

**RB23**  
**Bowie State University**  
 University System of Maryland

***Capital Budget Summary***

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

<i>Projects</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>
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Natural Sciences Center	\$7.600	\$23.342	\$49.800	\$9.000	\$0.000	\$0.000
<b>Total</b>	<b>\$7.600</b>	<b>\$23.342</b>	<b>\$49.800</b>	<b>\$9.000</b>	<b>\$0.000</b>	<b>\$0.000</b>

<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>
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GO Bonds	\$7.600	\$23.342	\$49.800	\$9.000	\$0.000	\$0.000
<b>Total</b>	<b>\$7.600</b>	<b>\$23.342</b>	<b>\$49.800</b>	<b>\$9.000</b>	<b>\$0.000</b>	<b>\$0.000</b>

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

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### **Funds**

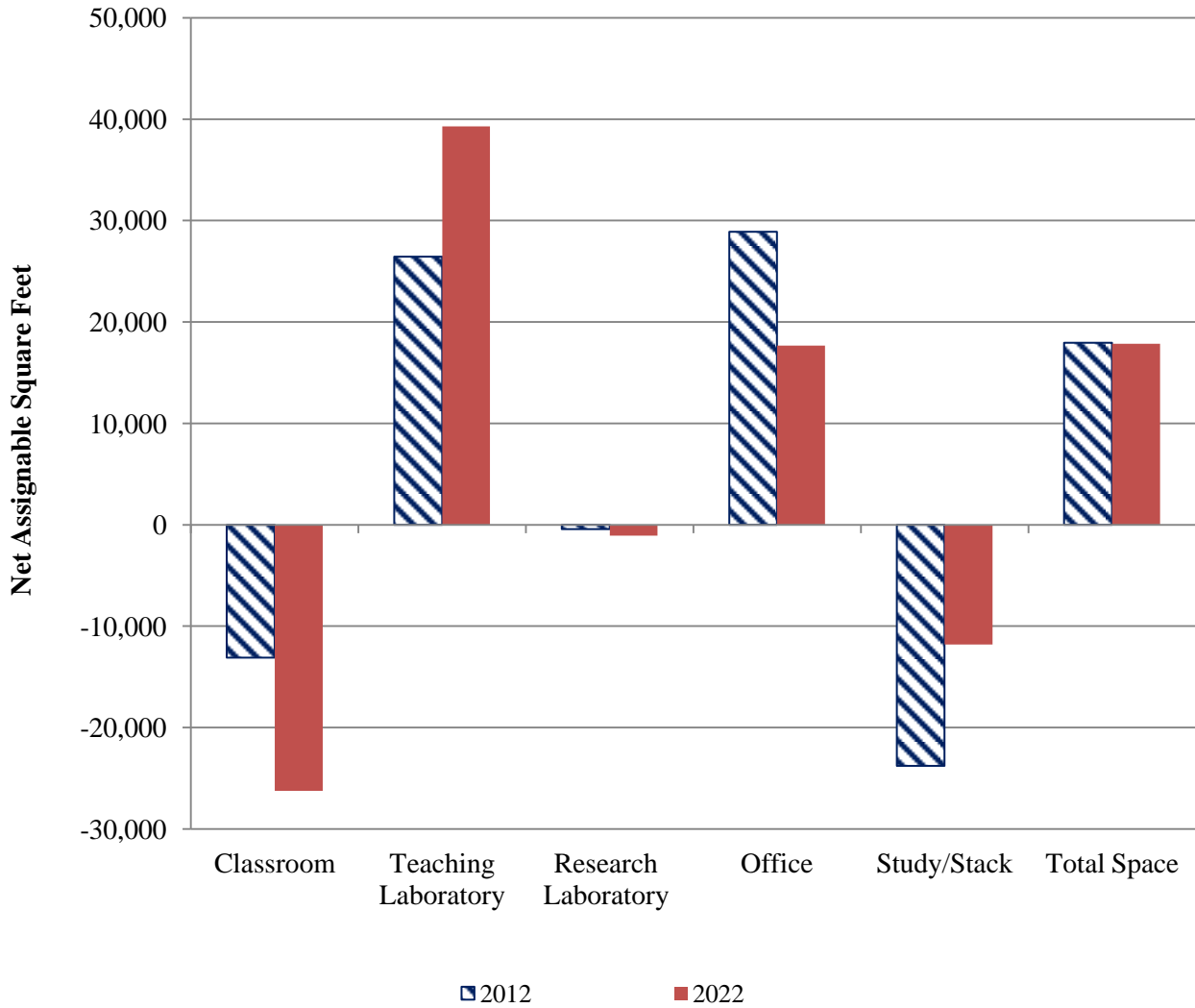
1. New Natural Sciences Center  
  
Approve.
2. SECTION 2 – Bowie State University – New Fine and Performing Arts Building  
  
Approve de-authorization.
3. SECTION 12 – Bowie State University – New Natural Sciences Center  
  
Approve the pre-authorization for the 2015 session.
4. SECTION 13 – Bowie State University – New Natural Sciences Center  
  
Approve the pre-authorization for the 2016 session.

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

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According to the fall 2012 facilities inventory, Bowie State University (BSU) academic space totals 352,099 net assignable square feet (NASF), which includes 55,329 NASF of classroom space; 93,553 NASF of teaching laboratory space; and 137,058 NASF of office space. **Exhibit 1** shows BSU's self-reported space deficiencies in fall 2012 and projected deficiencies in fiscal 2022. Nearly a decade from now, BSU currently expects to have space shortages in two of the five space categories, but an overall net surplus of about 18,000 NASF. While the deficiency in classroom space increases, so does the surplus in teaching laboratory space. In fiscal 2022, BSU expects to have 21.5% more NASF than it did in fall 2012, compared to a statewide public four-year institution average increase of only 13.2%. The new Natural Sciences Center (NSC) will provide all five types of academic spaces listed in Exhibit 1 and would assist BSU in meeting the planned enrollment growth and expansion of science, technology, engineering, and mathematics (STEM) programs.

**Exhibit 1**  
**Academic Space Surpluses/Deficiencies**  
**Net Assignable Square Feet**  
**Fall 2012 and Projected Fiscal 2022**



Source: Four-year Public Colleges and Universities Academic Space Surplus/Deficit: Fall 2012, Projected Fiscal 2022; Maryland Higher Education Commission

## ***Budget Overview***

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The fiscal 2015 budget provides \$23.3 million for construction administration services and to begin the actual construction process in fall 2014. This is a decrease of \$16.8 million from what was programmed for fiscal 2015 in the 2013 session *Capital Improvement Program* (CIP) based on new cash flow modeling, from the University System of Maryland (USM) cost center. This action increases the amount of funding for the project in both fiscal 2016 and 2017. The fiscal 2013 budget included \$3.1 million for the preliminary design and the 2014 budget programmed \$4.5 million to complete the design and begin site preparation for NSC at BSU. While the 2013 CIP included \$10.0 million in revenue bonds in fiscal 2015, the funding plan no longer includes any revenue bonds in this project as these funds have been allocated to other USM capital projects.

The total 2014 CIP estimated cost for NSC is \$89,742,000, which is an increase of \$342,000, or 0.4%, over last year's estimate. The estimate, however, has not been informed by final design stage input, which is expected in spring 2014.

When completed, the new NSC facility will provide modern laboratory and office space for expanding BSU programs in physical sciences, nursing, and mathematics. The project scope also includes demolishing both the Wiseman Center and the Crawford Science Building. In combination with the completion of a new Student Center building in August 2013 and the State-funded Fine and Performing Arts Center in early 2012, this will substantially alter BSU's campus space.

The NSC project includes the following components:

- demolishing the Wiseman Center to create space on campus for construction of NSC;
- constructing the modified NSC, which now includes additional facilities for nursing and mathematics research and classes; and
- demolishing the Crawford Science Building after NSC has been completed, as it is inadequate for current teaching needs, and the space can be repurposed as a plaza in front of the Student Center.

NSC will help improve BSU by creating a new teaching and research laboratory and classroom space. While the current science facility, the Crawford Science Building, offers about 15,000 NASF for laboratory space, NSC will offer about 39,000 NASF for laboratory space. NSC also includes space for a greenhouse, lounge, central services, and data processing that are all important for improving educational spaces at BSU. NSC will also have about 16,000 NASF for offices and about 12,000 NASF for classrooms. While the 2013 CIP documentation noted that the NSC are about 85,672 net square feet (NSF), current documentation shows 89,934 NSF, an increase of 4,262 NSF, or 5%, mostly due to increased classroom laboratory space.

**The President should comment on why the building's class laboratory NSF has increased given the space surpluses shown in Exhibit 1.**

The overall NSC project includes demolition costs for the Crawford Science Building as BSU has abandoned plans to renovate the Crawford Science Building after the completion of NSC. The Crawford Science Building cannot accommodate the mechanical, electrical, and plumbing systems required for a modern science building. In addition, although the building was remodeled in 1991, it is estimated to be cost prohibitive to meet modern fire and Americans with Disabilities Act requirements due to structural design, such as low ceiling heights and interior load bearing walls. The demolition of the Crawford Science Building will enable a renovated plaza to be placed in front of the new Student Center, the first Leadership in Energy and Environmental Design-certified building on campus, which opened in August 2013.

As a result of this change, the project scope was expanded greatly in the fiscal 2013 recommendation to include the Department of Nursing and the Department of Mathematics, as these departments will no longer be able to stay in the Crawford Building. While the nursing program is housed in the Center for Learning and Technology (CLT), it uses the Crawford Science Building for core science components. CLT does not have space for program growth, and the Crawford Science Building, as noted above, lacks sufficient space. NSC will add extensive new laboratory space for the nursing program to increase enrollment and to provide specialized spaces that simulate various clinical spaces found in a hospital, such as an operating room or pediatric unit. NSC will also offer modern facilities for hazardous material storage, which are not currently available in the Crawford Science Building. Classrooms will be larger to accommodate more students, and NSC will include a lecture hall that can seat 100 students. Office layouts will improve to meet the State guideline of 166 NASF, whereas the Crawford Science Building only offers 90 NASF per office.

This project also assists an initiative by USM to increase the number of STEM degrees awarded by 40% by 2020. Additionally, the new 2013 State Plan for Postsecondary Education emphasizes the need to develop more STEM capacity in the State to meet labor market demand. In order to meet this goal, institutions will need to increase production of STEM degrees by approximately 2,200. USM states that achieving this goal will require an array of targeted strategies, such as convincing those interested in, or enrolled in, education programs to switch to STEM areas and notes that it has seen some success in this area with a 20% increase in math and science education majors in the past fiscal year. NSC will assist in attracting students to STEM fields and retaining students over the course of their studies. In fall 2012, natural sciences, mathematics, and nursing generated about 25% of all weekly student contact hours on campus. In fiscal 2011, BSU rejected 17 qualified nursing students because it did not have the physical space to teach them. NSC would provide space for an expanding nursing program and would also attract and retain highly qualified STEM faculty and staff. Finally, as all undergraduate students are required to take a science class with a laboratory component to meet general education requirements, NSC will serve as a means to introduce all students to STEM disciplines.

## ***Operating Budget Impact Statement***

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### **Executive’s Operating Budget Impact Statement (\$ in Millions)**

	<i>FY 2015</i>	<i>FY 2016</i>	<i>FY 2017</i>	<i>FY 2018</i>	<i>FY 2019</i>
<b>Project Name</b>					
Estimated Operating Cost	\$0.000	\$0.000	\$0.672	\$1.687	\$1.715
Estimated Staffing	0	0	2	3	3
<b>Total Operating Impact</b>					
<b>Estimated Operating Cost</b>	<b>\$0.000</b>	<b>\$0.000</b>	<b>\$0.672</b>	<b>\$1.687</b>	<b>\$1.715</b>
<b>Estimated Staffing</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>3</b>

According to the fiscal 2015 CIP, NSC will impact the fiscal 2017 operating budget by \$0.7 million due to general costs for fuel and utilities, supplies and materials, and amortized equipment. Costs also rise to reflect 2 new positions required to maintain the facility and additional costs in running the building when it is completed in fiscal 2017 and 1 additional position in fiscal 2018. This is a decrease from 4 positions listed in the prior CIP.

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

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In fiscal 2014, BSU also received \$1.5 million to design, construct, renovate, and equip the installation of air conditioning units in the Leonidas James Physical Education Complex. BSU reports that this project is underway and will conclude by the end of fiscal 2014. BSU has no other ongoing projects or new projects in the CIP.

## ***Pre-authorizations and De-authorizations***

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BSU has one de-authorization for \$0.25 million related to favorable building contracts during the construction of the new Fine and Performing Arts building, which opened for the spring 2012 semester. There are two pre-authorizations for NSC for the 2015 and 2016 legislative sessions.

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

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1. Approve the \$23.3 million for construction of the new Natural Sciences Center on the campus of Bowie State University.
2. Approve the de-authorization of \$0.25 million in general obligation bonds for construction and equipping of the new Fine and Performing Arts Building at Bowie State University due to the project being complete.
3. Approve the pre-authorization of \$48.3 million in general obligation bonds for the 2015 session for the construction of the new Natural Sciences Center on the campus of Bowie State University.
4. Approve the pre-authorization of \$7.5 million in general obligation bonds for the 2016 session for the construction and equipping of the new Natural Sciences Center on the campus of Bowie State University.