

**RB31**  
**University of Maryland Baltimore County – Capital**  
**University System of Maryland**

***Capital Budget Summary***

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

<b>Projects</b>	<b>Prior Auth.</b>	<b>2021 Request</b>	<b>2022 Est.</b>	<b>2023 Est.</b>	<b>2024 Est.</b>	<b>2025 Est.</b>	<b>Beyond CIP</b>
Utility Upgrades and Site Improvement	\$5.382	\$6.041	\$6.936	\$0.000	\$0.000	\$0.000	\$0.000
Sherman Hall Renewal	0.000	0.000	0.000	0.000	0.000	5.746	70.995
<b>Total</b>	<b>\$5.382</b>	<b>\$6.041</b>	<b>\$6.936</b>	<b>\$0.000</b>	<b>\$0.000</b>	<b>\$5.746</b>	<b>\$70.995</b>

<b>Fund Source</b>	<b>Prior Auth.</b>	<b>2021 Request</b>	<b>2022 Est.</b>	<b>2023 Est.</b>	<b>2024 Est.</b>	<b>2025 Est.</b>	<b>Beyond CIP</b>
GO Bonds	\$3.036	\$6.041	\$6.936	\$0.000	\$0.000	\$5.746	\$70.995
Revenue Bonds	2.346	0.000	0.000	0.000	0.000	0.000	0.00
<b>Total</b>	<b>\$5.382</b>	<b>\$6.041</b>	<b>\$6.936</b>	<b>\$0.000</b>	<b>\$0.000</b>	<b>\$5.746</b>	<b>\$70.995</b>

CIP: *Capital Improvement Program*  
GO: general obligation

## ***Summary of Recommended Bond Actions***

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1. Utility Upgrades and Site Improvements

Approve funding to continue construction of the Utility Upgrades and Site Improvement projects.

2. SECTION 13 – University of Maryland Baltimore County – Utility Upgrades and Site Improvements

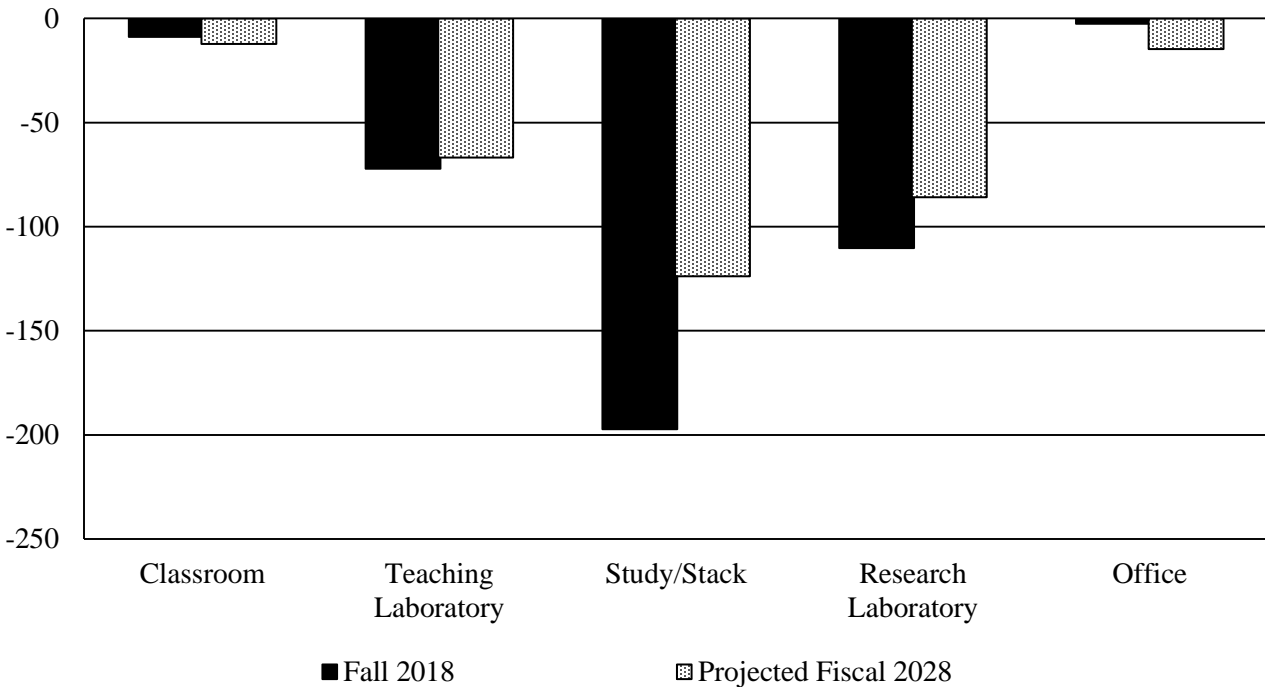
Approve a fiscal 2022 preauthorization to continue construction of Utility Upgrades and Site Improvement projects.

## ***Performance Measures and Outputs***

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The fall 2018 Space Guidelines Application Program (SGAP) report provides an estimate on the 10-year space needs of the University of Maryland Baltimore County (UMBC). The SGAP report calculates the space needed to accommodate the projected growth in faculty, staff, and students when including all the estimated space inventory, including planned new facilities, renovations, and eliminated space over the next 10 years. UMBC projects that full-time equivalent student enrollment will increase 9.9% by fiscal 2028. However, the classroom deficit is projected to slightly increase by 3,454 net assignable square feet (NASF) by fiscal 2028, as shown in **Exhibit 1**. It is estimated that the space deficits in teaching and research laboratories will lessen to 66,808 NASF and 85,936 NASF, respectively. A 9.8% increase in full-time equivalent faculty and staff will contribute to the deficit in office space to increase to 14,654 NASF by fiscal 2028.

**Exhibit 1  
Academic Space Deficit  
Fall 2018 and Projected Fiscal 2028  
Net Assignable Square Feet  
(in Thousands)**



Source: University System of Maryland

## ***Budget Overview***

### **Utility Upgrades and Site Improvements**

This project was originally scheduled to be completed in three phases. However, it was determined that it would be more efficient to implement the project in two phases. The first phase groups together mechanical, electrical, and plumbing and includes replacing a boiler in the Central Plant, transformers and switchgear, and electrical feeders. The second phase includes repairing the utility tunnel, refurbishing domestic water piping, improving exterior lighting, and upgrading the stormwater system. This results in a revised cash flow that is reflected in the *Capital Improvement Program (CIP)*. The fiscal 2021 budget provides \$6.0 million to complete Phase I and begin Phase II of the project, and the Maryland Consolidated Capital Bond Loan of 2020 includes a preauthorization of \$6.8 million for fiscal 2022 to complete Phase II of the project. Overall, the total cost of the project

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increased \$1.1 million to \$18.4 million, resulting from the Department of Budget and Management application of higher construction escalation rates to reflect the current conditions of the construction market. It should be noted that, based on the cash flow, expenditures total \$10.1 million in fiscal 2021 of which \$4.0 million is carried over from fiscal 2020 and \$6.0 million in general obligation bonds.

This project will address chronic infrastructure failures that are a result of an aging infrastructure that is approaching 50 years old and has exceeded its useful life. Projects include:

- Electrical, mechanical, and other systems either require repairs or replacement to remain functional and avoid catastrophic failures that would cause property loss and threaten the delivery of core services.
- If a high-temperature hot water generator fails, buildings would not be properly conditioned and could lead to extreme temperatures and humidity resulting in the need to close buildings.
- Three transformers are nearing the end of their useful life and need to be replaced within one or two years to avoid complete failure. The campus has experienced three to five power outages per year with the cost of repair ranging from \$250,000 to \$1.2 million.
- The campus has experienced 20 water main breaks since 2011, resulting in water being shut off to a portion of campus while repairs were being made, with one break leaving resident halls without water for almost 24 hours. The cost to repair each break ranges from \$20,000 to \$200,000.
- A 2018 utility condition assessment identified structural deterioration of the utility tunnel system that supports distribution of the chilled and hot water and the electrical and telecommunication feeder systems. Moisture infiltration has caused the wall to spall and crack. If repairs are not made and moisture removal measures are not put in place, complete tunnel failure could occur and that could sever any of the utility lines.
- Cabling, poles, and heads of much of the exterior lighting network have deteriorated to the point that some light fixtures must be replaced.
- Insurance claims have risen to cover the costs of needed repairs and damages, which resulted in the State's insurance provider increasing UMBC's deductible from \$50,000 to \$250,000. In addition, since the University System of Maryland is insured as a unit, the rise in UMBC's claims has resulted in premiums increasing for all institutions.

In addition, the campus is not in compliance with the State's environmental regulations. In particular, regulations require treatment of 20% of the previously untreated impervious area by 2025.

## **Summary of Other Projects in the Capital Improvement Program**

### **Sherman Hall Renewal**

This project, added to the 2020 CIP, is programmed to receive funding in fiscal 2025. The project will renovate Sherman Hall, including restoration of the building envelop; corrections of barriers to accessibility; and replacement and upgrades of mechanical, electrical, plumbing, and life safety systems. The mechanical systems have reached the end of their useful life and require frequent servicing and replacement of components. There has been repeated interior damage due to leaks of the domestic water piping and sprinkler systems. In addition, fire alarms are no longer supported by the vendors.

The prefabricated brick panel façade is failing. After cracks in the façade were seen, UMBC hired a team of forensic engineers to evaluate the façade. It was determined that the prefabricated brick panel system cannot be repaired; removal and replacement is the only option. UMBC estimates that the total cost would be \$15 million. Currently, UMBC replaced three panels that showed signs of failure with metal cladding costing \$0.6 million. Replacing sections of the façade requires relocating occupants adjacent to the building to complete the work. Also, panels with minor damage were caulked, sealed, and repaired. UMBC has cordoned off the sidewalks adjacent to the building. UMBC advanced this project within its 10-year plan due to it being easier to relocate occupants once to complete the upgrades and replace the façade rather than once for the repairs and again for the upgrades. **In as much as the complete building renovation is not scheduled to begin until fiscal 2025, UMBC should advise the committees concerning a funding strategy for any additional emergency façade repairs that might need to be made in the intervening years.**

The 44-year-old Sherman Hall provides offices, classrooms, and teaching laboratories for eight academic programs, including the School of Social Work and the Department of Education. The 19 classrooms and 187-seat lecture hall are used by all majors. The renovation will be implemented in phases over a three-year period. The estimated total cost of the project is \$76.7 million.

## ***GO Bond Recommended Actions***

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1. Approve \$6.0 million in general obligation bond funds to continue construction of the Utility Upgrades and Site Improvement projects.
2. Approve the preauthorization of \$6.8 million in general obligation bonds for fiscal 2022 to continue construction of the Utility Upgrades and Site Improvement projects.