

RB36
University System of Maryland Office
University System of Maryland

Capital Budget Summary

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

| Uses | <i>Prior Auth.</i> | <i>2015 Request</i> | <i>2016 Est.</i> | <i>2017 Est.</i> | <i>2018 Est.</i> | <i>2019 Est.</i> | <i>Beyond CIP</i> |
|--|-------------------------------|--------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|
| Biomedical Sciences and Engineering Education Facility | \$5.000 | \$4.300 | \$6.000 | \$69.000 | \$78.000 | \$0.000 | \$0.000 |
| Southern Maryland Regional Higher Education Center | 1.500 | 0.000 | 5.700 | 6.250 | 0.000 | 0.000 | 0.000 |
| Total | \$6.500 | \$4.300 | \$11.700 | \$75.250 | \$78.000 | \$0.000 | \$0.000 |

| <i>Fund Source</i> | <i>Prior Auth.</i> | <i>2015 Request</i> | <i>2016 Est.</i> | <i>2017 Est.</i> | <i>2018 Est.</i> | <i>2019 Est.</i> | <i>Beyond CIP</i> |
|---------------------------|-------------------------------|--------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|
| GO Bonds | \$6.500 | \$4.300 | \$11.700 | \$75.250 | \$68.000 | \$0.000 | \$0.000 |
| Revenue | 0.000 | 0.000 | 0.000 | 0.000 | 10.000 | 0.000 | 0.000 |
| Total | \$6.500 | \$4.300 | \$11.700 | \$75.250 | \$78.000 | \$0.000 | \$0.000 |

CIP: *Capital Improvement Program*

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Analysis of the FY 2015 Maryland Executive Budget, 2014

Grant and Loan Capital Improvement Program
(\$ in Millions)

| <i>Program</i> | <i>2013 Approp.</i> | <i>2014 Approp.</i> | <i>2015 Request</i> | <i>2016 Est.</i> | <i>2017 Est.</i> | <i>2018 Est.</i> | <i>2019 Est.</i> |
|----------------|-------------------------|-------------------------|-------------------------|----------------------|----------------------|----------------------|----------------------|
|----------------|-------------------------|-------------------------|-------------------------|----------------------|----------------------|----------------------|----------------------|

| | | | | | | | |
|----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Capital Facilities Renewal | \$17.000 | \$17.000 | \$17.000 | \$17.000 | \$17.000 | \$22.000 | \$27.000 |
| Total | \$17.000 | \$17.000 | \$17.000 | \$17.000 | \$17.000 | \$22.000 | \$27.000 |

| <i>Fund Source</i> | <i>2013 Approp.</i> | <i>2014 Approp.</i> | <i>2015 Request</i> | <i>2016 Est.</i> | <i>2017 Est.</i> | <i>2018 Est.</i> | <i>2019 Est.</i> |
|--------------------|-------------------------|-------------------------|-------------------------|----------------------|----------------------|----------------------|----------------------|
|--------------------|-------------------------|-------------------------|-------------------------|----------------------|----------------------|----------------------|----------------------|

| | | | | | | | |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| GO Bonds | \$0.000 | \$0.000 | \$0.000 | \$0.000 | \$0.000 | \$5.000 | \$10.000 |
| Revenue Bonds | 17.000 | 17.000 | 17.000 | 17.000 | 17.000 | 17.000 | 17.000 |
| Total | \$17.000 | \$17.000 | \$17.000 | \$17.000 | \$17.000 | \$22.000 | \$27.000 |

Summary of Recommended Bond Actions

1. Shady Grove Educational Center – Biomedical Sciences and Engineering Education Building

Approve.

2. Capital Facilities Renewal

Approve.

Budget Overview

Biomedical Sciences and Engineering Education Facility

The General Assembly included language in the 2012 capital budget pre-authorizing \$5.0 million in fiscal 2014 to begin design of the Biomedical Sciences and Engineering Education Facility that will be located at the Universities of Shady Grove (USG). The 2013 *Capital Improvement Program* (CIP) programmed \$6.0 million in fiscal 2015 to complete the design of the facility; however, based on the expected cash flow requirement, only \$4.3 million is needed in fiscal 2015. Construction is estimated to cost \$147.0 million, which is split funded over fiscal 2017 and 2018. The total cost of the project is estimated to be \$162.3 million.

The 134,414 net assignable square feet (NASF) facility will provide specialized laboratory space for new and existing programs and provide additional classroom space to support future enrollment growth. USG experienced enrollment growth of 52.9% from fall 2008 to 2013, with the number of students increasing from 2,519 to 3,851. Due to this increase and projected future enrollment growth, classroom space is expected to reach full capacity by 2015 and have a deficit of 26,187 NASF by 2019. In addition, USG will not be able to accommodate the projected growth in the health-related disciplines that require specialized space, such as respiratory therapy, pharmacy, and nursing programs.

The existing laboratory space is not appropriately sized, and there is an insufficient number of laboratories to accommodate the existing programs. National and State standards for health-related disciplines, *e.g.*, biological sciences and respiratory therapy, are 65 to 85 square feet (sq. ft.) per student. Currently, laboratories are below this standard and, therefore, do not have the space to accommodate a typical section of 20 to 30 students. One of the two biological science laboratories is 895 sq. ft. compared to the recommended size of 1,300 sq. ft., while the respiratory therapy program needs a laboratory that can accommodate 24 students compared to the existing space that only has room for 12 students. The pharmacy and nursing programs need additional space in order to meet enrollment demand. Nursing has only two laboratories that it shares with other health care programs, thereby limiting the number of courses that may be offered. In order to meet demand, the nursing program will need four additional laboratories by 2019.

The current laboratory space was not designed for any of the existing programs. For example, the library was converted to provide laboratory space for the pharmacy program. Specialized laboratories will be needed for new planned program offerings that include mechanical and electrical engineering, biotechnology, dentistry, and physical therapy. It is projected, based on estimated enrollment growth and the State's space guidelines, that there will be a laboratory space deficit of 39,411 NASF by 2019. Without adequate and appropriate laboratory space, USG cannot offer new programs or expand enrollment of existing programs.

There is also insufficient office space for faculty, which has grown from 298 to 456 between fiscal 2008 and 2012. Offices are crowded, congested, and lack privacy. Offices in the USG III building are 142 sq. ft., less than the State standard for office work stations, and there is not enough space for temporary storage for reference materials and supplies. The total amount of office space can only

adequately accommodate less than half of the existing faculty and staff. Currently, there is 34,328 NASF of office space, but it is projected USG will have a deficit of 58,273 NASF by 2019.

Overall, the new facility will provide 34,540 NASF of additional classroom space, 44,854 NASF of laboratory space and 26,960 NASF of office space. Additionally, the facility will include 11,420 NASF of clinical space. Montgomery County is contributing \$20 million to construct a new parking garage beginning in fiscal 2015, which replaces those parking spaces lost due to the new building and related site improvements, including relocating the main entrance further down Shady Grove Road.

Capital Facilities Renewal

This annual program provides for infrastructure improvements at various facilities at the University System of Maryland (USM) institutions. Capital facilities renewal funds are allocated among institutions on a pro rata share of self-reported replacement costs for all State-funded academic facilities. Eligible projects must have a life expectancy of at least 15 years. Funding for fiscal 2015 includes \$17 million in revenue bonds that will enable USM to undertake 30 projects.

Facilities renewal is defined as the planned renovation, adaptation, replacement, or upgrade of the systems of a capital asset during its lifespan such that it meets assigned functions in a reliable manner. A priority of USM is to maintain an adequate annual investment in the maintenance and renewal of its capital assets. When funding is insufficient to deal with a problem, such as replacing a leaking roof, repairs are made to meet the immediate concern and the replacement is “deferred,” becoming part of the backlog.

The consequences of not keeping up with facilities renewal projects as buildings age include more frequent and expensive maintenance work; electrical and mechanical systems becoming less effective, impacting academic and research activities; and the eventual failure of the facility leading to a closure or loss of space. As of fall 2011, the total gross square footage (GSF) of all USM facilities totaled 38.6 million, of which 21.6 million GSF are State-supported buildings with a replacement value of \$6.9 billion. The University of Maryland, College Park (UMCP) has the most square footage of any institution, totaling 13.7 million, including 7.7 million of State-supported space. The University of Maryland, Baltimore has the second highest square footage of all institutions, totaling 6.7 million, which includes 4.0 million of State-supported space. However, over 90.0% of the space is under 30 years old. USM estimates the current backlog of deferred maintenance is \$1.7 billion, with UMCP comprising 39.5%, or \$670.9 million, of the backlog, as shown in **Exhibit 1**.

Exhibit 1
Building-related Deferred Maintenance Backlog

| | |
|---|------------------------|
| University of Maryland, Baltimore | \$147,831,983 |
| University of Maryland, College Park | 670,947,171 |
| Bowie State University | 100,342,905 |
| Towson University | 182,275,000 |
| University of Maryland Eastern Shore | 60,266,520 |
| Frostburg State University | 45,207,750 |
| Coppin State University | 85,183,000 |
| University of Baltimore | 55,886,136 |
| Salisbury University | 119,133,315 |
| University of Maryland Baltimore County | 189,354,795 |
| University of Maryland Center for Environmental Science | 43,023,420 |
| Total | \$1,699,451,995 |

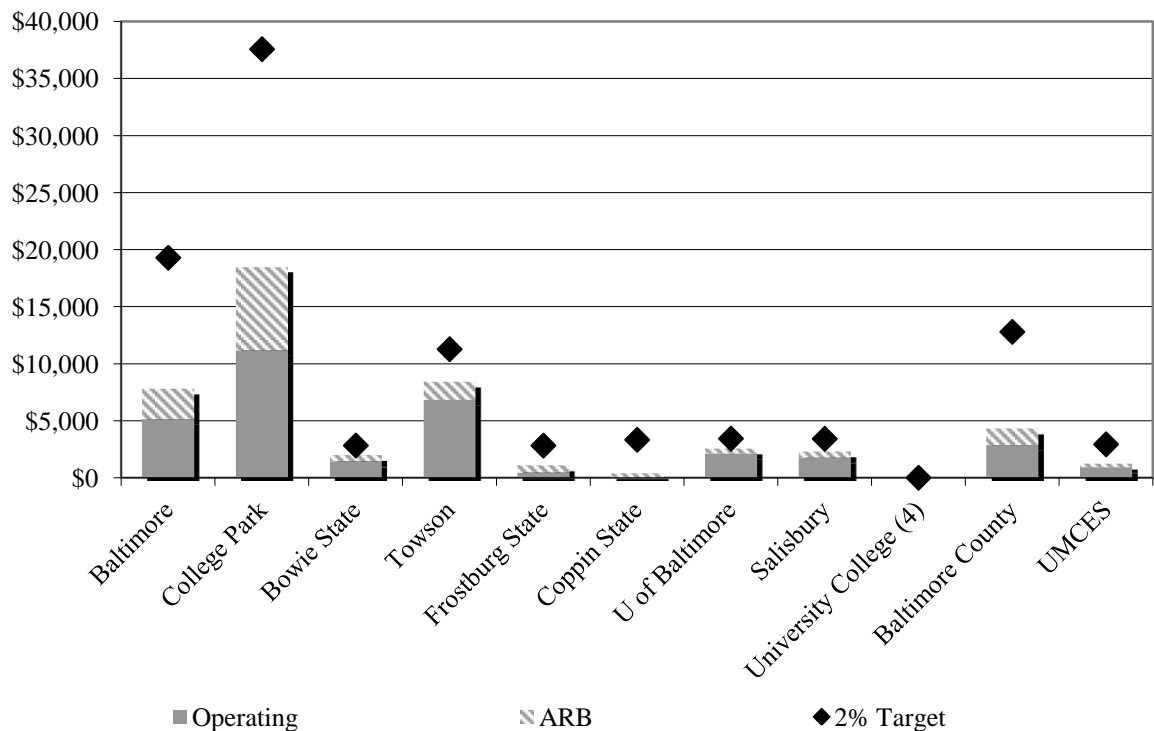
Source: University System of Maryland

USM's programs and policies are intended to reduce the existing backlog of deferred maintenance and find a balance between wear-and-tear on facilities and adequate spending to maintain facilities. Funding is intended to be from the operating budget; but historically, operating funds have not been able to sustain adequate levels of facility renewal funding, causing an increase in the backlog. To address the ongoing backlog, the Board of Regents adopted two strategies:

- reducing the backlog to a manageable size through deliberate spending on major renovation and replacement in the CIP; and
- adopting an annual operating spending formula based on a target guideline of 2.0% of the replacement value of campus buildings in which institutions annually increase operating expenditures by 0.2% unless there are "systemwide funding constraints."

Exhibit 2 shows the allocation of the fiscal 2014 operating expenditures and Academic Revenue Bonds (ARB) for facilities renewal and the 2.0% target. It should be noted, for UMCP, an additional \$10.0 million – \$5.0 million of general obligation bonds and \$5.0 million of ARBs – is included to address the backlog of deferred maintenance related to its failing infrastructure. In order for USM to meet the 2.0% target, institutions would need to spend a total of \$107.6 million on deferred maintenance. In fiscal 2014, expenditures (including operating and ARBs) total \$52.1 million, equivalent to 1.0% of the replacement values of State-supported assets. Of this amount, \$35.1 million are operating expenditures, equal to 0.7% of the replacement value. UMCP and Towson University (TU) account for

Exhibit 2
University System of Maryland
Operating and Capital Facility Renewal Expenditures
Fiscal 2014
(\$ in Thousands)



ARB: Academic Revenue Bonds

UMCES: University of Maryland Center for Environmental Science

Note: The University of Maryland, College Park includes \$5 million in general obligation bonds and \$5 million in Academic Revenue Bonds to fund campuswide building system and infrastructure improvements; the University of Maryland University College does not have a spending target due to the unique nature of its facilities profile, which include leased buildings and buildings that are off-campus or outside the State.

Source: University System of Maryland

51.6% of the facility renewal expenditures in fiscal 2014 at \$18.5 million and \$8.4 million, respectively. This spending is equivalent to 1.0 and 1.5% of the replacement value of assets at UMCP and TU, respectively. The University of Maryland Baltimore County and Coppin State University persist in having the lowest rates with expenditures equaling 0.7 and 0.2%, respectively, of the replacement value of the State-supported facilities.

Operating Budget Impact Statement

Executive's Operating Budget Impact Statement – State Owned Projects (\$ in Millions)

| | | <i>FY 2015</i> | <i>FY 2016</i> | <i>FY 2017</i> | <i>FY 2018</i> | <i>FY 2019</i> |
|--|--------------------------|----------------|----------------|----------------|----------------|----------------|
| Biomedical Sciences and Engineering Education Facility | | | | | | |
| | Estimated Operating Cost | \$0.000 | \$0.000 | \$0.000 | \$1.717 | \$2.607 |
| | Estimated Staffing | 0 | 0 | 0 | 5 | 6 |

DBM has advised that USM should budget additional operating expenses associated with the Biomedical Sciences and Engineering Education Facility within its current unrestricted funds and that no State general funds should be expected.

Summary of Other Projects in the Capital Improvement Program

Southern Maryland Regional Higher Education Center

Language was included in the 2013 capital budget providing \$1.5 million for the design of a new facility on the campus of the Southern Maryland Higher Education Center (SMHEC). Restrictive language was placed on this appropriation until the Southern Maryland Higher Education Council submitted a report assessing the educational needs in Southern Maryland and for SMHEC, USM, and the Southern Maryland Navy Alliance to submit a formal agreement on the roles and responsibilities of each in the construction and operation of the facility. The report and agreement were submitted in December 2013. The report summarized the current higher educational offerings in the region and identified academic programs that should be expanded, targeting the high demand areas of business/management, engineering, education, computer science, and health care. Additionally, it was recommended that a third building be constructed at SMHEC and should be owned and operated by USM. The formal agreement specifies that the new facility will be approximately 38,000 NASF, which will include laboratories and business incubator space. The 2014 CIP programs construction funding of \$5.7 and \$6.3 million in fiscal 2016 and 2017, respectively.

Other Significant Funding or Scope Changes to Projects in the *Capital Improvement Program*

Capital Facilities Renewal

In order to make more progress to reduce the \$1.7 billion backlog of deferred maintenance, the 2014 CIP programs an additional \$5 and \$10 million GO bonds in fiscal 2018 and 2019, respectively. Total funding for renewal projects would increase to \$22 million in fiscal 2018 and \$27 million in fiscal 2019. However, consideration should be given to the continual use of ARBs to fund renewal projects. Therefore, in 2017 a request should be made for the Capital Debt Affordability Committee to evaluate the capacity to increase USM's ARBs by \$5 million in fiscal 2018 and \$10 million annually starting in fiscal 2019 to accommodate additional funding for USM facility renewal projects.

GO Bond Recommended Actions

1. Approve \$4.3 million in general obligation funding to complete the design of the Biomedical Sciences and Engineering Education Facility.
2. Approve \$17 million in Academic Revenue Bonds to fund facilities renewal projects at University System of Maryland institutions.