

Capital Investment Workgroup Report

of the

Commission to Develop the Maryland Model for Funding Higher Education

November 3, 2008

Commission to Develop the Maryland Model for Funding Higher Education

Capital Investment Workgroup Report Executive Summary

The culmination of the Capital Investment Workgroup's year-long effort has resulted in 18 findings and 20 related recommendations. This executive summary will highlight several recommendations that the workgroup considers to be critical to ensure a strong system of higher education in Maryland that provides quality facilities. Currently, the capital facilities of Maryland higher education institutions face many problems and without significant, long-term investment these problems will only worsen.

In recognition of this and the paramount role that higher education plays in Maryland's economic health, the workgroup's recommendations surround certain fundamental observations as to the current status and future expectations of capital facilities at our higher education institutions. These observations include: (1) the State must commit to funding the facility renewal needs of the institutions; (2) the age and condition of the buildings have reached a critical point and ensuring adequate funding over the long-term will both reduce the existing backlog of need and prevent deterioration of buildings beyond the point of usefulness; and (3) the State must commit to funding research space. As Maryland's economy steadily shifts from manufacturing based to knowledge based,

the importance of having a robust research environment and a sufficient workforce will only become more critical.

Other fundamental observations include: (1) the State should continue searching for and evaluating alternative funding mechanisms that would provide additional capital revenues for higher education; and (2) there is a need to strictly prioritize capital projects and then remain consistent with the established priorities. In setting the priorities, equal consideration should be given to current and future space needs. For instance, community colleges have a significant deficiency in class lab space and there is a significant deficiency in research lab space at Maryland's research institutions. Increasing the inventory in these types of spaces will directly enhance Maryland's workforce and economic development.

While it appears that the implementation costs of these recommendations will be high (for instance, there is a total facility renewal backlog of \$3.1 billion), the workgroup emphasizes that the cost of not addressing these issues will be even higher and could cause significant irreparable harm to Maryland's future competitiveness and economic health.

Commission to Develop the Maryland Model for Funding Higher Education

Capital Investment Workgroup Findings and Recommendations

Introduction

The Capital Investment Workgroup was initially charged with six tasks: (1) examine enrollment trends compared to capital expenditures; (2) examine current capacity issues statewide; (3) examine future capacity in light of anticipated enrollment growth; (4) examine capital needs by type of project/space; (5) examine current and future capacity relative to workforce development/shortage areas; and (6) suggest ranking/prioritization principles/guidelines for capital investment in higher education across segments and by project type. An additional task was added in the 2008 interim to examine alternative funding options, including the Private Donation Incentive Program (PDIP).

Although there are seven tasks, several involve similar analysis. Therefore, the workgroup made findings and recommendations pertaining to four topic areas: (1) current and future capacity issues to accommodate enrollment growth; (2) workforce needs relative to capacity; (3) prioritization principles for capital investment; and (4) alternative funding options including PDIP. This report describes the workgroup's findings and recommendations in these four topic areas.

Topic 1: Current and Future Capacity Issues to Accommodate Enrollment Growth

Data Examined

The issue of capacity is primarily impacted by how much space an institution has, the functionality of that space, and how the space is used by an institution. The workgroup examined each of these three aspects of capacity.

How Much Space Exists Now and in the Future?

The Maryland Higher Education Commission (MHEC) maintains the State's enrollment data for prior years and 10-year projections. MHEC also maintains data on the public four-year institutions' and community colleges' academic space inventories. These include classroom,

class lab, faculty office, and research lab space among others. The workgroup compared a six-year history of enrollment trends to total academic space deficits for the public four-year institutions and for community colleges. The data showed that the public four-year institutions experienced a 17 percent increase in enrollment between fall 2000 and 2006. During the same time period, the academic space deficit, which includes the four types of academic space mentioned above, remained relatively constant. When the academic space deficits are scaled to a per full-time equivalent student basis, there was a slight increase in the deficit. Therefore, it appears that capital projects for the public four-year institutions over the past several years have made some inroads into the academic space deficits. However, significant deficits remain and are projected to worsen in the future, as will be shown below.

The workgroup examined this same type of data for the community colleges. However, community colleges do not have research space so only classroom, class lab, and faculty office space were examined. The enrollment data included full-time day equivalent students, which would predominantly be credit students. From fall 2000 to 2006, community college enrollment grew by 22 percent and academic space deficits increased by 38 percent during this time period. On a per student basis, deficits have increased by 13 percent. However, most community colleges will also have space deficits in the future.

The workgroup then examined future enrollment growth that is anticipated to occur in Maryland over the next 10 years. Enrollment at the public four-year institutions and the community colleges is expected to increase 22 and 24 percent, respectively, by fall 2016. This equates to 23,000 full-time equivalent students at the public four-year institutions and 17,000 at the community colleges. The expected enrollment growth at Maryland's private colleges and universities is projected to be 7,936 full-time equivalent students or 20 percent. In order to provide some perspective to this expected growth, the increase in enrollment during the prior 10 years (1997-2007) was 35 percent at the public four-year institutions and 34 percent at the community colleges. This equates to 27,123 full-time equivalent students at the public four-year institutions and 25,144 full-time equivalent students at the community colleges. The Maryland Independent College and University Association (MICUA) institutions report an enrollment growth of 28 percent from 1997 to 2007. This equates to 8,696 full-time equivalent students.

Based on this expected enrollment growth, the 10-year projected academic space needs were examined. Data showed that most public four-year institutions and community colleges are expected to have greater academic space deficits in 2016 than in 2006. It is important to note that the projected academic space inventory shown in Exhibits 1 through 4 assumes that no new facilities will be added to a campus's inventory. It should be noted that MICUA institutions use different methodologies when tracking academic space inventory. Therefore, they are not included in the exhibits or the relevant analysis.

Exhibit 1 shows the detail of inventory by type of space for fall 2006 and projected inventory for fall 2016. The four categories of academic space (classroom, class laboratory, faculty office, and research) are included. The exhibit shows that public four-year institutions currently have deficits in all types of space, and this is expected to continue and worsen in 2016.

Community colleges currently have a surplus in classroom space that is expected to remain in 2016. However, a deficit is expected in the other types of space. Of note are the deficits in research lab space at the public four-year institutions and the deficits in class laboratory space at the community colleges.

Exhibit 2 shows three of the four types of academic space, classroom, class lab, and faculty office space surpluses and deficits at the public four-year institutions. Currently, three institutions (Frostburg State University, University of Maryland Eastern Shore, and Morgan State University) have a small surplus in these spaces. However, all institutions are expected to have a deficit by 2016. **Exhibit 3** shows these spaces at the community colleges. The space deficits for classrooms, class labs, and faculty offices are generally to a smaller degree than for the public four-year institutions. Also, three institutions (Chesapeake, Garrett, and Prince George's) are expected to have a surplus of space in 2016.

Recognizing that research space is a critical academic component for the State, **Exhibit 4** shows only research space, the fourth type of academic space. Maryland has four public research institutions: University of Maryland, College Park (UMCP); University of Maryland, Baltimore (UMB); University of Maryland, Baltimore County; and Morgan State University. Of the four research institutions, all currently have a research lab space deficit and all will have a greater deficit by 2016. Most notable are UMB and UMCP, which have significant research space deficits now and in 10 years. UMB's research lab space deficit is projected to remain just under 1 million net assignable square feet (NASF). UMCP's research lab space deficit is projected to increase from slightly less than 800,000 NASF in 2006 to over 1 million NASF by 2016. Exhibit 4 also shows the research space at comprehensive institutions. Although these institutions are not classified as research institutions, data is maintained on this type of space as research does play a role in the mission of the institutions, but is not a primary role. The exhibit shows that most institutions have a research lab space deficit now and in the future. However, the deficit is of a significantly smaller degree than that for UMB and UMCP. It should be noted that community colleges do not have research lab space.

The workgroup also examined academic space inventory by type of space at each institution. These data (not included in this report) showed that there are different needs at different institutions. For this reason, the issue of space deficits must be examined on an individual basis. Additionally, it should be noted that each segment of higher education has different missions and capital projects are funded differently. This also requires individual analysis of each institution's needs.

It should be noted that although some campuses might have small deficits or even surpluses of certain types of space, this does not reflect the quality of the space that exists on the campus. For instance, an institution may report data that indicates a surplus of space, but the quality of that space may render it unusable. Therefore, this unusable space may need a major renovation or even replacement before it becomes usable. This issue will be further addressed below and in Topic 3 regarding the need for facility renewal.

Exhibit 1
Higher Education Space Needs
Net Assignable Square Feet

Current – Fall 2006

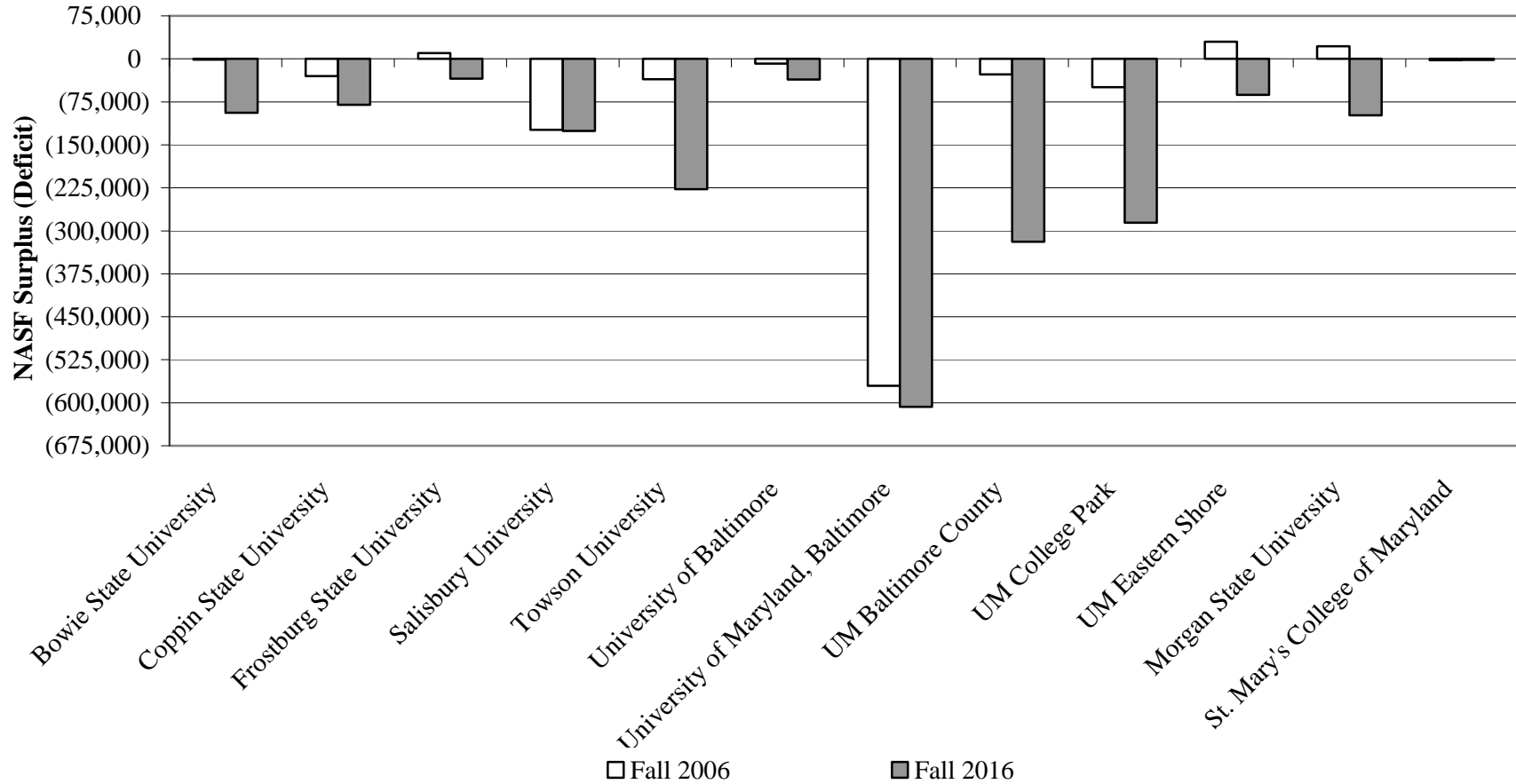
| | Classroom | Laboratory | Office | Research | Total |
|----------------------------|------------------|-------------------|------------------|--------------------|--------------------|
| 4-year Public Institutions | (134,189) | (430,040) | (221,871) | (1,908,691) | (2,694,791) |
| 2-year Public Institutions | 43,724 | (521,930) | (214,280) | N/A | (692,486) |
| Total | (90,465) | (951,970) | (436,151) | (1,908,691) | (3,387,277) |

Projected – Fall 2016

| | Classroom | Laboratory | Office | Research | Total |
|----------------------------|------------------|--------------------|--------------------|--------------------|--------------------|
| 4-year Public Institutions | (377,551) | (829,081) | (766,887) | (2,330,905) | (4,304,424) |
| 2-year Public Institutions | 27,583 | (680,993) | (341,166) | N/A | (994,576) |
| Total | (349,968) | (1,510,074) | (1,108,053) | (2,330,905) | (5,299,000) |

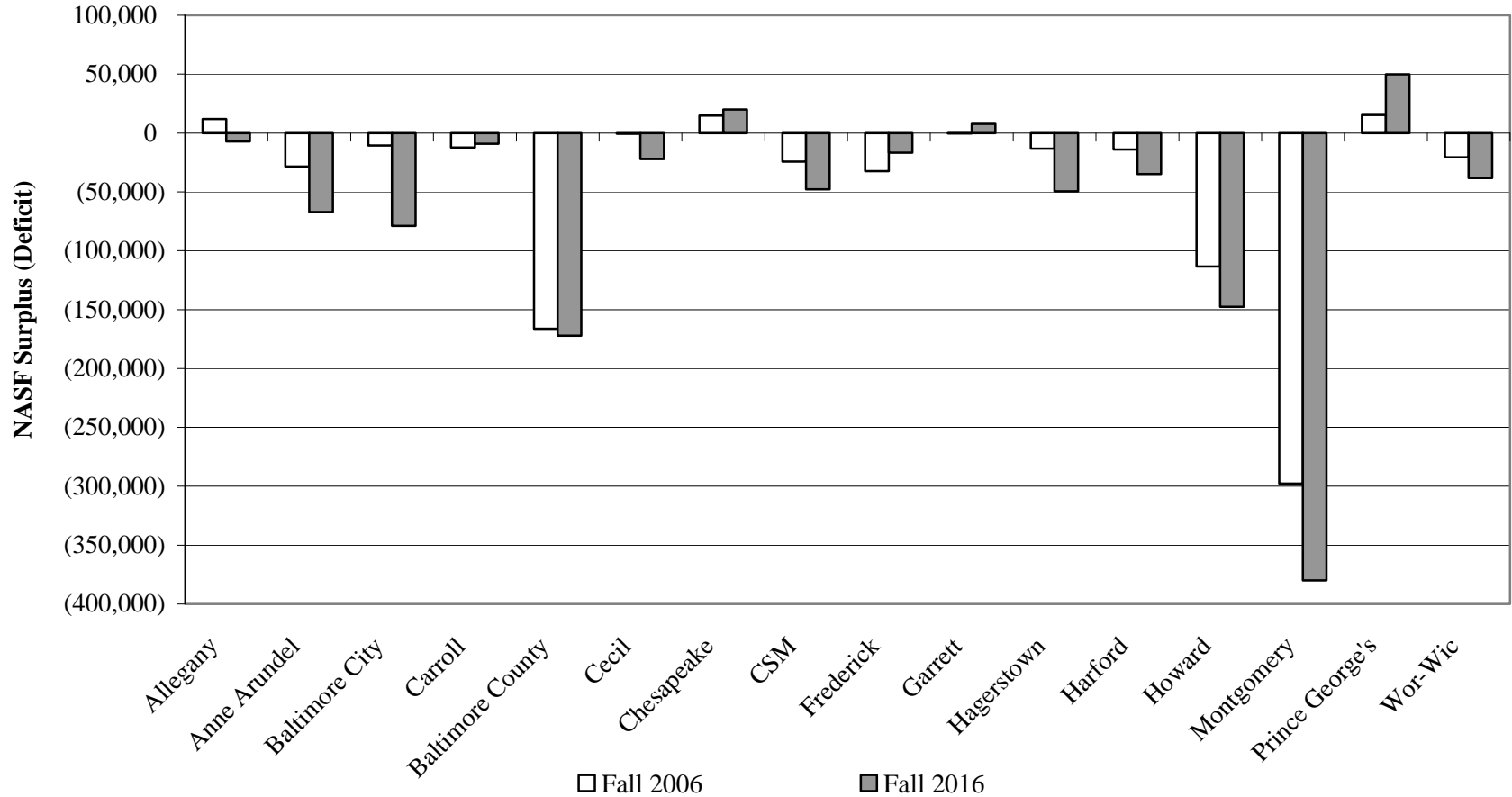
Source: Maryland Higher Education Commission

Exhibit 2
Maryland Public Four-year Colleges and Universities
Classroom, Class Lab, and Faculty Office Space Deficits Projected for All Institutions
Fall 2006 and 2016



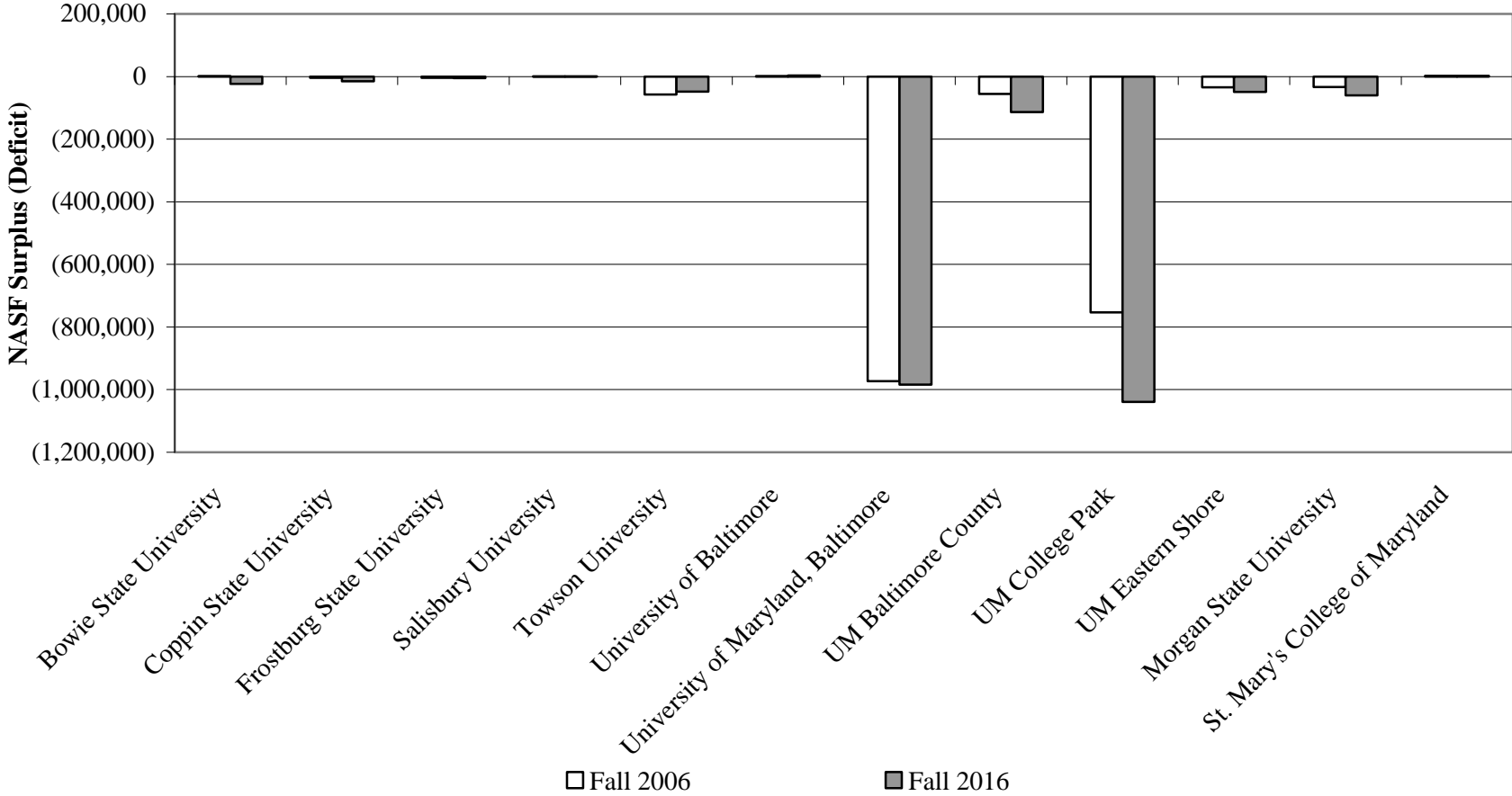
Source: Maryland Higher Education Commission

Exhibit 3
Maryland Community Colleges
Most Colleges Are Projected to Have Deficits of Classroom, Class Lab, and Office Space
Fall 2006 and 2016



Source: Maryland Higher Education Commission

Exhibit 4
Maryland Public Four-year Colleges and Universities
Research Lab Space Surplus and Deficit
Fall 2006 and 2016



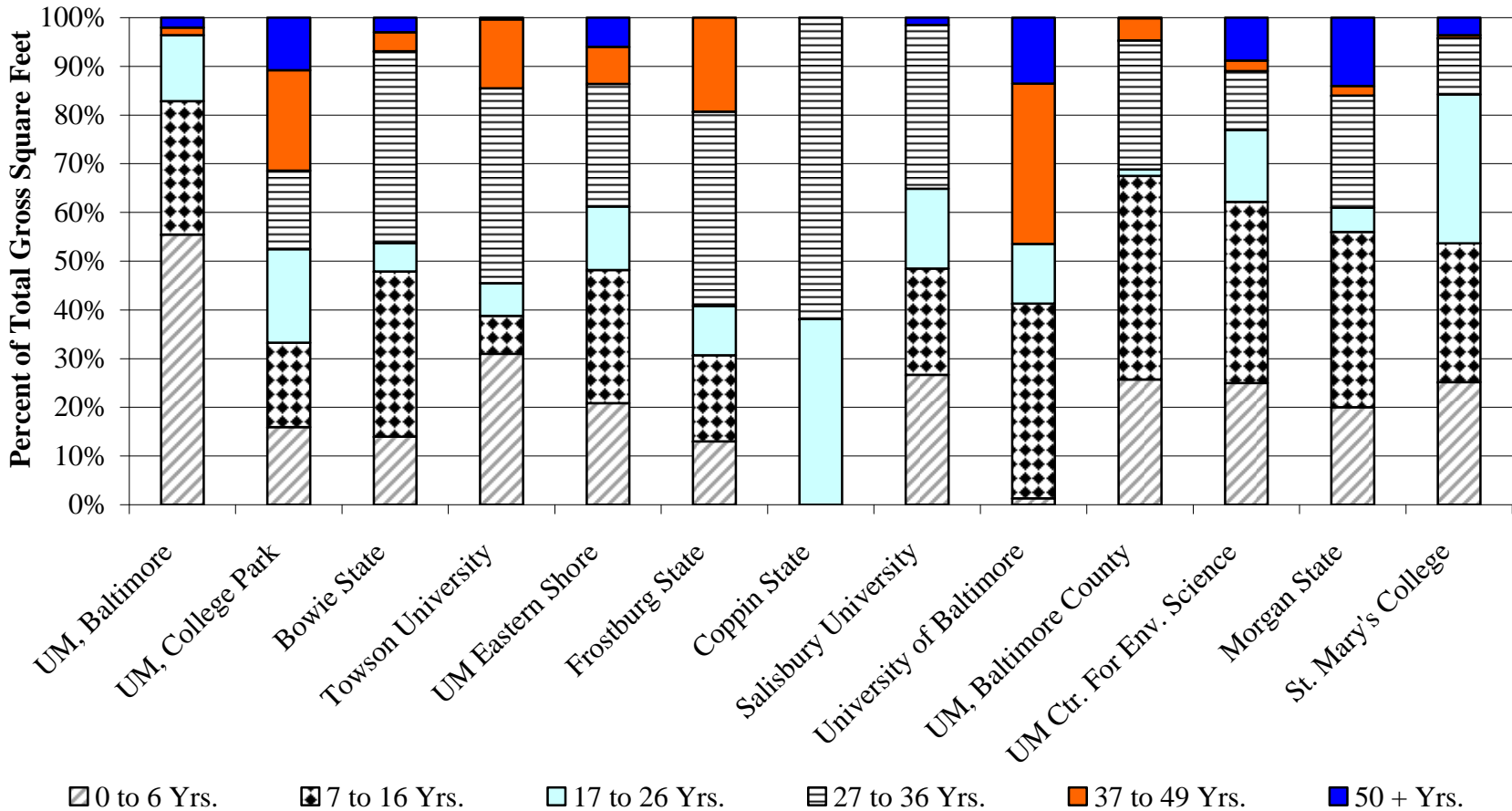
Source: Maryland Higher Education Commission

What Is the Quality of Existing Space?

Although the space deficits are an important piece of data to analyze, one does not have a full understanding of the issue until the quality of existing space is also analyzed. The quality of existing space can be broken down into two components: programmatic quality and physical quality. Programmatic quality pertains to the suitability of existing space to adequately serve the function of a particular building. This could include a building being too small, building features or design not being up to modern standards, or other functional issues. Building system quality pertains to whether systems such as heating, ventilation, and air conditioning; electrical; roofing; etc. are adequate and functional. While both types of quality are critical to the overall functionality of existing space, data limitations only allow for analysis of building system quality. Therefore, the following analysis excludes programmatic quality.

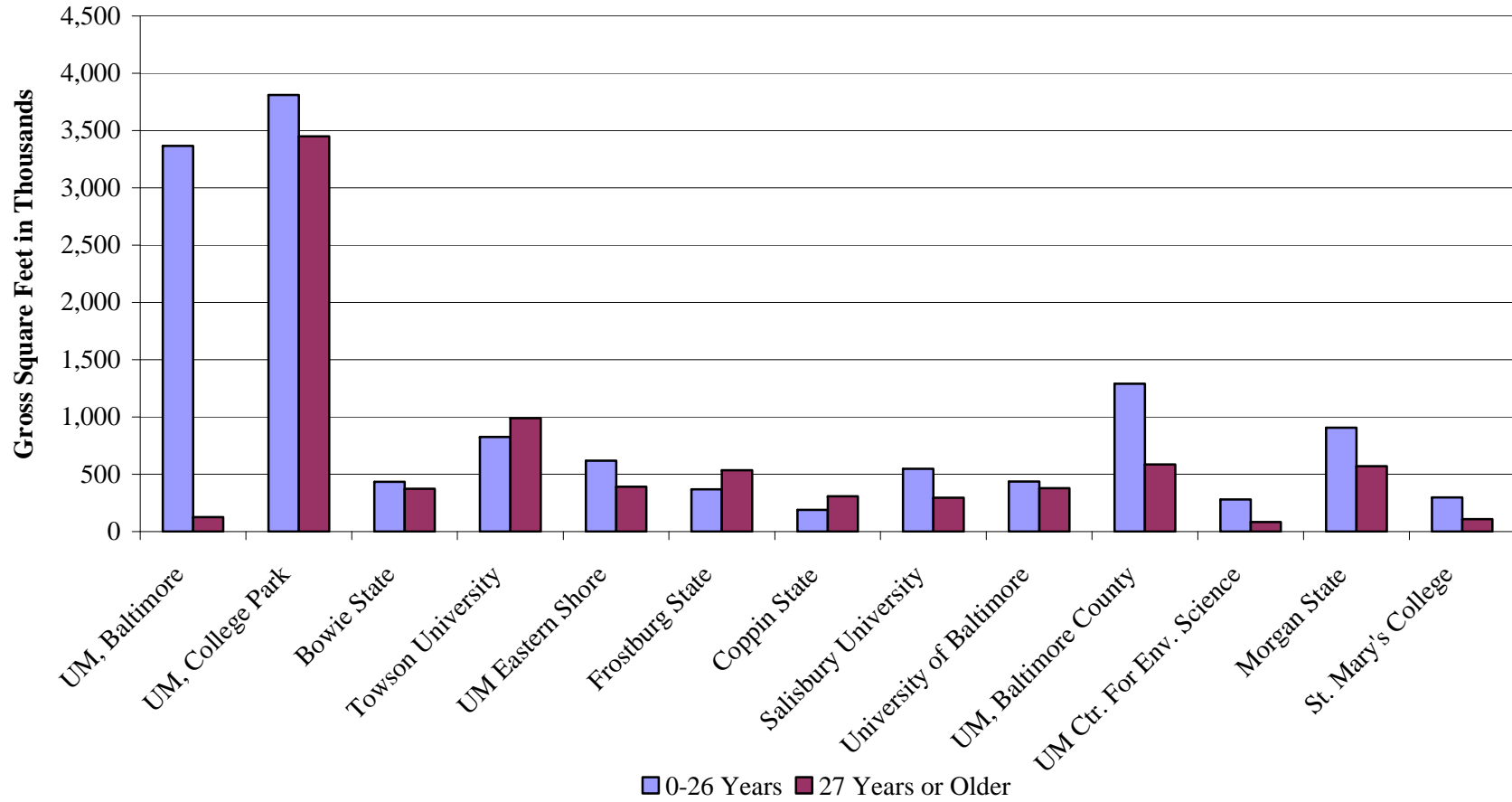
The age of buildings is one way to measure the functionality of existing space. This was thought to be important since the age of buildings on a campus will impact the extent of needed maintenance and the possibility of replacement buildings. The age of campus space was analyzed by looking at the number of gross square feet in several age categories. Current industry standards provide that building systems can be expected to last between 25 and 35 years before they will need major renovations or replacement. The building itself, however, is expected to last at least 50 years. **Exhibits 5** through **8** show the details of the age of space for each campus. It should be noted that these exhibits only include buildings that were operational in fall 2007. It does not include buildings that may have been under construction at that time. Additionally, when space is renovated the age of that space is adjusted to reflect the date of renovation.

Exhibit 5
Maryland Public Four-year Colleges and Universities
Age of Gross Square Feet as Percent of Total
Fall 2007



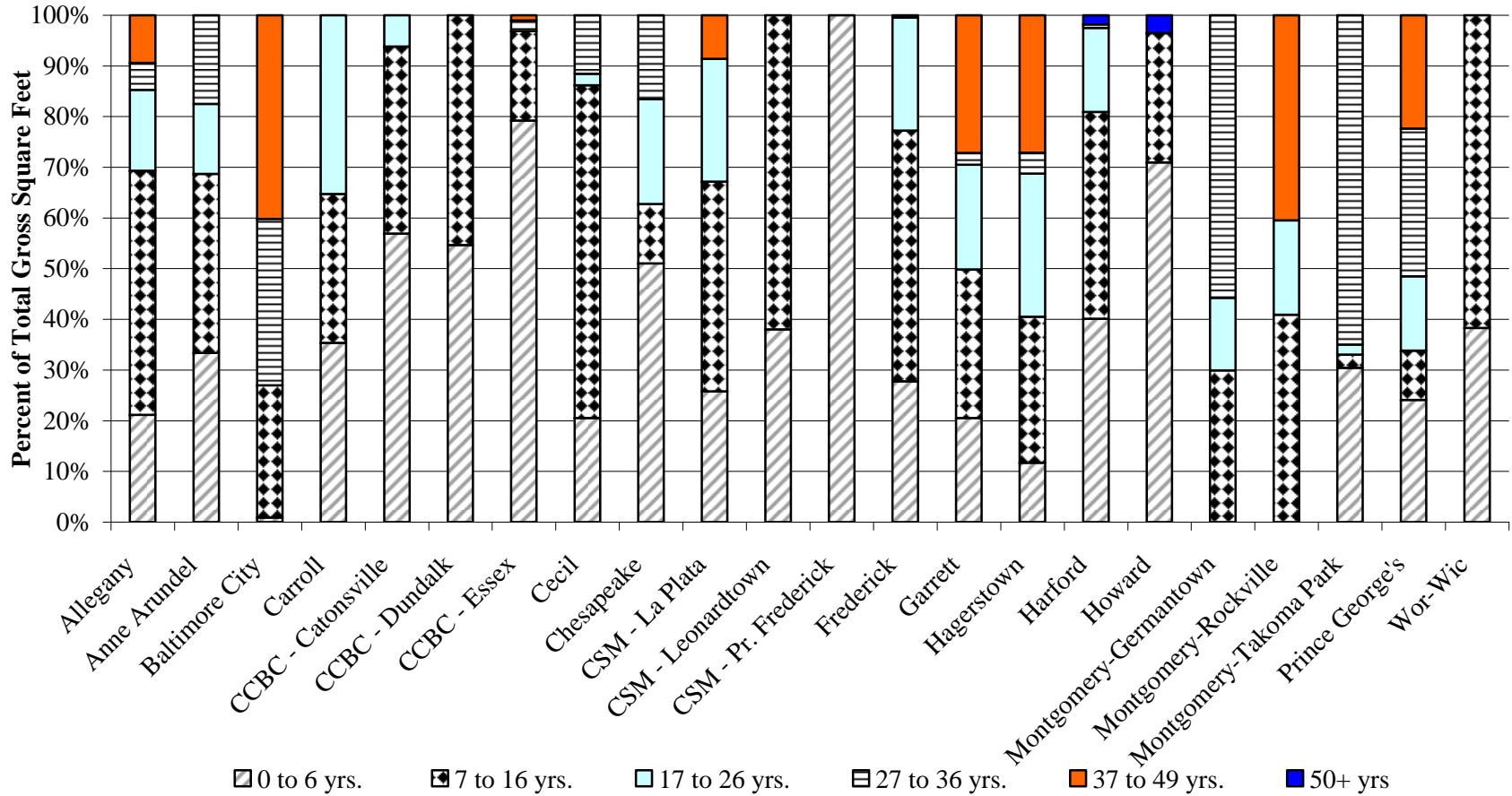
Notes: Includes only State supported buildings open as of fall 2007. Represents age of buildings from date of original construction or most recent renovation.
 Source: MHEC Space Guidelines and Planning (SGAP) Report 2008

Exhibit 6
Public Four-year Maryland Colleges and Universities
Gross Square Feet by Age
Fall 2007



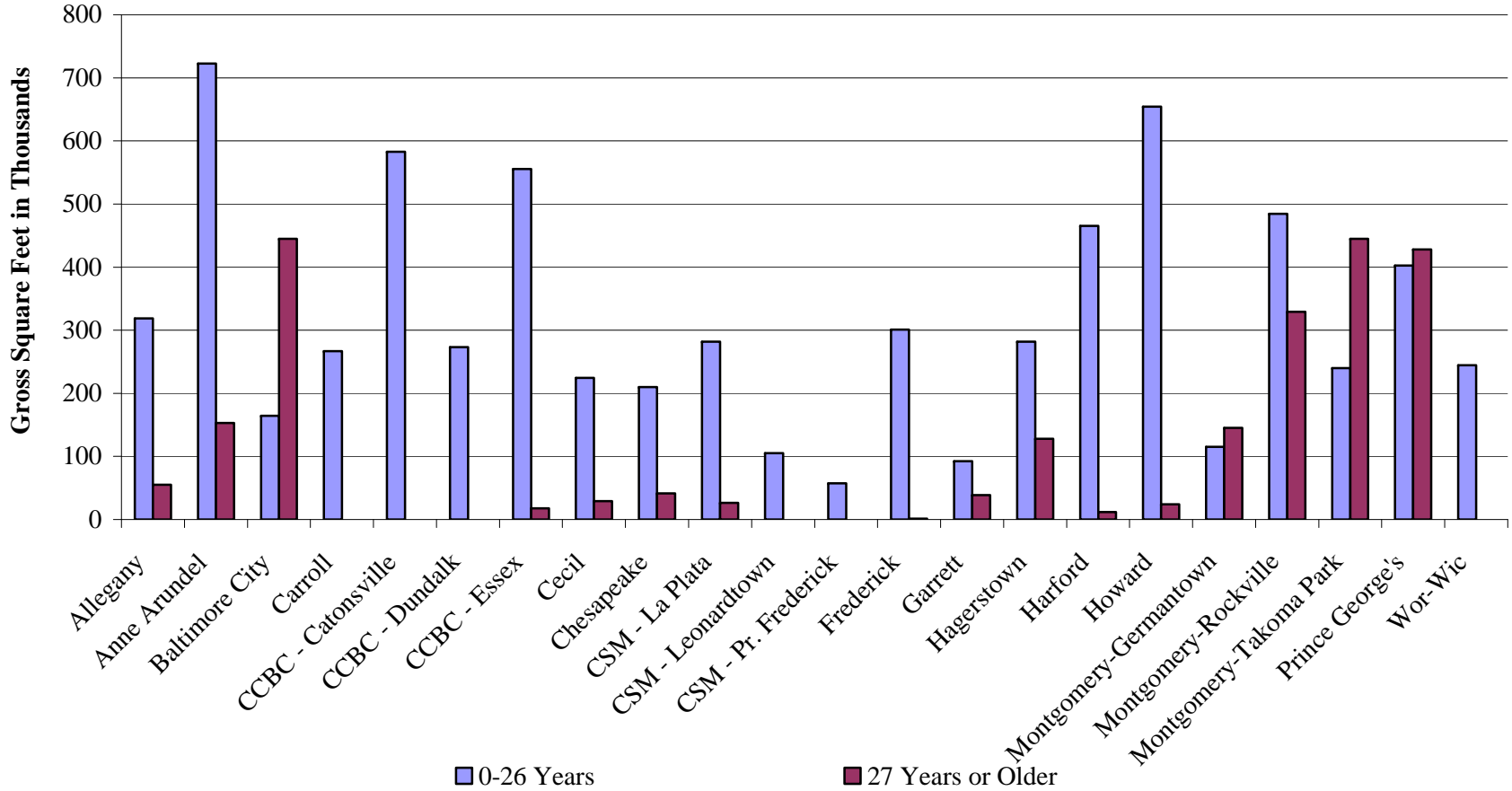
Notes: Includes only State supported buildings open as of fall 2007. Represents age of buildings from date of original construction or most recent renovation.
 Source: MHEC Space Guidelines and Planning (SGAP) Report 2008

Exhibit 7
Maryland Community Colleges
Age of Gross Square Feet as Percent of Total
Fall 2007



Notes: Includes only State supported buildings open as of fall 2007. Represents age of buildings from date of original construction or most recent renovation.
 Source: MHEC Community College Facilities Inventory Reports 2008

Exhibit 8
Maryland Community Colleges
Gross Square Feet by Age
Fall 2007



Notes: Includes only State supported buildings open as of fall 2007. Represents age of buildings from date of original construction or most recent renovation.
 Source: MHEC Community College Facilities Inventory Reports 2008

How Effectively Is Existing Space Used?

To address this question, the workgroup examined space guidelines and graduation rates. These two aspects are more operational in nature, but directly impact the need for space. An important aspect of space deficiencies and surpluses is the space utilization rates. This measures how efficiently an institution uses the existing space on its campus and impacts the space deficiency and surplus. For instance, if a campus is efficiently using its existing space (*i.e.*, has a high utilization rate) this can lower the need for additional space and should decrease the deficiency. The State established the Workgroup to Study Maryland's Capital Improvement Planning Process and Capital Facilities Space Guidelines for Higher Education to review the space standards and guidelines that are used to plan higher education facilities. There are national standards for utilization rates. The workgroup, led by MHEC, has studied the standards and guidelines at the public four-year institutions and the community colleges. The study found the utilization and occupancy standards of Maryland public colleges and universities to be consistent with guidelines and standards used in other states. Currently, the State is continuing the study and examining utilization rates. Efforts are underway to develop and gather consistent, reliable data regarding utilization rates. However, this effort has only just begun. Therefore, utilization data are not yet available for analysis. For further information regarding the State's work in this area please refer to the *Maryland Capital Improvement Planning Process and Capital Facilities Space Guidelines for Higher Education Report*. This report can be found on MHEC's web site at <http://www.mhec.state.md.us/publications/finance/MDCipCapFacRep.pdf>.

Another operational impact on the use of existing space is the time-to-degree for students. The longer it takes for a student to graduate, the less space is freed up for another student to enter a program. Maryland's overall average six-year graduation rate is at an all time high (64 percent) and has been increasing each year for the past seven years. However, the individual graduation rates at four institutions have declined over this time period. Six-year graduation rates at the public four-year institutions range from 84.1 percent to 20.7 percent. Four-year graduation rates are also measured and range from 71.8 percent to 5.2 percent. It is, however, important to note that Maryland's average six-year graduation rate has been consistently higher than the national average.

Findings

Based on the above data analysis, the workgroup makes the following conclusions regarding the capacity of the public four-year institutions and the community colleges now and in the future:

- Construction at public four-year institutions has improved the space inventories in some types of space. However, space deficits still exist and are projected to worsen in the future as enrollment grows. Maryland research institutions have a significant deficit in research lab space now and in the future. Of particular concern are the deficits at the University of Maryland, College Park and the University of Maryland, Baltimore.

- Construction at community colleges has not improved the overall space deficits when compared to enrollment growth during the past six years. Some community colleges, however, do have a surplus of space now and a projected surplus in the future in specific types of space. Teaching lab space is particularly needed at community colleges.
- A significant proportion of gross square feet at both the public four-year institutions and the community colleges is older than 27 years of age, the time at which major building system renovations and replacements will be needed.
- Operational use of existing space through class scheduling and other means can improve utilization rates, which could reduce the need for new construction in the short term.
- Increasing the graduation rates of students will also reduce the demand for space.
- The expected enrollment growth rate for the next 10 years is lower than the growth rate for the prior 10 years.

Recommendations

In order to address the above findings, the workgroup makes the following recommendations:

- Include an analysis of academic space needs at each public four-year institution and community college in all stages of the capital budget deliberation process beginning with the institution's capital request. There is significant data to inform this analysis, though the ultimate decision regarding project selection is, in many cases, up to a governing board. The institutions and the State should consider giving priority to projects that target the identified areas of significant academic space deficits at each campus. The institutions and the State should also consider giving priority to projects that address the programmatic quality and building system quality of existing space.
- Encourage all institutions to optimize the use of existing space. This can be achieved by incorporating night and weekend class schedules as well as using online class platforms whenever practicable.
- Encourage all institutions to decrease time-to-degree (increasing the graduation rate). This will decrease the need for space. Recent institutional efforts to increase the graduation rates have proven successful at most institutions. Institutions should maintain these efforts and strive for further improvements.
- Monitor the progress of Towson University's Trimester Pilot Program. Towson has created a trimester program to increase the utilization rate of class lab space, which is

typically a more expensive type of space to construct and a type of space that is in great demand. The trimester program began in summer 2008 and annual reports on the program will need to be submitted by Towson University to the University System of Maryland Board of Regents.

- Monitor the impact on space deficits resulting from the increase in the Community College Capital Grant Program. For the fiscal 2009 capital program, the State has provided the community colleges with \$81 million for capital projects, roughly a 30 percent increase over the prior year. The State intends to continue this higher level of funding for at least the next five years. Also, the increase in State funding leads to an increase in the local contribution for capital projects. When including the local funding, the fiscal 2009 budget is close to \$150 million, roughly a 45 percent increase over the prior year. In light of this significant increase in support for community college capital projects, it would be prudent to monitor the impact of this spending on academic space needs.

Topic 2: Workforce Needs Relative to Capacity

Data Examined

The workgroup was charged with examining workforce needs relative to capacity. There is currently a 21-member Advisory Council on Workforce Shortage that is charged with identifying critical workforce occupations for purposes of financial aid programs. However, the data that the council uses was examined in regards to the workgroup's charge. The council evaluates occupational data from the Department of Labor, Licensing, and Regulation; wage data from the federal Bureau of Labor Statistics; graduation data from MHEC; and other information sources. Pertinent to the workgroup is data that shows the number of graduates in specified degree programs versus the number of annual openings for jobs in those fields. The gap between these two measures represents a workforce shortage (or surplus). The council identified several areas in which there is great need: computer/electrical engineers, nursing instructors, special and secondary education teachers, elementary school teachers, middle school teachers, computer and network managers, registered nurses, and others.

The workgroup also identified some considerations that should be made when using this data to inform the capital budget process. The capital process is long-term in that it takes several years to fund and construct one building that is expected to last at least 30 years. Therefore, any particular workforce need ought to be shown to be a long-term need in order to justify a new building. Additional considerations should include the evaluation of the use of online or distance education courses to fulfill a workforce need that may be short term; the availability of instructors or interested students may be a limiting factor in producing an adequate supply of graduates in the workforce shortage area; and changing demographics and economic factors may impact the workforce needs. For example, an aging population may lead to a need for more

health care professionals trained in geriatrics or the shift from a manufacturing economy to a knowledge-based economy will impact the workforce shortage areas.

Findings

Based on the above data analysis and discussion of the workgroup, the following conclusions can be made:

- Areas showing the greatest gap between current demand and supply are:
 - Computer-based
 - Computer/Electrical Engineers
 - Computer and Network Managers
 - Nursing
 - Instructors and Teachers
 - Registered Nurses
 - Teaching/Education
 - Special Education Elementary and Secondary Teachers
 - Elementary Teachers
 - Middle and Secondary Education Teachers
 - Education Administrators
 - Accountants/Auditors
- Capital investment to construct buildings is a long-term process. Demand areas must be ones in which the demand is sustainable for longer periods of time, rather than periodically.
- Capital planning should include consideration of the flexibility of the space to meet the needs of multiple programs or courses and the changing needs and technology associated with the particular discipline. Space can be used for multiple functions, increasing capacity for more programs.
- The biennial reports of the Workforce Shortage Advisory Council should be considered when institutions are planning future capital facilities.

Recommendations

In order to address the above findings, the workgroup makes the following recommendations:

- Continue to monitor the need and supply for trained individuals in areas identified as having the greatest need through the work of the Department of Business and Economic

Development; the Governor’s Workforce Investment Board; the Department of Labor, Licensing and Regulation; and the Advisory Council on Workforce Shortage.

- If a need is identified, include an analysis on whether the need is short- or long-term and why the need should be considered in the capital planning process for the State.
- If a long-term need is identified, encourage institutions to place priority on capital projects that will meet the demands of those areas.
- Capital planners should consider how to increase the flexibility of space for use by multiple programs or courses to increase the usefulness of the space. Planners should also consider how to increase the flexibility of space to accommodate changing needs and technology for the specific programs and disciplines for which the building is designed.

Topic 3: Prioritization Principles for Capital Investment

Data Examined

The workgroup examined the following information in order to fulfill this charge: existing policy in Maryland, prioritization models currently in use, and facility renewal.

Existing Policies in Maryland

To evaluate this charge, the workgroup examined several existing reports regarding Maryland’s goals and principles for higher education, and the workgroup reviewed enrollment data and capital funding data for the public four-year institutions and community colleges. The workgroup reviewed the *2004 State Plan for Postsecondary Education* as a starting point with the intent of aligning workgroup recommendations with the existing policy of Maryland. From the State Plan the workgroup identified some principles that can be applied to the capital needs of the State. Access is the second goal of the State Plan, and the capital investment in higher education directly impacts the achievement of this goal. The policy statement of “all Maryland residents who wish to attend should have a place” is part of the goal of access. Maryland should provide access and quality with the commitment necessary to build facilities to make this goal attainable. The State Plan also mentioned that program duplication should be limited, growth in workforce shortage areas should be encouraged, and distance learning should be encouraged. These three programmatic ideas directly impact the need for facilities at higher education institutions and what types of facilities are needed.

The workgroup also reviewed the report completed by Van de Water Consulting, *Meeting Maryland’s Postsecondary Challenges*. This report was completed at the request of MHEC in anticipation of reviewing how Maryland funds higher education. While the scope of the report prevented a direct analysis of capital investments, the report does contain some ideas that were

important for the workgroup to consider. Interviews with Maryland leaders in higher education showed that there is a concern for accommodating enrollment growth in light of the anticipated “Thornton effect.” It is expected that more students will graduate from high school with an interest in and the capability of attending college as a result of increased funding at the K-12 level. Therefore, the report echoed the need for access. One of the things that Maryland already plans to do is complete a 10-year growth plan. It is anticipated that this plan will address the issue of access and how to encourage strategic enrollment growth between the segments of higher education.

The final report the workgroup reviewed was the principles that were discussed during the Symposium on Higher Education that the Commission to Develop the Maryland Model for Funding Higher Education held in July 2007. Again, the idea of capacity and access were thought to be critical to Maryland. However, it was noted that while enrollment in higher education institutions in Maryland is expected to grow, the pace of the growth is not expected to be unprecedented. Discussion at the symposium included improving college readiness at the K-12 level, encouraging online education, and eliminating low-enrollment courses to free up space for programs that are in higher demand. A question was raised during the symposium, but not answered, whether there is a difference in the role of research versus comprehensive institutions (including community colleges) to achieve the State’s goal of access.

Prioritization Models Currently in Use

The Maryland Independent College and University Association (MICUA), Maryland Association of Community Colleges (MACC), and the University System of Maryland (USM) were invited to make presentations to the workgroup about their own internal prioritization method among their constituent institutions when determining the capital funding request for each fiscal year. These three groups were selected because of their responsibility to decide which projects to fund among many different institutions. The prioritization methods among the three groups are different and were independently developed.

MICUA receives a grant from the State to support capital projects at the private colleges and universities. To receive State funding, the project must satisfy many criteria including the project must be academic in nature, consistent with the mission of the institution, aligned with the higher education needs of the State, and included in the campus master plan of the institution. Each institution is evaluated on its readiness to begin construction immediately after the capital budget is enacted and must demonstrate the capability of complying with MICUA and State guidelines for capital grants. In addition, MICUA may give priority to institutions that have not received a State capital grant in recent years.

MACC institutions also receive a grant from the State. MACC uses a detailed formula to calculate a final score for each project. These scores are then used to create a ranked list of projects. Projects are funded in that order until the grant amount for the fiscal year is exhausted. The ranking could change each year as the calculations are run for each fiscal year capital

request. The formula includes factors related to type of project, campus age, space inventory needs, and the campus' priority, among others.

USM also must prioritize among its constituent institutions within an annual capital budget target described by the USM Governance Bill (SB 682 of the 1999 session) as "current funding adjusted for inflation" and based on the project queue within the Governor's *Capital Improvement Program* (CIP). The three drivers for USM prioritization of project funding are: (1) programmatic or strategic (*e.g.*, enrollment growth); (2) physical deterioration (USM reports a facility renewal backlog of \$1.6 billion); and (3) outside influences and requirements (*e.g.*, Americans with Disabilities Act, Office for Civil Rights, economic development, etc.). Technical data are used to develop a draft budget (essentially incremental changes to the existing project queue) that is then vetted via an iterative and carefully structured collaborative process of discussion, revision, and evaluation between the presidents and the Board of Regents. USM selects projects that are consistent with an institution's facility master plan, the Board of Regents' initiatives, and ones that have a clearly documented need. USM also strives to remain consistent with the Governor's five-year CIP. However, USM also maintains a 10-year prioritization list in which the Board of Regents try to maintain each institution's priorities.

All capital projects must then be recommended by MHEC to be included in the Governor's budget. MHEC develops and approves a set of priorities to guide in the evaluation of capital budget requests for the public four-year institutions. Two levels of priority categories are used. The first identifies priorities within the following classifications: life safety, legal mandate, project completion, renovation, improvements to utility and basic support, new construction, site improvements, and land acquisition. The second level considers what types of facilities are being requested. These include academic, research, support, higher education center, and continuing education.

MHEC then decides whether to recommend a project for full funding, deferred funding, or reduced funding based on a number of considerations. These considerations include the priority list, the current and projected enrollment in academic programs, consistency with space guidelines, and the adequacy of current and proposed facilities to accommodate the academic, research, and support requirements of the institutions.

MHEC has adopted the prioritization model developed by MACC, and will use the model as the basis for their recommendation for the community college capital program.

Beginning with the fiscal 2010 capital request, MHEC will include three additional considerations. These include environmental sustainability and green building initiatives; the ability to address workforce education, particularly in the areas of nursing, teaching, science, technology engineering and mathematics programs; and meeting the needs of the Base Realignment and Closure Act of 2005.

The Challenge of Facility Renewal

Facility 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. The State of Maryland uses this term to describe a wide range of projects ranging from small system upgrades, large system renovations, and even the replacement of an entire building. This term also incorporates what national literature may refer to as “deferred maintenance.” Facility renewal becomes more of an issue as buildings age. The public four-year institutions report having a significant backlog of facility renewal needs. Specifically, USM, Morgan State University (MSU), and St. Mary’s College of Maryland report a \$1.6 billion backlog, \$8.5 million backlog, and \$15.0 million backlog, respectively. MICUA reports a backlog of \$631.0 million and MACC reports a backlog of \$850.0 million. In 1992, the USM Board of Regents began a policy that required each institution to allow 2 percent of the value of capital assets to be used on facility renewal needs. USM set the goal at 2 percent because this represents the industry standard for adequately maintaining building facilities. Over time, this goal was not met. USM recently developed a policy to systematically increase each institution’s facility renewal budget until the 2 percent goal is reached. More recently MSU also established a long-term goal of reaching 2 percent with a short-term goal of reaching 1 percent. The use of this policy at USM has resulted in a slight reduction of the backlog. However, it will take many years of focusing on this problem before significant reductions are made.

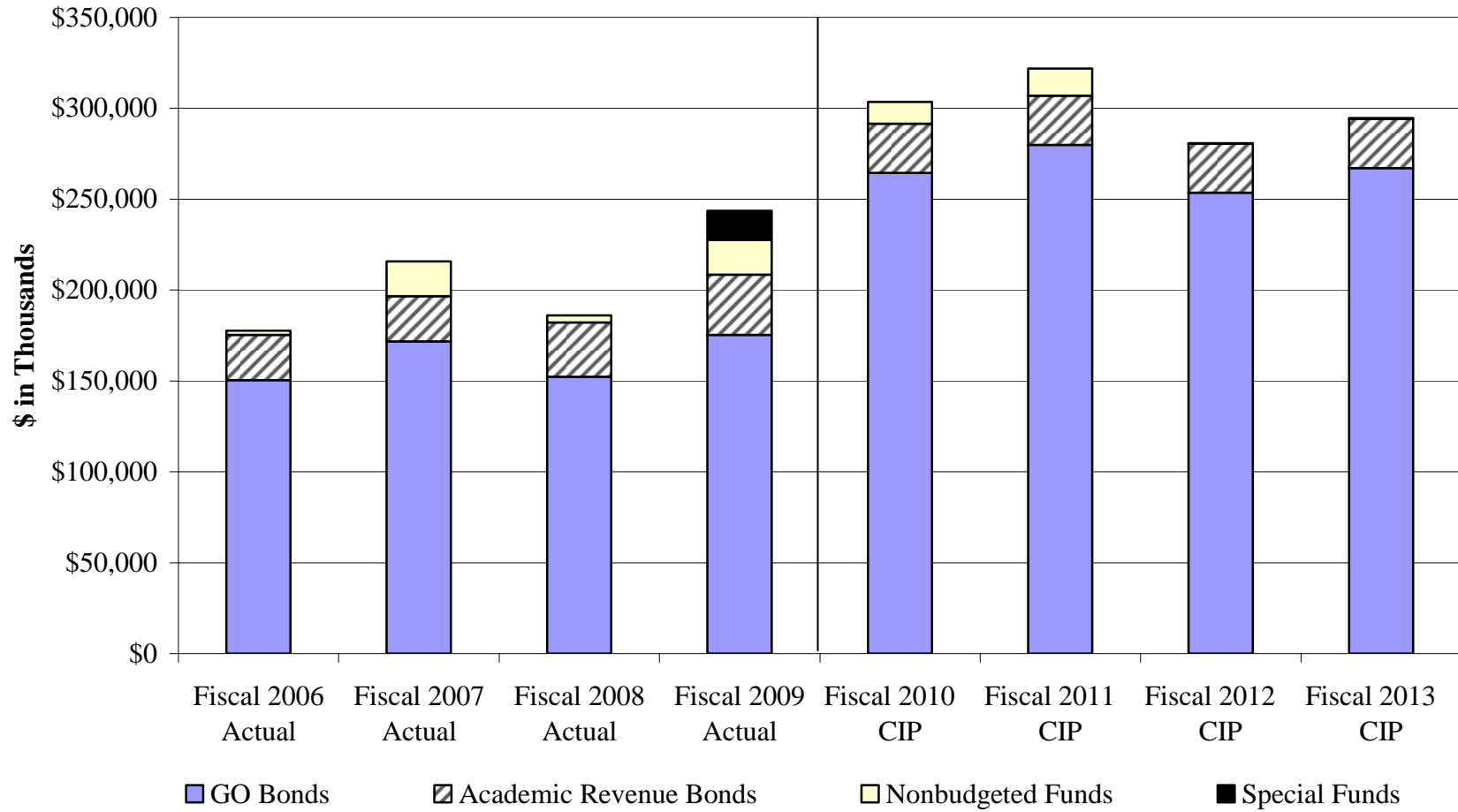
Currently, institutions measure their facility renewal needs in terms of the amount of money needed to fix the problems. This is important because it represents the scale of need for which capital budgets are established to meet. Another useful way to represent the need for facilities renewal is to compare this dollar amount of need to the overall value of the buildings. The Facility Condition Index (FCI) is expressed as a ratio of the cost to fix the problems and the replacement value of the assets. Expressing facility renewal needs as a percentage can assist in the evaluation of how severe a problem is and would assist in capital planning. For instance, a building with an FCI of 5 percent may represent a generally good condition rating and an FCI over 10 percent may represent a poor condition rating. Additionally, it can be expected for every institution to always have some level of facility renewal needs. The important issue is identifying when the needs have reached a critical level which requires action. Without some type of relative scale such as an FCI, it can be difficult to assess what dollar amount of facility renewal backlog is acceptable. A relative scale will also assist in prioritizing facility renewal projects. The FCI is most useful in comparing needs of individual buildings and the dollar amount of needed renewal adds perspective to the overall campus problem. Thus both measures are useful analytical tools in the budgeting process.

Capital Budget for Public Four-year Institutions and Community Colleges

Exhibits 9 and 10 show the capital budget from all funding sources for the public four-year institutions and the community colleges from fiscal 2006 through 2013. The data for the public four-year institutions includes nonbudgeted funds, which are typically funds from the institutions including any private donations. The data for the community colleges includes the

Community College Capital Grant, the local contribution for the Community College Capital Grant, and Baltimore City Community College (BCCC). BCCC is a State-supported community college and does not receive local contributions. It should be noted that for fiscal 2010 through 2013, the local contribution portion is estimated based on the same proportion of local funding for the fiscal 2009 capital program. Exhibit 9 shows a steady increase in anticipated funding from fiscal 2008 through 2011 and then levels off. Exhibit 10 shows the increase in funding since fiscal 2006 through 2009. It is anticipated that the Community College Capital Grant program will remain stable at \$80 million of State support.

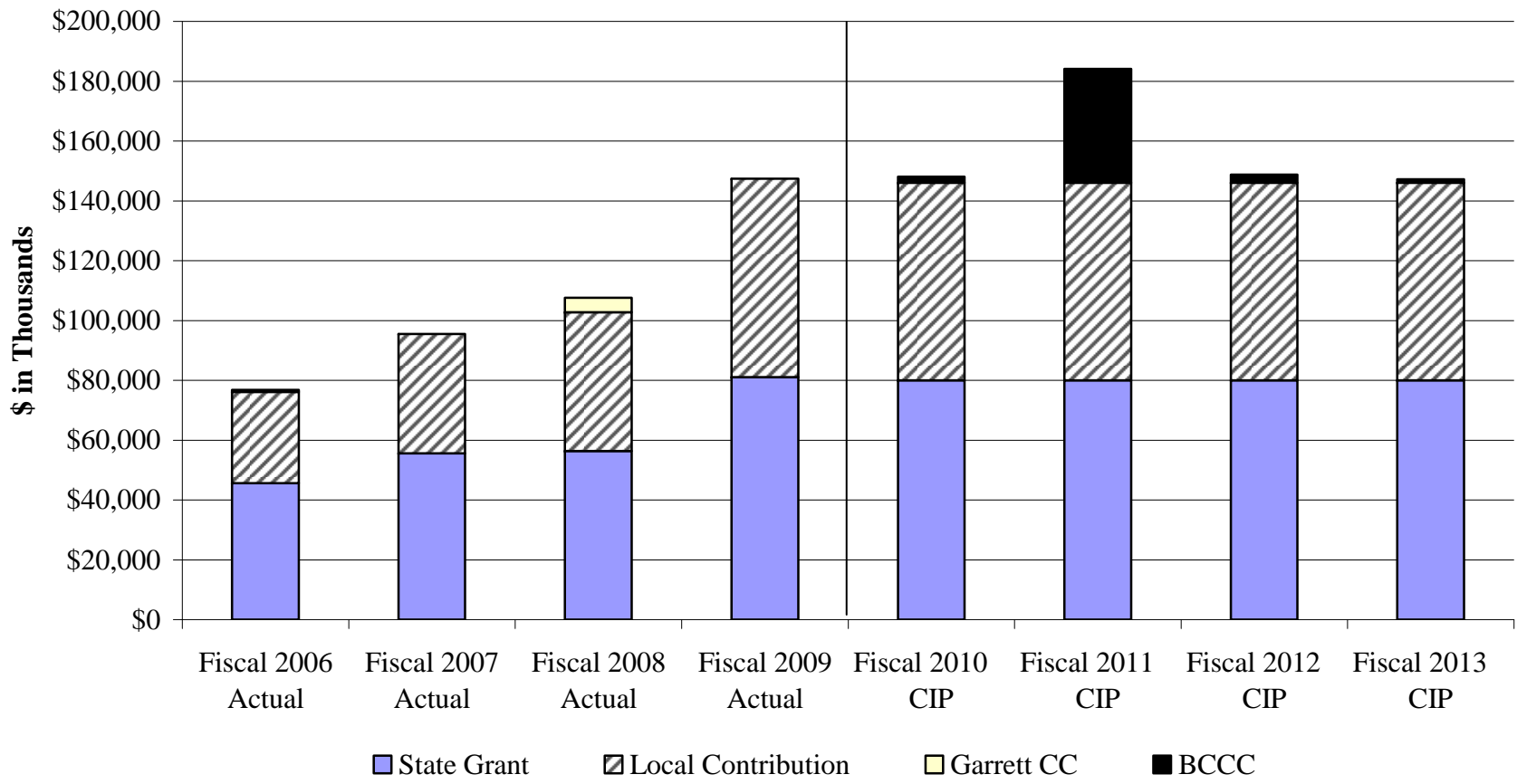
**Exhibit 9
Public Four-year Capital Budget**



Note: Includes nonbudgeted funds. Excludes UMBI and UMCES as these are not degree-granting institutions.

Source: 90 Day Reports, Governor's Budget Books

**Exhibit 10
Community College Capital Budget**



Note: The local contribution for fiscal 2010 through 2013 is estimated based on the contribution rate in fiscal 2009.
 Source: 90 Day Reports, Governor's Budget Books, and Department of Legislative Services

Findings

Based on the above analysis, the workgroup makes the following conclusions regarding prioritization principles for capital investment between segments and by project type:

- Any prioritization model should incorporate the following principles: fairness to all institutions; consistent process of selection; each project should have a clearly documented need using tools such as space inventory and building age, among others; projects that benefit students should have a high priority; and each institution's own priority as reflected in the facilities master plan should be incorporated.
- Each segment has a prioritization method for determining the allocation of capital funding among the constituent institutions that embodies the principles listed above. Additionally, the governing bodies of the higher education institutions are in the best position to establish priorities.
- Capital priorities by type of project can be divided into three groups: facility renewal, enrollment growth (academic core facilities), and research space. Community college projects should be considered academic core facilities.
- There is a substantial need for facility renewal in higher education. Whether via target amounts or as a separate criteria for consideration, the facility renewal need should be incorporated in any prioritization method.
- Budgeting and spending 2 percent of the value of capital assets on facility renewal needs is a best practice.

Recommendations

The Capital Investment Workgroup makes the following recommendations pertaining to capital expenditure prioritization:

- The feasibility of and the mechanism for creating a separate funding category in the CIP for research space should be examined. This examination should include whether State funding can be augmented with other sources to enhance the State's capacity to fund projects that provide academic research space. While there are some alternative sources that may be tapped to help fund academic research, it is critical to the economic vitality of the State that it also continue to directly support these research activities by building the required space. Any funding mechanism for research space should be aligned with current efforts that support an increase in State capital investments.

- Strongly encourage all institutions to adopt a policy to budget and spend 2 percent of the replacement value of capital assets at the institutions on facility renewal projects. Currently, USM is requiring its institutions to incrementally reach the 2 percent operating spending target and to use these funds to maintain its facilities. Additionally, all public institutions should annually report the progress toward reaching this goal. If a private institution requests State funding for a project that is primarily facility renewal related, the private institution must report its facility renewal budget practices and policy.
- Institutions are encouraged to start using the Facility Condition Index as an additional analytical tool for the capital budget process. This should be used in addition to the dollar amount of facility renewal backlog that has accrued. Combined, these two analytical tools would assist in measuring and understanding the facility renewal problem at institutions of higher education.
- Require the community colleges and public four-year institutions to maintain a 10-year capital plan as is the current practice of USM. This would improve the predictability of the process and indicate the priority of the projects over the long-term.
- State funding for capital projects at the private colleges should continue to be used for buildings that support the State's needs.
- Current and projected space deficiencies should have equal prioritization weight. Additionally, institutions and their governing boards should be encouraged to consider funding projects that address space deficiencies and quality of space issues.
- The State should maintain the increased funding in the community college capital grant.

Topic 4: Alternative Funding Options

Data Examined

Current Alternative Revenue Sources

Two recent legislative actions have required the creation of dedicated revenue sources that are available for capital projects of higher education: the Higher Education Investment Fund (HEIF) and the Education Trust Fund (ETF). The HEIF was created during the 2007 special session. The source of revenue for this fund is one-half of the increase in the corporate income tax that was also enacted during the special session. The HEIF was authorized for fiscal 2008 and 2009 only. During these two years the HEIF was estimated to receive approximately \$70 million. Three uses were established for the HEIF: to supplement general fund appropriations to the public four-year institutions, capital projects for the public four-year

institutions, and workforce development initiatives administered by MHEC. Currently, the law provides that HEIF will expire after fiscal 2009. Therefore, legislation would be required to reauthorize HEIF for fiscal 2010 and beyond.

The other dedicated revenue source is the ETF. The ETF was also created during the 2007 special session. The source of revenue for the ETF is a share of the State's proceeds from video lottery terminals. Money in the ETF can be used for a variety of education needs including funding for K-12 education and capital projects at community colleges and public four-year higher education institutions. However, the ETF is dependent upon a successful referendum of Maryland voters to establish a constitutional amendment allowing video lottery terminals at five specified locations in the State. The referendum will be included on the November 2008 election ballot.

Other Alternative Funding Options

The workgroup was charged with examining alternative funding options for capital projects including an examination of the Private Donation Incentive Program (PDIP). PDIP was created by the General Assembly in 1990 as a way to encourage private donation and development of institutional advancement by providing matching funds. PDIP was initially authorized for seven years, but it was extended in 1999 for an additional six years. The program was available to the public four-year institutions and the community colleges. Donations that were designated as endowment gifts for academic purposes consistent with the role and mission of the institutions would qualify for matching State funds according to a specified ratio. Limits were established as to the maximum amount of State matching funds: \$250,000 for community colleges; \$1.5 million for the Historically Black Institutions; \$1.25 million for UMCP, UMB, and the University of Maryland, Baltimore County; and \$750,000 for the remaining institutions. Using PDIP, institutions raised \$46.7 million between fiscal 1999 and 2007. During this time, the State has used \$16.4 million in general funds to match the donations. All institutions except for Bowie State University (BSU) have reached their cap. BSU has until January 2010 to raise the remaining qualified donations.

The workgroup considered other alternative financing methods. These included a surcharge on private donations to fund capital needs and the use of bonds backed by increases in indirect cost recovery from federal contracts and grants for the construction of research facilities. After considering the provided information regarding these funding methods, the workgroup determined that pursuing these methods was not feasible at this time. However, the workgroup determined that examining other alternative funding options should be done.

Findings

Based on the above information, the workgroup makes the following findings regarding alternative funding options for capital investment in Maryland:

- Using an incentive program to leverage private dollars would be helpful. It would be particularly helpful to fund projects for which it is difficult to raise private funds.
- A dedicated revenue source for higher education would be helpful for capital projects.
- Alternative funding options are critical to achieving the goals of higher education institutions.

Recommendations

The workgroup makes the following recommendations based on the above findings:

- The State should consider providing a specified percentage of project costs if the remaining can be raised through private donations. Development offices at the institutions can use this specified split funding as a target for raising the private funds. A potential mechanism for achieving this is to have two separate funding allocations. One as incentive funding and the other would be the current method of funding projects.
- The Higher Education Investment Fund should be reauthorized. The fund is currently authorized for fiscal 2008 and 2009 only. Legislation is required to reauthorize the fund for fiscal 2010 and beyond.
- The workgroup supports the authorized use of the ETF to fund capital projects for higher education.
- All segments of higher education should explore other alternative funding sources and the State is encouraged to provide incentives in order to maximize the potential for building capital projects.