Facilities Master Plan

January, 2017

HARFORD COMMUNITY COLLEGE

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INTRODUCTION

Purpose, Scope

This Master Plan was undertaken to establish a framework for the physical growth and change that can be anticipated for Harford Community College. It provides projected enrollment growth and establishes space needs by discipline.

Capital projects are identified as Near Term (0-5 years), Intermediate Term (6-10 years) and Long Term or "To be Implemented as Funds Become Available". For each major project that proceeds, the master plan will need to be followed by programming, design, and construction, unless programming or design have been undertaken already. The master plan does not attempt to design projects, but it does provide a campus development plan for the main campus, identifying locations and establishing relationships of major components.

The Facilities Master Plan should be regarded as a working document, which will need to be periodically reviewed and updated; it is recommended that the update should occur not later than 2022. As a 10-year master plan, the space needs are projected 10 years from the most recent Fall semester for which data is available, which is 2015. The nominal planning horizon used in this report is 2026.

This report is both a master plan and facilities assessment. The facilities assessment component provides an inventory and evaluation for the site infrastructure, buildings, and building systems for each HCC campus. This provides the foundation for the evaluation, both quantitatively and qualitatively, of the facilities and for recommendations for improvements to the site and buildings.

Because of inevitable unforeseen changes in programs, priorities, policies, and funding, this Facilities Master Plan should be viewed as a fluid document that is a conceptual tool and guide for making decisions regarding the College's physical resources. This document integrates academic and physical planning on a campus-wide basis; as facility and site development needs change or are newly identified, they must be incorporated into subsequent plan updates.

The planning process for development of this Facilities Master Plan results in a long-range planning document that addresses a broad range of subjects:

- Review of the College's vision, mission, functional and instructional program emphases, and organizational structure.
- Description of the students in terms of credit participation and choice of academic programs.
- Academic programs and projections of institutional growth.
- Inventory of existing facilities and patterns of physical development.
- Identification of projects that are needed to support the programs, personnel, and students of the College for the next ten years.

The information contained in this Facilities Master Plan serves various purposes. It affords the College a written reference that can be used to facilitate communication within the HCC community and with representatives of local and state review agencies. This document provides the rationale for physical improvements and serves as the basis for long-range capital development.

Inventory data concerning the existing facilities are collected and presented. Alternative actions to deliver improved educational facilities are presented. Recommendations are provided for renovation, replacement, and/or new construction as necessary, and priorities are suggested for the recommended facilities actions.

In brief, this document aggregates the inventory of existing facilities and physical resources, identifies current and future facility needs of HCC, and then provides a framework for achieving the required additional facilities.

Methodology

The Master Plan was developed beginning July, 2016. Information gathering began with the College providing information on the facilities, institutional history, enrollment, programs and operations. Serving as the basis for current and future space needs, the enrollment and projected enrollment were established by HCC, incorporating MHEC projections and planned program expansion. Using MHEC formulae, space needs were determined and allocated according to HEGIS code. Interviews, focus groups, and workshops were conducted with staff, faculty, and the steering committee for the master plan to solicit input from the College community. In addition, the consultant prepared and the College distributed a survey to all students relative to how the campus and campus facilities serve their learning experiences at the College; over 400 responses were received.

Parallel to these efforts, the buildings were documented photographically and in floor plan. Previous reports were examined, considered, and incorporated with the consultant team's more current evaluations. Site conditions were evaluated in the same way. The consultants visited the campus and assessed the condition of all buildings and the site, combined with the evaluations by HCC. Combining considerations of formula-driven space needs calculations, as well as qualitative factors, the consultant team and College developed a list of recommended capital projects and other initiatives recommended by the consultant team for consideration by the College. Alternative site development plans were developed to accommodate capital projects, including both renovations and proposed new construction. A preferred plan for each campus was selected and refined, ultimately becoming the selected development plan for this report.

Organization of the Report

Chapter 1	Executive Summary
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ACKNOWLEDGEMENTS

Any project such as this requires a great deal of help from a large number of people. We conducted twenty interviews with several members of the College community, including representatives of the administration, faculty, staff, students, and County planners. All had helpful opinions and information to share. The President of the College, Dr. Dianna Phillips, and other members of the Steering Committee have contributed their time, knowledge of the College, and thoughtful comments on the College's needs. In particular, Steve Garey, Associate Vice President for Campus Operations, provided important data, timely decisions, and wise guidance to the benefit of the consultant team and to the betterment of the Facilities Master Plan.

The College's Facilities Master Plan Steering Committee consisted of the following persons:

Deborah Cruise
Tom Franza
Steve Garey
John Haggerty
Tami Imbierowicz
Ken Krsolovic
Brenda Morrison
Zoann Parker
Dianna Phillips
Avery Ward

The Consultant Team, led by Hord Coplan Macht, Inc., included the following firms and persons:

Hord Coplan Macht, Inc.	Architects, Planners
Jim Determan	
Bruce Manger	
Matthew Fitzsimmons	
Bin Liu	
Facilities Planning Associates	Facilities Planners
Rich Watkins	
Al Robinson	
Site Resources, Inc.	Civil Engineers
Mike Fisher	
Peter Soprano	
Patrick Pleasants	
Alban Engineering, Inc.	Mechanical-Electrical Engineers
Jeff Alban	
Gred Denning	

Chapter 1
Executive Summary

EXECUTIVE SUMMARY

INTRODUCTION

SNAPSHOT IN TIME

This Facilities Master Plan (the "Plan") addresses the accomplishments, needs and aspirations of Harford Community College (HCC) at a time when the College is poised to continue its track towards first-rate facilities, accommodating HCC's program offerings and the aspirations of its students. The Plan acknowledges the fiscal realities of Fiscal Year (FY) 2017 capital planning while keeping the needs of the institution as paramount, within the long range vision. While the planning horizon is ten years, certain features such as the campus development plan and capital projects describe future development not just to calendar year 2026, but anticipate continuing development beyond 2026. The Plan embraces the College's success in its history, programs, and campus and lays out a roadmap for development which, if fully implemented, will provide the facilities necessary to satisfy the needs of a modern community college. Major factors influencing this plan include the following:

- Enrollment
- Commuting students
- Academic offerings
- Class logistics
- Evolving student needs
- The College's setting
- Environmental elements
- Public utilities
- Technology
- Maintenance of buildings and grounds
- The library
- Vehicles and pedestrians
- HCC locations
- Use of athletic fields
- Relationships within the County

PURPOSE

The Plan was undertaken to establish a framework for the physical growth and change that can be anticipated for Harford Community College over the next ten years. It establishes projected enrollment growth and space needs. Several capital projects are identified and others are suggested. For each major project the master plan will need to be followed by programming, design and construction. The master plan does not attempt to design projects but it does provide a campus development plan which suggests locations and priorities for specific projects and organizes them within the boundaries of the current campus and in the context of Harford County.

METHODOLOGY

The team has:

- Used existing information to create the base site plan.
- Gathered and evaluated the significant statistics of the College, including population trends, enrollment characteristics and trends, academic programs, and space inventory.

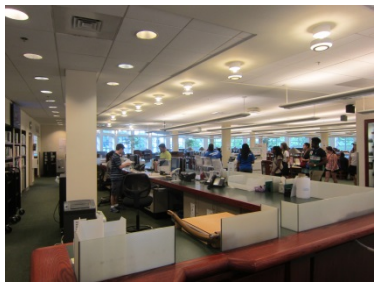
- Reviewed the College's Mission, Vision, and Strategic Plan in relation to the setting that they provide for the Facilities Master Plan. In addition, the team reviewed numerous documents related to the academic programs, facilities, operations and planning for the College.
- Canvassed a wide range of constituencies in a series of twenty interviews and focus groups, supplemented by a survey distributed to all students.
- Performed walk-through surveys of existing buildings to gain a sense of their character and condition. This was coupled with data from the College as well as observations of the campus.
- Tabulated and organized by HEGIS code each space, compared the existing to the State allowances, and noted deficiencies.
- Evaluated the existing buildings and site to determine the suitability of the facilities for existing and future needs of the College.
- Proposed and evaluated several campus development schemes, consolidating and distilling the most beneficial elements from each into a cohesive campus plan.

THE COLLEGE TODAY

Since the 2009 Master Plan, the higher education landscape for HCC has changed measurably. Since that Plan, enrollment has changed course from significant growth to relatively flat growth. While federal, state and local support has been reduced for community colleges in general and for HCC, tuition has remained affordable.

The College has continued to enhance the technology in its instructional spaces and supporting infrastructure. Learning support has been expanded for students of varying needs. Planning, construction, renovation and occupancy of facilities continue, including the completion of the Aberdeen Hall expansion, Hayes-Heighe House restoration, construction of the Conowingo Center, Susquehanna Center / APGFCU Arena renovation and expansion, Darlington Hall, Hickory Center, and, now nearing completion, the renovation and addition to Edgewood Hall. These projects represent a remarkable improvement to the College's facilities.

As demands and expectations of HCC's graduates become more complex, the College's curricula, operations, and facilities will need to be correspondingly more sophisticated. This applies to the College's resources as they exist today as well as to future changes and development. As markets and demographics shift, so will the need for the College to be nimble in response to those changes, with corresponding flexibility in its learning facilities.


PLANNING OBJECTIVES

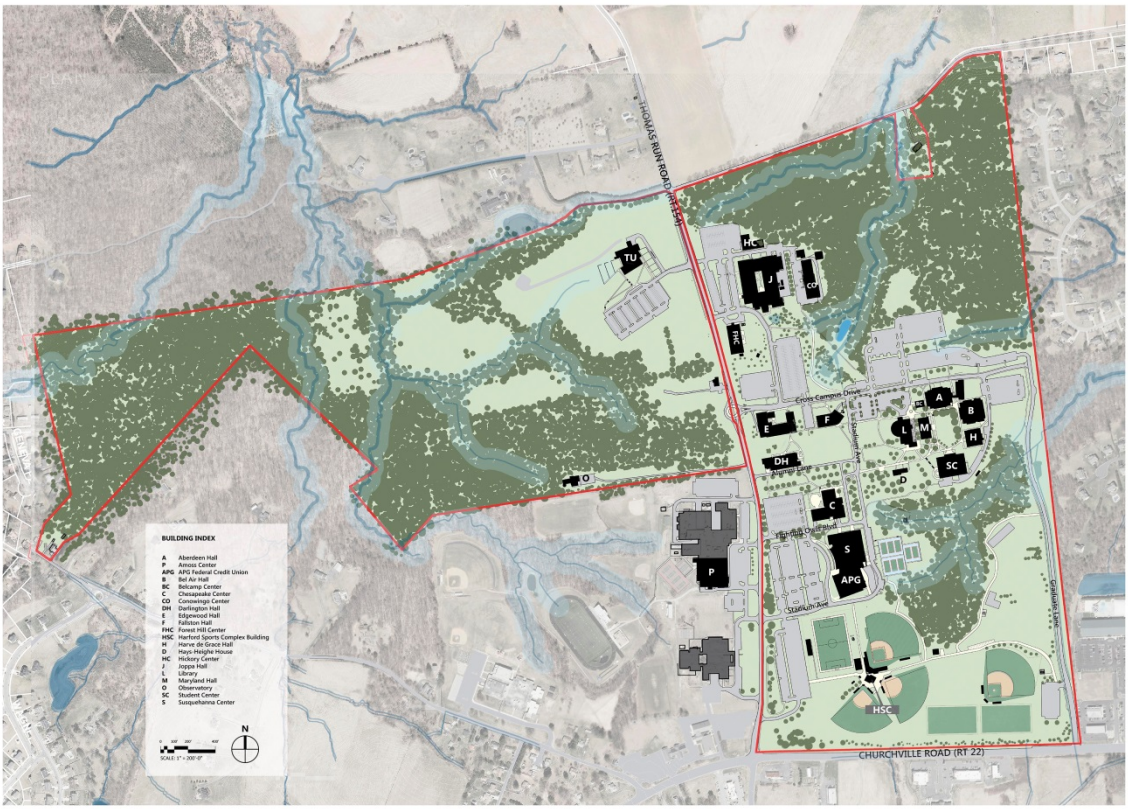
- Provide settings to best fulfill the mission and vision of the College.
- Maintain existing programs and plan to accommodate expanded and new programs.
- Make learning, visiting and working on the campus and off-site locations a positive experience.
- Enhance settings to facilitate learning; enhance the strengths of each campus and help remedy weaknesses.
- Accommodate orderly growth on the main campus and growth across Thomas Run Road: new facilities, site infrastructure, and additions and renovations to existing facilities
- Provide for flexibility in future expansion.
- Evaluate mechanical, electrical and telecommunications systems.
- Accommodate training and educational needs of business and industry.
- Examine transportation alternatives to automobile commuting patterns.
- Satisfy parking demand with more convenient parking locations.
- Mitigate and, where possible, eliminate pedestrian-vehicle conflicts.
- Establish clear identity of entrances to the campus and facilities.
- Create memorable spaces.
- Improve accessibility.
- Respect realities of state and local budgets and requirements.
- Respect environmental and community issues and constraints. Incorporate sustainable strategies in the plan for the campus.
- Establish priorities and sequence of development for capital projects during planning periods.

THE PLANNING TEAM

Led in a collaborative effort by Hord Coplan Macht and Harford Community College, the planning team included the following consultants:

- Hord Coplan Macht, Inc: prime consultant, facilities evaluation, campus planning
- Facilities Planning Associates: facility planning, space needs
- Site Resources, Inc: civil engineering consultation
- Alban Engineering, Inc: mechanical, electrical, special systems consultation

Existing Campus



Overview of the College

Harford Community College (HCC) is a public community college that occupies 352 acres on Thomas Run Road in Churchville, three miles northeast of Bel Air, Maryland. HCC has 21 buildings totaling approximately 364,800 net assignable / 588,200 gross square feet on campus. The College shares another approximately 41,200 net assignable / 55,300 gross square feet in five off-campus buildings.

As a comprehensive community college, Harford Community College addresses the diverse educational needs of Harford County, and in select instances, the greater regional community and the State of Maryland. An open admissions institution that views learning as a life-long activity, the College provides high- quality transfer and career programs, developmental education courses, and continuing education programs to challenge and support students regardless of age, color, disability, national origin, race, religion, sex, and/or sexual orientation. HCC offers more than 70 affordable degree and certificate programs of study to nearly 2,400 full-time and 4,100 part-time students, as well as a wide variety of noncredit continuing education courses to over 11,100 students a year.

HCC was founded in 1957 as the Harford Junior College in the basement of Bel Air High School. In 1962, The Harford County Board of Education purchased 211 acres of Prospect Hill Farm that included the historic Hays-Heighe House, which was built in 1808 and is in use today. This property to the east of Thomas Run Road would, in 1964, become home for the Junior College. At this new location, it would continue to grow and eventually became Harford Community College in 1971.

Initial development of the new campus began in 1964 with the construction of Aberdeen Hall, Bel Air Hall, and Maryland Hall. In 1965, Joppa Hall was built followed by Havre de Grace Hall in 1967, and Chesapeake Center and Susquehanna Center in 1968. The Student Center in 1976 and the Daycare Center in 1978 represented the only major addition of facilities until 1994, when Edgewood Hall was built followed by Fallston Hall in 1998 and the Observatory in 1999.

In the last facility master plan the most recently constructed major new building projects were the Library in 2000 and the Plant Services Building in 2002. Since that time, Darlington Hall, a new Nursing and Allied Health Building to support new programs that serve these professions was completed and occupied in the fall of 2014; and Hickory Center was just completed in 2015 to house the campus copy services and computer services center.

The College offers classes at several off-campus sites throughout the County, led by the University Center and the Wage Connection, both near Aberdeen, and the Edgewood Library.

MISSION, VISION AND VALUES

Harford Community College's mission, vision and values statements reflect the uniqueness of this learner-centered institution with a commitment to not only to serve the citizens of Harford County, but also to engage and enhance the greater regional community.

Mission

Harford Community College provides accessible, innovative learner-centered educational opportunities. As an open access institution, the College promotes graduation, transfer, individual goal attainment, and career and workforce development. The College fosters lifelong learning, global awareness, and social and cultural enrichment.

Vision

To be a national higher education leader by transforming lives through imagination, compassion, and rigor.

Values

Excellence: We are creative and passionate in our work. Our highly qualified faculty and staff, learner-centered programs and services, and beautiful campus reflect our commitment to intentional improvement.

Lifelong Learning: We prepare our students and ourselves to contribute to our community as critical thinkers, knowledgeable citizens, and creative problem solvers. We believe that learning should be engaging and enjoyable.

Diversity: We embrace differences, respect intellectual and academic freedom, promote critical discourse, and encourage socio-cultural and global awareness.

Service: We are accessible and responsive to our students, our community, and each other. Helping people achieve their goals is central to our mission.

Innovation: We cultivate bold vision, creative exploration, and responsible risk taking.

Sustainability: We are responsible stewards of our resources. We work together to protect our natural resources, renew our human resources, and expand our financial and physical resources.

Integrity: We adhere to high ethical standards. Honesty, sincerity, fairness, respect, transparency, and trust serve as our foundation.

Collaboration: We foster teamwork and partnerships. Working together enhances results and builds community.

Communication: We share information and ideas, listen with open minds, and strive for clarity.

STRATEGIC PLAN

The Harford Community College Strategic Plan 2013 - 2017 is intended to focus and guide the College, its units, and its resources toward the achievement of well-articulated goals. The Plan clearly defines the specific goals and the strategies for achievement.

Goal 1

Recognizing the need for more students to achieve their goals, the College will pursue excellence in teaching, learning and assessment.

Strategies

1. Eradicate attainment gaps based on income, race, gender and ethnicity.
2. Develop new programs and enhance existing programs to reduce time to degree, increase student success, and promote goal completion.
3. Assess, improve, and advance educational program design, content, and delivery.
4. Strengthen the College's partnership with local schools to increase the readiness of high school graduates for college.

Goal 2

Acknowledging that HCC plays an important role in the region, the College will expand programming, events, and facilities that engage and enhance the community.

Strategies

1. Provide educational programs and workforce development training to meet the needs and interests of the community.
2. Use facilities and events, with particular attention to the APG Federal Credit Union Arena, to provide mutual benefit for the community and the College.
3. Address, to the extent to which the College has influence, the recommendations of the Northeast Maryland Higher Education Task Force.

Goal 3

Understanding that the environment and the demands on higher education are changing rapidly, the College will develop resources and infrastructure required to meet future challenges.

Strategies

1. Develop sufficient fiscal resources to carry out its mission, including the resources required to implement the Facilities Master Plan.
2. Recruit and retain highly qualified, diverse employees.
3. Identify and invest in technology that will increasingly support student success and employee productivity.

GOVERNANCE AND ORGANIZATION

Harford Community College's governing board is comprised of nine trustees exercising general control over HCC (Code Education Article, secs. 16-101 through 16-103). The Board members are appointed to five-year terms by the Governor. Six members represent the Councilmanic Districts and three are appointed from the County at large. The Board keeps separate records and minutes, and adopts reasonable rules, regulations, or bylaws to carry out the provisions of this subtitle. The Board is subject to the authority of the Maryland Higher Education Commission.

The President is hired by the Board of Trustees and reports directly to the Board. The President recommends the appointment by the Board qualified faculty members and other employees necessary for the efficient administration of the community college. The President is responsible for the conduct of the community college and for the administration and supervision of its departments; and shall attend all meetings of the board, except those involving his/her personal position as president.

The following Vice Presidents report directly to the President:

- Chief of Staff & Vice President for External Relations & Communications
- Vice President for Student Affairs & Institutional Effectiveness
- Interim Vice President for Academic Affairs
- Associate Vice President for Administration & Technology
- Associate Vice President for Finance & Operations

The College's Collegial Governance system provides structure and process for all employees and students allowing individuals affected by the College's decisions to have input into those decisions. The structure provides for a coordinating group comprised of representatives from three constituent councils and the student government association. Each group strives to share in accomplishing the HCC mission. Three principles guide the system:

- The governance structure must be inclusive.
- The governance structure must be recognized as advisory in nature. Final authority for decisions rests with the President of the College and with the Board of Trustees.
- Issues should be delineated as either appropriate for the governance process or as not appropriate for the governance process.

The Student Government Association (SGA) serves as the voice of the students, and communicates student needs campus-wide.

ENROLLMENT

In the fall 2015 semester, the College enrolled 6,543 students (headcount), plus 11,148 noncredit, continuing education students.

FACULTY AND STAFF

During the academic year 2015-2016 HCC employed 347 full-time faculty, administrative and support staff. In addition the College employed 669 part-time faculty and staff.

ACADEMIC PROGRAMS

Harford Community College offers certificates or degrees in various programs of study, or "majors":

- Associate of Arts (A.A.)
- Associate of Arts in Teaching (A.A.T.)
- Associate of Sciences (A.S.)
- Associate of Applied Sciences (A.A.S.)

The *Continuing Education and Training Division* offers education and training for the community, youth camps, senior programs, adult development education, and workforce development. Workforce development training includes certification programs and contract training offerings in the construction trades, as well as programs in computer training, healthcare and human services, professional and leadership, service industries, and basic academic preparation.

In addition to degree programs and continuing education and training, the College offers *Early College Access* and *Dual Enrollment* programs to local high school students. The college also has partnerships with the following institutions which allow county residents to complete a bachelor's or master's degree without leaving Harford County:

- Towson University
- Notre Dame of Maryland University
- Johns Hopkins University
- Morgan State University
- University of Maryland College Park
- UMBC Training Center

CAMPUS FACILITIES

At the beginning of the base year for this *Facilities Master Plan* (fall 2015), the facilities inventory at HCC's main campus includes 21 permanent buildings totaling 588,190 gross square feet (GSF) that contain 364,754 net assignable square feet (NASF) of space.



Major Factors Influencing the Plan

THE STUDENT EXPERIENCE

- Enrollment. Static for several years, enrollment is expected to increase before the end of the decade. Renovations to existing buildings will continue in the short term along with key new capital projects, followed by additional new construction to accommodate the anticipated enrollment increase.
- Commuting Students. As a community college with no housing, all students commute to some degree to get to campus; nearly all of them drive. The County bus systems require long commutes with transfers to get from population centers to the main campus. If a student is raising a family or holds a job in addition to attending HCC, the challenges become more complex. The Plan recommends bringing more of the College to more of the students in response to their circumstances.
- Academic Offerings. With a strong transfer program and robust majors such as Nursing, Business and Cyber Security, the College offers a positive academic experience to it students, well preparing them for continuing studies at four-year institutions and/or career placements in the region or County.
- Class Logistics. The large scale of the campus requires a 10 to15 minute walk from the most remote buildings to each other (i.e. Joppa Hall to/from Havre de Grace Hall). Add to that the lack of convenient parking and getting to and from one's car, many students must take additional time to get to class (or a job after class).
- Evolving Needs. Students graduating from high school are trending towards needing more remediation in basic core classes. This must be addressed by time in the classroom and via tutoring, both of which require "seat time," not online. And "seat time" = classroom space. In addition, as the

demographics of the County have been changing relative to a growing Hispanic population, many of those students require academic and financial assistance and counseling.

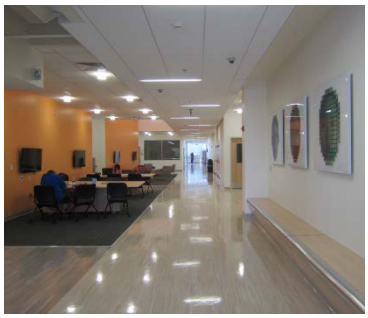
THE CAMPUS AND THE HCC SYSTEM

- Harford Community College's setting amidst rolling, verdant piedmont is almost picturesque, combining historic structures (Hays Heighe House and springhouse), natural woodlands and landscaped spaces, and modern buildings that seem to point to the future (Susquehanna/APG Arena and Darlington Hall). The beautiful campus is valued by students, faculty, staff, and visitors alike.
- Environmental Elements. As the campus is not served by public water and sewer, the College must rely on wells, septic fields and waste treatment, and pumping stations for water coming and going. Expanding the built environment must be carefully planned to avoid negative environmental impacts.
- Public Utilities. Eventually, as the College grows, the ability of local water service will meet its limit. As other concentrated areas of the County are served by public water and sewer, so must the College eventually be served as well. The closest public water and sewer lines extend to Prospect Mill Road, stopping short of the College.
- Technology. The College has kept up with fast-changing technology in terms of hardware and software for both academic and administrative computing. Continuing its course will continue to provide the College with appropriate and competitive technology systems.
- Maintenance of Buildings and Grounds. The College and its maintenance staff have kept up with the most pressing maintenance and upgrade to a remarkable degree in spite of its list of deferred maintenance items to be addressed. More resources are needed to provide safe, secure and well-functioning facilities.
- The Library. The library building has been serving the College and its students well since it was built in 2000. During those years, the building has been periodically modified to meet the evolving needs of students; in particular, since 2012 the amount of space used to house the print media collection has decreased, freeing areas for study and open computer workstation space. Continued re-purposing of spaces and equipment will be needed as the HCC Library continues to change and adapt in keeping with national college library trends.
- Vehicles and Pedestrians. Lacking a perimeter loop road such as at UMBC and Chesapeake College, the vehicular routes to and through the HCC campus pose potential conflicts with pedestrians – specifically, Cross Campus Drive and Thomas Run Road. The plan suggests re-routing Cross Campus Drive and strategies to improve pedestrian safety (and better traffic management) on Thomas Run Road.
- Locations. Nearly all of the College's resources are invested in its main campus on Thomas Run Road. Specifically, population centers along the U.S.40 / I-95 corridor are not as well served by the College as in the greater Bel Air area. While the College maintains facilities near Aberdeen and a

smaller presence in Edgewood, the Route 40 corridor is still underserved. Bus routes are inconvenient and expensive for students living on limited incomes. A coordinated initiative involving the College, County Government, and public transportation companies should be undertaken to identify a suitable location for an off-campus site in or near Edgewood and to better coordinate bus routes to accommodate students.

- Use of Athletic Fields. The Harford Sports Complex serves not only the College but is a valued resource for the County. However, the College's costs to maintain these fields far outweigh the revenue for their use. A balanced income/revenue arrangement is recommended.





THE COLLEGE AND COMMUNITY

- Harford Community College is a valued, indeed treasured resource for Harford County. The College and County Government maintain a good relationship, which should be reinforced and strengthened, particularly if the College is to teach and train the County's best resources – its constituents – as their employment and education circumstances continue to evolve, grow and change.

Space Needs

PLANNING ASSUMPTIONS

The base year for this analysis is fall 2015. Student headcount of 6,543 reflects the total number of students taking credit courses. FTES / FTDES are calculated from credit hours earned at HCC. Faculty represent credit faculty only.

	Student Headcount	FTES	FTDES	Full-Time Faculty	Part-Time Faculty	Full-Time Staff	Part-Time Staff
Fall 2015	6,543	3,852	2,817	101	243	246	314
Fall 2025	8,066	5,326	3,821	137	330	302	385
Percent Change 2015-2025	23%	38%	36%	36%	36%	23%	23%
Average Annual Growth Rate	2.1%	3.3%	3.1%	3.1%	3.1%	2.1%	2.1%

SUMMARY OF KEY FINDINGS

Although planned construction and occupancy of a new Math Engineering and Technology building, the Edgewood Hall Addition, as well as renovations to Fallston Hall will address some of the 2015 deficits in instructional space, significant deficits are projected in this classification for 2025 as well as for study, food, athletics/physical education, office, media production, shop/storage and assembly space.

The 2015 campus space inventory was 364,754 net assignable square feet (NASF). The College anticipates a 2025 space inventory of 391,938 NASF as the base or supply against which the need, generated by the demand of future enrollments, would be quantified.

When space deficits and surpluses were computed by comparing enrollment and staffing projections against the projected space inventory, the outcome was a projected 2025 overall space deficit of 75,436 NASF as shown by the following table. Quantitative indicators suggest immediate and long-term need for facilities to support space classifications showing significant deficits.

Summary Guideline Calculations

		Base Year (2015)				2016-2025		Projected Year (2025)			
Use Code	Use Classification	Inventory	Guideline	Surplus (-) Deficit	Inventory as a % of Guideline	Additions[a]	Deletions[a]	Inventory	Guideline	Surplus (-) Deficit	Inventory as a % of Guideline
100	Classroom Facilities	65,654	77,613	-11,959	84.6%	3,000	5,067	63,587	77,903	-14,316	81.6%
200	Laboratory Facilities	77,824	91,876	-14,052	84.7%	20,874	0	98,698	106,477	-7,779	92.7%
210	Class Laboratory	73,999	80,045	-6,046	92.4%	19,874	0	93,873	90,429	3,444	103.8%
220	Open Laboratory	3,825	11,831	-8,006	32.3%	1,000	0	4,825	16,048	-11,223	30.1%
300	Office Facilities	77,448	72,667	4,781	106.6%	7,077	0	84,525	92,757	-8,232	91.1%
310/50	Office / Conference	74,998	70,508	4,490	106.4%	7,077	0	82,075	90,096	-8,021	91.1%
320	Testing / Tutoring	2,450	2,159	291	113.5%	0	0	2,450	2,661	-211	92.1%
400	Study Facilities	20,952	24,399	-3,447	85.9%	0	0	20,952	32,737	-11,785	64.0%
410	Study	13,032	17,606	-4,574	74.0%	0	0	13,032	23,881	-10,849	54.6%
420/30	Stack / Study	6,084	4,852	1,232	125.4%	0	0	6,084	6,326	-242	96.2%
440/55	Processing / Service	1,836	1,941	-105	94.6%	0	0	1,836	2,530	-694	72.6%
500	Special Use Facilities	51,690	50,824	866	101.7%	0	0	51,690	64,452	-12,762	80.2%
520/23	Athletic	49,010	47,170	1,840	103.9%	0	0	49,010	57,210	-8,200	85.7%
530	Media Production	1,867	2,654	-787	70.3%	0	0	1,867	6,242	-4,375	29.9%
580	Greenhouse	813	1,000	-187	81.3%	0	0	813	1,000	-187	81.3%
600	General Use Facilities	47,514	53,538	-6,024	88.7%	1,300	0	48,814	62,033	-13,219	78.7%
610	Assembly	12,498	14,634	-2,136	85.4%	0	0	12,498	16,642	-4,144	75.1%
620	Exhibition	3,974	2,159	1,815	184.1%	0	0	3,974	2,661	1,313	149.3%
630	Food Facility	9,211	16,504	-7,293	55.8%	0	0	9,211	18,304	-9,093	50.3%
640	Day Care	7,128	7,128	0	100.0%	0	0	7,128	7,128	0	100.0%
650	Lounge	3,952	4,854	-902	81.4%	200	0	4,152	6,537	-2,385	63.5%
660	Merchandising	3,209	2,259	950	142.1%	100	0	3,309	2,761	548	119.8%
670	Recreation	0	0	0	0.0%	0	0	0	0	0	0.0%
680	Meeting Room	7,542	6,000	1,542	125.7%	1,000	0	8,542	8,000	542	106.8%
700	Support Facilities	17,938	21,639	-3,701	82.9%	0	0	17,938	24,317	-6,379	73.8%
710	Data Processing	1,737	2,500	-763	69.5%	0	0	1,737	2,500	-763	69.5%
720-740	Shop / Storage	13,022	14,842	-1,820	87.7%	0	0	13,022	17,468	-4,446	74.5%
750	Central Service	3,179	4,000	-821	79.5%	0	0	3,179	4,000	-821	79.5%
760	Hazmat Storage	0	297	-297	0.0%	0	0	0	349	-349	0.0%
800	Health Care Facilities	0	763	-763	0.0%	0	0	0	964	-964	0.0%
000	Unclassified[b]	5,734	5,734	0	100.0%	0	0	5,734	5,734	0	100.0%
	Totals	364,754	399,053	-34,299	91.4%	32,251	5,067	391,938	467,374	-75,436	83.9%

Data Source: Compiled by Facilities Planning Associates from data provided by Harford Community College

[a]Additions and Deletions represent inventory gains and losses upon completion of the Edgewood Hall Addition, Renovations to Fallston Hall, and completion of the new Math Engineering & Technology Building.

[b]Space occupied by other organizations at the time of this inventory (Day Care Center-3,000 NASF and Joppa Hall-2,734 NASF).

QUALITATIVE INDICATORS OF SPACE NEED

A variety of qualitative or non-statistical environmental characteristics impact the space needs of Harford Community College. These global space needs are referenced throughout this document. A sampling of such needs is summarized here by the following functions:

- Instruction
- Instructional Support
- Student Services
- Institutional Support
- Outdoor Functions
- Continuing Education

Unlike quantitative analysis, qualitative analysis is very subjective. Qualitative indicators of current conditions and program characteristics and future space needs/desires are the result of observations by the consultants and of views expressed by College personnel during interviews with the consultants and/or via written statements.

This listing is by no means all-inclusive. Future facility programming for individual new or renovated facilities at Harford Community College will require, in each instance, a thorough review and analysis of each of the subject function's component activities to determine a specific justification and rationale for new or reconfigured spaces.

Instruction

- Many classrooms and laboratories lack contemporary technology. The need exists for technology-enhanced instructional spaces that empower faculty and students to benefit from the use of virtual learning experiences that enhance engagement.
- Some classrooms are inappropriately proportioned. Narrow and deep room dimensions result in some students being too distant from the teaching wall.
- There is a need for highly flexible, multi-functional instructional spaces, now and in the future. Migration to teaching more disciplines in computer labs has created rooms that are inflexible. Permanent furniture, hardware and wiring installations have made it difficult, if not impossible, to rearrange classrooms to suite varied needs in different courses or even in the same course.
- There is a need for some "quick response capability" to take advantage of emergent opportunities to respond rapidly to business needs particularly in Continuing Education environments. While most Con Ed programs need flexible spaces, some like plumbing will need more fixed equipment.
- There is insufficient laboratory storage in general, and in art studios and music rooms in particular.
- Functions that should be co-located are sometimes separated and distributed throughout the campus by floor and by building. There is a need for physical proximity with respect to spaces within various departments.
- Extreme distances of separation between workforce development facilities mitigate efficient and effective delivery of cohesive programs.
- There is a need for appropriate workforce development space for trades programs. For example, one relatively small shop in Joppa Hall houses five different trades programs without necessary support spaces. Plumbing is extremely limited, as is carpentry due mostly to inappropriate spaces, e.g., absence of high bays on ground floors.

Instructional Support

- The College has no facilities that are appropriate for adjunct faculty to work and communicate before and after classes. Not only is there a need for appropriate settings outside the classroom for student/faculty interaction, but also a need for spaces that allow for seamless integration of adjunct faculty into departmental frameworks. There are no office spaces for adjunct faculty to work or meet one-on-one with students.
- Although the College has made many changes in use of space within the Library since it opened in 2000, further changes in space utilization are needed, such as increased and more modern reading/study space; increased processing and office space; more library instruction space; space for digital media, makerspaces, and other technology-focused spaces; archives; and general storage. These changes cannot easily be accommodated within the existing facility. In particular, the very large, open spaces that dominate the second and third floors, which were designed for a mixed use of book stacks, reading/study space, and open computer lab space, need further redesign to support and extend the trend begun by the Library in 2012 of reducing book stacks and re-purposing freed space to support study and computer workstations.
- There is a need for more group study rooms. There are a minimal number of group or collaborative learning environments on campus. There is a need for available study rooms and spaces where small groups could meet, either as spontaneous groupings or as scheduled study circles.
- There is insufficient space to support formal learning community concepts. There are no adequate commons areas or large professional development areas for faculty. There is a need for modern facilities that address faculty development needs at HCC.
- There is insufficient access on campus to multi-media computers and software such as the Adobe Creative Cloud suite.
- There is no physical Information Technology (IT) Help Desk in the Library.

Student Affairs

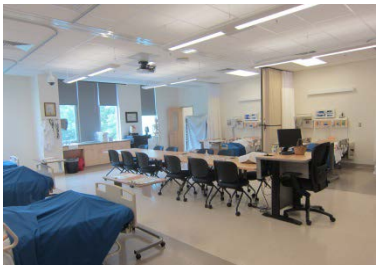
- The space designated for student activities is too small. The Student Center is not functionally efficient or effective as a student center. Students complain that there are insufficient and inadequate places for them to really hang out. There is a need for student areas that are more inviting for enjoyment, relaxation, individual study and group learning.
- Office and storage space allocated to student organizations is insufficient given the 38-plus student organizations at HCC. There are instances where former storage spaces are being used as offices. For instance, SGA's four former office spaces have been reduced to one.
- There is also a need for more distributed informal spaces, especially during evening and weekend hours. The only campus building with a lounge area, other than the Student Center which contains most of the available lounge space, is the Susquehanna Center. At present, the lounge space (and cafeteria) in the Student Center is available only for limited hours during evenings and weekends. There is no informal lounge space within the Library building despite the extensive evening and weekend hours that the building is open.
- There is generally insufficient and inadequate student lounge space, meeting space, recreational areas, and student organization space.
- There is insufficient space allocated for self-serve computers.
- Space for computers that support Admissions and Enrollment functions is very limited. Thus, there are currently only two computer stations available to serve over 2,000 newly admitted students.
- Health care facilities are non-existent.

- Although the Fitness Center is regularly used by all students and staff, there are no weight training facilities for athletes.
- The College has identified the need for its student services functions, as opposed to student programs and activities functions, to be consolidated in a location easily identifiable and readily accessible upon entering the campus. This would allow the College to focus on eliminating the identified inefficiencies and ineffectiveness of the Student Center.

Institutional Support

- Although there is a current overall surplus in space classified as "office," some individuals are cramped into areas that were designed as closets and alcoves in order to be located near their departments and others in their work teams. There are insufficient numbers of offices to support all athletic coaches. Creating office space for new personnel, campus-wide, is extremely difficult. This problem is only exacerbated given the projected shortage in office space by 2025.
- Some campus areas are not accessible to students with disabilities.
- There is a need to provide safe, accessible, and convenient gender inclusive buildings and facilities for students, staff, faculty, and campus guests.
- Kitchen, dining and food storage facilities are insufficiently sized to effectively serve the needs of HCC's students, faculty and staff. Total campus food facilities are currently, and will be in 2025, less than allowed under Maryland's guidelines for community college food facilities.
- There is no drop-in service space for child care facilities.
- Insufficient storage space is a significant problem throughout the campus buildings resulting in inappropriate storage of records, furniture and equipment, books, academic and administrative supplies, performing and fine arts materials and equipment, event and major athletic equipment, and custodial supplies.
- Facilities for counseling, human resources and other areas that need confidential spaces are insufficient and inadequate.
- Some spaces, such as those used for exams and testing, are limited with respect to assistive technology for those with disabilities.
- There are insufficient numbers of break rooms and social spaces for staff and faculty.
- There are insufficient numbers of convenient small conference spaces and meeting rooms. Many faculty and staff meetings take place in classrooms or other spaces that are inappropriate for such activities.
- As facilities are renovated and newly constructed, additional technology requirements will necessitate further evaluation of the Campus Information Technology infrastructure. A direct impact of evolving technology is the corresponding need for more closets and telecommunication rooms in buildings.
- There is insufficient space for physical plant operations such as; maintenance shops, storage, and central services.





Outdoor Functions

- There are very few designated outdoor student spaces for active recreation.
- Although there is a current overall surplus of parking space, projections of student enrollment and staffing suggest a parking deficit by the year 2025. Existing parking, in several instances, is inconvenient to user destinations.
- Built in 1968, the Stadium Field (original soccer field) grandstand will be nearing its estimated useful life during the life of this *Facilities Master Plan* and should be replaced. In addition to the grandstand, a press box, lighting, power, heating, cooling, and telecom should be included in an upgrade.
- Deterioration of the varsity softball field renders it in poor condition. The field requires upgrades to the press box, fence, drainage system and turf.
- Restroom, concession and storage facilities are not available at many of the athletic fields.
- Lockers and other support spaces for outdoor teams like lacrosse, soccer, baseball, for home and visiting teams are non-existent.
- The extensive natural environment of the campus, including woodlands, meadows, streams, wetlands and ponds, offers a living laboratory for field exercises, research and observations required for several courses and programs, including environmental science, geography, and earth science.

Considerations for Future Instructional Spaces

For future new and renovation construction projects, needs beyond historic, prescribed allocation and configuration of instructional spaces need to be considered and implemented in educational specifications (programs Parts 1 and 2) and designs. Considerations include the following:

- Adequate space for adjunct and part time faculty
- Gathering places for employees to conduct program and division-level activities
- Informal learning spaces and creative spaces
- Flexibility of classroom space and labs (This may suggest increased area within instructional spaces to accommodate flexible furnishings.)
- Meeting and seminar space within existing buildings
- A plan to address how to bring existing space to meet these needs through renovations

Continuing Education

HCC's Continuing Education and Training Division provides courses, programs and services that are responsive to the needs, interests and trends of Harford County's business and industrial community, and promote the personal and professional growth and stability of the people who live and work in Harford County. Courses tailored to the applications of individual businesses are offered through customized training contracts within parameters convenient to the businesses. A wide range of non-credit courses is offered in day, evening and weekend formats that appeal to people of all ages with busy lifestyles. Continuing Education and Workforce Development courses represent cutting-edge curricula and quality instruction. Instructors are generally field practitioners who bring first-hand knowledge to HCC's learning environment.

The following table represents Maryland Association of Community Colleges data showing that non-credit courses accounted for over 18% of Harford Community College's state-funded FTE enrollment in Fiscal Year 2015. Although Maryland space planning models do not fully provide for consideration of Continuing

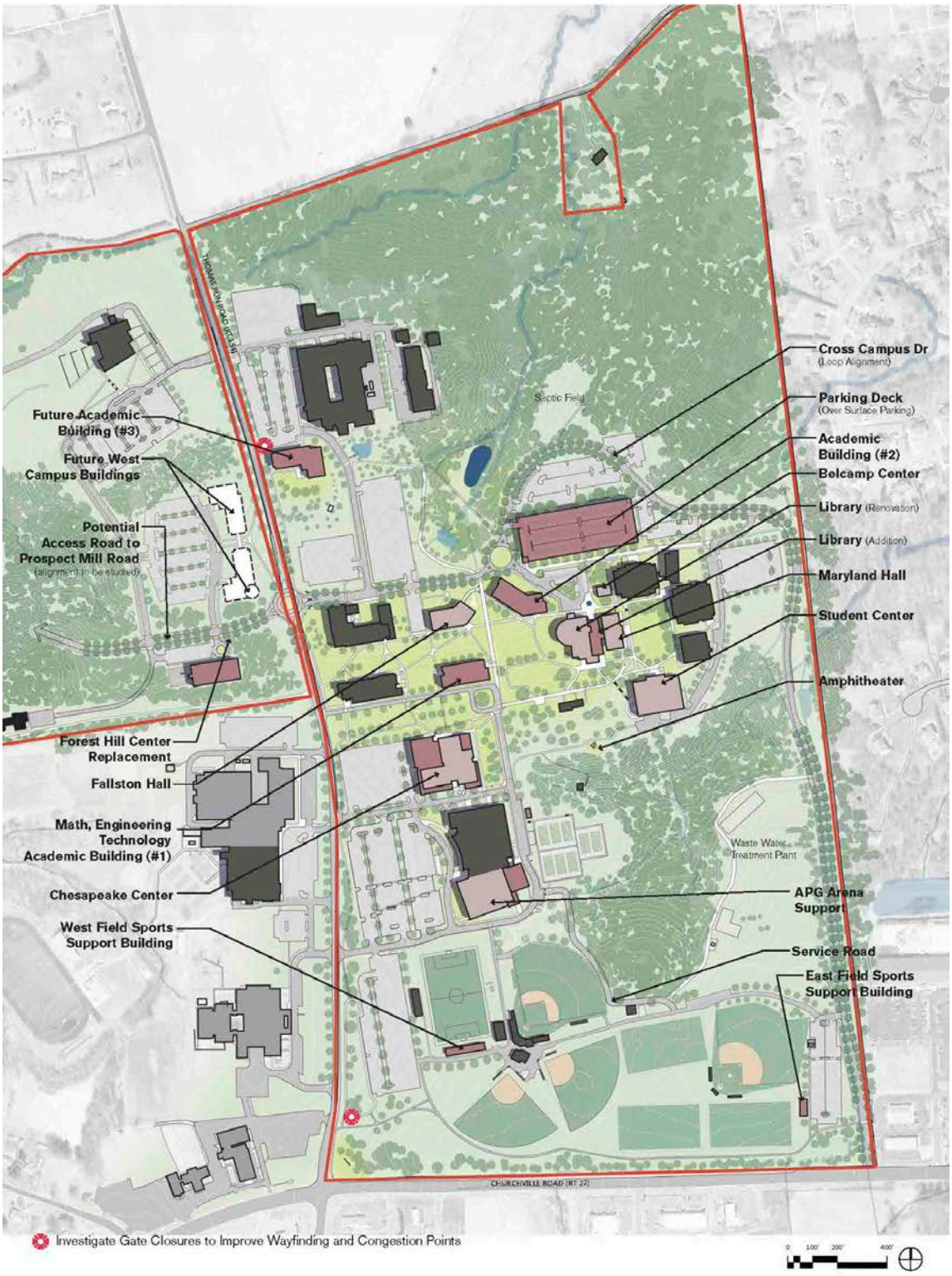
Education and Workforce Development student enrollment data when computing space needs, it is clear that the implications of this statistic could have a significant impact on HCC's space needs.

State-Funded FTE Enrollment (FY 2010 – FY 2015)

	Fiscal Year					
	2010	2011	2012	2013	2014	2015
Credit FTE	4,338	4,314	4,432	4,393	4,250	4,047
Non-Credit FTE	1,104	1,080	920	968	916	910
Total FTE	5,442	5,394	5,352	5,361	5,166	4,957
Non-Credit %	20.3%	20.0%	17.2%	18.1%	17.7%	18.4%

Data Source: Maryland Association of Community Colleges

Proposed Campus Development Plan



Chapter 2
Overview of the College

Mission, Vision, Values

Strategic Directions

Governance and Organization

Students, Faculty and Staff

Instruction

Main Campus

Off-Site Locations

CHAPTER 2
OVERVIEW OF THE COLLEGE

A problem well stated is a problem half solved.
—Inventor Charles Franklin Kettering (1876–1958)

HARFORD COUNTY

In ***HarfordNEXT 2016: A MASTER PLAN FOR THE NEXT GENERATION***[1], Harford County Government seeks to encourage economic growth while enhancing quality of place. Harford County has strived to maintain its rural character and identity while balancing the needs of a diverse and growing population. The core of the plan focuses on policies promoting safe, harmonious, and livable communities. The plan provides strategies to create opportunities for small businesses and large national corporations with diverse workforce needs.

HarfordNEXT reaffirms the County's commitment to the mission of the Aberdeen Proving Ground and creating opportunities for revitalization and reinvestment within the Chesapeake Science and Security Corridor (CSSC). The plan also recognizes the County's diverse history and agricultural roots. ***HarfordNEXT*** balances the preservation of productive farm lands with sustainable development, to ensure continued economic vitality. ***HarfordNEXT*** promotes an efficient, multi-modal transportation system as another vital component to the County's economic engine.

HarfordNEXT recognizes that a master plan is a statement of a community's vision for the future that comprehensively coordinates all major components of services, activities, and the community's physical development. Master plans are purposefully long-range, high-level, and general in nature to provide flexibility over the planning horizon of the document. Future plans and studies will provide greater specificity and allow communities to individually prioritize their needs. ***HarfordNEXT*** is an overarching plan which will require coordinated efforts across many agencies along with community engagement to realize the goals contained within the document.

The six themes in ***HarfordNEXT*** represent a holistic perspective on broad planning topics. The themes are Grow With Purpose, Preserving Our Heritage, Mobility and Connectivity, Promoting Healthy Communities, Environmental Stewardship, and Economic Vitality. Each theme is structured around a number of principles and goals that correspond to implementation strategies to guide County policies over the life of the plan. The goals and implementations proposed in ***HarfordNEXT*** will become the work plan for County agencies.

Harford Community College is central to *Education & Workforce Development* within the theme Economic Vitality. Harford County has many educational and workforce assets including a strong public school system with high graduation rates; a strong STEM focus with targeted and magnet programs; a model Science & Math Academy at Aberdeen High School; a Homeland Security program at Joppatowne High; and a Biomedical program at Bel Air High. Harford Community College provides opportunities for residents to obtain an associate degree or an array of certificates. The College also provides 2 + 2 programs that make it convenient for residents to earn a four-year degree. In addition, the University Center of Northeastern Maryland offers university courses, advanced education, training and resources. Harford County's Workforce Development effort is a partnership between government, higher education and industry.

New and innovative programs in the area of continuing education, higher education, vocational and professional training have been developed to complement career awareness efforts and advanced skills development programs designed to support and grow a productive skilled and competitive labor force.

[1] "Harford County Government, Maryland"; *HARFORDNEXT 2016: A MASTER PLAN FOR THE NEXT GENERATION;* Barry Glassman, Harford County Executive

The County also possesses a highly trained workforce that is well-suited to the service industry and technical sector. The County has strong workforce partnerships among higher education, the local workforce investment board, and government and industry that recognize interdependency for economic stability. Harford County has a solid framework and funding tools in place for workforce training needs, including technical training grants. The Harford Business Innovation Center offers a technology incubator program that helps young technology and growth-oriented start-up companies by offering a critical combination of customized business support services and access to subject matter experts. With a highly-skilled workforce and a focus on innovation, Harford County is the premier setting for technology and entrepreneurism.

The County's economic success depends upon job creation and preparing the workforce of tomorrow for those jobs. Partnerships with Harford Community College and the University Center of Northeastern Maryland are essential to educating and training a skilled workforce that is able to adapt to the changing needs of the marketplace. Other opportunities exist to invest in the future of Harford's workforce by partnering with the Board of Education to create programs that focus on science and technology.

Key to *HarfordNEXT's* success as a master plan is transportation. In turn, central to encouraging economic growth while enhancing quality of place is Transportation Demand Management (TDM), a general term for various strategies that increase transportation system efficiency, emphasizing the movement of people and goods rather than motor vehicles. Special emphasis has been placed on promoting TDM along the MD 22 Corridor and within the Chesapeake Science and Security Corridor (CSSC). Specific areas where TDM solutions could improve traffic conditions include Harford Community College (HCC), Aberdeen Proving Ground (APG), and near MARC train stations. Significantly, Harford Community College is the largest employer in the Churchville/Creswell community planning area. Therefore, the development of Harford Community College impacts the continuation of agriculture as an important priority of the community and support for nearby agricultural businesses. The northern portion of the community area is in the Deer Creek Valley Rural Legacy Area and the County's Priority Preservation Area. Limited commercial development exists in the Churchville rural village, with more intensity located around Harford Community College. These uses should continue to support local residents, students, and the farming industry.

HARFORD COMMUNITY COLLEGE

Harford Community College (HCC) is a public community college that occupies 352 acres on Thomas Run Road in Churchville, three miles east of Bel Air, Maryland. HCC has 21 buildings totaling approximately 364,800 assignable square feet on campus. The College shares another approximately 41,200 assignable square feet in five off-campus buildings.

As a comprehensive community college, Harford Community College addresses the diverse educational needs of Harford County, and in select instances, the greater regional community and the State of Maryland. An open admissions institution that views learning as a lifelong activity, the College provides high quality transfer and career programs, developmental education courses, and continuing education programs to challenge and support students regardless of age, color, disability, national origin, race, religion, sex, or sexual orientation. HCC offers more than 70 affordable degree and certificate programs of study to nearly 2,400 full-time and 4,100 part-time students, as well as a wide variety of noncredit continuing education courses to over 11,100 students a year.

HCC was founded in 1957 as the Harford Junior College in the basement of Bel Air High School. In 1962, the Harford County Board of Education purchased 211 acres of Prospect Hill Farm that included the historic Hays-Heighe House, which was built in 1808 and is in use today. This property to the east of Thomas Run Road would, in 1964, become home for the Junior College. At this new location, it would continue to grow and eventually became Harford Community College in 1971.

Hays-Heighe House

Initial development of the new campus began in 1964 with the construction of Aberdeen Hall, Bel Air Hall, and Maryland Hall. In 1965, Joppa Hall was built followed by Havre de Grace Hall in 1967, and Chesapeake Center and Susquehanna Center in 1968.

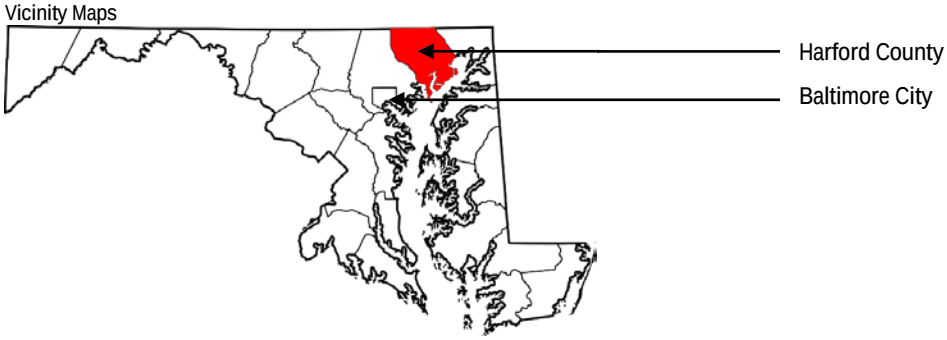
The Student Center in 1976 and the Daycare Center in 1978 represented the only major addition of facilities until 1994, when Edgewood Hall was built followed by Fallston Hall in 1998 and the Observatory in 1999.

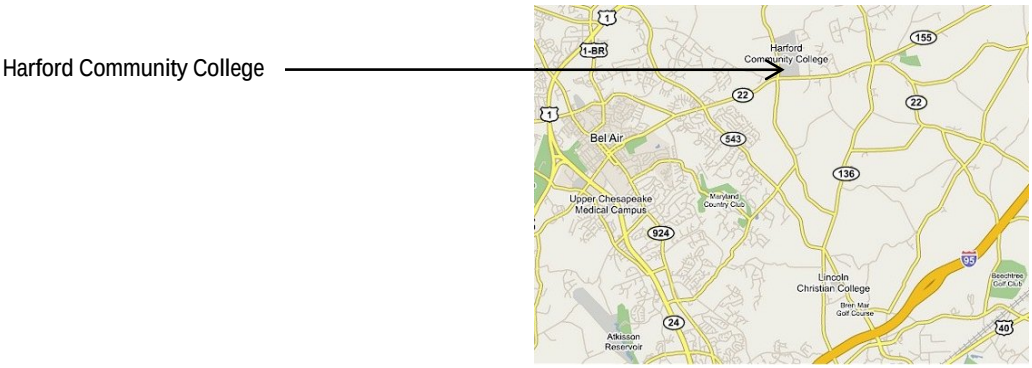
In the last facility master plan the most recently constructed major new building projects were the Library in 2000 and the Plant Services Building in 2002. Since that time, Darlington Hall, a new Nursing and Allied Health Building to support new programs that serve these professions was completed and occupied in the fall of 2014; and Hickory Center was just completed in 2015 to house the campus copy services and computer services center.

Location

The College's address is 401 Thomas Run Road, Bel Air, Maryland 21015. This location is on the northeast corner of the intersection of Churchville Road (MD 22) and Thomas Run Road just east of the Harford County seat of Bel Air and about 23 miles northeast of Baltimore City.

Vicinity Maps





THE COLLEGE'S MISSION, VISION AND VALUES

Harford Community College's mission, vision and values statements reflect the uniqueness of this learner-centered institution with a commitment to not only to serve the citizens of Harford County, but also to engage and enhance the greater regional community.

Mission

Harford Community College provides accessible, innovative, learner-centered educational opportunities. As an open-access institution, the College promotes graduation, transfer, individual goal attainment, and career and workforce development. The College fosters lifelong learning, global awareness, and social and cultural enrichment.

Vision

To be a national higher education leader by transforming lives through imagination, compassion, and rigor

Values

Excellence: We are creative and passionate in our work. Our highly qualified faculty and staff, learner-centered programs and services, and beautiful campus reflect our commitment to intentional improvement.

Lifelong Learning: We prepare our students and ourselves to contribute to our community as critical thinkers, knowledgeable citizens, and creative problem solvers. We believe that learning should be engaging and enjoyable.

Diversity: We embrace differences, respect intellectual and academic freedom, promote critical discourse, and encourage socio-cultural and global awareness.

Service: We are accessible and responsive to our students, our community, and each other. Helping people achieve their goals is central to our mission.

Innovation: We cultivate bold vision, creative exploration, and responsible risk taking.

Sustainability: We are responsible stewards of our resources. We work together to protect our natural resources, renew our human resources, and expand our financial and physical resources.

Integrity: We adhere to high ethical standards. Honesty, sincerity, fairness, respect, transparency, and trust serve as our foundation.

Collaboration: We foster teamwork and partnerships. Working together enhances results and builds community.

Communication: We share information and ideas, listen with open minds, and strive for clarity.

THE COLLEGE'S STRATEGIC PLAN

The Harford Community College Strategic Plan 2013 - 2017 is intended to focus and guide the College, its units, and its resources toward the achievement of well-articulated goals. The Plan clearly defines the specific goals and the strategies for achievement.

Goal 1

Recognizing the need for more students to achieve their goals, the College will pursue excellence in teaching, learning and assessment.

Strategies

1. Eradicate attainment gaps based on income, race, gender and ethnicity.

2. Develop new programs and enhance existing programs to reduce time to degree, increase student success, and promote goal completion.

3. Assess, improve, and advance educational program design, content, and delivery.

4. Strengthen the College's partnership with local schools to increase the readiness of high school graduates for college.

Goal 2

Acknowledging that HCC plays an important role in the region, the College will expand programming, events, and facilities that engage and enhance the community.

Strategies

1. Provide educational programs and workforce development training to meet the needs and interests of the community.

2. Use facilities and events, with particular attention to the APG Federal Credit Union Arena, to provide mutual benefit for the community and the College.

3. Address - to the extent to which the College has influence - the recommendations of the Northeast Maryland Higher Education Task Force.

Goal 3

Understanding that the environment and the demands on higher education are changing rapidly, the College will develop resources and infrastructure required to meet future challenges.

Strategies

1. Develop sufficient fiscal resources to carry out its mission, including the resources required to implement the Facilities Master Plan.

2. Recruit and retain highly qualified, diverse employees.

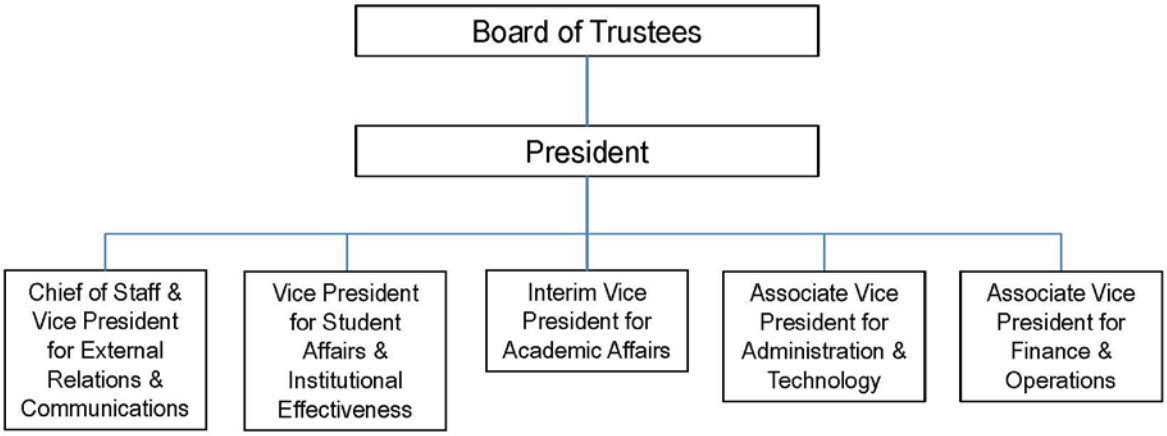
3. Identify and invest in technology that will increasingly support student success and employee productivity.

GOVERNANCE AND ORGANIZATION

Board of Trustees

Harford Community College's governing board is comprised of nine trustees exercising general control over HCC (Code Education Article, secs. 16-101 through 16-103). The Board members are appointed to five-year terms by the Governor. Six members represent the Councilmanic Districts and three are appointed from the County at large. The Board keeps separate records and minutes, and adopts reasonable rules, regulations, or bylaws to carry out the provisions of this subtitle. The Board is subject to the authority of the Maryland Higher Education Commission.

The President is hired by the Board of Trustees and reports directly to the Board. The President recommends the appointment by the Board qualified faculty members and other employees necessary for the efficient administration of the community college. The President is responsible for the conduct of the community college and for the administration and supervision of its departments; and shall attend all meetings of the board, except those involving his/her personal position as president.



(Revised December 5, 2016)

Collegial Governance

The purpose of the Collegial Governance system at Harford Community College is to provide structures and processes that allow employees and students who will be affected by decisions to have input into the decisions. Though any issue of concern to a constituency group may be discussed, some issues will be appropriate for formal consideration and recommendation through Collegial Governance and some will not be appropriate for such consideration. For many issues, the role and involvement of Collegial Governance may not be clear. In such instances, the first task of Collegial Governance will be to clarify the scope of involvement and the limits and parameters of that involvement. The structure provides for a coordinating group comprised of representatives from three constituent councils and the Student Government Association. Each group strives to share in accomplishing the HCC mission.

There are three principles that guide the system of Collegial Governance at Harford Community College:

1. The governance structure must be inclusive.

2. The governance structure must be recognized as advisory in nature. Final authority for decisions rests with the President of the College and with the Board of Trustees.

3. Issues should be delineated as either appropriate for the governance process or as not appropriate for the governance process.

Student Government Association

The Student Government Association (SGA) serves as the voice of the students, and communicates student needs campus-wide. SGA members are service-oriented, diverse, and responsive leaders who organize student activities, assist other student organizations, and cultivate an atmosphere of teamwork throughout the campus.

STUDENT ENROLLMENT

In the fall semester of 2015 Harford Community College enrolled 6,543 students who generated 57,775 credit hours of enrollment. The following table shows the distribution of on campus, off campus sites and distance learning credit enrollments.

Current Credit Enrollment Distribution (Fall 2015)

	Credit Hours	FTES	Percent
Main Campus			
Day (Before 5:00 pm)	39,332	2,622	68%
Evening (5:00 pm or After)	8,251	550	14%
Subtotals	47,583	3,172	82%
Off Campus Sites			
Day (Before 5:00 pm)	1,014	68	2%
Evening (5:00 pm or After)	60	4	<1%
Subtotals	1,074	72	2%
Online/Distance Learning	9,118	608	16%
HCC Totals	57,775	3,852	100%

In the 2015 fiscal year, 11,148 students also enrolled in 24,598 noncredit continuing education courses at HCC.

FACULTY AND STAFF

During the academic year 2015-2016, HCC employed 347 full-time faculty, administrative and support staff. In addition the College employed 669 part-time faculty and staff. The following table illustrates the distribution of personnel who are critical to the mission and learning experience at Harford Community College.

Current Faculty and Staff

Category	Full-Time	Part-Time	Total
Faculty (Credit)	101	243	344
Faculty (Noncredit)	0	112	112
Staff	246	314	560
Totals	347	669	1,016

LEARNING EXPERIENCE DELIVERY

Harford Community College serves the needs of students in credit programs designed to provide the first two years of baccalaureate education (transfer programs) in preparation for transfer to baccalaureate colleges or universities for further study, for immediate employment (career programs), and noncredit learning opportunities for children, youth and adults (continuing education programs). These programs, services, and activities are administered by the following 10 learning experience delivery organization elements:

- Behavioral & Social Sciences
- Continuing Education & Training
- Educational & Transitional Studies
- eLearning & Instructional Resources
- Human Development, Health & Physical Education
- Humanities
- Library & Information Resources
- Nursing & Allied Health Professions
- Science, Technology, Engineering, & Mathematics
- Visual, Performing & Applied Arts

This *Facilities Master Plan* acknowledges the impact of the built environment on Harford Community College's ability to fulfill its mission. There is an interface between student learning styles and the institutional learning environment. The intent in overviewing the learning experience delivery system(s) at the College is to identify opportunities for Harford Community College to provide both on-campus and off-campus transformative learning environments in support of its mission. Traditional and non-traditional approaches to learning and instruction both have to recognize that online or in-person, there is a space impact.

Bloom's Taxonomy in 1956 sought to promote higher forms of thinking in education beyond just remembering facts (i.e., rote learning). Focus was redirected to three additional types of learning: 1) cognitive: mental skills (knowledge), 2) affective: growth in feelings or emotional areas (attitude or self), and 3) psychomotor: manual or physical skills (skills). The cognitive was further updated by Anderson, et al. to: remembering, understanding, applying, analyzing, evaluating, and creating. Although education's prior principal focus was K-12, the current focus is based on lessons learned from those experiences over the last twenty years. Blended learning requires blended learning environments that acknowledge the greater role of both collaboration as well as self-directed learning. Harford seeks to provide the most flexible and effective opportunities possible to support student success.

INSTRUCTIONAL PROGRAMS OVERVIEW

Harford Community College offers certificates or degrees in various programs of study (often referred to as "majors").

Degree Programs

Associate of Arts (A.A.)

The Associate of Arts degree recognizes a curricular focus on the liberal arts (humanities, social sciences and similar subjects) and fine arts. The Associate of Arts degree not only transfers to appropriate baccalaureate programs, but also provides for career exploration and skills upgrading.

Associate of Arts in Teaching (A.A.T.)

The Associate of Arts in Teaching degree recognizes a curricular focus in teacher education that meets the lower-level degree academic content, outcomes, and requirements for teacher education similar to the first two years of a baccalaureate program in teacher education. This degree requires a passing score on Praxis I and a cumulative grade point average of 2.75 on a 4.0 scale and will transfer in total without further review by Maryland public and independent four-year institutions. Certain SAT and ACT scores may also be considered.

Associate of Science (A.S.)

The Associate of Science degree recognizes a curricular focus on science, mathematics, engineering and technology. The A.S. degree not only transfers to appropriate baccalaureate programs, but also provides for career exploration and skills upgrading.

Associate of Applied Science (A.A.S.)

The Associate of Applied Science degree recognizes a curricular focus in a specific occupational area. The A.A.S. degree is intended primarily for immediate employment or career mobility; it also provides some opportunities for transfer to baccalaureate programs.

Continuing Education and Training

The mission of the Continuing Education and Training Division is to provide courses, programs, and services of superior quality, at a competitive price, that are responsive to the educational and training needs of the people who live or work in Harford County. The Division offers education and training for the community, youth camps, senior programs, adult development education, and workforce development.

Workforce development training includes certification programs and contract training offerings in the construction trades, as well as programs in computer training, healthcare and human services, professional and leadership, service industries, and basic academic preparation.

Harford Community College is committed to providing quality workforce development services that are convenient, competitively priced, and responsive to the unique needs of business, industry, government and their employees. Through the Department of Workforce Development, individuals receive training that increases their competency and makes them greater assets to Maryland's workforce.

Non-Traditional Studies (Early College Access)

HCC works in partnership with Harford County Public Schools (HCPS) to encourage high school students to enroll in college classes early. Taking college classes while in high school enables students to receive a quality education and reduce the amount of time it takes to earn a college degree. Students have the opportunity to simultaneously earn high school credit and/or up to 30 college credits through articulated course selections. A particular emphasis of Early College Access (ECA) is to encourage enrollment and college completion by first generation, low income, and

underrepresented minority students. Students attending Harford County Public Schools interested in ECA opportunities seek information directly from their high school guidance counselor. Homeschooled or private schooled students contact the HCC Admissions Office.

Non-Traditional Studies (Dual Enrollment)

The Towson University and Harford Community College partnership provides seamless transfer for students who wish to pursue an associate degree at Harford and a bachelor's degree at Towson. This new location makes Towson's programs easy to access and provide regional opportunities for study and workforce development. Programs of study include:

- Business Administration (Management)
- Family and Human Services – Services to Children and Youth
- Information Technology
- Integrated Early Childhood Education/Special Education
- Integrated Elementary Education/Special Education
- Nursing
- Psychology
- Sociology (Criminal Justice)

The University Center allows Harford Community College and six university partners, including Notre Dame of Maryland University, Towson University, Johns Hopkins University, Morgan State University, University of Maryland College Park and UMBC Training Center, to provide a wider array of educational offerings for the region.
The University Center, Northeastern Maryland, located on Rt. 22 in Aberdeen, MD, offers 18 programs of study. Classes are offered at a variety of times and schedules (days, evenings, and weekends), including traditional semesters and opportunities for accelerated learning. In addition, classes are offered via face-to-face instruction and in hybrid and online or distance learning formats. It is convenient and accessible higher education for residents of Northeastern Maryland, Delaware, and Southern Pennsylvania.

Harford Community College and University Partners

- Harford Community College
- Towson University
- Notre Dame of Maryland University
- Johns Hopkins University
- Morgan State University
- University of Maryland College Park
- UMBC Training Center

Specialized Program Accreditations

Harford Community College is accredited by the Middle States Commission on Higher Education, 3624 Market Street, Philadelphia, PA 19104 (267) 284-5000. The Commission's Statement of Accreditation status is posted on the Commission's website. The accreditation process involves a 10-year cycle of review that includes a Self-Study Report prepared by the institution.

The Associate of Science Degree Nursing Program is approved by the Maryland Board of Nursing and accredited by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326

The Histotechnology Program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Road, Suite 720, Rosemont, IL 60018.

The Paralegal Studies Program is approved by the American Bar Association (ABA), 750 North Lake Shore Drive, Chicago, IL 60611.

The College holds membership in numerous national, regional, state and local professional associations.

CAMPUS FACILITIES

At the beginning of the base year for this *Facilities Master Plan* (fall 2015), the facilities inventory at HCC's main campus includes 21 permanent buildings totaling 588,190 gross square feet (GSF) that contain approximately 364,800 net assignable square feet (NASF) of space.

Buildings (Permanent Space)

Building	Code	Built	GSF	NASF	Primary Use
On Campus Permanent					
Aberdeen Hall	A	1964	43,023	25,319	Instruction
Bel Air Hall	B	1964	30,665	18,359	Instruction
Belcamp Center	SA	1993	2,337	1,604	Instruction, Office
Chesapeake Center	C	1968	32,266	19,475	Assembly, Office, Meeting, Food Service
Conowingo Center	CO	2002	16,189	13,241	Storage, Shops
Darlington Hall	DH	2014	51,628	28,785	Instruction
Edgewood Hall	E	1994	33,845	20,270	Instruction, Office, Assembly
Fallston Hall	F	1998	24,728	15,309	Instruction, Office
Forest Hill Center	N	1978	13,913	11,250	Day Care, Other Organization
Harford Sports Complex	HSC	1991	2,475	1,449	Office, Athletic/Physical Education
Havre de Grace Hall	H	1967	18,156	10,871	Instruction
Hays-Heighe House	HH	1808	6,000	3,465	Exhibit
Hickory Center	HC	2015	14,007	9,750	Office, Storage
Joppa Hall	J	1965	81,385	52,305	Instruction
Joppa Utility Buildings	JU	1991	1,074	1,074	Instruction
Library	L	2000	49,346	33,519	Library, Data Processing
Maryland Hall	M	1964	10,303	6,147	Instruction
Observatory	O	1999	4,143	3,039	Instruction
Pump Station	PH	1990	853	{na}	Mechanical Space {Nonassignable}
Student Center	SC	1976	50,294	29,743	Office, Food Service, Lounge, Bookstore
Susquehanna Center/APG Arena	S	1968	101,560	59,780	Athletic/Physical Education
Totals			588,190	364,754	

The College also shares space in five off-campus facilities. These buildings are classified as "overflow space" and, therefore, are not included in HCC's main campus permanent building inventory.

Buildings (Overflow Space)

Building	Code	Built	GSF	NASF	Primary Use
Off Campus Overflow					
Amoss Center	AC	2000	22,637	20,934	Assembly (Performing Arts)
University Center East	HE	1994	10,000	5,683	Instruction
University Center West	HW	1997	19,080	11,919	Instruction
PMR Residence	PMR	Circa 1950	2,000	1,472	Other Organization
TRR Garage	TRR	Circa 1950	1,560	1,148	Other Organization
Totals			55,277	41,156	

Chapter 3
Space Needs

Space Needs

Existing Space, Demand

Quantitative Indicators of Need

Qualitative Indicators of Need

Summary

SPACE NEEDS ANALYSIS

The growth of existing programs and the establishment of new programs suggest concomitant growth in enrollment and a need for specific, specialized facilities. The demand for transfer and workforce skills will drive program offerings in the coming years. Many of these programs require specialized classrooms, labs and other facilities that can be flexibly adjusted for a variety of teaching/learning settings. This demand is considered in subsequent sections to identify space needs and suggests future physical development.

The need for facilities should also be viewed in the context of how the process of learning may evolve over time. Demand for critical skills in top growth occupations, amplified need for developmental education programs and services, flexibility in contract and workforce training with their unique learning environments, veterans, international students, and aging of the general population will be the primary drivers for future program offerings and enrollments.

As the College's student body continues to change in size and diversity, there will be greater demands placed on resources devoted to developmental education. It is expected that over the next ten years Harford Community College, as with most community colleges, will need enhanced programs and services for a student population increasingly composed of the under prepared.

Improved literacy and refinement of technology in educational institutions dictates the provision of instructional spaces that are designed for both unique and/or shared functions. These spaces will further require adequate consistency with a global reconfiguration that increases the utilization efficiency ratio. The lack of sufficient numbers of contemporary, flexible instructional and learning spaces has directly and indirectly curtailed the College's ability to fully develop the inherent potential of its credit and noncredit course offerings.

The Continuing Education and Training Division does not offer "programs", as such, but "market-driven" courses. Since the Division's offerings must be extremely flexible, course changes are continuous. This flexibility is essential in order to meet the ever changing needs of its unique market. As the general population ages, it is expected that a maturing workforce will create greater demand for continuing education and personal enrichment opportunities.

> *"The foundation of our economy must be built on a population that is prepared to enter the workforce with a diverse range of skills. Preparing our workforce to excel is vital to ensuring that our emerging employment sectors can prosper."*
>
> *-HarfordNEXT 2016*
> *A Master Plan for the Next Generation*

Workforce development programs will require highly flexible specialized learning environments for a variety of trade skills. These types of programs often necessitate large unique commercial and industrial type specialty spaces, utilizing interior and exterior open areas. Such spaces, or groupings of spaces, are intended to maximize efficiency and flexibility of use in terms of highly specialized tasks, tools, materials, and equipment.

Due to ever changing technology for both teaching and learning, much of higher education must rethink its learning environments. Although the lecture/lab instructional delivery mode will continue to be used, colleges and universities will increasingly supplement that delivery methodology with specialized learning environments that allow for both scheduled and unscheduled instruction and learning in discipline-related simulated environments.

Future environments should be such that the distinction between a computer lab and a lecture classroom will disappear, because the technology and furnishings will be unobtrusive, but available on demand. All furnishings will be easily movable or the instructional area will automatically be able to configure the furnishings based upon immediate need.

With the exception of science labs, physical education spaces, and some visual and performing arts studios, the idea of rooms belonging exclusively to an instructional area will also disappear. Credit classrooms would be available to Continuing Education learners and vice versa.

Electronic presentation that allows integration and manipulation of complex data into the learning environment is becoming more and more the norm. Teleconferencing and online capabilities will make learning partnerships with other schools and businesses, even ones in other countries, commonplace. Modernization of instructional delivery requires that instructional spaces be configured relative to future disciplinary/programmatic goals whose objectives and functions dictate more efficient organization and utilization of space.

Contemporary learning environments are required in order for the College to continue to successfully attract and retain a representative level of Harford County's available student population.

SPACE NEEDS

The purpose of space needs analysis is to assess the extent to which the current total amount of academic and other space is adequate for use in support of future enrollments. The ultimate outcome of this assessment is to provide estimates of the supply of types and amounts of space likely to be needed to accommodate HCC's projected fall 2025 demand in terms of academic programs and their ensuing enrollments and staffing levels.

The College provided a summarized space inventory, course enrollment data, and staffing data for the fall semester of 2015, which formed the basis for analyzing HCC's space needs. The consultant team then applied elements of the data to the Maryland Higher Education Commission's *Space Allocation Guidelines for Community Colleges* (COMAR Title 13B) to provide quantitative indicators of current space needs.

Definitions and room use codes are those provided by the taxonomy found in the *Postsecondary Education Facilities Inventory and Classification Manual (FICM) 2006 Edition* published by the U.S. Department of Education in cooperation with the National Center for Education Statistics. For the most part, room use codes and classifications referenced in this analysis refer to the primary activity space plus support space that directly services the primary activity. Furthermore, the space inventory data in this section is presented in such a way as to satisfy the requirements of the *Guidelines*.

For this space needs analysis, data relating to facilities refers to permanent on-campus buildings at the main campus only. Buildings classified as temporary structures are excluded from these data and analyses.

Need Determinants

The need for space via new or renovated facilities is typically calculated with respect to hours of instruction and the number of students, employees, and library volumes to be accommodated. Projections of total space need are based on an anticipated number of student enrollments, faculty and staff, and volumes for fall semester 2025. For this master planning process, the enrollment assumption is that the projected mix of academic disciplines maintains the program distributions of fall semester 2015.

Space deficits and surpluses are identified based on applying the *Space Allocation Guidelines* to inventories of various categories of space and projected student enrollments. However, guidelines are not to be used as the only determining factor when making decisions about facility needs. A variety of qualitative or non-statistical indicators of space need, along with utilization analyses, offer augmentation to any statistical calculations.

Planning Assumptions

The base year for this analysis is fall 2015. Student headcount of 6,543 reflects the total number of students taking credit courses. FTES / FTDES are calculated from credit hours earned at HCC. Faculty represent credit faculty only.

Planning Assumptions

	Student Headcount	FTES	FTDES	Full-Time Faculty	Part-Time Faculty	Full-Time Staff	Part-Time Staff
Fall 2015	6,543	3,852	2,817	101	243	246	314
Fall 2025	8,066	5,326	3,821	137	330	302	385
Percent Change 2015-2025	23%	38%	36%	36%	36%	23%	23%
Average Annual Growth Rate	2.1%	3.3%	3.1%	3.1%	3.1%	2.1%	2.1%

While the use of static demographics may not be realistic for micro-level planning, such as individual project programming where population movement needs to be considered and planned for, macro-level analysis and estimates of future student populations often using static demographic data have shown to be a relatively reliable tool for facilities master planning purposes.

When student population movement is projected by means of comprehensive academic planning and/or expressions of institutional policy, such considerations are incorporated into space planning guidelines applications to set priorities for campus development and to compute campus-wide allowances for each category of space. In instances where such is not the case, static data for student enrollments, faculty and staff levels, and library collections are appropriately used as the basis for computing future campus-wide need for space.

Summary of Key Findings

Although planned construction and occupancy of a new Math Engineering and Technology Building, the Edgewood Hall Addition, as well as renovations to Fallston Hall will address some of the 2015 deficits in instructional space. Significant deficits are projected in this classification for 2025 as well as for study, food, athletics/physical education, office, media production, shop/storage and assembly space.

The 2015 campus space inventory was 364,754 net assignable square feet (NASF). The College anticipates a 2025 space inventory of 391,938 NASF as the base or supply against which the need, generated by the demand of future enrollments, would be quantified.

When space deficits and surpluses were computed by comparing enrollment and staffing projections against the projected space inventory, the outcome was a projected 2025 overall space deficit of 75,436 NASF as shown by the following tables. Quantitative indicators suggest immediate and long-term need for facilities to support space classifications showing significant deficits.

Projected (Fall 2025) Space Deficits and Surpluses

Use	Space Classification	Deficit NASF	Use	Space Classification	Surplus NASF
100	Classroom	14,300	210	Class Laboratory	3,400
220	Open Laboratory	11,200	620	Exhibition	1,300
410	Study/Seating*	10,800	660	Merchandising	500
630	Food Facility	9,100	680	Meeting Room	500
520	Athletics/Physical Edcuation	8,200		Total	5,700
300	Office/Conference Room	8,000			
530	Media Production	4,400			
720-740	Shop/Storage	4,400			
610	Assembly	4,100			
650	Lounge	2,400			
800	Health Care	1,000			
750	Central Services	800			
710	Data Processing/Telecom	800			
440	Processing/Service*	700			
760	Hazardous Material Storage	300			
320	Testing/Tutoring	200			
420-430	Stack/Open Stack Study*	200			
580	Greenhouse	200			
	Total	81,100			

*Primarily Library Function

A comprehensive computation of space needs is summarized in the following table. All numbers on the preceding and succeeding tables may not exactly match due to rounding.

Summary Guideline Calculations

Use Code	Use Classification	Base Year (2015) Inventory	Guideline	Surplus (-) Deficit	Inventory as a % of Guideline	2016-2025 Additions[a]	Deletions[a]	Projected Year (2025) Inventory	Guideline	Surplus (-) Deficit	Inventory as a % of Guideline
100	Classroom Facilities	65,654	77,613	-11,959	84.6%	3,000	5,067	63,587	77,903	-14,316	81.6%
200	Laboratory Facilities	77,824	91,876	-14,052	84.7%	20,874	0	98,698	106,477	-7,779	92.7%
210	Class Laboratory	73,999	80,045	-6,046	92.4%	19,874	0	93,873	90,429	3,444	103.8%
220	Open Laboratory	3,825	11,831	-8,006	32.3%	1,000	0	4,825	16,048	-11,223	30.1%
300	Office Facilities	77,448	72,667	4,781	106.6%	7,077	0	84,525	92,757	-8,232	91.1%
310/50	Office / Conference	74,998	70,508	4,490	106.4%	7,077	0	82,075	90,096	-8,021	91.1%
320	Testing / Tutoring	2,450	2,159	291	113.5%	0	0	2,450	2,661	-211	92.1%
400	Study Facilities	20,952	24,399	-3,447	85.9%	0	0	20,952	32,737	-11,785	64.0%
410	Study	13,032	17,606	-4,574	74.0%	0	0	13,032	23,881	-10,849	54.6%
420/30	Stack / Study	6,084	4,852	1,232	125.4%	0	0	6,084	6,326	-242	96.2%
440/55	Processing / Service	1,836	1,941	-105	94.6%	0	0	1,836	2,530	-694	72.6%
500	Special Use Facilities	51,690	50,824	866	101.7%	0	0	51,690	64,452	-12,762	80.2%
520/23	Athletic	49,010	47,170	1,840	103.9%	0	0	49,010	57,210	-8,200	85.7%
530	Media Production	1,867	2,654	-787	70.3%	0	0	1,867	6,242	-4,375	29.9%
580	Greenhouse	813	1,000	-187	81.3%	0	0	813	1,000	-187	81.3%
600	General Use Facilities	47,514	53,538	-6,024	88.7%	1,300	0	48,814	62,033	-13,219	78.7%
610	Assembly	12,498	14,634	-2,136	85.4%	0	0	12,498	16,642	-4,144	75.1%
620	Exhibition	3,974	2,159	1,815	184.1%	0	0	3,974	2,661	1,313	149.3%
630	Food Facility	9,211	16,504	-7,293	55.8%	0	0	9,211	18,304	-9,093	50.3%
640	Day Care	7,128	7,128	0	100.0%	0	0	7,128	7,128	0	100.0%
650	Lounge	3,952	4,854	-902	81.4%	200	0	4,152	6,537	-2,385	63.5%
660	Merchandising	3,209	2,259	950	142.1%	100	0	3,309	2,761	548	119.8%
670	Recreation	0	0	0	0.0%	0	0	0	0	0	0.0%
680	Meeting Room	7,542	6,000	1,542	125.7%	1,000	0	8,542	8,000	542	106.8%
700	Support Facilities	17,938	21,639	-3,701	82.9%	0	0	17,938	24,317	-6,379	73.8%
710	Data Processing	1,737	2,500	-763	69.5%	0	0	1,737	2,500	-763	69.5%
720-740	Shop / Storage	13,022	14,842	-1,820	87.7%	0	0	13,022	17,468	-4,446	74.5%
750	Central Service	3,179	4,000	-821	79.5%	0	0	3,179	4,000	-821	79.5%
760	Hazmat Storage	0	297	-297	0.0%	0	0	0	349	-349	0.0%
800	Health Care Facilities	0	763	-763	0.0%	0	0	0	964	-964	0.0%
000	Unclassified[b]	5,734	5,734	0	100.0%	0	0	5,734	5,734	0	100.0%
	Totals	364,754	399,053	-34,299	91.4%	32,251	5,067	391,938	467,374	-75,436	83.9%

Data Source: Compiled by Facilities Planning Associates from data provided by Harford Community College

[a]Additions and Deletions represent inventory gains and losses upon completion of the Edgewood Hall Addition, Renovations to Fallston Hall, and completion of the new Math Engineering & Technology Building.

[b]Space occupied by other organizations at the time of this inventory (Day Care Center-3,000 NASF and Joppa Hall-2,734 NASF).

In summary, space needs analysis is the process of estimating the needed supply of learning, support and resource space given a projected demand of academic programs, disciplines and student enrollments. Thus, space needs analysis begins the transitioning from the language of academic planning to the language of facilities planning.

GLOSSARY OF TERMS

This glossary contains brief definitions of generic terms related to educational facilities planning and explanations of the acronyms and abbreviations referred to in this Space Needs Analysis.

Bound Volume Equivalent (BVE)	The physical space required to accommodate a variety of library materials in amounts equal to one single typical book
Class Laboratory	Spaces that are used primarily for formally or regularly scheduled classes that require special purpose equipment for a specific room configuration for student participation, experimentation, observation, or practice in an academic discipline
Classroom	Spaces that are not tied to a specific subject or discipline by equipment or room configuration
Core Space	Space necessary because of existence of the institution or program without regard to other factors
Credit Hour	A numerical value awarded a student for successfully completing a course
Facilities Inventory	Room-by-room and building-by-building listing of assignable spaces, their primary use, their size and their capacity
Full-Time Equivalent Faculty (FTEF)	A base factor statistic equal to a full-time faculty plus 25% of all part-time faculty Note: This statistic is used in this document for facilities planning purposes only, and the calculation may differ from the FTEF computed for budgetary or other reporting purposes.
Full-Time Equivalent Student (FTE or FTES)	The total number of on-campus credit hours taught during a given semester, divided by 15 Note: This statistic is used in this document for facilities planning purposes only, and the calculation may differ from the FTE computed for budgetary or other reporting purposes.
Full-Time Day Equivalent Student (FTDE or FTDES)	The total number of on-campus credit hours taught before 5:00 p.m. during a given semester, divided by 15 Note: This statistic is used in this document for facilities planning purposes only, and the calculation may differ from the FTDE computed for budgetary or other reporting purposes.
Gross Square Feet (GSF)	The sum of square feet of space in a building included within the outside faces of exterior walls for all stories or areas that have floor surface Included are all structural, mechanical, service and circulation areas.
Net Assignable Square Feet (NASF)	The sum of all areas on all floors of a building assigned to, or available for assignment to an occupant for specific use Excluded are spaces defined as structural, mechanical, service and circulation areas.
Student Contact Hour	A measure of time of scheduled interface between students and teacher that is usually expressed in terms of Weekly Student Contact Hour (WSCH), which is the number of hours per week of required interface Note: This statistic is used in this document for facilities planning purposes only, and the calculation may differ from the WSCH computed for budgetary or other reporting purposes.

HISTORICAL TRENDS

Students

By analyzing an institution's student body composition during the past few years, it is possible to deduce trends in the numbers and types of students enrolled, number of credit hours generated and choices among continuing programs.

Examination of the table below shows that fall credit FTDE enrollment trends for students attending HCC during the past six years has declined at an annual rate of 5.8%.

Enrollment Trends

	Fall Semester						Net Change	Annual Rate
	2010	2011	2012	2013	2014	2015	2010-2015	2010-2015
Headcount	7166	7152	7256	7039	6748	6543	-8.7%	-1.8%
FTDE	3,802	3,346	3,783	2,810	2,893	2,817	-25.9%	-5.8%

Faculty and Staff

Since 2010, HCC's full-time faculty level has remained rather flat at an annual rate of growth of just .8% while part-time faculty has declined at a rate of 4.1%. The College has experienced an annual increase of 4.8% in total staff over the same period. Credit student to faculty ratio is 21:1.

Faculty and Staff Trends

	Fall 2010	Fall 2011	Fall 2012	Fall 2013	Fall 2014	Current Fall 2015	Net Change 2010-2015	Annual Rate 2010-2015
Full-Time Faculty	97	101	106	105	101	101	4.1%	0.8%
Part-Time Faculty	299	286	285	260	256	243	-18.7%	-4.1%
Faculty Totals	396	387	391	365	357	344	-13.1%	-2.8%
Full-Time Staff	220	224	235	236	250	246	10.6%	2.3%
Part-Time Staff	224	235	250	285	270	314	28.7%	7.0%
Staff Totals	444	459	485	521	520	560	20.7%	4.8%

EXISTING SPACE

Facilities Inventory

An inventory summary of assignable space in each building, by room use classification, was prepared by the College and given to the consultant team. This inventory of existing spaces serves as the baseline data against which computed space needs are compared.

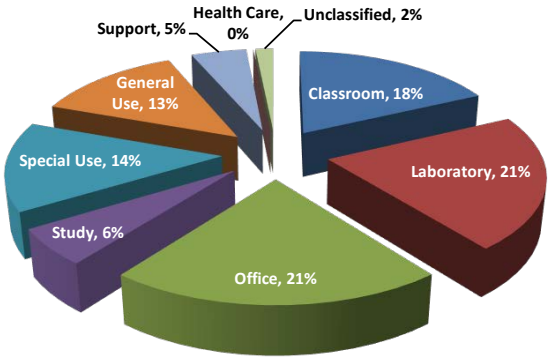
The inventory utilizes the space taxonomy found in the *2006 Postsecondary Education Facilities Inventory and Classification Manual* (FICM) published by the U.S. Department of Education in cooperation with the National Center for Education Statistics. Furthermore, the space inventory data in this chapter is presented in such a way as to satisfy the requirements of the Maryland Higher Education Commission's *Space Allocation Guidelines for Community Colleges*. More detailed attention is devoted to each of the College's building structures later in this document.

In determining the base inventory to be used in calculating permanent space needs, inventoried net assignable square footage (NASF) is designated as either "permanent" or "overflow." Only "permanent" space is used to determine space needs. Space contained in temporary structures and space in facilities at locations other than a main campus is considered "overflow" and is not included in the base calculations.

As depicted in the accompanying table and graphic, 39% of HCC's assignable space is classified as classroom and laboratory instruction (classroom 18%, laboratory 21%), 21% as office, 6% as study (library), and the remaining 34% is a combination of special use, general use, support and unclassified spaces.

Distribution of Existing Space by Room Use Classification

Use Code	Classification	NASF
100	Classroom	65,654
200	Laboratory	77,824
300	Office	77,448
400	Study	20,952
500	Special Use	51,690
600	General Use	47,514
700	Support	17,938
800	Health Care	0
000	Unclassified	5,734
	Total	**364,754**



Parking Facilities

Harford Community College has 2,863 parking spaces distributed among 14 primary lots as well as various secondary sites. Ninety Nine (99) spaces are reserved for disabled individuals. Two hundred seventeen (217) spaces are reserved for employees, and 2,495 spaces are open to all students and the general public. All existing parking is on surface lots as there are no parking structures at HCC.

Distribution of Existing Parking Space

Parking Area	Open	ADA	Van ADA	Employee	90 Minute	Permit	Carpool	Other	Totals
Lots									
A-Lot	623	3	0	0	0	0	0	3	629
B-Lot	118	2	0	40	0	0	1	0	161
C-Lot	140	5	1	38	2	5	1	1	193
E-Lot	105	5	1	15	0	0	0	0	126
F-Lot	230	3	2	8	0	0	0	4	247
J-Lot	297	7	0	36	0	0	1	8	349
L-Lot	99	11	2	7	0	1	2	5	127
T-Lot	217	6	0	0	0	0	0	0	223
T-Lot Extension	81	0	0	0	0	0	0	0	81
W-Lot	88	0	4	0	0	0	0	0	92
3 Lot-Fallston	0	3	1	27	0	0	1	0	32
4 Lot	0	0	0	16	0	0	0	0	16
S Lot	433	10	4	15	0	0	0	0	462
6 Lot-Aberdeen	0	1	0	3	0	0	0	1	5
Subtotals Lots	2,431	56	15	205	2	6	6	22	2,743
Miscellaneous Spaces									
Misc: Ches #2 (rear-East)	11	4	0	0	0	0	0	0	15
Misc: Ches #2 (rear-West)	9	3	0	0	0	0	0	0	12
Misc: Forest Hill	0	1	0	0	0	0	0	9	10
Misc: Havre de Grace	0	3	1	0	0	0	0	0	4
Misc: Hays Heighe	0	2	0	0	0	0	0	2	4
Misc: Conowingo	44	1	1	0	0	0	0	1	47
Misc: Student Ctr.-Side	0	1	0	12	0	1	0	2	16
Misc: Student Ctr.-Back	0	7	1	0	0	0	0	0	8
Misc:H/C+service:Aberdeen	0	1	2	0	0	0	0	1	4
Subtotals Miscellaneous Spaces	64	23	5	12	0	1	0	15	120
Total Parking Spaces	2,495	79	20	217	2	7	6	37	2,863

DEMAND AGAINST EXISTING SPACE

The base year for this analysis is 2015. Current demands against existing space reflect the actual situation during the fall semester of 2015, while the data projected to 2025 are statistically based and are, for the most part, assumptions made by the College. Summary explanations of the data assumptions for the input items are as follows:

- Student Data (FTDE) are calculated from course credit hours. Credit Hour and Contact Hour Data are derived from current enrollment course data provided by Harford Community College's Office of Institutional Research, Planning and Effectiveness; and projections were then calculated based on enrollment projections developed by the Maryland Higher Education Commission.

- Faculty and Staff Data for 2015 are provided by Harford Community College's Office of Institutional Research, Planning and Effectiveness. Information about the projected number of faculty is obtained by maintaining the current student/faculty ratio. Information about the projected number of staff is based on a conservative anticipated average annual growth rate of 2.1% over the next ten years.

- Parking Space Data is provided by Harford Community College's Office of Campus Operations. Information about the projected number of parking spaces derived by applying planned adjustments over the next ten years to the existing parking space inventory. Demand against that inventory is generated by the numbers of projected students, faculty and staff.

Student Enrollments

Headcount enrollments and full-time equivalent student (FTE or FTES) enrollments are the primary measures of student population. Although the headcount is most commonly used when referring to enrollments, this measure is generally not used for facility planning purposes. The most generally accepted method of counting students for the purposes of assessing facilities needs is the FTE. However, it is useful to analyze trends in headcount enrollments with particular attention given to the mix of full-time versus part-time students. Because full-time students have more needs for space than do part-time students, a sizeable shift in the ratio of full-time to part-time could have a significant impact on FTE generation, and consequently, on overall space needs.

Space needs analysis primarily focuses upon academic activities that occur during the prime hours before 5:00 p.m. (Day), and will be engaged by full-time and part-time students, faculty and staff. Students enrolled during these hours are referred to as full-time day equivalent students (FTDES).

While presenting various measures of FTES is important, of prime significance is establishing a stable foundation of planning tools upon which the effectiveness and quality of instructional environments necessary for learning can be predicted. For those purposes, projections of weekly student contact hours (WSCH) are also presented.

The College estimates that the total daytime on-campus WSCH will reach 85,684 by fall 2025. Of this total, approximately 70,173 WSCH will be generated by lecture segments and approximately 15,511 WSCH are expected to occur in laboratory segments for courses offered before 5:00 p.m.

The table below presents an overall distribution of projected credit/contact hours for fall semester of 2025 in comparison with fall 2015 enrollments. The table isolates those on-campus credit hours, FTDES and weekly student contact hours expected to be generated on campus during the day before 5:00 p.m.

Projected Enrollments by Headcount, Credit Hours, FTES, FTDES and WSCH: Fall 2025

						ON-CAMPUS DAY ONLY (Before 5:00 pm)			
	Full-Time Headcount	Part-Time Headcount	Total Headcount	Credit Hours	FTES	Credit Hours	FTDES	WSCH Lecture	WSCH Laboratory
Fall 2015	2,395	4,148	6,543	57,775	3,852	42,255	2,817	51,742	11,435
Fall 2025	3,430	4,636	8,066	79,890	5,326	57,315	3,821	70,173	15,511
% Change 2015-2025	43.2%	11.8%	23.3%	38.3%	38.3%	35.6%	35.6%	35.6%	35.6%
Average Annual Growth Rate	3.7%	1.1%	2.1%	3.3%	3.3%	3.1%	3.1%	3.1%	3.1%

Data Source-2025: Maryland Higher Education Commission

Determination of program and course content ten years out is difficult at best. However, given an anticipated number of students to be enrolled, projections of weekly student contact hours generated, as well as the number of classroom and laboratory sections, general estimations of space need can be calculated. These projections of weekly student contact hours form the basis for planning for future instructional spaces.

Projections of enrollments for fall 2016 through fall 2025 represent the recommendations developed by the Maryland Higher Education Commission in keeping with the pursuit of HCC's mission through the year 2025.

Faculty and Staff

The College expects to maintain its current student/faculty ratios of 21:1 for the year 2025. For master planning purposes, a conservative annual increase of 2.1% is projected for staff.

Current and Projected Faculty and Staff Summary

	Faculty (Credit)				Staff		
	Full-Time	Part-Time	Total	FTEF[a]	Full-Time	Part Time	Total
Fall 2015	101	243	344	172	246	314	560
Fall 2025	137	330	467	234	302	385	687
% Change 2015-2025	35.6%	35.8%	35.8%	36.0%	22.8%	22.6%	22.7%
Annual Average Growth Rate	3.1%	3.1%	3.1%	3.1%	2.1%	2.1%	2.1%

[a]Full-time equivalent faculty, including librarians, plus 25% of all part-time faculty

Library Volumes

Use of Bound Volume Equivalents (BVE) is a generally accepted determinant of need for overall library or study space. The BVE concept provides for conversion of a variety of collections materials such as e-books, audio-visual materials, and electronic reference sources into amounts equal to a typical book. Although the term bound volume equivalent is used to reference the measure of overall library collections, it should not be construed that growth in BVE's necessarily means a corresponding growth in actual "book" resources. Although the substitution of digital formats for bound, print volumes at the HCC Library and libraries elsewhere is well underway now, particularly for journals, reference books, and government documents, there continues to be a need for stack space for certain types of books.

The learning landscape is constantly and dramatically changing in terms of the ways by which people learn and the technologies that can facilitate the learning process. Increasing use of technology that facilitates teaching, learning, and accessing and processing information creates demands for library spaces that bring together information resources. Technology also affects other kinds of space needs. The HCC Library has already reduced the floor space allocated for collections to re-purpose space for student-use computer workstations and other technology. This trend will continue and may accelerate.

Just as the use of static demographics is generally accepted as reliable in macro-level planning for people-driven space requirements, the use of book equivalents is a generally accepted methodology for estimating long-range library and study space needs. At the time of actual programming for future library/study facilities, as for other facilities, more timely consideration can be given to actual planning for design that is contemporary.

Current and Projected Library Collections

	BVE[a]
Fall 2015	48,520
Fall 2025	63,260
% Change 2015-2025	30%
Average Annual Growth Rate	2.7%

Data Source: Maryland Higher Education Commission

[a]Bound Volume Equivalent (BVE): the physical space required to accommodate a variety of library materials in amounts equal to one single typical book.

QUANTITATIVE INDICATORS OF SPACE NEED

Computation of quantitative need for space is based primarily on the projected program of instruction and the number of weekly student contact hours (WSCH) that it generates. Determinations of current and projected space surpluses and/or deficits are driven by current space inventory and anticipated changes, current enrollment and projected enrollments, and current and anticipated staffing levels.

The consultant team used the space guidelines model developed by the State of Maryland and published under Title 13B of the Code of Maryland Regulations (COMAR). These guidelines, *Space Allocation Guidelines for Community Colleges*, provide an initial assessment of campus-wide facility needs.

By applying information about the type of space required to teach the various courses to the current and projected enrollments previously presented, it is possible to determine the approximate amount of space that is needed using the guidelines. Then by applying current space inventory data, it is possible to determine the current and projected space surplus and/or deficit.

The assumptions made for the application of the formulae-driven space computations for fall 2025, as shown in the following table, were presented earlier and are shown again for easy reference and are applied to the existing campus space inventory.

Guidelines Planning Assumptions

	FTES	FTDES	WSCH Lecture	WSCH Laboratory	Full-Time Faculty	Part-Time Faculty	Full-Time Staff	Full-Time Librarians	Library Volumes
Fall 2015	3,852	2,817	51,742	11,435	101	243	246	10	48,520
Fall 2025	5,326	3,821	70,183	15,511	137	330	302	14	63,260
Percent Change 2015-2025	38%	36%	36%	36%	36%	36%	23%	40%	30%
Average Annual Growth Rate	3.3%	3.1%	3.1%	3.1%	3.1%	3.1%	2.1%	3.4%	2.7%

Data Sources: Harford Community College Office of Institutional Research, Planning & Effectiveness and Maryland Higher Education Commission

Space Guidelines Application and Analysis (Buildings)

With respect to current and projected space surpluses and deficits as the result of the *Guidelines* application, review of the individual data elements reveals the following:

Classroom (110): Facilities used for classes and that are also not tied to a specific subject or discipline by equipment in the room or the configuration of the room. This category includes general purpose classrooms, lecture halls, seminar rooms, and support rooms that directly service classroom activity.

Guideline allowance assumes 27 hours per week target room utilization; 66.7% seat occupancy rate; and 20 NASF per student station.

Given the current inventory of classroom space, application guideline suggests a current deficit of 11,959 NASF and a deficit of 14,316 NASF by 2025. The College currently owns 85% of the space allowance in this classification. The data suggests that by 2025, the College will own 82% of its computed space allowance.

CLASSROOM	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	2016-2025 Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Classroom	65,654	77,613	-11,959	3,000	5,067	63,587	77,903	-14,316

Class Laboratory/Open Laboratory (210/220): A class laboratory or teaching laboratory (210) is space used primarily for formally or regularly scheduled instruction (including associated mandatory, but noncredit-earning laboratories) that requires special purpose equipment or a specific space configuration for student participation, experimentation, observation, or practice in an academic discipline. Included in this category are spaces generally called teaching laboratories, instructional shops, art studios, computer laboratories, drafting rooms, band rooms and similar specially designed or equipped rooms, and support rooms that directly service class laboratory activity.

An open laboratory (220) is used primarily for individual or group instruction that is informally scheduled, unscheduled, or open. An open laboratory is designed for or furnished with equipment that serves the needs of a particular discipline or discipline group for individual or group instruction. Included in this category are spaces generally called music practice rooms, language laboratories used for individualized instruction, studios for individualized instruction, special laboratories or learning laboratories if discipline restricted, individual laboratories, and computer laboratories involving specialized restrictive software or where access is limited to specific categories of students.

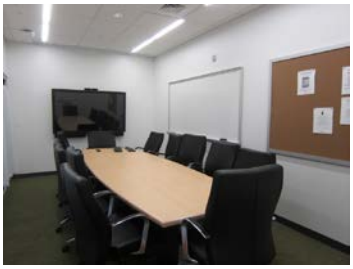
Class Laboratory guideline allowance assumes 18 hours per week target room utilization; 60% seat occupancy rate; 50 NASF per student station for natural and social science labs; and 115 NASF per student station for technical and career labs. The allowance assumes 80% of lab contact hours are generated in natural and social science labs, and 20% in technical and career labs. Open Laboratory guideline allowance assumes a space factor of 4.2 NASF/FTDE.

Given the current inventory of laboratory space, application of the Class Laboratory and Open Laboratory guidelines to the College's enrollment data suggests a current deficit of 6,046 NASF for Class Laboratory and a deficit of 8,006 NASF for Open Laboratory. By 2025, Class Laboratory will have a surplus of 3,444 NASF and Open Laboratory will have a deficit of 11,223 NASF.

The College currently owns 85 % of the space allowance in this combined classification. The data suggests that by 2025, the College will own 93 % of its computed space allowance.

CLASS LABORATORY / OPEN LABORATORY	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	2016-2025 Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Class Laboratory	73,999	80,045	-6,046	19,874	0	93,873	90,429	3,444
Open Laboratory	3,825	11,831	-8,006	1,000	0	4,825	16,048	-11,223
Totals	77,824	91,876	-14,052	20,874	0	98,698	106,477	-7,779

Office (300): Office facilities are individual, multi-person, or workstation spaces specifically assigned to faculty, staff, or students in academic, administrative, and service functions of a college or university. This category also includes conference rooms, file rooms, break rooms, kitchenettes, copy rooms, and testing/tutoring space. The guideline allows:



- 166 NASF per individual requiring office space, plus 1,120 NASF core space for student offices
- 1,500 NASF core space, plus 0.5 NASF/FTDE in excess of 1,500 FTDE for testing and tutoring

Given the current inventory of office space, application guideline suggests a current surplus of 4,490 NASF in Office/Conference space and a surplus of 291 NASF in Testing/Tutoring space. By 2025, these classifications are projected to be deficits of 8,021 NASF and 211 NASF respectively.

The College currently owns 107% of the space allowance in this combined classification. The data suggests that by 2025, the College will own 91% of its computed space allowance.

OFFICE

	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Office / Conference	74,998	70,508	4,490	7,077	0	82,075	90,096	-8,021
Testing / Tutoring	2,450	2,159	291	0	0	2,450	2,661	-211
Totals	77,448	72,667	4,781	7,077	0	84,525	92,757	-8,232

Study (400): In this analysis, study space refers to, individually or collectively, three space categories:

- Study (410): A room or area used by individuals to study at their convenience and not restricted to a particular subject or discipline by contained equipment. It includes rooms or areas located in the library or other buildings. Study spaces are primarily used by students or staff for learning at their convenience.

- Stack/Study (420/30): Stack is a space used to house arranged collections of educational materials for use as a study resource. Stack/Study is a combination of study space and stacks, generally without physical boundaries between the stack and study areas.

- Processing/Service (440): A room or area devoted to processes and operations in support of library functions. Included are card and microfiche areas, reference desk and circulation desk areas, bookbinding rooms, multimedia materials processing areas, interlibrary loan processing areas, and other areas with a specific process or operation in support of library functions.

Guideline allowance assumes a combination of three separate space factors:

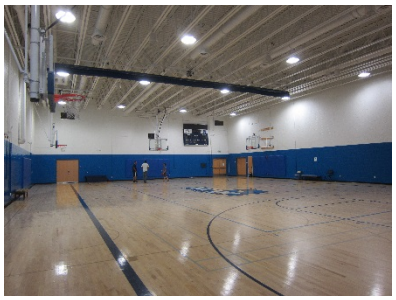
- Seating: 25 NASF per seating station for 25% of FTDE
- Stack: .1 NASF per Bound Volume Equivalent

- Processing/Service: 40% of Stack space plus a core of 1,200 NASF.

Given the current inventory of collective study space, application guideline suggests a current deficit of 3,447 NASF and a deficit of 11,785 NASF by 2025.

The College currently owns 86 % of the space allowance in this overall classification. The data suggests that by 2025, the College will own 64% of its computed space allowance. Most significantly, the College is projected to own only 55% of its computed allowance of study space by 2025.

STUDY	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	2016-2025 Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Study	13,032	17,606	-4,574	0	0	13,032	23,881	-10,849
Stack / Study	6,084	4,852	1,232	0	0	6,084	6,326	-242
Processing / Service	1,836	1,941	-105	0	0	1,836	2,530	-694
Totals	20,952	24,399	-3,447	0	0	20,952	32,737	-11,785



Athletics / Physical Education (520): A room or area used by students, staff, or the public for athletic or physical education activities. Athletics / Physical Education space includes gymnasia, basketball courts, handball courts, squash courts, wrestling rooms, weight or exercise rooms, racquetball courts, indoor swimming pools, indoor putting areas, indoor ice rinks, indoor tracks, indoor stadium fields, and field houses. This category includes spaces used for dancing and bowling.

Guideline allowance assumes 10 NASF/FTDE beyond 1,500 plus a core of 34,000 NASF.

Given the current inventory of physical education space, application guideline suggests a current surplus of 1,840 NASF and a deficit of 8,200 NASF by 2025.

The College currently owns 104% of the space allowance in this classification. The data suggests that by 2025, the College will own 86% of its computed space allowance.

ATHLETICS / PHYSICAL EDUCATION	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	2016-2025 Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Athletics / Physical Education	49,010	47,170	1,840	0	0	49,010	57,210	-8,200

Media Production (530): A space used for the production or distribution of multimedia materials or signals. This classification Includes spaces generally called TV studios, radio studios, sound studios, photo studios, video or audio cassette and software production or distribution rooms, and media centers.

Guideline allowance assumes 0.8 NASF/FTDE beyond 1,500 plus a core of 1,600 NASF.

Given the current inventory of media production space, application guideline suggests a current deficit of 787 NASF and a deficit of 4,375 NASF by 2025.

The College currently owns 70% of the space allowance in this classification. The data suggests that by 2025, the College will own only 30% of its computed space allowance.

MEDIA PRODUCTION	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	2016-2025 Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Media Production	1,867	2,654	-787	0	0	1,867	6,242	-4,375

Greenhouse (HEGIS 580): A building or room usually composed chiefly of glass, plastic, or other light transmitting material, which is used for the cultivation or protection of plants or seedlings for research, instruction, or campus physical maintenance or improvement purposes.

Guideline allowance assumes a minimum core of 1,000 NASF

Given the current inventory of greenhouse space, application guideline suggests a current deficit of 187 NASF and a continued deficit of 187 NASF by 2025.

The College currently owns 81% of the space allowance in this classification. The data suggests that by 2025, the College will still own 81% of its computed space allowance.

GREENHOUSE	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	2016-2025 Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Greenhouse	813	1,000	-187	0	0	813	1,000	-187

Assembly (610): A space designed and equipped for the assembly of many persons for such events as dramatic, musical, devotional, livestock judging, or commencement activities. Includes theaters, auditoria, concert halls, arenas, and chapels that are used primarily for general presentations (speakers), performances (dramatic, musical, dance), and devotional services.

Guideline allowance assumes 2 NASF/FTDE beyond 1,500 plus a core of 12,000 NASF.

Given the current inventory of assembly space, application guideline suggests a current deficit of 2,136 NASF and a deficit of 4,144 NASF by 2025. The College is currently just above the core guideline allowance for assembly space.

The College currently owns 85% of the space allowance in this classification. The data suggests that by 2025, the College will own 75% of its computed space allowance.

ASSEMBLY	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	2016-2025 Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Assembly	12,498	14,634	-2,136	0	0	12,498	16,642	-4,144

Exhibition (620): A room or area used for exhibition of materials, works of art, artifacts, etc., and intended for general use by faculty, students, staff, and the public. This includes both departmental and institution-wide museums, galleries, and similar exhibition areas that are used to display materials and items for viewing by institutional population and the public.

Guideline allowance assumes 0.5 NASF/FTDE beyond 1,500 plus a core of 1,500 NASF.
Given the current inventory of exhibition space, application guideline suggests a current surplus of 1,815 NASF and a surplus of 2,661 NASF by 2025.

The College currently owns 184% of the space allowance in this classification. The data suggests that by 2025, the College will own 149% of its computed space allowance.

EXHIBITION	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	2016-2025 Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Exhibition	3,974	2,159	1,815	0	0	3,974	2,661	1,313

Food Facility (630): Rooms intended for the consumption of food, and rooms that provide direct service. This category includes dining halls, cafeterias, snack bars, restaurants, kitchens, food serving areas, food storage, dishwashing, and cleaning areas. Also included are such facilities located in residence halls.

Guideline allowance assumes 8.4 NASF times Planning Headcount (50% FTDE, FTEF, and FT Staff).

Given the current inventory of food facility space, application guideline suggests a current deficit of 7,293 NASF and a deficit of 9,093 NASF by 2025.

The College currently owns 56% of the space allowance in this classification. The data suggests that by 2025, the College will own 50% of its computed space allowance.

FOOD FACILITY	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	2016-2025 Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Food Facility	9,211	16,504	-7,293	0	0	9,211	18,304	-9,093

Lounge (650): Lounge space used for rest and relaxation that is not restricted to a specific group of people, unit, or area. A lounge facility is typically equipped with upholstered furniture, draperies, and carpeting, and may include vending machines.

Guideline allowance assumes 3.0 NASF times Planning Headcount (50% FTDE, FTEF, and FT Staff).

Given the current inventory of lounge space, application guideline suggests a current deficit of 902 NASF and a deficit of 2,385 NASF by 2025. The College currently owns 81% of the space allowance in this classification

The data suggests that by 2025, the College will own 64% of its computed space allowance.

LOUNGE	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	2016-2025 Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Lounge	3,952	4,854	-902	200	0	4,152	6,537	-2,385

Merchandising (660): This classification is for areas used to sell products or services. Examples include bookstores, student supply stores, campus food stores, barber and beauty shops, walk-away vending areas, and central ticket outlets.

Guideline allowance assumes 0.5 NASF/FTDE beyond 1,500 plus a core of 1,600 NASF.

Given the current inventory of merchandising space, application guideline suggests a current surplus of 950 NASF and a surplus of 548 NASF by 2025.

The College currently owns 142% of the space allowance in this classification. The data suggests that by 2025, the College will own 120% of its computed space allowance.

MERCHANDISING	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	2016-2025 Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Merchandising	3,209	2,259	950	100	0	3,309	2,761	548

Meeting Room (680): A room that is used by the institution and is also available to the public for a variety of non-class meetings.

Guideline allowance assumes a core of 8,000 NASF

Given the current inventory of meeting space, application guideline suggests a current surplus of 1,542 NASF and a surplus of 542 NASF by 2025.

The College currently owns 126% of the space allowance in this classification. The data suggests that by 2025, the College will own 107% of its computed space allowance.

MEETING ROOM	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	2016-2025 Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Meeting Room	7,542	6,000	1,542	1,000	0	8,542	8,000	542

Data Processing (710): A space used as a data or telecommunications center with applications that are broad enough to serve the overall administrative or academic primary equipment needs of a central group of users, department, college, school, or entire institution.

Guideline allowance assumes 0.75 NASF/FTDE beyond 4,500 plus a core of 2,500 NASF.

Given the current inventory of data processing space, application guideline suggests a current deficit of 763 NASF and a continued deficit of 763 ASF by 2025.

The College currently owns 70% of the space allowance in this classification. The data suggests that by 2025, the College will still own 70% of its computed space allowance.

DATA PROCESSING	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	2016-2025 Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Data Processing	1,737	2,500	-763	0	0	1,737	2,500	-763

Physical Plant (720-760): Support facilities, which provide centralized space for various auxiliary support systems and services of a campus, help keep all institutional programs and activities operational. While not as directly accessible to institutional and community members as General Use Facilities (Code 600 series), these areas provide a continuous, indirect support system to faculty, staff, students, and the public. Support facilities are centralized in that they typically serve an area ranging from an entire building or organizational unit to the entire campus. Included are centralized areas for shop services, general storage and supply, vehicle storage (720-745); central services e.g., printing and duplicating, mail, shipping and receiving, environmental testing or monitoring, laundry, or food stores (750), and hazardous materials areas (760/770).

Guideline allowance assumes a combination of three room use categories:

- Central Services: 1.0 NASF/FTDE beyond 4,500 plus a core of 4,000 NASF.
- Shops/Storage/Vehicle Storage/Repair: 4% of all other campus inventory
- Hazardous Materials Storage: 2% of existing shops/storage/vehicle storage/repair NASF

Given the current inventory of physical plant facilities, application guideline suggests a current deficit of 2,938 NASF and a deficit of 5,616 NASF by 2025. The College currently owns 85% of the space allowance in this classification. The data suggests that by 2025, the College will own 74 % of its computed space allowance.

PHYSICAL PLANT	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	2016-2025 Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Shop / Storage	13,022	14,842	-1,820	0	0	13,022	17,468	-4,446
Central Service	3,179	4,000	-821	0	0	3,179	4,000	-821
Hazmat Storage	0	297	-297	0	0	0	349	-349
Totals	16,201	19,139	-2,938	0	0	16,201	21,817	-5,616

Health Care Facilities (800): Space used for patient care areas that are located in separately organized and budgeted health care facilities: student infirmaries and centers, teaching hospitals, stand-alone clinics run by these hospitals, and veterinary and medical schools.

Guideline allowance assumes 0.2 NASF/FTDE beyond 1,500 plus a core of 500 NASF.

Given the current inventory indicates no space classified as health care facilities, application of guidelines suggests a current deficit of 763 NASF and a deficit of 964 NASF by 2025.

The College currently owns no space with this classification. The data suggests that by 2025, the College will still own no space with this classification.

HEALTH CARE FACILITIES	2015 Inventory	2015 Guideline	Surplus (-) Deficit	2016-2025 Additions	2016-2025 Deletions	2025 Inventory	2025 Guideline	Surplus (-) Deficit
Health Care Facilities	0	763	-763	0	0	0	964	-964

Space Guidelines Application and Analysis (Parking)

Maryland's *Space Allocation Guidelines for Community Colleges* are also used to compute parking allowances. The Guidelines allow 300 square feet per car and a number of spaces to accommodate 75% of full-time faculty, staff, and eligible full-time day equivalent students with regular parking. In addition to regular parking spaces, the Americans with Disabilities Act (ADA) requires reserved spaces for disabled individuals.

Harford Community College has 2,863 parking spaces distributed among 14 primary lots as well as various secondary sites. Ninety Nine (99) spaces are reserved for disabled individuals. Two hundred seventeen (217) spaces are reserved for employees, and 2,495 spaces are open to all students and the general public. All existing parking is on surface lots as there are no parking structures at HCC.

When the guidelines input data assumptions are applied to current parking inventory data, it is possible to determine the number of allowable parking spaces. The current parking inventory was presented earlier and calculations of allowance are provided in the following table.

Current and Projected Parking Surpluses / Deficits

Parking Category	Factor	Allowance Current	Inventory 2015	Surplus/ (Deficit)	Allowance 10 Years	Inventory 2025	Surplus/ (Deficit)
FTDE-T	0.75	2,113			2,866		
FT-Faculty and FT Staff	0.75	260			329		
Visitors	0.02	47			64		
Reserved Accessible (ADA)	Required	48			65		
Total Spaces		2,469	2,863	394	3,324	3,035	(289)

The campus currently owns 116% of guidelines allowed parking spaces. The data suggests that by 2025, the campus will own 91% of its computed parking space allowance.

QUALITATIVE INDICATORS OF SPACE NEED

A variety of qualitative or non-statistical environmental characteristics impact the space needs of Harford Community College. These global space needs are referenced throughout this document. A sampling of such needs is summarized here by the following functions:

- Instruction
- Instructional Support
- Student Services
- Institutional Support
- Outdoor Functions
- Continuing Education

Unlike quantitative analysis, qualitative analysis is very subjective. Qualitative indicators of current conditions and program characteristics and future space needs/desires are the result of observations by the consultants and of views expressed by College personnel during interviews with the consultants and/or via written statements.

This listing is by no means all-inclusive. Future facility programming for individual new or renovated facilities at Harford Community College will require, in each instance, a thorough review and analysis of each of the subject function's component activities to determine a specific justification and rationale for new or reconfigured spaces.

Instruction

- Many classrooms and laboratories lack contemporary technology. The need exists for technology-enhanced instructional spaces that empower faculty and students to benefit from the use of virtual learning experiences that enhance engagement.
- Some classrooms are inappropriately proportioned. Narrow and deep room dimensions result in some students being too distant from the teaching wall.
- There is a need for highly flexible, multi-functional instructional spaces, now and in the future. Migration to teaching more disciplines in computer labs has created rooms that are inflexible. Permanent furniture, hardware and wiring installations have made it difficult, if not impossible, to rearrange classrooms to suite varied needs in different courses or even in the same course.
- There is a need for some "quick response capability" to take advantage of emergent opportunities to respond rapidly to business needs particularly in Continuing Education environments. While most Con Ed programs need flexible spaces, some like plumbing will need more fixed equipment.
- There is insufficient laboratory storage in general, and in art studios and music rooms in particular.
- Functions that should be co-located are sometimes separated and distributed throughout the campus by floor and by building. There is a need for physical proximity with respect to spaces within various departments.
- Extreme distances of separation between workforce development facilities mitigate efficient and effective delivery of cohesive programs.
- There is a need for appropriate workforce development space for trades programs. For example, one relatively small shop in Joppa Hall houses five different trades programs without necessary support spaces. Plumbing is extremely limited, as is carpentry due mostly to inappropriate spaces, e.g., absence of high bays on ground floors.

Instructional Support

- The College has no facilities that are appropriate for adjunct faculty to work and communicate before and after classes. Not only is there a need for appropriate settings outside the classroom for student/faculty interaction, but also a need for spaces that allow for seamless integration of adjunct faculty into departmental frameworks. There are no office spaces for adjunct faculty to work or meet one-on-one with students.
- Although the College has made many changes in use of space within the Library since it opened in 2000, further changes in space utilization are needed, such as increased and more modern reading/study space; increased processing and office space; more library instruction space; space for digital media, makerspaces, and other technology-focused spaces; archives; and general storage. These changes cannot easily be accommodated within the existing facility. In particular, the very large, open spaces that dominate the second and third floors, which were designed for a mixed use of book stacks, reading/study space, and open computer lab space, need further redesign to support and extend the trend begun by the Library in 2012 of reducing book stacks and re-purposing freed space to support study and computer workstations.
- There is a need for more group study rooms. There are a minimal number of group or collaborative learning environments on campus. There is a need for available study rooms and spaces where small groups could meet, either as spontaneous groupings or as scheduled study circles.
- There is insufficient space to support formal learning community concepts. There are no adequate commons areas or large professional development areas for faculty. There is a need for modern facilities that address faculty development needs at HCC.
- There is insufficient access on campus to multi-media computers and software such as the Adobe Creative Cloud suite.
- There is no physical Information Technology (IT) Help Desk in the Library.

Student Affairs

- The space designated for student activities is too small. The Student Center is not functionally efficient or effective as a student center. Students complain that there are insufficient and inadequate places for them to really hang out. There is a need for student areas that are more inviting for enjoyment, relaxation, individual study and group learning.
- Office and storage space allocated to student organizations is insufficient given the 38-plus student organizations at HCC. There are instances where former storage spaces are being used as offices. For instance, SGA's four former office spaces have been reduced to one.
- There is also a need for more distributed informal spaces, especially during evening and weekend hours. The only campus building with a lounge area, other than the Student Center which contains most of the available lounge space, is the Susquehanna Center. At present, the lounge space (and cafeteria) in the Student Center is available only for limited hours during evenings and weekends. There is no informal lounge space within the Library building despite the extensive evening and weekend hours that the building is open.
- There is generally insufficient and inadequate student lounge space, meeting space, recreational areas, and student organization space.
- There is insufficient space allocated for self-serve computers.
- Space for computers that support Admissions and Enrollment functions is very limited. Thus, there are currently only two computer stations available to serve over 2,000 newly admitted students.
- Health care facilities are non-existent.

- Although the Fitness Center is regularly used by all students and staff, there are no weight training facilities for athletes.
- The College has identified the need for its student services functions, as opposed to student programs and activities functions, to be consolidated in a location easily identifiable and readily accessible upon entering the campus. This would allow the College to focus on eliminating the identified inefficiencies and ineffectiveness of the Student Center.

Institutional Support

- Although there is a current overall surplus in space classified as "office," some individuals are cramped into areas that were designed as closets and alcoves in order to be located near their departments and others in their work teams. There are insufficient numbers of offices to support all athletic coaches. Creating office space for new personnel, campus-wide, is extremely difficult. This problem is only exacerbated given the projected shortage in office space by 2025.
- Some campus areas are not accessible to students with disabilities.
- There is a need to provide safe, accessible, and convenient gender inclusive buildings and facilities for students, staff, faculty, and campus guests.
- Kitchen, dining and food storage facilities are insufficiently sized to effectively serve the needs of HCC's students, faculty and staff. Total campus food facilities are currently, and will be in 2025, less than allowed under Maryland's guidelines for community college food facilities.
- There is no drop-in service space for child care facilities.
- Insufficient storage space is a significant problem throughout the campus buildings resulting in inappropriate storage of records, furniture and equipment, books, academic and administrative supplies, performing and fine arts materials and equipment, event and major athletic equipment, and custodial supplies.
- Facilities for counseling, human resources and other areas that need confidential spaces are insufficient and inadequate.
- Some spaces, such as those used for exams and testing, are limited with respect to assistive technology for those with disabilities.
- There are insufficient numbers of break rooms and social spaces for staff and faculty.
- There are insufficient numbers of convenient small conference spaces and meeting rooms. Many faculty and staff meetings take place in classrooms or other spaces that are inappropriate for such activities.
- As facilities are renovated and newly constructed, additional technology requirements will necessitate further evaluation of the Campus Information Technology infrastructure. A direct impact of evolving technology is the corresponding need for more closets and telecommunication rooms in buildings.
- There is insufficient space for physical plant operations such as; maintenance shops, storage, and central services.

Outdoor Functions

- There are very few designated outdoor student spaces for active recreation.
- Although there is a current overall surplus of parking space, projections of student enrollment and staffing suggest a parking deficit by the year 2025. Existing parking, in several instances, is inconvenient to user destinations.
- Built in 1968, the Stadium Field (original soccer field) grandstand will be nearing its estimated useful life during the life of this *Facilities Master Plan* and should be replaced. In addition to the grandstand, a press box, lighting, power, heating, cooling, and telecom should be included in an upgrade.
- Deterioration of the varsity softball field renders it in poor condition. The field requires upgrades to the press box, fence, drainage system and turf.
- Restroom, concession and storage facilities are not available at many of the athletic fields.
- Lockers and other support spaces for outdoor teams like lacrosse, soccer, baseball, for home and visiting teams are non-existent.
- The extensive natural environment of the campus, including woodlands, meadows, streams, wetlands and ponds, offers a living laboratory for field exercises, research and observations required for several courses and programs, including environmental science, geography, and earth science.

Continuing Education

HCC's Continuing Education and Training Division provides courses, programs and services that are responsive to the needs, interests and trends of Harford County's business and industrial community, and promote the personal and professional growth and stability of the people who live and work in Harford County. Courses tailored to the applications of individual businesses are offered through customized training contracts within parameters convenient to the businesses. A wide range of noncredit courses is offered in day, evening and weekend formats that appeal to people of all ages with busy lifestyles. Continuing Education and Workforce Development courses represent cutting-edge curricula and quality instruction. Instructors are generally field practitioners who bring first-hand knowledge to HCC's learning environment.

The following table represents Maryland Association of Community Colleges data showing that noncredit courses accounted for over 18% of Harford Community College's state-funded FTE enrollment in Fiscal Year 2015. Although Maryland space planning models do not fully provide for consideration of Continuing Education and Workforce Development student enrollment data when computing space needs, it is rather obvious that the implications of this statistic could have a significant impact on HCC's needs for space.

State-Funded FTE Enrollment (FY 2010 – FY 2015)

	Fiscal Year					
	2010	2011	2012	2013	2014	2015
Credit FTE	4,338	4,314	4,432	4,393	4,250	4,047
Noncredit FTE	1,104	1,080	920	968	916	910
Total FTE	5,442	5,394	5,352	5,361	5,166	4,957
Noncredit %	20.3%	20.0%	17.2%	18.1%	17.7%	18.4%

Data Source: Maryland Association of Community Colleges

SUMMARY

It is often said that inferior spaces equal inferior environments equal perceived inferior service. Qualitative facilities problems often stem from the impact of quantitative problems on the physical campuses as a whole and the absence of certain necessary spaces.

The data leading up to and including the computed and qualitative needs establishes the necessity for renovated and/or additional facilities at Harford Community College to meet its present and future requirements for space. Potential strategies for meeting these identified space requirements are addressed, in physical terms, by the capital projects outlined later in this *Facilities Master Plan*.

The next chapter begins the evaluation of buildings and campus site to determine their suitability to support existing and future programs.

Chapter 4
The Campus Today

Buildings

Campus-Wide Systems

Site Infrastructure

Site Analysis

Sustainability

Off-Campus Sites

THE CAMPUS TODAY

BUILDINGS

The following academic, administration and auxiliary buildings currently exist on campus, although the inventory found in chapter 3 Space Needs does not count buildings completed after the fall semester, 2015, e.g. Facilities Storage Building. This section provides a snapshot summary of those buildings.

Academic, Administration and Auxiliary Buildings

1. Aberdeen Hall
2. Bel Air Hall
3. Belcamp Center
4. Chesapeake Center
5. Conowingo Center
6. Darlington Hall
7. Edgewood Hall
8. Fallston Hall
9. Forest Hill Center
10. Harford Sports Complex
11. Havre de Grace Hall
12. Hays-Heighe House
13. Hickory Center
14. Joppa Hall and Utility Buildings
15. Library
16. Maryland Hall
17. Observatory
18. Pump House
19. Student Center
20. Susquehanna Center and APG Arena

Campus Buildings (Permanent Space – from Chapter 2)

Building	Code	Built	GSF	NASF	Primary Use
On Campus Permanent					
Aberdeen Hall	A	1964	43,023	25,319	Instruction
Bel Air Hall	B	1964	30,665	18,359	Instruction
Belcamp Center	SA	1993	2,337	1,604	Instruction, Office
Chesapeake Center	C	1968	32,266	19,475	Assembly, Office, Meeting, Food Service
Conowingo Center	CO	2002	16,189	13,241	Storage, Shops
Darlington Hall	DH	2014	51,628	28,785	Instruction
Edgewood Hall	E	1994	33,845	20,270	Instruction, Office, Assembly
Fallston Hall	F	1998	24,728	15,309	Instruction, Office
Forest Hill Center	N	1978	13,913	11,250	Day Care, Other Organization
Harford Sports Complex	HSC	1991	2,475	1,449	Office, Athletic/Physical Education
Havre de Grace Hall	H	1967	18,156	10,871	Instruction
Hays-Heighe House	HH	1808	6,000	3,465	Exhibit
Hickory Center	HC	2015	14,007	9,750	Office, Storage
Joppa Hall	J	1965	81,385	52,305	Instruction
Joppa Utility Buildings	JU	1991	1,074	1,074	Instruction
Library	L	2000	49,346	33,519	Library, Data Processing
Maryland Hall	M	1964	10,303	6,147	Instruction
Observatory	O	1999	4,143	3,039	Instruction
Pump Station	PH	1990	853	{na}	Mechanical Space {Nonassignable}
Student Center	SC	1976	50,294	29,743	Office, Food Service, Lounge, Bookstore
Susquehanna Center/APG Arena	S	1968	101,560	59,780	Athletic/Physical Education
Totals			588,190	364,754	

Off-Campus Buildings (Overflow Space – from Chapter 2)

Building	Code	Built	GSF	NASF	Primary Use
Off Campus Overflow					
Amoss Center	AC	2000	22,637	20,934	Assembly (Performing Arts)
University Center East	HE	1994	10,000	5,683	Instruction
University Center West	HW	1997	19,080	11,919	Instruction
PMR Residence	PMR	Circa 1950	2,000	1,472	Other Organization
TRR Garage	TRR	Circa 1950	1,560	1,148	Other Organization
Totals			55,277	41,156	

Aberdeen Hall

Building Description

Building Designation	1. Aberdeen Hall
Number of Floors	1 + 3
Net Assignable Square Feet	25,319
Gross Building Area - GSF	43,023
Net-to-Gross Efficiency	58.9%
Year Constructed	1964
Renovations	1985, 2009
Additions	2009
Contains	Instructional spaces, faculty offices
General Condition	Very good
Adequacy of Space	Adequate for functions housed in the building
Sprinkler System	Fully sprinklered

Thanks to a 2009 comprehensive renovation and addition, the steel frame and masonry Aberdeen Hall provides up-to-date science instructional facilities. The combined original one-story building and three-story addition offers appropriate and adequate space for the sciences curriculum. Energy-efficient features such as rooftop solar array, rainwater collection system, and water-efficient plumbing fixtures showcase part of the building's mission to demonstrate environmental sustainability.

MEP SYSTEMS

Mechanical

Existing Systems:

a. The mechanical and plumbing systems were replaced in 2010 as part of the renovation and addition project. Hot water for heating is generated via four (4) gas fired Lochinvar Intelli Fin Boilers. The heating plant serves Aberdeen Hall and associated addition, the Science Annex, (Bel Camp Building) Bel Air Hall, Havre de Grace Hall and Maryland Hall.
b. Chilled water to Aberdeen Hall is delivered from the Student Center. Aberdeen Hall is served by an indoor 4-pipe air handling unit (McQuay) located in the main mechanical room. The addition is served by one packaged McQuay rooftop unit (RPS model) and one split direct expansion (McQuay) rooftop unit with air cooled condensing unit (McQuay model ACZ020) utilizing refrigerant R22. Both rooftop units utilize hot water heat. Seven (7) lab exhaust fans are roof mounted Greenheck Vektor type.
c. Fume hoods are equipped Triatek Hood Monitoring System and Venturi style exhaust dampers.

d. Domestic water storage, domestic water treatment system and booster pumps are located in the mechanical equipment room which serves Aberdeen Hall and addition, Belcamp Center, Havre de Grace Hall, Bel Air Hall, Maryland Hall and the Library.
e. Compressed air is generated by a Champion lab air compressor.
f. The building and annex is sprinklered.
g. The building has a natural gas service.
h. Pumps were manufactured by Bell and Gossett.
i. Solar domestic hot water heating system.
j. 4000 gallon rain water collection system for gray water system serving toilet rooms.

Reported Problems/Deficiencies:
a. None.

Recommendations:
a. None.

Electrical

Existing Systems:
a. The building is has an emergency diesel generator from MTU with belly tank, and appears to be in good working condition.
b. There is a solar PV system located on the roof, to supplement the energy used at the building.
c. The building has two (2) Main Distribution Panels, both at 800A – additionally, the Hays-Heighe House and Maryland Hall are fed from these MDPs.

Reported Problems/Deficiencies:
a. None.

Recommendations:
a. None.

Information Technology

Existing System

a. The MDF is located in a dedicated room adjacent to the Main Electrical room and includes the incoming fiber, telephone and security headends.

Reported Problems/Deficiencies:
a. None.

Recommendations:
a. None.

Photographs - Aberdeen

View from Quad

Biology Lab

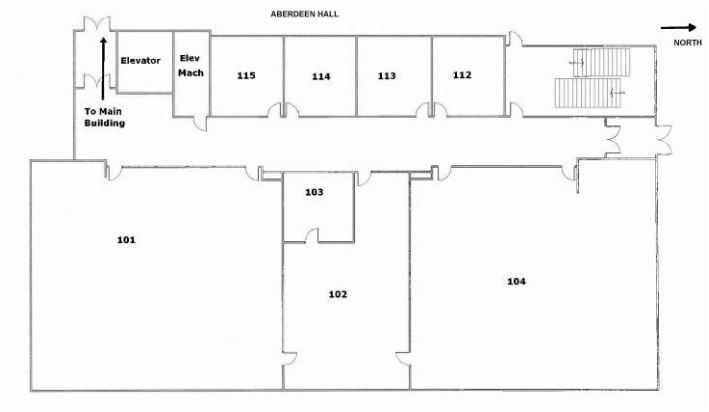
Lab Prep Room

Main Level Commons

Rooftop Greenhouse

Classroom

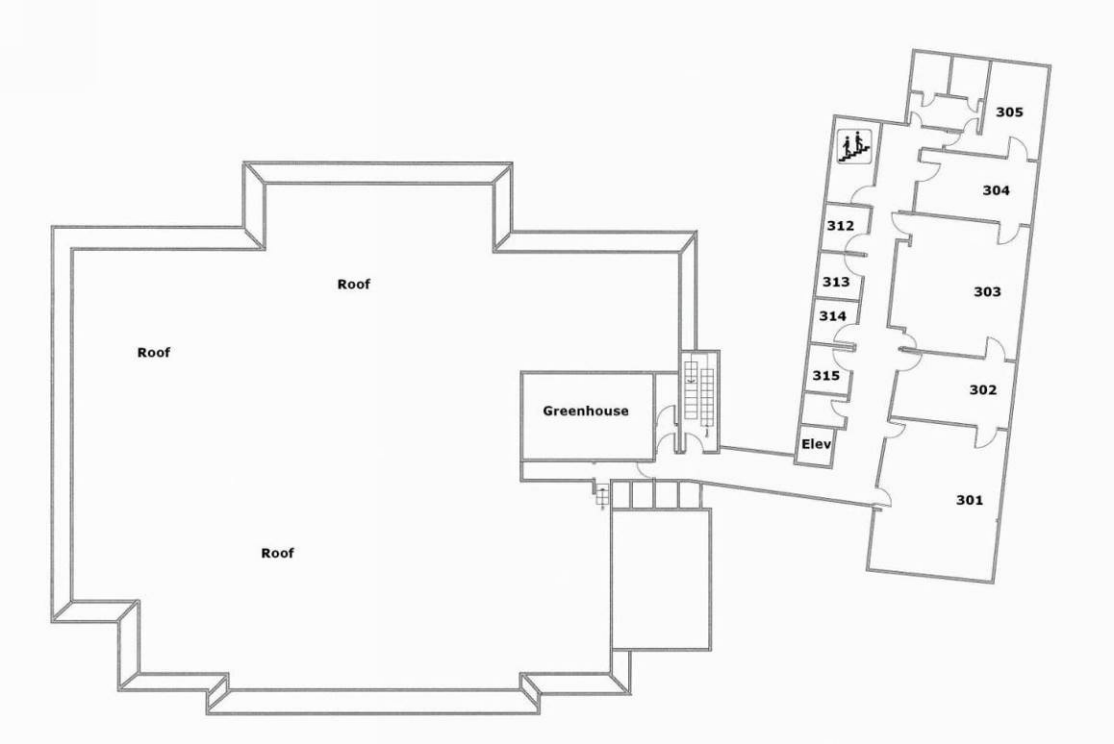
Floor Plans - Aberdeen



Lower Level

Middle Level

Floor Plans - Aberdeen



Upper Level

Bel Air Hall

Building Description

Building Designation	2. Bel Air Hall
Number of Floors	2
Net Assignable Square Feet	18,359
Gross Building Area - GSF	30,665
Net-to-Gross Efficiency	59.9%
Year Constructed	1964
Renovations	2004
Additions	2004
Contains	Instructional spaces, faculty offices
General Condition	Very good
Adequacy of Space	Adequate for functions housed in the building
Sprinkler System	Fully sprinklered

Bel Air Hall, a two-story steel frame and masonry building, is the largest general purpose classroom building on the central campus. The 2004 addition expanded instructional area and provided access to the building from parking lot B. Instructional spaces are equipped with current technology and provide generally flexible learning spaces.

MEP SYSTEMS

Mechanical

Existing Systems

a. The building is served by two (2) air handling units.
b. One unit is a roof mounted packaged Direct Expansion type utilizing scroll compressors, refrigerant R407C and hot water heat. The unit was manufactured by York International (Model YPAL070).
c. One air handling unit is located in a basement mechanical room which is open to the crawl space. This unit operates at 100% outside air and is a multi-zone type installed in 1998. It uses chilled water for cooling and hot water for heating. The air handling unit was manufactured by Trane.
d. Heating water is provided by Aberdeen Hall.
e. Chilled water is provided by the Student Center.
f. Domestic hot water is generated by an electric water heater (manufactured by Rheem).
g. Mechanical and plumbing systems were upgraded in 2004 except for the 1998 air handling unit.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. Replace and/or convert the 1998, 100% outside air multi-zone air handling unit to a variable air volume system with return air.

Electrical

Existing Systems

a. The incoming electrical service is located in a dedicated electrical room and feeds an 800A Square D I-Line panel which sub feeds the mechanical equipment and distributed branch panelboards. The electrical distribution is in good condition and was replaced in 2004.
b. The FACP is located in the Main Electrical Room and the original SimplexGrinnell FACP was replaced with Firelite 411UDAC and Notifier AFP-200

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Information Technology

Existing System

a. A separate room houses the incoming fiber terminations, telephone PBX and security headends.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Photographs – Bel Air

View from Quad

Classroom

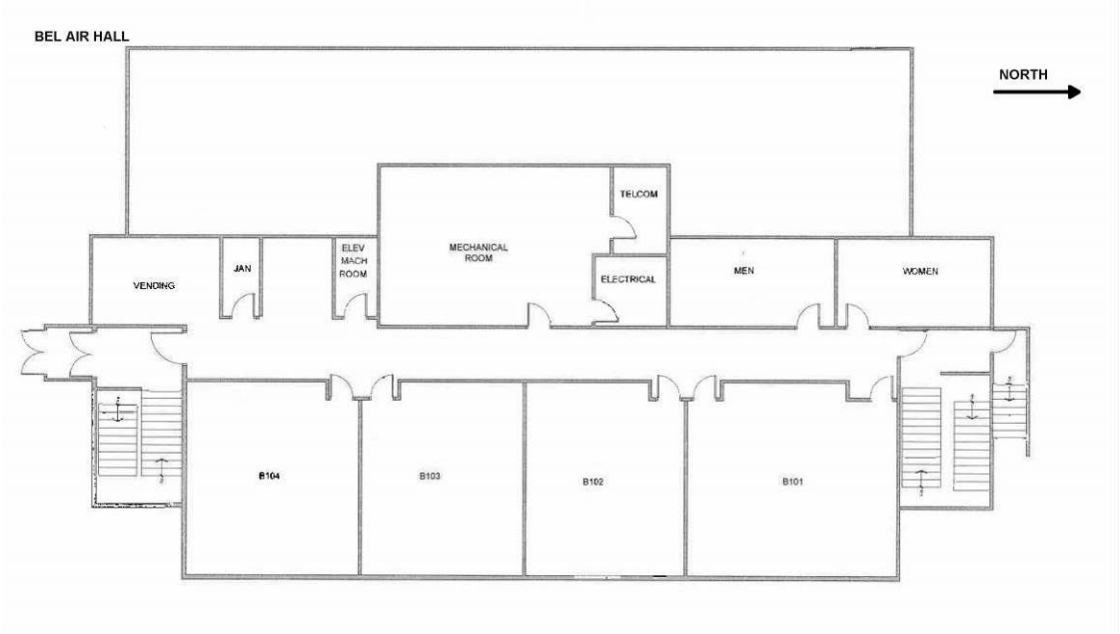
Large Classroom

Office Suite

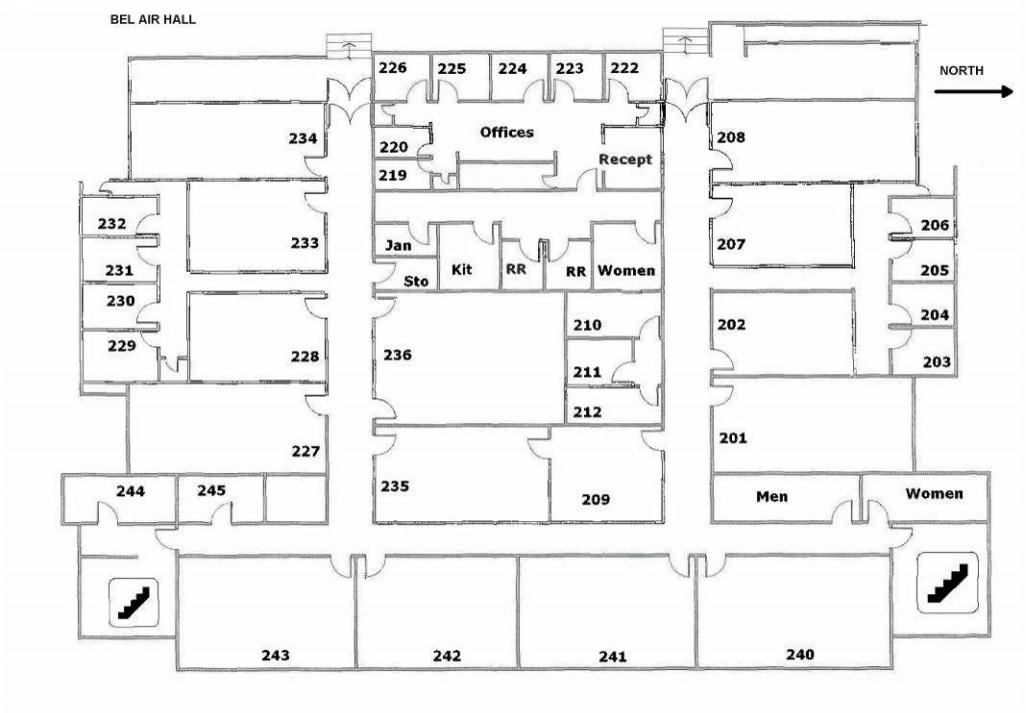
Corridor

Resource Room

Floor Plans – Bel Air



Lower Level



Upper Level

Belcamp Center

Building Description

Building Designation	3. Belcamp Center
Number of Floors	1
Net Assignable Square Feet	1,604
Gross Building Area - GSF	2,337
Net-to-Gross Efficiency	68.6%
Year Constructed	1993
Renovations	2002
Additions	None
Contains	Multi-purpose space
General Condition	good
Adequacy of Space	Adequate for functions housed in the building
Sprinkler System	Fully sprinklered

Belcamp Center, originally constructed as the College bookstore, also served as temporary science facilities until the Aberdeen renovation and addition. Since then, the small steel frame and masonry building has provided space for several functions. Strategically located on the main quad, the building can continue to offer space for varied programs due to its flexible nature.

MEP SYSTEMS

Mechanical

Existing Systems

a. Two (2) small split gas furnace, Direct Expansion cooling systems serve the building (manufactured by Luxaire) installed in 2002.
b. A small gas fired water heater generates domestic hot water (manufactured by State Industries).
c. The building is sprinklered.
d. Domestic cold water is from Aberdeen Hall.

Reported Problems/Deficiencies:

a. None.

Recommendations

a. Replace HVAC with a commercial type unit which includes outdoor air for ventilation.

Electrical

Existing Systems

a. The incoming service appears to be through a 3P-150A ECB which feeds a double width 200A panelboard.
b. The FACP is located in the shared Mechanical/Electrical Closet and is 1500 Series ESL but appears to be original to the building. The FACP is maintained by Anaconda Protective Concepts

Reported Problems/Deficiencies:

a. None.

Recommendations

a. Clearly indicate how the incoming service is installed.
b. Upgrade Fire Alarm system to match other buildings, and provide with Voice Evacuation.

Information Technology

Existing Systems

a. A small wall mounted IT switch and patch panel are located in the shared Mechanical/Electrical closet for the whole building.

Reported Problems/Deficiencies:

a. None.

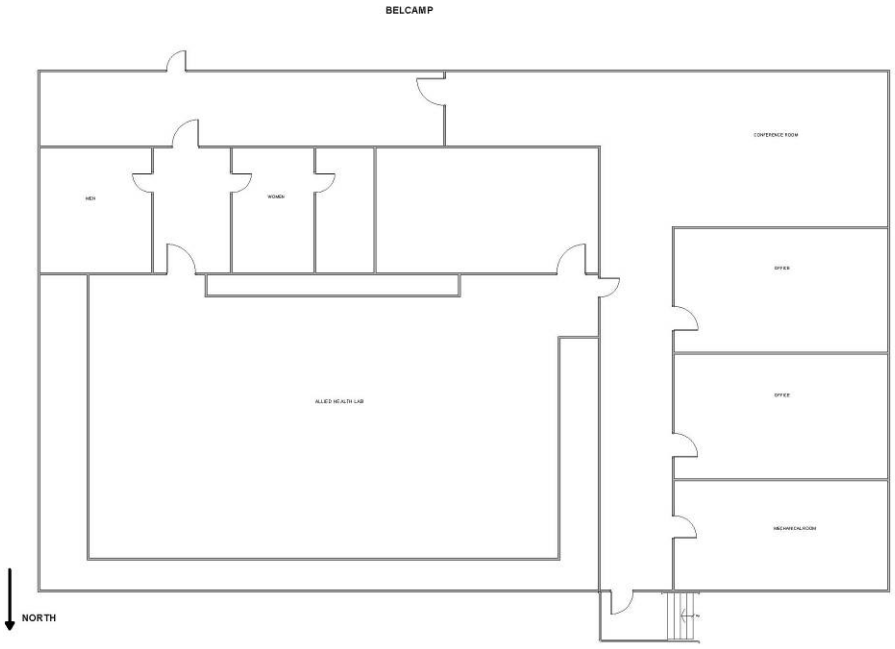
Recommendations

a. Provide in a manufactured wall mounted rack to house and protect patch panel and server.

Photographs and Floor Plan – Belcamp

View from Quad

Instructional / Multi-purpose Space



Chesapeake Center

Building Description

Building Designation	4. Chesapeake Center
Number of Floors	1
Net Assignable Square Feet	19,475
Gross Building Area - GSF	32,266
Net-to-Gross Efficiency	60.4%
Year Constructed	1968
Renovations	2002
Additions	None
Contains	Food service, administrative offices, theater
General Condition	good
Adequacy of Space	Inadequate for functions housed in the building
Sprinkler System	Fully sprinklered

Chesapeake Center, one of the original steel frame and masonry buildings, was constructed when the campus was new and much smaller than the campus today, and when this building needed to serve several functions, including the main dining facility, the only theater/auditorium, and student lounge space. Most of those same functions continue today except student lounge which was renovated to house administrative offices. Food service will continue to provide in-situ meal service as well as catering to other buildings on campus, and the 300-seat theater space is adequate and with good acoustics and sight lines. Both functions need to be expanded with better receiving and support space.

MEP SYSTEMS

Mechanical

Existing Systems

a. Heating is provided by the Susquehanna Center. Two (2) base mounted end suction pumps (Taco) circulate hot water through the building.
b. Four (4) air handling units serve the facility. Three (3) units are split type with indoor air handling units (Carrier) and roof mounted air cooled condensing units (Carrier). One unit serve the Dining Area, one unit serves the Theater and one unit serves the Office/Admin Suite. A packaged rooftop unit serves the Board Room.
c. A supplemental VRF system (Mitsubishi) serves six (6) indoor units in the kitchen area.
d. An indoor heating and ventilating unit also serves the kitchen area.
e. The building is sprinklered.
f. Domestic water is from Susquehanna Hall.
g. Two (2) solar water heaters generate domestic hot water.
h. The mechanical equipment and systems were installed in 2011.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. Extend chilled water from the Susquehanna Center to the Chesapeake Center.
b. Replace the Board Room rooftop unit.

Electrical

Existing Systems:

a. The building is has an emergency diesel generator IEC “International Electric Corp” that is original to the building, but is maintained by Fidelity Power Systems. The fuel tank for the generator is remote and located near the entrance into the Mechanical/Electrical Room.

b. The incoming electrical service enters the building below grade into a wire trough when it serves a 1200A GE Spectra Series Main Distribution Panel.

c. There is a solar PV system located on the roof, to supplement the energy used at the building.

d. The main telephone trunk lines enter the Mechanical/Electrical Room and feeds a separate closet located inside the building where all the switches are located for the entire campus.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. Replace existing diesel generator with new natural gas type generator and provide additional capacity for Standby Loads.

Information Technology

Existing System

a. The MDF is located in a shared room with mechanical equipment and electrical panelboards. Additionally, the MDF contains MM fiber to telephone room, and 6-MM to the Sports Complex.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None

Photographs – Chesapeake

View from Northeast

Theater

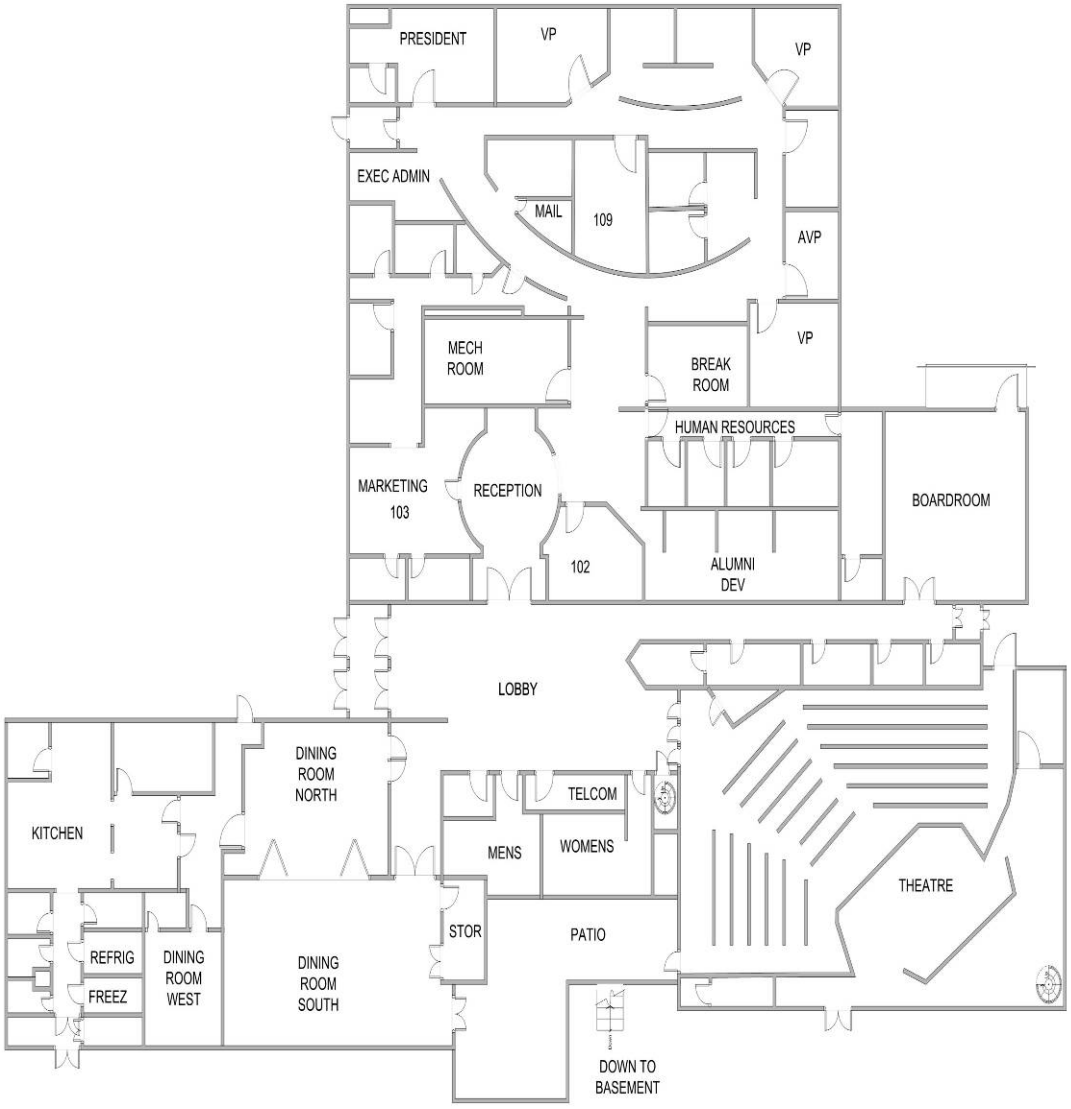
Kitchen

Dining / Meeting Space

Administrative Offices Reception

Administrative Offices

Floor Plan – Chesapeake



Conowingo Center

Building Description

Building Designation	5. Conowingo Center
Number of Floors	1
Net Assignable Square Feet	13,241
Gross Building Area - GSF	16,189
Net-to-Gross Efficiency	81,8%
Year Constructed	2002
Renovations	None
Additions	None
Contains	Storage, shops
General Condition	good
Adequacy of Space	Generally adequate for functions housed in the building
Sprinkler System	Fully sprinklered

Conowingo Center, a pre-engineered steel building, houses most of the physical plant operations spaces for the entire campus. Mostly unchanged since its construction in 2002, the building has undergone minor expansion by way of a recent new storage structure.

MEP SYSTEMS

Mechanical

Existing Systems

a. The warehouse area (south) is heated by two (2) gas fired unit heaters (Reznor) and ventilated by a wall louver and exhaust fan.
b. The receiving area (north) is heated by a gas fired unit heater and two (2) manifolded gas fired unit heater forming an air curtain at each of the two (2) overhead doors. The area is ventilated by a wall louver and roof fan.
c. Four (4) water to air geothermal heat pumps (Water Furnace Versatec) serve the office areas. Each heat pump has a remote geolink pump to circulate geothermal water to the water to air heat pump from the earth heat exchanger.
d. Mechanical and plumbing systems were installed in 2002.
e. The building is sprinklered.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Electrical

Existing Systems

a. The incoming electrical enters the warehouse and is distributed to the building.
b. The warehouse utilizes HID high bay lights for general illuminuation.
c. An emergency natural gas MTU generator provides power for Life Safety loads.
d. The fire alarm appears to be in good working order, with a Siemens SXL-EX FACP and is maintained by a third party.

Reported Problems/Deficiencies:

a. None.

Recommendations

a. Replace existing HID high bays with LED, for energy savings and less maintenance over the life of the fixture.

Information Technology

Existing System

a. The MDF is in a dedicated closet, with CAT6 horizontal cabling, and provides 12-SM fiber to Joppa Hall.

Reported Problems/Deficiencies:

a. None.

Recommendations:

b. None

Photographs – Conowingo

View from Southwest

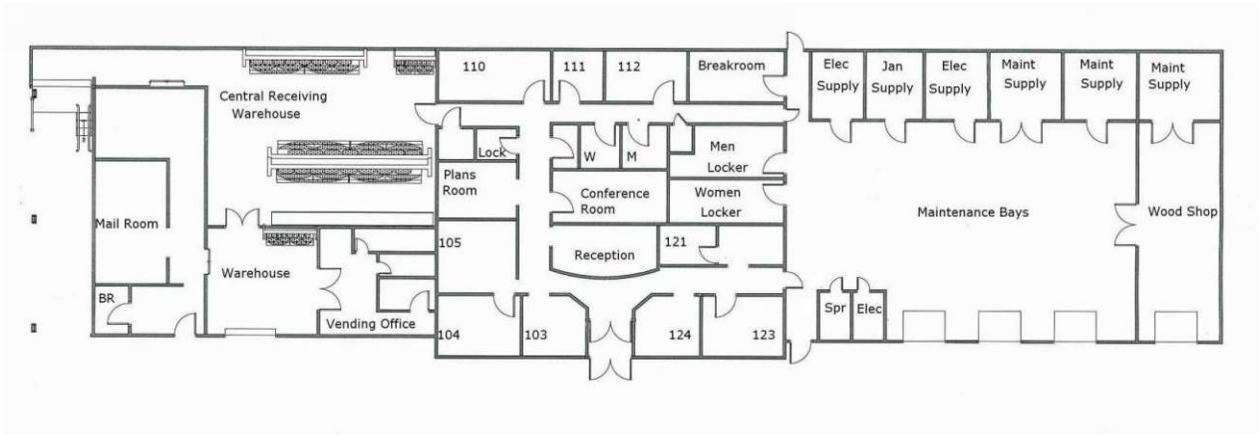
Office Reception

Maintenance Bays

Maintenance Bay

Storage Building

Floor Plan – Conowingo



Darlington Hall

Building Description

Building Designation	6. Darlington Hall
Number of Floors	3
Net Assignable Square Feet	28,785
Gross Building Area - GSF	51,628
Net-to-Gross Efficiency	55.8%
Year Constructed	2014
Renovations	None
Additions	None
Contains	Classrooms, labs, offices
General Condition	Excellent
Adequacy of Space	Very adequate for functions housed in the building
Sprinkler System	Fully sprinklered

The three-story steel frame brick and metal panel clad Darlington Hall was constructed to provide needed space for the College's large health sciences programs. This new building more than adequately accomplished fulfilling that need, and students reported overall satisfaction with the instructional and gathering spaces inside. Current use of the building can be expanded to serve other programs in addition to health sciences.

MEP SYSTEMS

Mechanical

Existing Systems

a. The building was recently renovated and the mechanical and plumbing systems were replaced.
b. Heating water is generated by three (3) high efficiency gas fired condensing boilers (Lochinvar Crest).
c. Chilled water is generated by an air cooled chiller (York International) located on the roof. The chilled water system uses a glycol solution.
d. Heating and chilled water pumps were manufactured by Bell and Gossett. Pumps utilize variable speed drives.
e. Three (3) central station air handling units serve the building.
f. The building has a gas service.
g. Domestic hot water is generated by a high efficiency gas fired water heater (PVI Conquest).
h. The building has both air and vacuum systems.
i. The building has a domestic water booster pump system.
j. The building is sprinklered.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Electrical

Existing Systems

a. The building's emergency lighting is fed from a central battery inverter system located in the Main Electrical Room
b. The Main Switchboard is new, Square D, at 1200A and spare capacity for future expansions.
c. The FACP is Siemens FireFinder system located in the Main Electrical Room, is in good condition and is maintained by Anaconda Protective Concepts.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. Provide an emergency natural gas generator to provide Life Safety and Standby loads to the building.

Information Technology

Existing Systems & Reported Problems/Deficiencies:

None.

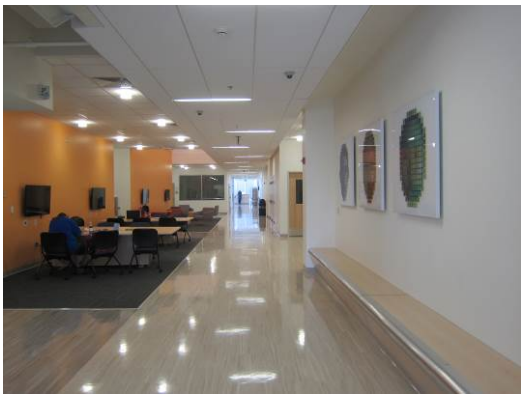
Recommendations:

a. None

Photographs – Darlington

View from East

Stair / Tiered Seating



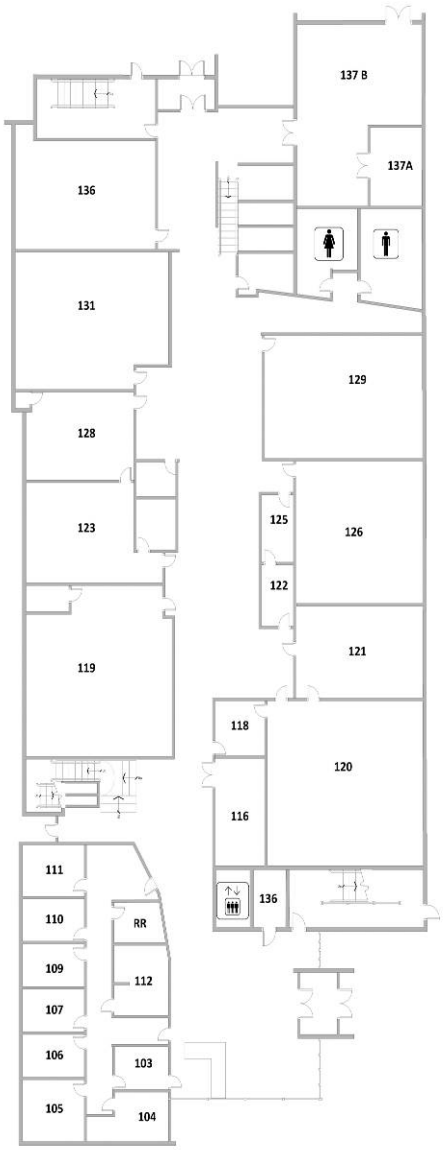
Commons – Second Level

Classroom

Nursing Lab

Group Study Rooms

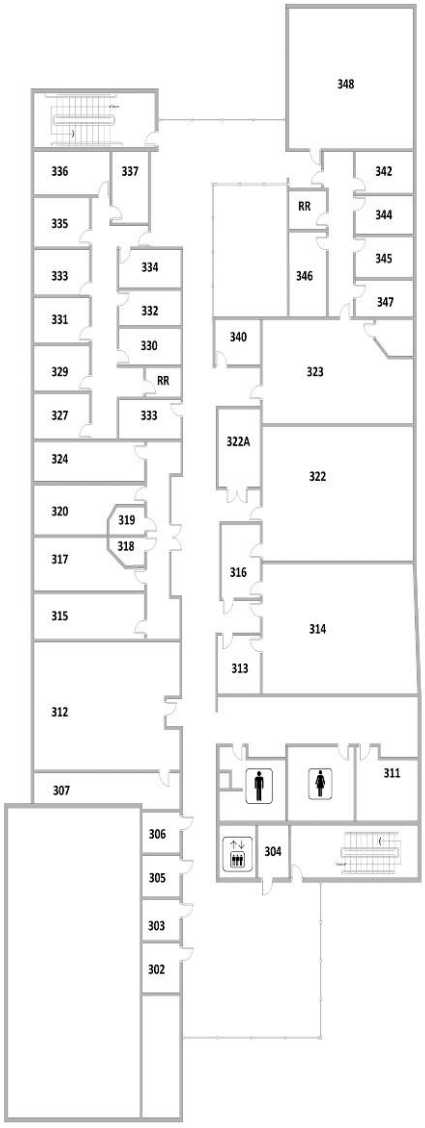
Floor Plans – Darlington



Level 1

Level 2

Floor Plans – Darlington



Level 3

Edgewood Hall

Building Description

Building Designation	7. Edgewood Hall
Number of Floors	2
Net Assignable Square Feet	20,270 (1994), 24,434 (2017)
Gross Building Area - GSF	33,845 (1994), 40,000 (2017)
Net-to-Gross Efficiency	59.9%
Year Constructed	1994
Renovations	2016
Additions	2016
Contains	Classrooms, training rooms, offices
General Condition	Excellent
Adequacy of Space	Adequate for functions housed in the building
Sprinkler System	Fully sprinklered

Edgewood Hall has served as an academic building and is undergoing a comprehensive renovation and additions to provide space for continuing education instruction and for the Sheriff's Training Academy and Electrical Apprenticeship Program functions. With Darlington Hall, the steel frame and masonry prairie-style building occupies an important location at the front of the campus; together, both buildings make a pleasing aesthetic statement for a first-time visitor to the campus. A current renovation will be completed in time for occupancy in the beginning of the Spring 2017 semester.

MEP SYSTEMS

Mechanical

Existing Systems

a. The building is currently under construction. New independent mechanical systems are being installed and plumbing systems are being upgraded.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Electrical

a. The building is currently under construction. New electrical upgrades are a part of the design process.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Information Technology

Existing Systems & Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None

Photographs – Edgewood (under construction)

View from Southeast

Interior Construction 1

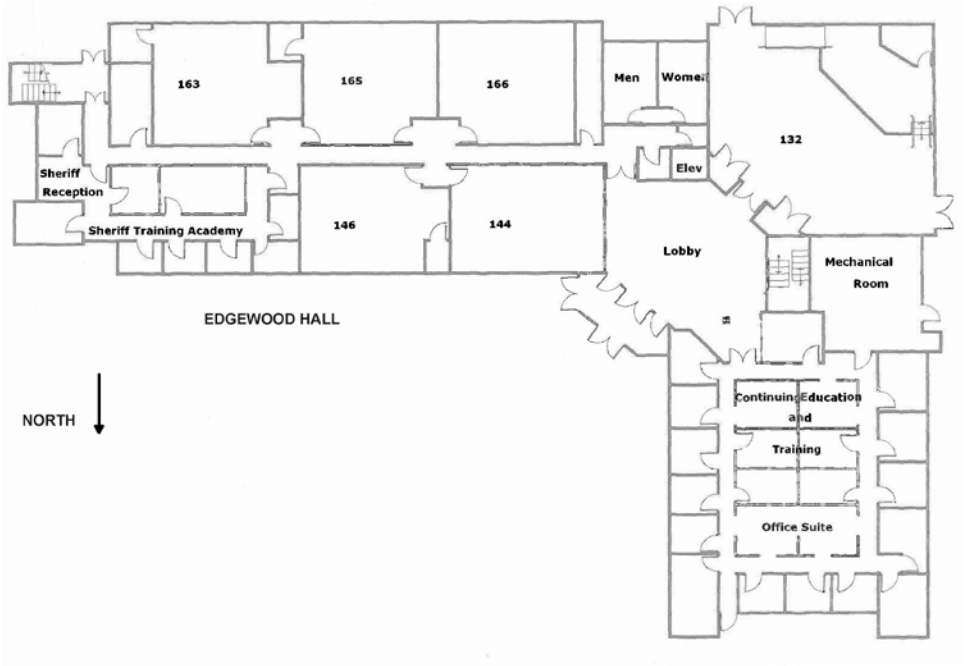
Interior Construction 2

Interior Construction 3

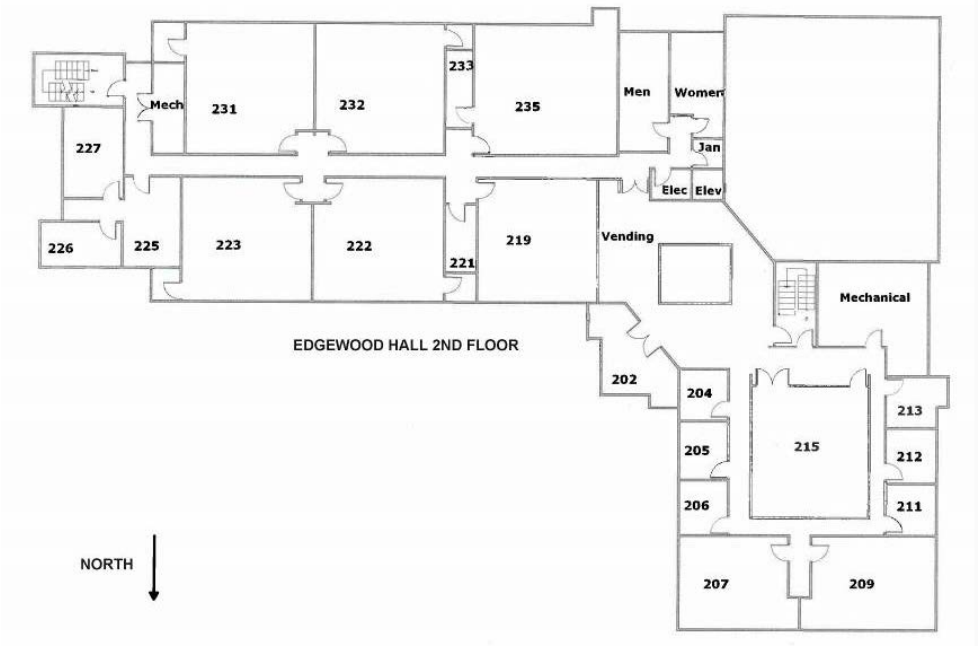
Interior Construction 4

Interior Construction 5

Floor Plans – Edgewood (pre-renovation/addition)



Lower Level



Upper Level

Fallston Hall

Building Description

Building Designation	8. Fallston Hall
Number of Floors	2
Net Assignable Square Feet	15,309
Gross Building Area - GSF	24,728
Net-to-Gross Efficiency	61.9%
Year Constructed	1998
Renovations	None
Additions	None
Contains	Classrooms, offices, testing and tutoring centers
General Condition	Fair
Adequacy of Space	Not adequate for functions housed in the building
Sprinkler System	Fully sprinklered

Fallston Hall, now 20 years old, has provided instructional, office, and testing/tutoring spaces for the College, but the testing and tutoring functions have outgrown their spaces and will be moving to the library. In addition to functional and programmatic inadequacies, most of the building systems have deteriorated and are inefficient and are in need of upgrade, including: mechanical, electrical and technology systems and damage, and wear and tear of the exterior and interior architectural building systems and elements. These deficiencies are described in further detail in the April 26, 2016 Facility Program Parts I and II. A comprehensive renovation is needed for the two-story steel frame, masonry building and is planned for the near future.

MEP SYSTEMS

Mechanical

Existing Systems

a. The existing mechanical and plumbing systems are original to its 1996 construction.
b. Heating is generated by two (2) gas fired cast iron boilers rated at 1246 MBH (HB Smith 28A-6 Section).
c. Chilled water for cooling is generated by an air cooled chiller (Trane RTAA 125) utilizing refrigerant R-22.
d. Two (2) heating water pumps and two (2) chilled water pumps were manufactured by Taco.

e. The two (2) story classroom wing is served by floor mounted unit ventilators while the two (2) story Office area is served by a central station air handing unit and remove return air fan located in the Attic/Penthouse space.
f. Domestic hot water generated by a gas fired water heater (A.O. Smith).
g. The building is sprinklered.

Reported Problems/Deficiencies:
a. While the mechanical systems are operating, most have reached or exceeded their life expectancy and should be replaced.

Recommendations:
a. Replace the existing air cooled chiller with a high efficiency type.
b. Replace the existing boilers with high efficiency condensing type.
c. Replace the existing unit ventilator system and/or supplement with a Dedicated Outdoor Air System (DOAS) to reduce humidity issues if space allows.
d. Replace the existing air handling unit and return fan.

Electrical

Existing Systems
a. The building is fed from an 800A Cutler Hammer Main Distribution Panel located in a dedicated closet and appears to have spare capacity for additional loads.
b. The FACP is located in the Main Electrical Closet, is recently installed from EST and is maintained by a third party. The Fire Alarm system does not operate properly, example: activating fire doors, notification devices appear to be original and should be updated.

Reported Problems/Deficiencies:
a. The Fire Alarm system does not operate properly, example: activating fire doors, notification devices appear to be original and should be updated.
b. The building does not have an emergency generator for backup power.
c. While the electrical systems are operating, most have reached or exceeded their life expectancy and should be replaced

Recommendations
a. The Kohler generator located outside is for the Lift Station; provide a dedicated emergency natural gas generator to provide power to the Life Safety and Standby Loads for the building
b. The Cutler Hammer Main Distribution Panel is 20 years old and should be replaced with new. Additionally, the current service will not be adequate to serve future renovations and expansions. Additional work will require an electrical service upgrade.

Information Technology

Existing Systems & Reported Problems/Deficiencies:
a. There is only one (1) telecommunication closet located in the building; which causes issues providing data cabling to the opposite end of the building

b. The telecommunications distribution is original to the building not allowing for efficient design and installation of additional data cabling

Recommendations – Information Technology:

a. Provide additional IDF closets to shorten the data cable runs to other areas of the building, this will increase the flexibility for renovations and improvements.
b. Replace the existing telecommunication infrastructure with new and per HCC's standards, this will provide the greatest flexibility for expansion.

Photographs – Fallston

View from Southeast

Open Space – Second Level

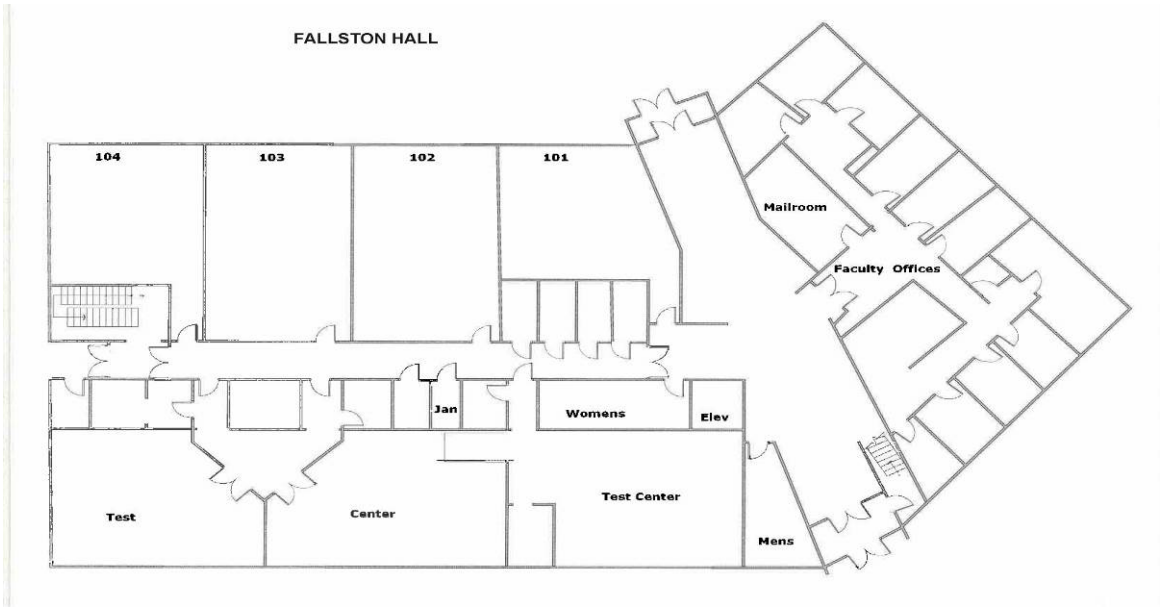
Office Suite

Classroom

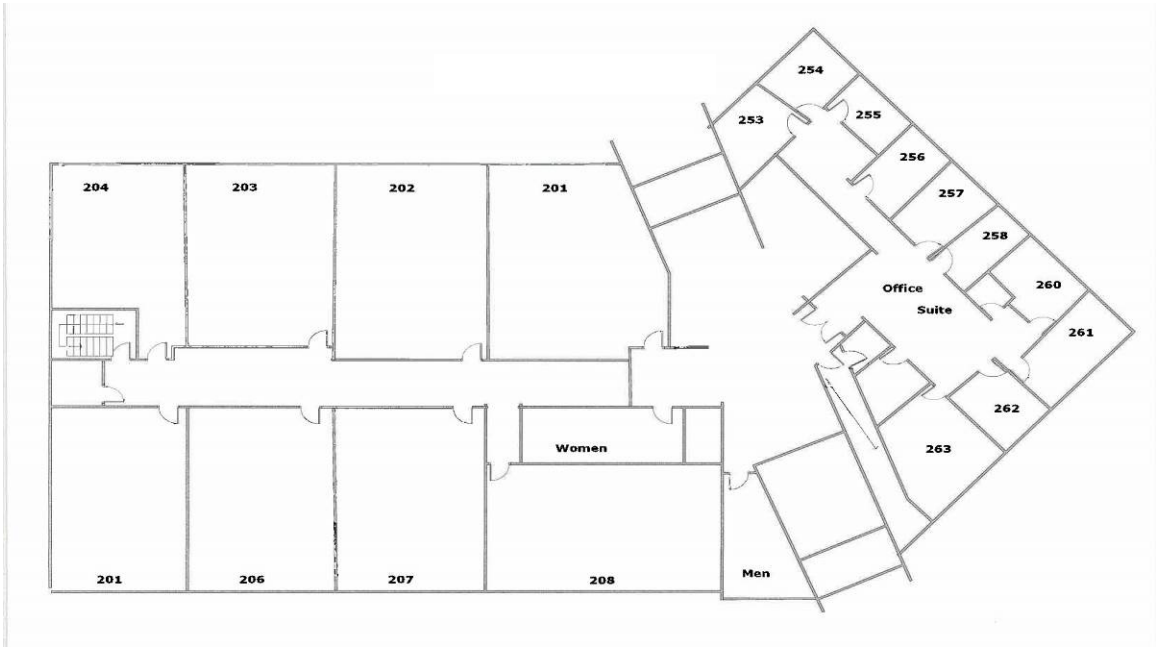
Corridor

Testing Center

Floor Plans – Fallston



Level 1



Level 2

Forest Hill Center

Building Description

Building Designation	9. Forest Hill Center
Number of Floors	1
Net Assignable Square Feet	11,250
Gross Building Area - GSF	13,913
Net-to-Gross Efficiency	80.9%
Year Constructed	1978
Renovations	None
Additions	2000
Contains	Day-care classrooms, multi-purpose space
General Condition	Fair
Adequacy of Space	Adequate for functions housed in the building
Sprinkler System	Not sprinklered

The single story, pre-engineered brick-clad Forest Hill Center houses, primarily, a child day care center and, on the south end of the building, adult care in the 2000 addition. As an adjunct function, these services could be provided elsewhere on campus if the location is needed by the College for an academic use in the future.

MEP SYSTEMS

Mechanical

Existing Systems

a. The Child Care area is served by a packaged rooftop unit (Carrier) and classrooms are served by packaged through the wall units (PTAC's). The rooftop unit and most wall PTAC's seemed to have been recently replaced.
b. Two (2) packaged rooftop units serve the Adult Daycare area. Both units were manufactured by York. One was recently replaced and the other is older.
c. The building is not sprinklered. Only storage rooms are sprinklered and served off the domestic water system.
d. A new domestic water line was extended to the building from Joppa Hall.
e. Electric water heaters generate domestic hot water for the facility.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. Sprinkler the entire building.

b. Replace old rooftop unit.

Electrical

a. The incoming electrical service enters the main electrical room and feeds three (3) service panelboards for power distribution for the building.
b. The existing fire alarm system is Silent Knight and EST that cross trip for activation; and is maintained by a third party.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Information Technology

Existing System

a. The MDF is located in the same room as the electrical service to the building as well as the incoming telephone. The horizontal cables are CAT6 with a fiber backbone.

Reported Problems/Deficiencies:

a. None.

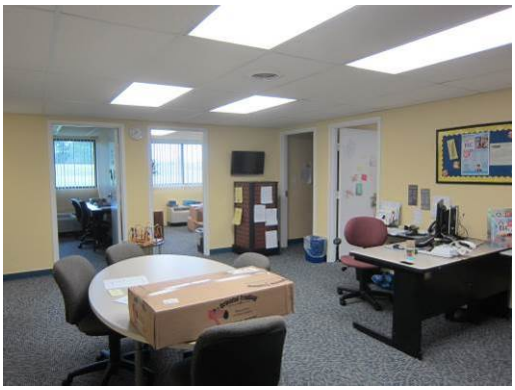
Recommendations:

a. None.

Photographs – Forest Hill Center

View from Northeast

Child Care Classroom

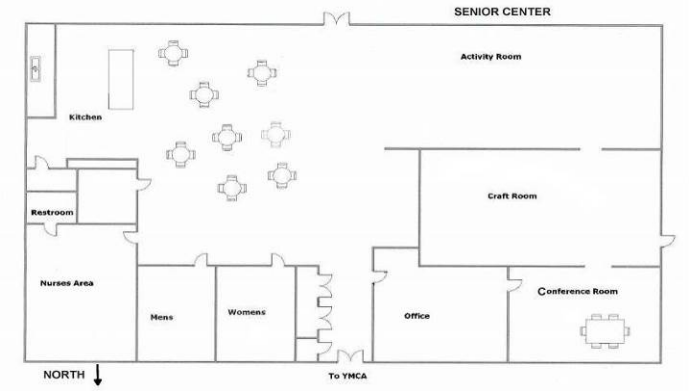


Office Suite

Child Care Activity Room

Storage, Records

Floor Plan – Forest Hill Center



Senior Center Section

Harford Sports Complex

Building Description

Building Designation	10. Harford Sports Complex
Number of Floors	1
Net Assignable Square Feet	1,449
Gross Building Area - GSF	2,475
Net-to-Gross Efficiency	58.5%
Year Constructed	1991
Renovations	None
Additions	None
Contains	Field sports support spaces
General Condition	Good
Adequacy of Space	Adequate for functions housed in the building
Sprinkler System	Not sprinklered

The Harford Sports Complex, located at the confluence of four outdoor sports fields, provides team support space such as training, team room, rest rooms and clerical spaces.

MEP SYSTEMS

Mechanical

Existing Systems

a. A small split direct expansion HVAC system serves the building.
b. A domestic water well was installed in 2002 to serve the building.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Electrical

Existing Systems:

a. The building is fed from an 800A Main Distribution Panel located in the basement of the adjacent Sports Arena.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Information Technology

Existing Systems & Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Photographs

Exterior

Training Room

Team Room

Havre de Grace Hall

Building Description

Building Designation	11. Havre de Grace Hall
Number of Floors	2
Net Assignable Square Feet	10,871
Gross Building Area - GSF	18,156
Net-to-Gross Efficiency	59.9%
Year Constructed	1967
Renovations	2005-6
Additions	None
Contains	Instructional space, faculty offices
General Condition	Very good
Adequacy of Space	Adequate for functions housed in the building
Sprinkler System	Fully Sprinklered

One of the original buildings on campus, Havre de Grace Hall provides instructional spaces with up-to-date technology systems and faculty and departmental offices. A comprehensive renovation for the two-story steel frame and masonry building was completed in 2006, providing updated technology and building systems.

MEP SYSTEMS

Mechanical

Existing Systems

a. The building is served by two (2) air handling units.
b. One air handling unit is a roof mounted central station air handling unit (McQuay Model RDS).
c. One air handling unit is an indoor central station multi-zone air handling unit (manufactured by York).
d. Heating water is provided by Aberdeen Hall.
e. Chilled water is provided by the Student Center.
f. The building is sprinklered.
g. The building has a rain water collection system to serve restrooms.
h. The mechanical and plumbing systems were upgraded during the 2005 and 2006 renovation of the facility.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. Pipe RTU condensate drain to roof drain.

Electrical

Existing Systems

a. The incoming electrical service is located in a separate room, and terminates in an 800A Siemens Main Distribution Panel and is in good condition.
b. The FACP is located in the same room, is EST2 and maintained by a third party.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Information Technology

Existing Systems

a. The MDF feeds fiber to the Student Center; Single Mode 12-strand.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Photographs – Havre de Grace Hall

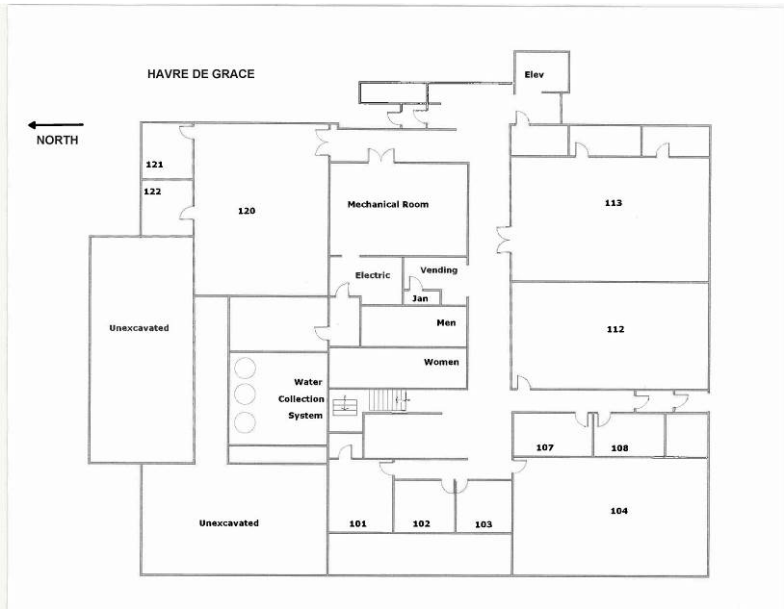
View from Quad

Central Open Stair

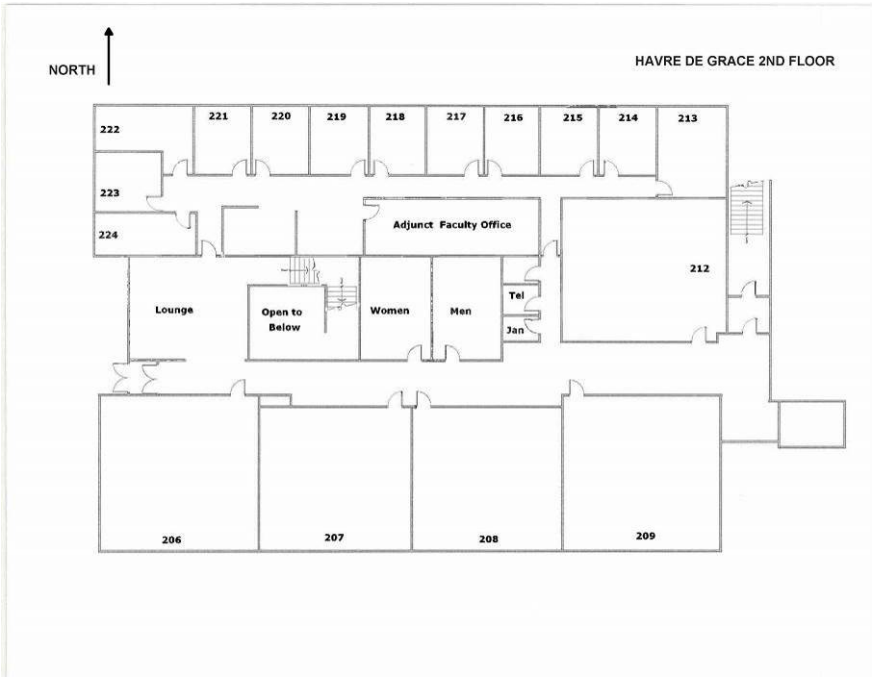
Classroom

Corridor / Gathering Space

Floor Plans – Havre de Grace Hall



Upper Level



Lower Level

Hays-Heighe House

Building Description

Building Designation	12. Hayes-Heighe House
Number of Floors	2 ½
Net Assignable Square Feet	3,465
Gross Building Area - GSF	6,000
Net-to-Gross Efficiency	57.8%
Year Constructed	1808
Renovations	2010
Additions	None
Contains	Office, exhibition, meeting space
General Condition	Very good
Adequacy of Space	Adequate for functions housed in the building
Sprinkler System	Fully Sprinklered

The original estate dwelling, the stone and wood-frame historic Hays-Heighe House has been restored to accommodate offices and exhibition space for the Building Preservation and Restoration Program. The creative restoration for the National Register of Historic Places building also provides modern amenities and accessibility for disabled persons.

MEP SYSTEMS

Mechanical

Existing Systems

a. A central geothermal system serves the building. Two (2) base mounted end suction circulating pumps (Taco) located in the basement serve water to air heat pumps.
b. Three (3) water to air heat pumps are located in the basement and five (5) water to air heat pumps are located in the Attic/eaves. Water to air heat pumps were manufactured by McQuay.
c. The geothermal system was installed in 2009.
d. The building is sprinklered.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Electrical

Existing Systems

a. The incoming electrical service enters the basement of the building and feeds a 200A Square D MDP which separate distribution panels in the same location. The electrical gear is fairly and in good working condition.
b. The FACP is new (Notifier NFW2-100) and is maintained by a third party.

Reported Problems/Deficiencies:

a. None.

Recommendations

a. Provide an emergency natural gas generator for Life Safety and Standby loads.
b. Upgrade fire alarm system to provide voice evacuation.

Information Technology

Existing System

a. The incoming telecom and telephone enter the basement of the building. The telecom is in an open room with single rack, CAT6 horizontal cables and provides 6-MM fiber connections to Chesapeake Building.

Reported Problems/Deficiencies:

a. None.

Recommendations

a. None.

Photographs – Hayes-Heighe House

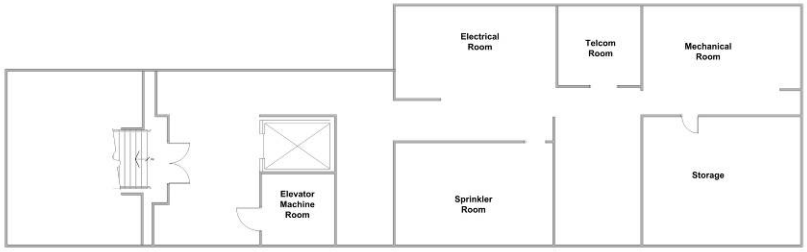
View from Quad

Main Stair Hall

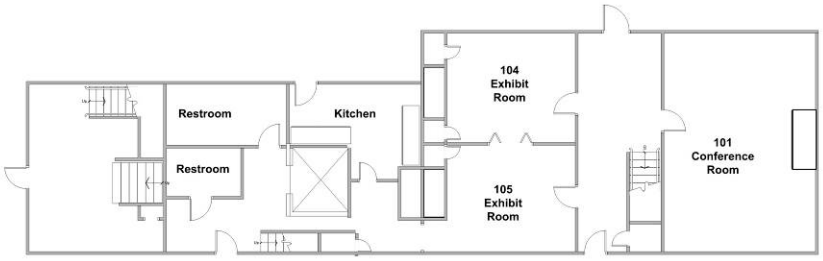
First Floor Exhibition and Meeting Space

Second Floor Exhibition and Meeting Space

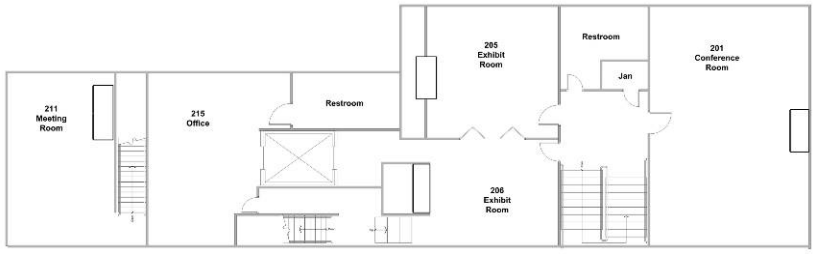
Floor Plans – Hayes-Heighe House



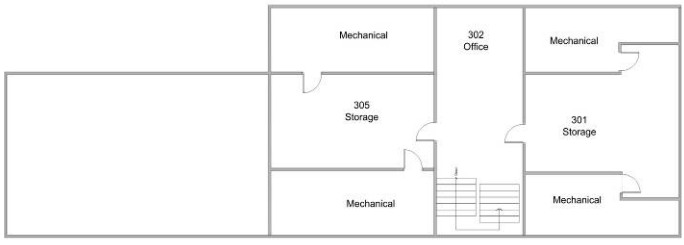
Basement



First Level



Second Level



Third Level

Hickory Center

Building Description

Building Designation	13. Hickory Center
Number of Floors	1
Net Assignable Square Feet	9,750
Gross Building Area - GSF	14,007
Net-to-Gross Efficiency	69.6%
Year Constructed	2015
Renovations	None
Additions	None
Contains	Office, work room, storage
General Condition	Excellent
Adequacy of Space	Adequate for functions housed in the building
Sprinkler System	Not Sprinklered

Recently erected, the pre-engineered steel frame and metal siding Hickory Center provides long-needed space for campus technology operations and mail services, with high bay storage. The building has sufficient space for expansion over the next several years.

MEP SYSTEMS

Mechanical

Existing Systems

a. The Hickory Center is new and is served by three (3) packaged type gas fired rooftop units as manufactured by Trane.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Information Technology

Existing Systems & Reported Problems/Deficiencies:

None.

Recommendations:

a. None.

Photographs – Hickory Center

Building Exterior

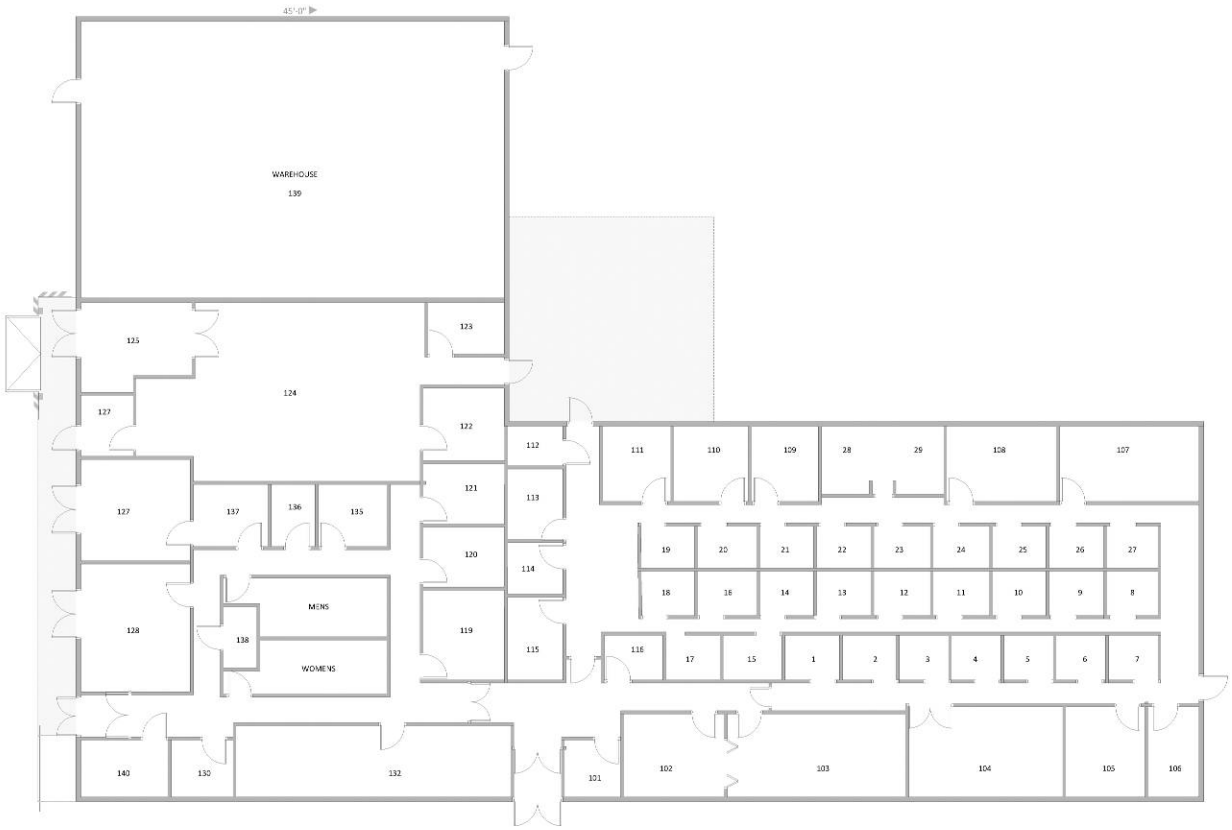
Computer Work Room

Semi-private office

Meeting Room

Mail Room

Floor Plan – Hickory Center



Joppa Hall

Building Description

Building Designation	14. Joppa Hall
Number of Floors	1
Net Assignable Square Feet	53,379 including utility buildings
Gross Building Area - GSF	82,459 including utility buildings
Net-to-Gross Efficiency	64.7%
Year Constructed	1965
Renovations	1981, 2005
Additions	Small, detached utility buildings
Contains	Classrooms, studios, offices
General Condition	Good
Adequacy of Space	Adequate but some additional space needed for performing arts
Sprinkler System	Fully Sprinklered

Joppa Hall houses all of the visual and performing arts instructional spaces for the College. All on one floor, the slab-on-grade structure is the largest academic building on campus. Originally constructed as a vocational-technical high school, the building was renovated in 1981 to serve the College and again as a comprehensive renovation in 2005.

MEP SYSTEMS

Mechanical

Existing Systems

a. The building was renovated in 2004/2005 in which the mechanical and plumbing systems were replaced except for one (1) heating boiler.
b. A 330 ton variable speed water cooled centrifugal chiller (York International) using refrigerant 134A generates chilled water for cooling.
c. An induced draft cooling tower (Baltimore Air Coil) rejects heat absorbed by the chiller to the atmospheric heat sink.
d. Two (2) gas fired hot water boilers generate heat for the building. One (1) boiler is the high efficiency condensing type, 2700 MBH capacity as manufactured by Viesmann (Vertomat). The other boiler is a standard cast iron type, 6770 MBH, 26 section H.B. Smith 640 Mills Boiler.
e. Two (2) heating water pumps, two (2) chilled water pumps and two (2) condenser water pumps were manufactured by Bell & Gossett.
f. Ten (10) central station (4-pipe) air handling units and one (1)central station (4-pipe) rooftop units serve the majority of the building. All air handling units were manufactured by York.
g. Three (3) fan coil units serve individual office spaces.

h. The building is sprinklered.
i. The domestic water system includes storage tanks, water treatment system and pumps. Water system additionally serves Conowingo Center, Hickory Center and Forest Hill Center.
j. Domestic hot water is generated by a gas fired domestic water heater (PVI Maxim).
k. A rain water collection system is utilized for cooling tower makeup.

Reported Problems/Deficiencies:
a. None.

Recommendations:
a. Replace existing cast iron boiler with a high efficiency condensing type.
b. Replace two (2) small air cooled condensing units serving fan coil units.

Electrical

Existing Systems
a. The building is has an emergency diesel Generac generator for the Life Safety and Standby Loads for the building.
b. There is a solar PV system located on the roof, to supplement the energy used at the building.
c. The incoming electrical service is fed from a 2000A Cutler Hammer, three (3) section Main Switchboard. The mechanical units are fed from a ten (10) section MCC rated at 400A; all VSDs, HOAs and starters are integrated to the MCC and appear to be in good working condition.
d. The FACP is located adjacent to the MSB and is a Siemens MXL-IQ, is maintained by a third party and appears to be in good working condition.

Reported Problems/Deficiencies:
a. None.

Recommendations
a. Replace existing diesel Generac generator with a natural gas generator.

Information Technology

Existing Systems
a. The MDF contains incoming telephone, CATV with Blonder Tongue XXX and fiber backbone for emergency communications to other public schools. Majority of the horizontal cables appear to CAT5E

Reported Problems/Deficiencies:
a. None.

Recommendations:
a. Upgrade horizontal cabling to CAT6.

Photographs – Joppa Hall

Building Exterior

Computer Classroom

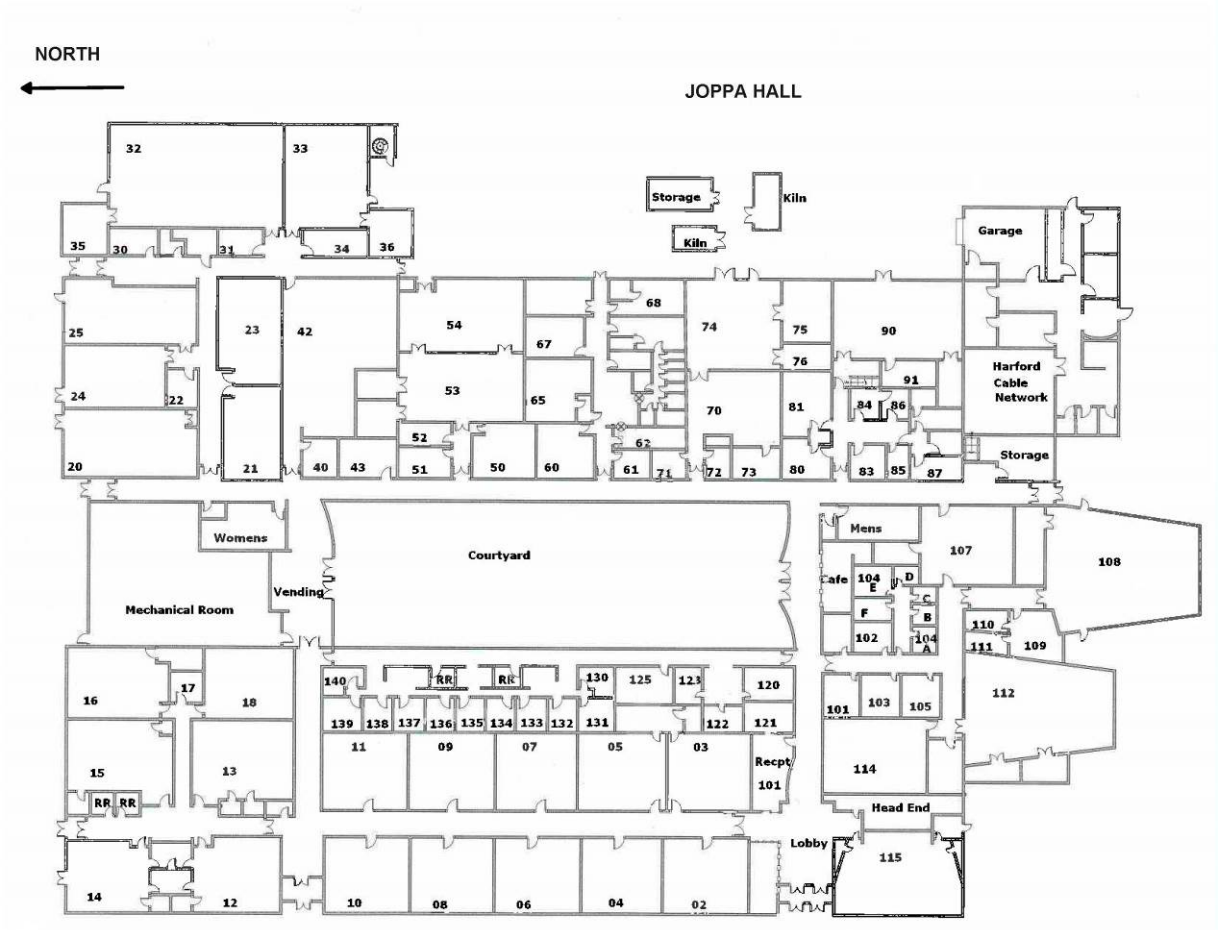
Practice/Recital Hall

Art Studio

Design Studio

Photography Lab

Floor Plan – Joppa Hall



Library

Building Description

Building Designation	15. Library
Number of Floors	3
Net Assignable Square Feet	36,856
Gross Building Area - GSF	49,436
Net-to-Gross Efficiency	74.6%
Year Constructed	2000
Renovations	Minor, including 2016 for testing suite
Additions	None
Contains	Library functions
General Condition	Very good
Adequacy of Space	Adequate but will benefit from re-purposing spaces
Sprinkler System	Fully Sprinklered

Now fifteen years old, the library has been periodically modified to accommodate changing library needs, generally reducing stack area and creating library support spaces. The office and office work are small and continued re-purposing of spaces should be maintained. Located at the heart of the campus, the library stands and serves as the academic heart of the College.

MEP SYSTEMS

Mechanical

Existing Systems

a. Mechanical and plumbing systems are original from the 1998/1999 construction.
b. Cooling is generated by an air cooled chiller utilizing semi-hermetic compressors. The chiller is located on the roof and was manufactured by York International. The chiller serves the Library and Maryland Hall. One compressor was failed.
c. Heating is generated by two (2) cast iron hot water boilers (H.B. Smith 28A-10 Section) rated for 2172 MBH each with Webster Burners. The boilers serve the Library only. One cast iron section was being replaced.
d. Pumps were manufactured by Weinman. One pump was disassembled and being repaired.
e. Three (3) variable air volume central plant (4-pipe) air handling units serve the building. One (1) is located in the main mechanical room while the other two (2) were roof mounted. The units were manufactured by York International.
f. The Data Center is served by two (2) split DX type Computer Room Units (Liebert) installed in 2013 and one (1) larger original slit DX type Computer Room Unit (ATC). Small split type units also

serve the Telecommunications Room and Elevator Machine Room. Remote air cooled condensers are located on the roof and at grade on the east side of the building.

g. The building is sprinklered. A FM2000 system is additionally installed in the Data Center.
h. Domestic water piping is galvanized.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. Replace galvanized domestic water piping.
b. Replace boilers with high efficiency condensing type.
c. Replace chiller with a high efficiency type.

Electrical

Existing Systems

a. The building is fed from 1200A Square D Switchboard, which feds localized branch panelboards throughout the building and is in good condition
b. The FACP is located in an IDF room where a lone IT rack is located. The FACP is Cerberus Pyrotonics and is maintained by Anaconda Protective Concepts, Inc. The room also houses the incoming CATV terminates on Blonder Tongue amplifiers, the incoming telephone service is terminated in the room as well.
c. The library houses the data center for the entire campus, consists of multiple IT racks and includes the outgoing fiber to all the buildings.
d. There is an emergency diesel Alban CAT generator to for the building's Life Safety Loads

Reported Problems/Deficiencies:

a. None.

Recommendations

a. Replace diesel generator with natural gas and enough capacity for building's Life Safety and Standby Loads.

Information Technology

Existing System

a. The library houses the data center for the entire campus, consists of multiple IT racks and includes the outgoing fiber to all the buildings.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Photographs – Library

View from Upper Quad

Open Computer Lab

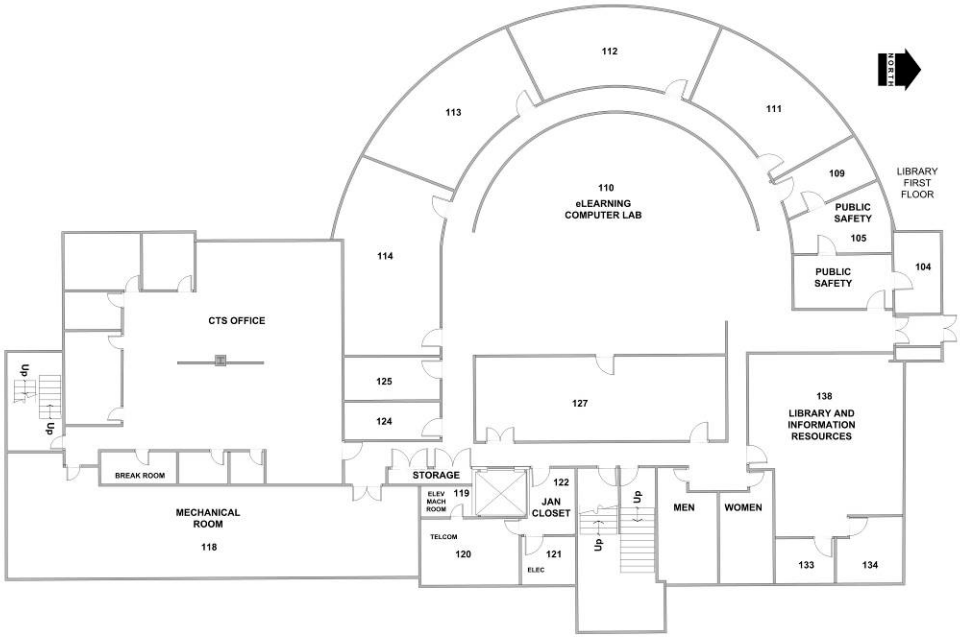
Office / Workroom

Study Areas

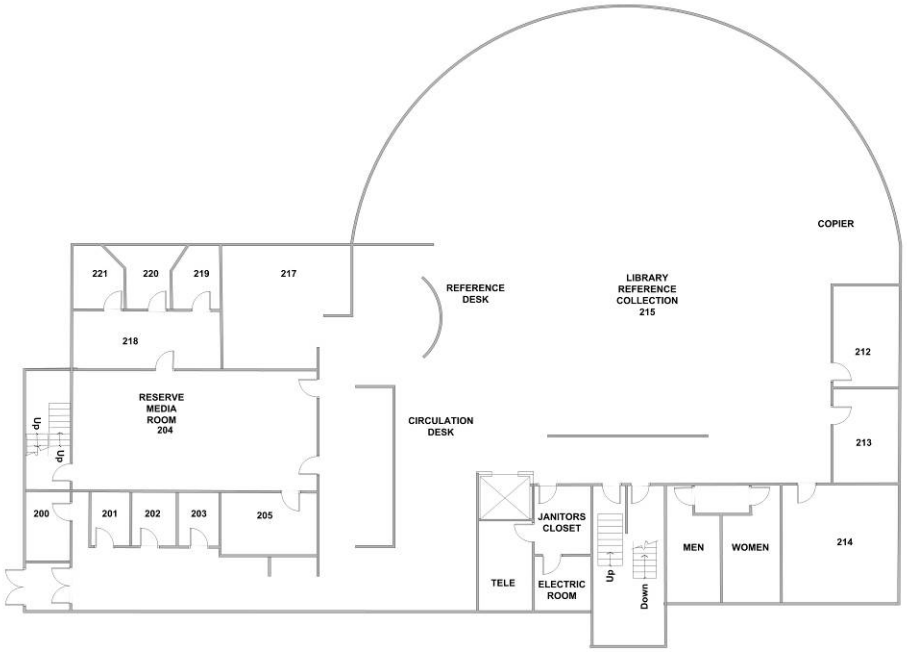
Group Study Room

Classroom

Floor Plans – Library

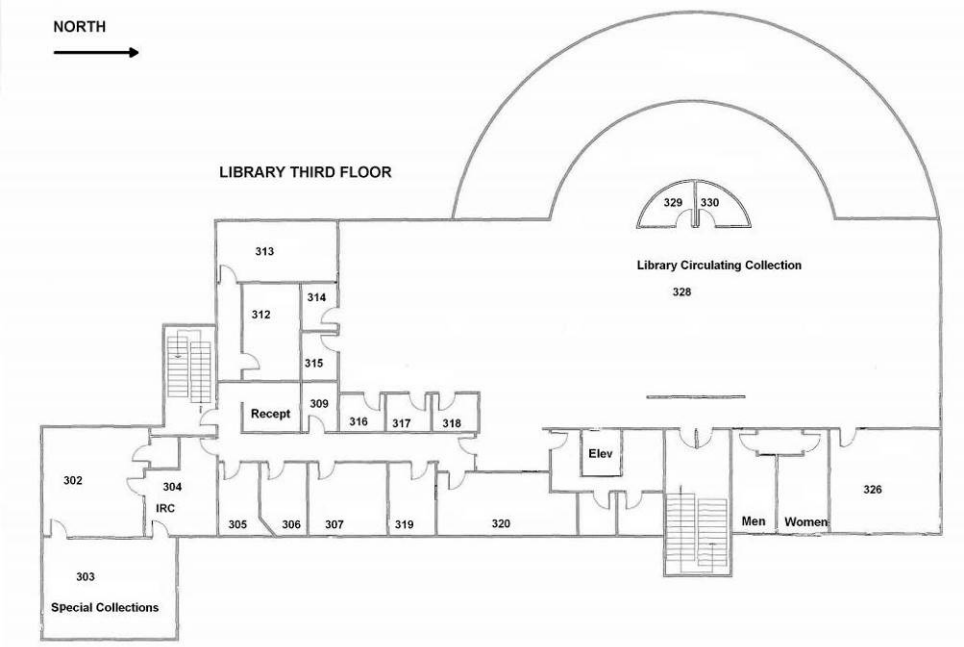


First Floor



Second Floor

Floor Plans – Library



Third Floor

Maryland Hall

Building Description

Building Designation	16. Maryland Hall
Number of Floors	1
Net Assignable Square Feet	6,147
Gross Building Area - GSF	10,303
Net-to-Gross Efficiency	59.7%
Year Constructed	1964
Renovations	1978, 2002
Additions	None
Contains	Offices, instruction and training spaces
General Condition	Fair
Adequacy of Space	Inadequate for current purposes
Sprinkler System	Fully sprinklered

At 6,147 square feet, Maryland Hall is the second smallest academic building on campus. However, its central location, containing all areas on a single floor, has afforded the College use of the building for several different functions over its over 50-year existence. In this facilities master plan, expansion of the library may connect to Maryland Hall, giving the library direct access to the main quad.

Mechanical

Existing Systems

a. The building is served by a single central station (4-pipe) variable air volume air handling unit (McQuay) with remote return air fan. The unit is located in the basement/lower level. The air handling unit and air distribution system was replaced in 2002 when the building was renovated.
b. Hot water for heating is from Aberdeen Hall.
c. Chilled water for cooling is from the Library building.
d. The building is sprinklered.
e. Domestic hot water is generated by an electric water heater (State Industries).

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Electrical

Existing Systems

a. The building is fed from a 480V disconnect which feeds a small Distribution panel at 225A. All the electrical panelboards are original and are past their life expectancy.
b. The FACP is EST and is maintained by Anaconda Protective Concepts. The FACP is located in the basement with an AHU and distribution panelboards.

Reported Problems/Deficiencies:

a. None.

Recommendations

a. Replace the incoming electrical distribution with new panelboards and provide with an integrated main circuit breaker.
b. Upgrade the EST FACP to allow Voice Evacuation for the building.

Information Technology

Existing System

a. The Incoming telephone service is located in the basement within the same room as the incoming electrical and mechanical equipment.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Photographs – Maryland Hall

View from Quad

Training Room

Classroom

Corridor

Testing Room

Conference Room

Floor Plan – Maryland Hall

Observatory

Building Description

Building Designation	17. Observatory
Number of Floors	1
Net Assignable Square Feet	3,039
Gross Building Area - GSF	4,143
Net-to-Gross Efficiency	73.4%
Year Constructed	1999
Renovations	None
Additions	None
Contains	Offices, instruction and training spaces
General Condition	Good
Adequacy of Space	Adequate for current purposes
Sprinkler System	Not sprinklered

The observatory building consists of the observatory and adjacent support and instructional spaces, currently providing space for the HVAC training program. The wood and steel-frame building is purposely located away from the main campus to be sheltered from incidental night light. The dome housing the main telescope was saved from the previous observatory and re-installed in its current location. The geothermal HVAC system and plumbing and electrical systems were recently upgraded and are in good condition. A well and septic system are dedicated only to this building.

Photographs – Observatory

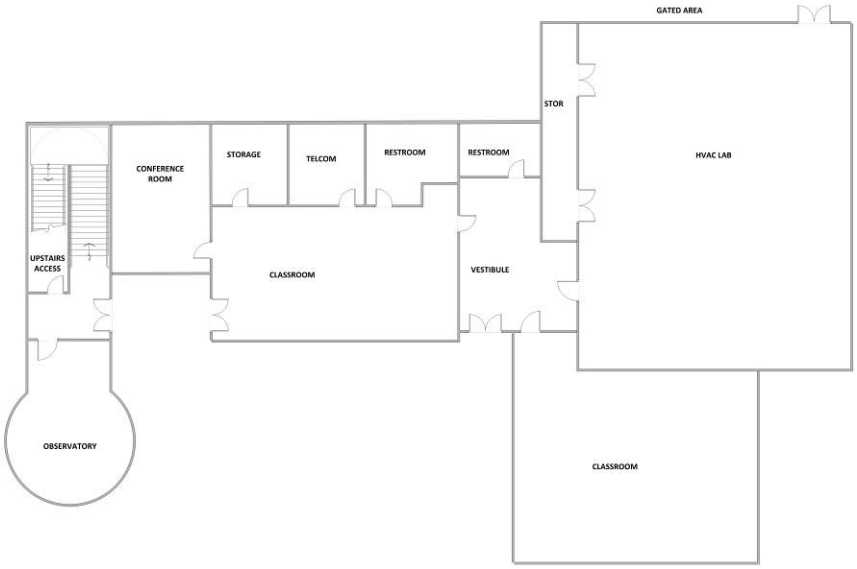
Exterior

HVAC Lab

Large Classroom

Small Classroom

Floor Plan



Pump House

Building Description

Building Designation	18. Pump House
Number of Floors	1
Net Assignable Square Feet	N/A
Gross Building Area - GSF	853
Net-to-Gross Efficiency	N/A
Year Constructed	1990
Renovations	None
Additions	None
Contains	Pumping Equipment
General Condition	Good
Adequacy of Space	Adequate
Sprinkler System	Not sprinklered

The pump house and its equipment are essential to operating most of the buildings on campus, providing fire protection water. A 250,000-gallon storage tank lies under the building and stores the water pumped to the campus by two large pumps, one electric turbine and one diesel turbine. A back-up generator provides emergency power in the event of a power failure.

Photographs

Exterior

Interior

Student Center

Building Description

Building Designation	19. Student Center
Number of Floors	2
Net Assignable Square Feet	29,743
Gross Building Area - GSF	50,294
Net-to-Gross Efficiency	59.1%
Year Constructed	1976
Renovations	2001
Additions	None
Contains	Student Services and Finance & Accounting offices, food service, bookstore, student offices, lounge, art gallery, multi-purpose room
General Condition	Good
Adequacy of Space	Adequate except for student services
Sprinkler System	Fully sprinklered

Originally built as the College library, the building was renovated in 2001 to provide the same functions housed in the building today. Located at a corner of campus, access is limited by parking not convenient to the building. Student Services, located on both levels, is experiencing growing pains.

MEP SYSTEMS

Mechanical

Existing Systems

a. The mechanical and plumbing systems were replaced during the 2001 renovation of the building except for the existing boilers.
b. The building's heating plant only serves the building and includes a high efficiency 2000 MBH gas fired condensing boiler (Viesmann) installed in 2009. The original boiler (1975) is a gas fired cast iron type (H.B. Smith Mills 350).
c. Cooling is generated by a single 330 ton air cooled chiller (York International Model YCAS0330) utilizing R22 refrigerant.
d. The chilled water plant consists of primary and secondary pumping with separate secondary pumps with one set serving the Student Center and the other set serving Havre De Grace Hall, Bel Air Hall and Aberdeen Hall.
e. All heating water pumps (four (4) total) and chilled water pumps (six (6) total) are manufactured by Bell & Gossett.
f. Three (3) central station air handling units serve the building. One air handling unit (No. 3) utilizes a remote in line fan (Cook) and is located on the lower level. Two (2) air handling units (No. 1 and

No. 2) are located in independent penthouses. All three (3) air distribution systems are variable air volume type. All air handling units were manufactured by York International.

g. Solar domestic water heater.
h. The building is sprinklered.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Electrical

Existing Systems

a. The incoming electrical service still utilizes the original Federal Pacific utility disconnect, distribution transformer and associated disconnect. The original Federal Pacific feeds a newer Cutler Hammer two (2) section main switchboard rated at 2000A.
b. There is a solar PV system located on the roof, to supplement the energy used at the building.
c. The Fire Alarm is updated to Notifier AFP-200.

Reported Problems/Deficiencies:

a. None.

Recommendations

a. Remove all original Federal Pacific electrical gear in its entirety to ensure proper function and to allow easier maintenance of gear.

Information Technology

Existing Systems

a. The incoming fiber enters the IDF located in the Mechanical Room which feeds the MDF located in its own closet. The MDF feeds fiber to the Data Center (6-SM), Havre De Grace (12-SM), Library (6-SM and 24-MM), Sports Complex (6-MM) and 2nd floor (4-MM)

Reported Problems/Deficiencies:

a. None.

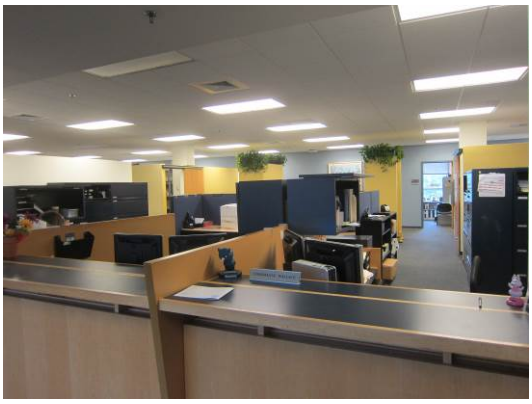
Recommendations:

a. None.

Photographs – Student Center

View from Quad

Central Open Space



Student Services – Registration & Records

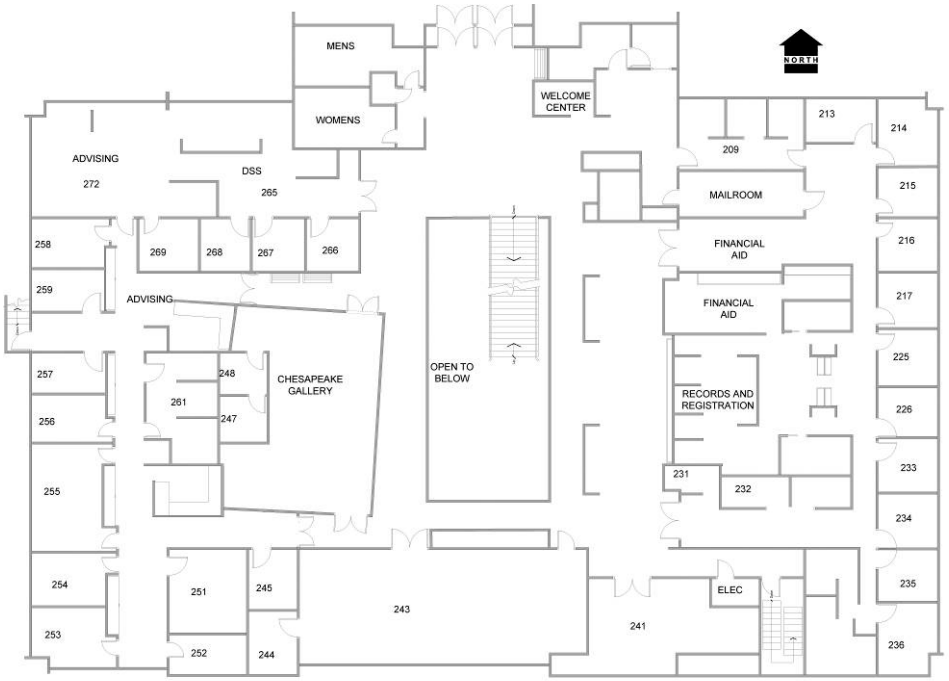
Dining

Bookstore

Art Gallery

Floor Plans – Student Center

Lower Level



Upper Level

Susquehanna Hall / APG Arena

Building Description

Building Designation	20. Susquehanna Hall / APG Arena
Number of Floors	2
Net Assignable Square Feet	59,780
Gross Building Area - GSF	101,560
Net-to-Gross Efficiency	58.9%
Year Constructed	1968
Renovations	2011
Additions	2011 (APGFCU Arena)
Contains	Offices, multi-purpose competition arena, fitness center, multi-purpose rooms, swimming pool, locker rooms, support spaces
General Condition	Excellent
Adequacy of Space	Adequate except for concessions, storage
Sprinkler System	Fully sprinklered

As the original 1968 building passed its 40th year, the College put in motion a design for a complete renovation and large addition, resulting in the building as it exists today. In addition to serving the College community, the facility is used by residents of Harford County and beyond, especially when large events are held.

MEP SYSTEMS

Mechanical

Existing Systems

a. The heating plant consist of four (4) gas fired cast iron boilers (Wiel McLain). Three (3) main boilers are equally sized and rated at 4055 MBH (Model 1888) and one summer/pool heat boiler is rated at 664 MBH (Model k778). The boilers utilize Webster Burners. The heating plant serves the Susquehanna Center, Chesapeake Center and APG Federal Credit Union Arena. Two heating water pumps serve the pool unit, two (2) heating water pumps serve the facility and two (2) heating water pumps serve Chesapeake Hall. All pumps were manufactured by Taco.
b. Cooling is generated by an air cooled chiller installed in 2011 (Daiken McQuay Model AWS-210A). It currently only serves the Susquehanna Center. Two (2) chilled water pumps (Taco) distribute chilled water to the building.
c. A pool dehumidification unit (Pool Pak) serves the pool area.
d. Two (2) roof mounted central station air handling units (McQuay) and one dehumidification rooftop air handling unit (Munters) serve the building.

e. The mechanical and plumbing systems were upgraded in 2011-2013 when the building was renovated and expanded.
f. Domestic hot water is generated by two (2) gas fired 250 gallon, 800 MBH input domestic water heaters (PVI Model 1000 P250A).
g. The building has domestic water storage tanks, water treatment system and associated pumps.
h. The building is sprinklered.
i. The building has a natural gas service.

Reported Problems/Deficiencies:
a. None.

Recommendations:
a. Extend chilled water piping to serve Chesapeake Center.

Electrical

Existing Systems:
a. The building has an emergency diesel generator, Kohler and in good working condition and is regularly maintained by Fidelity Power Systems. The fuel tank for the generator is located under the generator.
b. The incoming electrical service enters the building's Main Electrical Room and feeds a multi-section 2500A Siemens Switchboard. Additionally, the main power feed to the Chesapeake Building rated at 1200A. The original service disconnect to the building is still in use and located in the existing Mechanical Boiler Room.
c. There is a solar PV system located on the roof, to supplement the energy used at the building.

Reported Problems/Deficiencies:
a. None.

Recommendations:

Replace existing diesel generator with new natural gas type generator and provide additional capacity for Standby Loads.

Information Technology

Existing Systems & Reported Problems/Deficiencies:

None.

Recommendations:
a. None.

MEP SYSTEMS – APG ARENA

Mechanical

Existing Systems:

a. The area was constructed as part of the 2011-2013 renovation and expansion of Susquehanna Hall.
b. The Arena is served by four (4) sixty (60) ton packaged rooftop units (AAON).
c. Heating is provided by the Susquehanna Hall heating plant.
d. Mitsubishi VRF systems serve auxiliary spaces.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Electrical

Existing Systems:

a. The building is fed from an 800A Main Distribution Panel located in the basement of the Arena.
b. The main lighting in the Arena consisted of 8-lamp compact fluorescent highbays with multiple lamps burnt out throughout the layout.

Reported Problems/Deficiencies:

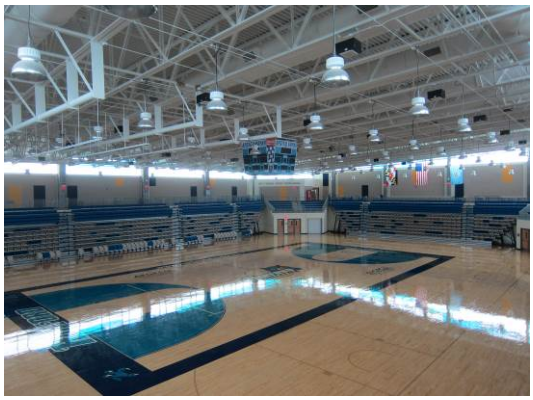
a. None.

Recommendations:

a. Replace the compact fluorescent lighting with LED high bays for lower maintenance requirements, better illumination and controllability.

Photographs – Susquehanna Hall / APG Arena

Building Exterior



Arena

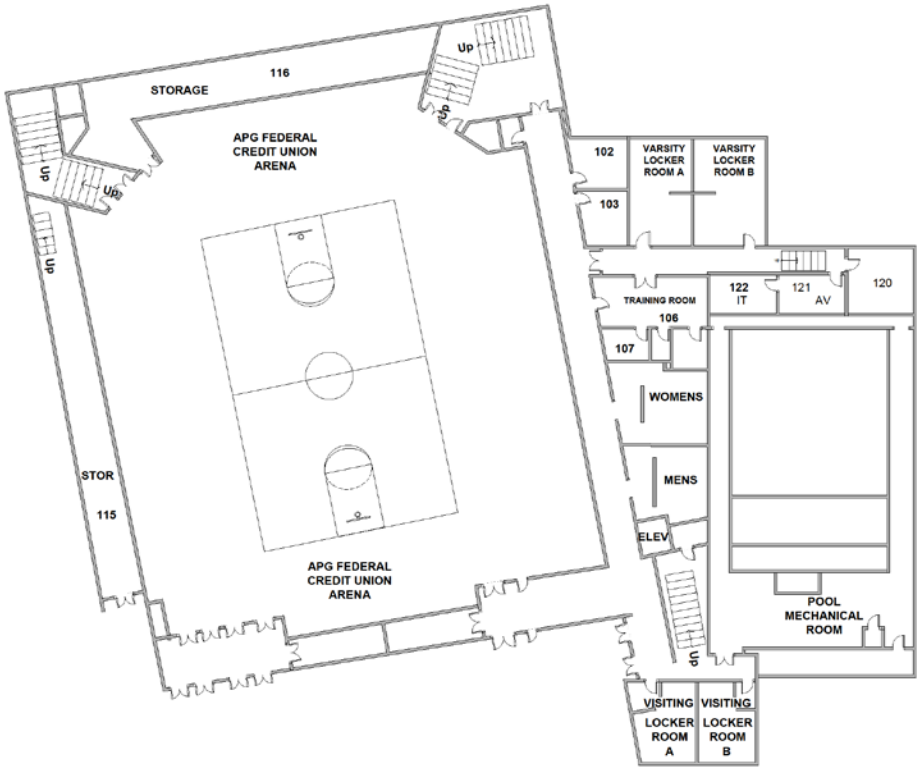
Multi-purpose / Dance Space

Pool

Fitness Center

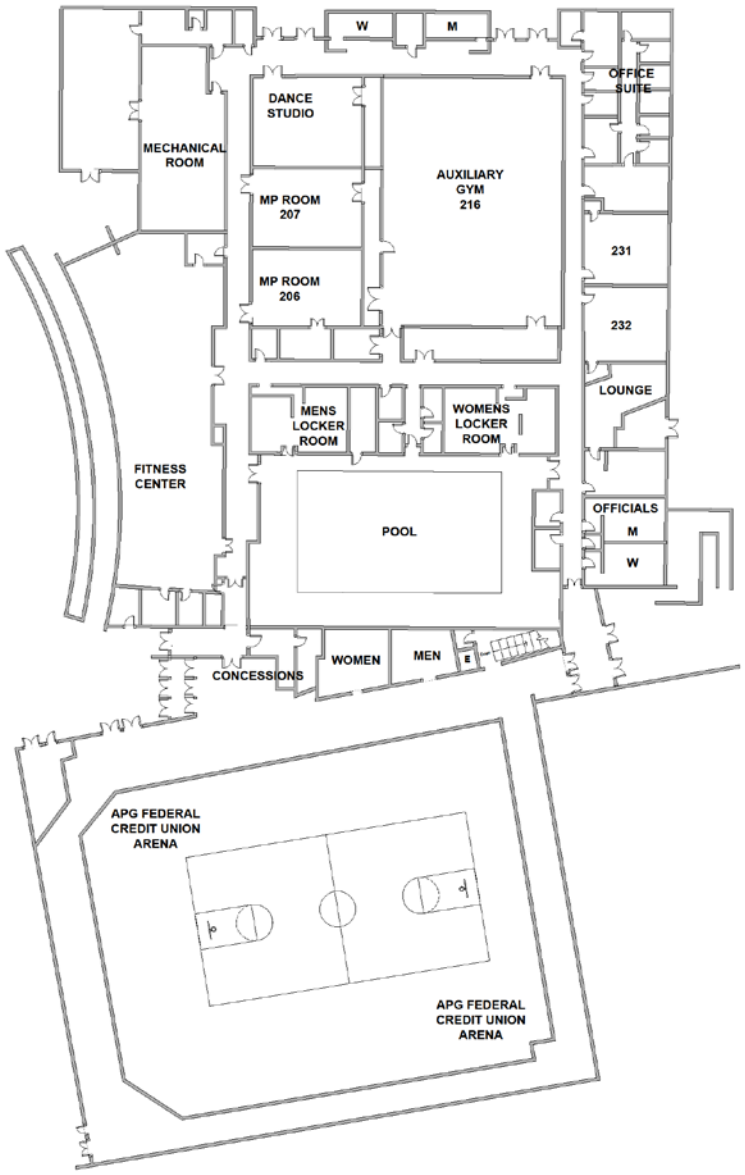
Training Room

Floor Plans – Susquehanna Hall / APG Arena



Lower Level

Floor Plans – Susquehanna Hall / APG Arena



Upper Level

Other Buildings

In addition to the campus buildings on the preceding pages, two other buildings need to be mentioned.

Owned by Harford County Public Schools, the 900- seat auditorium and support spaces of the William H. Amoss Center for the Performing Arts, located on the grounds of Harford Technical High School, is also used by Harford Community College for performing arts events and other venues. It is jointly operated under a memorandum of understanding between HCPS and HCC.

Harford Community College partnered with Towson University TU) to develop and build a new 58,000 square-foot academic facility on the West Campus, known as Towson University North East (TUNE). TU owns the building and the College owns the land. Under a memorandum of understanding, the College provides maintenance, housekeeping, security and other operational functions.

CAMPUS-WIDE SYSTEMS

FIRE PROTECTION SYSTEMS

Existing Systems & Reported Problems/Deficiencies:

a. The campus is served by a central fire protection system. A central water reservoir/atmospheric tank holding 250,000 gallons with fire pumps is located adjacent to and north of the Conowingo Center.
b. An electric vertical turbine fire pump and diesel fired vertical turbine fire pump are located above the reservoir/tank in the pump house. The pumps are rated for 1500 gpm at 125 psi. A jockey pump maintains minimum system pressure of 75-100 psi.
c. An underground fire protection line serves fire hydrants throughout the campus. This same line serves most but not all buildings on campus.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. Extend and provide a wet pipe sprinkler system to buildings which are currently not sprinklered including the Hickory Center, Harford Sports Complex building, Forest Hill Center and the Observatory.
b. A public water system would enhance the level of protection.

MECHANICAL

Existing Systems & Reported Problems/Deficiencies:

a. The campus is comprised of multiple buildings served by individual heating and cooling plants, a combination of buildings served by independent cooling plants and/or direct expansion systems with a central heating plant serving multiple buildings, a central cooling plant serving multiple buildings with independent heating plants and buildings which are served by remote central heating and cooling plants.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. Based on the proximity of buildings, creating multiple central utility type plants within an existing or new building or as an independent building would house all central heating and cooling plant equipment to serve multiple buildings in close proximity.
b. Small central plants would create localized locations to house multiple boilers, multiple chillers and primary-secondary pumping systems.
c. Advantages include enhanced operating efficiency, redundancy and reduced maintenance cost.
d. Plants could be expanded when future buildings are constructed and/or existing buildings are renovated.
e. Potential central satellite plants could include serving the following clusters:
    - Library, Maryland Hall, Bel Camp Building, Aberdeen Hal, Bel Air Hall, Havre de Grace Hall, Student Center and future adjacent buildings.
    - Fallston Hall, Darlington Hall, Edgewood Hall and future adjacent buildings.
    - Joppa Hall, Forest Hill Center, Hickory Center, Conowingo Center and future adjacent buildings.
    - Chesapeake Center, Susquehanna Center, APGFCU Arena and future adjacent buildings.

PLUMBING

Existing Systems & Reported Problems/Deficiencies:

a. The campus is not served by a public municipal water system. Four (4) on-site water wells serve the campus.
b. The wells are typically piped to adjacent buildings where the water is stored, treated and boosted to serve adjacent buildings.
c. The water distribution system is interconnected such that the three (3) main water wells provide water for all campus buildings. The fourth well serves irrigation for the sports field and is tied into the Susquehanna Center for limited emergency backup.
d. The three (3) main wells are over forty (40) years old.
e. One water well is located adjacent to Joppa Hall. The water treatment, storage tanks, and booster pumps are located in Joppa Hall which also serve adjacent buildings.
f. One water well is located on the north side of Aberdeen Hall. The water treatment system, storage tanks and booster pumps are located in Aberdeen Hall which also serves adjacent buildings.
g. One water well is located on the west side of Hays-Heighe House. The water treatment system, storage tanks and booster pumps are located in Susquehanna Center which also serves adjacent buildings.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. New back up wells as individual well pump alternators are recommended in close proximity to existing water wells to provide additional redundancy.
b. Water wells should be upgraded with water level sensors to insure low water levels in wells will turn pumps off prior to running well dry and/or avoid pump burn out.
c. A public water service would eliminate the water wells, water treatment systems, storage tanks and booster pumps plus associated monitoring and permitting requirements.

ELECTRICAL

Existing Systems & Reported Problems/Deficiencies:

a. Unmarked 13.2kV BGE underground feeders are scattered throughout the campus.
b. Multiple outdoor lighting fixtures are fed from BGE transformers and submetered.
c. Outdoor lighting fixtures are not energy efficient LED, but HID.
d. Backup emergency generators vary in age, capacity, manufacturer and fuel source. Multiple generators handle only Life Safety loads to buildings.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. As LED site lighting becomes common, it is recommended that all HID lamps be replaced with LED fixtures, with control through building mounted photocells and time clocks. Additionally, site lighting should be fed from nearby buildings in lieu of BGE stepdown transformers.
b. Natural gas generators should replace all diesel generators due to the low cost of natural gas and lower maintenance requirements of a natural gas generator. Additionally the generators should be upsized to handle additional standby loads to be added.
c. Provide emergency generators for all lift stations.

d. The campus should centralize the incoming electrical distribution to a central plant, to allow HCC to become their own utility for the campus and allow for a single 13.2kV line from BGE so previous BGE lines can be abandoned in the ground.

FIRE ALARM SYSTEMS

Existing Systems & Reported Problems/Deficiencies:

a. Each building has their own standalone system, with varying capabilities (i.e. voice evacuation).
b. All building alarm systems tie back to a central building where issues can be reported and diagnosed.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. Replace fire alarm systems to one manufacturer for consistency and ability to stock parts.
b. Upgrade al fire alarm systems to voice evacuation type, which will allow for greater ability to evacuate and direct building occupants in the event of an emergency or other hazardous situations.

INFORMATION TECHNOLOGY

Existing Systems:

a. The campus has a centralized data center located in the Library, where all the fiber run back to for the whole campus.
b. Based on the building arrangements, some buildings provide additional fiber runs in lieu of running back to the library data center.

Reported Problems/Deficiencies:

None.

Recommendations:

None.

SITE INFRASTRUCTURE

LOCATION AND TOPOGRAPHY

Located approximately 4 miles east/northeast of Bel Air, Maryland, Harford Community College occupies 360 acres that are apportioned into two large tracts known as "East Campus" (211 acres) and "West Campus" (149 acres). The college has 4 primary zoning designations, "Academic Core," "College & Community Use," "Recreation," and "Conservation." The Academic Core encompasses all of the existing buildings that are centrally located in the heart of campus. The Recreation zone includes the southern-most area, with baseball and soccer fields located near the Thomas Run Road and Churchville Road intersection. The College and Community Use zone is delineated mostly along the west side of Thomas Run Road, where the Towson University Building resides. Finally, Conservation zones closely follow the stream corridors and the heavily-forested spaces within the property boundaries.

Topographically, the highest points are along the general "ridgeline" that parallels Thomas Run Road. County GIS mapping depicts contours around elevation 404 to 406 just west of the Thomas Run Road right-of-way, near the John Archer School and Harford Technical High School. From this higher area, the grade across the Academic Core descends toward the east. The core campus buildings are generally positioned in the elevation 370 to 390 range. The lowest point on the eastern parcel is around elevation 316 (where the northern creek corridor crosses Medical Hall Road).

The only portion of the main campus where the terrain exceeds a 15% grade is south/southeast of the Student Center where 30% slopes drop into a drainage corridor near Graduate Drive. This slope is mostly wooded as it descends toward the north side of the corridor on the south side of the stream the topography flattens somewhat in the wastewater treatment plant area. As the terrain wraps toward parking lot "B," the tree canopy opens and the slope tapers into a more gentle lawn hillside.

The West Campus terrain generally slopes toward the west and becomes deeply incised with two primary creek valleys bifurcating the elongated parcel. The first stream valley spans from the Thomas Run Road right-of-way down to the creek bed where there is approximately 140 feet of vertical change. This region also represents the lowest and steepest portions of the overall college properties, with a contour elevation of 262 +/- where the northern property line intersects a creek channel, which represents the second stream valley. In this western tract, there are 40% slopes where the property line angles sharply to form the narrowest point of the parcel. A third significant stream valley in the western-most corner of the property has more dramatic topography, with one particular hillside sloping as much as 55%.

HYDROLOGY

Watersheds and Jurisdictional Boundaries

The geomorphology of HCC's eastern campus includes 2 primary stream valleys, both flowing north and east into Thomas Run and ultimately to Deer Creek. The watershed delineations for both of these valleys begin at the high points along Thomas Run Road. Rainwater falling in the core campus area reaches the storm infrastructure or drains directly toward one of these two valleys. Surface runoff in the Chesapeake/Hays-Heighe/Student Center area drains into a wooded corridor near the Susquehanna Center tennis courts. The creek bed in this valley has wooden fencing outlining the beginning of the channel, signifying the point where the creek formally starts and serving as a "guardrail" to protect anyone strolling by. The other drainage corridor begins just north of Fallston Hall, in the area occupied by a large stormwater facility. Both of these sub-watersheds ultimately leave the campus property by crossing under roadways at the college perimeter (Medical Hall Road and Graduate Drive).

West Campus is somewhat more "subdivided" with a dendritic stream pattern that meanders through the tract. As a result, there are a few places where stream buffers may be wider than usual because the channel forms an oxbow or because two creeks are running parallel to each other in close proximity. The runoff in these multiple drainage corridors merges in a forested wetland on the property of the adjacent northern neighbor and ultimately flows north toward Deer Creek.

The majority of campus runoff travels a good distance north before emptying into Deer Creek. Deer Creek then drains eastward and meets the Susquehanna River at Susquehanna State Park. Ultimately, the runoff from Harford Community College empties into the Chesapeake Bay at the confluence of the Susquehanna River and the Bay, in Havre de Grace, Maryland. The campus is roughly 11 miles from this confluence, so Harford Community College does not have any territory located within the Chesapeake Bay Critical Area and is therefore not subject to CBCA regulations.

Harford County enforces a 75' stream buffer requirement and County regulations stipulate that building construction cannot occur within this buffer. However, utility easements are allowed within these areas.

Flood Plain and Wetlands

FEMA Flood Insurance Rate Maps covering the campus (panels 24025C0160E, 24025C0166E, and 24025C0167E) do not indicate any flood-prone areas within the college's property boundaries. The nearest flood hazard designation is roughly ¼ mile north of the West Campus property line.

In the core campus area, there is one noteworthy semi-aquatic landscape feature. Just north of Cross Campus Drive, near parking lot "A," there is a large stormwater management facility that does appear on the U.S. Fish and Wildlife Service's National Wetlands Inventory on-line database. While the database does not designate this location with a specific alphanumeric wetland code, it is color-coded as a "freshwater pond." A September site visit revealed a low, marshy area, with little standing water. It appears that this area is most likely ephemeral and likely that this facility impounds more water volume during wetter months. Whether this facility qualifies as a "pond" or merely a stormwater facility, it is nonetheless a landscape feature that clearly supports aquaphilic vegetation and as such, could be considered a micro-scale "wetland" ecosystem. The NWI mapping does not specify wetland designations for any other stream corridors or low-lying portions of the main campus. However, there is a constructed "pocket wetland" facility that serves as part of the Susquehanna Center's stormwater management strategy.

On the west side of Thomas Run Road, within the large parcel known as "West Campus," there are various patches of hydric soils that may be characterized as wetlands. In 2009, Frederick Ward and Associates produced plans for HCC that depict 10 individual non-tidal wetland pockets scattered throughout the western campus parcel. In general these patches are centrally-located on the tract, with 7 of the 10 depressions situated more than a quarter mile west of the Towson University building. Two of the wetland pockets are roughly within a quarter-mile radius of the Towson Building, positioned along a drainage corridor designated as a "perennial stream." While these 10 individual pockets do not appear in the National Wetlands Inventory database, most of these low-lying places drain north toward a large area that is designated in the NWI mapping as "Freshwater Forested/Shrub Wetland." This larger wetland area is located on adjacent property, just beyond (perhaps slightly encroaching) the northernmost property line. The NWI mapping depicts this larger wetland with the code "PSS1A," indicating a "palustrine" ecosystem, temporarily flooded, and dominated by trees and woody, broad-leaved deciduous vegetation averaging more than 20 feet tall. The water table in this area generally lies well below the ground for the majority of the year.

Wetlands in Harford County are protected with a 25' State of Maryland buffer and a 75' County buffer. On the west campus parcel, the wetland buffer in closest proximity to an existing HCC facility appears to be a small depression located about 0.13 mile west of the Towson University building, at the confluence of the building's back-yard drainage-way and a nearby stream corridor southwest of the parking lot.

STORMWATER

Managing Stormwater

In accordance with Maryland regulations, Harford Community College currently maintains a number of stormwater management practices that are designed to reduce runoff velocities and allow infiltration to recharge underground aquifers. There are 33 facilities distributed throughout the campus, including micro-bioretention cells, pervious pavements, dry wells, grass channels, and detention ponds. For example, the area surrounding the Towson Building has grass channels around the parking lot, micro-bioretention facilities near the main entrance, sand filters, and a detention pond in the "back yard."

Similarly, the yard area around Darlington Hall has 3 micro-bioretention facilities plus an installation of pervious pavement on the south side. The micro-bioretention cells are carefully graded into the landscape close to the architecture and, in some cases, sculpted into narrow spaces between the building and the Thomas Run Road right-of-way. The permeable pavement is installed along a pedestrian pathway connecting the main building entrance with parking lot "C."

Around the Susquehanna Center, there are grass swales graded into spaces between parking bays. The swales are designed to allow some degree of natural infiltration while the remainder of the runoff is conveyed to a "pocket wetland" located between APG-FCU Arena and the nearby baseball field. This constructed wetland includes a forebay (impounded with gabion baskets) and a permanent pool area with a perforated underdrain. Further "downstream," there is a third facility, a dry detention pond, graded into the landscape behind the tennis courts. Working in concert, these three practices are designed to manage the stormwater runoff from the impervious parking, sidewalk, and roof surfaces around the Susquehanna Center/APG-FCU Arena complex.

There are other quality/quantity control depressions in strategic places around campus. Parking Lot "T" has bioretention cells in the vegetated space between the parking bays and also at the southern end of the lot. Parking Lot "W" also has a large facility at the southern end, between the asphalt surface and Churchville Road. There are also some facilities south of Joppa Hall, in the space between the building and nearby parking lot "F." All of these practices are sized to handle a targeted amount of impervious area and are not necessarily designed to have "cushion" capacity that might accommodate additional runoff input from future development.

As the college evaluates proposed development projects, the Maryland Department of the Environment (MDE) will expect HCC officials to set aside territory for site-specific stormwater management facilities. MDE emphasizes practices that fall under the category of "Environmental Site Design," which includes facilities that promote infiltration/groundwater recharge (micro-bioretention, for example). Additionally, MDE prefers to see these practices installed as close as possible to the impervious surfaces being treated, so parking lots, walkways, or roof areas associated with campus expansion projects will require the closest adjacency to "green space" stormwater allocations. Due to the suburban nature of Harford Community College, the campus is uniquely suited to comply with stormwater management requirements when compared to institutions in more tightly-constrained urban settings. However, whether these facilities are located in the country or in the city, they require maintenance attention in order to function properly. Therefore, it is important for HCC grounds crews and facility administrators to be vigilant concerning the numbers and types of stormwater practices arrayed throughout campus.

An inventory of 2016 facilities reveals the following tally.

#	SWM FACILITY TYPE	LOCATION
1	Quality - Bioretention	Parking Lot A – Fenced facility at eastern end of the northern-most asphalt lot
2	Quality - Sand Filter	Parking Lot A - Fenced, along the northern edge of the asphalt near Aberdeen Hall
3	Quality - Bioretention	Parking Lot A – Fenced, along the northern edge of Aberdeen Hall lot
4	Quality - Bioretention	Parking Lot A – In space between Cross Campus Drive and parking area entrance
5	Quality - Bioretention	Parking Lot B - Northeast corner of lot (elevated above Cross Campus Drive)
6	Quantity	West of Graduate Drive - South of Parking Lot B
7	Quality - Bioretention	East of Graduate Drive – Between road and residential community
8	Quantity	Northwest corner of Graduate Drive and Churchville Road intersection
9	Quality – 8 Dry Wells	Sports Complex – Group of 8 wells near soccer field
10	Quality – 1 Dry Well	Sports Complex – Between soccer field and baseball field
11	Quality – 1 Dry Well	Sports Complex – Between large baseball field and small baseball field
12	Quality - Bioretention	Parking Lot T – Swale in the long island running north/south
13	Quality - Bioretention	Parking Lot T – South of the lot extension, triangular depression
14	Quality - Bioretention	Parking Lot T – South of the lot extension, rectangular depression
15	Quality – Grass Channels	Parking Lot S – Swales in the islands
16	Quality – Pocket Wetland	Between APG-FCU Arena and baseball field
17	Quantity – Detention Pond	APG-FCU Arena – Behind tennis courts
18	Quality - Bioretention	South of Darlington Hall – Near Thomas Run Road
19	Quality - Bioretention	Darlington Hall – Northwest corner of building
20	Quality - Bioretention	Darlington Hall – Northeast corner of building
21	Quality – Permeable Paving	Darlington Hall – Pedestrian connection to Parking Lot C
22	Quality – Dry Well	Observatory
23	Quality – Permeable Paving	Observatory
24	Quantity – Detention Pond	Observatory
25	Quality – Grass Channel	Towson University Building – South side of parking lot
26	Quality - Bioretention	Towson University Building – East side of parking lot (with forebay near bldg)
27	Quality - Bioretention	Towson University Building – West end of parking lot
28	Quality – Sand Filter	Towson University Building – “Back Yard” area – West side of building
29	Quantity – Detention Pond	Towson University Building – “Back Yard” area - West side of building
30	Quality – Sand Filter	Towson University Building – Near intersection of Thomas Run Road & Lundys Lane
31	Quality - Bioretention	Joppa Hall – South side
32	Quantity - Detention	Joppa Hall – South side
33	Quality	Parking Lot J – North of Hickory Center

The 2016 Campus Development Studies indicate the potential for a number of new or expanded buildings, primarily in the core campus area. For example, a library addition, a new academic building, plus a new math & engineering facility would all introduce new impervious surface square footage that would require "project-specific" stormwater management solutions. Since a proposed parking garage could be positioned in an area that is already impervious (Parking Lot "A"), there is a possibility that such a project may not need to introduce a large number of new stormwater management facilities. Since a realignment of Cross Campus Drive might interfere with current stormwater facilities north of Parking Lot "A," there may be the potential to modify the existing bioretention cells and introduce a few new ESD practices in close proximity to the deck, all under the auspices of a unified vision, rather than in a piecemeal manner.

There will be similar regulatory stipulations for impervious surfaces on other parts of campus. The proposed Forest Hill Center Replacement building and a proposed building on the south side of Joppa Hall would require micro-bioretention facilities (or other sanctioned "ESD" practices) to satisfy MDE regulations. Similarly, any expanded roof square footages, such as proposed enlargements for Chesapeake Hall or APG-FCU Arena, would fall under the category of additional impervious surfaces and would necessitate stormwater management evaluation, design, and permitting during project development.

Storm Drain Infrastructure

The campus currently has a network of inlets and underground pipes that collect and convey storm drainage toward outfall points in the stream corridors. In general, the East Campus drainage "divide" appears to be along an axis formed by Bel Air Hall, Maryland Hall, the south side of the Library, and the allée south of Darlington Hall. Most of the drainage north of this axis finds its way into the larger watershed that covers the forested northern portion of campus. Drainage collected around the Student Center, the Chesapeake Center, and the Susquehanna Center is deposited into the creek corridor that flows east, behind the wastewater treatment plant, toward Graduate Drive.

CAMPUS VEGETATION AND FOREST CONSERVATION

East Campus is relatively open around the sports complex, with very sparse shade trees planted mostly along the Thomas Run Road and Churchville Road frontages. North of the ballfields, behind APG-FCU Arena there is a wooded conservation area begin preserved, and as expected, this conservation area is associated with the creek corridor that drains toward Graduate Drive. There are stately shade trees in the large lawn space behind the Hays-Heighe House, providing some degree of tree canopy linkage between the conservation area and the grounds surrounding the library. This particular part of campus resembles a small arboretum, with a sawtooth oak, linden, and an American Larch that is specifically labeled with an identification tag. While the Hays-Heighe lawn spaces have very large trees in the back yard, there are only sporadic shrubs and herbaceous plants in the front yard. As pedestrians move from the Hays-Heighe area toward the Library, there are more understory and shrub communities providing some definition for study and gathering spaces.

Generally, Harford Community College has quite a few very mature trees, some with robust measurements of 30 inches "diameter-at-breast-height" or more, potentially qualifying them as "specimen" candidates. While many of the larger trees are

located in the Hays-Heighe area, there are also some large-caliper oaks, pines, maples and other species in the lawns next to Thomas Run Road (especially by Parking Lot "T") and in the allée south of Darlington Hall. The grand allée, in particular, has a few mature maples that appear to be in fair or poor condition, with some dead branches intermingled among sparse leaf densities. The northeastern corner of the main campus property supports a much larger forested community, with approximately 50 undeveloped acres surrounding another primary stream corridor that drains north underneath Medical Hall Road.

West Campus has a large open area around the Towson Building and the associated parking lots. Further west, however, the parcel is heavily wooded, with roughly 75 undeveloped acres of territory. Aerial imagery reveals three or four large open spaces in the woods behind the Towson Building, so about 60 of those 75 acres could be described as uninterrupted tree canopy coverage.

As HCC initiates future development projects, officials must be mindful of the State of Maryland's Forest Conservation Act of 1991, which stipulates Forest Stand Delineations and Forest Conservation Plans for any activity requiring subdivision, grading, or sediment control permits on areas greater than 40,000 square feet. For each individual development project, designers will need to prepare the necessary computations that determine how much forest would be lost and what sort of mitigating measures would be necessary to satisfy regulatory requirements. The Maryland law is designed to promote the preservation of intact forest resources ("retention") as much as possible. When forest clearing is necessary, the regulations specify the amount of replanting ("reforestation") to offset development impacts. In some circumstances, now plantings may be added to sparsely vegetated areas ("afforestation") in order to increase forest coverage.

UTILITIES

Water

There are a total of six wells serving the Harford Community College campus. Of these six, four primary wells serve East Campus and operate under a withdrawal permit from the Maryland Department of the Environment. These four main wells are arrayed around the campus core (one north of Joppa Hall, one north of Aberdeen Hall, one northeast of the Susquehanna Center, and one well beside the Susquehanna Center that feeds irrigation service to the sports fields). The Towson Building has a dedicated well that operates under a separate permit. The sixth well, near the Observatory, is small and operates outside the other withdrawal permits. These wells supply the potable water for domestic provision and the Joppa well provides water for fire protection also. Shortly after water is extracted from the Joppa well, the distribution is divided so that domestic water reaches destinations through one pipe network while fire suppression service is conveyed via a separate piping system.

In the domestic water network, the wells feed water into "attendant" pressure/storage tanks located in nearby buildings (Joppa, Aberdeen, and Susquehanna) and hydropneumatic processes pressurize the service lines. The water is generally treated for pH/alkalinity and is piped through 8" or 10" lines. The overall domestic system is "compartmentalized" to serve a particular campus sector. For example, the Aberdeen well and tank system serves buildings in the general proximity of Aberdeen Hall. However, the domestic distribution layout is interconnected so that the overall system can be adapted to compensate for a failure in one of the sectors.

The fire protection piping forms a loop through East Campus from an underground tank (approximately 250,000 gallons) near the Conowingo Center (formerly the Plant Services Building). From the pumping station beside the Conowingo Center, the fire protection line extends south past Fallston Hall. Near the Chesapeake Center the trunk line turns east and forms a looped alignment that wraps around core campus buildings (Student Center, Aberdeen

Hall, etc.). The system has multiple hydrant spurs radiating from the trunk and it also serves various sprinkler arrays in HCC buildings. The network has redundant pumping mechanisms to account for pressure drops and is pressurized to handle fire department pumper truck usage even during sprinkler activation. There is existing hydrant protection service for the Susquehanna Center area, but the fire lines do not extend further south beyond APG-FCU Arena, so there are no hydrants in the Sports Complex.

Sanitary

Harford Community College is not linked to public sanitary infrastructure. In 2012, the college constructed a centralized wastewater treatment plant (WWTP) in order to modernize their overall sanitary effluent disposal strategy. Campus officials submitted an application to the Maryland Department of the Environment for a permit to install an innovative deep-trench drip disposal network on the eastern side of campus, near Graduate Drive. Once MDE granted the approval, HCC became the first institution in Maryland to install and utilize this unique wastewater disposal system.

The strategy begins with individual septic tanks in various locations throughout campus. A few of these septic tanks have adjacent pumps, but there are some stand-alone pump stations as well. A total of seven pump stations send effluent, via force mains, toward the new central wastewater treatment plant. The plant employs a multi-faceted treatment process involving standard media filters, stone denitrification (to foster bacteria), subsurface wetlands, and deep bed disposal drip irrigation trench fields.

The campus also maintains an old existing septic drain field (known as the “Aberdeen System”) located just north of Parking Lot A.

INFRASTRUCTURE: CAMPUS CIRCULATION

Vehicular

Thomas Run Road (Route 154) and Churchville Road (Route 22) serve as the primary vehicular approaches to Harford Community College. Thomas Run Road, in particular, has 7 entry points into the various sectors of East Campus, with 5 of those entry points formally labeled with large numbered signs indicating the available destinations. The other two entry points are not as prominently "announced." One entrance into Parking Lot "T" has a small sign and the other less prominent entry point, where Alumni Lane exists between Parking Lot "C" and Darlington Hall, has no signage at all. Along Churchville Road, the intersection signed as entry #6 provides access to a roadway (Graduate Drive) that parallels the eastern-most property line and essentially serves as a campus boundary. Finally, there is another vehicular access point serving the West Campus, located in front of the Towson University Building.

The existing roundabout at entrance #3 currently functions as the primary "gateway" into HCC, allowing vehicles to enter the college along Cross Campus Drive, a major campus arterial. This drive feeds 8 large asphalt parking areas (4 of which are under the "A" lot label) and also serves as the quickest avenue to reach core buildings. The speed limit along Cross Campus Drive is 15 miles per hour.

Parking

Parking on campus is entirely on asphalt surface lots (no parking decks). The majority of parking spaces are concentrated within 10 major lots, labeled alphabetically. A tally of campus parking is provided on the following page. In addition, Towson University site provides 249 spaces with 8 accessible spaces.

Of these 10 major surface lots, 4 of them (A, B, E, and F) have either direct or indirect access points from Cross-Campus Drive. Lots A, E, and F are all located on the north side of Cross Campus Drive, and college officials have expressed a desire to alter this situation so that students do not have to cross the roadway to reach the core campus buildings.

The 2016 Campus Development Studies recommend altering the alignment of Cross Campus Drive so that it "sweeps" in a northern arc and creates space for a future parking garage. This new garage would facilitate the consolidation of a majority of the Parking Lot "A" spaces and would effectively change the parking paradigm near HCC's core buildings.

PARKING COUNT - MAIN CAMPUS LOT	Open	Handicap	Van Acc H/C	Employee	90 min	Permit	Carpool	Other	Total
A-Lot	623	3	0	0	0	0	0	3	629
B-Lot	118	2	0	40	0	0	1	0	161
C-Lot	140	5	1	38	2	5	1	1	193
E-Lot	105	5	1	15	0	0	0	0	126
F-Lot	230	3	2	8	0	0	0	4	247
J-Lot	297	7	0	36	0	0	1	8	349
L-Lot	99	11	2	7	0	1	2	5	127
T-Lot	217	6	0	0	0	0	0	0	223
T-Lot Extension	81								81
W-Lot	88	0	4	0	0	0	0	0	92
3 Lot-Fallston	0	3	1	27	0	0	1	0	32
4 Lot	0	0	0	16	0	0	0	0	16
S Lot	433	10	4	15	0	0	0	0	462
6 Lot-Aberdeen	0	1	0	3	0	0	0	1	5
Misc: Ches #2 (rear-East)	11	4	0	0	0	0	0	0	15
Misc: Ches #2 (rear-West)	9	3	0	0	0	0	0	0	12
Misc: Forest Hill	0	1	0	0	0	0	0	9	10
Misc: Havre de Grace	0	3	1	0	0	0	0	0	4
Misc: Hays Heighe	0	2	0	0	0	0	0	2	4
Misc: Conowingo	44	1	1	0	0	0	0	1	47
Misc: Student Ctr.-Side	0	1	0	12	0	1	0	2	16
Misc: Student Ctr.-Back	0	7	1	0	0	0	0	0	8
Misc:H/C+service:Aberdeen	0	1	2	0	0	0	0	1	4
Miscellaneous Total	64	23	5	12	0	1	0	15	120
Entire Site Total	2496	79	20	217	2	7	6	37	2863

Pedestrian

In general, Harford Community College is relatively open and "walkable" in the areas around the core buildings. There are walkways along the edges of lawn spaces around the library and pathways connecting the various academic buildings nearby. Many of these pathways are 5' or 6' wide asphalt strips with no formal "edging," while others are more formalized concrete sidewalks. In some instances, the path material changes. For example, students walking from Edgewood Hall to Joppa Hall use an asphalt walk beside the driveway between parking lots E and F. Students would then need to cross the drive and walk the rest of the way to Joppa Hall on a narrow concrete strip, only about 3' wide.

In East Campus, the most significant barrier to easy pedestrian motion is Cross Campus Drive. Students who park in lots A, E, or F must find crosswalks and wait to get across this busy roadway. Many of the formal crosswalks are relatively narrow and are simply indicated with white paint striping and a small bollard sign in the middle of the yellow lane striping. Other crosswalks have white striping with irregular shapes, indicating that pedestrian passage could occur from two or three different points along the curbing.

There are a few congregational spaces for relatively small gatherings. The plaza immediately west of the Chesapeake Center has a surface of decorative pavers and free-standing, umbrella-shaded picnic benches randomly positioned in the space. The area has the feel of a large courtyard, outlined with at-grade concrete edging and crape myrtle planters. Beside the Student Center, there is a small circular seating area that effectively serves as a passive recreation space for plaza games or casual dining.

There are pathways linking the core buildings with other sectors, such as the Chesapeake/Susquehanna area to the south or the Joppa Hall area to the north. However, there is no easy way for pedestrians to cross Thomas Run Road in order to reach the new Towson University Building sector.

Regarding accessibility, there are pedestrian ramps in key locations to facilitate wheelchair access. Some of these inclines are quite long, specifically the ramp along the north side of Havre-de-Grace Hall and the ramp adjacent to the grand staircase beside the library. The Americans with Disabilities Act (ADA) specifies the dimensions and construction detailing necessary to achieve regulatory compliance for these types of passages. Older ramps are not required to be rebuilt if they are deemed non-compliant, but any new buildings proposed for HCC would need to install accessible pathways per the ADA guidelines.

As a part of the 2016 Campus Development Studies, the proposed parking garage and re-alignment of Cross Campus Drive would afford HCC an opportunity to enhance various pedestrian crosswalks. For example, just north of Fallston Hall, there is an existing pathway that directs students over an earthen embankment between two large stormwater management depressions. If Cross Campus Drive were re-aligned near this location, a new, wider crosswalk could be established with specialty pavers and perhaps elevated slightly to serve as traffic calming. This crosswalk could be further enhanced with a college logo or another highly-visible decorative treatment that would send a clear signal to drivers that it is a significant pedestrian crossing.

Recreational Fields

There are four (4) dedicated campus baseball/softball fields and one dedicated soccer field. There are also several multipurpose fields. All recreational fields are directly adjacent to MD route 22. All of the recreational fields appear to be draining properly.

SITE ANALYSIS

CONTEXT

Harford Community College's main campus is centrally located within Harford County, east of the County seat of Bel Air. The main campus is located at the northeast corner of Churchville Road (Maryland Route 22) and Thomas Run Road. However the College is not located within the populated and urbanized areas of the County, which includes the I-40 corridor communities of Joppa, Abingdon, Belcamp, Aberdeen and Havre de Grace and MD-24 corridor communities from I-95 to Bel Air and Forest Hill.

Harford County's Development Envelope controls development through the control of public water and sewer connection. The campus currently operates on well water and septic. Public water and sewer access within the Development Envelope is located approximately 1.25 miles from Chesapeake Center, just west of Prospect Mill Road. The acquisition of property west of Thomas Run Road has positioned the College closer to public water and sewer. The agricultural land north of Medical Hall Road is designated Priority Preservation Area (PPA). Priority Preservation Area aims to protect agricultural and natural land area from urban development.

The main campus east of Thomas Run Road surrounds the historic Hays-Heighe House estate, listed on the National Register of Historic Places. Since the previous masterplan Harford Community College has continued to expand its landholdings on both sides of Thomas Run Road.

The campus east of Thomas Run Road extends from Churchville Road to the south to West Medical Hall Road to the north. A single family residential neighborhood on Campus Hills Drive and Campus Lakes Court and a retail node including the WaWa convenience store at the intersection of Churchville Road and Graduate Lane form the eastern boundary of the campus. The campus west of Thomas Run Road is bounded to the north by large lot single family homes and agricultural land off of Jacobs Well Court, to the southwest by wooded large lot single family homes and to the south by Harford County Public School properties including Harford Technical High School, Prospect Mill Elementary School and John Archer Elementary School. Harford Community College has narrow frontage on Prospect Mill Road just west of Wagner Farms Road. *Refer to Exhibit 4D.1 Existing Campus.*

The campus is well-defined by public roads and forested valleys and sits prominently along a ridge extending from Thomas Run Road. The following paragraphs describe and analyze the existing campus in terms of overall campus organization, land use, access and vehicular circulation, pedestrian and bike circulation, transit, open space and campus landscape.

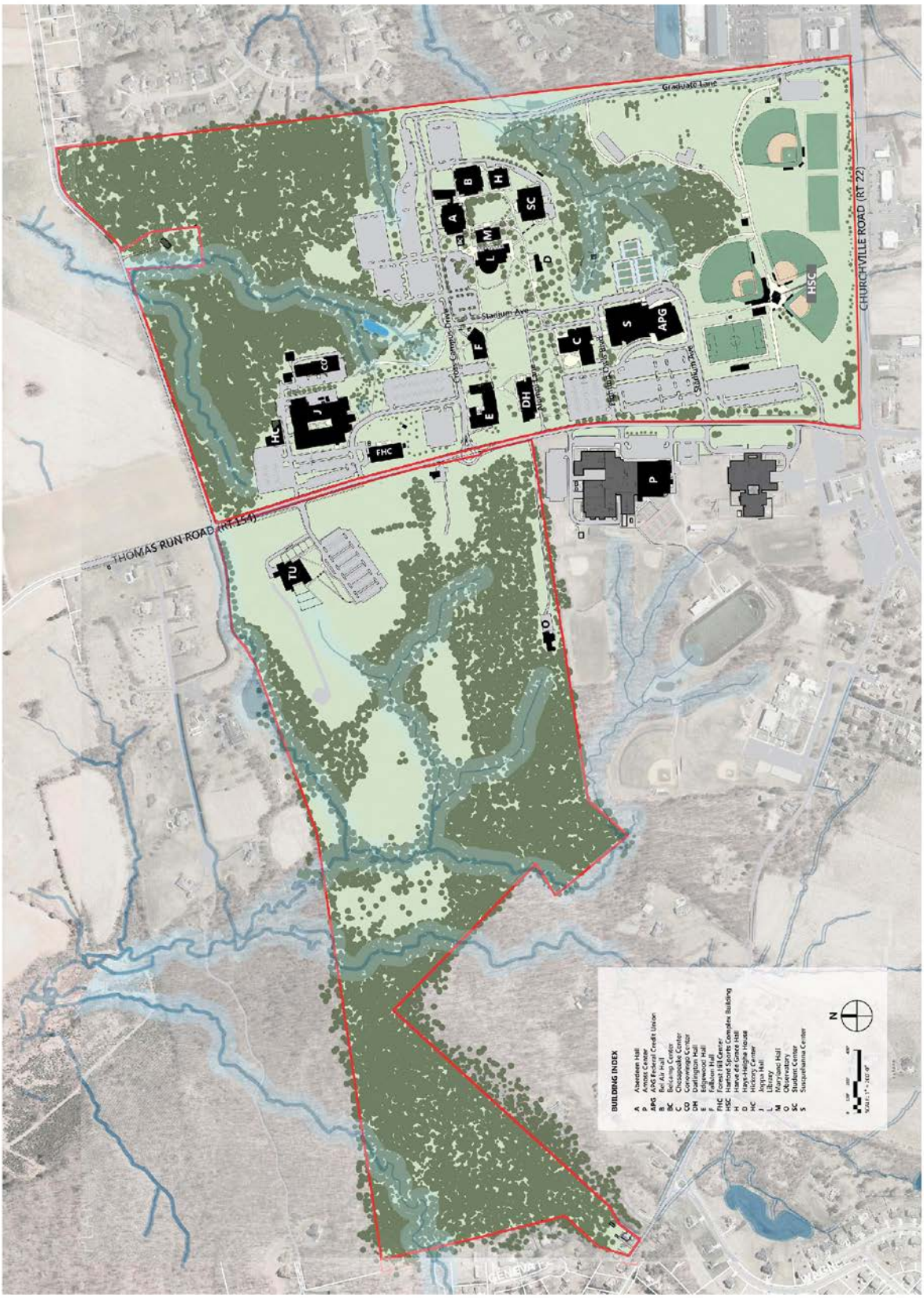


Exhibit 4D.1 Existing Campus

CAMPUS ORGANIZATION

Existing Conditions

Harford Community College campus is defined by a series of ridges, roads, open spaces and buildings. In general there are four distinctively developed campus precincts- the Academic Core, North Campus, Athletics Precinct and West Campus.

The Academic Core is located along a ridge line extending from Thomas Run Road between Entrance 3 and 2 along the old allee of trees leading east to the historic Hays-Heighe House. The Academic Core is framed on the north by Cross Campus Drive, the east by Graduate Lane, the south by Fighting Owl Boulevard and the stream south of the Hays-Heighe House, and the west by Thomas Run Road. Stadium Avenue, a north-south road, bisects the Academic Core. Internal to the campus core are a variety of open spaces. The original campus is organized around a well-defined, hill-top quad east of the Library. The surrounding buildings include Aberdeen Hall, Bel Air Hall, Harve de Grace Hall, Student Center and Maryland Hall. Newer academic facilities have developed west of the Library. Darlington Hall, Edgewood Hall, and Fallston Hall partially frame an expansive east-west rolling lawn between Thomas Run Road and the Library. An east-west pedestrian/service lane creates a linear open space that connects the Quad along the north side of the Hays-Heighe House and connects to the allee of trees and former road bed north of Chesapeake Hall.

Cross Campus Drive separates the Academic Core from parking lots A, F and E as well as the North Campus, a cluster of buildings located north and uphill from Lot F and E. This cluster of buildings includes Joppa Hall, Conowingo Center, Hickory Center and Forest Hill Center. Joppa Hall is the only academic building in this precinct. Unlike the Academic Core, North Campus is not organized by open spaces; rather buildings are surrounded by parking lots and service areas. A park-like open space links Joppa Hall and Fallston Hall. This space includes a walking path, seating areas, wind turbine demonstration site, pond and trail heads.

Fighting Owl Boulevard and the stream valley south of the Hays-Heighe House is a clear edge between the Academic Core and the Athletic Precinct to the south. Susquehanna Center and the APG Arena is located within close proximity to the Academic Core, just south of Chesapeake Hall. The field sports are located further south along Churchville Road. The soccer stadium, baseball stadium and the two softball stadiums are radially organized around Harford Sports Complex Building. Two practice fields and a second baseball field are located in the southeast corner of the campus. Tennis courts are clustered between two forest stands and APG Arena.

The land west of Thomas Run Road is largely forested and undeveloped, with the exception of the Towson University Building, due west of Joppa Hall and the Observatory surrounded by woods due west of Darlington Hall. A small auto/metal repair business operates out of a small single-story building located on College-owned land adjacent to Thomas Run Road north of the Gate 3. This business is in the process relocating and will vacate the structure.

Analysis

The main Quad has a very distinct “sense-of-place” with many of the academic buildings surrounding this open, level hilltop open space. The rolling lawn space west of the Library is less well-defined by buildings and feels expansive. The main Quad is comprised of closely spaced buildings all at approximately the same grade and the building entrances face directly onto the quad. The rolling lawn, on the other hand, is stretched out with buildings and their entrances more distant to each other. Students do not necessarily

congregate with the same intensity as on the main quad or near the fountain north of the library. Stadium Avenue and Alumni Lane separate Chesapeake Hall from the rolling lawn and Hays-Heighe house.

North Campus works well for facilities maintenance and campus support zone with good access to the Academic Core and Thomas Run Road, but removed far enough to be out of sight. Joppa Hall, an academic building, is separated by parking lots and open space from the Academic Core, creating a sense of isolation and separation.

The athletic fields are concentrated in the southern portion of the campus. The field sports are removed from the academic core by a wooded valley and are about a 5-minute walk from the main Quad.
The land between the Academic Core and fields is generally contiguous without significant barriers, such as steep slopes or parking fields. A stronger, clearer north-south pedestrian corridor between the Academic Core and Athletics Precinct would improve the sense of proximity between these campus areas and encourage more walking.

The property west of Thomas Run Road is expansive and wooded. Thomas Run Road is a physical barrier for vehicular and pedestrian access between the existing campus and future West Campus growth. This physical barrier is a limiting factor for future academic facilities that desire to be close to the academic core. The wooded setting is appropriate for the observatory. The Towson Center sits independent from Harford Community College and lacks sidewalk connectivity east to the Academic Core. The West Campus contains an expansive and growing forest system with hiking paths worth preserving. At the same time the West Campus is within close proximity to public water and sewer connection near Prospect Mill Road. Roadway and utility expansion through West Campus provides an alternative route bypassing Churchville Road and the Thomas Run Road intersection.

As the campus continues to grow, buildings, pathways, open spaces and parking areas can continue to be located in a manner to reinforce the overall organization of the campus and connections between different campus precincts.

LAND USE

Existing Conditions

Land uses throughout the Harford Community College are varied. Most academic and administrative/support uses are located in the Academic Core. Joppa Hall and the Observatory are two academic facilities that are located outside of the Academic Core. Parking is concentrated north of Cross Campus Drive and along Thomas Run Road. Athletics are located along Churchville Road south of the Academic Core. The Amoss Center, Towson University and the Observatory are located west of Thomas Run Road. The maintenance function of the campus is located on the North Campus, adjacent to Joppa Hall. Performing Arts facilities are dispersed throughout the campus with a large theater in the Amoss Center, a smaller theater in Chesapeake Hall and two black box theaters and recite halls in Joppa Hall.

A significant portion of the campus remains as open space, comprised of park-like spaces or woodland areas in addition to the athletic fields, Quad and lawns. Refer to ***Exhibit 4.2 Campus Land Uses***.

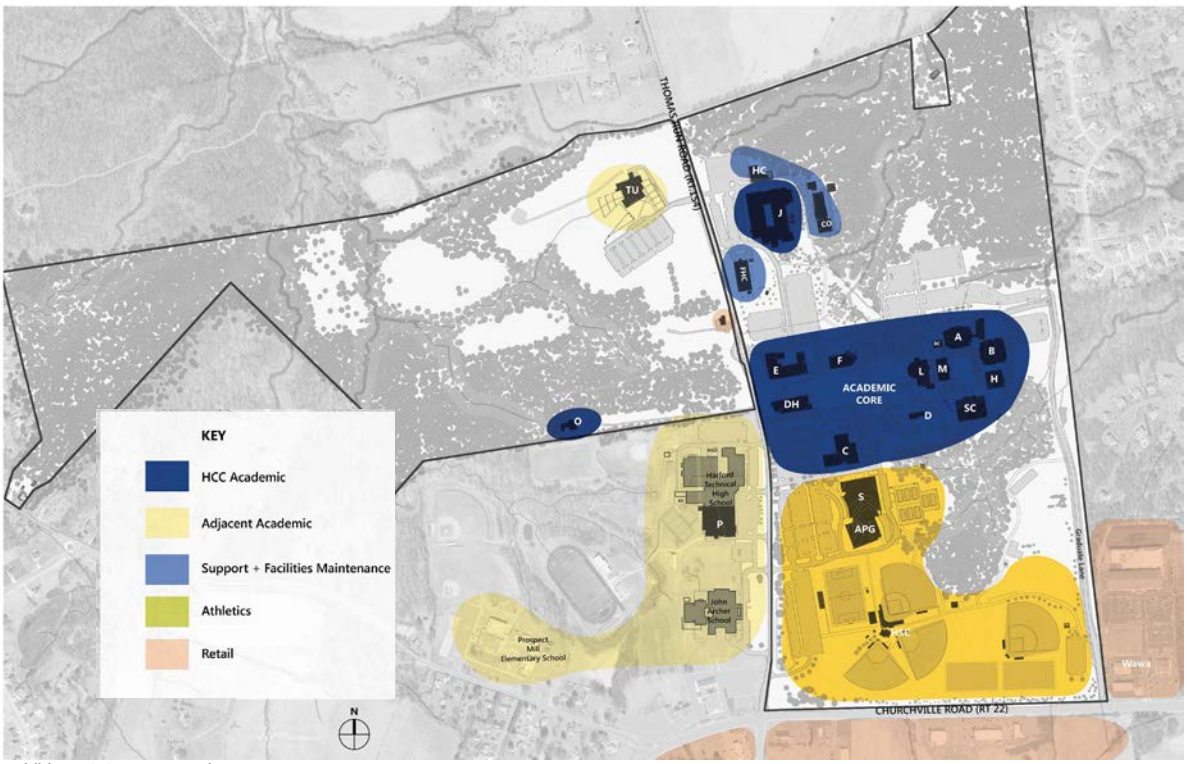


Exhibit 4D.2 Campus Land Uses

Analysis

Generally, the distribution and grouping of land uses works well and is appropriate for Harford Community College. Facilities critical to the daily learning experience are concentrated in the academic core. Joppa Hall, one of the largest academic buildings is situated outside of the academic core and beyond parking lots, approximately ¼ of mile from the Student Center. Some of the functional uses, such storage for art related materials located in and outside of Joppa Hall are compatible to the facilities maintenance services located in adjacent Conowingo Hall. The Student Center is located in the southwest corner of the Academic Core and anchors the main Quad. The day-to-day student support services, such as food services, bookstore and club spaces, are conveniently located in the Student Center. The Student Center is not visible and conveniently accessible from a parking lot. This locational issue makes the Student Center less than adequate to support the existing admissions, financial aid, and similarly related student services. Chesapeake Hall, which houses administrative services, is visible from Thomas Run Road and adjacent to convenient parking. This location is better suited for services that support and welcome first time visitors to the campus.

Thomas Run Road is a great barrier to link the Academic Core with the Amoss Center, Towson Center and Observatory. Pedestrian and vehicular improvements as well as future building design and placement can resolve the sense of distance and physical obstructions between the West Campus and the Academic Core.

The Susquehanna Center, APG Arena and the athletic fields are concentrated together. Walkways and service lanes provide a network of connections between the arena complex, park lots, fields and even north to the Academic Core. The Harford Sports Complex Building provides storage, restrooms and some concessions capacity for the western portion of the athletic fields, whereas the eastern most fields lack toilets, storage and shelter. The parking is unevenly distributed in favor of the more spectator-drive athletic facilities closer to Thomas Run (Lot T and S). A smaller parking lot (Lot W) provides some parking support to the eastern fields.

ACCESS AND VEHICULAR CIRCULATION

Existing Conditions

Harford County's population center is south and west of the campus. Destinations west, southwest and east of the campus use Churchville Road (Maryland Route 22) to access the campus. Maryland Route 22 is an east-west arterial connecting Bel Air with Aberdeen. This corridor is developed, particularly west of the campus.

Schucks Road, a narrow county-owned, two-lane road, provides access to the campus from the south destinations. This is the shortest route to the nearest I-95 interchange at Cresswell Road. Schucks Road turns into Thomas Run Road north of Churchville Road.

The fully signalized intersection at the southwest corner of the campus collects in-bound traffic from Shucks Road and Churchville Road onto Thomas Run Road to the campus. A west-bound right turn lane on Churchville Road is under-construction to provide more capacity at the existing intersection. Thomas Run Road provides access from destinations north of the campus. Traffic along Thomas Run Road between the campus and Churchville Road is impeded by multiple intersections and turning movements. Thomas Run Road provides access not only to Harford Community College, but to the Towson University Center, John Archer Elementary School and Harford Technical High School. During the school day, Thomas Run Road experiences peak-hour congestion leading to the signalized intersection at Churchville Road. Back-ups from Churchville Road make it difficult for cars to safely access or cross Thomas Run Road.

There are five official gateways along Thomas Run Road. The round-about at Cross Campus Drive provides constant vehicular flow in and out of the central portion of the campus. Graduate Lane is the sixth official gateway and provides a signalized access directly to Churchville Road. All gateways have large monumental signs. A more decorative and monumental gateway of framing piers and walls are located at Gate 3 and 6.

Internal to the campus, Cross Campus Drive provides access to the more heavily utilized parking lots adjacent and north of the academic core. However, Cross Campus Drive separates Parking Lots E, F, A from the Academic Core. Pedestrians are forced to cross the roadway creating safety conflict points and reduce the vehicular flow. Refer to ***Exhibit 4D.3 Vehicular Circulation***

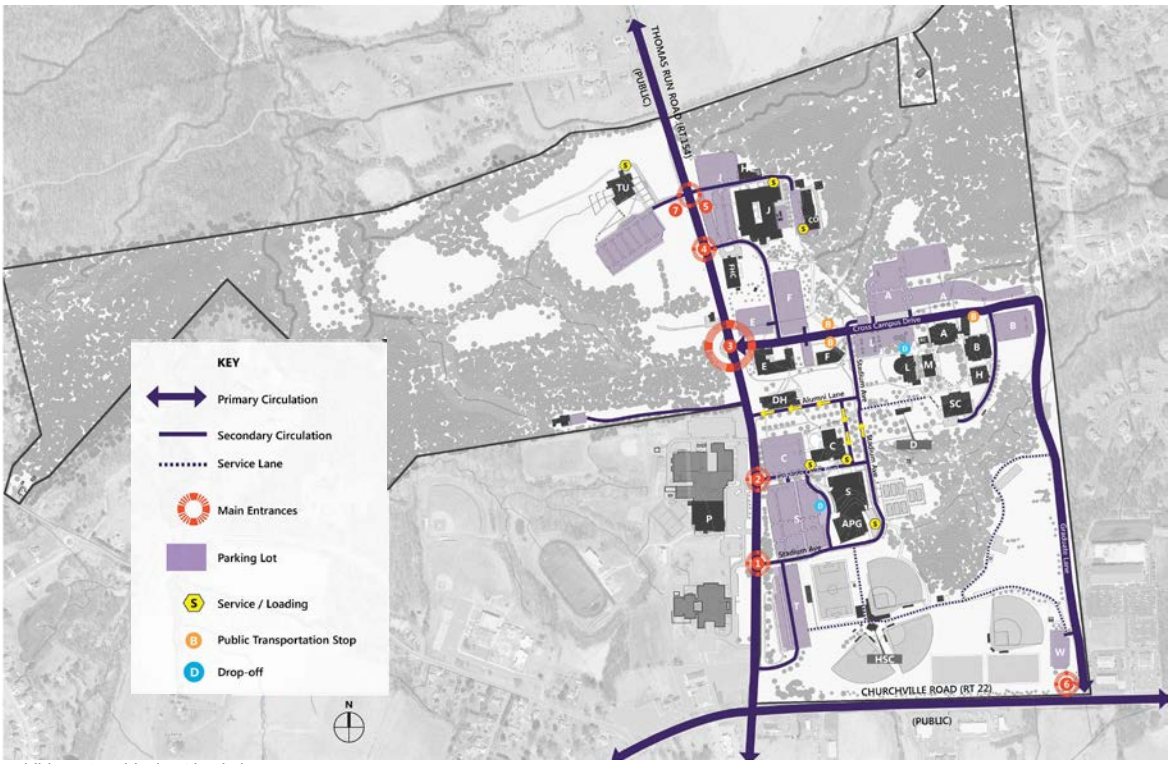


Exhibit 4D.3 Vehicular Circulation

Analysis

The round-about at Cross-Campus Drive and Thomas Run Road has improved the flow of traffic in and out of campus as well as created a distinctive central entrance into the campus. Although the campus has multiple points of access points, all but one access points puts vehicles onto Thomas Run Road adding to the congestion, particularly during peak hours of the school day. Graduate Lane provides access directly to Churchville Road, by-passing Thomas Run Road, however Graduate Lane appears to be used less frequently. This may be attributed to the perceived distance between the Churchville Road and the Academic Core, the lack of parking lots located on Graduate Road or the easier right-turn movements from parking lots to Thomas Run Road. The parking lots adjacent to APG Arena and Chesapeake Hall do not have direct access to Graduate Lane. Alternative routes to between APG Arena and Graduate Lane may divert traffic away from Thomas Run Road. This route could be particularly useful for peak school day rush hours or during major on-campus events.

The Thomas Run Road and Churchville Road intersection is undergoing improvements to improve flow and capacity. The most direct route to the more populated parts of the County from the campus leads directly through this intersection. A roadway east to Prospect Mill Road provides an alternative route to avoid this intersection. An eastern road alignment to Prospect Mill Road must contend with the physical and financial

implications of constructing a lengthy roadway through rolling slopes, wetlands, forest stands, streams and related regulatory buffers.

Realignment of Cross Campus Drive north of Parking Lot A will ameliorate the many existing pedestrian-vehicular conflict points and will locate parking closer to the center of campus. In addition, easy right-turn movements out of these new parking lots may encourage vehicles to exit directly to Churchville Road.

Consideration should be given to traffic demand strategies to reduce vehicular travel demand on campus. These strategies provide cost-effective and sustainable alternatives to building new roadways and parking lots. Strategies include priority parking for car-pools or develop pricing strategies to better use existing parking stock.

PEDESTRIAN, BIKE AND TRANSIT CIRCULATION

Existing Conditions

In general, the campus is well served by a network of pedestrian pathways and sidewalks. The walkways are constructed of asphalt, concrete and in a few places with pavers, such as in front of the library.

In the Academic Core the pedestrian network is well connected. The experience is enhanced by gentle topography, well-maintained landscape, adequate site lighting, and multiple opportunities for seating. Two east-west pedestrian corridors provide access between Edgewood and Darlington to the Quad. From this duel pedestrian spine pathways branch out to connect buildings with adjacent land uses and parking areas.

There are two major trail systems. The Walls-Cook Trail traverses the western campus connecting the Observatory and Thomas Run Road to the county-owned Prospect Mills Park. In the northeastern corner of the campus there is a nature trail loop with a major trail head adjacent the pond by Conowingo Center. Between Lot T and Thomas Run Road is a small asphalt paved fitness walking path. This path does not connect to other walkways.

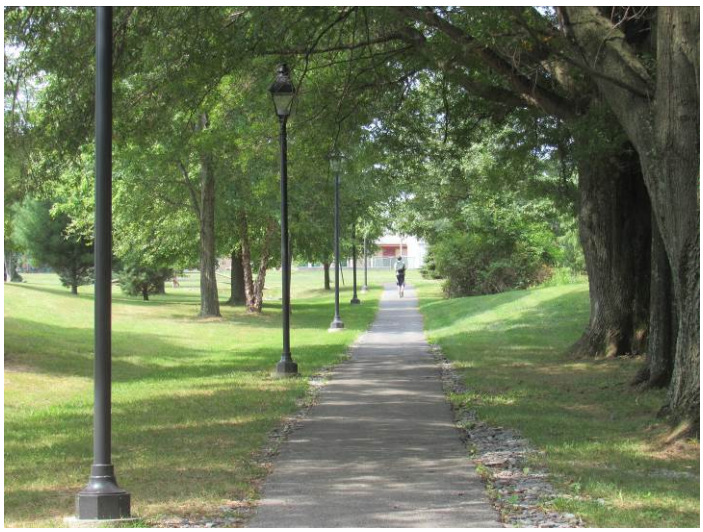
Campus community members frequently walk around the campus for exercise. This undefined loop route uses existing pathways and sidewalks as well as traverses parking lots, such as infront of Conowingo Center or across lawns where pathways do not exist.

Distance, roadways and lack of walkways and crosswalks are limiting factors to make the campus pedestrian system better connected. Cross Campus Drive is a major pedestrian barrier. This roadway physically separates the Academic Core from Joppa Hall and the central parking lots (Lots A, F and E).

There are multiple crosswalks of various geometries and connection points along Thomas Run Road. To a lesser extent, the less frequently used Alumni Lane and Stadium Avenue are pedestrian hazards.

Thomas Run Road, like Cross Campus Drive, is a barrier for pedestrian connectivity. Towson University has sidewalk connections to and along the western side of Thomas Run Road, but there is not a crosswalk or east-west walkways from Thomas Run Road to Joppa Hall. There is a crosswalk at the intersection of Thomas Run and Fighting Owl Road which links the Harford Tech sidewalks with the sidewalks along Fighting Owl Road (connecting the Amoss Center with APG Arena). Pedestrians must wait for cars to voluntarily yield to the pedestrian.

Joppa Hall is connected to the Academic Core by a series of scenic park-like pathways with places of for rest, education and enjoyment of the natural setting. However Joppa Hall is the most remote academic building from the Student Center. In addition people must also traverse slopes and Cross Campus Drive.



In general the APG Arena and athletic fields have good pedestrian access to the Academic Core. There are a few locations where pedestrians are required to cross roadways between the APG Arena and the fields as well as to the Academic Core. The designated walkways and service lanes provide adequate pedestrian access throughout the field sports. In some areas pedestrian lighting is not present, particularly between the Harford Sports Complex Building and APG Arena. Refer to *Exhibit 4D.4 Pedestrian Circulation*

Improvements to Churchville Road have introduced designated bike lanes, although this system is incomplete. On campus there are a few bicycle racks and no dedicated bikeways.

The campus is serviced by the 1 and 1A Green Line of the Harford County Link bus system. The Green Line arrives at the campus approximately 15 rides between 7:25 AM to 6 pm. This service connects the campus to Bel Air, Aberdeen and Havre de Grace. Inconvenient bus transfers are required to get to Edgewater and populated neighborhoods in the southeast corner of Harford County.

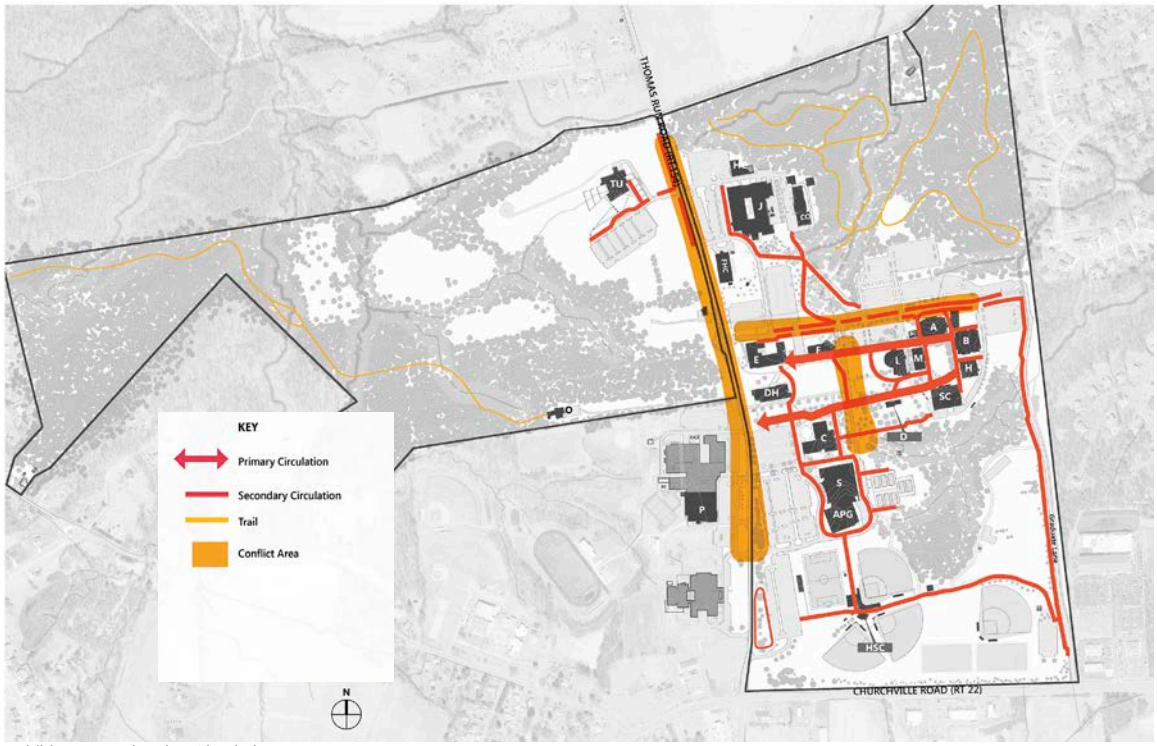


Exhibit 4D.4 Pedestrian Circulation

Analysis

While the campus has a robust network of pathways, there are many pedestrian-vehicular conflict points. As future facilities are developed consideration should be given to prioritize safe pedestrian access and reduce the vehicular movement internal to the campus. Pathways extensions should be considered to link Towson University and the trail systems to the Academic Core. In addition, a loop path at the perimeter of the campus would create safe recreational circuit and community asset.

A dedicated bike lane along Graduate Lane and Cross Campus Drive provides access to the campus from Churchville Road bike lanes. Where necessary, storm drains should be retrofitted with grates that do not obstruct bike mobility. A shared-use path through the west campus could provide an alternative off-road bike connection to the campus from populated areas around Bel Air. Bike racks should be located at highly visible, safe as well as convenient locations adjacent to building entrances. However bike racks should not obstruct pedestrian space and seating areas. Additional amenities such as access to showers, lockers and covered bike storage should be provided to encourage year-round bicycle commuters.

Transit provides an alternative mode of transportation to help reduce the demand for cars and parking on campus. New campus development should continue to locate bus shelters in convenient and accessible locations. The location of the campus outside of the populated and developed areas of Harford County does not enable transit to work most efficiently to serve residents that would benefit from transit services. Harford Community College should work with Harford County to expand hours of service and development routes or connections that could provide more expedient and direct transit service to the southeast corner of Harford County.

OPEN SPACE

Existing Conditions

The Academic Core has two primary campus open spaces. The Quad is the heart of the campus. It is flat and well-proportioned to accommodate a variety of social activities. The rolling and expansive Lawn space west of the library is traversed by Stadium Avenue. Currently this open space is more scenic with smaller gathering spaces located adjacent to building entrances.

To the south of these open spaces are two distinctively wooded and park-like spaces- the allee between Chesapeake Hall and Darlington Hall and the area around the historic Hays-Heighe House. These areas are unable to provide space for large events but do provide smaller scale seating areas, such as the picnic area south of Darlington Hall and the small amphitheater southeast of Hays-Heighe House.

The plaza and fountain north of the Library is well used pedestrian space and vehicular drop-off point. Benches and tables below the shade of the mature trees provide shaded socializing space. The monumental stairs on the east side of the library are underutilized.

The campus has two notably sized plazas. The semi-circular plaza west of the Student Center is well used and easily accessed to the lower level dining area. The Chesapeake Hall plaza is generously sized, but does is not conveniently located near active building programs.

Between Cross Campus Drive and Parking Lot F and Lot A is another scenic park-like setting. The large storm water facility and pond are the main attraction within this area. Meandering pathways link Joppa Hall to the Academic Core. Benches around the pond offer a quiet place for reflection and studying. The iconic wind turbine not only provides a hands-on learning but articulates HCC's commitment to promoting sustainability.

The athletic fields along Churchville Road provide recreational space for the campus and surrounding communities.

Generally, the campus is built on higher ground. Forested riparian valleys traverse through and surround the campus. The west side of Thomas Run Road is dominated by the existing and reemerging forest system. *Refer to **Exhibit 4D.5 Open Space Typologies.***

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Analysis

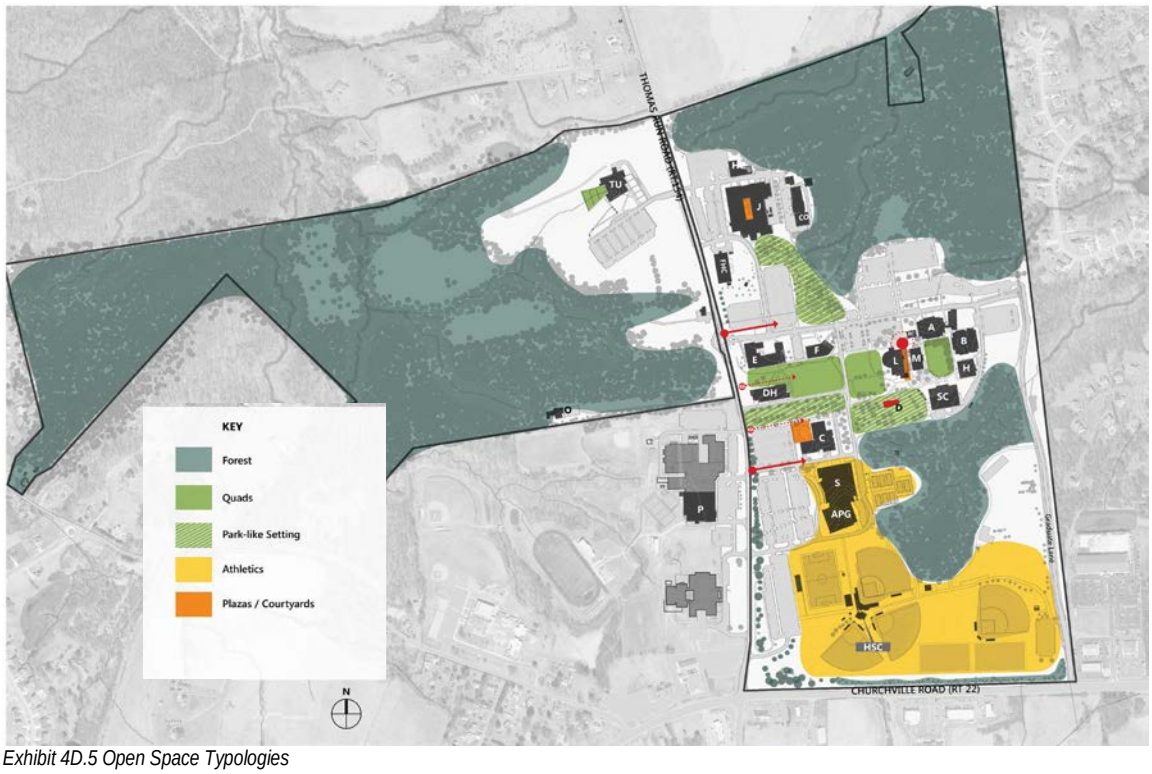


Exhibit 4D.5 Open Space Typologies

The original Quad is the most useable and distinctive traditional campus space. The space is well contained by surrounding buildings and uninterrupted by roadways and service areas. Each of the surrounding academic buildings has small scale entry courts that provide casual areas for socializing and seating, while the flat open lawn can accommodate larger outdoor events. The mature trees in the northwest corner of the quad provide shade and a sense of timelessness. This space functions well as a traditional academic quad and should be protected.

The Lawn west of the Library is not fully developed and contained by buildings. Future buildings should be laid out to strengthen the sense of enclosure. Daily vehicular movement on Stadium Drive should be eliminated to encourage a fully pedestrian Academic Core. Shared paths can provide both pedestrian and intermittent service vehicle access.

The allee and Hays-Heighe house represent a vernacular agricultural landscape type common of old Harford estates. These spaces should be protected from encroachment of development and enriched with seating opportunities to enjoy this bucolic setting. Recent pathway improvements to the spring house has helped enable people to explore the nearby stream and historic structure.

The park-like setting around the pond is a major north-south pedestrian corridor and provides important environmental functions. Future development should avoid this area to protect both the existing connectivity and environmental qualities of this space. Pedestrian improvements at the periphery, such as wayfinding signage and crosswalks on Cross Campus Drive, can enable better access to the space.

The athletic fields are an expansive open space. Restrooms are limited to the western half of this precinct. Consideration should be given to provide a convenient support facility (restrooms and storage) closer to

Parking Lot W to support the eastern baseball and practice fields. There is adequate open space along Churchville Road to expand a walking path outside of the playing fields. This pathway could provide a hard surface to access sports fields in additional to creating a more comprehensive loop pathway system.

Exhibit 4D.6 Environmental Features and Drainage Pattern

The forested riparian areas are important to the ecological function of the county and campus. They provide hands on learning and recreational opportunities. Visually the forest creates a distinctive buffer to the campus, seasonally transforming throughout the year. *Refer to Exhibit 4D.6 Environmental Features & Drainage*.

CAMPUS LANDSCAPE

Existing Conditions

The landscape at Harford Community College is comprised of manicured lawn areas, natural woodlands, accent planting areas and remnant landscapes associated with the historic farm estate. The campus is populated with mature trees, such as within Parking Lot A and L, the northeast corner of the Quad, within the allee and Hays-Heighe house site and along perimeter of the campus.

Analysis

The diversity of landscape settings results in a rich campus experience for those using and visiting the campus. The historic landscapes associated with the Hays-Heighe estate is an asset many other college

campuses do not have. While the historic landscape features distinguish this campus from others, it is the mature canopy trees that make the most positive contribution to the campus landscape. Many canopy trees occur throughout the campus, particularly within the Academic Core and play a significant role in defining spaces and providing comfort in the form of shade. Canopy trees also allow unobstructed sight lines beneath their canopies which is an important consideration in terms of safety and perception of safety. As the campus continues to grow, it is important to emphasize the planting of new canopy trees to increase the overall tree canopy and to establish "replacements" for those trees nearing the end of their lifespan. In particular, more canopy trees should be planted in parking lots to provide shade and beak up large expanses of asphalt.

Many of the accent plantings along walkways and adjacent to buildings are attractive and help make the campus more pedestrian-friendly. Newer buildings have successfully incorporated foundation plantings to ground the buildings and soften the adjacent pathways. Native species planting should be encouraged to create natural habitat, potentially minimize water demand and help the campus visually connect to the surrounding natural areas. Many of the older buildings around the Quad lack foundation and accent planting. Introducing a consistent landscape palette around the Quad can help create a unified open space.

The central landscape in the traffic circle is very successful at demarcating this intersection as the main gateway into the campus. Accent planting at the base of existing monumental gateway signs would provide color relief to the grey and black signs, potentially increasing the visibility of these signs. Gateway accent planting should be a consistent planting palette to reinforce the campus identity along the periphery.

Integrated stormwater management plantings provide an ecological services as well as aesthetic interest. These facilities will continue to be an important landscape feature for new development. A planting palette can help create visual consistency throughout the campus.

The tree stands along Thomas Run Road and Churchville Road offer a distinctive public edge to the campus. This landscape form should continue to be protected and expanded on both sides of the Thomas Run and along the north side of Churchville Road. Street trees on internal roadways should be expanded to create rhythm, visual relieve and shade to reduce the heat island effects.

Accent paving has been installed in some visually important locations such as within the plazas or at building entrances. There is a variety of paver types, but generally the palette ranges from red brick pavers to a cobble grey concrete paver. The pavers help create a sense of welcome and place. These materials offer pedestrian-scaled textures to enrich the places of congregation. New development should continue to employ paver materials to enhance building entrances and important pedestrian nodes.

A grey and brown field stone is a common material for site walls and building foundations particularly around the

Quad. Future projects around the Quad should incorporate this material to create more visual unity at the ground level.

Stamped red concrete was used at the traffic circle. The red and paver texture creates a distinctive contrast to the dark black asphalt. Key cross walks should use this material to help enhance pedestrian awareness and safety.

SUSTAINABILITY

Harford Community College maintains a Sustainability Committee that guides sustainable practices for the College. Most of these have been in the form of campus operations and capital development. Examples of the College's practices include the following:

- The College purchases approximately 15% of its electricity from an on-site solar farm consisting of over 3,000 solar panels. The roof-top photovoltaic solar panels have been in incorporated in two recent projects: Susquehanna Hall / APG Arena and Darlington Hall, in addition to the very large solar array on Joppa Hall.
- All recent and current projects incorporate LEED sustainability guidelines, although in some cases, LEED certification is not pursued. The recent Towson University project achieved LEED Silver certification, and the current Edgewood Hall project is pursuing LEED certification.
- The campus has been migrating to LED lighting systems in buildings and on site, particularly in site lighting.
- New projects incorporate rain collection systems to minimize the impact of storm water.
- A wind turbine with solar panels has been installed near the pond, generating one kw of electricity.
- Roof-top




MASTER PLAN RECOMMENDATIONS

The Facilities Master Plan fully supports the College's sustainability commitment. All projects envisioned in the master plan are expected to embrace the College's sustainability practices. Sustainable strategies which have been incorporated into the master plan include:

- Continuing to incorporate the sustainability recommendations from the 2009 Facilities Master Plan, including recommendations for the campus zones, and recommended practices of the College's sustainability committee.
- Developing a plan to maintain, protect, and coordinate the uses of the natural spaces on campus.
- Orienting, where possible, the long axis of new buildings along an east-west axis to capture preferable solar access.
- Providing for integrated storm water management consistent with new State of Maryland regulations: to be incorporated in each new project and throughout the campus.
- Improving intra-campus pedestrian connections, discouraging use of vehicles for intra-campus transportation.
- Clarifying way-finding to reduce unnecessary driving.

- Retaining natural wooded areas to maximum extent, limiting impervious development and maintaining natural habitat.
- Planting with native plants and removing invasive species to enhance wildlife habitat and stability.
- Planting shade trees throughout the campus, but particularly adjacent to roadways and parking lots to reduce urban heat island effects.
- Safeguarding natural wetlands and environmentally sensitive areas.
- Re-using existing buildings where possible; renovating buildings in lieu of new construction, provided the existing buildings do not present infeasible renovation possibilities
- Building on previously developed areas, limiting impervious development.
- Encouraging multi-story buildings where feasible, minimizing building footprints and corresponding additional unnecessary impervious area.
- Working with County and MTA public transportation authorities to improve bus service to and from the campus from and to existing population centers, discouraging use of private vehicles.
- Encouraging car-share programs, such as priority parking for carpooling, to reduce the land area devoted for private car parking.
- Supporting bikeways internal to the campus coordinated with and connected to bikeways planned by the County on public roads adjacent to the campus.
- Supporting the commitment to LEED construction practices for future new construction and renovation projects.
- Continuing replacement and upgrade of lighting with more energy-efficient systems and fixtures.
- Continuing to explore, and then implement, solar photovoltaic arrays. A possible future location includes the upper level of the proposed parking deck.
- Continuing to provide educational signage to promote the knowledge and understanding of sustainability best practices.
- Supporting student activities and initiatives related to sustainability.
- Maintaining trails and developing trailhead signage to promote access to trail networks to encourage exploration of ecological systems surrounding the campus.
- Protecting the natural and built zones of preservation identified in the plan (see exhibit below). These valuable preservation areas include riparian and forest systems (F:1, F:2, F:3) that provide ecological benefits; septic and waste water treatment areas (S.1, S.2), the Hayes-Heighe House (HH), fountain plaza (F), Quad (Q), and Observatory (O) and surrounding forest area.

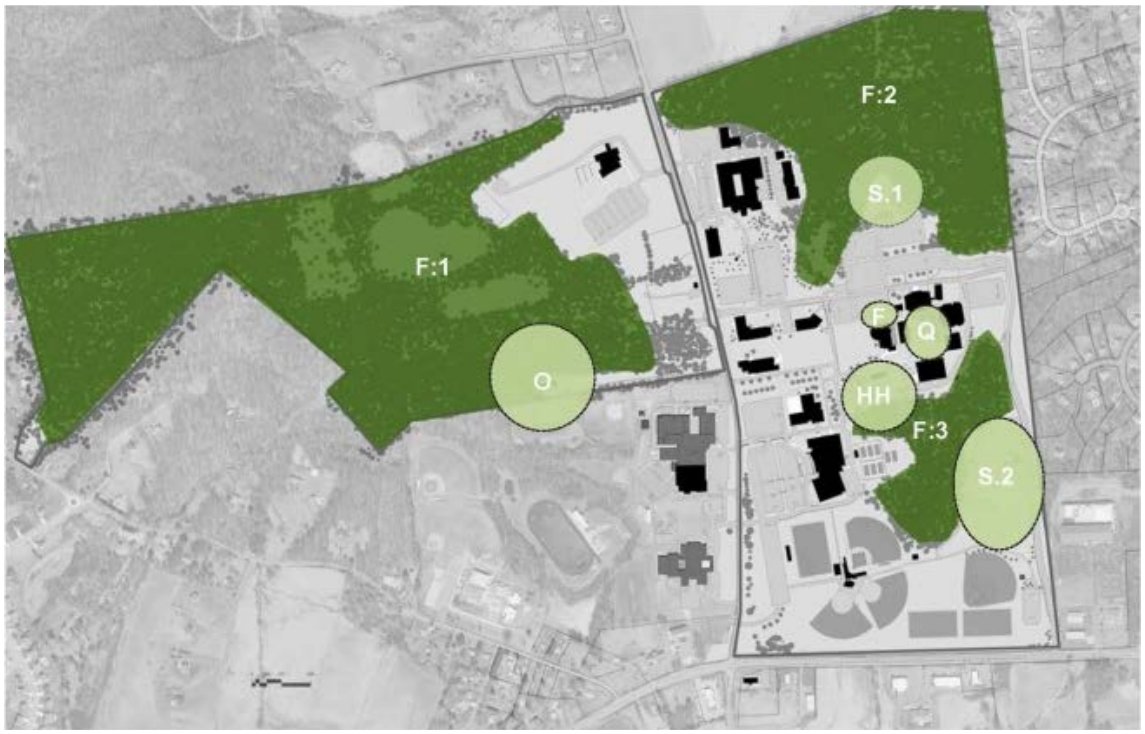


Exhibit 4E.1 Preservation Sites

Rooftop Solar Array – Joppa Hall

Rainwater Collection System – Aberdeen Hall

OFF-CAMPUS SITES

In addition to the main campus east of Bel Air and the Amoss Center (for performing arts) west of Thomas Run Road, the College offers classes at several sites in the County, including County buildings and more dedicated sites. Those dedicated sites include the University Center and Wage Connection locations near Aberdeen and the Edgewood Library. By far the most significant of these is the University Center, located off of Maryland Route 22 just west of Interstate 95.

University Center

Building Description

Building Designation	University Center
Number of Floors	1 (East), 2 (West)
Net Assignable Square Feet	17,602
Gross Building Area - GSF	29,080
Net-to-Gross Efficiency	60.5%
Year Constructed	1994 (East), 1997 (West)
Renovations	Minor
Additions	1997 University Center West
Contains	Classrooms, Meeting Room, Offices
General Condition	Very Good
Adequacy of Space	Adequate
Sprinkler System	Fully sprinklered

Built to be convenient to workers and residents along the I-95 corridor, and particularly in and near Aberdeen, the University Center (previously known as the HEAT (Higher Education Applied Technology) Center, provides accessible and well-equipped instructional space. Instructional technology systems in the masonry and steel frame building were upgraded in 2014. A previously anticipated expansion to the Aberdeen Proving Ground in connection with the 2005 federal Base Realignment and Closure (BRAC) initiative did not continue, and the influx of workers did not materialize as expected, resulting in current space availability at the Center.

Photographs – University Center

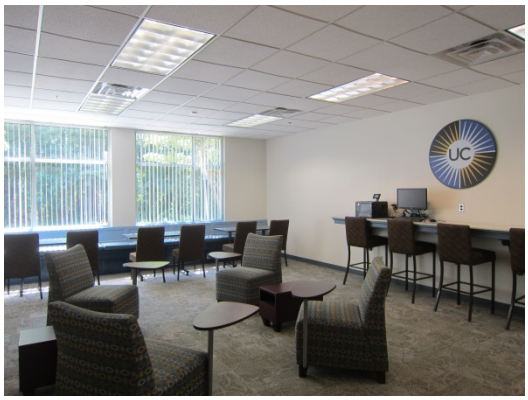
Building Exterior

Entrance Terrace

Office Suite

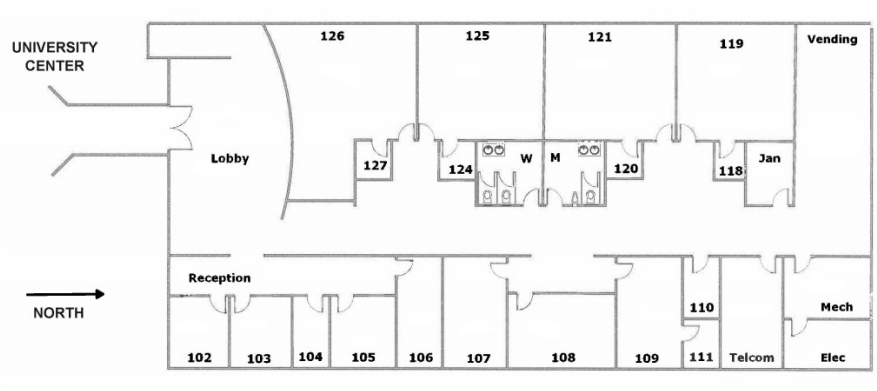
Computer Classroom

Large Classroom / Meeting Room



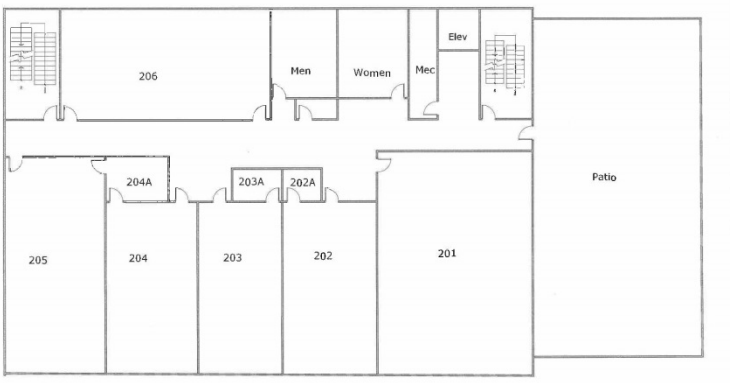
Lounge / Break-out Area

Floor Plans – University Center



UC East

UC West – First Level



UC West – Second Level

Chapter 5
Looking to the Future

Campus Development: Buildings, Site

Capital Projects

Proposed Campus Development

Off-Campus Development

CAMPUS DEVELOPMENT: BUILDINGS, SITE

Opportunities, Recommendations

BUILDINGS

ARCHITECTURAL CONSIDERATIONS

Throughout the life of the campus, the College has consistently built, maintained, and renovated buildings as needed to provide appropriate learning and support spaces for its programs. The campus began with seven "original" buildings, constructed between 1964-1968, including Aberdeen, Bel Air, Chesapeake, Havre de Grace, Joppa, Maryland, and Susquehanna. All of these buildings have been at least partially renovated within the past 15 years. After 1968, the next new buildings were the Student Center and Forest Hill between1976-1978. Then, several more years elapsed until the Pump Station, Harford Sports Complex, Belcamp, Edgewood, Fallston, and the Observatory come on line between 1990 and 1999. All other buildings – The Library, Conowingo, APG Arena, Darlington, and Hickory were erected in 2000 or later.

The essential structure and architecture of the campus buildings is generally adequate to allow the buildings to be successfully renovated. Exterior envelopes, foundations, supporting structure, floor plates, and floor-to-floor heights are generally sufficient to allow new building systems to be installed. With judicious use of funds, the College has invested in the existing buildings by regularly renovating some spaces and undertaking systems upgrades. While the amount of available space on campus is very limited, there are nonetheless sites that represent opportunities for new buildings, some as additions to existing buildings and some as stand-alone.

As buildings are renovated, expanded, and new buildings are constructed, the architecture of the existing buildings should be respected. Besides the 19th century Hays-Heighe House and spring house, all of the campus buildings have been designed to contemporary styles at the time of construction. Stone and masonry are the unifying elements for most campus buildings. These also can include tones of brick, compatible with the existing buff color; and field stone similar to the existing stone; other materials which can complement these two basic components; clear anodized windows, doors, and curtain walls; clear glass except where other types of glazing are suggested by internal functions; and unifying signage indoors and on the building facades. Building size should not exceed any of the largest existing buildings, and overall height should be limited to three stories. Roofs may be relatively level but all with positive slope, and some roofs may be sloped if suggested by their context or internal functions. Main entrances should be clearly discernable and should be fully accessible.

In academic buildings – including labs, classrooms, lecture halls, and offices – the faculty offices should be integrated with the instructional spaces. That is, they should be convenient to each other, so that faculty are accessible to students such as before and after class. Instructional spaces should be flexible, to accommodate various modes of learning experiences. Informal gathering spaces, meeting and seminar spaces, and adequate space for adjunct and part time faculty should be provided. Faculty offices should not be remote, such as in separate wings of buildings, not in separate buildings, and should be on the same floors as the instructional spaces. Offices should be grouped in suites where feasible. As informal learning spaces, lounges should be integrated into all buildings to provide convenient drop-in / touch-down spaces. Ideally, they are convenient to the most heavily used programmed spaces and through-routes within buildings and are equipped with networked computers, data outlets, and/or wireless coverage, plus power outlets for students' devices.

Structural systems generally should avoid interior bearing walls, to facilitate flexibility in future renovations. Corridor-to-exterior wall bays should be at least 30 feet wide to allow for flexibility in configuration of learning spaces and office suites. Corridors should be generous, and modulated, to allow for ease of passage and for interaction by students, faculty, and staff. Ceiling heights should be appropriate to the spaces, and in any case not less than 9 feet for small-to- moderate sized spaces. In new facilities not tied to existing buildings, floor-to-floor heights should be sufficient to avoid systems conflicts both in the initial installation and future modifications. Each building project needs to be designed with sustainable building systems, orientation, compactness, and configuration and should comply with the College's practice of meeting LEED certified standards.

SITE

INFRASTRUCTURE

Future development of on-site water service may involve extension of existing water provision to the athletic field areas, including lines sized for restroom buildings. Extensions of the existing 8-inch and 10-inch water loops may also be provided to serve proposed academic buildings. Based upon previous studies, it is possible that enough well capacity is available for some future development; however, a detailed analysis would be required to determine if additional water capacity is necessary. Additional capacity may be provided by drilling another well, establishing a water tower to serve the campus, or via connectivity to public water sources. Presently, the closest connection for public water is near the roundabout connecting Prospect Mill Road and Wagner Farm Road which is approximately one mile off campus. Since there is a 12" main near this location, it seems possible that this size water line could be extended to serve the campus. However, officials would need to conduct a proper study of the existing capacity in Harford County and the proposed demand by HCC in order to determine if this option is feasible.

As for sanitary service, the college's new wastewater treatment plant (WWTP) is sizable and robust. Therefore, campus officials do not anticipate needing wastewater facility enhancements in the near future. If there are new sanitary lines, lift stations, or restrooms proposed in the Sports Complex area, the WWTP should be well-prepared to adequately handle reasonable demand increases. However, any proposed development that might engender an unusually large increase in load should prompt a more detailed analysis of the existing system to ensure capacity. Campus officials do not anticipate that an additional system will be required in the near future, but it is possible that the existing system may need periodic upgrades to remain within MDE-established permit stipulations.

Regarding storm water management, the Maryland Department of the Environment (MDE) will review any proposed development projects that disturb more than 5,000 square feet of territory. MDE will expect storm water management solutions that employ Environmental Site Design (ESD) techniques. These techniques include practices such as micro-bioretention, permeable pavements, green roofs, roof leader disconnection from storm drainage, and other sanctioned "ESD" approaches described in the MDE design manual.

If any improvement project disturbs more than 40,000 square feet, Harford Community College will be required to prepare a Forest Stand Delineation and Conservation Plan. All plans for improvements must account for mature woodlands throughout this campus.

There are areas on campus with designated stream corridors that appear on County GIS mapping. In particular, the area just north of Parking Lot A (near the eastern property line) has a low drainageway directing runoff toward the adjacent neighborhood. College officials may wish to acquire a formal assessment of this area in order to determine whether the proposed realignment of Cross Campus Drive would encroach environmentally sensitive areas (streams or wetlands).

The following is a list of individual site infrastructure improvement observations associated with the Campus Development Plan:

Cross Campus Drive Realignment and Proposed Parking Deck

- Potential relocation of existing sanitary force main (away from garage footprint)
- Possible modification of sanitary lines extending to Aberdeen drain field
- Relocate water service at Aberdeen Hall
- Reconfigure 3 (possibly 4) stormwater management facilities in the Parking Lot "A" area
- Realign storm drain infrastructure
- Potential loss of existing mature trees in Parking Lot "A" area

New Academic Building East of Fallston Hall

- Potential relocation of existing sanitary (on the south side of Cross Campus Drive), or modification of proposed architecture to avoid the current sanitary alignment
- Existing angle in fire service water line may allow building placement without water relocation
- Proposed position in area of existing parking lot "L" may help with impervious area computations
- Realignment of storm drain infrastructure

Proposed Math and Engineering Building

- Building position may require moving primary water service lines (the trunk lines extending into this part of campus from the Conowingo area)
- Sanitary service may need to extend north, past Fallston Hall, into the Cross Campus Drive right-of-way

Chesapeake Center Expansion

- Fire service water line may be too close to any proposed expansion on the south side of the building – potential relocation

Susquehanna Center Expansion

- Any proposed addition on the southeast side would potentially add impervious surface runoff into the existing "pocket wetland" – in the event that the wetland cannot handle the extra runoff, designers may need to examine other ESD practices in this particular location
- Assuming the roadway doesn't change, there may be minimal impact to sanitary
- Records do not indicate a water line in the roadway between the building and the tennis courts

Sports Complex

- Any restroom facilities introduced on the western side of the recreation area would need to extend sanitary service to this region – the closest connection is currently in the central "hub" of the 3 baseball fields
- Water service would need to be fed here, likely from the same central press box/concession area

Future Building Replacing Forest Hill

- Presumably a replacement building in the area of the current child care center could utilize existing water and sanitary services – unless the programmatic nature of the building requires utility upgrades

New Forest Hill Location – West of Thomas Run Road

- New stormwater management facilities would likely be proposed to treat any and all additional impervious surfaces in this area. Further study will be required once impervious layout is finalized.

CAMPUS PLANNING

The following paragraphs describe site recommendations for enhancements to the Harford Community College Campus. The recommendations follow the overall approach of connecting space smartly to create a more cohesive physical campus and learning environment and to enhance the inherent qualities for this particular campus. Recommendations are described below and illustrated in the Illustrative Campus Development Plan in Section 5-C of this report.

Preservation & Opportunity Sites

Based on the site analysis described in Chapter 4 and through discussion with stakeholders, key sites are identified for preservation. These valuable campus spaces include riparian and forest systems (F:1, F:2, F:3) that provide ecological benefits, septic and waste water treatment areas (S.1, S.2), the Hayes-Heighe House (HH), fountain plaza (F), Quad (Q) and Observatory (O) and surrounding forest area. These sites are illustrated in *Exhibit 5.1 Preservation Sites.*

Exhibit 5.1 Preservation Sites

The analysis identified several logical "opportunity sites" within the campus where new facilities can occur. These facilities could be in the form of new buildings, open spaces and/or parking resources and may replace buildings, green spaces and/or surface parking areas that currently exist. These sites are illustrated in *Exhibit 5.2 Development Opportunity Sites.*

Exhibit 5.2 Development Opportunities Sites

Campus Organization and Land Use

The Academic Core of Harford Community College is organized along a ridge line extending from Thomas Run Road east to the original Quad. The Academic Core is framed by Cross Campus Drive to the north and a forested riparian valley and Parking Lot C to south. Some academic and administration functions are located north of Cross Campus Drive and athletics are located south of Chesapeake Hall. There is an opportunity to expand and strengthen the Academic Core to create a more central and walkable campus, while reinforcing pedestrian connections to the southern Athletics Precinct and northwest to Joppa Hall and the Towson Center. Following are recommendations to strengthen the campus organization, improve circulation and access and preserve sensitive environmental areas:

- Locate new academic buildings to physically frame and strengthen the sense of enclosure of the lawn between the Library and Thomas Run Road.
- Renovate and expand existing buildings, such as Chesapeake Hall, Maryland Hall and Library to protect and enhance important existing open spaces, the Quad, fountain plaza area and the allee.
- Protect the park-like setting surrounding the stormwater facility and pond between Joppa Hall and Fallston Hall.
- Relocate Cross Campus Drive to the north side of Parking Lot A to minimize pedestrian-vehicular conflict points.
- Improve pathway and sidewalk connections between the Academic Core and Athletic Precinct. Install pedestrian site lighting that balances pedestrian safety and light trespass.

- Maintain Facilities Management and daycare operations outside of the Academic Core.
- Identify "placeholders" for future development opportunities west of Thomas Run Road that allows for connectivity to both the Academic Core and Towson University Building and protects important ecological systems and a dark sky zone around the Observatory.

Access and Vehicular Circulation

In general the majority of vehicular access and egress is directed to Thomas Run Road. There are many access points and turning movement opportunities along both sides of Thomas Run Road that contributes to traffic and congestion. Congestion is particularly noticeable during afternoon peak rush hours when stacking is backed up from Churchville Road to beyond Gate 2. The traffic circle on Thomas Run Road has improved the flow of vehicles to and from Cross Campus Drive and the centrally located parking lots. The landscape quality of the traffic circle has elevated Gate 3's sense of arrival and importance. However the multitude of gates along Thomas Run Road can be confusing for visitors. Cross Campus Drive bisects Parking Lots E, F and A from the Academic Core creating a series of pedestrian-vehicular conflicts. While Graduate Lane provides access directly to Churchville Road from Cross Campus Drive it is underutilized in comparison to the volume of traffic directed to Thomas Run Road. The following recommendations will help to ease these conflicts:

- Explore reducing unnecessary access points along Thomas Run Road to reduce vehicular turning movements that add to congestion along Thomas Run Road and to strengthens the clarity of arrival and wayfinding into campus.
- Realign Cross Campus Drive to the north side of Parking Lot A to minimize pedestrian-vehicular conflict points. Provide parallel pedestrian sidewalks along Cross Campus Drive to expand the loop pathway system and to create opportunities to access the northeast trail systems. The new Cross Campus Drive alignment should remain within the footprint of existing Parking Lot A. Where possible parking lot and road configurations should protect internal mature trees and retain existing stormwater management systems.
- Improve the existing service road from APG Arena to Graduate Lane to allow for one-way egress from Parking Lot S and T to better ameliorate major event related traffic. Improvements such as site lighting, pavement stripping, minor pavement widening and reconfiguration will allow for safe vehicular movement.
- Explore westward road alignment from Thomas Run Road to Prospect Mill Road. Design considerations should be given to minimize environmental impacts, length and cost of road way and opportunities to incorporate future access to public water and sewer systems.
- Down-size Stadium Drive between Alumni Lane and Cross Campus Drive to eliminate daily vehicular access. Repurpose the roadway to serve as a wide north-south pedestrian route that is capable of serving emergency and service vehicles as needed.
- Eliminate the one-way southbound lane to allow for eastward expansion of Chesapeake Hall.
- Relocate the narrow access lane to the Observatory from Thomas Run Road to connect to the future westward road expansion from the existing round-about.

Parking

In order to accommodate future parking demand, displaced parking lots for future buildings and road realignments this plan identifies new parking lots, a parking deck and expanded parking lots. In combination this master plan increases the overall parking capacity to 3,035 spaces. Recommendations for accommodating additional parking include the following:

- Reorganize Parking Lot A to accommodate a parking deck and surface parking lots inside of the realigned Cross Campus Drive. Utilize topography as much as possible to terrace lots, preserve trees and minimize the need for internal parking deck ramping.
- Develop a 340 space parking deck north of Aberdeen Hall with upper deck access on the higher west side and 340 surface spaces below with access on the lower east side of the structure.
- Redevelop a surface parking lot between the new parking deck and Cross Campus Drive. The parking lot configuration should avoid impact to the existing mature trees.
- Redevelop surface parking lots between Cross Campus Drive and Parking Lot B.
- Provide clear pedestrian access from the Academic Campus to these parking facilities and Cross Campus Drive.
- Reorganize Parking Lot C to better accommodate visitor drop-off and reserved visitor parking for Chesapeake Hall.
- Reduce on-street parking between on Stadium Drive adjacent to Chesapeake Hall to accommodate building expansion.
- Expand Parking Lot W north to add more overflow and athletic field parking spaces.
- Identify parking areas west of Thomas Run Road to provide parking for overflow campus and event parking, relocated Forest Hill Center and future west campus academic buildings.

Pedestrian, Bicycle and Transit Circulation

As the campus continues to grow, there is an opportunity to enhance pedestrian circulation to create stronger and clearer connections within the Academic Core, to Joppa Hall and Towson University, the athletic fields, to Harford Technical High School and Amoss Center as well as to existing and future trail systems. In addition to improving connections, the addition or improvement of site elements such as site lighting, benches, enhanced cross-walks, and bike racks enhance and encourage safe biking and walking throughout the campus. The following recommendations will help to enhance the Harford Community College:

- For new buildings consider clear internal building circulation to enable accessible routes through buildings to connect high and low elevations.
- Reinforce the pedestrian connection to Joppa Hall from the Academic Core. Eliminate barriers, such as parking lots, service lanes, curbs and access road, to ease pedestrian access to the existing park-like pathways adjacent to the pond. Strengthen the clarity of cross-walks on Cross Campus Drive, such as using a scored and stained asphalt pattern, to better prioritize pedestrians and alert motorists. Continue to enhance the pedestrian experience within this park-like setting by continuing to provide educational displays, public art, wayfinding signage and pedestrian seating areas.
- Work with Harford County Department of Transportation to study and develop mid-block traffic calming, such as a pedestrian refuge and highly visible crosswalks near Darlington Hall to create a safe crossing for bikers and pedestrians between the Walls-Cook Trail and the Academic Core.
- Develop a ‘Complete Street’ strategy for Cross Campus Drive and Graduate Lane to accommodate and balance the needs of pedestrians, bikes, transit and cars.
    - Where possible expand or restripe the roadway to accommodate designated bike lanes.
    - Create a continuous sidewalk system parallel to these roads with minimal curb cut interruptions and opportunities to connect to existing trails and pathways.
- Implement a perimeter campus walking circuit to provide recreational opportunity to the campus and surrounding community.
    - Provide a continuous sidewalk on the northside of the realigned Cross Campus Drive that connects the paths adjacent the pond to the existing sidewalk parallel to Graduate Lane. Make connections to existing trails and campus walkways.

  - Create an asphalt path along the southern edge of the athletic fields from existing Graduate Lane sidewalk near Parking Lot W to the fitness loop west of Parking Lot T and then north along the east side of Thomas Run Road to Gate 5 to create a more complete perimeter walking circuit. Where possible consider implementing a wider shared-use path to accommodate bikes as well as pedestrians.
  - Install seating areas, mile markers, path signs and site lighting as needed in high traffic areas.
- Provide bike racks near building entrances.
- Provide covered bike racks, storage and repair stations near the APG Arena to enable ease of access to shower and locker rooms for commuter bikers.
- Replace, where necessary, storm grates (grates parallel to the flow of bikes) in the road that impair bike mobility.
- Maintain two bus stop locations along Cross Campus Drive to conveniently serve the eastern and western ends of the Academic Core. Provide shelter and ample seating opportunities to comfort waiting transit riders.

Open Space

Campus open spaces knit various buildings and facilities together into a unified campus environment, allowing for learning and discovery to happen in a variety of spaces throughout, and creating a collegiate image for the institution. Harford Community College has a strong open space framework, particularly in the Academic Core. New development should continue to strengthen and expand these spaces. The following recommendations will allow for new and enhanced open spaces throughout the campus:

- Locate new buildings to reinforce the definition of adjacent open spaces. Position entries to activate larger campus spaces and provide welcoming entry courts or plazas to foster informal interaction and chance meetings.
- Throughout the campus introduce smaller scale places, similar to the shady picnic area near Darlington Hall, to provide casual seating areas, quiet sanctuary spaces and spaces to support teaching and learning.
- Redevelop the existing amphitheater to provide covered seating for 50 people. The design of the amphitheater must be sensitive to the wooded and historic context by preserving existing trees, work with existing slopes and create a low-profile roof structure to minimize visual obstructions.
- Develop an expansive academic lawn between the Library and Thomas Run Road.
  - Place new academic buildings to reinforce the spatial definition of west lawn between the Library and Thomas Run Road.
  - Eliminate daily vehicular access through this space.
  - Create different gathering spaces along the perimeter of the lawn, offering a variety of experiences and different opportunities to learn.
  - Screen views of parking lots and service areas from the lawn.
  - Allow for a view into the lawn and Library from Thomas Run Road to strengthen the identity of the campus.
- Protect and enhance the Quad as the heart of the campus.
  - Preserve the flexible lawn area and mature trees of the Quad.
  - Continue to create perimeter seating areas along the other edge of the Quad near building entrances.
  - Develop a consistent landscape plant palette as well as foundation and walkway surface material treatment to unify the open space and strengthen the Quad's sense of place.
- Preserve the landscape and character of the historic Hays-Heighe House, including the allee and spring house area.

- Continue to activate the parklike setting around the pond while expanding the presences of the visual arts program by public art along the pathway between Cross Campus Drive and Joppa Hall.
- Enhance the Athletic Precinct by introducing a recreational walking paths and convenient field support buildings on both east and west ends of the precinct.

Campus Landscape

Successful open spaces within a campus require both architectural and landscape definition. The campus landscape allows for a variety of settings, reinforces the campus image and provides comforts, such as shade, to those using the campus. Recommendations to enhance the campus include:

- Establish and reinforce a variety of landscape settings that respond to the topography, historic influences, adjacent uses, views and function.
- Protect and enhance existing woodlands and ecosystems.
- Emphasize the use of native and adaptive plants that provide a clear transition into the campus woodlands. Prohibit the use of invasive species and encourage the eradication of existing invasive plants.
- Implement a streetscape design, including street trees, street lighting and campus signs and banners, for Campus Drive and Graduate Lane to reinforce the campus identity from Thomas Run Road to Churchville Road.
- Protect and expand the perimeter tree stands along Churchville Road and Thomas Run Road to establish a clear campus edge. Between Edgewood Hall and Darlington Hall maintain a clear view into the lawn.
- Preserve existing mature trees throughout the campus and develop a replanting strategy to ensure the campus maintains a health and full shade canopy.
- Accommodate activities through the careful location of plant material to define, not fill, open spaces.
- Maintain visual connectedness throughout the campus, particularly from the parking areas into the Lawn and Quad, through an emphasis on the use of high canopy trees and low shrubs/groundcovers to maintain sightlines.
- Distinguish unique spaces and building entrance areas with special planting, providing for seasonal interest and smells.
- Utilize campus design standards to unify the different areas of campus but allow for unique designs to highlight special nodes and spaces.
- Continue to use portable chairs and umbrella tables to provide more flexibility to adapt campus spaces to individual needs and comforts.

PROPOSED CAPITAL PROJECTS

The Following capital projects are proposed for the main campus, unless noted as "Off-Campus Sites". These projects are shown in the campus development plan included with this report. Building projects, particularly new construction and expansion, will require site improvements as part of the project, such as roadway changes or extensions, sidewalks, and utility upgrades or extensions. Project priorities may change as circumstances change over time.

Near Term 0-5 Years				
Building Name	Type of Work	Estimated Size - GSF	Proposed Functions	Remarks
Maryland Hall	Partial Renovation	10,303	Testing Center, other student support services	Longer term, Maryland Hall is incorporated into Library expansion
Belcamp Hall	Renovation	2,337	Public Safety	
Fallston Hall	Renovation	25,000	Classrooms, faculty offices	Comprehensive renovation
Chesapeake Center	Renovation + Expansion	32,266 + 15,000 new	• Student Services, including Welcome Center • Theater • Food service	Expansion serving all three functions
Sports Fields Support Building East	New Construction	2,000	Storage, restrooms	Near Lot W and baseball field (TRP Sportsplex Bldg = 1,590 GSF)
Library Expansion	New	15,000-20,000	Learning Center support spaces, learning commons, expand office space, work room; help desk; additional study rooms	2-to-3 floors First Phase of Library Project (One Project)
Library Renovation	Renovation	49,280 or remainder after partial renovation	With Library Expansion project	Comprehensive renovation Second Phase of Library Project (One Project)
Student Center	Renovation	50,294	• Expanded food service • Student offices • Bookstore, other • Faculty/staff lounge and dining	Art Gallery stays; moves to Joppa Hall (long term)
	Renovation	5,000-7,000	CETL (Center for Excellence in Teaching and Learning)	Instructional technology innovation, faculty collaboration and training, office & support space. To be located in the Library or Student Center
Outdoor Amphitheater	New Construction		Small gatherings/events in amphitheater setting – to 50 persons	Near Hays-Heighe Spring House
Off- Campus Sites	Renovation, new, or lease	TBD	For Continuing Education & Workforce Development; also, credit offerings	Location(s): • Rte 40 corridor • On-campus

Proposed Capital Projects, continued

Intermediate Term 6-10 Years				
Building Name	Type of Work	Estimated Size - GSF	Proposed Functions	Remarks
APG Arena Expansion	Add to APG Arena and Susquehanna	8,000 – 10,000	Storage, support	Other Arena needs should be addressed, e.g. food service, restrooms.
Math, Engineering Technology Bldg	New Construction	44,000	Academic building # 1	Main campus, opposite Fallston
Lot A parking deck	New	Deck: 300 cars	Parking	One deck only above at-grade parking.
Re-route loop road	New		Roadway	In conjunction with parking deck
Sports Fields Support Building West	New Construction	5,000	Public restrooms, team rooms and locker rooms	Near stadium field
Academic Building	New	35,000	Academic building # 2	Future building between Lot A and Fallston

Long Term – After 10 Years / As Funds Become Available				
Building Name	Type of Work	Estimated Size - GSF	Proposed Functions	Remarks
Child Care Center	New Construction	14,000	Child care	Next building on west side of Thomas Run Road Construct driveway, parking, and access to future development west of Thomas Run Road
Joppa Hall	Renovation	81,385	Visual and performing arts	
Facilities Management Support Building	New Construction	5,400	Storage, Shop	West of Thomas Run Road; location to be determined
Academic Building	New	35,000	Academic building # 3	Future building near Joppa Hall
Future Academic Buildings	New and/or expansion		Academic buildings	Size to be determined. May include Sheriff's Training Academy. West Campus

For future new and renovation construction projects, needs beyond historic, prescribed allocation and configuration of instructional spaces need to be considered and implemented in educational specifications (programs Parts 1 and 2) and designs. Considerations include the following:

- Adequate space for adjunct and part time faculty
- Gathering places for employees to conduct program and division-level activities
- Informal learning spaces and creative spaces
- Flexibility of classroom space and labs (This may suggest increased area within instructional spaces to accommodate flexible furnishings.)
- Meeting and seminar space within existing buildings
- A plan to address how to bring existing space to meet these needs through renovations

PROPOSED CAMPUS DEVELOPMENT

INTRODUCTION

A series of initial development concepts were presented to the College illustrating how the recommendations and capital projects described earlier could be accommodated on the site. Following review and discussion of the initial concepts, a preferred alternative was identified which includes a combination of elements from all of the alternatives. The future vision for Harford Community College is described below and illustrated in ***Exhibit 5.3, Campus Development Plan.***

DESCRIPTION

The Campus Development Plan provides a long-term vision for Harford Community College, illustrating how new program elements can be accommodated in a way that reinforces and enhances campus spaces, circulation patterns and image. Several major projects are recommended through 2027. They include the following: a renovation of the Maryland Hall, Belcamp Hall and Fallston Hall; renovation and 20,000 GSF expansion of the Library; 2,000 GSF new east Fields Support Building; 15,000 GSF expansion and renovation of Chesapeake Hall; renovation of Student Center; new 50-seat amphitheater; 44,000 GSF new Math, Engineering Technology Academic Building (#1); 10,000 GSF expansion to APG Arena; 5,000 GSF new west Fields Support Building; 35,000 GSF new Academic Building (#2); realignment of Cross Campus Drive and a new 340 space parking deck.

In addition to the above buildings, the Harford County Sheriff's Office will be in need of a new facility to accommodate the Sheriff's Training Academy. Size and programming needs will have to be developed, but such a facility could be accommodated on the west campus, such as within one of the "Future West Campus Buildings" footprints shown in *Exhibit 5.3, Campus Development Plan.*

This master plan recommends further investigation and cooperation with private and public sector partners to locate a satellite educational center within the Route 40 corridor see Chapter 5-D Off-Campus Development for more information.

Projects to be implemented as funds become available include a 14,000 GSF new relocated Forest Hill Center; renovation of Joppa Hall; 5,400 GSF new Facilities Management Support Building; 35,000 GSF new Academic Building (#3); identification of place-holder west campus buildings.

The development plan illustrated in this report accommodates smart growth reasonably within the existing developed area of the campus. The low-scale of the campus is preserved with new buildings limited to 3 floors. The physical growth of the campus is accommodated by infill development along the lawn west of the Library, to better define this east-west open space and to continue to reinforce the sense of campus community and connectivity. New building design should acknowledge the historical references of the older buildings around the Quad and the historic Hays-Heighe House, while incorporating contemporary functions and aesthetics.

Forested riparian areas are protected from development to maintain their ecological functions and habitat. Physical growth west of Thomas Run Road should be limited to address long-term needs or provide space for programs such as the child care and facilities management programs not required for daily on-campus activities.

Site and infrastructure improvements are required to support the proposed building program and to improve the function, safety, and efficiency of the campus. The relocation of Cross Campus Drive will provide a safer

environment for pedestrians while encouraging easy vehicular movement towards Graduate Lane, diverting traffic from Thomas Run Road. A new road alignment from Thomas Run Road to Prospect Mill Road will require further technical analysis of environmental conditions, engineering and costs.

When new projects are undertaken, the parking supply should be increased to meet expanded future needs. Some of the existing parking will be eliminated with new facilities and replaced by new parking lots and a parking deck. The proposed parking deck takes advantage of the natural topography to reduce the need for internal ramping.

Landscape and open space improvements need to continue to strengthen pedestrian connectivity and safety throughout the Academic Core and surrounding facilities, including enhanced and highly visible cross walks on Cross Campus Drive and Thomas Run Road.

Taken together, these projects will require storm water management measures. Projects need to strive to treat rainwater locally using devices such as swales, bio-retention, rain gardens, roof leaders and similar features. Unified designs for paving, site amenities, and site lighting are recommended, to continue to reinforce campus identity for future projects affecting these components.

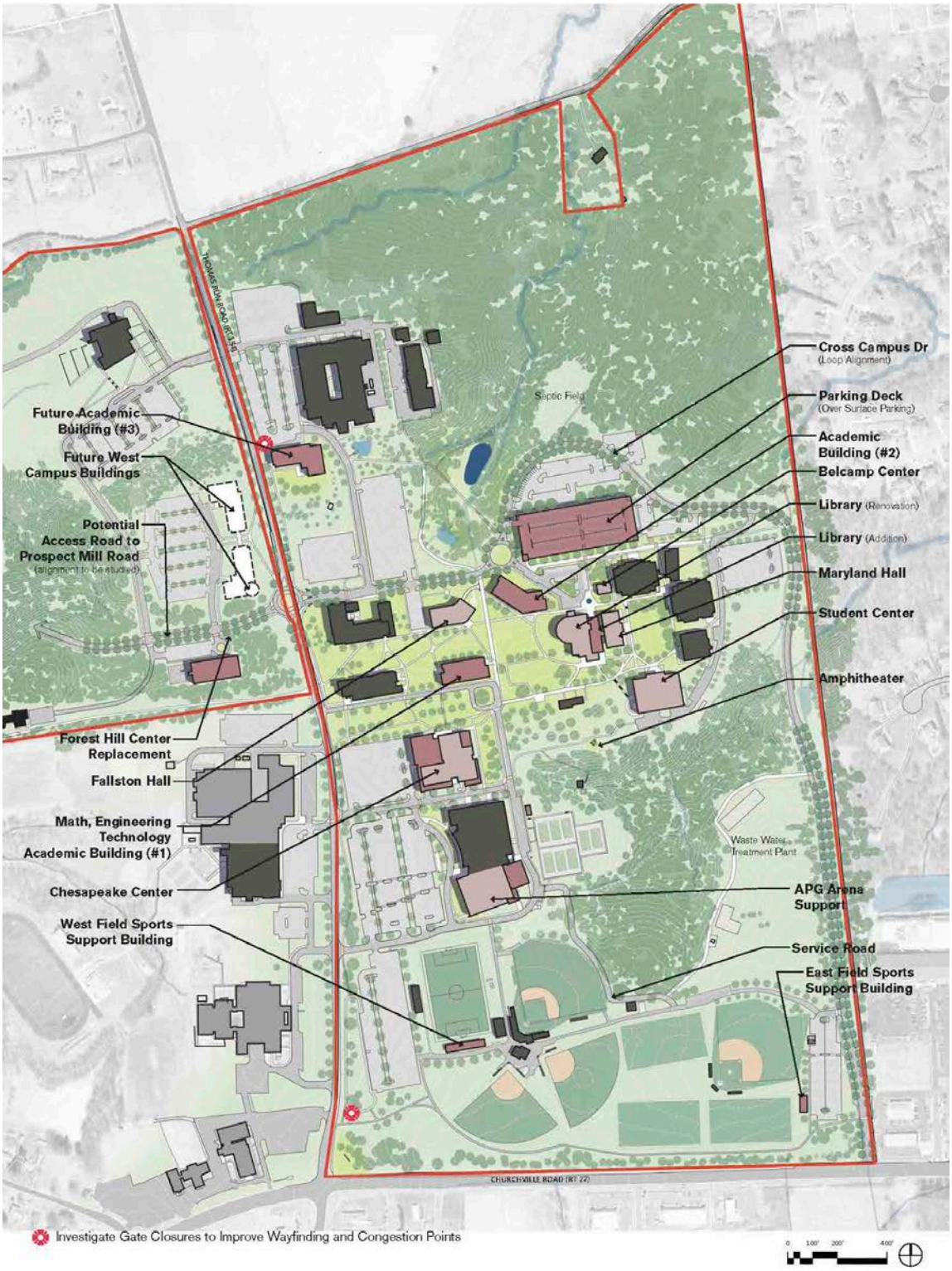
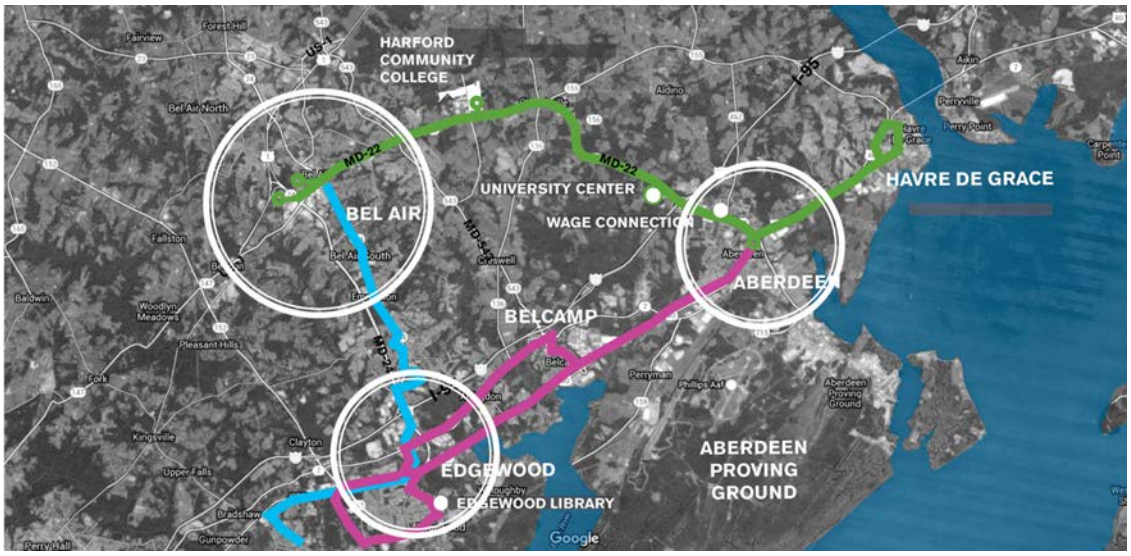


Exhibit 5.3 Campus Development Plan

OFF-CAMPUS DEVELOPMENT

In response to the issues affecting students' access to the College's main campus, this report recommends establishing a learning center or full-service site in the I-95 / U.S. 40 corridor. While the College maintains facilities near Aberdeen and a smaller presence in Edgewood, the route 40 corridor is still underserved. Bus routes are inconvenient and expensive for students, especially those living on limited incomes. A coordinated initiative involving the College, County Government, and public transportation companies should be undertaken to identify a suitable location for an off-campus site in or near Edgewood and to better coordinate bus routes to accommodate students.

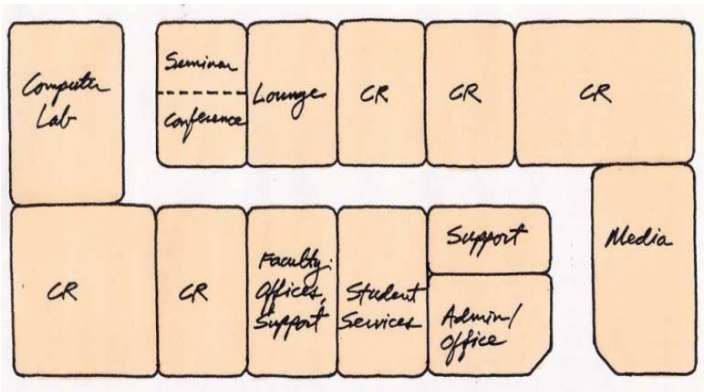
Major Population Centers



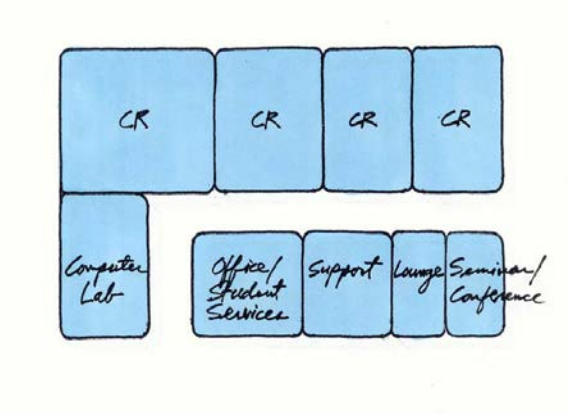
The facility may be leased, developed and owned by the College, or developed in concert with Harford County Government in a County-owned facility. The consultant team suggests starting modestly with a small center that would allow for growth. Either of the two models illustrated below or a modified version can serve as a basis for further study. Selecting the site is critical, so that it is accessible by public transportation, visible, safe, and with adequate space for programmed areas and for on-site parking.

Off-Campus Models

A – Full Service Site
- Student Services
- Classrooms & Labs.
- Support Space
- 8,000-10,000 SF



B – Teaching Center
- Some Student Services
- Classrooms
- Support Space
- 4,000-5,000 SF



Appendix

Six-Year Capital Improvement Plan

Deferred Maintenance Projects

HARFORD COMMUNITY COLLEGE

PROPOSED SIX YEAR CAPITAL IMPROVEMENT PROGRAM

	TOTAL PROJECT COST	BUDGET YEAR FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
County/State Funded Projects: *							
Fallston Hall Renovation	$ 7,136,000	$ 585,000	$ 5,851,000	$ 700,000	$ -	$ -	$ -
Chesapeake Renovation	7,782,400	-	456,000	6,516,400	500,000	310,000	-
Library Renovation	7,609,500	-	-	467,250	6,675,000	467,250	-
Student Center Renovation	3,446,450	-	-	-	210,700	3,010,000	225,750
Math, Engineering, & Technology Building	22,000,000	-	-	-	-	2,000,000	20,000,000
Total	**47,974,350**	**585,000**	**6,307,000**	**7,683,650**	**7,385,700**	**5,787,250**	**20,225,750**
HCC Internal Capital Funds:							
Computer Equipment/ Technology	4,848,755	848,755	800,000	800,000	800,000	800,000	800,000
Site Improvements	1,650,000	275,000	275,000	275,000	275,000	275,000	275,000
Total	**$ 6,498,755**	**$ 1,123,755**	**$ 1,075,000**	**$ 1,075,000**	**$ 1,075,000**	**$ 1,075,000**	**$ 1,075,000**
Total Proposed Funding	**$ 54,473,105**	**$ 1,708,755**	**$ 7,382,000**	**$ 8,758,650**	**$ 8,460,700**	**$ 6,862,250**	**$ 21,300,750**

CAMPUS OPERATIONS DEFERRED PROJECTS

Maintenance

Campus Operations Deferred Maintenance List
Revised July 22, 2016

Project Description	Est. Cost ($)	Est. Date of Compl.	Status
ABERDEEN HALL			
Complete installation of Water Treat. System	$15,000	2016	Open
Correct Ponding water at HC Ramp	$17,500	2016	Open
Correct roof leak in lobby	$7,500	2015	In Process
	$40,000		
AMOSS CENTER			
Comprhensive rigging repairs and upgrades	$50,000	2017	Open
Replace legs and borders on curtains	$20,000	TBD	Open
Replace midstage curtain and main drape	$10,000	TBD	Open
Replace Back Curtain	$11,000	TBD	Open
Replace black scrim, white scrim, and cyclorama	$6,000	TBD	Open
Install automatic door operator front entrance	$3,500	TBD	Open
	$100,500		
BEL AIR HALL			
Repaint all hallways and repair wall treatments	$45,000	TBD	Open
Relocate South Camera	$4,500	2016	In Process
Improve women's restroom entrance	$7,500	TBD	Open
	$57,000		
BEL CAMP			
Replace fire alarm panel	$7,500	2017	Open
Replace awning system/ change building name	$15,000	2017	HOLD
Correct leaking gutter system	$10,000	2016	In Process
Replace front sidewalk	$15,000	2017	HOLD
	$47,500		

CHESAPEAKE CENTER			
Replace wooden soffit	$50,000	TBD	Open
Add emergency lighting to restrooms	$1,500	TBD	Open
Upgrade kitchen restrooms	$35,000	TBD	Open
Replace walk in frig and freezer	$45,000	TBD	Open
Replace East Entrance Concrete walk and steps	$12,000	2016	In Design
Install enclosure around trash containers	$10,000	TBD	Open
Replace main generator	$150,000	2018	Open
	$303,500		
CONOWINGO BUILDING			
Repair Rear Roof leak	$5,000	2016	In Process
	$5,000		
EDGEWOOD HALL			
Install water filtration system on domestic line	$3,000	TBD	HOLD
Replace office carpet	$15,000	TBD	HOLD
Correct humidity problelms in building	$25,000	TBD	HOLD
Replace soffit material	$25,000	TBD	HOLD
replace front entrance railing	$1,500	TBD	HOLD
	$69,500		
FALLSTON HALL			
Soffit repairs	$10,000	TBD	Open
Paint remaining offices and classrooms	$7,500	TBD	Open
Replace office carpet	$10,000	TBD	Open
Replace floor boxes in F-103	$5,000	TBD	Open
	$32,500		
FOREST HILL BUILDING			
Install water filter on domestic line	$3,000	TBD	Open
Replace carpet in classroom	$2,500	TBD	Open
Replace single pane exterior windows with insulated glass	$75,000	TBD	Open
	$80,500		
GROUNDS/ SITE			
Conduct Inspection of Radio Tower/Paint	$35,000	2015	In Process
Make corrections to main SWM Pond per county	$60,000	2015	In Design
Campus wide concrete sidewalk repairs	$120,000	TBD	In Process
Campus wide curb repairs	$45,000	TBD	Open
Campus wide asphalt repairs-non-parking lot	$50,000	TBD	In Process
Replace wood fence at access road ponds	$15,000	TBD	In Process
Correct walkway issues within A-Lot	$5,000	TBD	In Design
Muck out Science Pond	$25,000	TBD	Open
	$355,000		

Harford Sports Complex			
Replace fence on Field two	$40,000	2017	Open
	$40,000		
HAVRE DE GRACE HALL			
Repair blisters on roofing system	$30,000	TBD	Open
	$30,000		
HAYS-HEIGHE HOUSE			
Complete work on springhouse	$35,000	2015	In Process
	$35,000		
HICKORY CENTER			
JOPPA HALL			
Repair carpet issues	$20,000	2016	Open
Reconfigure lighting in Painting and Drawing	$4,000	TBD	Open
Paint hallways	$5,000	TBD	Open
Add roofing material to green roof	$5,000	TBD	Open
Repair roof leaks at Black Box and Vending	$3,000	2015	In Process
	$37,000		
LIBRARY			
Replace main stair treads	$3,500	TBD	Open
Repair damaged gutter system	$3,000	2016	In Process
Repair/replace precast capping/sills at exterior windows	$30,000	2016	In Process
Reinsulate rooftop air handlers	$20,000	TBD	Open
Replace aluminum railing system	$55,000	TBD	Open
Replace select carpet	$40,000	TBD	Open
Paint main library area	$25,000	TBD	Open
Replace fabric covered acoustical panels	$5,000	TBD	Open
Upgrade restroom faucets to hands free	$15,000	TBD	Open
Replace humidification units-3	$90,000	TBD	Open
Replace Handicap ramp	$80,000	2017	Open
Replace concrete grand stairs	$225,000	TBD	Open
	$591,500		
MARYLAND HALL			
Replace entire patio on quad side	$125,000	2018	Open
	$125,000		
OBSERVATORY			

PUMP HOUSE			
Repair gutter on storage tank roof	$3,500	TBD	Open
Upgrade tank heating unit	$2,500	2016	In Process
Upgrade fire pump control system	$75,000	TBD	Open
	$81,000		
SUSQUEHANNA CENTER			
Correct roof leak-high roof - hallway	$5,000	2016	In Process
	$5,000		
SPORTSPLEX BUILDING			
Install AC unit for telecom room	$1,000	2016	In Process
	$1,000		
STUDENT CENTER			
Correct water flow from rear lot to septic area	$20,000	TBD	Open
Replace main chiller compressor	$40,000	2016	In Process
Clean building ductwork	$15,000	2016	In Process
Replace carpet in SC-243	$15,000	TBD	Open
Replace dumpster compactor box	$12,500	2017	Open
Replace carpet in main office area	$35,000	TBD	Open
	$137,500		
UNIVERSITY CENTER			
Correct curbing and walks-level out-gaps-cracks	$15,000	2015	Open
Correct patio benches-concrete work	$25,000	2015	Open
Paint offices	$15,000	TBD	Open
Replace select carpet	$20,000	TBD	Open
Correct brick / foundation settlement	$35,000	TBD	In process
Replace several split AC systems	$35,000	TBD	Open
Add AC unit to upper level telecom room	$5,000	2014	Open
Repair roof leak at 2nd flr patio	$5,000	2014	In process
	$155,000		
WASTE WATER TREATMENT PLANT			
Repair field control boxes	$7,500	2016	In Process
	$7,500		
PARKING LOT IMPROVEMENTS			
3-Lot Mill and Overlay	$30,000	2020	Open
4-Lot Mill and Overlay	$20,000	2020	Open
A-Lot Rear Two Lots - mill and overlay	$175,000	2019	Open
L-Lot Mill and Overlay	$125,000	2021	Open
	$350,000		

ROAD IMPROVEMENTS			
Mill and overlay Entrance four - base work	$50,000	2019	Open
	$50,000		
WALKWAY IMPROVEMENTS			
Replace sidewalk on North side of Susquehanna	$45,000	2018	Open
Replace asphalt sidewalk on Success Way	$40,000	2020	Open
Replace sidewalk on North Side of H.H.H.	$20,000	2017	Open
Replace asphalt walk across SWM pond	$25,000	2017	Open
	$130,000		
ROOF REPLACEMENTS			
Aberdeen Hall - original building	$308,000	2019	Open
Bel Air Hall - original building	$210,000	2022	Open
Havre De Grace Hall	$150,000	2022	Open
Maryland Hall	$150,000	2018	Open
Forest Hill - Mansard only	$85,000	2017	Open
Bel camp	$75,000	2020	Open
Fallston Hall	$375,000	2022	Open
Library-upper flat roof only	$350,000	2025	Open
	$1,703,000		
CHILLER REPLACEMENTS			
Fallston Hall	$150,000	2022	Open
Library	$175,000	2025	Open
Bel Air Hall	$150,000	2025	Open
Student Center	$200,000	2025	Open
Day Care Roof Top Unit	$25,000	2020	Open
	$700,000		
SITE INFRASTRUCTURE REPLACEMENTS			
Replace Vehicle Fuel Tanks and Pumps	$75,000	2020	Open
Replace Main Water line North - South	$170,000	2025	Open
Replace water line to H.H.H.	$40,000	2020	Open
Replace and relocate Aberdeen Domestic well	$60,000	2020	Open
	$345,000		

WEST CAMPUS

Deferred Maintenance Total: $5,574,500

Projects

Campus Operations Deferred Projects List
Revised July 22, 2016

Project Description	Est. Cost ($)	Est. Date of Compl.	Status
ABERDEEN HALL			
Install lighting and railing on roof	$15,000	TBD	Open
	$15,000		
AMOSS CENTER			
BEL AIR HALL			
Install solar hot water heating system	$9,000	TBD	On Hold
Consolodate Fire Alarm Panels	$25,000	TBD	Open
Install room divider in B-236	$20,000	TBD	On-Hold
	$54,000		
BELCAMP			
Reconfigure Building for new occupants	$150,000	2017	Spring 2017
	$150,000		
CHESAPEAKE CENTER			
Improve acoustical wall at Din Rooms South and West	$22,000	2017	Open
Add electrical capacity to Theater	$125,000	TBD	Open
Construct addition to Theater for workshop	$250,000	TBD	Open
Replace Fire Alarm Panel	$30,000	TBD	Open
Reconfigure HR reception counter	$15,000	August	In Design
	$442,000		
CONOWINGO BUILDING			
Fence screen behind building	$5,000	TBD	Open
Enclose rear exterior storage area-partial	$25,000	2015	Open
Covert Old Vending storage to office area	$3,500	2016	In Process
Install weather station on roof	$1,500	2016	In Process
Construct Pole Barn for Equipment storage	$45,000	2016	In Process
Extend asphalt road adjacent to building	$19,000	2016	In Process
	$30,000		
EDGEWOOD HALL			
Misc. Cost due to construction Project	$25,000		In Process
	$25,000		
FALLSTON HALL			
Reconfigure parking lot	$55,000	2017	In Design
Install sound blanket on chiller compressors	$6,000	TBD	Open

Reconfigure learning Ctr. to classrooms	$35,000	2017	Open
	$96,000		
FOREST HILL BUILDING			
Consolidate two fire alarm panels into one	$25,000	TBD	Open
Install access control on front door	$12,000	TBD	Open
Install Panic-Alarm button in office area	$3,500	TBD	Open
Install Surr. Cameras on building	$10,000	TBD	Open
Install automatic door operator front entrance	$3,500	TBD	Open
Install sprinkler system in building	$275,000	TBD	Open
	$329,000		
GROUNDS/ SITE			
Install remaining light poles at Access Road	$45,000	2017	Open
Install fiber optic line to transmitter tower	$25,000	2016	In Process
Color code all parking lots	$35,000	TBD	Open
Parking lot Lighting at W-Lot	$12,000	2016	In Process
Install lighting at Entrance six Gate	$10,000	2017	Open
Add lighting to steps at A-Lot near Aberdeen Hall	$9,500	2017	Open
Add LED display sign at Entrance six	$75,000	TBD	Open
Add lights poles to East side of Library	$14,000	2016	In Process
Add Site lighting to Quad Area	$20,000	2016	In Process
Add site lighting on North Side of H.H.H.	$20,000	2016	In Process
Add road lights to Alumni Lane	$18,000	2016	In Process
Add road lights at Stadium way	$15,000	2016	In Process
	$298,500		
HARFORD SPORTS COMPLEX			
Install formal domestic water treatment unit	$7,500	TBD	Open
Install netting on fence at field four	$2,500	2016	In process
Install 350' of fence on new practice field	$35,000	TBD	Open
Scoreboard for new practice field	$15,200	TBD	Open
Bleachers for new practice field (6)	$15,000	TBD	Open
Bleachers for Field 4	$15,000	TBD	Open
Install benches in dugouts at field four	$2,500	TBD	Open
Install irrigation at Two ballfields	$60,000	TBD	Open
Lighting for new practice field	$250,000	TBD	Open
Lighting at Field 4	$225,000	TBD	Open
Install water supply system at ballfield four area	$75,000	TBD	Open
Construct restroom facility at Field 4 area	$225,000	TBD	Open
	$927,700		
HAVRE DE GRACE HALL			
Correct lobby concrete pad settlement	$150,000	2017	In Design

HAYS-HEIGHE HOUSE			
Conduct limited Restoration work on Spring House	$50,000	2016	In Process
	$50,000		
HICKORY CENTER			
Install card swipe on Bravo Ext. Door	$3,000	2016	In Process
Install Building Generator-Limited Size	$40,000	TBD	Open
	$40,000		
JOPPA HALL			
Awning for doors at Café	$7,500	TBD	Open
Remove abandonded satellite dishes	$5,000	TBD	Open
Construct Awning for Raku	$3,000	2016	In Process
Remove brick surplus area	$2,500	2016	In Process
Construct new Gallary Space	$175,000	2016	Open
Reconfigure Nursing area for new occupants	$25,000	2016	Open
	$218,000		
LIBRARY			
Install sound proofing for 1st floor classrooms	$10,000	TBD	Open
Reconfigure Public Safety area for new occupants	$35,000	2017	In Design
Replace 50 KVA UPS System	$50,000	2017	Open
Reconfigure CTS area for new occupants	$90,000	2017	In Design
	$185,000		
MARYLAND HALL			
Reconfigure West Entrance to improve HC access	$20,000	2017	Open
Replace Patio and ramp	$175,000	2017	In Design
Reconfigure for new occupants phase-II	$350,000	2017	Open
	$350,000		
OBSERVATORY			
Construct campus garden in open lawn area	$5,000	TBD	Open
Install water treatment system	$1,500	2014	In Process
Install sprinkler system in building	$125,000	TBD	Open
	$131,500		
PUMP HOUSE			
SUSQUEHANNA CENTER / ARENA			
Place lift station on Emergency Generator	$125,000	TBD	Open
Add formal seating at Tennis Courts	$75,000	TBD	Open
	$200,000		
STUDENT CENTER			
Install perimeter ledge on roof to hold stone in place	$18,000	2017	Open
Reconfigure Gallery Space	$55,000	2017	Open
	$73,000		

UNIVERSITY CENTER

WASTE WATER TREATMENT PLANT			
Install high water alarms on all lift stations	$7,500	TBD	Open
Install return line to EQ tanks	$40,000	2016	In Design
Replace UV Unit	$20,000	2016	In Design
	$67,500		
PARKING LOT IMPROVEMENTS			
Construct driveway- parking area Senior Ctr	$150,000	TBD	On Hold
Reshape and reslope rear SC lot-add curb and gutter	$100,000	2017	In Design
	$250,000		
ROAD IMPROVEMENTS			
Construct Right Turn Lane at RTE-22	$800,000	2016	In Process
Complete asphalt road behind Conowingo	$50,000	2017	Open
Extend asphalt road into Auto Shop	$35,000	2017	Open
	$885,000		
WALKWAY IMPROVEMENTS			
Extend sidewalk from E-Lot to Forest Hill Bld	$35,000	2018	Open
Construct walkway to Spring House	$15,000	2016	In Process
Remove Steps at edgewood - re-route to corner	$18,000	2017	2016-17
Construct HC acces to L-Lot from A-Lot	$20,000	2016	In Design
Construct sidewalk at rear of HHH	$12,000	2018	Open
	$100,000		
SITE INFRASTRUCTURE REPLACEMENTS			
Extend Fire Line to the HSC	$250,000	2020	Open
Extend Power and Fiber to all Entrances for Cameras	$100,000	TBD	Open
Install backup well and 25,000 gal storage system	$250,000	2019	Open
	$600,000		
WEST CAMPUS			
Redefine property lines to accommodate RWDC	$25,000	2015	Open
Conduct Perc Test to Accommodate RWDC	$30,000	2015	Open
Minor Repairs to Auto Shop	$45,000	2016	Open
Construct trail and two bridges	$15,000	2016	In Design
Install Well for RWDC	$40,000	2016	Open
	$155,000		

Deferred Projects Total: $5,672,200