition, the facility will include modern research space, which will enhance the ability of facility to secure research grants.

Operating Budget Impact Statement

Executive's Operating Budget Impact Statement – State-owned Projects
Fiscal 2023-2027
($ in Millions)

	2023	2024	2025	2026	2027
Chemistry Building Wing 1 Replacement					
Estimated Operating Cost	**$0.303**	**$0.644**	**$0.609**	**$0.606**	**$0.603**
Interdisciplinary Engineering Building					
Estimated Operating Cost	0.000	0.000	0.000	1.987	3.743
Estimated Staffing	0.0	0.0	0.0	0.0	3.0
Total Operating Impact					
Estimated Operating Cost	**0.303**	**0.644**	**0.609**	**2.593**	**4.346**
Estimated Staffing	**0.0**	**0.0**	**0.0**	**0.0**	**3.0**

Operating costs for the Chemistry Wing 1 Replacement reflect those costs for operating the facility including fuel, utilities, and supplies. Since this project replaces an existing building, additional personnel are not needed to maintain the facility.

The Interdisciplinary Engineering Building does not impact the operating budget until fiscal 2026 for equipment-related expenses. In fiscal 2027, costs reflect additional personnel to maintain the facility and other expenses related to operating the facility, such as fuel, utilities, and supplies.