Anne Arundel Community College

Facilities Master Plan 2016

January 4, 2016

Stantec

Acknowledgments

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Anne Arundel Community College

Steering Committee

Arthur Ebersberger, *Board Chair / Board Liaison*

Dr. Dawn Lindsay, *President*

Melissa Beardmore, *VP for Learning Resources Management*

Maury Chaput, *Executive Director, Administrative Services*

Shad Ewart, *Academic Forum Representative*

Dr. Karen Hays, *VP for Learning*

Peter Kaiser, *Professional and Support Staff (PSSO) Representative*

Felicia Patterson, *VP for Learner Support Services*

Dr. Terry Portis, *Administrative Staff Organization (ASO) Representative*

Jim Taylor, *Director, Facilities Planning and Construction*

2014 - 2015 Board of Trustees

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Matthew Hortopan, *Student Member*

Dr. Dawn Lindsay, *Secretary-Treasurer*

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Introduction

The 2016 Facilities Master Plan for Anne Arundel Community College is intended to identify capital projects that are the direct result of the College's need to accommodate people, modernize or replace facilities, and / or provide space for services and programs.

Specifically, the College has identified several areas of emphasis for this planning process:

- Provide sustainable and flexible design recommendations to help shape the future of the institution
- Match educational programs and delivery systems to physical spaces for students in all recommendations
- Identify areas of cutting edge study that support the mission and vision of the College
- Project the future instructional and student support needs of the College

The planning process began in February 2015 and final approval from the Board of Trustees is expected in January 2016. The plan was led by Stantec Consulting in collaboration with JMZ Architects and engaged College and community stakeholders in a collaborative process.

Phase 1 - Framework

Prior to the start of the project, the College established a Steering Committee, a small group of stakeholders whose role was to guide the planning process. This group also served as the primary connection between the institution as a whole and the master plan team. The members represented a diverse cross section of the College that were engaged throughout the process including faculty, staff, and administration. This committee was also tasked with creating a series of goals and guiding principles to guide the master planning process and the planning team's recommendations.

The following guiding principles were established with the Steering Committee and are intended to inform physical project recommendations outline within the 2016 Facilities Master Plan:

Guiding Principles

1. Provide **flexible learning** and social environments consistently across the campus reflecting the needs of the 21st century student.
2. Create **humanly scaled** spaces that foster a spirit of collaboration.
3. Establish **visual continuity** across campus through well designed landscape, architecture, signage, and way-finding.
4. Optimize **operational efficiencies** through improved critical adjacencies and appropriate use of existing structures.
5. Create a **sustainable campus** environment that considers Maryland's mandated LEED requirements.
6. Promote a **pedestrian friendly** campus that is physically accessible to all.
7. Integrate **campus and community**.
8. Match **infrastructure and technology** needs with academic mission.
9. Consider adult learners and **non-traditional students** in all recommendations.
10. Evaluate the **financial realities** of all recommendations.

These principles were reviewed at each phase of the project with the Steering Committee to ensure that they support the mission and vision of the institution while providing a solid foundation for future recommendations.

Phase 2 - Discovery

The master plan team spent a significant amount of time on campus throughout the planning process in an effort to become immersed in the culture of the institution and gather appropriate base information. The planning team collected all existing documentation relevant to the planning process, such as scheduling records, enrollment reports, construction documents, and other relevant data. This information was cataloged and reviewed with the facilities staff for accuracy. Stantec then conducted interviews, focus groups, and open forums, using proven methods of information gathering to engage specific audiences and gain information directly from multiple constituencies.

Phase 3 - Exploration

During Phase 3, Stantec became familiar with Anne Arundel Community College's campus history, programs, academic vision, enrollment goals, staffing data, existing facilities use, and landholdings. The team reviewed and examined the collection of information, focus group findings, and data to establish a list of short-, mid-, and long-term projects. This list was reviewed and prioritized together with the Steering Committee. After master plan project priorities were established with the committee, the planning team developed several options that explored deferred maintenance projects as well as projects that would significantly enhance the campus in the future.

Phase 4 - Recommendations

After reviewing and refining the presented project options with the Steering Committee, the master plan team prepared their final recommendations and assigned costs to each proposed project. Once the costs were established, the team reviewed both costs and final recommendations again with the committee.

Summary of Needs

Fast Facts

Near-Term Opportunities

- Install informal learning spaces throughout campus
- Improve space utilization campus-wide
- Raze outdated and under-utilized structures
- Provide contemporary and competitive space for Health Science programs
- Provide new labs for Biology
- Create more parking for visitors

Mid-Term Opportunities

- Renovate Careers Building to expand Math Department and classrooms
- Expand Child Development Center and CDC Labs
- Update and provide more space for the physical sciences
- Improve arrival sequence to campus
- Renovate Florestano Allied Health Building

Long-Term Opportunities

- Complete the relocation of Ring Road to allow for future expansion of the core campus
- Renovate and expand the Student Services Center and Student Union
- Renovate Dining Hall

Anne Arundel Community College (AACC) is a fully accredited public, two-year institution that has provided exemplary learning opportunities for over 50 years. The College offers transfer and career associate degree programs, certificate programs, credit courses, continuing education, workforce development, and non-credit learning opportunities for students seeking career training or pursuing new areas of interest.

AACC offers learning opportunities at multiple locations across the county. These sites include the main campus at Arnold, degree centers at Arundel Mills (including HCAT and CCPT), Glen Burnie Town Center and Sales and Service Training Center, as well as non-College facilities like the Fort Meade Army Education Center and other off-campus locations.

The 2016 Facilities Master Plan aims to evaluate the College at its current status. The consultants evaluated the existing conditions and projected needs of the College, and worked with the Steering Committee to develop a series of recommendations that meet the current and projected needs of the institution. Information herein presents the findings that informed the overall decisions and recommendations that will help shape AACC in future years.

Environmental Scan Summary

Optimism about the U.S. economy is paired with uncertainty. While economic growth is projected to be moderate in the next few years, analysts predict that small businesses will hire more workers and the job market will improve. Consumer spending and increased business spending are good signs, but the strong dollar could lead to a widening international trade deficit. Maryland's economy is steady, but slow-growing anticipated State tax revenues necessitate cautious budgeting in upcoming years.

Anne Arundel County residents have higher educational attainment than residents of Maryland as a whole, and their degrees are predominantly in science, engineering, and related fields. The federal government is a primary employer in Anne Arundel County, which makes the county susceptible to dramatic swings in employment depending on federal budgets.

Nationwide and Statewide, birth rates are declining while the workforce is aging. This is leading to an increasing old-age dependency ratio (the number of dependents over age 65 compared to the number of working adults). The same is true of Anne Arundel County. The County is expected to grow 12.2 percent between 2015 and 2040, slower than Maryland as a whole and about the same as the U.S.

Job growth will be robust in health care related occupations, as services expand to meet the needs of an aging population. Science, Technology, Engineering, and Math (STEM) professions, already strong in Maryland and Anne Arundel County, will continue to be in demand. Primary and secondary school teachers are needed in the region. In the next decade, the K-12 teacher occupation is expected to add more jobs regionally than any other occupational category. Anne Arundel Community College should build on its existing strengths in these in-demand academic programs to expand enrollment and retain students.

Space Utilization Study Summary

The effective use of instructional space is an essential factor in space utilization efficiency. As funding for capital expenditures is reduced, space shortages occur, and the need for new types of space develop, it becomes even more important for colleges to focus on the efficient use of their current resources. Classroom and class lab utilization was studied at all AACC locations.

On the Arnold Campus, classroom seat utilization targets (the number of students compared to the number of stations available in a classroom) were met in many buildings. However, classrooms were not generally used for as many hours as recommended by Maryland Higher Education Commission targets. There is classroom capacity on the Arnold Campus to accommodate projected enrollment growth through 2025, though the College would need to schedule more courses outside of the peak hours of 10 AM and 2 PM. Science Labs on the Arnold Campus were often full in both day and evening course meeting times; indicating the need to provide more labs to meet current demands in health professions and other sciences.

At AACC's other locations, few classrooms met the hourly use target, yet many met or exceeded the seat utilization target. Many class labs are filled when scheduled, indicating a possible need for more labs. Night classes are most in demand at the Arundel Mills and Glen Burnie locations, indicating that daytime hourly use of instruction space may be increased. At all AACC locations, adjustment of scheduling practices may improve classroom utilization.

Academic Programs and Space Needs Assessment Summary

In 2014, AACC awarded more degrees and certificates than any other single community college in Maryland. In fall 2014, AACC attracted almost 53.7 percent of all county residents enrolled as first-time, full-time freshmen in any Maryland college or university. Because State and County funding are projected to be scarce in the future, the College should enhance efficiency of its existing instructional space. Academic expansion should focus on already-strong programs:

- Provide new labs for expanded Paralegal offerings

and consider adding a Court Reporting Certificate.
- Offer the Dental Assisting Program at the Glen Burnie Town Center. It is currently only taught at the Arnold Campus.
- Expand the Teacher Education Program and Child Development Program.
- Add certificates that build on already-developed curricula, such as a Transition of Care Certificate and a Social Services Certificate.

Space need projections indicate that in 2025 AACC will need more laboratory, office, study, athletics, assembly, food service, and meeting spaces. College administration, faculty, staff, and students reported that outdated laboratories, crowded offices, and lack of varied study space were key needs. The primary recommended projects in this Master Plan address these needs and also restore adjacencies in some departments that became fragmented over time.

Independent of the primary recommended projects, AACC can convert underutilized classrooms to faculty offices, adjunct faculty offices, and study spaces. At the Glen Burnie Town Center and Arundel Mills locations, space shifts will make way for a new Dental Assisting Lab (Glen Burnie) and a new Biology Lab (Arundel Mills), as well as reconfiguration of advising offices at Arundel Mills.

Facilities Master Plan Recommendations Summary

The following recommendations were developed to respond to existing and projected needs, as well as to guide the long-term success of the institution:

Academics
- Maximize the potential of the Arnold Campus by updating its buildings, infrastructure, and technology, while maintaining the Arundel Mills and Glen Burnie Town Center locations as Degree Centers.
- Demolition of inefficient buildings including the Johnson Building and Schwartz Building.
- Construction of a new Health Science and Biology Building.
- Comprehensive renovation of and addition to the Henry L. Dragun Science Building.
- Relocation of the School of Business and Law and the School of Continuing Education and Workforce Development to the Florestano Building, which is perfectly suited for general purpose classroom instruction and office space.
- Relocation of the Mathematics Department to space in the Careers Building that would be vacated by other departments.
- Renovation of the Mathematics Building to house an expansion of the Child Development Center and the creation of a new Lab School for Teacher Education.

Student Life
- Renovation of the Dining Hall and expansion of Student Services to update facilities and make spaces attractive to incoming students.

Athletics and Recreation
- Demolition of the Pool and construction of an addition to the Gymnasium to include an entrance lobby, instruction space, and storage.

Open Space / Infrastructure
- Relocation of Ring Road to activate the Arnold Campus and provide opportunities for future expansion of the East Campus building core.
- Define gateways through landscaping and signage to improve the overall entrance experience to campus.

Demolition

As part of the Master Plan all buildings on campus were evaluated based on their condition and use. The consultants explored the ramifications of investing in buildings that are in poor to fair condition, below target utilization, and / or do not meet the needs of students as expressed in the College's mission and vision statements.

Using these criteria to evaluate the College's current asset inventory, the following buildings were noted as candidates for removal:

- Johnson Building
- Schwartz Building
- Olson Memorial Pool

The Pool and Schwartz are two buildings that represent under-utilized structures that are deteriorating. These structures also occupy valuable real estate on campus as they are located on flat terrain with limited encumbrances by utilities or other infrastructure. The highest and best use of this land is academic. Specifically, this land is recommended to be used for the new Health Science and Biology building as it offers several valuable characteristics:

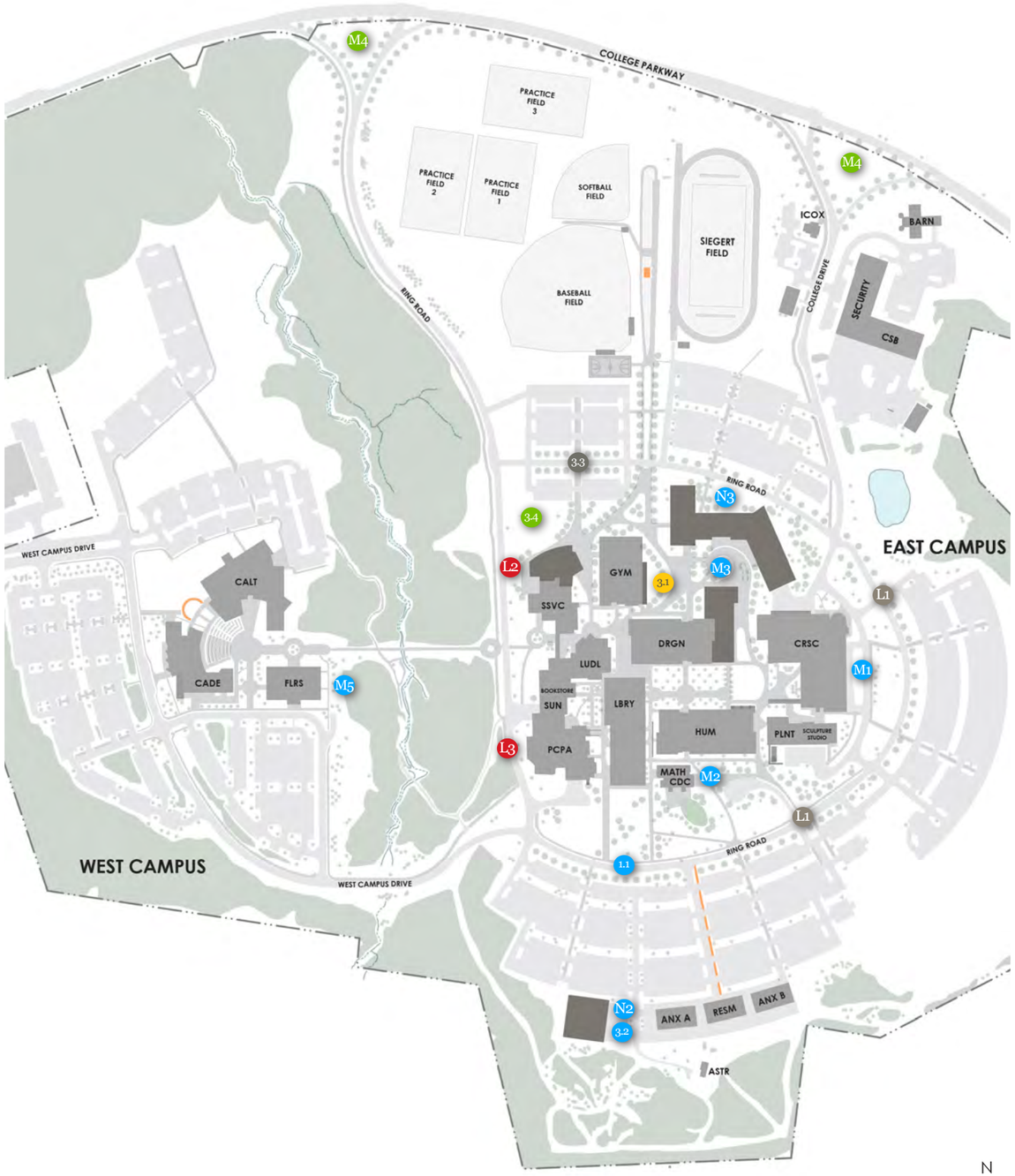
- Limited site and infrastructure work is required to make the site pad ready.
- Existing parking that will need to be removed to allow the development of the site can be replaced in close proximity to the current lot.
- The site offers the ability to create a science quad which will increase collaboration among the sciences as it is immediately adjacent to Dragun. This will help in both attraction and retention of students.
- The site offers the ability to create a new gateway to campus which will improve the ability of the College to attract new students.
- There are several excellent aquatic centers in the county that could provide community members the swimming programs that they desire.

Planned Projects

NEAR-TERM (1-5 Years)	
N1	Learning Landscape Improvements Campus Wide
N2	Relocate the Modular Building
N3	Construct Health Science and Biology Building*
N3.1	Raze Pool and Install Gym Façade
N3.2	Raze Schwartz and Relocate Classrooms
N3.3	Partial Relocation of Ring Road
N3.4	Campus Entrance Monument Sign
MID-TERM (6-8 Years)	
M1	Partial Renovation of Careers Building
M2	Renovate and Expand Child Development Center
M3	Renovate Dragun and Expand for Physical Sciences
M4	Campus Gateway Improvements along College Parkway
M5	Renovate Florestano
LONG-TERM (8+ Years)	
L1	Complete Relocation of Ring Road**
L1.1	Raze Johnson Building
L2	Renovate and Expand Student Services Center
L3	Renovate Dining Hall

*Pre-Construction will include Projects N3.1 - N3.4

**Pre-Construction will include Project L1.1



Proposed AACC Arnold Campus

Anticipated Probable Costs

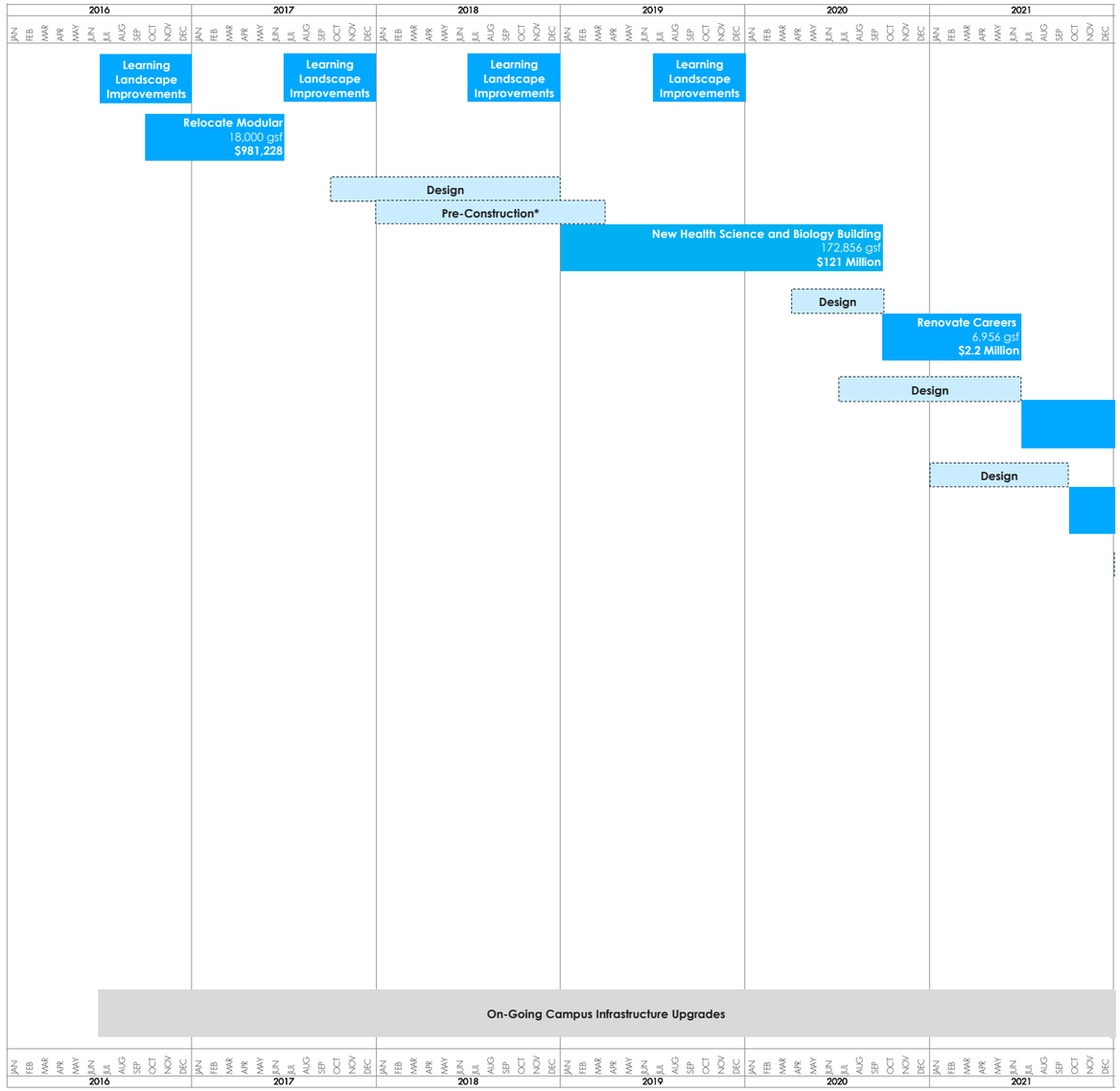
Cost Summary

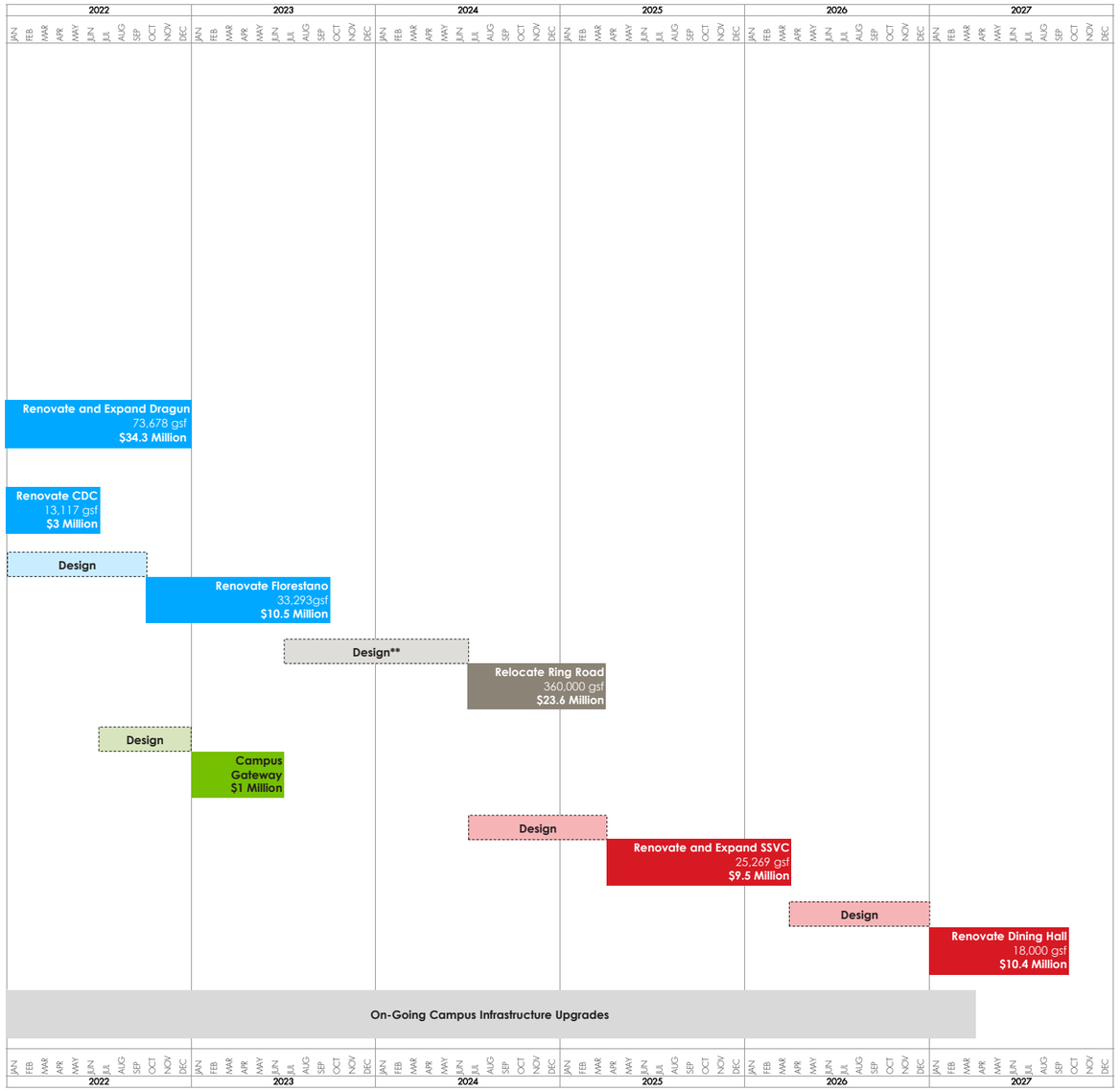
Proj. No.	Project Name	Construction Cost	Quantity	Unit Cost	Professional Fees, Equipment, Construction Contingencies	Total Project Costs 2016 Dollars	Estimated Year of Mid-Point Construction	Total Project Cost w/ Escalation	Total Project Cost by Term w/ Escalation
NEAR-TERM (1-5 Years)									**$129,256,226**
N1	Learning Landscape Improvements Campus Wide	$1,000,000	20	$50,000	$200,000	$1,200,000	2018	$1,349,837	
N2	Relocate the Modular Building	$810,000	18,000	$45	$97,200	$907,200	2017	$981,228	
N3	Construct Health Science and Biology Building*	$86,428,000	172,856	$500	$17,285,600	$103,713,600	2019	$121,330,243	
N3.1	Raze Pool and Install Gym Façade	$560,000	14,000	$40	$84,000	$644,000	2019	$753,389	
N3.2	Raze Schwartz and Relocate Classrooms	$348,800	13,952	$25	$69,760	$418,560	2019	$489,656	
N3.3	Partial Relocation of Ring Road	$2,800,000	70,000	$40	$560,000	$3,360,000	2019	$3,930,725	
N3.4	Campus Entrance Monument Sign	$300,000	1		$60,000	$360,000	2019	$421,149	
MID-TERM (6-8 Years)						$110,603,360		$129,256,226	**$51,114,654**
M1	Partial Renovation of Careers Building	$1,530,320	6,956	$220	$306,064	$1,836,384	2021	$2,234,242	
M2	Renovate and Expand Child Development Center	$1,967,550	13,117	$150	$393,510	$2,361,060	2022	$2,987,494	
M3	Renovate Dragun and Expand for Physical Sciences	$22,613,522	73,678	$325	$4,522,704	$27,136,227	2022	$34,335,984	
M4	Campus Gateway Improvements along College Parkway	$660,000	2	$330,000	$132,000	$792,000	2023	$1,042,218	
M5	Renovate Florestano	$6,658,600	33,293	$200	$1,331,720	$7,990,320	2023	$10,514,716	
LONG-TERM (8+ Years)						$40,115,991		$51,114,654	**$46,432,949**
L1	Complete Relocation of Ring Road**	$14,400,000	360,000	$40	$2,880,000	$17,280,000	2024	$23,648,873	
L1.1	Raze Johnson Building	$282,850	11,314	$25	$56,570	$339,420	2024	$464,520	
L2	Renovate and Expand Student Services Center	$5,559,180	25,269	$220	$1,111,836	$6,671,016	2025	$9,494,936	
L3	Renovate Dining Hall	$5,400,000	18,000	$300	$1,350,000	$6,750,000	2027	$10,391,315	
	On-going Campus Infrastructure Upgrades					$2,000,000	2021	$2,433,306	
						$33,040,436		$46,432,949	
GRAND TOTAL		**$151,318,822**			**$30,440,964**	**$183,759,787**		**$226,803,829**	**$226,803,829**

All estimates are in 2016 dollars and account for escalation.
*Pre-Construction will include Projects N3.1 - N3.4
**Pre-Construction will include Project L1.1

Implementation

Planned Project Timeline





*Pre-Construction will include Projects N3.1-N3.4 identified in the Anticipated Probable Costs Summary.

**Pre-Construction will include Project L1.1 identified in the Anticipated Probable Costs Summary.

Chapter 1
Overview of the Institution

Institutional Mission

Anne Arundel Community College (AACC) is one of sixteen public Community Colleges serving the state of Maryland that offers transfer and career associate degree programs, certificate programs, credit courses, continuing education, workforce development, and lifelong learning opportunities.

The following statements have been crafted by the institution to communicate its commitment to academic excellence and providing students the opportunity to realize their academic dreams in an accessible, equitable, and stimulating manner.

College Vision

Anne Arundel Community College is a premier learning community whose students and graduates are among the best-prepared citizens and workers of the world.

Philosophy

Anne Arundel Community College strives to embody the basic convictions of our country's democratic ideal: that individuals be given full opportunity to discover and develop their talents and interests; to pursue their unique potentials; and to achieve an intellectually, culturally, and economically satisfying relationship with society.

Mission Statement

With learning as its central mission, Anne Arundel Community College responds to the needs of a diverse community by offering high quality, affordable, and accessible learning opportunities and is accountable to its stakeholders.

Mission Goals and Objectives

The following Goals and Objectives were a part of the *Anne Arundel Community College Mission* that was approved by the Board of Trustees on April 14, 2009.

Goal 1. Excellence in Teaching and Learning Objectives

- Advancing the excellence of teaching and learning for students, faculty and staff;
- Providing a range of integrated credentialing opportunities; and
- Upholding rigorous and fair standards of student achievement.

Goal 2. Student Achievement and Success Objectives

- Providing appropriate services in support of learner access, success and development; and
- Providing appropriate placement for all learners.

Goal 3. Access and Affordability Objectives

- Providing accessible learning opportunities responsive to a range of community needs; and
- Working to make all programs and courses affordable to those who can benefit.

Goal 4. Diversity Objectives

- Promoting a campus climate that is inviting to and supportive of diverse populations (dimensions of diversity include race, color, age, religion, sex, national origin, marital status, sexual orientation, ability, genetic information and veteran status).

Goal 5. Community Engagement and Enrichment Objectives

- Supporting members of the community to benefit from global opportunities;
- Promoting county and state economic development through a variety of educational, support and training services to business, not-for-profit and governmental organizations;
- Providing a source for intellectual, cultural and physical vitality in the community; and
- Promoting a culture of community involvement and stewardship.

Goal 6. Effective Management Objectives

- Managing all aspects of the college effectively through planning, organizing, staffing and directing; and
- Establishing performance standards, assessing performance and taking appropriate action.

Strategic Plan

Strategic Plan - Student Success 2020

The Student Success 2020 Strategic Plan was developed in response to President Obama's 2009 American Graduation Initiative that aims to help an additional 5 million Americans earn degrees and certifications by 2020. Since December 2009, the College has been actively engaged in meeting the goals outlined in the Strategic Plan (shown below) by providing opportunities for students to be more successful in reaching their educational goals. This includes a long-range goal to double the number of degrees, certifications, and workforce credentials obtained by AACC students.

1.1 Ensure in planning and review that developing and existing program offerings, delivery formats and scheduling locations best serve community needs.

1.2 Enhance enrollment by implementing measures to identify and serve new and currently un-served student populations.

1.3 With student focus as a continuing principle of operation, assure that recruitment, enrollment and retention processes and procedures are free of impediments to students' success.

2.1 Promote and support effective teaching and learning to ensure a culture of academic excellence to enhance student success.

2.2 Develop pathways to assist students in the identification, progression and completion of personal, academic and career goals.

2.3 Increase course success rates with specific attention to gateway and developmental courses.

2.4 Implement initiatives and programs to increase the success and completion of all students, especially low-performing students, students of color, part-time students and students enrolled in online courses.

2.5 Through collaborative means, develop initiatives and programs to directly connect student support services with classroom instruction.

2.6 Promote diversity, equity and cultural responsiveness to support student success and completion.

3.1 Secure traditional and non-traditional resources that support Student Success 2020.

3.2 Allocate resources to Student Success 2020 initiatives that are scalable and efficiently deployed.

3.3 Acknowledge and utilize strengths of the existing workforce and enhance development, support, recruitment and retention of a diverse and competent workforce.

3.4 Provide a variety of professional enrichment programs to strengthen the workforce.

3.5 Strengthen sustainability throughout the college.

Adopted by the SPC, September 17, 2013

Institutional Structure

AACC ADMINISTRATIVE LIST – FY2016

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Director, Andrew Truxal Library	Cindy Steinhoff
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Director, e-Learning & Instructional Technology	Thiha Aye
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Manager, Institutional Professional Development & Adjunct Faculty Development	Lisa Starkey
Director, Offsite and Weekend College & Assessment of Prior Learning	Frances Turcott
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Coordinator, Center for Learning Through Service	Stephanie Goldenberg
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Assistant Director/Chair, Teacher Education	Audra Butler
Assistant Director, The Parenting Center	Cari Bixler
Assistant Dean, Continuing Education	Charlene Templeton
Director, Center on Aging	Dr. Terry Portis
Director, Lifelong Learning	Louann Tracy
Director, Occupational Skills	Michael Yeakey
Assistant Dean, Workforce Development	Kip Kunsman
Director, Cyber & Technology Training	Sara Eger
Workforce Solutions	
Director, Client Services	Dawn Carter
Director, Sales and Solutions	Sonja Gladwin
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Chair, Emergency Medical Technician	Claudia Clark
Chair, Health and Human Services	Elizabeth Appel
Interim Chair, Health & Physical Education	Tiffin Bumpass
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Coordinator, Therapeutic Massage	Lynne Brummitt
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Coordinator, Medical Laboratory Technician	Lorraine Doucette
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Chair, African American Studies, American Studies, Anthropology, Future, Geography &Sociology	Dr. Erica Yeager
Chair, English &Communications	Dr. Steven Canaday
Coordinator, Gender & Sexuality Studies	Dr. Heather Rellihan
Chair, History, Philosophy & Political Science	Dr. Russell Rockefeller
Chair, Mathematics	Dr. Alycia Marshall
Chair, Performing Arts: Dance, Music & Theater Arts	Douglas Byerly
Chair, Psychology & Sports Studies	Dr. Rachelle Tannenbaum
Coordinator, Reading	Kerry Taylor

VICE PRESIDENT FOR LEARNING (continued)	
Chair, Visual Arts & Humanities	Christopher Mona
Chair, World Languages (including American Sign Language)	Scott Cooper
Dean, Science & Technology	Dr. Bruce Bowman
Chair, Architecture and Interior Design	Michael Ryan
Chair, Astronomy, Chemistry, Physics, Physical Science & Sustainable Energy Systems	Dr. Kirsten Casey
Chair, Biology & the Environmental Center	Dr. M. Stephen Ailstock
Chair, Computer Information Systems	Penny Foster
Chair, Computer Science	Krysten Hall
Chair, Engineering	Beth Baran (Wyler)
Manager, Instructional Technologies	Catherine Bosse
Director, National STEM Consortium	Sue Gallagher
Chair, Networking, Forensics & Security	Kasia Taylor
Director, Regional STEM Center	Vacant
VICE PRESIDENT FOR LEARNING RESOURCES MANAGEMENT	Melissa A. Beardmore
Executive Director, Administrative Services	Maury Chaput
Director, Document Services	Kevin Miller
Director, Facilities Maintenance and Operations	Larry Gregory
Director, Facilities Planning and Construction	James Taylor
Director, Workplace Safety & Risk Management	Steven Kroh
Executive Director, Finance	Andrew Little
Director, Auxiliary Services	Steven Pegg
Budget Director	Sue Callahan
Controller	Marti Rothschild
Director, Management Advisory Services	Karen Tobat
Director, Purchasing & Contracting	Melanie Scherer
Executive Director, Human Resources	Suzanne Boyer
Director of Human Resources Operations	Lisa Sanford
Executive Director, Public Relations & Marketing	Dan Baum
Assistant Director, Creative Services	Allison Ernst
Assistant Director, Marketing Research & Strategy	Jill Bennett
Assistant Director, Public Relations	Laurie Farrell
Chief of Police/Director, Public Safety	Gary Lyle
Deputy Director, Public Safety	Cleveland Smith

Campus Locations

Fast Facts

AACC Locations

- Arnold Campus
- Arundel Mills (AMIL)
  - Hotel, Culinary Arts and Tourism Institute (HCAT)
  - Center for Cyber and Professional Training (CCPT)
- Glen Burnie Town Center (GBTC)
- Fort Meade Army Education Center
- Sales and Service Training Center (SSTC)

Anne Arundel Community College (AACC) is a fully accredited public, two-year institution located in Anne Arundel, Maryland. The College has several locations that allow it to maintain a significant presence across the county. These locations include the main campus located at Arnold and other sites at Arundel Mills in Hanover, the Glen Burnie Town Center, the Hotel, Culinary Arts and Tourism Institute in Glen Burnie and the Center for Cyber and Professional Training across from Arundel Mills in Hanover. Courses are also offered at non-college facilities including the Fort Meade Army Education Center, other off-campus locations in centers and public schools, as well as AACC's Virtual Campus.

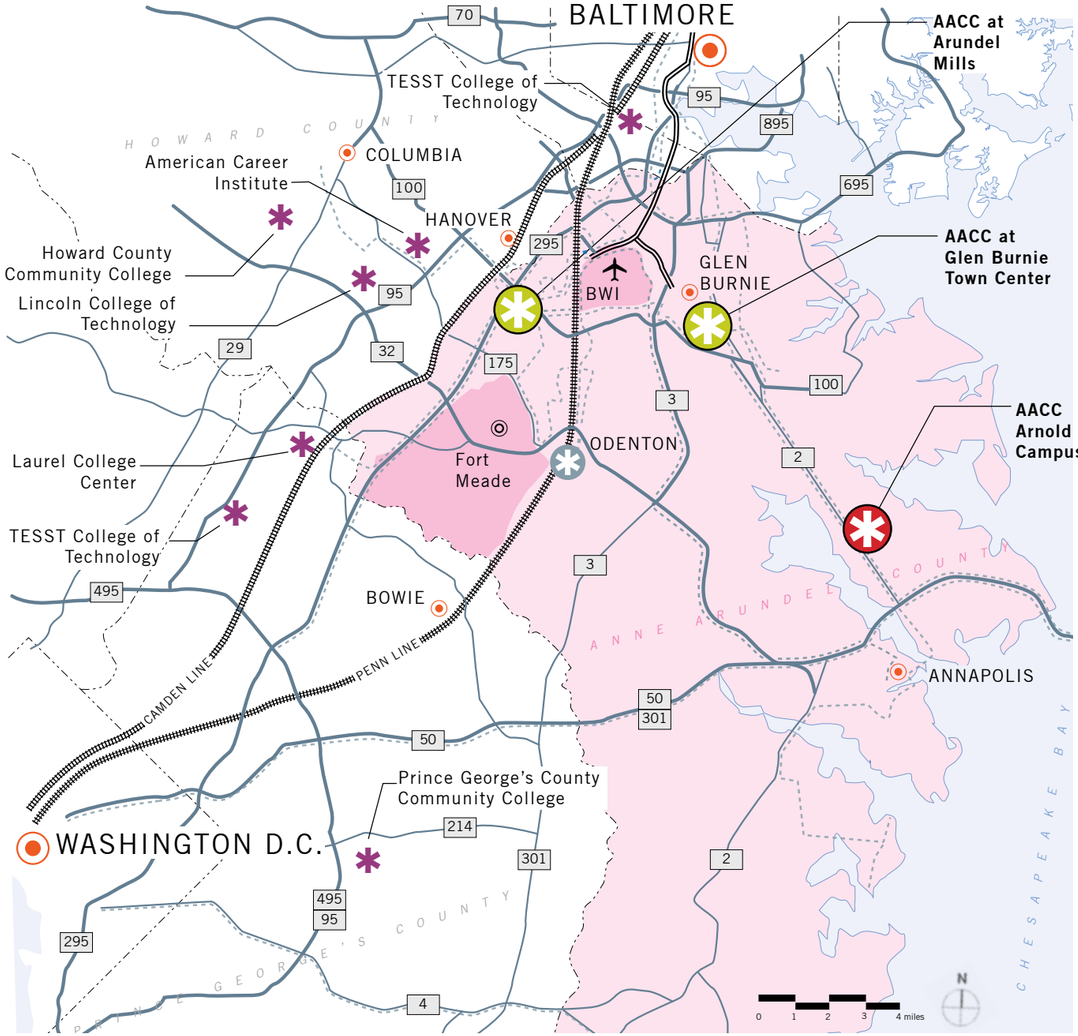
Student services are available at the Arnold Campus, Arundel Mills, the Glen Burnie Town Center, the Fort Meade Army Education Center, and online.

College Locations

Arnold Campus

The College's main campus located in Arnold, Maryland is situated at the center of Anne Arundel County on 230 acres. The Arnold Campus exists approximately 18 miles south of Baltimore and eight miles north of Annapolis on a peninsula extending into the Chesapeake Bay. As a result of greater population densities in the northern and western areas of the county, the College attracts and serves less students in the southern and eastern areas. The Arundel Mills and Glen Burnie sites serve as anchors for the northern part of the county.

The Arnold Campus features 30 buildings and multiple amenities including various academic buildings, an astronomy lab, the newly renovated Truxal Library, Center for Applied Learning and Technology, Careers Center, Student Union, Student Services Center, 389 seat performing arts center, two art galleries, a gymnasium, and an athletic field that accommodates 3,000 spectators.



1 "Anne Arundel Community College Facilities Master Plan 2009-2019," by Cho Benn Holback + Associates Inc.

AACC Campus Locations in Maryland[1]

Arundel Mills (AMIL)

AACC at Arundel Mills is designated by the state as a Regional Higher Education Center. The four-story facility houses classroom, lab, and student service spaces that support the various programs featured at the center These programs include the AACC University Consortium that allows students to attain a four-year degree without leaving the county, the Teacher Education and Child Care Institute (TEACH), the Hotel, Culinary Arts and Tourism (HCAT) Institute's Casino Dealer School facilities, and the Physician Assistant Program.

The Center for Cyber and Professional Training is located at 7556 Teague Road near AACC at Arundel Mills. The center houses specialized labs for cyber security and digital forensics, professional training, a testing center, and faculty support space. The facility also houses the Center for Workforce Solutions, which provides employee training and business services to organizations, agencies, and companies.

Glen Burnie Town Center (GBTC)

AACC operates in two buildings in Glen Burnie. The five-story Arundel Center North building features classrooms, computer facilities, and student services. The Hotel, Culinary Arts, and Tourism Institute houses three training classrooms and a commercial kitchen that can hold two classes.

Fort Meade Army Education Center

The Fort Meade Army Education Center provides academic advising, testing, and other support services.

Sales and Service Training Center (SSTC)

AACC, in partnership with the Anne Arundel County Workforce Development Corporation, and the Department of Labor Licensing and Regulations, offers a One-Stop Career Center at SSTC. The Career Center provides the following services for employers and job seekers: career counseling, job postings, job fairs, office equipment, basic skills and GED test prep courses, Step Up to Success (SUTS), and English as a Second Language courses.

Off-Campus Locations

Other off-campus locations include the Center for Applied Technology, North and South, and Independent Electrical Contractors. Courses are also offered at several public schools including Annapolis High School, Meade High School, North County High School, and Severna Park High School.

AACC Virtual Campus

In 1996, AACC began offering online courses. Today students can choose from an array of credit distance education courses to complete a degree, certificate, letter of recognition, or update workplace skills.

The Virtual Campus provides learning programs and courses available to students at anytime and anywhere. Virtual courses are available exclusively online, in a hybrid format that has both online and classroom components, as real-time interactive courses that use high-tech classrooms for students and faculty to interact from remote locations, or as web-enhanced courses available on-campus that help to supplement and expand instruction and learning.

Arundel Mills (AMIL)

Hotel, Culinary Arts and Tourism (HCAT)

Glen Burnie Town Center (GBTC)

History

Since the College's opening in 1961, its enrollment has grown from 270 to over 20,000 students in multiple locations across Anne Arundel County, Maryland. Anne Arundel Community College has become renowned for its academic excellence, dedicated faculty and staff, and a commitment to the students and the communities the College has served for more than fifty years.

1961
The County Board of Education established Anne Arundel Community College on January 2, 1961.

In September of 1961, the college opened for 270 students, 4 full-time, and 26 part-time faculty members in temporary quarters at Severna Park High School.

1967
Dr. Andrew G. Truxal became the College's first president until his retirement on August 1, 1968.

The College moved to its own campus in Arnold, Maryland in September 1967 and by April 1968 it was awarded full accreditation by the Middle State Association of Colleges and Secondary Schools (now Middle States Commission on Higher Education).

1968
Dr. Robert P. Ludlum became the second president and oversaw the initial expansion of the Arnold Campus. He retired on June 30, 1976.

1976
Dr. Justus D. Sundermann became AACC's third president and served July 1, 1976 to June 30, 1979.

1979
On July 1, 1979, Dr. Thomas E. Florestano became the fourth president until his retirement June 30, 1994. During his tenure, the campus grew its enrollment, academic programs, and services, and expanded in size to 230 acres.

1994
Dr. Martha A. Smith became the College's fifth president on August 1, 1994.

AACC's accreditation was approved by the Middle States Commission on Higher Education.

2004
AACC's accreditation was approved by the Middle States Commission on Higher Education.

The College was named a Board College for the League for Innovation in the Community College.

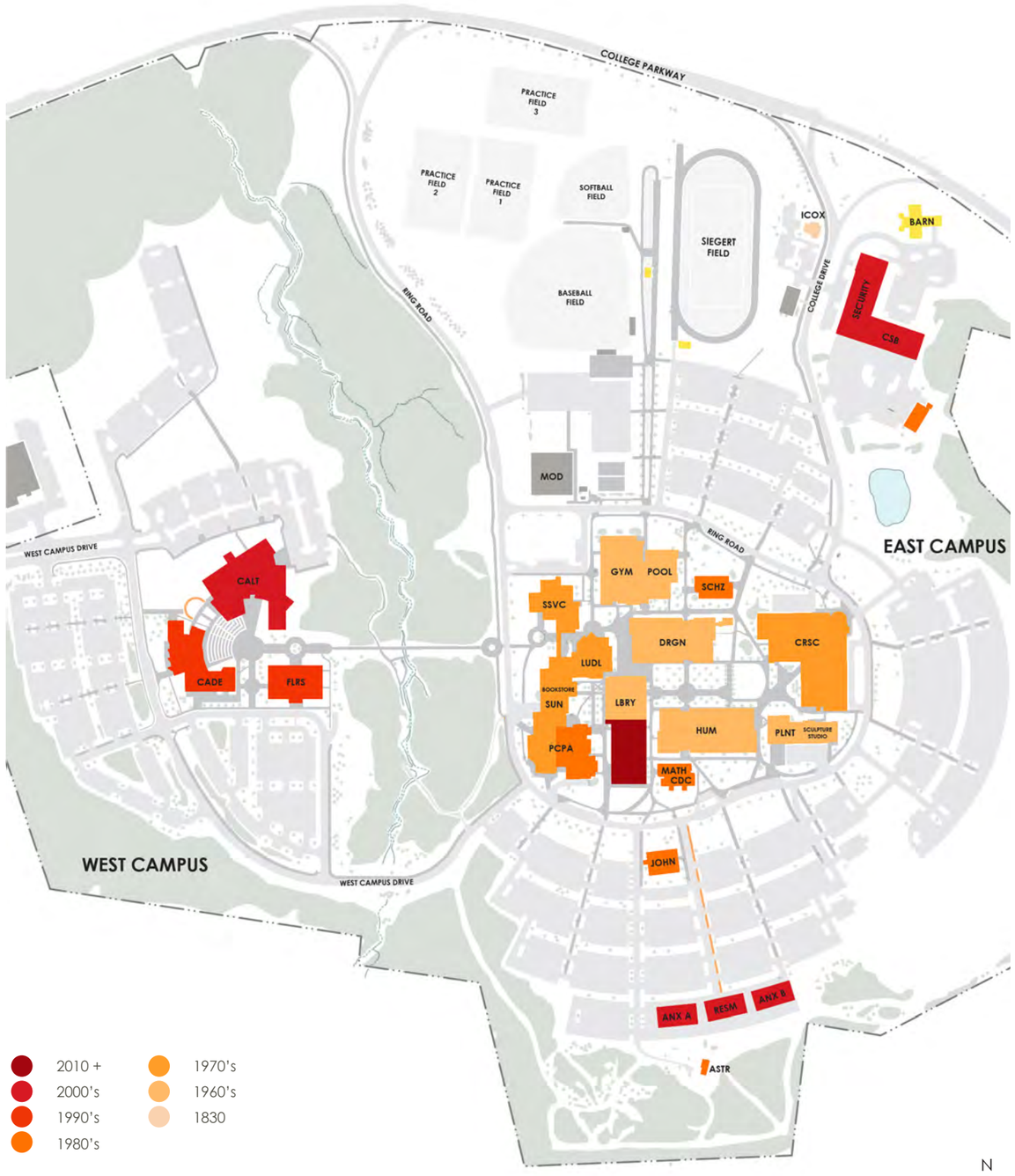
2007
In 2007, AACC received the American Association of Webmasters Gold Award (also received in 2005) and World Wide Web Silver Award recognizing outstanding web design, content, creativity, and ease of navigation.

2009
AACC named one of the Top Ten Community Colleges with Foremost Use of Digital Technology.

2010
AACC named on of the "Best Colleges to Work For" in the nation by The Chronicle of Higher Education.

2011
AACC celebrates its 50 year anniversary.

2012
Dr. Dawn Lindsay joined the College in 2012 and became its sixth president.



Growth of Campus Over Time

Facilities Assessment

The Arnold Campus is split into two main clusters that create East Campus and West Campus. Administrative, student service, and community related buildings are located towards the center of campus, thereby creating a perceived link between the academic buildings that surround them on both the east and west edges of campus. Athletic and recreation facilities including the Gym, Pool, and athletic fields are located along the north side of campus.

The main cluster of buildings located on East Campus is the original area where the College first began developing. Over time more buildings were constructed to create other clusters. The second major cluster of academic buildings creates what is referred to as West Campus. There are two smaller clusters located north and west of East Campus where academic and athletic facilities are located.

2014 Facilities Assessment

In 2014 a Facilities Condition Assessment was conducted by EMG Corporation to capture the campus' current building and site conditions in preparation for the facilities master plan. Detailed reviews for 27 of AACC's 35 owned and leased properties were conducted. Information shown herein collates results from these assessments and current space data. Detailed summaries of each building assessment and corresponding floor plans can be found in Appendix A - Building Conditions of this report.

Ratings System

Each building assessed as part of the 2014 Facilities Condition Assessment was rated as good, fair, or poor. EMG Corporation used the following definitions to explain each rating:

- Good - Satisfactory as-is. Requires only routine maintenance during the assessment period. Repair or replacement may be required due to a system's estimated useful life.
- Fair - Satisfactory as-is. Repair or replacement is required due to current physical condition and/or estimated remaining useful life.
- Poor - Immediate repair, replacement, or significant maintenance is required.

Building Conditions

The buildings reviewed appear to be well maintained and are in fair-good overall condition. Building systems require regular maintenance and where equipment has reached the end of its useful life, it should be replaced. Each detailed assessment should be referenced to determine the specific needs of each facility.

Figure 1.1 Arnold Campus Facilities Inventory

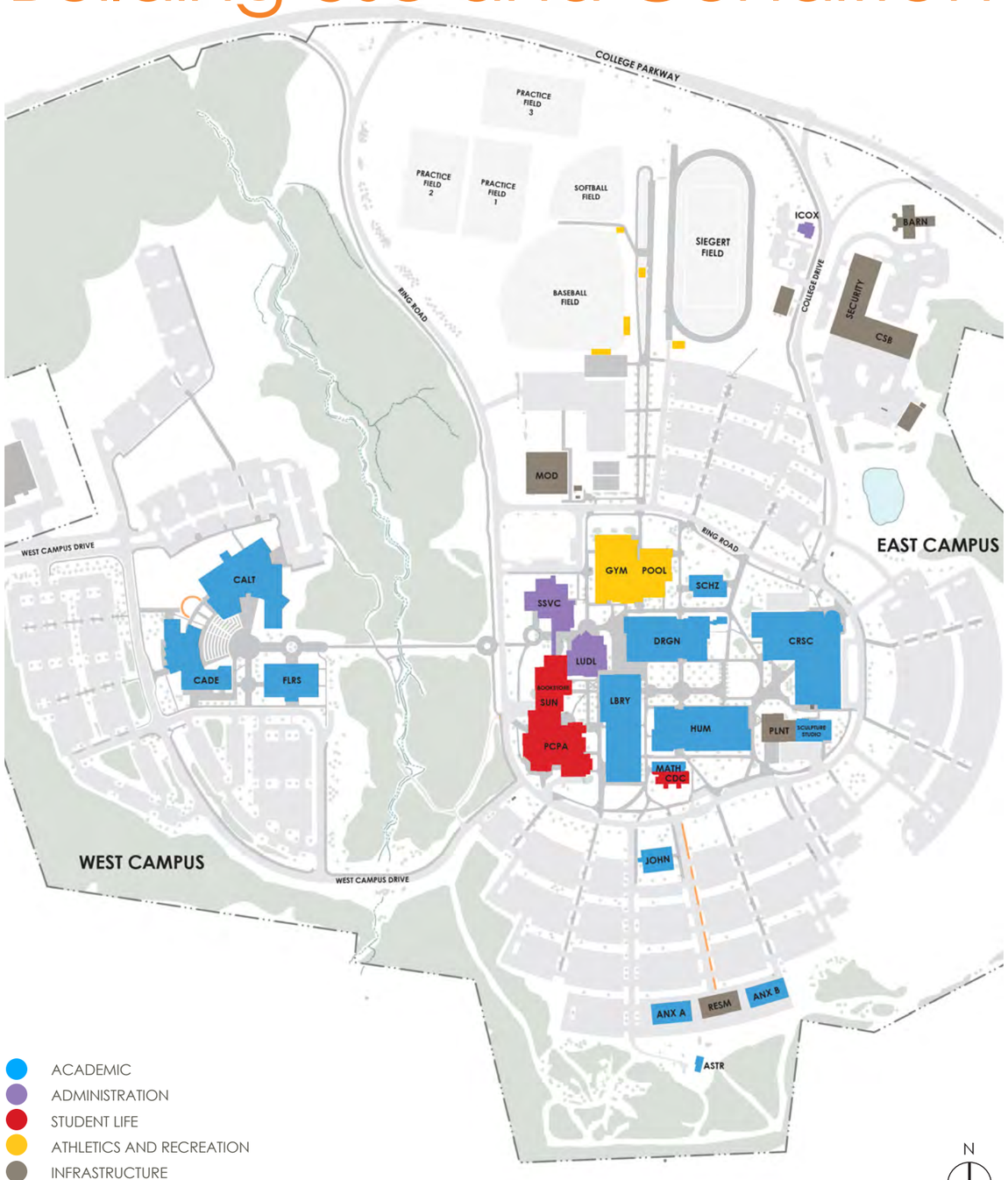
#	Key	Building Name	GSF (Gross Sq. Ft.)	Year Built	Most Recent Renovation	Building Rating 2014	Primary Building Use
1	LUDL	Ludlum Hall Administration Building**	18,757	1976	2013	Good	Administration
2	ASTR	Astronomy Building	864	1980	2007	Fair	Academics
3	CRSC	Careers Center Building	117,650	1973	2009	Good	Academics
4	GYM	David S. Jenkin's Gymnasium	43,555	1967	1999	Good	Athletics and Recreation
5	HUM	Humanities Building	37,978	1967	2007	Fair	Academics
6	LIBR	Andrew G. Truxal Library**	67,384	1967	2012	Good	Academics
7	PLNT	Physical Plant	13,408	1967	2008	Fair	Infrastructure
8	POOL	Daniel C. Olson Memorial Pool	13,884	1975	2009	Fair	Athletics and Recreation
9	DRGN	Dragun Science Building	39,499	1967	2007	Fair	Academics
10	SUN	Student Union	43,355	1975	2003	Fair	Student Life
11	MATH	Math Building / Child Development Center	11,543	1986	2006	Fair	Academics / Student Life
12	PCPA	Pascal Center for Performing Arts	14,138	1983	2008	Fair	Student Life
13	ATST	Athletic Storage*	604	1976		Good	Athletics and Recreation
14	BARN	Barn*	11,967	1938	2007	Good	Infrastructure
15	GRND	Grounds Building	3,025	1982		Fair	Infrastructure
16	JOHN	Johnson Building	11,314	1982	2013	Fair	Academics
17	STOR	Grounds Storage	3,006	1988	2013	Fair	Infrastructure
18	SCHZ	Schwartz Building	12,442	1990		Fair	Academics
19	ICOX	Isaac Cox House	2,954	1830	2009	Good	Administration
20	FLRS	Florestano Allied Health Building	57,940	1993		Good	Academics
21	CADE	Cade Center for Fine Arts	52,835	1997	2007	Good	Academics
22	SSVC	Student Services Center	21,100	1975	2002	Good	Administration
23	RESM	Resource Management Building	6,759	2003		Good	Infrastructure
24	CALT	Center for Applied Learning and Technology	92,711	2004		Good	Academics
25	CSB	Central Services Building	32,538	2007		Good	Infrastructure
29	ANXA	Annex A	7,550	2007		Fair	Academics
30	ANXB	Annex B	7,160	2008		Fair	Academics
31	ATRM	Athletic Building Restroom	624	1986	2014	Good	Athletics and Recreation
34	GRHS	Greenhouse Building*	830	2011		Fair	Infrastructure
36	EQST	Equipment Storage*	2,273	2013		Good	Infrastructure

Figure 1.2 Off-Site and Leased Space Inventory

#	Key	Building Name	GSF (Gross Sq. Ft.)	Year Built	Most Recent Renovation	Building Rating 2014	Primary Use
26	HCAT	Hospitality, Culinary Arts and Tourism Institute	12,815	2001		Good	Academics
27	GBTC	Glen Burnie Town Center	45,231	1982	2000	Good	Academics
28	AMIL	Arundel Mills	72,248	2003		Good	Academics
32	SSTC	Sales & Service Training*	4,316	2010		Good	Academics
35	CCPT	Center for Cyber and Professional Development*	27,137	2012		Good	Academics

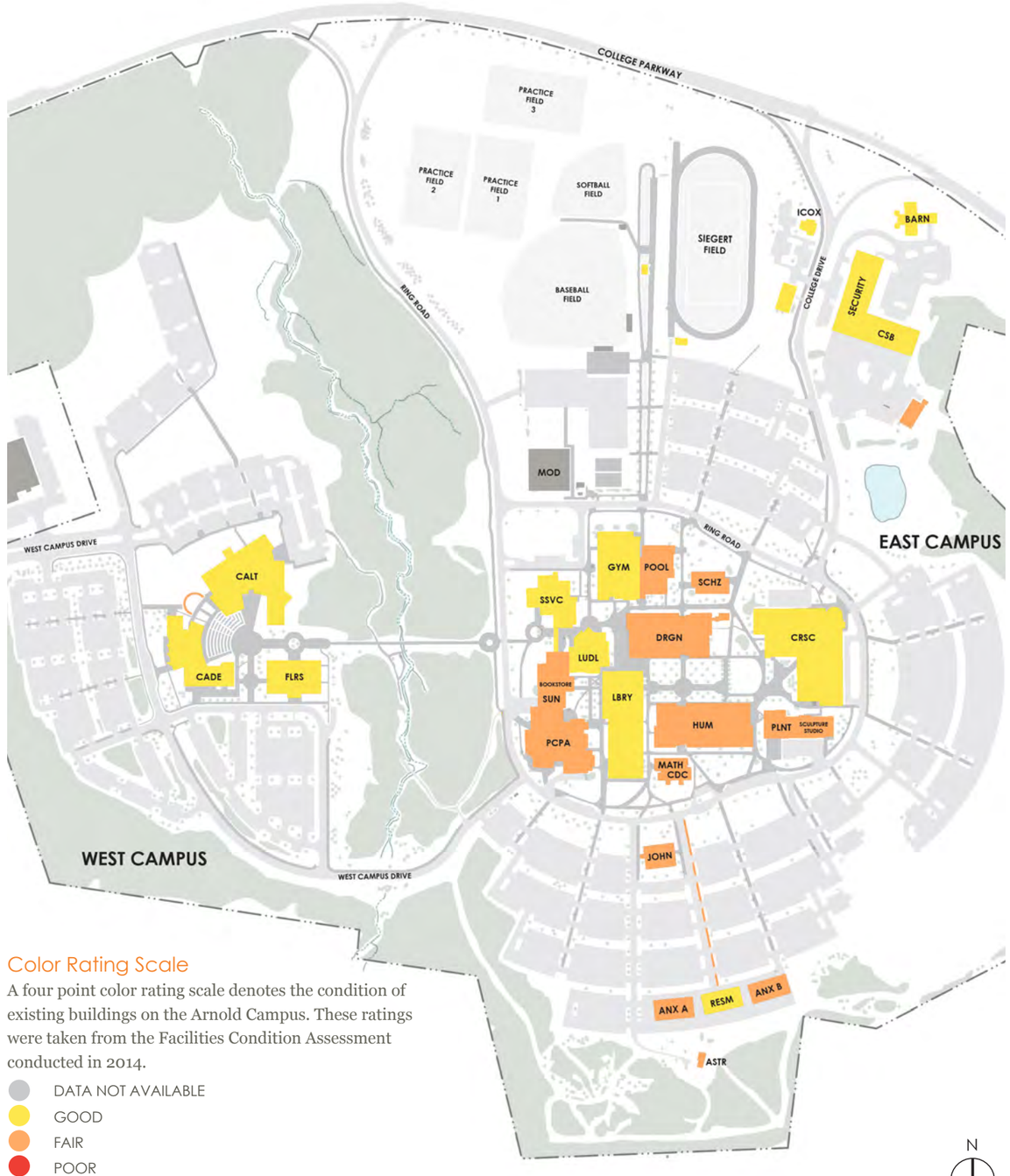
*Buildings indicated were not reviewed as part of the 2014 Facilities Condition Assessment and are not featured in Appendix A.
**Buildings indicated were not reviewed as part of the 2014 Facilities Condition Assessment, but are featured Appendix A.

Building Use and Condition



- ACADEMIC
- ADMINISTRATION
- STUDENT LIFE
- ATHLETICS AND RECREATION
- INFRASTRUCTURE

Existing Building Use



Color Rating Scale

A four point color rating scale denotes the condition of existing buildings on the Arnold Campus. These ratings were taken from the Facilities Condition Assessment conducted in 2014.

- DATA NOT AVAILABLE
- GOOD
- FAIR
- POOR

Existing Building Condition

Chapter 2
Institutional Background Data

Physical Characteristics

Fast Facts

Notable Open Spaces

East Campus
- Library Campus Quad
- Earl S. Scott Nature Trail - Dividing Creek

West Campus
- Dr. Martin Luther King Memorial Statue
- Cade Center for Fine Arts outdoor Amphitheater

Anne Arundel Community College's Arnold Campus is situated on approximately 230 acres in Arnold, Maryland. The campus is divided into two sides, East and West Campuses, that are bifurcated by a small waterway and grove of trees. A footbridge allows students to safely travel from one side of campus to the other.

Access to Campus

The Arnold Campus is bordered by two major arteries. College Parkway defines the northern extents of the campus and offers two entrances to campus that originate from this roadway. Route 2 borders West Campus and provides a third entrance to campus. All three entry roads ultimately intersect with Ring Road, which encompasses the heart of the Arnold Campus.

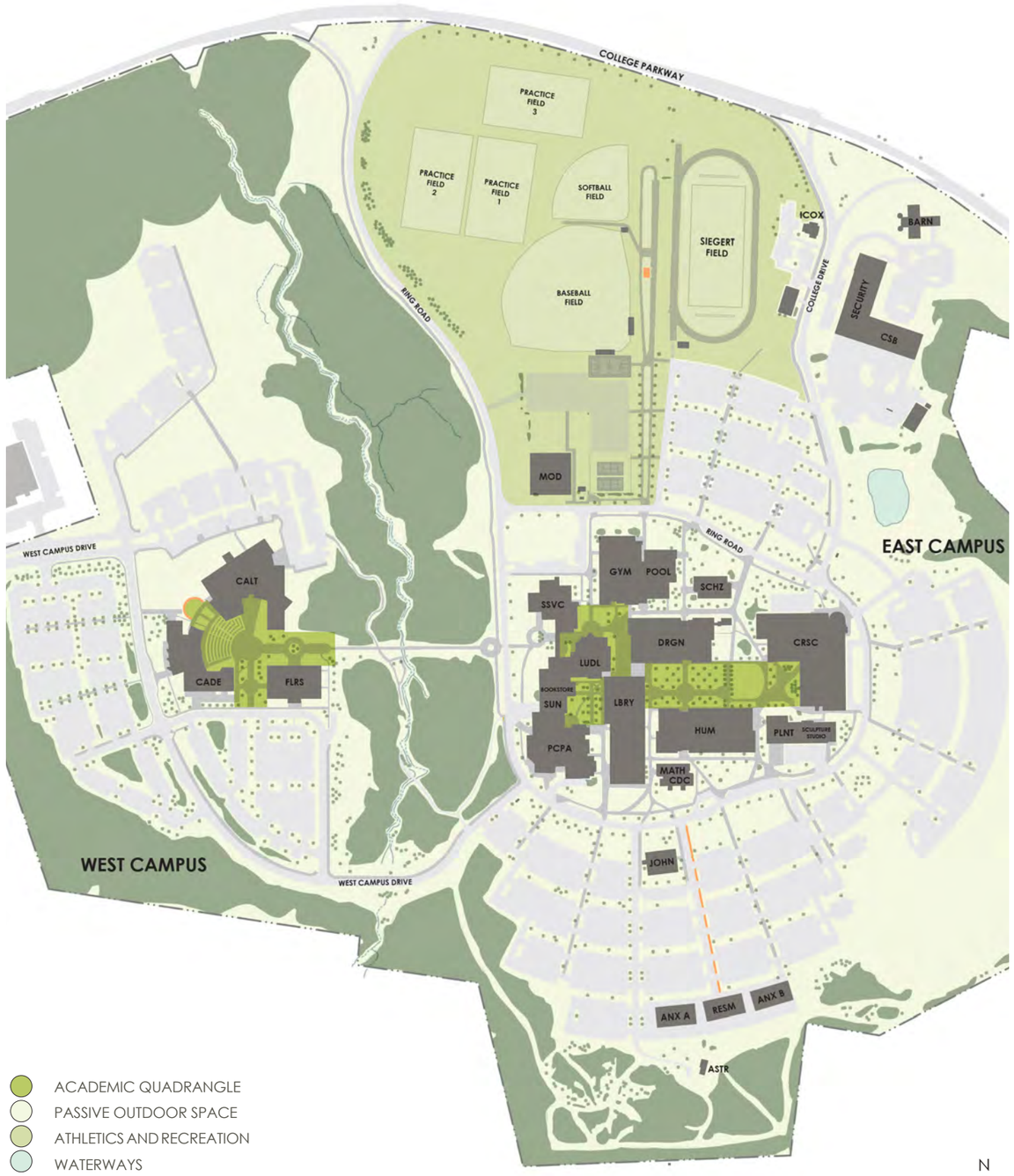
Topography

The topography of campus is generally flat with the exception of the deep ravine that runs north / south creating the East and West Campuses. The ravine is lined with mature trees and is deep enough to prohibit development in this area. The majority of the buildable land owned by the College is currently developed with buildings, parking, or sports fields. There is an open plot on West Campus located at the corner of College Freeway that could be developed in the future; however, it is separated from the rest of campus by parking lots and the ravine.

Open Space

The Arnold Campus' landscape relies on key open spaces to define the physical form, perception, and character of its campus. Gracious lawns and unique gathering spaces provide excellent vistas of the property and promote outdoor placemaking throughout.

The main campus quadrangle is located between Dragun, Humanities, and the Library. While this space is centrally located, the mature trees actually limit the use of this area by students, faculty and staff. The density of the trees limits the usable space while creating large shaded areas which stunt the growth of other plant material. Thinning or removing some of the trees in this area would promote better use of the space by providing larger, more usable areas while allowing for grass and



Open Space

groundcover to be re-established.

In contrast to the naturalized, open spaces East Campus possesses, West Campus boasts a variety of interesting and unique built landscape features that help to define its extents. The most significant man-made features include a memorial statue and large amphitheater.

A statue honoring Rev. Dr. Martin Luther King Jr. is featured on the western part of the Arnold Campus. The statue was sculpted by Ed Dwight and was dedicated on August 27, 2006. The 9-foot, 6-inch-tall bronze statue stands atop a 5-foot pedestal next to the Cade Center for Fine Arts. The statue recently underwent structural repairs.

A large, 300-person outdoor amphitheater is located adjacent to the Cade Center for Fine Arts. This amphitheater is used for music, dance, acting, and poetry performances. The Veteran's Memorial Garden is situated at the base of the amphitheater. The garden includes shrubs, perennials and grasses, as well as an illuminated American Flag.

Athletics Overview

Anne Arundel Community College has 11 intercollegiate athletic teams that compete in the National Junior College Athletic Association (NJCAA) Division III and Maryland Junior College Athletic Association (MD JUCO). The institution provides its athletes, faculty, and students access to the following facilities:

Indoor Facilities

David S. Jenkin's Gymnasium
Jenkin's Gymnasium and Fitness Center provides space on campus for men and women's basketball, women's volleyball, athletic classes, recreational use, and general physical health and wellness. The Fitness Center features two rooms with cardiovascular fitness and weight training equipment for use in classes and during open-hour workouts. These facilities are only available for enrolled credit students, faculty, and college employees.

Daniel C. Olson Memorial Pool
The Olson Memorial Pool is a 6-lane, Olympic-size swimming pool used for swim meets, group swims, and is open for student and community use. The pool is currently used 5.75 day hours/week for credit swimming classes and 24.75 day hours/week for non-credit water aerobics and other fitness classes. The pool (13,884 GSF) generates approximately 30 day hours/week of use unlike other buildings used for academic instruction like Dragun (39,499 GSF) that generate approximately 368 day hours/week.

While the pool is an asset to the community, it does not serve the core mission of the college. Its under-use by credit bearing courses, as well as annual operational expenses and costs to modernize the pool justify the recommendation of this Master Plan to demolish the pool.

Athletic and Intramural Fields

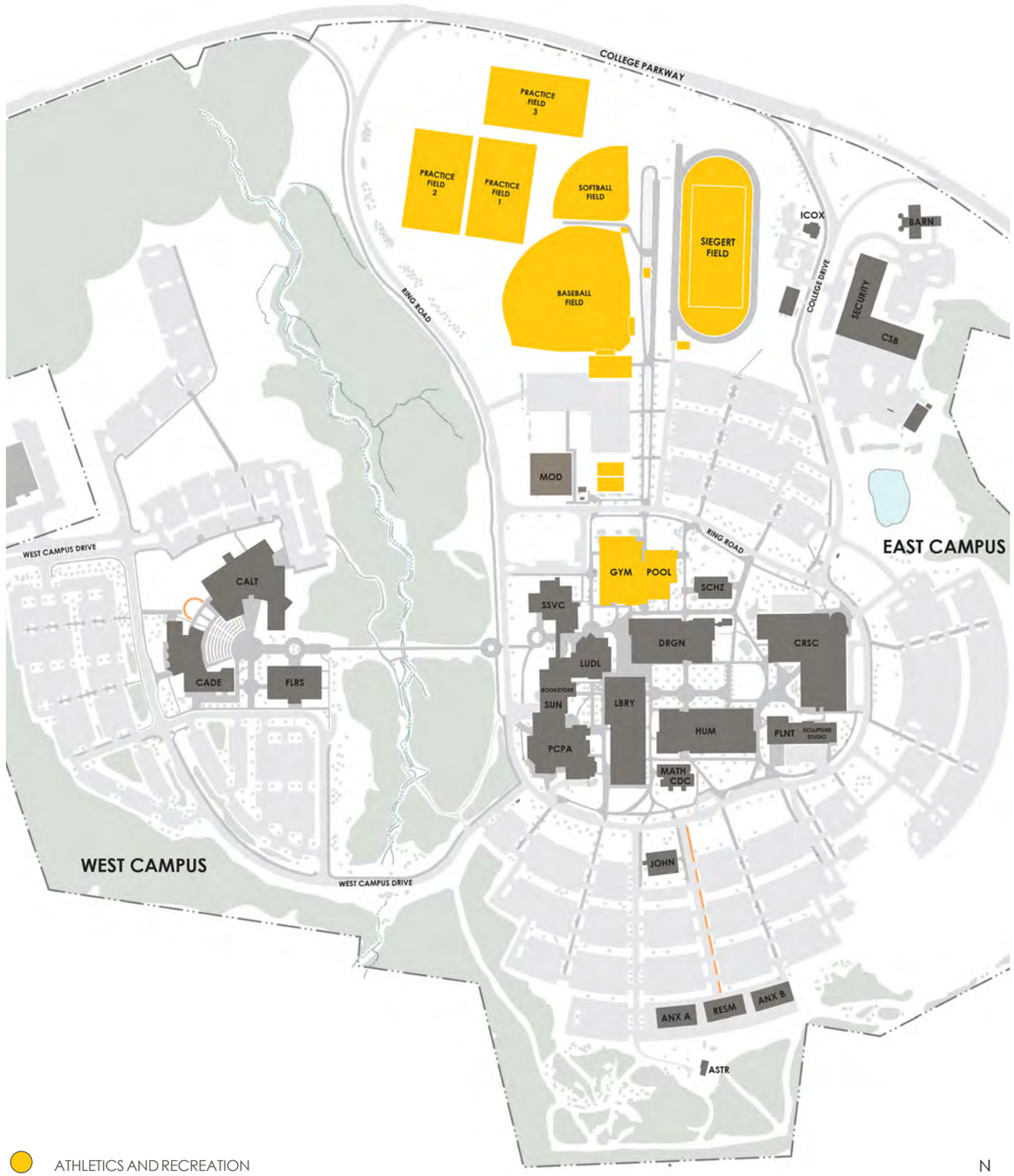
Athletic, recreation, and club sports are accommodated on the Anne Arundel Community College campus by multiple sports fields and outdoor facilities. These facilities include two soft asphalt tennis courts, natural grass softball, baseball, and three multi-sport practice fields, as well as a synthetic turf field.

Louis L. Siegert Jr. Stadium
The Louis L. Siegert Jr. Stadium encompasses a synthetic turf field installed in 2010, stadium seating, field lighting, and a track. In general, the field is serviceable. Adjacent stadium seating lacks barrier-free access, space for wheelchair occupants, and hand rails on the perimeter of staircases.

Baseball Field
The baseball field features batting cages, bleachers, a drinking fountain, dugouts, and a recently installed scoreboard. The field is heavily used for league play leaving little time for repairs and turf rejuvenation to occur. Lack of maintenance has resulted in poor turf quality and uneven grades in both the infield and outfield. The field has no lighting, irrigation, or infield drainage/ subdrainage and lacks appropriate ADA seating and access to the field.

Softball Field
The softball field features bleachers, dugouts, and a recently installed scoreboard. Heavy use has resulted in changing infield grades and a rough and uneven outfield. The field has no lighting, irrigation, or infield drainage/ subdrainage and lacks appropriate ADA seating and access to the field. Also, fabric connectors are failing at various locations along the outfield fence and are in need of replacement.

Practice Fields
There are three natural grass practice fields located on the AACC Campus. The field's primary use is men's and women's lacrosse, but are also used for additional intercollegiate and recreational sporting events, commencement, and other events requiring tents. When not in use for College activities the fields are also open for community use. The heavy use of these fields has resulted in substantial compaction of soil and uneven turf coverage, but reportedly have good drainage.



Athletics and Recreation Facilities

Circulation and Parking

Fast Facts

Arnold Campus
Existing Parking Allocation

- Loading: 6
- Faculty / Staff: 389
- Reserved: 144
- Metered: 26
- Motorcycle: 11
- ADA: 111
- Open: 3,845
- Total Spaces: 4,532

Vehicular Circulation

Anne Arundel Community College's Arnold Campus does not possess a defined main entrance or gateway. Instead, the campus may be accessed at three separate points. There are two entries located along College Parkway that guide visitors towards East Campus. At the intersection of College Parkway and Ring Road visitors are directed past the athletic fields and are greeted with a view of the Student Services Center. College Drive also intersects College Parkway and guides visitors past the Barn, Isaac Cox Building, and Central Services Building until it meets with Ring Road. The third entrance to campus is located at the intersection of Route 2 and West Campus Drive. This roadway provides immediate access to West Campus which ultimately intersects with Ring Road if vehicles continue to head eastward.

Pedestrian Circulation

On the east side of campus, Ring Road surrounds the main cluster of buildings. All parking is located outside of this loop towards the periphery of campus. Major circulation conflicts occur where pedestrians cross over this roadway to travel to and from the outer ring of parking.

A wide, planked pedestrian bridge that crosses over a wooded chasm, known as Dividing Creek, connects the eastern and western campuses. Here, the Earl S. Scott Nature Path runs along a forested stream and provides a peaceful retreat for wildlife and humans alike. The pedestrian bridge provides dry passage for pedestrians and handrails are installed along steep areas of the trail as a safety precaution.

Pedestrian and Vehicular Circulation

Parking on Campus

Visitors may park in any of the lots designated for general student parking. Short-term metered parking is provided for visitors along a portion of Ring Road and near the Florestano Building.

At the time of this study, Anne Arundel Community College has a total supply of 4,532 parking spaces on its Arnold Campus. The table herein displays a breakdown of the institution's available parking spaces for faculty / staff, students, and visitors. The majority of these spaces (85%) are designated as open and unrestricted for use by students and visitors alike. The remaining spaces are reserved (3%), designated for faculty and staff (9%), or other uses (3%).

Figure 2.1 Arnold Campus Existing Parking Inventory

Lot	Loading	Faculty/ Staff	Reserved	Metered	MC	Visitor	ADA	Open	Total
A Lot	-	-	7	-	-	-	2	527	536
B Lot	-	85	15	-	-	-	11	625	736
C Lot	-	61	8	-	-	-	3	639	711
C Lot OF	-	-	-	-	-	-	-	371	371
D Lot	-	-	-	-	-	-	4	381	485
D Lot OF									
E Lot	1	26	13	6	1	-	16	184	247
F Lot	-	25	5	-	1	-	3	424	458
G Lot	1	50	19	-	1	-	17	197	285
H Lot	-	-	-	-	-	-	-	272	272
M Lot	-	137	11	-	-	-	-	-	148
CRRS Lot (L Lot)	-	-	-	-	-	-	11	-	11
CRRS East	-	-	-	-	6	-	-	-	6
CSB Lot (J Lot)	-	-	6	-	-	-	5	89	100
ICOX Lot	-	-	-	-	-	-	2	35	37
Math CDC Lot	4	-	-	-	-	-	-	-	4
Plant Lot	-	5	2	-	-	-	4	1	12
Ring Road	-	-	54	15	2	-	25	-	96
SSVC Lot	-	-	4	5	-	-	8	-	17
Lot	**6**	**389**	**144**	**26**	**11**	**0**	**111**	**3,845**	**4,532**
	.13%	**9%**	**3%**	**1%**	**.24%**	**0%**	**2%**	**85%**	**100%**

Existing Parking Distribution

Transportation

Fast Facts

AACC Existing Transportation Offerings

- Generally, there are bus routes directly servicing roadways within and/or adjacent to all campus locations.
- There are bus to light rail connections (for the Arnold and Arundel Mill's location and subsidiaries) and a direct light rail connection within walkable distance of the GBTC via Cromwell Light Rail Station.
- There is no bus service to residents residing in the southern sections of Anne Arundel County, south of W Central Avenue.
- Bus service to the AACC campuses is generally infrequent with buses stopping on campus, on average, every 45 to 60 minutes.

The following Transit Assessment was prepared as part of the Anne Arundel Community College (AACC) Facilities Master Plan (FMP). The Transit Assessment analyzes the availability of existing transit service and facilities serving AACC and outlines recommendations to enhance transit access in the future.

This assessment is inclusive of the Arnold Campus (or main campus) and off-campus sites at Arundel Mills, the Center for Cyber and Professional Training (CCPT) and the Glen Burnie Town Center. Limited transit information has been included for the Fort Meade Education Center (FMEC). A full transit assessment could not be provided given access to the fort is permissible to a select population[1]; therefore, transit that directly services the facility could not be field verified and residential information for enrolled students was not available.

While the vast majority of travel to AACC is likely via private vehicle, public transportation is an important means of providing access to education for individuals who do not have access to private transportation. As outlined by the American Public Transportation Association, public transportation helps everyone including commuters, families, students, senior citizens and persons with disabilities live the American dream; as they seek to fulfill their personal and career goals, meet their daily needs and maintain a high level of transportation independence. Public transportation also offers the benefits of reducing traffic congestion, improving air quality and reducing parking demand.

Public transportation offers a variety of modes of travel, including bus, vanpool, paratransit service, commuter rail and light rail. The most viable modes of public transportation for college students and staff include bus, commuter rail and light rail. Vanpool programs do not offer as much flexibility as other modes of public transit and are more successful for persons with fixed and consistent schedules. Paratransit is specialized service for persons with disabilities and can be scheduled by students and staff as necessary. Thus, the focus of this Transit Assessment includes consideration for bus (including private shuttle bus) and rail service.

1 Active duty military, military dependents, veterans, reservists and civilians who have base access.

Background

Background information such as existing geographic location of each location, student enrollment (by county and city) and courses taken at each campus was compiled from the Master Planning team and used as a basis for this Assessment.

There are a total of 14,940 students enrolled at AACC. The enrollment by county of residence in Maryland is outlined in Figure 2.2.

Figure 2.2 Enrollment by County of Residence[2]

County of Residence	Attend AACC
Allegany	1
Anne Arundel	12,703
Baltimore City	309
Baltimore County	279
Calvert	129
Caroline	24
Carroll	31
Cecil	4
Charles	14
Dorchester	6
Frederick	14
Harford	47
Howard	163
Kent	10
Montgomery	58
Prince George's	814
Queen Anne's	276
Saint Mary's	8
Somerset	1
Talbot	40
Washington	3
Wicomico	4
Worchester	2
Total	14,940

As shown in Figure 2.2, the overwhelming majority (approximately 85%) of students are residents of Anne Arundel County. The adjacent jurisdictions with relatively high levels of enrollment have also been highlighted.

The residential areas within Anne Arundel County with relatively high concentrations of students enrolled in courses (at each AACC location) are highlighted in Figure 2.3.

The cities with the highest student population include: Annapolis, Arnold, Crofton, Crownsville, Davidsonville, Edgewater, Gambrills, Glen Burnie, Hanover, Laurel, Millersville, Odenton, Pasadena, Severn and Severna Park.

Figure 2.3 Cities within Anne Arundel County with Relatively High Concentrations of Students Enrolled

City	Courses				
	Students	Arnold	Arundel Mills	GBTC	CCPT
Annapolis	1,798	3,695	75	22	28
Arnold	688	1,486	10	8	7
Crofton	603	1,289	67	8	8
Crownsville	199	405	15	12	1
Davidsonville	191	455	6	1	4
Edgewater	518	1,159	17	5	0
Gambrills	291	596	41	11	12
Glen Burnie	1,980	2,992	488	377	65
Hanover	277	280	261	20	33
Laurel	240	199	249	9	8
Millersville	420	847	68	15	4
Odenton	766	1,090	428	33	23
Pasadena	1,722	3,346	156	108	33
Severn	868	1,131	607	58	31
Severna Park	733	1,584	20	9	12
Total	11,294	20,554	2,580	696	269
Total Number of Courses Enrolled (based on entire campus population)		27,088	3,404	914	366
Total Student Headcount		10,558	1,932	645	246

Note: The table only includes cities with the highest populations of students enrolled at each campus and thus the total number of students does not correspond to the total (12,703) in Figure 2.2.

2 Anne Arundel Community College.

Existing Transit Conditions

Site specific transit conditions such as the availability and distance to bus stops and service frequencies were assessed utilizing standards from the Best Practices for Transit Planning resource. This Assessment assumes an area is considered "Well Served" if a bus stop is no more than ¼ mile from passenger's origin point and a minimum of 30 minutes service frequency is provided. An area is considered "served" if a stop is no more than ½ mile from passenger's origin point and a minimum of 60 minutes of service frequency is provided. Attention was also given to bus stop amenities such as shelters and walkability (i.e. presence of sidewalks) to/from bus stops.

The assessment of existing transit conditions includes the following information for each AACC campus:

- Map of bus stops (sheltered and non-sheltered) within a quarter mile of each campus
- Map of bus routes
- Table of key service stops, hours of operation, service frequency and available transit connections
- Walkability (i.e. presence of sidewalks and crosswalks) to bus stops
- Future transit improvements

Arnold Campus

The Arnold Campus (or main campus) is located at 100 College Parkway in Arnold, Maryland. The campus is located in eastern Anne Arundel County and is approximately 7 miles north of Annapolis and 23 miles south of downtown Baltimore. The 230-acre campus consists of thirteen academic buildings, a gymnasium, a pool, student services buildings, a performing arts center, a library, art galleries and an athletic field.

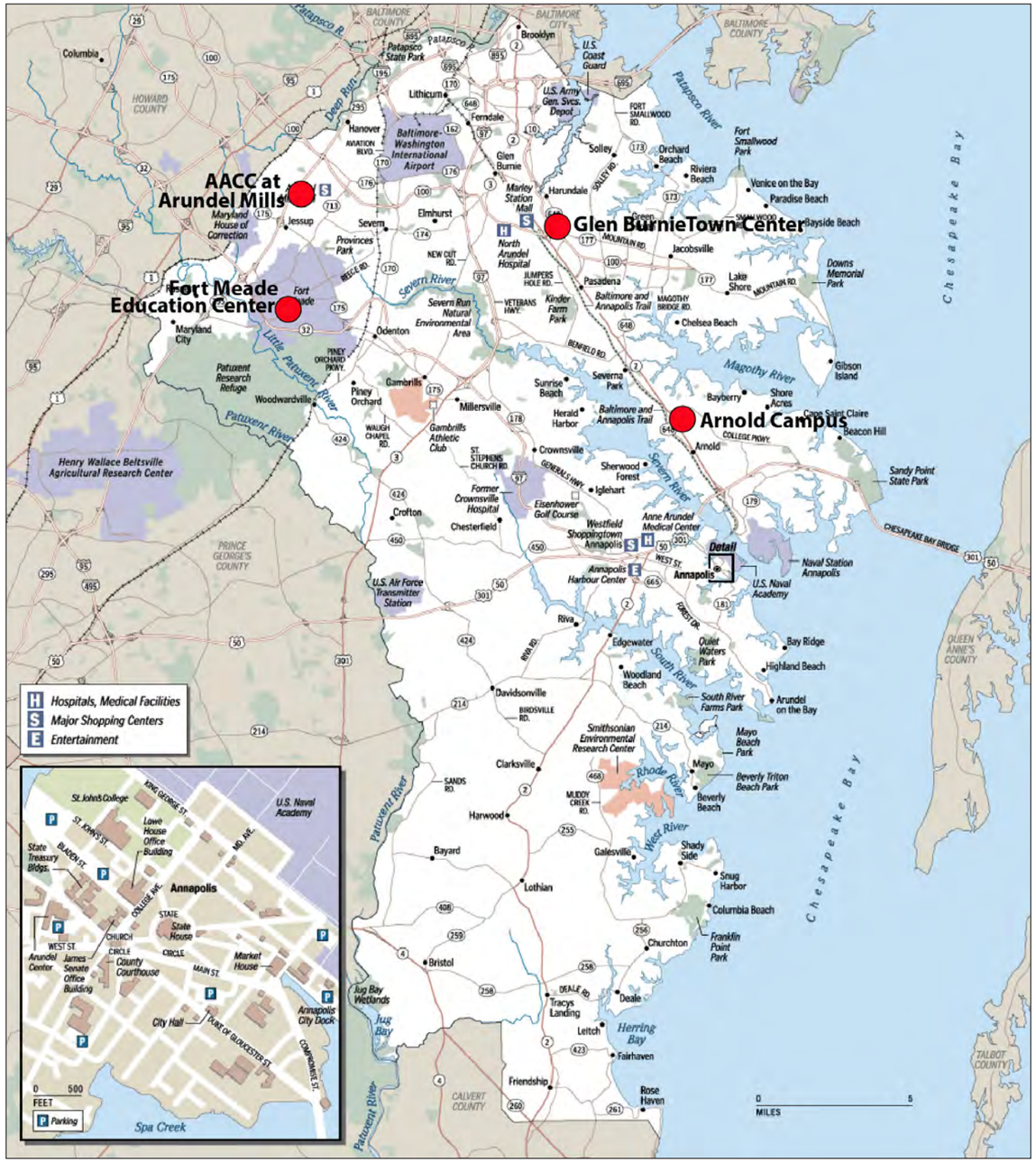
The campus is bordered on the north by College Parkway and on the west by Governor Ritchie Highway (MD 2). Both roadways are served by the MTA Local Route 14 Patapsco Light Rail Stop to Annapolis/Jumpers Hole. The route starts at the Patapsco Light Rail Stop[3] and services Brooklyn Park, Glen Burnie, Cromwell Light Rail Station, Pasadena, Severna Park, University Hospital, AACC and parts of downtown Annapolis including Church Circle. The station provides connections to MTA bus routes 16[4], 17[5], 51[6], 77[7] and RTA Connect-A-Ride Route 201/J[8] at the Cromwell Light Rail Station. Route 14's first southbound bus trip servicing the campus departs Patapsco Light Rail Stop at 5:37 AM and arrives to the campus at 6:34 AM. The southbound route services the campus, on average, every 35 minutes between 6:34 AM and 10:41 AM, hourly between 11:38 AM and 4:38 PM and on average every 47 minutes between 5:17 PM and 10:17 PM. The first northbound bus trip servicing the main campus departs Annapolis (at Calvert Street and Bladen Street) at 7:00 AM and arrives at the main campus at 7:14 AM. The northbound route services the College about once an hour[9] thereafter until 10:48 PM.

The Annapolis Transit Gold Route Edgewater to Arnold/AACC provides bus access to the campus. Key stops along the Gold Route include the Westfield Mall, Anne Arundel Medical Center and Annapolis Harbor Center. Roadways serviced include Ritchie Highway, Rowe Boulevard, Bestgate Road, Church Circle and Soloman Island Road. The Gold Route operates seven days a week from 6:00 AM to 7:56 PM[10]. Each round trip (from one end of the route to the other) takes approximately one hour. The first trip of the Gold Route begins at Sojourner Douglas College in Edgewater at 6:00 AM and arrives at the Arnold Campus at 6:57 AM. The reverse route then departs the Arnold Campus at 7:00 AM headed south in the direction of Edgewater.

The MTA Route 14 and the Annapolis Gold Route and bus stop locations servicing the Arnold Campus are shown on pages 52-53. Bus stops are conveniently located on and around the Arnold campus. There are stops along Ritchie Highway, College Parkway and Ring Road. The bus stops along Ring Road are sheltered. There are sidewalks adjacent to each bus stop that support pedestrian access.

Arundel Mills

AACC at Arundel Mills is located at 7009 Arundel Mills Circle in Hanover, MD 21076. The Arundel Mills campus lies just outside of the Arundel Mills Mall and is bordered by Route 100 on the north and east and by Arundel Mills Circle on the south. This location is a full service center with a 77,000-square-foot facility offering students in the western portion of Anne Arundel County access to complete degree programs, noncredit courses and specialized instruction. The campus is 30 miles north of Washington, DC and 13 miles south of downtown Baltimore.



Anne Arundel County and AACC Locations

The Arundel Mills campus is directly served by MTA local Route 17 Patapsco Light Rail Stop to Parkway Center and the Howard Transit/RTA 501/Silver route. Route 17 starts at the Patapsco Light Rail Stop and services Airport Square Business Park, BWI Business District, BWI Thurgood Marshall Airport, Amtrak Way, Baltimore Commons Business Park, Arundel Mills Mall and Parkway Center. Along the route to these destinations, several roadways are serviced including Patapsco Avenue, Annapolis Road, Nursey Road, Winterson Road and Dorsey Road. Stops along this route also provide connections to Washington Metropolitan Area Transit Authority's (WMATA) B30[11].

RTA 501/Silver provides connections to Columbia Mall, Snowden Square, Maryland Food Center, Dorsey MARC Station, Arundel Mills and BWI Airport. The route services the Arundel Mills Campus weekdays hourly from 7:25 AM to 3:54 PM. Two additional bus trips are made to the location at 8:04 PM and at 9:04 PM.

There is a bus stop servicing the Arundel Mills Campus located just west of the driveway to the facility along Arundel Mills Circle. There are no sidewalks along Arundel Mills Circle in this area. There is a crosswalk to support crossing Arundel Mills Circle however this crosswalk is approximately 70 feet east of the actual bus stop. Pedestrians may choose to either cross another intersection[12] unsupported by a crosswalk to get to this walk or depart the bus and immediately cross Arundel Mills Circle (not supported by a crosswalk).

The Center for Cyber and Professional Training (CCPT) is also located near Arundel Mills. The CCPT is a separate building located at 7556 Teague Road. CCPT provides specialized training for students whom reside in Hanover and nearby cities and also provides employee training for businesses and government agencies. CCPT is serviced by the RTA 202/K route. The closest stops servicing CCPT are located along Ridge Road (MD 713) at Stoney Run Drive and Thames River Road. There is also a bus stop along Arundel Mills Boulevard (west of the Arundel Mills Boulevard/ Ridge Road intersection). The stop is however not desirable for patrons destined for CCPT given riders would have to cross heavy vehicular traffic along Arundel Mills Boulevard. RTA Connect-A-Ride 202/K provides access for Severn, Fort Meade and Odenton to Arundel Mills. On weekdays, northbound service to Arundel Mills operates from 6:15 AM to 10:45 PM and stops every 45 minutes. Southbound service to Odenton is provided from 7:39 AM to 10:39 PM and the Arundel Mills stops are serviced every 45 minutes.

Other routes that provide bus service to the Arundel Mills Mall include RTA Connect-A-Ride routes 201/J and 502/B. These routes do not directly service the Arundel Mills Campus or CCPT since bus stops are either located outside of a ½ mile walking threshold or require crossing heavy traffic along Arundel Mills Boulevard.

Bus routes servicing the Arundel Mills Campus (and CCPT) and bus stop locations are shown on pages 54-55.

Glen Burnie Town Center

The Glen Burnie Town Center is located at 101 N. Crain Highway. The Glen Burnie Town Center location allows for academic facilities in Arundel Center North and the 10,000 square-foot Hotel, Culinary Arts and Tourism (HCAT) Institute. The location provides access to degree programs, non-credit and specialized instruction and other academic support services.

RTA 201/J provides bus service to Glen Burnie Town Center from Hanover, Glen Burnie and Freetown. On weekdays, the route services stops at the Glen Burnie Town Center at approximately 45 to 90 minutes headways from 7:20 AM to 11:50 PM (eastbound route) and from 7:30 AM to 10:30 PM (westbound route). The headway is the number of minutes between buses servicing a stop in succession.

MTA Route 14 (see description within the Arnold Campus Existing Transit Conditions) also services the Glen Burnie Town Center location.

Bus routes servicing Glen Burnie Town Center and bus stop locations are shown on pages 56-57.

A summary of bus routes, key service stops, hours and frequency of operations and transfer connections for the Arnold Campus, Arundel Mills Campus (inclusive of CCPT) and the Glen Burnie Town Center locations is provided in Figure 2.4.

Fort Meade Education Center

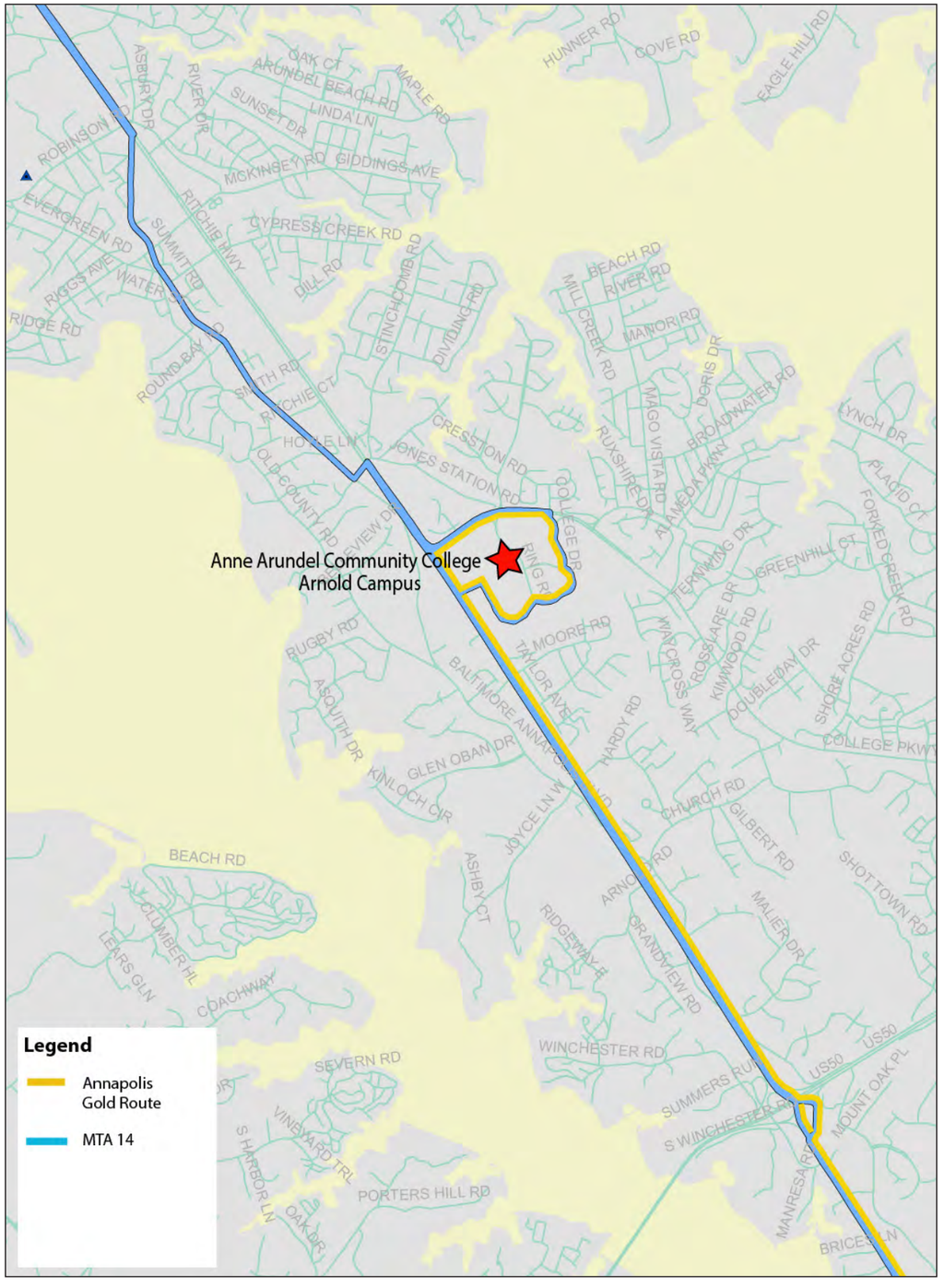
The Fort Meade Education Center (FMEC) is located at 8601 Zimborski Avenue in Fort Meade, Maryland. Non-military students and staff who wish to use services at the center must enter the base via the visitors' entrance at Reece Road and Route 175. Visitors must however have clearance to access the base. The FMEC offers services only to active duty military, military dependents, veterans, reservists and civilians who have base access. Only cleared individuals have access to transit services on the campus.

The RTA Route K provides access outside of the Fort Meade base along MD 175 and Reece Road. Bus routes and stops directly servicing the FMEC are unknown.

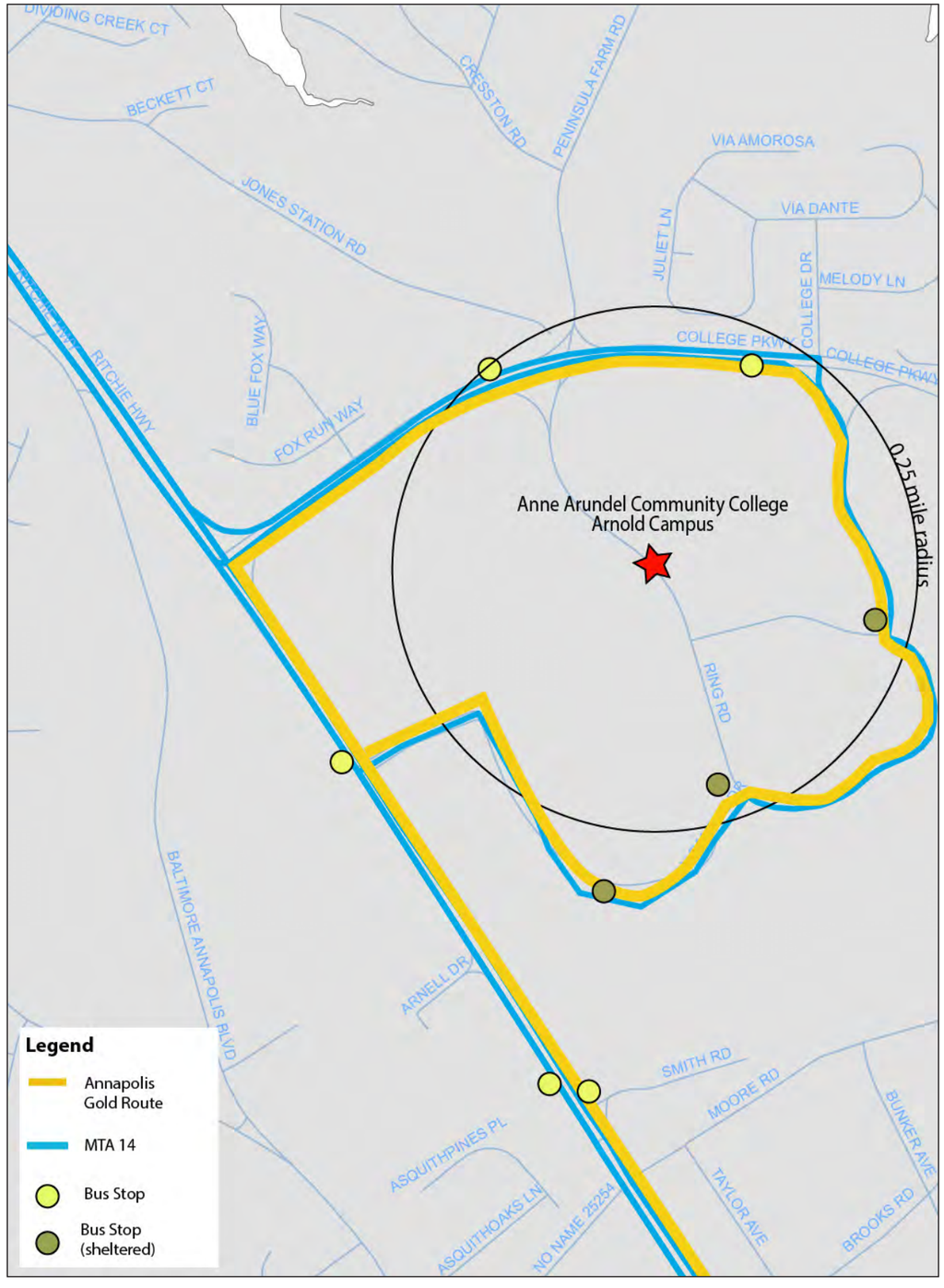
Future Transit Improvements

There are no transit plans for bus, light rail or MARC service that would affect riders accessing the AACC locations. The RTA recently (April 2015) changed the scheduled running times on four routes including the 501/Silver (which services the Arundel Mills Campus). The modifications impacted the first two bus trips with a start time 8 minutes earlier than previously designated. This adjustment allowed for the Baltimore Light Rail passengers arriving at the airport to make scheduled MARC Station connection times. This change improved service reliability and connectivity.

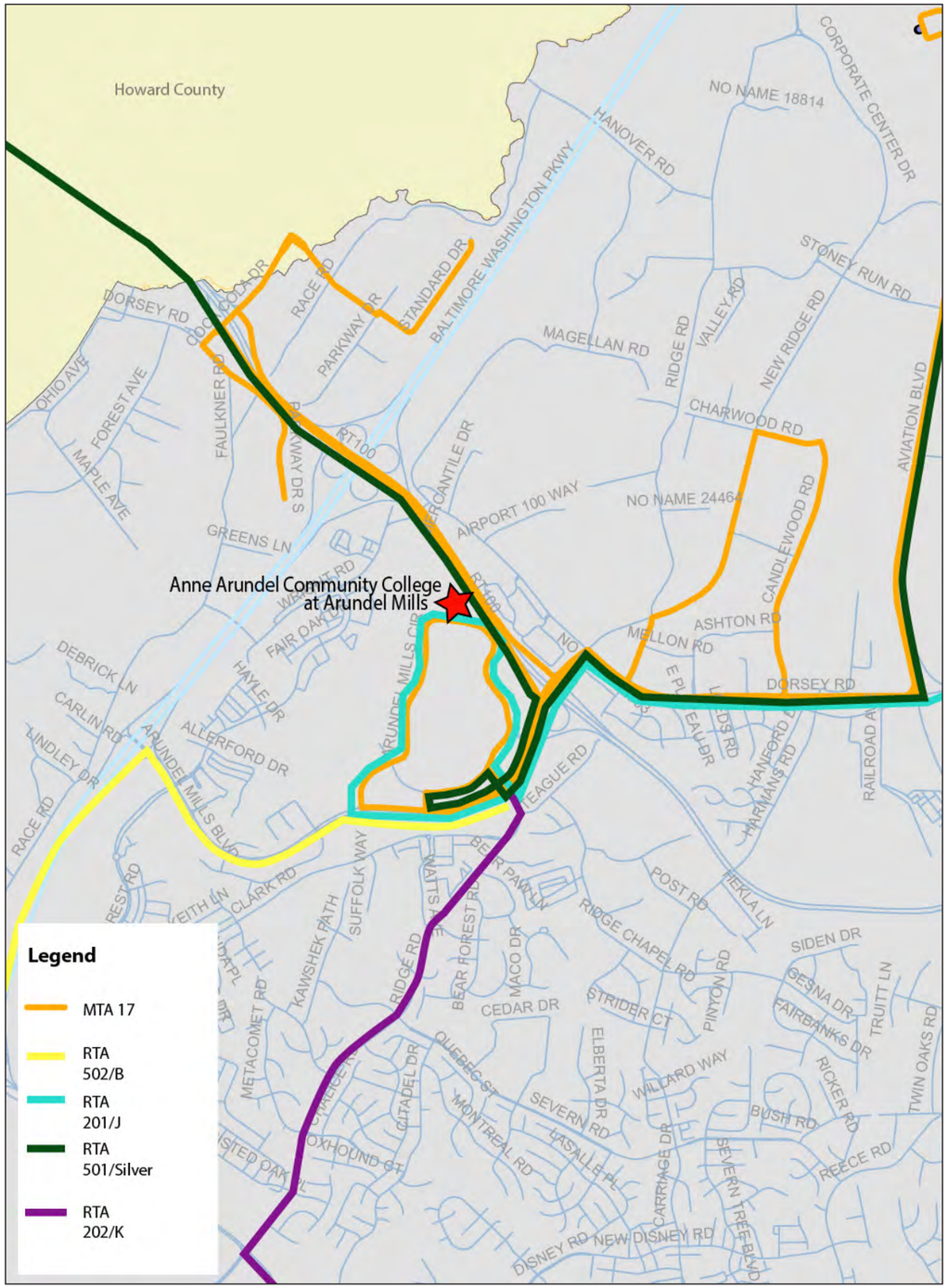
3 The Patapsco Light Rail Station is on the Hunt Valley to/Cromwell/ Glen Burnie line.
4 Mondawmin Metro Station to Brooklyn Homes
5 Patapsco Light Rail Stop to Parkway Center
6 Rogers Avenue Metro Station to Patapsco Light Rail Stop
7 Old Court Metro Station to Patapsco Light Rail Stop
8 Arundel Mills to Freetown Village
9 Two northbound routes service the campus within the 10:00 AM, 1:00 PM and 4:00 PM hours.
10 The 6:00 AM and 7:00 AM bus trips only operate on weekdays.
11 Greenbelt to Thurgood Marshall Airport Express Line
12 This is a T-intersection with Arundel Mills Circle and a drive aisle from the Mall surface parking spots. A stop sign is in-place to control Mall traffic.



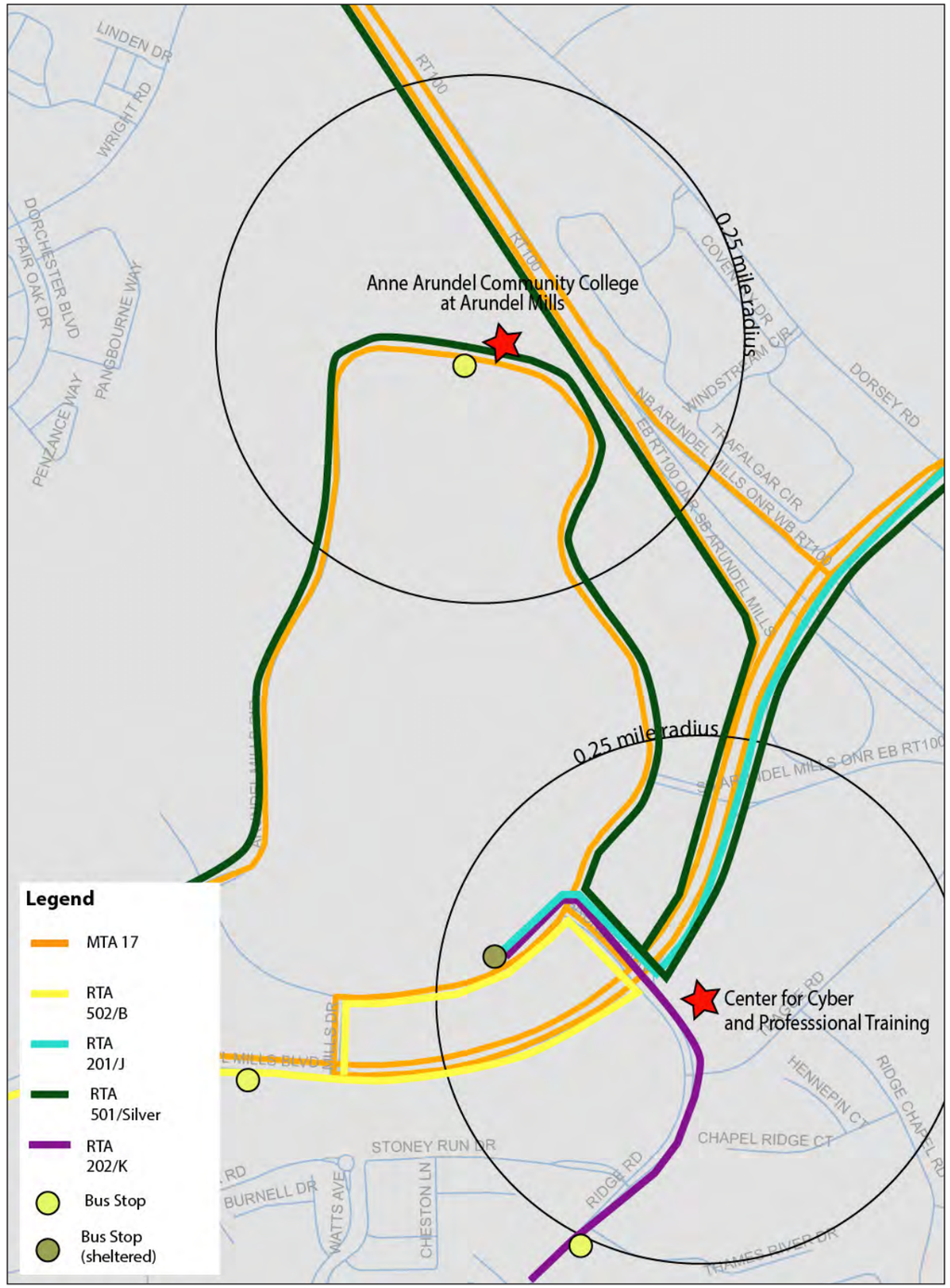
Arnold Campus and Existing Bus Service



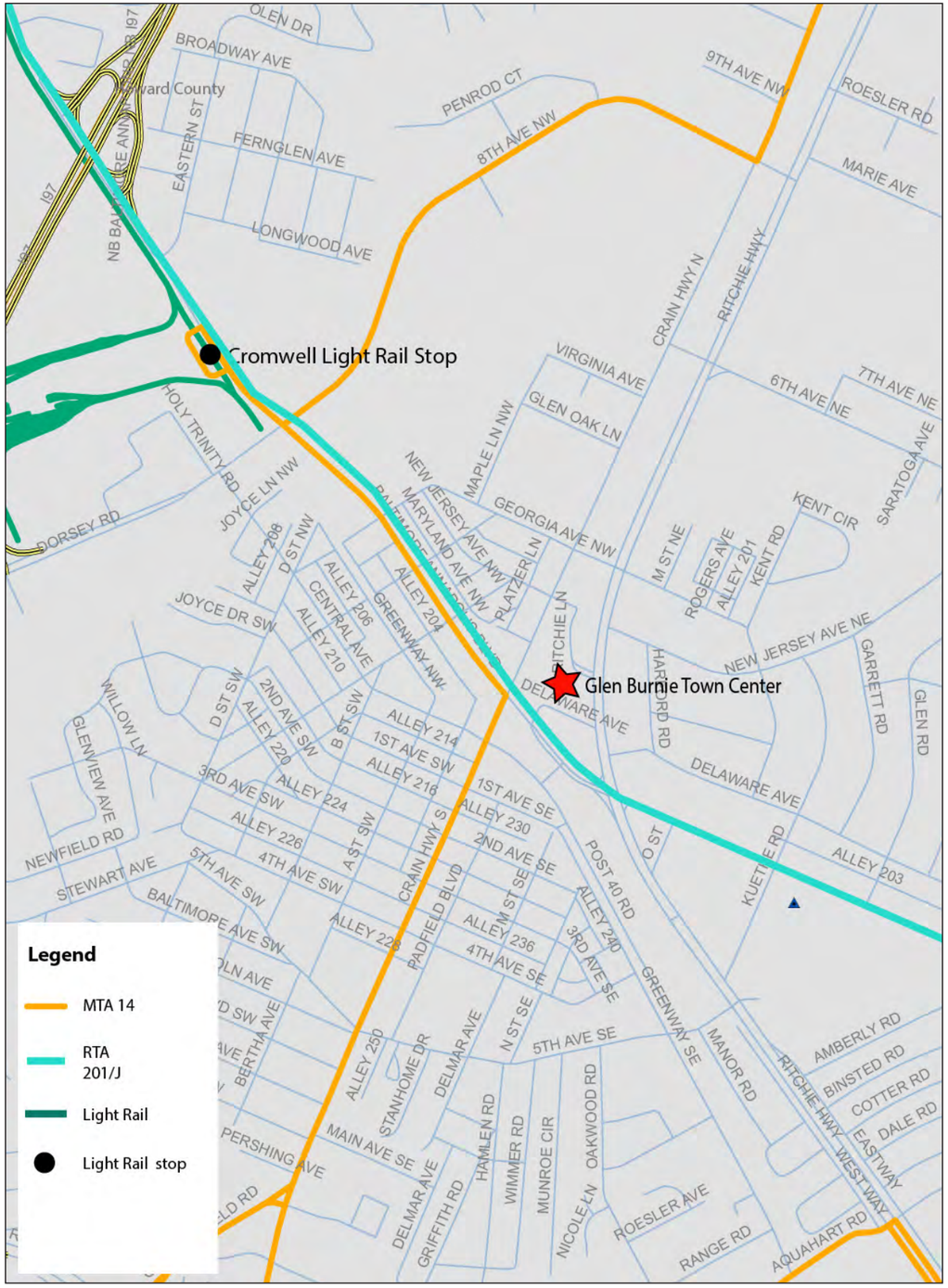
Arnold Campus Bus Stops



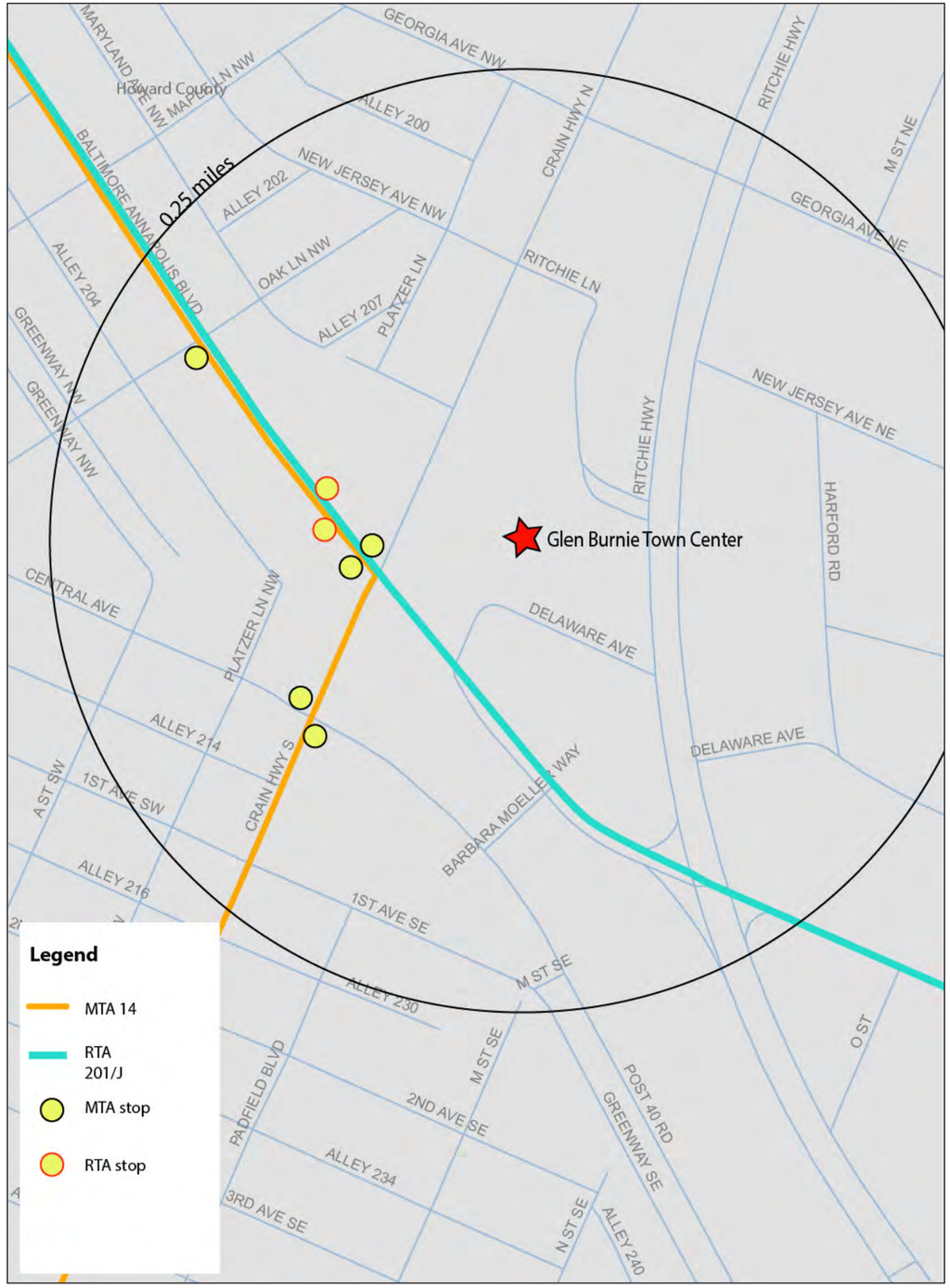
Arundel Mills and Existing Bus Service



Arundel Mills Bus and CCPT Bus Stops



Glen Burnie Town Center and Existing Bus Service



Glen Burnie Town Center Bus Stops

Figure 2.4 Summary of Existing Transit Service by AACC Location

Campus	Route	Key Service Stops	Hours	Frequency	Bus to Rail Connection	Bus to Bus Connection	Connection Destinations
Arnold	MTA 14	Patapsco, Brooklyn Park, Glen Burnie, Cromwell, Pasadena, Severna Park and University Hospital	Southbound: 5:37 AM to 10:17 PM Northbound: 7:00 AM to 10:47 PM	Southbound: 35 to 60 minutes Northbound: 60 minutes	Patapsco and Cromwell Light Rail station	RTA 201/J MTA 16, 17, 51 and 77	• RTA 201/J -Arundel Mills Mall, ITT Tech-Hanover, Cromwell, Freetown Village • MTA 16 -Coppin State, St. Agnes Hospital, Patapsco and Brooklyn • MTA 51-Rogers Metro to Patapsco • MTA 71-Old Court Metro to Patapsco
	Annapolis Gold Route	Westfield Mall, Anne Arundel Medical Center, and Annapolis Harbor Center along Ritchie Highway, Rowe Blvd, Bestgate Road, Church Circle and Soloman Island Road	6:00 AM to 7:56 PM	60 minutes	None	Annapolis Purple, Yellow, Red and Green	• Annapolis
Arundel Mills	MTA 17	University of Maryland Transit Center[13], Patapsco, BWI Business District, BWI Thurgood Marshall Airport, BWI Amtrak/ MARC station, Baltimore Commons Business Park, Arundel Mills Mall and Parkway Center	Southbound: 5:43 AM to 11:52 PM Northbound: 11:10 AM to 11:15 PM	Southbound: average 52 minutes Northbound: 45 minutes	Nursey Road, BWI Marshall and University Hospital Light Rail Stations BWI Marshall MARC/ Amtrak Station	WMATA B30 RTA 202/K, 201/J and 502/B	• WMATA B30-Greenbelt to BWI Airport • RTA 202/K (Fort Meade, Severn and Odenton) • RTA 502/B (Laurel and Maryland City)
	RTA 501 Silver (Howard Transit)	Columbia Mall, Snowden Square, MD Food Center, Dorsey MARC station, Arundel Mills and BWI Airport	Westbound[14] only: 7:25 AM to 3:54 PM and 7:40 PM to 9:04 PM	60 minutes	Dorsey MARC station BWI Business Light Rail Station BWI MARC/ Amtrak Station	Howard Transit 401,404, 406, 407, 408 and 409 RTA Connect-A-Ride 405 and 503 MTA 17	
CCPT	RTA 202 K	Arundel Mills, Meade Village, Seven Oaks, Odenton MARC station and Odenton Health Campus	Southbound: 7:39 AM to 10:39 PM Northbound: 6:15 AM to 10:45 PM	45 minutes	Odenton MARC station	RTA 201/J and 502/B	
Glen Burnie Town Center	MTA Route 14	See above (Arnold Campus)					
	Route 201/J	Arundel Mills Mall, ITT Tech-Hanover, Cromwell, Freetown Village	Eastbound: 7:20 AM to 11:50 PM Westbound: 7:30 AM to 10:30 PM	Eastbound 45 to 90[15] minutes Westbound 45 to 90[16] minutes	Cromwell Light Rail Station	N/A	

Transit Assessment

The following section summarizes the assessment of available transit service and stops in cities with relative high concentrations of enrolled students at each AACC location.

Generally, there are bus routes directly servicing roadways within and/or adjacent to all locations. The geography of Anne Arundel County is generally longitudinal and consistent with the interstate system, major roadways and bus routes within the county that primarily run north-south. There are few east-west routes servicing the northern portion of Anne Arundel County (operated by RTA). There are bus to light rail connections (for the Arnold Campus and Arundel Mills locations and subsidiaries) and a direct light rail connection within walkable distance[17] of the GBTC via Cromwell Light Rail station. The light rail service connects AACC with Baltimore City and Baltimore County. There are MARC and Amtrak lines servicing the northwestern sections of the County which are accessible via bus from the Arundel Mills locations.

Per the Best Practices in Transit Planning report, transit service tailored specifically to students of schools and universities should provide a high-level of service with limited stops and more direct routing. Bus service is provided to the AACC locations however stops are generally serviced infrequently. An area is considered “Well Served” if a stop is no more than ¼ mile from passenger’s origin point and is served at a minimum frequency of 30 minutes. An area is considered “served” if a stop is no more than ½ mile from passenger’s origin point and a minimum of 60 minutes. As shown in Figure 2.4, the AACC locations are “Served” with 35 to 90 minute headways.

Transit accessibility from each city to the respective AACC sites was rated in two categories “Served” or “Not Served”. This determination was rated based on the availability of bus or rail service from central locations (such as downtown Annapolis) within each city. Direct bus service from specified neighborhoods was not examined. For instance, bus service may be considered “Served” from Edgewater to the Arnold Campus however routes from Edgewater may not be accessible for all Edgewater students who travel to the Arnold Campus.

In terms of bus stop access, bus stops supporting each AACC location were also rated “Well Served”, “Served” or “Not Served”. This criterion considers stops within a ¼ mile and walkability (presence of sidewalks) to/from stops in relation to campus facilities as “Well Served”. Bus stops within a ½ mile of each location or bus stops without sidewalks were rated as “Served”. Service headways were also factored in the rating.

There is no bus service to residents residing in the southern sections of Anne Arundel County south of West Central Avenue. This represents student populations in Davidsonville, Clarksville, Harwood, Lothian, Galesville, Shadyside, Mayo, Churchton, Bristol, Deale, Tracy’s Landing, Fairhaven, Rose Haven, Beverly Beach. While these areas are less populated in terms of density and also have smaller numbers of students enrolled this represents a population currently not served by public transit.

13 Only serviced during non-Light rail hours of operation
14 The BWI Airport Terminal E to Columbia Mall route services the Arundel Mills Campus. The reverse route (Columbia Mall to BWI Terminal E) does not specifically service the Arundel Mills Campus but does however service Arundel Mills Mall.
15 There are 90 minutes service headways between the hours of 10:20 AM and 4:20 PM and 8:50 PM and 11:50 PM
16 There are 90 minutes service headways between the hours of 10:30 AM and 4:30 PM and 9:00 PM and 10:30 PM
17 Approximately 0.68 miles

Figure 2.5 Arnold Campus Transit Accessibility and Bus Stops

Arnold Campus Transit Accessibility				
City	Served	Not Served	Bus	Justification for "Not Served" Rating
Annapolis	X		MTA 14; Annapolis Gold Route	
Arnold	X		MTA 14	
Crofton		X		Out-of-county bus routes. A connection to the Arundel Mills Campus is provided via transit however there is no connection to the Arnold Campus. Travel time via transit is 2 hours 12 minutes one-way.
Crownsville		X		A vehicle is required to get to public transit and several bus connections are required (Annapolis Yellow to Green then to MTA 14). The travel time would be approximately 1 hour and 40 minutes one-way.
Davidsonville	X		Annapolis Gold Route	
Edgewater	X		Annapolis Gold Route	
Gambrills		X		A vehicle is required to get to public transportation. Travel time via transit is 2 hours 12 minutes one-way.
Glen Burnie	X		MTA 14	
Millersville		X		A vehicle is required to get to public transportation. Travel time is approximately 2 hours 45 minutes one-way.
Odenton		X		A vehicle is required to get to public transportation. Access to the Arnold campus would require a MARC-to-local bus transfer (Odenton MARC to MTA 17). Travel time is approximately 1 hour 45 minutes one-way.
Pasadena	X		MTA 14	
Severn		X		A connection to the Arundel Mills Campus is provided (RTA 202/K) via bus however there is no connection to the Arnold Campus. Travel time is approximately 2 hours 46 minutes.
Severna Park	X		MTA 14	

Arnold Campus Bus Stops				
City	Well Served	Served	Not Served	Notes
Ritchie Highway		X		
College Parkway		X		
Ring Road	X			Bus Stops are accessible from within the campus and are sheltered.

Figure 2.6 Arundel Mills Transit Accessibility and Bus Stops

Arundel Mills Transit Accessibility				
City	Served	Not Served	Bus	Justification for "Not Served" Rating
Glen Burnie	X		RTA 201/J	
Severn	X		RTA 202/K	
Odenton	X		RTA 202/K	
Hanover	X		MTA 17	
Laurel		X	RTA 502/B and Howard Transit 409 (via RTA 501)	Travel time is within 60 minutes on the RTA 502/B (from Towne Center Laurel) however the bus stop this route services is outside of a ½ mile walking distance to the Arundel Mills Campus.
Center for Cyber and Professional Training Transit Accessibility				
Glen Burnie		X		Transit service on RTA 202 K provides access for residents from Hanover, Fort Meade, Odenton and Severn.

Arundel Mills Bus Stops				
City	Well Served	Served	Not Served	Notes
Arundel Mills Circle (at AACC)		X		There is a bus stop within a ¼ mile radius of the facility however sidewalks are not provided to support pedestrian access to the stop to the building entrance.
Ridge Road (CCPT)		X		There are buses along the east and west sides of Ridge Road near CCPT. The stops are served but not well served given they are within a ½ mile however outside of the 1/4 mile radius.

Figure 2.7 Glen Burnie Town Center Accessibility and Bus Stops

Glen Burnie Town Center Transit Accessibility				
City	Served	Not Served	Bus	Justification for "Not Served" Rating
Glen Burnie	X		RTA 201/J	This area is rated as "served" however during certain periods of the day (between the hours of 10:20 AM and 4:30 PM, there are 90 minute headways.

Glen Burnie Town Center Bus Stops				
City	Well Served	Served	Not Served	Notes
Baltimore - Annapolis Boulevard and Crain Highway		X		

Recommendations

Recommendations outlined in this Assessment were developed considering residential areas in Anne Arundel County that have the highest student enrollment levels and are thus most likely to support or warrant the need for transit service or improvements.

According to student enrollment data, Baltimore City (309 students) is the only jurisdiction outside of Anne Arundel County that may have enough demand to consider future transit improvements. However, according to the 2009 National Household Travel Survey, the average travel distance by public bus to school is 5.73 miles and to work is 8.37 miles. Thus, transit recommendations outside of Anne Arundel County were not considered at this time. Additionally, Baltimore City is already served by transit to the main campus as outlined in Figure 2.4.

While population density/demand is one way of considering future transit access improvements to AACC, transportation equity and service to low-income communities should also be considered for future transit improvements. Additional studies, such as user surveys with potential students, should be conducted to further understand future transit access needs to each campus. Recommendations based on existing population data and transit facilities inventory are outlined below:

General

- Coordinate with AACC recruiters to poll potential AACC students regarding measures the College or other organizations could employ to make public transportation a more viable option.
- Identify target neighborhoods (based on poll results or existing data) within the cities with relatively high levels of existing enrollment in order to determine potential routes, stop locations and service frequency.
- Examine the need for and feasibility of inter-campus transit or shuttle connections (i.e. from Arnold to Arundel Mills).

Arnold

- Coordinate with Maryland Transit Administration (MTA) to examine the feasibility of increasing service frequencies on the MTA 14 (pending demand is warranted). This would increase service frequencies to a large population serviced by the 14 including Annapolis, Arnold, Glen Burnie, Pasadena, Edgewater, and Severna Park.
- Coordinate with RTA to examine the feasibility of adding a new route (pending demand is warranted) to provide east-west service between central Anne Arundel County cities such as Millersville and Crownsville to the Arnold Campus.

Arundel Mills

- Coordinate with Regional Transportation Agency (RTA) to examine the feasibility of extending routes on the three Connect-A-Ride bus lines that currently service the Arundel Mills Mall bus stop to also service the bus stop adjacent to the Arundel Mills Campus. The improvement would provide more direct access for residents from Severn, Fort Meade and Odenton (on line 202/K), Laurel and Maryland City (on line 502B) and Glen Burnie and Freetown (on line 201/J).
- Examine the feasibility and need for a peak period shuttle that would provide a transit connection from the Arundel Mills Mall bus stop to the Arundel Mills Campus.
- Coordinate with Anne Arundel County Department of Public Works to implement an additional crosswalk (if determined it is warranted) at the T-intersection with Arundel Mills Circle near Arundel Mills to support east-west pedestrian crossings from the bus stop.
- Coordinate with the Regional Transit Authority to examine the feasibility of adding an additional bus stop along the east and west sides of Ridge Road (if feasible) closer to Teague Road. The existing stops support patrons destined for the shopping center and residential areas however this improvement would reduce the distance between the bus stop and the entrance to the CCPT for students destined for the campus.

Campus Infrastructure

Fast Facts

AACC Utility Service Providers

Electric
- Baltimore Gas and Electric (BGE)

Natural Gas
- Baltimore Gas and Electric (BGE)

Domestic Water
- Anne Arundel County Department of Public Works

Sanitary Water
- Anne Arundel County Department of Public Works

Stormwater
- Anne Arundel County Department of Public Works

Electrical Power Distribution

Electrical service for the Arnold Campus originates from two 13.2 kV BGE feeders (7351 and 7352) located outside of the Physical Plant. BGE feeder 7351 functions as the primary feeder of electricity for campus and feeder 7352 provides backup support. Both feeders serve a pad-mounted, four-way type switchgear with two incoming and two outgoing sections.

All facilities on campus are metered by BGE using two methods. A primary 13.2 kV metering system located in the Physical Plant building switchgear monitors power usage for the following facilities on East Campus: the Physical Plant, Resource Management Building, Jenkins Gymnasium, Olson Memorial Pool, Humanities Building, Truxal Library, Careers Center, Ludlum Administration Building, Math Building, Schwartz Classroom Building, Johnson Building, Dragun Science Building, Student Union Bookstore, Annex A, Annex B, and Astronomy. AACC owns and maintains the infrastructure (feeders, switch gears, transformers, etc.) located downstream of this primary meter.

BGE tracks all buildings not monitored by the primary system using low-voltage meters. Buildings fed from the secondary meters on West Campus include: the Florestano Building, Cade Center for Fine Arts, and Center for Applied Learning and Technology. Buildings on East Campus fed by this system include the Pascal Center for the Performing Arts, Student Union Café, Student Services Building, the Central Services Building, Athletic Storage Building, Central Storage Building, Isaac Cox House, Tennis Courts, and the East Marquee. BGE owns and maintains the infrastructure (feeders, transformers, etc.) used to power these facilities.

Maintenance of the 13.2 kV monitoring system shall occur annually or on an as-needed basis. It is recommended that the new Health Science and Biology Building be provided with a secondary service from the power company. If the primary transformer is owned and maintained by the power company, it may lower the overall construction cost of the building.

Heating and Cooling System

The Physical Plant supplies heated and chilled water for all buildings located along Ring Road except for the Student Services Building. Underground water distribution piping feeds through tunnels to all buildings served. Over time the system's original equipment has been replaced and upgraded; however, it has not been expanded to accommodate continuous growth of the campus. Piping part of the Physical Plant was replaced during the Plant HVAC Renovation in 2012. The vast majority of the underground loop is original and is reported to be maxed out. It is recommended that sections of the original piping system be replaced.

West Campus is equipped with mechanical systems that are separate from the original plant.

Chilled Water System

The existing chilled water system servicing the Arnold Campus is located in the Physical Plant. This system includes two water-cooled centrifugal chillers (Chillers#1 and #2), a multi-stage tower, three constant volume pumps for the tower, two constant volume pumps that maintain flow through the chillers, and two variable pumps that serve East Campus.

Chilled water for the central cooling system is supplied by two water-cooled centrifugal chillers and a cooling tower. Chiller #1 has a nominal rating of 525 tons (49°F-44°F) and Chiller #2 has a nominal rating of 725 tons (56°F-49°F). Additionally, there is a heat recovery screw chiller with a nominal rating of 175 tons. The chiller system considers water temperature during operation to conserve energy. If the return temperature is equal to or less than 49°F, Chiller #2 is de-energized and Chiller #1 will handle 100 percent of the load. Correspondingly if chilled water returns back to the plant greater than 49°F, Chiller #2 is energized to partially cool the water before it enters Chiller #1. The primary pumps are sized for redundancy so that 100 percent of the connected flow rate can still be maintained if one of the two primary pumps is not functioning.

The chilled water system on the Arnold Campus is generally in good condition. Significant past renovations and additions to the system include the following: chiller replacement (1995), cooling tower and exterior pipe replacement (2007), and replacement of all pumps (2010).

Heated Water System

The existing heated water system includes two oil and gas fired boilers (Boiler #1 and #2), three gas fired boilers (Boilers #3, #4, and #5), two variable pumps that maintain constant volume through the boilers, and two variable pumps that serve East Campus. The boilers also supply the domestic hot water system and have two nominal 500 gallon storage expansion tanks. The Careers Center (CRSC) is served by two variable hot water primary pumps and two variable hot water perimeter pumps.

The primary boilers for the Physical Plant are thought to be original, but despite their age continue to operate efficiently. Boilers #1 and #2 were sized with redundancy in mind and have a rated input capacity of 21,000 MBH each. Boilers #3, #4, #5 have a rated input capacity of 2,500 MBH each. As with the two-phase chiller system, the heated water system was designed with energy conservation in mind. Either of the two primary boilers can accommodate 100 percent of the connected heated water load.

Continued maintenance of the existing boilers shall occur to prolong their life expectancy. Significant past renovations and additions to the system include: burner assembly replacement (2010) and the replacement of secondary pumps and associated piping with the renovation of each campus building.

Water Distribution

Water is supplied to the Arnold Campus by two 12" public water mains. A north/south water main runs from the intersection of Moore Road and Bunker Avenue to a point of connection with the public water system near the intersection of College Parkway and Peninsula Farm Road. An east/west water main originates near the intersection of Governor Ritchie Highway and extends east through campus along Campus Drive to a point of connection with the north/south water main west of Parking Lot A.

Water is supplied to East Campus via an 8” water meter connection from the 12” north/south water main. The West Campus water supply is delivered via two additional 8” connections to the 12” water mains, with one of these two connections serving only some of the West Campus fire hydrants adjacent to the east side of the CALT Building. Multiple fire hydrants are located throughout both sides of the campus.

The 12” main on East Campus that begins at the second entrance off of College Parkway has a 6” main tapped on it after the meter. This main follows along the stadium fence and ends at the walk that intersects with the stadium gate. This line feeds other lines that provide water to the athletic fields. The line also feeds back into the 12” main on the north side of the Gym and can be used to provide the campus its water supply should the primary 12” main fail.

The existing water distribution system adequately meets the needs of the Arnold Campus. With continued expansion of the campus the system may need to grow. This will require the addition of new water mains extended to each building, analysis of peak domestic flow and fire flow demand, and potential up-sizing of pipes to accommodate an increase in water demands. All major renovations and new construction shall consider standard requirements for the placement and location of fire hydrants during the design process.

Sanitary Sewerage

Anne Arundel Community College’s sanitary system consists of a pressure sewer system on the West Campus and a gravity sanitary sewer system on the East Campus. The West Campus pressure sewer system is pumped via a 2” diameter force main to the East Campus gravity system, which connects to the Anne Arundel public sanitary sewer system. The current campus sanitary sewer system adequately provides for the campus needs.

Telecommunications, Fiber, and CATV

The Primary Data Center, located on the 2nd floor of the Careers Building, houses servers and core data communications equipment for the Arnold Campus. There is a secondary data center located in the CALT Building. This center includes core data communications infrastructure for West Campus with a fiber connection that joins with the primary data center. The primary data center receives internet through Comcast and the Anne Arundel County SONET.

The Arnold Campus’ fiber cable distribution system was installed in 1996. Each building on campus is connected to the primary data center, often by only a single fiber run or routed through another building. It is recommended that at least two fiber cable pathways be required to connect each individual building back to the primary data center. This recommendation shall be a standard for future renovations, additions, or new construction projects.

The campus network supports all college systems requiring data communications, including: the Access Control System, Emergency Alert System, Campus Networking Systems, HVAC Network, Telecommunications, and Careers Data Center. It also helps to improve campus wide cell phone coverage and support systems for enrollment, distance learning, and human resources.

Anne Arundel Community College has taken significant measures to ensure that their hardware and software have an appropriate bandwidth to fit its needs. With future demands, the institution will also need to consider updating the cable plant to support growing telephone and data demands.

Off-Campus Locations

Arundel Mills

The utilities at Arundel Mills are well maintained and in good overall condition. The electrical supply lines run underground to pad-mounted transformers, which feed interior-mounted electrical meters. The main electrical service size is 3,000 amps, 277/480 volt three-phase four-wire alternating current (AC). Arundel Mills facility is connected to the Careers Center located on the Arnold Campus by a fiber telecommunications connection.

The plumbing system includes the incoming water service, cold water piping, and sanitary sewer and vent system. Domestic hot water is supplied by the HVAC system’s boilers. The central hot water system consists of a heat exchanger, circulating pumps, and a 225 gallon insulated storage tank.

HCAT

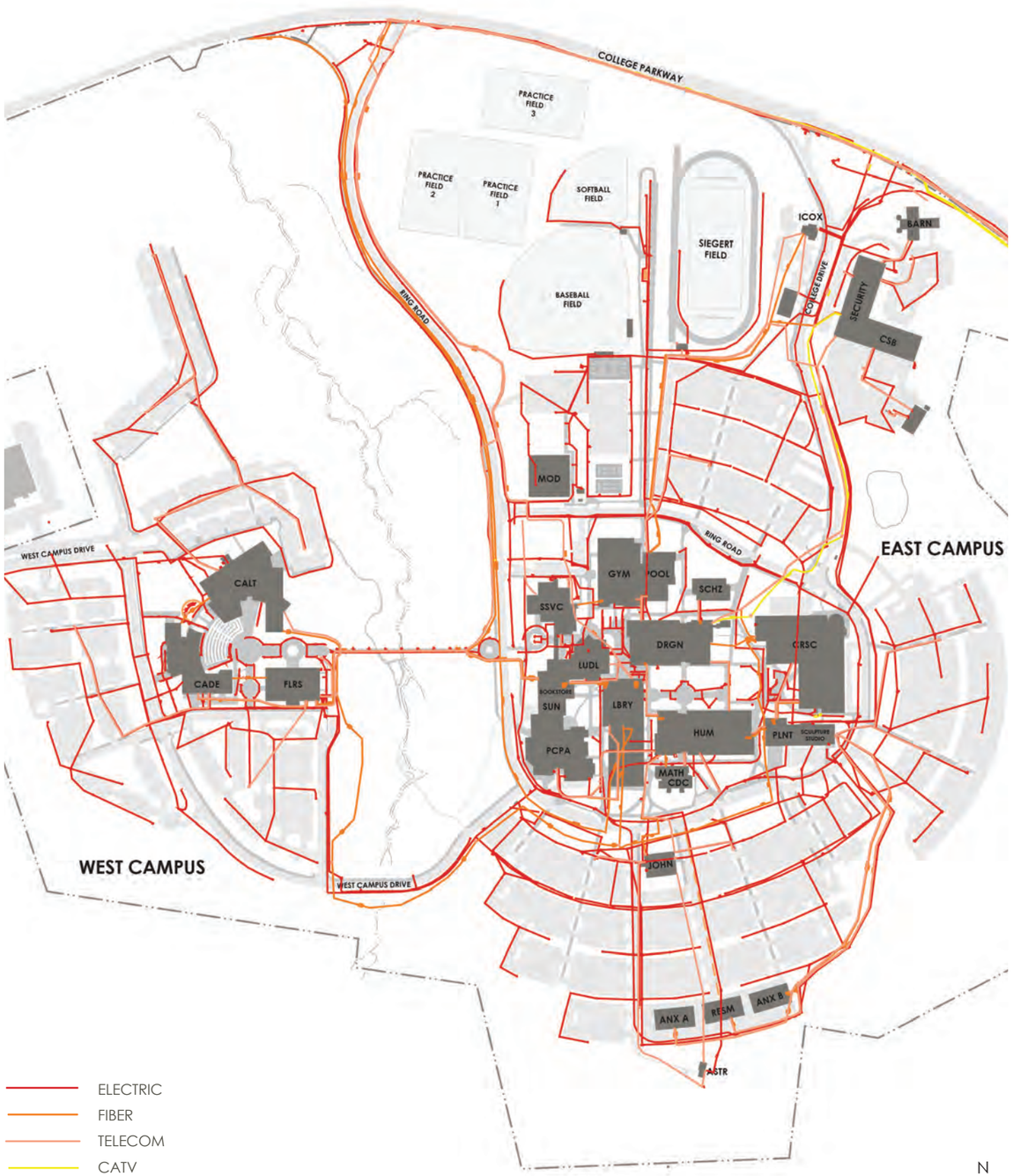
The electrical supply lines run underground to pad-mounted transformers, which feed interior-mounted electrical meters. The main electrical service size is 800 amps, 120/208 volt three-phase four-wire alternating current (AC).

The plumbing system includes the incoming water service, the cold water piping system, and the sanitary sewer and vent system. Domestic hot water is supplied by one 100 gallon gas-fired water heater and one 50 gallon electric water heater.

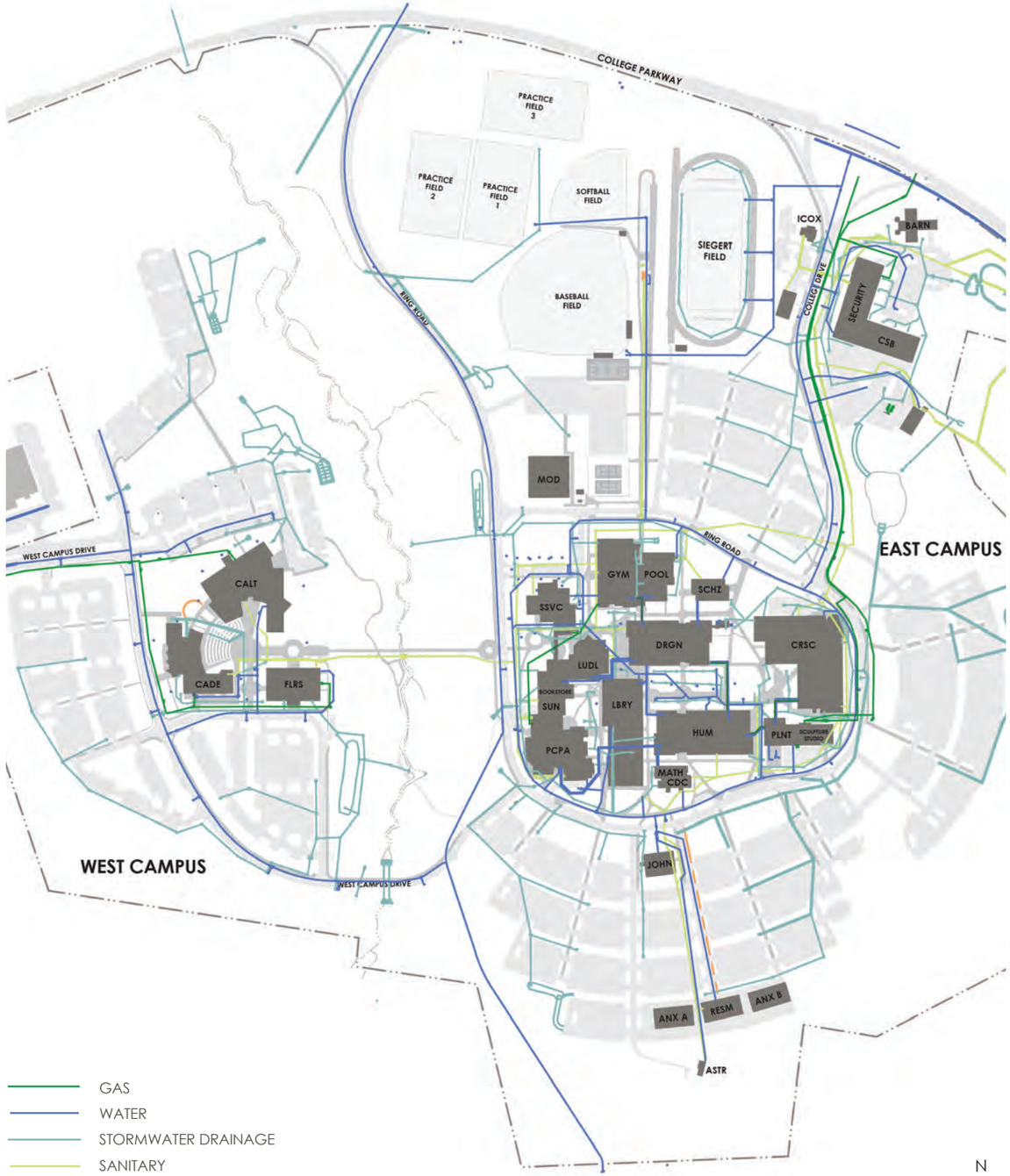
Glen Burnie Town Center

The electrical supply lines run underground to pad-mounted transformers, which feed interior-mounted electrical meters. The main electrical service size is 1,200 amps, 277/480 volt three-phase four-wire alternating current (AC).

The plumbing system includes the incoming water service, cold water piping, and sanitary sewer and vent system. Domestic hot water is supplied by one 80 gallon electric water heater that is located in the third floor mechanical room.



Campus Utilities - Electric, Fiber, Telecom, CATV



Campus Utilities - Gas, Water, Stormwater, Sanitary

Chapter 3
Environmental Scan

Introduction

Fast Facts

Economy

- Economic recovery is slow but steady.
- Many small businesses are hiring.

Population and Demographics

- The population in 2025 will be older and more diverse.
- Birth Rates are declining nationwide.

Workforce

- Health Care Occupations will add the most jobs nationwide between 2012 and 2022.
- Skilled labor will be in demand.

Education

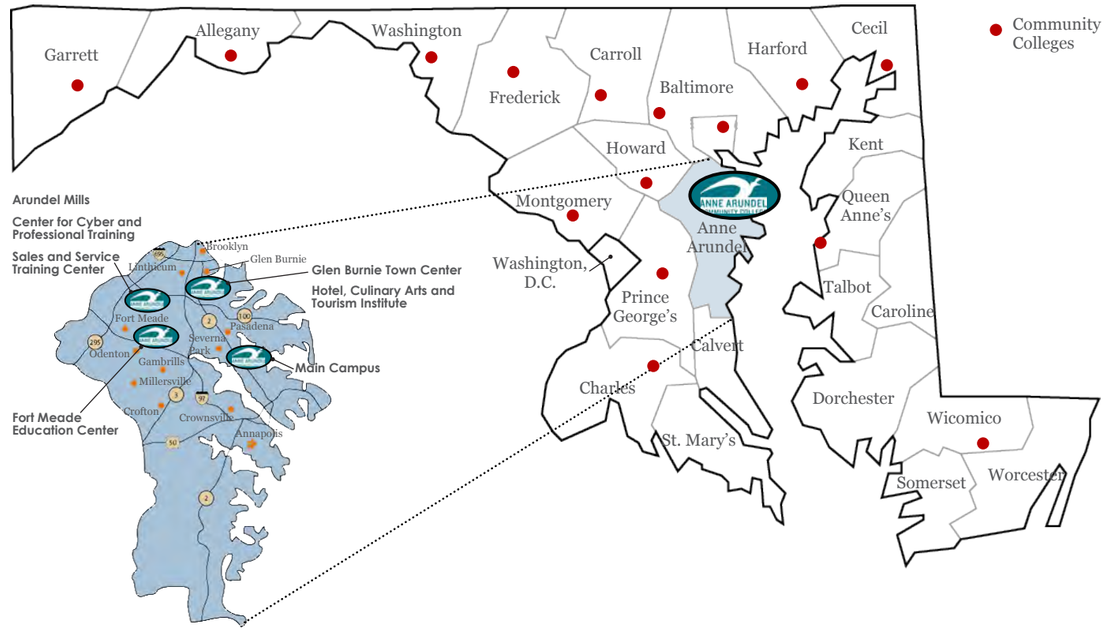
- Anne Arundel County residents have achieved higher levels of education (by percentage) than Marylanders and the Nation as a whole.
- Anne Arundel County community leaders recognize AACC as a valuable resource.

The purpose of the Environmental Scan is to review and assess current and projected trends that will influence Anne Arundel Community College (AACC) in the near future, as well as in the coming years. This environmental scan reports on factors surrounding the economic recovery; population trends, such as the graying of America and its impact on education; workforce issues influenced by employment growth or decline, both nationally and locally; education trends including funding, high school enrollment, and graduation projections. All of these factors will influence AACC's academic programs, which in turn will have an impact on facility needs.

Census data was retrieved from the American Fact Finder website, a searchable database of U.S. Census Bureau data. The U.S. Census Bureau prepares estimates between census years. One-year estimates use twelve months of collected data. Three-year estimates are prepared with the previous three years of data. Five-year estimates are prepared with the previous five years of data and use the largest sample size, but they do not include the most current data. When U.S. Census estimates were used in this report, they are marked with the year prepared, the range of the estimate, and "est."

In this Environmental Scan, "the Anne Arundel Region" refers to Anne Arundel, Prince George's, Howard, and Calvert Counties (Figure 3.1). These counties are included in the Environmental Scan to provide context and comparative data to accompany Anne Arundel County data. Anne Arundel County is the catchment area of Anne Arundel Community College.

Figure 3.1 Regional Map



Data Sources

U.S. Census Bureau
American Association of Community Colleges
Bloomberg Businessweek
Georgetown University Center on Education and the Workforce
InsideHigherEd.com
Kiplinger's Economic Outlooks
National Center for Education Statistics
Pew Research Social & Demographic Trends
United States Bureau of Labor Statistics
United States Department of Labor
ReferenceUSA
Maryland Department of Labor, Licensing, and Regulation
Maryland Workforce Exchange
Maryland Higher Education Commission
Maryland Association of Community Colleges
University System of Maryland
Maryland State Department of Education
Anne Arundel County Economic Development Corporation

The Nation

Economy

Optimism about the economy is paired with uncertainty. In 2014, the U.S. economy grew by 2.4 percent. Economist David Payne of Kiplinger.com predicts that the U.S. economy will grow 3.3 percent in 2015 as a result of stronger consumer spending.

> *With consumer spending on the rise, more and more businesses will increase investment in new production capacity. Housing is in a recovery mode, too, with builders expected to increase the pace of new-home construction this year. Though the Federal Reserve has more or less promised to start raising interest rates this year – most likely in the summer – we expect the hikes to be modest.*[1]

Mr. Payne also predicts that small businesses will hire more workers this year and more than forty percent of small businesses plan to raise salaries.

> *Over 50% of small firms are seeking workers, good news for both job hunters and the economy, as businesses that employ from one to 49 workers account for nearly 30% of all employment in the U.S. However, many employers will find it tough to fill openings because prospective hires lack the needed skills. Nearly 40% will raise salaries this year, the highest proportion of firms to do so in six years. Rising state minimum wages are less of a concern now as more and more [small businesses] see business improving.*[2]

Inflation is expected to stay low this year; consumer prices will pick up 1.5 percent in 2015, compared with a very low 0.8 percent increase in 2014. These factors are good news for manufacturers, as raw materials will cost less. However, individuals still face economic challenges.

- Wage increases will continue to be moderate.
- Oil prices will stay relatively low, which is good for consumers but has mixed effects on the economy.
- Medical costs will go up 4 percent this year, which exceeds inflation and projected wage increases.
- The cost of shelter will rise about 3 percent this year, also faster than overall inflation.
- College tuition is also likely to increase around 3% in 2015.[3]

Business spending is expected to be good in 2015, but not as good as originally projected. When oil prices fell in 2014, U.S.-based oil and gas producers scaled back investment. In addition, the dollar appreciated sharply against other major world currency, which makes it difficult for U.S. manufacturers to export goods. However, the strong consumer spending outlook leads to net optimism in the U.S. economy, and business spending in 2015 is expected to grow by 5 percent this year, matching 2014 growth.

The strong dollar could lead to a further widening trade deficit (the dollar amount by which the nation's imports exceeded its exports). In 2014, the U.S. trade deficit grew by six percent. This year, the deficit is expected to grow even more, perhaps by as much as ten percent.[4]

1 Payne, David. "Economic Outlook, Indicators, Forecasts 2015 - GDP." *www.kiplinger.com*. The Kiplinger Washington Editors, 9 Mar. 2015. Web. 12 Mar. 2015.
2 Payne, David, and Rodrigo Sermeno. "Small Business Revving Up in 2015-Kiplinger." *www.kiplinger.com*. The Kiplinger Washington Editors, 27 Jan. 2015. Web. 12 Mar. 2015.
3 Payne, David. "Economic Outlook, Indicators, Forecasts 2015 - Inflation." *www.kiplinger.com*. The Kiplinger Washington Editors, 27 Feb. 2015. Web. 12 Mar. 2015.
4 Somerville, Glenn. "Economic Outlook, Indicators, Forecasts 2015 - Business Spending." *www.kiplinger.com*. The Kiplinger Washington Editors, 27 Feb. 2015. Web. 12 Mar. 2015.

Population and Demographics

In 2012, the U.S. Census Bureau projected that U.S. population will be 420,268,000 in 2060. That number is less than what was projected in 2008 (439,010,000 by 2050) as birth rates are expected to decline. The ratio of births to deaths is projected to reach nearly 5:4.5 Baby Boomers had fewer children than their parents did. There are fewer Americans of child-bearing age and fewer Americans are having big families. As a result, the workforce will grow slowly and will have a larger percentage of older workers until Baby Boomers retire.

Immigration is important to the American labor force because incoming workers bolster slow natural population growth and help to offset the effect of the aging Baby Boom generation. Immigration rates are declining, however, which could lead to further challenges in the U.S. labor market.

The U.S. Census Bureau reported in 2010 that the dependency ratio, or the number of people 65 and older to every 100 people of traditional working age, is projected to climb rapidly from 22:100 in 2010 to 35:100 in 2030.

After 2030, the dependency ratio is expected to continue to rise, but more slowly, to 37:100 in 2050. The number of Americans 85 and older will likely increase from about 14 percent in 2010 to 21 percent in 2050. These members of the population represent a potentially substantial burden on social resources.[6]

This challenge is summarized in a McKinsey & Company report, "Talkin' 'bout My Generation: The Economic Impact of Aging US Baby Boomers," published in June 2008. While the Baby Boomers earned record levels of income, generated great wealth for the nation, and spurred growth, they have also spent at record levels, failed to save, and accumulated unprecedented levels of debt. Nearly two-thirds of Boomer households are financially unprepared for retirement. They have not built-up enough savings to maintain their lifestyles as they age. The report suggests that one solution is for older people to work longer. That is the most economically attractive (in GDP-based models) of scenarios.[7] However, this adds costs to employers in terms of health insurance and re-training of their aging employees. On the other hand, experienced employees maintain the knowledge base in the workforce and can assist in training new employees.

5 Cohn, D'Vera. "Census Bureau Lowers U.S. Growth Forecast, Mainly Due to Reduced Immigration and Births." *Pew Research Centers Social Demographic Trends Project*. Pew Research Center, 14 Dec. 2012. Web. 12 Mar. 2015.
6 ibid
7 Farrell, Diana, David Court, Eric Beinhocker, John Forsyth, Ezra Greenberg, Suruchi Shukla, Jonathan Ablett, and Geoffrey Greene. "Talkin' 'bout My Generation: The Economic Impact of Aging US Baby Boomers." Talkin' 'bout My Generation: The Economic Impact of Aging US Baby Boomers. McKinsey Global Institute, 1 June 2008. Web. 12 Mar. 2015.

Figure 3.2 U.S. Births and Deaths 2015-2060[8]

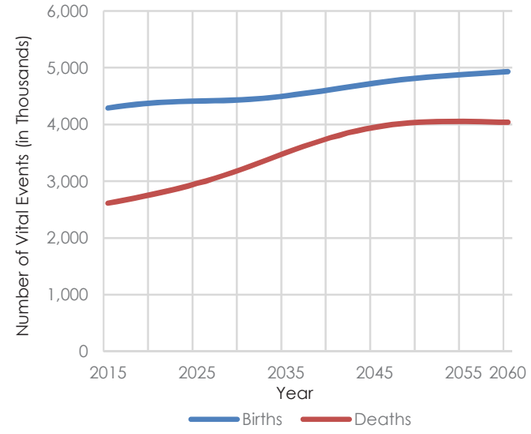
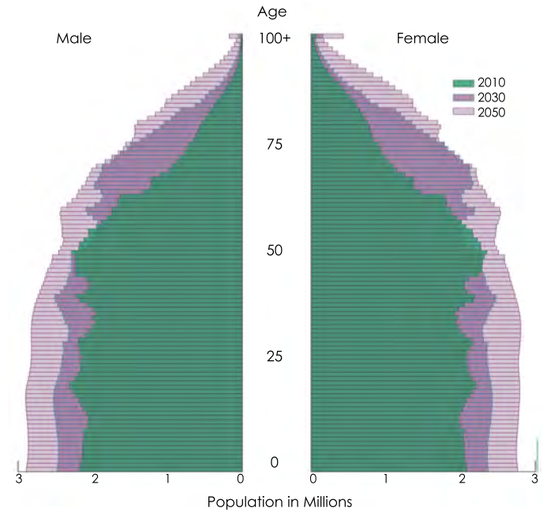


Figure 3.3 Age and Sex Structure of the Population for the United States: 2010, 2030, and 2050[9]



8 Table 1. Projections of the Population and Components of Change for the United States: 2015 to 2060 (NP2012-T1); Source: U.S. Census Bureau, Population Division; Release Date: December 2012
9 Vincent, Grayson, and Victoria Velkoff. "The Next Four Decades: The Older Population in the United States: 2010-2050, Population, Estimates, and Projections." www.census.gov. U.S. Department of Commerce, Economics and Statistics Administration, 1 May 2010. Web. 12 Mar. 2015.

Domestic Migration

During the recession, Americans moved less and took fewer risks with their careers. Reports that domestic migration within the U.S. is returning to pre-recession rates indicate that people feel more confident about relocating and changing jobs.

As domestic migration increases, a shift from pre-recession domestic migration patterns has emerged. People are no longer moving to the nation's outer suburbs. Outer exurban (the ring of prosperous communities beyond the suburbs that are commuter towns for an urban area) counties are experiencing a net out-migration. In fact, people are headed back to cities. This reflects, in part, homebuyers' caution regarding transportation time and cost, future home values, and the economy in rural regions.[10]

Population Diversity

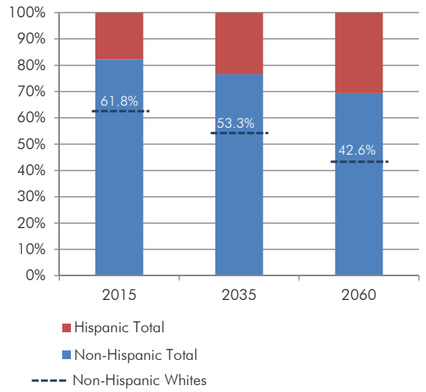
Age, gender, and cultural diversity are important components of a dynamic community and workforce. In an October 2012 article on Forbes.com called "Diversity Drives Innovation," author Jonathan Becher wrote, "Diversity of the seen and unseen - culture, thought, style, skills, education, workplace flexibility, and perspectives - ensures that every member of the team is represented and valued."[11]

As birth rates have declined in the U.S., skilled immigrants have helped fill jobs made available by retiring Baby Boomers and the expansion of science and technology industries. High-tech companies absorb around 80 percent of H-1B visa applicants. (H1-B is the immigration option that businesses use to hire foreign nationals for positions that require at least a bachelor's degree.)

Following the 1998 American Competitiveness and Workforce Improvement Act, which made visas easier to obtain, high-tech industries enjoyed 15 percent higher returns on stock investments (compared to investments in other sectors with similar levels of risk). This demonstrates the impact of immigration on high-tech businesses.[12] In 2012, Patricia Cortes and Jessica Pan of Boston University and the National University of Singapore reported that 20 percent or more of all those taking the U.S. nursing licensure exam were foreign-born, up from 6 percent in the mid-1980s.[13] As opportunities for good jobs in developing countries increase, many of these workers may choose to remain in or return to their own countries. The U.S. will need to educate workers with comparable skills.

By 2045, for the first time non-Hispanic whites will comprise less than 50 percent of the United States population.[14]

Figure 3.4 U.S. Population by Race and Hispanic Origin
2015, 2035, and 2060 (percent)



Gender diversity in the workplace is not expected to change significantly, The proportion of men to women in the workforce will likely remain the same, but it is anticipated that women will continue to take more leadership roles in companies.

Workforce

The United States Bureau of Labor Statistics (BLS) prepares projections for occupations and industries based on the overall economy and industry-specific data. Between 2012 and 2022, occupations and industries related to healthcare are projected to add the most new jobs. Occupations that typically require postsecondary education for entry are expected, on average, to grow faster than occupations that require a high school diploma or less. Total employment is projected to increase 10.8 percent, or 15.6 million jobs, during the decade.[15] The same BLS report contained projections regarding the following topics:

Labor Force and the Aggregate Economy

- Slow population growth and decreasing overall labor force participation rate (due to an aging population and the recent recession) are expected to lead to slow civilian labor force growth through 2022 and beyond.
- In October 2014, the labor force participation rate was at its lowest rate since 1978 - 62.7% of the population age 15 and older are employed or are actively looking for work.[16]
- While slow labor force growth often slows GDP growth, the percent change of GDP is increasing faster than expected. This could be due to import and export conditions, federal government spending, and personal spending.[17]

Industry and Occupation Employment Projections[18]

- Occupations and industries related to healthcare are projected to add the most new jobs between 2012 and 2022.
- Health care and social assistance are projected to grow at an annual rate of 2.6 percent, adding 5.0 million jobs between 2012 and 2022. This accounts for nearly one-third of the total projected increase in jobs.
- Employment in construction is expected to grow 2.6 percent annually. This equates to 1.6 million new jobs nationwide, the third-largest growth among all major industry sectors. However, construction is not expected to meet its previous peak level of employment (7.7 million in 2006).
- Five industry sectors are projected to have decreases in employment: manufacturing (-549,500); federal government (-407,500); agriculture, forestry, fishing, and hunting (-223,500); information (-65,200); and utilities (-56,400). In these sectors, there will be job openings due to replacement even though net job losses are predicted.
- Four major occupational groups are projected to grow more than 20 percent (nearly double the overall growth rate) from 2012 to 2022: health-care support occupations (28.1 percent); healthcare practitioners and technical occupations (21.5 percent); construction and extraction occupations (21.4 percent); and personal care and service occupations (20.9 percent).

Workforce Education and Training[19]

- Sixty-three percent of the occupations projected to grow fastest from 2012 to 2022 typically require some form of postsecondary education for entry. It is important to recognize that occupations that are growing the fastest do not always represent the greatest number of jobs available or the best opportunities for advancement.
- Service occupations such as personal care aides, home health aides, and medical assistants are among those projected to employ the most people through 2022, but salaries for these occupations are often low (Figure 3.5).
- Occupations typically requiring postsecondary education for entry generally had higher median wages ($57,770) in 2012 and are projected to grow faster (14.0 percent) between 2012 and 2022 than occupations that typically require a high school diploma or less ($27,670 and 9.1 percent).
- Occupations that typically require an apprenticeship are projected to grow 22.2 percent from 2012 to 2022, faster than any other on-the-job training assignment.

10 Frey, William. "Economic Improvement Nudges U.S. Migration to Normal." www.brookings.edu. The Brookings Institution, 15 Mar. 2013. Web. 12 Mar. 2015; and Frey, William. "The Demographic Lull Continues, Especially in Exurbia." www.brookings.edu. The Brookings Institution, 6 Apr. 2012. Web. 12 Mar. 2015.
11 Becher, Jonathan. "Diversity Drives Innovation." www.Forbes.com. Forbes Magazine, 10 Oct. 2012. Web. 12 Mar. 2015.
12 Kenney, Charles. "Why More Immigration, Not Less, Is Key to U.S. Economic Growth." *www.Bloomberg.com*. Bloomberg, 28 Oct. 2012. Web. 12 Mar. 2015.
13 ibid.
14 Table 6. Percent Distribution of the Projected Population by Race and Hispanic Origin for the United States: 2015 to 2060 (NP2012-T6). Source: U.S. Census Bureau, Population Division, Release Date December 2012
15 "Employment Projections: 2012-2022 Summary." U.S. Bureau of Labor Statistics. U.S. Bureau of Labor Statistics, 19 Dec. 2013. Web. 12 Mar. 2015.
16 Kiersz, Andy. "Labor Force Participation Falls To Its Lowest Rate Since 1978." www.BusinessInsider.com. Business Insider Inc., 3 Oct. 2014. Web. 12 Mar. 2015.
17 "News Release: Gross Domestic Product: Third Quarter 2014 (Third Estimate)." Bureau of Economic Analysis. U.S. Department of Commerce, 23 Dec. 2014. Web. 12 Mar. 2015.
18 "Employment Projections: 2012-2022 Summary." U.S. Bureau of Labor Statistics. U.S. Department of Labor, 19 Dec. 2013. Web. 12 Mar. 2015.
19 ibid

Job Openings due to Replacements and Retirements[20]

- Over the 2012-22 decade, there will be an estimated 50.6 million job openings, but more than two-thirds (67.2 percent) are anticipated to be jobs available due to replacements and retirements.
- For most occupations, openings due to replacement are projected to exceed openings from growth.

Often employees that replace retirees are promoted from within a company. This means that businesses must be prepared to train their rising management and technical employees in preparation for increased retirements through 2022. As skilled employees advance, employers will value entry-level employees who are well prepared with education and soft skills.

Figure 3.5 shows the jobs gained or lost by industries in the past (2002-2012) and projections for the future (2012-2022). Many industries that were losing jobs between 2002 and 2012 are projected to gain jobs.

Although manufacturing is still projected to lose jobs nationwide, far fewer losses are expected in the next decade than during the last ten years.

Figure 3.5 National Job Openings for Different Levels of Education Sorted by Number of Jobs (2012-2022)

(U.S. Bureau of Labor Statistics)

Entry-level Education Required	Job Openings 2012-2022	Annual Salary for jobs with this Education Requirement*	Occupations with this education requirement with the most job openings 2012-2022
High School Diploma or Equivalent	17,668,200	37,902	Customer service representatives
			Office clerks, general
			Secretaries and administrative assistants (except legal, medical, and executive)
			Childcare workers
			First-line supervisors of office and administrative support workers
Less than High School	15,914,600	21,304	Retail salespersons
			Combined food preparation and serving workers, including fast food
			Cashiers
			Waiters and waitresses
			Laborers and freight, stock, and material movers (by hand)
Bachelor's Degree	8,618,400	70,270	General and operations managers
			Accountants and auditors
			Elementary school teachers (except special education)
			Secondary school teachers (except special and career/technical education)
			Management analysts
Postsecondary non-degree award	3,067,000	34,630	Nursing assistants
			Heavy and tractor-trailer truck drivers
			Licensed practical and licensed vocational nurses
			Medical assistants
			Hairdressers, hairstylists, and cosmetologists
Associate's degree	2,269,700	56,370	Registered nurses
			Preschool teachers (except special education)
			Dental hygienists
			Paralegals and legal assistants
			Medical and clinical laboratory technicians
Doctoral or professional degree	1,426,700	108,957	Lawyers
			Physicians and surgeons
			Physical therapists
			Pharmacists
			Health specialties teachers, postsecondary
Master's degree	950,800	65,996	Educational, guidance, school, and vocational counselors
			Education administrators, elementary and secondary school
			Healthcare social workers
			Education administrators, postsecondary
			Mental health counselors
Some college, no degree	642,500	32,040	Teacher assistants
			Computer user support specialists
			Computer, automated teller, and office machine repairers

*Weighted average based on 2012 median annual wage

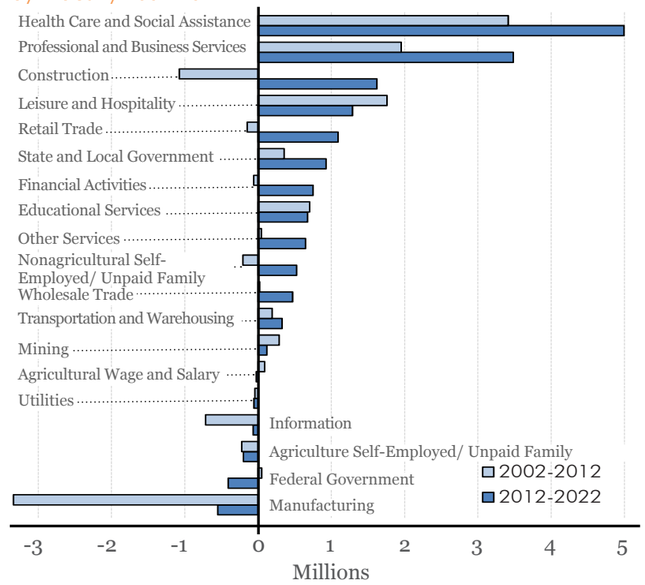
20 ibid.

Green Occupations

The emerging fields of clean energy production and environmental protection showed job growth from 2000-2006 at a far faster rate than any other occupations. The Bureau of Labor Statistics projected 52 percent growth rate of these jobs between 2000 and 2016. Unfortunately, due to budget cuts, the Bureau of Labor Statistics no longer tracks Green Jobs. However, O-Net (a part of the American Job Center network) lists the following occupational sectors as being key to the green economy:

- Renewable energy generation
- Transportation
- Energy efficiency
- Resource-efficient construction
- Energy trading
- Energy and carbon capture and storage
- Research, design, and consulting services
- Environment protection
- Agriculture and forestry
- Manufacturing
- Recycling and waste reduction
- Governmental and regulatory administration

Figure 3.6 Historic and Projected Job Gains/Losses by Industry 2002-2022[21]

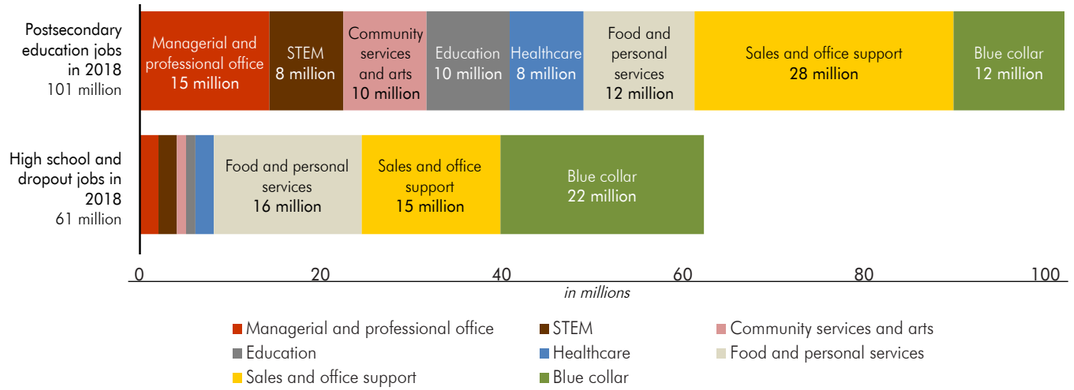


21 U.S. Bureau of Labor Statistics. NOTE: Categories are determined by Bureau of Labor and Statistics North American Industry Classification System (NAICS)

Education

Many occupations require first-time employees to have some post-secondary education and training, but not necessarily a degree. As shown in Figure 3.5, between 2012 and 2022 many job openings are projected for workers with no post-secondary education but their earning potential is very low. Savvy students can combine workplace experience and education to advance their careers or to begin work toward an advanced degree. Figure 3.7 illustrates the diminishing share of jobs for those with only a high school-education.

Figure 3.7 National Opportunities for Workers based on Education[22]



According to the Rob Jenkins in the Chronicle of Higher Education, community colleges are expected to continue their vital contribution to degree- and career-seeking students. "As long as students are looking for inexpensive courses that transfer easily, ...community colleges will continue to thrive."[23] Post-recession, demands such as re-training of displaced workers; workforce demand for occupational training; increase in veteran enrollment due to the Post 9/11 G.I. Bill; and an influx of traditional-age students whose families cannot afford to send them to four-year institutions have helped Community College enrollments rebound.

Many studies show that jobs of the future will require at least some post-secondary education."Help Wanted: Projections of Jobs and Education Requirements Through 2018," published by the Georgetown University Center on Education and the Workforce, summarizes the trend:[24]

> *By 2018, the U.S. will need 22 million new college graduates - but will fall short of that number by at least 3 million post-secondary degrees, Associate's or better. In addition, we will need at least 4.7 million new workers with postsecondary certificates. At a time when every job is precious, this shortfall will mean lost economic opportunity for millions of American workers.*

One quarter of today's jobs were not listed among the Census Bureau's occupation codes in 2003 because the professions did not yet exist. Changes in technology have accelerated in the last decade making it even more difficult for educators to remain current.[25]

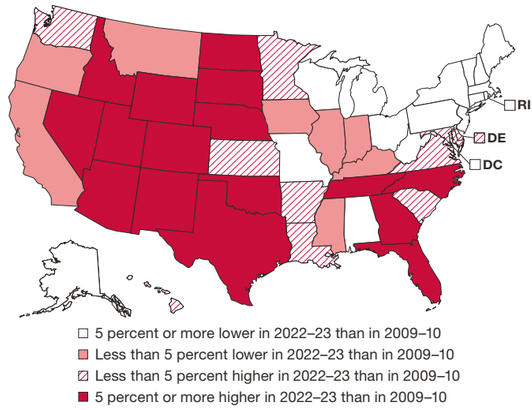
22 Anthony P. Carnevale, Nicole Smith, Jeff Strohl; *Help Wanted: Projections of Jobs and Education Requirements Through 2018*; Georgetown University Center on Education and the Workforce; June 2010; Web; 27 February 2013.
23 Jenkins, Rob. "What About Community Colleges?" The Chronicle of Higher Education. The Chronicle of Higher Education, 15 Jan. 2013. Web. 23 Nov. 2015.
24 ibid.
25 "Preparing the Workers of Today for the Jobs of Tomorrow." www.whitehouse.gov. The White House, 1 July 2009. Web. 12 Mar. 2015.
26 Johnson, L. , Adams Becker, S. , Estrada, V. , Freeman, A. (2014). NMC Horizon Report: 2014 Higher Education Edition. Austin,Texas: The New Media Consortium.
27 ibid.

Higher education today is challenged by:

- Innovative, rapidly developing classroom technology
- Student learning methods ("digital natives")
- Growing ubiquity of social media
- Integration of online, hybrid, and collaborative learning
- Competition for resources
- Pressure to close the skills gap
- Political pressure and reduced funding
- Perceived value vs. cost of higher education; student debt concerns
- Rise of data-driven student assessment
- Shift from students as consumers to students as creators
- Increased competition for fewer high school graduates due to steadily declining birth rates [26]

The long-range effect of declining birth rates and diminished immigration is being felt in many school districts across the nation. There are fewer children in K-12 schools; therefore, colleges are competing for a smaller pool of graduates. In the map below, states that expect the most growth in the number of high school graduates (red) are states that benefit from net gains in domestic migration and immigration. States expecting the most decline (white) are losing residents to other states or nations.

Figure 3.9 Projected Percentage Change in Number of Public High School Graduates[27]



Higher Education Trends

The following factors will have a significant impact on how colleges approach student recruitment and enrollment in the coming years[28]:

- Key demographic projections indicate that the recruitment of traditional-age college students will become an even greater challenge. College enrollments will grow more slowly; a smaller proportion of college students will be traditional-age; and through 2019, the number of high school graduates will be flat or decrease in every region except the south.
- Students and their families will continue to look for value in a college education. In a Princeton Review survey, 79 percent of college applicants and their parents said the economy affected their decisions about applying to or choosing a college.
- The increasing demand for accountability from prospective students, as well as legislators and government officials, is requiring colleges to better track student outcomes.
- Increasing online access via mobile devices brings expectations of responsiveness by colleges in their communications with prospective students.

Stacked Certificates and Alternate Education Delivery Methods[29]

Students are looking for more flexible pathways to achieve their academic goals and colleges are responding. Stackable certificates offer students an opportunity to earn credentials in small steps.

Industry and educators often work together to build curriculum for certification programs that directly relate to the acquisition of specific workplace skills.

- Certificates can build upon each other leading to third-party certificates, associate degrees, or workforce advancement.
- Instruction can include a flexible, blended combination of on-campus instruction, on-the-job training, and online education.

28 "Trends for 2014: Five Factors Facing Private Higher Education." *Clients.thelawlorgroup.com*. The Lawlor Group. Web. 12 Mar. 2015.
29 Fain, Paul. "Labor Department Grants May Be Paying off for Community Colleges and Students." *Insidehighered.com*. Inside Higher Ed, 14 May 2013. Web. 12 Mar. 2015.

There is increased demand for certificate programs at two year colleges. Colleges and universities that embrace certificate programs can help students apply stacked certificates to advanced degrees, which could help students pursue higher education while keeping up with the demands of jobs and families. Ideally, colleges and universities will eventually all recognize certificates as credit-bearing.

Flipped Classrooms[30]

New models for classroom-based instruction reserve face-to-face time for collaborative interaction. Lecture learning takes place outside the classroom.

- Instructors record and post video lectures on the Internet.
- Students view lectures and answer questions at their convenience on their computers or mobile devices.
- Students spend class time actively working with the instructor and collaborating with other students.
- Ownership of learning is shifted to the students.

Maker Spaces[31]

Maker Spaces began to appear in the mid-2000s. They are collaborative environments in which students from all disciplines work side-by-side with a range of materials. They typically include traditional craft tools and digital equipment, such as laser cutters and 3D printers.

Incubator Spaces and Co-Working Spaces

These are spaces on campus that are available for public use. Such resources help institutions of higher education forge strong relationships with communities and businesses.

- "Co-Working" Spaces: Space for alumni to return to campus and work with one another and with current students.
- Incubator Spaces: Space and equipment that small, growing businesses can share for little or no cost.

30 Johnson, L. , Adams Becker, S. , Estrada, V. , Freeman, A. (2014). NMC Horizon Report: 2014 Higher Education Edition. Austin,Texas: The New Media Consortium.
31 ibid.

Funding

Community colleges have often been referred to as "the safety valve" for the neediest students: 2013-2014 average annual tuition and fees totaled about $3,260, compared with the average annual tuition of $8,890 for in-state public four-year colleges, according to the American Association of Community Colleges.[32] In recent years, community and technical colleges' funding burdens have shifted more heavily to students than state and local sources.

Figure 3.10 Revenue Sources of Two-Year Colleges Nationwide

Revenue Source	2007-2008 percent contribution	2013-2014 percent contribution	Percent Change
Federal	14%	16.1%	+2.1%
State	36%	28.1%	-7.9%
Local	19%	17.3%	-1.7%
Tuition and Fees	16%	29.5%	+13.5%
Other	15%	9.0%	-6.0%

http://www. aacc. nche. edu

Figure 3.11 Sources of Student Aid Received Nationwide

Note: Students can receive aid from more than one source, so the totals per year may equal more than 100%.

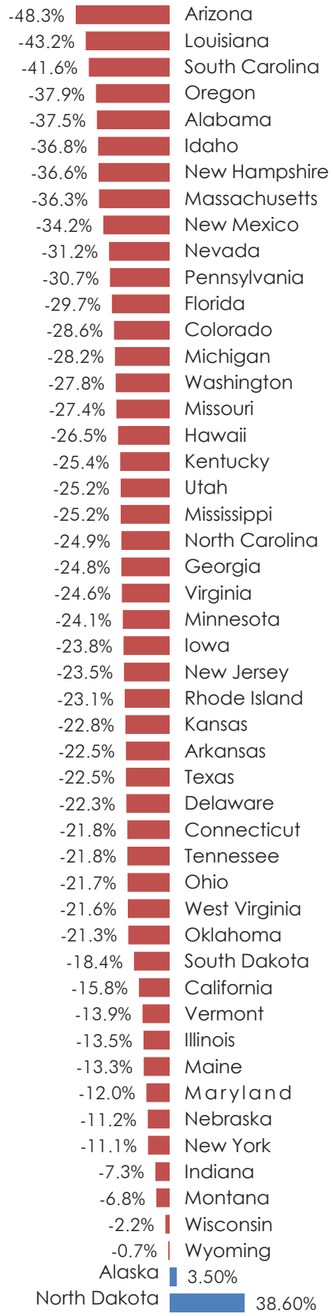
Revenue Source	2007-2008 percent students receiving	2013-2014 percent students receiving	Change
No aid	54%	42%	-12%
Federal grants	21%	38%	+17%
Federal loans	10%	19%	+9%
State aid	13%	12%	-1%
Institutional aid	11%	13%	+2%

http://www. aacc. nche. edu

Pell Grants have provided federal grant aid to needy undergraduate students since the 1970s. In the 2015 fiscal year, the program provided over eight million students with more than $30 billion in aid. The 2015 maximum Pell Grant award is $5,575 and it is expected to increase to $6,000 in 2017. During the recession, enrollment skyrocketed and more people met the income requirements for Pell Grants. Federal spending on the program increased sharply between 2008 and 2010 and peaked in the 2010-2011 award year. In the 2013 award year, funding exceeded spending and the subsequent surplus has eased stresses on the Pell Grant program as

32 " Fast Facts From Our Fact Sheet ." *Fast Facts From Our Fact Sheet*. American Association of Community Colleges, 1 Jan. 2014. Web. 12 Mar. 2015.

Figure 3.12 Percent change in state higher education spending per student, inflation adjusted; FY08-FY14



a result. However, to continue to offer comparable benefit levels and eligibility after 2018, Congress will need to sustain a higher level of funding and provide annual increases.[33] Efforts are being made at the federal level to improve the return on investment for higher education, for both students and prospective employers, such as:[34]

- Expansion of apprenticeship training programs.
- Creation of manufacturing innovation institutes across the nation over the next ten years to accelerate the development and adoption of cutting-edge manufacturing technologies for making new, globally-competitive products.
- Realignment of training efforts between two-year colleges and industry to ensure students are prepared for existing jobs.
- Establishment of a new college rating system to encourage colleges to focus on affordability and value.

In May 2014, the Center on Budget and Policy Priorities issued a report on higher education funding. The report indicates that 48 states - all except Alaska and North Dakota - are spending less per student than they did during the recession (Figure 3.12).[35] The average state spending per student is $2,036, 23 percent less than before the recession. Furthermore, tuition has increased far faster than household incomes in the past four decades (Figure 3.13).

Community College Enrollment

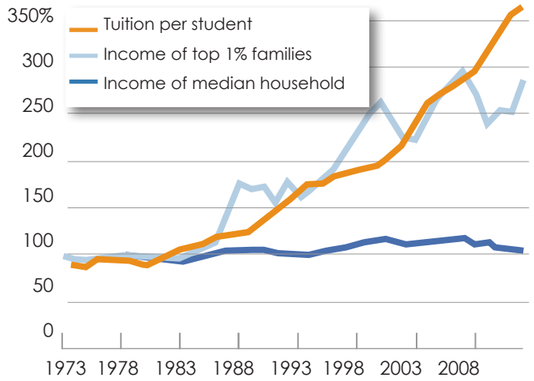
Despite the decline in the number of school-age children, more people than ever are pursuing higher education. While the rate of enrollment growth experienced during the recession was not sustained, the rate of higher education enrollment is projected to continue to grow moderately through the 2020s.

Much of the recent growth in higher education can be attributed to non-traditional students. Older students, with obligations such as jobs and families, represent forty percent of 2011 enrollment and are the fastest-growing group of higher education participants.

Trends in gender, full-time vs. part-time, and undergraduate vs. graduate enrollment are expected to follow pre-recession patterns, as shown by the following graphs.

33 "Pell Grant Program Overview." Atlas. New America, 14 May 2015. Web. 12 Aug. 2015; Alsalam, Nabeel. "The Federal Pell Grant Program: Analysis and Options: Presentation to the American Association of Community Colleges." October 22, 2013. Web. 12 Aug. 2015.
34 "The State of the Union Fact Sheet: Opportunity for All." *www.whitehouse.gov*. The White House, 28 Jan. 2014. Web. 12 Mar. 2015.
35 ibid.

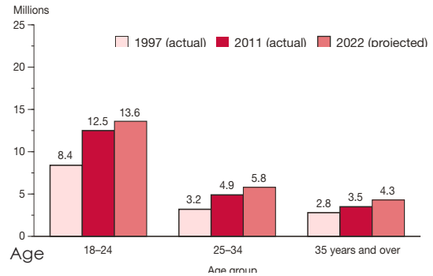
Figure 3.13 Inflation-adjusted average tuition and fees at public 4-year institutions and income for select groups (1973=100%)[36]

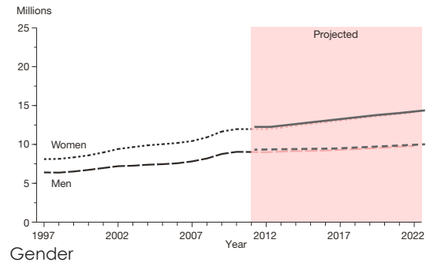


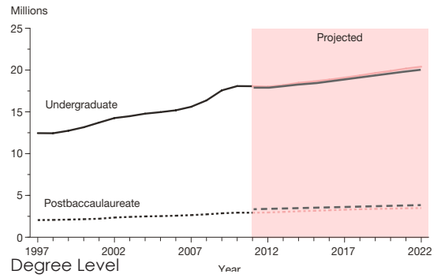
*Tuition per student and income levels, adjusted for inflation, as a percentage of 1973-74 price levels. Note: Years shown and income data are for hte calendar year. Tuition data cover the school year beginning in the calendar year.
Source: Center on Budget and Policy Prioriities based on the College Board and Census Bureau
Center of Budget and Policy Priorities | cbpp.org

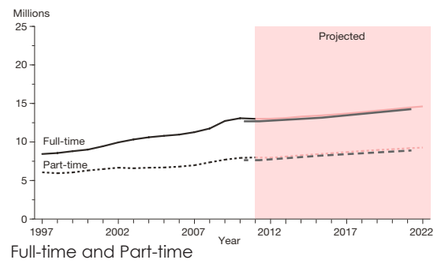
Community colleges deliver education to a variety of students through multiple modalities. Today, national enrollment in community colleges consists of approximately 6,750,000 students. In higher education as a whole, 49 percent of students were enrolled part-time in 2011. At community colleges in that same year, 59 percent of students were enrolled part-time.[37]

Figure 3.14 Projected Enrollment in Higher Education[38]









36 Mitchell, Michael, Vincent Palacios, and Michael Leachman. “States Are Still Funding Higher Education Below Pre-Recession Levels.” *www.cbpp.org*. Center on Budget and Policy Priorities, 1 May 2014. Web. 12 Mar. 2015.
37 “ Community College Trends and Statistics - Enrollment .” *www.aacc.nche.edu.* American Association of Community Colleges. Web. 12 Mar. 2015.
38 Hussar, William J., and Tabitha M. Bailey. “Projections of Education Statistics to 2022; Forty-first Edition.” *www.nces.gov*. National Center for Education Statistics, 1 Feb. 2014. Web. 12 Mar. 2015.

Maryland

Economy

Maryland's economy is steady; the State's anticipated tax revenues for 2015 and 2016 will increase moderately. Even moderate growth is received enthusiastically as the state recovers from the recession. Because of the predominance of federal government jobs, Maryland was hard-hit by spending freezes. The federal budget sequestration that started in 2013 is planned to continue through 2021. Each year, changes in sequestration are possible.

State tax revenue is expected to be around $15.7 billion in 2015, up from $15.1 billion in 2014. However, Maryland State Comptroller Peter Franchot warned:

> *It's important to remember that these revenue estimates represent a very cautious and not overly optimistic view on Maryland's near-term economic outlook. It's important that we not confuse economic stability for sustained economic growth. And while we should be relieved that we aren't here to further write down our revenue estimates, we can't afford to be satisfied when considering the continued struggles facing far too many of our friends and neighbors in the Maryland economy.*
>
> *The federal government remains a major economic asset, but like with any portfolio, over-reliance on it carries significant risks. A sustained economic recovery comes down to quality, family-supporting jobs, and the only way to create and retain those jobs is to instill confidence in our consumers to spend, and in our businesses to expand and hire.*[39]

State business development efforts are focused on the following key industries:

- Aerospace & Defense
- Energy & Sustainability
- Life Sciences
- IT & Cybersecurity
- Manufacturing

Maryland has the highest proportion of doctoral scientists and engineers in the nation, and the second highest concentration of employed professional and technical workers. Bolstering this highly skilled labor force are 56 accredited two- and four-year colleges and universities.[40]

Maryland's Department of Business and Economic Development emphasizes the state's excellent education system; skilled workforce; strategic location on highway, air, and ocean routes; STEM resources; and research and development funding. Maryland offers financing and incentives for small businesses, veteran-owned businesses and minority- and women-owned businesses to assist with a variety of business challenges including:[41]

- Modernization of manufacturing equipment
- Land acquisition and infrastructure improvements
- Machinery and equipment purchase
- Development of commercial opportunities
- Financing for the economically disadvantaged

In addition, the following tax credits help new and existing businesses reduce costs, pursue research and development, and create jobs:[42]

- Job Creation Tax Credit
- Cybersecurity Investment Incentive Tax Credit
- Enterprise Zone Tax Credits
- One Maryland Tax Credit
- Research and Development Tax Credit
- Biotechnology Investment Incentive Tax Credit
- Regional Institution Strategic Enterprise (RISE) Zone Program
- Brownfields Tax Incentive
- Cellulosic Ethanol Technology R&D Tax Credit
- Employer Security Clearances Costs Tax Credit
- Maryland Wineries and Vineyards Tax Credit

Last year, a new commission convened in the Maryland government to study the state's economic development structure and incentive programs. The commission proposed five key measures to the General Assembly to advance economic development and strengthen the business climate. The key measures (listed below) had been approved by the Governor at the time of this report with the exception of SB 602.[43]

- Reduced-tax zones - HB 742/SB 600 encourages business investment by offering tax incentives for those operating in certain districts.
- Cyber seed investment fund - HB 740/SB 603 establishes a cybersecurity investment fund in the Maryland Technology Development Corporation to provide seed and early-stage funding for emerging technology companies in Maryland focused on cybersecurity and to maximize corporate investments.
- Matching private-sector funding for university research endowments - HB 741/SB 601 would help the process of scientific research funding at degree-granting institutions of higher education.
- Recoupling Maryland's estate tax to federal criteria to ease the tax's burden - HB 739/SB 602 proposes raising, over a four-year period, Maryland's threshold for taxing estates from $1 million currently to the federal estate tax threshold of more than $5 million.
- Improved transparency on tax forms - HB 743/SB 604 would require information on each state tax form showing how tax dollars are being spent.

State support and workforce skill have driven scientific, technical, and engineering companies to the top of Maryland's list of biggest employers.

Figure 3.15 Maryland's Biggest Employers[44]

Company	Employees in Maryland
Giant Food Inc	27,000
Johns Hopkins Medical Institutions	22,000
MedStar Health	22,000
Black & Decker Corp (Towson)	22,000
Black & Decker Corp (Baltimore)	15,759
Verizon Inc	14,000
Northrop Grumman Corp	11,000
Constellation Energy Group Inc	8,700
McCormick & Co	8,000
Wal-Mart Stores Inc	7,286
United Parcel Service Inc	6,945
CareFirst BlueCross BlueShield	6,500
W. R. Grace & Co.	6,300
University of Maryland Medical System	6,162
Safeway Inc	6,000
LifeBridge Health	5,691
Sears, Roebuck & Co	5,483
Legg Mason Inc	5,300
Magellan Health Services Inc	4,800
Bank of America Corp	4,000
T. Rowe Price Group Inc.	3,682
Mercantile Bankshares Corp	3,325
Sinclair Broadcast Group Inc	3,221
Greater Baltimore Medical Center Healthcare Inc	3,200
International Business Machines Corp	3,200
The Rouse Co	3,081
M&T Bank Corp	2,810
Micros Systems Inc	2,749

Across the nation, sole proprietorships are on the rise. During the recession, many enterprising individuals decided not to wait for someone else to "create" their jobs and set out to make jobs for themselves. Establishment of one-person businesses increased at a higher rate in Maryland than in the U.S. as a whole between 2004 and 2014. Establishment of businesses with fewer than fifty employees in Maryland increased 33 percent between 2004 and 2014, while nationwide they increased 26 percent.[45]

Population and Demographics

Between 2010 and 2015, Maryland's population grew by 236,589 residents (47,320 per year) of 4.1 percent - the same rate as the nation. Looking ahead, population growth in Maryland is projected to slow down. Maryland is projected to grow by 1,116,140 residents between 2015 and 2040 (18.6 percent total, about 44,645 per year). The rate of growth is projected to increase in the nation, which is projected to grow by 71.5 million residents over the same period (22.2 percent total, just under 2.9 million per year).[46]

39 Marron, Brian. "Maryland Tax Revenue Estimates Unchanged For Fiscal Years 2015, 2016." *CNSMaryland.org*. Philip Merrill College of Journalism, 11 Mar. 2015. Web. 12 Mar. 2015.

40 "Maryland's Business Climate - Workforce." *Business.maryland.gov*. Maryland Department of Business and Economic Development, 1 Jan. 2015. Web. 12 Mar. 2015.

41 "Programs for Businesses." *www.Maryland.business.gov*. Maryland Department of Business & Economic Development, 2015. Web. 12 Mar. 2015.

42 ibid.

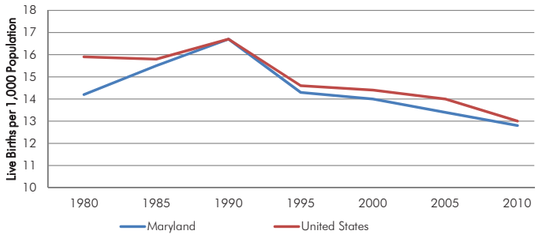
43 Miller, Cassandra. "New Commission to Frame State's Business Development Agenda." *www.gbc.org*. Greater Baltimore Committee, 20 Mar. 2014. Web. 12 Mar. 2015.

44 "Top Maryland Employers." *www.Baltimoresun.com*. The Baltimore Sun, 1 Jan. 2015. Web. 13 Mar. 2015.

45 ReferenceUSA

46 "Resident Population Data (Text Version)." *www.census.gov*. 2010 Census. Web. 16 Mar. 2015; "Projections." *www.mdp.state.md.us*. Maryland Department of Planning, State Data Center, updated Jan.

Figure 3.16 Maryland and U.S. Birth Rate Comparison 1980-2010[47]



In Maryland, as in the nation, birth rates are declining. Figure 3.15 represents the number of live births per 1,000 population. Birth rates are expected to decline in upcoming decades, leading to slower natural population growth.

Fewer births per capita results in a growing proportion of older residents. In Figure 3.17, Maryland's residents age 65 and older are projected to comprise 20.1 percent of the population in 2040, compared to 10.8 percent in 1990.

Maryland is more diverse than the nation. African Americans and Asians comprise a larger percentage of the population in Maryland than in the nation, while people of other races (including two or more races) comprise a slightly lower percentage of total population.

Figure 3.17 Maryland Population by Age Groups, 1970-2040

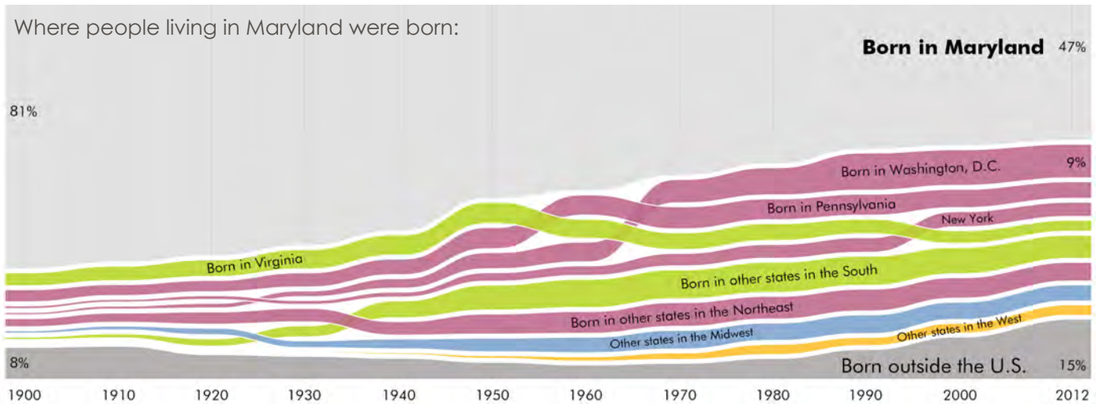
Source: Maryland Department of Planning

				Projection	
Age Group:	1990	2015	Change (1990-2015)	2040	Change (2015-2040)
Age 0-19	1,305,276	1,502,000	15.1%	1,619,850	7.8%
Age 20-44	2,046,144	2,013,810	-1.6%	2,226,310	10.6%
Age 45-64	914,989	1,655,350	80.9%	1,636,880	-1.1%
Age 65+	514,344	838,970	63.1%	1,406,660	67.7%
Population	4,780,753	6,010,140	25.7%	6,889,690	14.6%

The population of Maryland reflects the strong influence of the federal government; residents hail from all states in the nation. Seven percent of Maryland natives work for the federal government, compared to seventeen percent of Maryland's newcomers.[48] Maryland is a transient place, due to its proximity to Washington, D.C. Based on the 2010 census, the Washington, D.C. region ranked third among most transient places in the country (behind Nevada and Florida).[49]

Figure 3.18 Maryland Domestic In-Migration, 1900-2012

Source: Aisch, Gebeloff, and Quealy. See footnote.



2015. Web. 16 Mar. 2015.

47 Maryland Department of Information Technology Data Portal and U.S. Centers for Disease Control National Vital Statistics Reports, Volume 61, Number 1

48 Aisch, Gregor, Robert Gebeloff, and Kevin Quealy. "Where We Came From and Where We Went, State by State." *The New York Times*. The New York Times, 12 Aug. 2014. Web. 16 Mar. 2015.

49 Austermuhle, Martin. "We're Only Slightly Less Transient Than Florida and Nevada." *DCist*. Gothamist LLC, 28 Nov. 2011. Web. 16 Mar. 2015; Ping, Ren. "Lifetime Mobility in the United States: 2010." *www.census.gov*. U.S. Department of Commerce Economics and Statistics Administration, U.S. Census Bureau, Nov. 2011. Web. 16 Mar. 2015.

Workforce

The ebb and flow of Maryland's population due to domestic in- and out-migration poses a challenge to employers. The workforce changes often. While STEM and healthcare industries dominate employment, companies in all industries employ people working in many different occupations. Both occupational and industry analyses are needed to get an accurate picture of Maryland's current and future workforce needs.

Figure 3.19 Maryland Total Employment Change by Occupation 2012-2022

Source: Maryland Department of Labor

Standard Occupational Classification (SOC)	Total Employment Change (2012-2022)
Food Preparation and Serving Related	18,835
Computer and Mathematical	18,602
Healthcare Practitioners and Technical	16,726
Education, Training, and Library	15,418
Business and Financial Operations	15,113
Management	11,272
Transportation and Material Moving	10,051
Construction and Extraction	9,204
Personal Care and Service	8,922
Sales and Related	8,743
Office and Administrative Support	8,333
Building and Grounds Cleaning and Maintenance	8,224
Healthcare Support	7,757
Installation, Maintenance, and Repair	4,820
Protective Service	4,449
Architecture and Engineering	3,748
Community and Social Services	3,270
Life, Physical, and Social Science	3,021
Arts, Design, Entertainment, Sports, and Media	2,056
Legal	1,471
Farming, Fishing, and Forestry	39
Production	-760
Total Job Gains	**179,314**

Figure 3.20 Maryland Total Employment Change by Industry 2012-2022

Source: Maryland Department of Labor

North American Industry Classification System (NAICS) Major Industry	Total Employment Change (2010-2020)
Professional, Scientific, and Technical Services	42,555
Healthcare and Social Assistance	32,995
Educational Services	23,718
Administrative; Support; Waste Management; Remediation Services	18,712
Accommodation and Food Services	18,413
Retail Trade	12,701
Construction	10,891
Other Services (Except Government)	8,199
Transportation and Warehousing	6,428
Arts, Entertainment and Recreation	4,180
Wholesale Trade	3,125
Government	2,557
Information	2,327
Management of Companies and Enterprises	1,820
Real Estate and Rental and Leasing	589
Agricultural, Forestry, Fishing and Hunting	245
Mining	71
Finance and Insurance	-368
Utilities	-1,054
Manufacturing	-8,261
Self Employed Workers, All Jobs	-364
Unpaid Family Workers, All Jobs	-165
Total Job Gains	**179,314**

There is not always a clear relationship between industry projections (Figure 3.20) and occupational projections (Figure 3.19). For example, the Standard Occupational Classification of Production includes employees who make and manufacture products. Total employment in Maryland for these employees is projected to decline by 760 jobs over the study decade. However, industry-wide, companies whose business it is to manufacture products will employ 8,261 fewer people in Maryland in 2022 than in 2012. The discrepancy accounts for administrative staff, compliance officers, executives, and other types of employees including the hands-on manufacturing workers.

Quality Workforce Attracts Business

Area Development Magazine's 2013 Corporate Survey results communicate that *skilled labor is the most important factor for companies seeking to relocate.* In the online article "Skilled Labor Tops the List," site selection professional Gary Yates wrote:

> *Slightly more than 58 percent of survey participants say [skilled labor] is "very important" and nearly 37 say it is "important." In contrast, only 14 percent say that availability of unskilled labor is "very important." For advanced manufacturing concerns, skilled labor is particularly critical - and the regions that are aggressively investing in work force development are winning the competition for these companies. Seventy-one percent of respondents report that advanced skills, such as machine tool programming, are what unemployed workers lack.*[50]

Another *Area Development* article describes the essential relationship between the private sector and workforce development efforts:

> *Creating a sustainable, flexible, evolving workforce requires a number of stakeholders to pull together — for the long run. It cannot be the responsibility of one entity, organization, or institution. Five pillars of the area economy need to come together with a common goal and vision to develop and maintain the modern workforce:*
>
> - *The private sector must embrace its role in ongoing education and training.*
> - *Local and state governments will need to become direct partners with business and educational institutions to develop policies that encourage and reward skills development, not simply rewarding job creation.*
> - *Educational institutions — where the development of creativity and innovation, as well as soft and technical skills, should begin — need to become partners with business and government to create a continuum of education and training.*
> - *The workforce itself must accept that prosperity requires lifetime learning to meet the needs of continually evolving skills requirements.*
> - *Social institutions that are already dedicated to workforce development are more nimble than companies and governments. Philanthropic organizations must be creative in developing and funding strategies that invest in skills development for untrained members of communities that are not contributing to growth.*[51]

The *Area Development* survey also asked business leaders what factors prompt them to leave communities. High taxes, excessive government regulation, and labor costs led the list.[52] These are challenges with which Maryland struggles. Due to taxes, regulation, and the labor environment, Maryland often falls on the bottom of "business friendliness" rankings.

Maryland's Place in the New Economy

Maryland's exceptional quality of education and outstanding technology and innovation are recognized in the CNBC 2014 "America's Top States for Doing Business." The state also ranked somewhat highly in Workforce Quality. Together, these three qualities suggest that Maryland is well prepared to compete in the New Economy.

Investopedia.com defines "the New Economy" as:

> *New, high-growth industries that are on the cutting edge of technology and are the driving force of economic growth. The new economy is commonly believed to have started in the late 1990s, as high tech tools, such as the Internet, and increasingly powerful computers, began penetrating the consumer and business marketplace.*[53]

The Information Technology and Innovation Foundation ranked states using 25 key indicators divided into five key areas that best capture what is *new* about the New Economy:

50 Yates, Gary. "Corporate Executive Survey Commentary: Skilled Labor Tops the List - Area Development." *Area Development*. *Area Development Online*, 2014. Web. 16 Mar. 2015

51 Schneider, Phil. "Workforce: The Location Factor Companies Must Get Right - Area Development." *Area Development*. Area Development Online, 2014. Web. 16 Mar. 2015.

52 "28th Annual Survey of Corporate Executives: Availability of Skilled Labor New Top Priority - Area Development." *Area Development*. Area Development Online, 1 Jan. 2014. Web. 16 Mar. 2015.

53 "New Economy Definition - Investopedia." *Investopedia*. Investopedia, LLC, 24 Nov. 2003. Web. 17 Mar. 2015.

Hot Jobs in Solar Energy

Maryland's solar industry employed 3,012 Marylanders in 2014 and added 670 solar jobs over the previous year. This nearly 29 percent increase placed Maryland 13th in the nation for the number of solar jobs. Solar employment grew more than forty times faster than the state employment growth rate of 0.7 percent during the same period.

"We're proud to be hiring and growing the solar industry here in Maryland," said Tony Clifford, CEO of Standard Solar. "Solar is creating quality Maryland jobs and saving Marylanders money on utility bills; our industry's an economic growth engine that's powering our state and region now – and in the future."

Source: "PRESS RELEASE: Maryland Solar Industry Jobs Grow 29%: Now Ranks 13th Nationally." *The Solar Foundation*. The Solar Foundation, 12 Feb. 2015. Web. 17 Mar. 2015.

1. Knowledge Jobs
2. Globalization
3. Economic Dynamism
4. The Digital Economy
5. Innovation Capacity

Maryland ranked fifth, and achieved its high ranking primarily due to high concentrations of knowledge workers, many employed with the federal government or related contractors in the suburbs of Washington, D.C. In the New Economy, innovative capacity (derived through universities, R&D investments, scientists and engineers, highly skilled workers, and entrepreneurial capabilities) is the driver of competitive success. States whose business development efforts only offer low costs without other business benefits are being undercut by cheaper producers abroad.

States that score highly on the State New Economy Index are best able to face the challenges brought on by the New Economy transformation. Successful strategies to compete in the New Economy will incentivize, among other things: having a workforce and jobs based on higher skills; strong global connections; dynamic firms, including strong, high growth startups, industries, and individuals embracing digital technologies; and strong capabilities in technological innovation.[54]

Despite Maryland's strengths in knowledge-based categories, CNBC's "Top States" ranked the state low overall - 35th out of 50 states. There is room for Maryland to improve in infrastructure and transportation, cost of living, business friendliness, and cost of doing business.

Workforce Assistance Programs

Workforce Shortage Student Assistant Grant Program

The Workforce Shortage Student Assistance Grant program is for students who plan on working in specific career/ occupational programs upon graduation. Eligible fields include: child care, human services, teaching, nursing, physical and occupational therapy, social work, and public service.[55]

54 Atkinson, Robert D., and Adams Nager. "The 2014 State New Economy Index - The Information Technology & Innovation Foundation." *www.itif.org*. The Information Technology & Innovation Foundation, 11 June 2014. Web. 17 Mar. 2015.

55 "Maryland Higher Education Commission." *Workforce Shortage Student Assistance Grant Program*. Maryland Higher Education Commission. Web. 16 Mar. 2015.

Business Friendliness Ranking

CNBC's annual ranking of states' business friendliness uses tangible public data to gauge each state's performance in ten broad categories. Maryland is one of the highest ranked in the innovation and education categories, but the cost of doing business is high. The number of possible points is shown in parenthesis.

- Cost of Doing Business (450)
- Economy (375)
- Infrastructure & Transportation (350)
- Workforce (300)
- Quality of Life (300)
- Technology & Innovation (300)
- Business Friendliness (200)
- Education (150)
- Cost of Living (50)
- Access to Capital (25)

Maryland's Rank

Category	Score	2014 Rank	2013 Rank
Education	*103*	*7*	*2*
Technology & Innovation	*240*	*7*	*9*
Workforce	158	20	20
Economy	229	24	33
Quality of Life	149	26	25
Access to Capital	12	27	9
Infrastructure & Transportation	140	39	46
Cost of Living	10	41	42
Business Friendliness	59	42	45
Cost of Doing Business	104	45	41
Overall	**1,204**	**35**	**40**

The whole report and methodology are available at:
http://www.cnbc.com/id/101723185
Scott Cohn, "America's Top States for Business 2014: Our Methodology," 3 June 2014, CNBC.com

EARN Maryland Workforce Training Initiative

EARN Maryland is a new state-funded, competitive workforce development grant program that is industry-led, regional in focus, and a proven strategy for helping businesses cultivate the skilled workforce they need to compete. It is flexible and innovative, designed to ensure that Maryland employers have the talent they need to compete and grow in an ever-changing 21st century economy.[56]

Mid-Atlantic Regional Collaborative (MARC) Green Jobs

MARC is a program funded by the U.S. Department of Labor that supports the strategic expansion of a regional green economy. The organization is a cross-regional coalition that serves Washington, D.C., Virginia, and Maryland. Their website offers job listings, employer services, education services, and labor market data specifically related to green jobs.

Maryland Division of Labor and Industry Apprenticeship and Training Program

Registered apprenticeships are voluntary, industry-driven programs sponsored by employers, employer associations, and jointly by management and labor. Apprenticeships combine supervised, structured, on-the-job training and related technical instruction to teach apprentices the skills necessary to succeed in a specific occupation. Maryland Apprenticeship and Training is part of the Department of Labor, Licensing and Regulation's Division of Labor and Industry and is responsible for registering and regulating the state approved apprenticeship programs in Maryland. The Program helps people find apprenticeships in over 200 fields.[57]

Maryland Jobs Now and Maryland One-Stop Career Centers

Maryland One Stop Career Centers provide a full range of free assistance to job seekers and businesses. The centers are part of Maryland Jobs Now, a network of high-performing, results-oriented workforce organizations investing in employment and training strategies, services, and initiatives, helping job seekers and businesses succeed. Staffed with qualified professionals who can assist with training referrals, career counseling, job listings, and other employment-related services, the Centers stand ready to serve Marylanders with high-quality services and programs.[58]

56 "Maryland's New Workforce Training Initiative, the EARN Maryland Program." *www.dllr.state.md.us*. Maryland Department of Labor, Licensing and Regulation. Web. 16 Mar. 2015.
57 "Department of Labor, Licensing and Regulation." *Maryland Apprenticeship and Training Program*. Maryland Department of Labor, Licensing and Regulation. Web. 16 Mar. 2015.

Education

There are 57 public and private colleges and universities in Maryland. There are over 150 private career schools, as well. The University System of Maryland (USM) includes 11 degree-granting campuses and two research and service components. Two four-year institutions, Morgan State University and St. Mary's College of Maryland, have independent governing boards and are not part of USM.

The Maryland Association of Community Colleges (MACC) is a membership organization that advocates for Maryland's 16 community colleges. The following MACC 2015 legislative goals are focused on helping community colleges recover from the budget cuts suffered during and following the recession[59]:

- MACC seeks to increase state aid to community colleges by ten percent for fiscal year 2016. MACC suggests that additional funds would offset the loss of tuition revenue resulting from enrollment decline, assist in keeping postsecondary education accessible, and contain rising student debt.
- Fully fund the 23 capital projects at twelve community colleges.
- Leverage private interest to match colleges' needs and goals.
- Goals to increase completions at Maryland's community colleges in the past five years have been exceeded. Licensure and certificate completions increased nearly 40 percent. Degree completions increased nearly one-third.
- MACC seeks to restore funding for the Statewide Program and the Health Manpower Shortage Grant. These programs permit Marylanders to attend community colleges outside their county of residence at reduced out-of-county tuition rates if the program addresses a workforce shortage need or if the student's local college does not offer the program.

58 "Department of Labor, Licensing and Regulation." *Maryland One Stop Career Centers*. Maryland Department of Labor, Licensing and Regulation. Web. 16 Mar. 2015.
59 "MACC 2015 Legislative Agenda." *www.mdacc.org*. Maryland Association of Community Colleges, 29 Oct. 2014. Web. 17 Mar. 2015.

Maryland ranks high in education compared to other states in the nation, and scores in the top 20 states for workforce. These factors help the state compete for business investment despite its high cost of living and high cost of doing business. Ongoing budget concerns and uncertainty in federal government will pose challenges to Maryland looking ahead, but quality career counseling can help residents weather the storm.

Are Career Development Interventions Effective? A collaborative paper prepared by the National Career Development Association and the Society for Vocational Psychology lists the following outcomes of career counseling:[60]

- Career counseling is effective in enhancing career decidedness, satisfaction with work, and confidence about decision-making skills.
- Students who take a career and life planning course are more likely to select a meaningful major and are less likely to drop out of college.
- Career counseling helps individuals negotiate career development tasks with greater ease and effectiveness, identify new and promising training opportunities, and prepare for changing labor market demands.
- Communities that invest in career counseling are well-positioned to help their citizens react nimbly and thoughtfully to changing job markets.
- Career development is optimally facilitated when services begin in elementary school and continue through adulthood. For unemployed adults, some of these same services are required in helping them gain employment in addition to assistance in job search, identification of transferable skills, and skill development.

In 2013, Maryland ranked first in K-12 education for the fifth year in a row in the Education Week Quality Counts report, but in 2014, Massachusetts took the first place and Maryland fell to eighth. Part of the shift was due to the School Finance ranking and the Standards, Assessments, and Accountability ranking; Maryland was eighth and 24th, respectively. Maryland is very successful in the Transitions and Alignment factor, which includes early-childhood education, college readiness, economy and workforce.[61]

60 Whiston, S. C, & Blustein, D. L., (2013). *The impact of career interventions: Preparing our citizens for the 21st century jobs*. (Research Report). National Career Development Association (www.ncda.org) and the Society for Vocational Psychology.
61 "Quality Counts - Maryland Highlights." *www.edweek.org*. Education Week, Jan. 2014. Web. 17 Mar. 2015.

Anne Arundel County

Following the Civil War, as the mid-Atlantic economy started to shift away from agriculture, Anne Arundel County became a center for recreation. As industrialization increased, suburban development drew Marylanders to Anne Arundel County. The County grew in population during World War II, partially due to war-related industries, with growth continuing through the 1960s.[62] People are still moving to Anne Arundel County; its population grew around one percent per year between 2000 and 2010, and about 1.5% per year between 2010 and 2015 according to projections.

Economy

Anne Arundel County is home to the Maryland capital city, Annapolis, and is supported by economic drivers such as the Baltimore-Washington International (BWI) Thurgood Marshall Airport, the defense industry, private sector employers, and telecommunications, retail, and distribution operations. Eight of the nation's top defense contractors employ workers in Anne Arundel County. Fort Meade is the nation's center for cyber operations; the U.S. Cyber Command agency headquarters is projected to be complete in late 2015. The Cyber Command will employ 4,900 military and civilian workers in the coming years.[63]

The Anne Arundel Economic Development Corporation (AAEDC) has identified six top industry sectors:

- Government (local, state, federal)
- Retail
- Professional, scientific & technical services
- Healthcare and social assistance
- Accommodation and food services
- Construction

There are an estimated 14,500 businesses in Anne Arundel County. Key private sector employers are Booz Allen Hamilton, CSC, Johns Hopkins HealthCare, Northrop Grumman, Rockwell Collins and Southwest Airlines. The new, growing defense/cyber contractor KeyW has over 680 employees.[64]

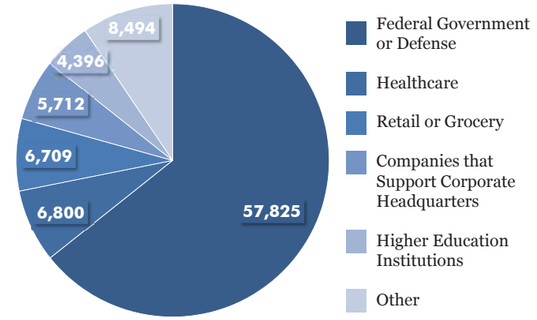
According to the International Trade Administration, Anne Arundel County is part of the Baltimore-Columbia-Towson market, which is the 46th largest foreign export market among over 400 such markets in the United States. Of the seven Maryland jurisdictions that make up this market, Anne Arundel tops the list with $1.7 billion in exports outside the U.S. in 2013. Top export sectors of this market include computer and electronic products, chemicals, transportation equipment, machinery and other manufactured commodities.[65]

62 "History of Anne Arundel County." *www.aacounty.org*. Anne Arundel County. Web. 17 Mar. 2015.
63 "Brief Economic Facts - Anne Arundel County, MD." *www.business.maryland.gov*. The World Trade Center Baltimore, 1 Jan. 2014. Web. 17 Mar. 2015

64 "Anne Arundel Key Industries." Key Business Sectors. Anne Arundel Economic Development Corporation. Web. 17 Mar. 2015; and ibid. NOTE: The sources provided different data on the numbers of businesses. Business.maryland.gov was used as the business data source.
65 "Brief Economic Facts - Anne Arundel County, MD;" and "Exports by Metropolitan Area." *MSA 2013 (Full Year) Exports*. Office of Trade and Economic Analysis (OTEA), Industry and Analysis, International Trade Administration, U.S. Department of Commerce. Web. 17 Mar. 2015

In 2014, there were approximately 205,000 workers employed in Anne Arundel County; 89,936 worked for the County's major employers.[66]

Figure 3.21 Categories of Major Employers in Anne Arundel County, 2014 and numbers employed[67]



The Washington, D.C. area, including Baltimore, has some of the most expensive housing costs in the nation (Figure 3.23). The estimated living wage marked in Figure 3.24 was calculated for a two-adult, two-child household. Anne Arundel County's households earned more money in 2013 than they did in inflation-adjusted 2000 dollars. Considered against the estimated living wage, however, a higher percentage of families were struggling financially in 2013 than in 2000.

AACC is home to the Center for the Study of Local Issues (CSLI). AACC students assisted CSLI in surveying 411 Anne Arundel County residents for the 2014 Survey. Overall, county residents viewed the local and state economy less favorably than they did in 2013.[68] This indicates fatigue with the slow recovery and matches the guarded tone of Maryland State Comptroller Peter Franchot's outlook for the 2015 state economy (see the Maryland Economy section of this report).

Many voters and county residents were preoccupied by taxes and the economy. When asked what was "the most important problem facing the residents of Anne Arundel County at the present time," 28 percent said taxes, followed by 18 percent saying the economy.[69]

66 ibid.
67 ibid.
68 "County Survey Finds Voters Focused on Taxes and the Economy." *Center for the Study of Local Issues*. Center for the Study of Local Issues, 22 Oct. 2014. Web. 18 Mar. 2015.
69 ibid.

Figure 3.22 Anne Arundel County Major Employers, 2015[70]

Anne Arundel County Top 10 Employers		
Government Employers	**Employees**	**Product or Service**
Ft. George G. Meade	53,733	Dept. of Defense
Anne Arundel County Public Schools	14,000	County public education K-12
State of Maryland	12,434	State government
BWI Thurgood Marshall Airport	9,717	Regional airport
Anne Arundel County Government	5,190	Local government
U.S. Naval Academy	2,340	Federal naval education facility
Anne Arundel Community College	1,849	Public two-year college
U.S. Postal Service	600	Incoming mail service
U.S. Coast Guard Yard & Tenant Command	598	U.S. Coast Guard
City of Annapolis Government	550	Government services
Private Employers	**Employees**	**Product or Service**
Northrop Grumman	7,725	HDQT, Electronic Systems Sector & marine division
Anne Arundel Health System	4,000	Hospital
Southwest Airlines	3,200	Airline
Maryland Live!Casino	3,000	Casino
Univ of MD Baltimore Washington Medical Center	2,901	Hospital
Booz Allen Hamilton	2,100	Information assurance & signals intelligence solutions
Allegis Group	1,500	HDQT, IT & engineering placement
CSC	1,229	Information technology services
Lockheed Martin	925	Engineering services
Rockwell Collins ARINC	750	Aircraft & avionic telecommunication systems
Source: AAEDC (updated September 2015)		

70 "AAEDC." Top Employers. Web. 23 Nov. 2015..

Figure 3.23 Annual Expenditures on Housing-Related Items, per Household, 2011-2012[71]

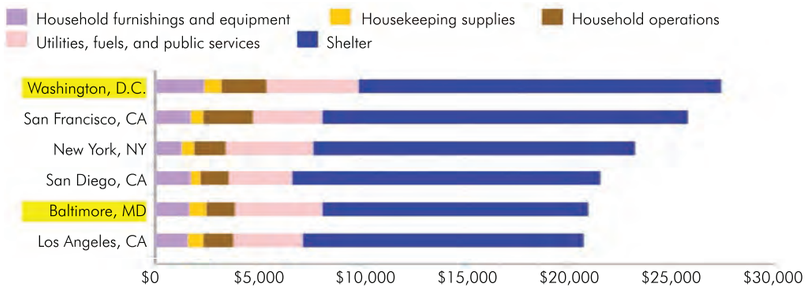
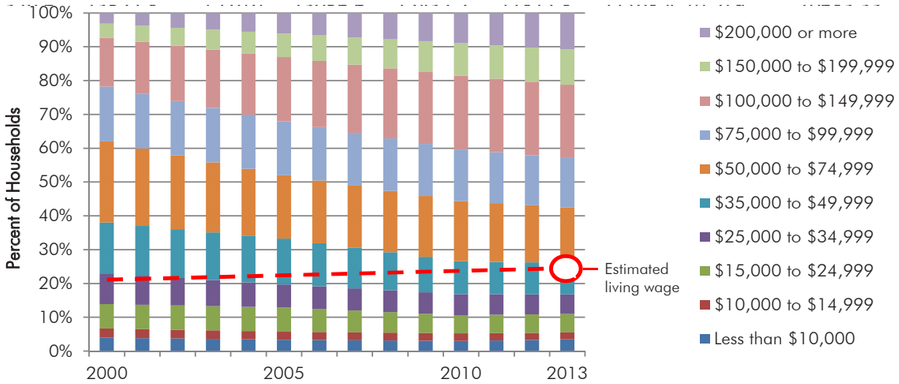


Figure 3.24 Household Incomes in Anne Arundel County[72]



Population and Demographics

The population in the Anne Arundel County region has grown at a rate that exceeds the rate of change in the rest of the nation. Between 1970 and 2010, the nation's population increased by 50.8 percent. During the same period, Anne Arundel County, Prince George's County, Howard, and Calvert Counties grew by 70.6 percent. In the future, the rate of population increase is likely to slow as birth rates decline, following the pattern of the state and the nation.

71 Scopelli, Demetrio M. "Housing: Before, During, and After the Great Recession." www.bls.gov. U.S. Bureau of Labor Statistics, Sept. 2014. Web. 17 Mar. 2015.
72 U.S. Census Bureau; Bureau of Labor Statistics CPI Inflation Calculator; and "Introduction to the Living Wage Calculator." *Living Wage Calculator - Anne Arundel* County. Dr. Amy K. Glasmeier and the Massachusetts Institute of Technology, 24 Mar. 2014. Web. 17 Mar. 2015.

Figure 3.26 shows that Anne Arundel County residents age 65 and older are projected to comprise 20.5 percent of the population in 2040, compared to 8.8 percent in 1990. Fewer births per capita results in a growing proportion of older residents. In addition, retirees could be relocating to Anne Arundel County, which further increases the proportion of older County residents.

Anne Arundel County is less diverse than Maryland. African Americans and Asians comprise a lower percentage of the population in the county than in Maryland. People of other races (including two or more races) comprise a lower percentage of total population in the county than in the state.

Figure 3.25 Anne Arundel Region Population Projections[73]

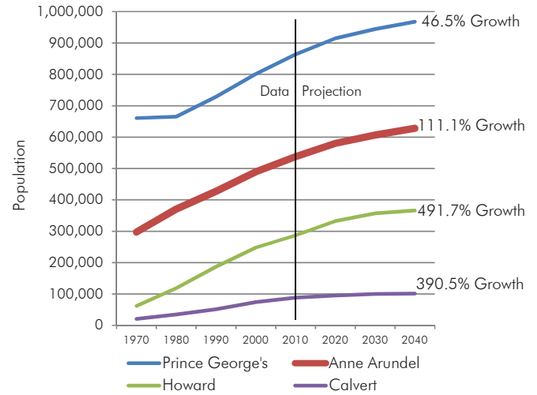


Figure 3.26 Anne Arundel Population by Age Groups, 1970-2040[74]

				Projection	
Age Group:	1990	2015	Percent Change (1990-2015)	2040	Percent Change (2015-2040)
Age 0-19	118,541	140,060	18.2%	150,880	7.7%
Age 20-44	185,826	184,410	-0.8%	200,690	8.8%
Age 45-64	85,482	157,360	84.1%	147,510	-6.3%
Age 65+	*37,390*	*77,780*	*108.0%*	*128,980*	*65.8%*
Population:	427,239	559,610	31.0%	628,060	12.2%

73 Maryland Department of Planning Data Center.
74 ibid.

Figure 3.27 U.S., MD, and Anne Arundel County Population by Race[75]

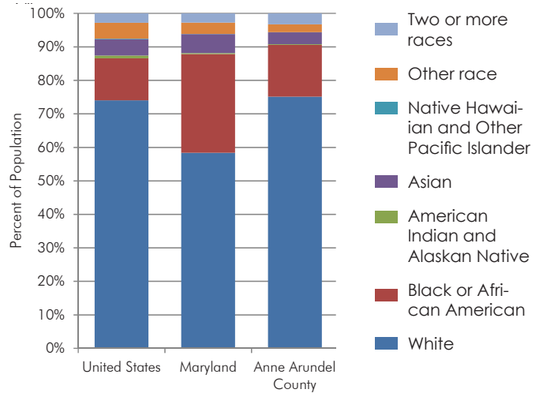
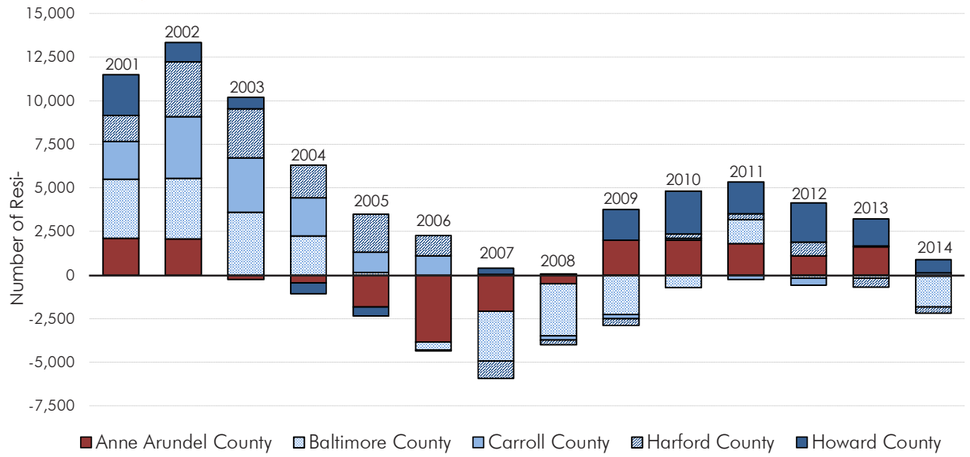


Figure 3.28 illustrates the effects of the recession on net domestic migration into and out of Anne Arundel County and the region.[76] When jobs are scarce, fewer people relocate. The height of the bars shows net moves of residents. If the bar is above zero, the region gained residents. Out-migration from Baltimore city fueled some of the suburban net gains in growth years. Foreign immigration is a key growth factor. During the 1980s, foreign immigration accounted for 17.5 percent of the region's net population gain. During the 1990s, immigration accounted for 37.1 percent of the net gain, and in the 2000s it accounted for well over 50 percent.[77]

75 U.S. Census Bureau Five-Year Estimate
76 Maryland Department of Planning, March 2015.
77 "Demographic Changes and Economic Development." Baltimore Metropolitan Council. Www.baltometro.org, 2010. Web. 27 May 2015.

Figure 3.28 Anne Arundel County and Region Domestic Migration



Workforce

Workers in Anne Arundel County have earned higher levels of education than workers in the rest of the state and the nation. Many jobs available are tied to the state and federal government, military, and defense industry. However, there are opportunities to expand industries such as data security to serve the private sector.

While tech and defense companies are deeply invested in the Anne Arundel County region, many workers are employed in occupations that are not directly STEM-related. Figure 3.30 shows that most workers are projected to perform office, sales, service, and management jobs in 2020. By industry, Figure 3.29 lists Trade, Transportation and Utilities; Professional and Business Services; and Leisure and Hospitality as the three largest industry sectors by employment.

The Bureau of Labor Statistics Standard Occupational Classifications (SOC) do not always adequately describe the jobs that are performed in the modern economy. Frequently workers' roles and skills overlap occupational classifications. Distinct cohorts within an occupation (such as solar panel installers within SOC 49, Installation Maintenance and Repair) are part of a wave of new jobs growing out of technology and innovation. The SOC has been slow to adapt due to federal budget cuts. For that reason, Anne Arundel Community College should be vigilant about keeping in touch with regional employers about workforce needs.

Figure 3.29 Anne Arundel County Industry Employment, 2013[78]

Industry	Estab-lishments	Annual Avg. Empl.	Emp. %	Avg. Wkly. Wage
Federal government	108	13,175	5.2	$1,573
State government	74	13,327	5.3	961
Local government	163	20,768	8.2	905
Private sector	14,527	204,696	81.2	1,009
Natural resources and mining	28	182	0.1	735
Construction	1,741	14,932	5.9	1,095
Manufacturing	342	12,235	4.9	2,019
Trade, transportation and utilities	3,163	52,856	21.0	819
Information	179	2,564	1.0	1,371
Financial activities	1,332	10,175	4.0	1,109
Professional and business services	3,294	40,810	16.2	1,498
Education and health services	1,468	29,256	11.6	921
Leisure and hospitality	1,429	32,508	12.9	376
Other services	1,549	9,178	3.6	753
Total	14,872	251,966	100.0	1,027

78 Maryland Department of Business and Economic Development, Brief Economic Facts

Figure 3.30 Anne Arundel County Occupation Growth Projections, 2010-2020[79]

SOC Code	Occupational Title	Employment 2010	Employment 2020	Change	Openings 2010-2020 Replacement	Openings 2010-2020 Total
43-0000	Office and Administrative Support Occupations	39,620	40,918	1,298	8,724	10,840
41-0000	Sales and Related Occupations	29,490	31,603	2,113	9,250	11,470
35-0000	Food Preparation and Serving Related Occupations	22,804	24,200	1,396	8,395	9,906
29-0000	Healthcare Practitioners and Technical Occupations	20,104	22,361	2,257	3,905	6,192
11-0000	Management Occupations	17,701	17,843	142	3,606	4,174
13-0000	Business and Financial Operations Occupations	15,126	16,658	1,532	2,996	4,621
53-0000	Transportation and Material Moving Occupations	15,538	16,530	992	3,877	4,884
25-0000	Education, Training, and Library Occupations	14,459	15,362	903	3,135	4,060
47-0000	Construction and Extraction Occupations	11,481	11,901	420	2,467	3,020
15-0000	Computer and Mathematical Occupations	11,110	11,839	729	1,893	2,703
49-0000	Installation, Maintenance, and Repair Occupations	9,872	10,380	508	2,271	2,878
37-0000	Building and Grounds Cleaning and Maintenance Occupations	9,118	9,390	272	1,637	2,000
39-0000	Personal Care and Service Occupations	7,776	8,601	825	1,869	2,732
31-0000	Healthcare Support Occupations	7,010	8,545	1,535	1,018	2,581
33-0000	Protective Service Occupations	7,425	8,399	974	1,775	2,750
51-0000	Production Occupations	7,192	7,166	-26	1,414	1,700
17-0000	Architecture and Engineering Occupations	6,934	6,193	-741	1,554	1,666
21-0000	Community and Social Services Occupations	4,177	4,756	579	917	1,499
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	3,469	3,491	22	885	1,033
23-0000	Legal Occupations	2,896	3,058	162	486	694
19-0000	Life, Physical, and Social Science Occupations	2,045	2,332	287	623	917
45-0000	Farming, Fishing, and Forestry Occupations	243	269	26	71	97
00-0000	**Total, All Occupations**	**265,590**	**281,795**	**16,205**	**62,768**	**82,417**

STEM-Specific Goals

Annually, the Department of Defense (DoD) spends $1.7 billion on research, operating over fifty labs across the nation. The DoD is actively involved in building the STEM workforce because it is essential to national security.[80] The DoD STEM Education and Outreach Strategic Plan aims to:

- Increase awareness about the importance of STEM
- Provide educational opportunities at the community level
- Engage populations underrepresented in STEM fields
- Increase diversity in STEM fields
- Increase the number of military personnel with STEM competencies

The DoD STEM initiative involves all branches of the military, and also offers opportunities for direct engagement with DoD labs and technical staff. The DoD funds undergraduate, graduate, and postdoctoral fellowships and scholarships.[81]

79 "Department of Labor, Licensing and Regulation." *Anne Arundel County WIA Occupational Projections, 2010-2020*. Maryland Department of Labor, Licensing and Regulation. Web. 18 Mar. 2015.
80 Arrington, Austin. "Building a STEM Workforce – Top Priority for National Security." *Science and Technology*. The Harlem Times. Web. 18 Mar. 2015
81 ibid.

Anne Arundel County's economy is closely tied to high-growth, high-tech industries and there are numerous opportunities for well qualified entry level workers. Many people move to Anne Arundel County to participate in the high-tech and defense workforce. Meanwhile, the County can develop STEM talent within its native population. Furthermore, by percentage more Anne Arundel County residents have participated in higher education than in the state or the nation. There is a strong cultural precedent for college attendance, but K-12 students whose families have not participated in postsecondary education might not know how to get started. Outreach and career counseling at the K-12 level is essential to get students, especially those in underrepresented demographics, interested in STEM careers.

Community Awareness

In 2012, the Community Foundation of Anne Arundel County published the fourth edition of "Poverty Amidst Plenty: Surviving the Economic Downturn." The needs assessment report identified a distinct need for support of transition aged youth, defined as the cohort of youth aged 16-24 who are experiencing social, economic, and developmental transitions. This group is typically not tracked after its members leave public schools, and those at risk are not aware of community services and resources.[82]

> *In almost every focus group participants commented that the 16-24 age group needs special attention in the school setting, especially for those who do not want to go to college. There should be "apprenticeships, job training, and certification programs."*
>
> *Many low income students do not have a plan for their life. Several participants noted that "planning" and "soft-skills" training should begin in middle school, before disengaged students drop out. The "poor mental models" for success prevalent in public and subsidized housing extend to their narrower view of the larger community around them.*
>
> *As one participant noted, there are few opportunities for low income children to leave their neighborhoods and experience other settings because "kids in public housing never cross Forest Drive." On the same theme, a subsidized housing resident told the story of a young, Annapolis low income resident who, having been told about the Anne Arundel Community College in Arnold, asked the question "Where's Arnold?"*[83]

Transition-aged youth lack career planning advice and financial literacy, two keys to success in the recovering economy. The Poverty Amidst Plenty report highlights many successes Anne Arundel County has achieved in addressing underserved populations.

- Anne Arundel Community College was considered "excellent" among focus group participants; it is well respected for its efforts to teach students with challenges.
- The non-profit community is active in the schools. The Eastport Girls Club and the Restoration Community Development Corporation work with students on project completion and educational success.
- The Anne Arundel County Workforce Development Corporation (AAWDC) has a number of targeted programs to help youth move up academically and occupationally. Related to jobs, there are summer youth programs, as well as job fairs and linkages to business advisory boards.[84]

The AAWDC supports the local workforce through several distinct programs to meet the workforce needs of the county[85]:

- Workforce Investment Act programs (WIA) funding provides workforce service options to job seekers and businesses at Career Centers in Glen Burnie and Arnold, and also at the BWI Marshall Airport, Fort Meade, Pasadena Freetown Village, and at the Arundel Mills Mall.
- Youth Programs including drop out prevention, job readiness programs, GED preparation, career services, and summer work experience coordination.
- JobsWork!Arundel provides job readiness services to public assistance recipients to help them secure full time unsubsidized employment.
- Re-entry Program to help inmates at Ordnance Road Correctional Facility find employment after release.
- Older Worker Programs to help older workers (55+) return to work with computer training and part-time work experience opportunities.
- Veterans Program staffed by former military members who help veterans find employment and/or determine a career path.
- Business Services helps businesses with job postings, recruitment assistance, job fairs, and financial assistance for incumbent worker training.
- Cybersecurity, Green Jobs, and Federal Application and Security Clearance training programs.

Input from Community Leaders

On May 4, 2015 the consultants met with community leaders from across Anne Arundel County to learn about strengths, challenges, needs, and opportunities in the North, South, and West County regions and in Annapolis.

North County

The North County neighborhoods have a conventional business environment that includes manufacturing, distribution, and entrepreneurship. Residents of North County face economic challenges and transportation challenges, and might not be aware of the College's offerings. North County has more residents per square mile than other parts of Anne Arundel County.

South County

South County is the agricultural zone of Anne Arundel County. In nearby Prince George's County, the Beltsville Agricultural Research Center is the USDA's largest scientific installation. The Southern Maryland Agricultural Development Commission is planning a Southern Maryland Ag Business Park and Food Innovation Center (location to be determined), which will be a centralized, multipurpose facility that would handle food processing and distribution, new farmer incubation, meat and seafood processing, and warehouse space. The Center will enable small farms to aggregate their products and reach larger wholesale markets.

West County

When Base Realignment and Closure (BRAC) commenced in 2005, West County experienced tremendous growth. Many families relocated to the West County area as military staff and operations were consolidated to Fort Meade. MarylandLive! is a gambling and entertainment destination in Hanover, MD, in the West County. Retail, residential, and tourism development are strong in this part of Anne Arundel County.

Annapolis

Annapolis is the county seat of Anne Arundel County and the capital of Maryland. Its historical sites, the U.S. Naval Academy, and attractive shopping and dining districts make Annapolis a tourist destination. A 2013 report released by the travel research company Tourism Economics shows that 5.6 million visitors to Annapolis and Anne Arundel County led to $3.2 billion in new revenues in 2011, which accounted for 22.2% of the state's total tourism industry sales.

AACC Strengths and Opportunities

Community leaders report that:

- The College is well-recognized as a valuable resource throughout Anne Arundel County.
- The AACC Parenting Center is an asset that could be expanded to offsite locations.
- There is economic opportunity in commercializing and privatizing industries that have traditionally served only the federal government. An example is iJet, an Annapolis-based global risk management company that provides data security and intelligence services.
- Storm water, river, and bay restoration and infrastructure projects are expected to increase. Employees in this field are in demand.
- Demand for agricultural products could support a rural entrepreneurship program.
- West County's location and businesses could support new programs in logistics and hospitality.
- A proposed new conference center at MarylandLive! could help ease the College's need for a large assembly space.
- The Glen Burnie Town Center location could serve as an economic engine in the North County region but it needs a focused mission.

Perceived Challenges and Needs

Community leaders report that:

- There is not much knowledge of the College and its offerings in some North County neighborhoods where residents are place-bound.
- County-wide, there is a mismatch between the jobs available and the skills of applicants.

82 Brown, Dr. Pamela M., Dr. Karen Pell, Allison Holstrom, and Julie Vanskiver. "Poverty Amidst Plenty IV: Surviving the Economic Downturn, Fourth Edition, 2012." *2012 AA County Needs Assessment*. Community Foundation of Anne Arundel County, 1 Jan. 2012. Web. 18 Mar. 2015.

83 ibid., p. 25.
84 ibid, pp. 25-26.
85 "AAWDC - Corporate Overview." Anne Arundel County Workforce Development Corporation. Web. 18 Mar. 2015.

- Different levels of mobile device training and experience lead to misunderstandings in the multi-generational workplace. Different generations use technology in different ways.
- Internship programs are the best way to offer on-the-job training, but the programs offered are not as developed as they could be.
- In-demand job skills are not taught by any one academic program. Applicants need to learn a wide array of skills to meet the interdisciplinary needs of today's job market. Soft skills are still a key component of career readiness.
- Daycare is needed at more diverse locations. It is currently only offered through the Child Development Center at the Arnold campus.
- Outreach is needed to attract college-age first generation students whose parents might not understand the value of community college education.
- North County needs programs focused on economic development.
- West County needs programs and resources to respond to continued population growth.

Education

By percentage, more Anne Arundel County residents have participated in higher education than in the state or the nation (Figure 3.31). Of the Anne Arundel County population age 25 and older, 136,836 (37%) residents were estimated to have a Bachelor's degree or higher in 2013. Anne Arundel County residents, along with Marylanders, have completed a higher percentage of science and engineering degrees than the nation as a whole (Figure 3.32).

In Anne Arundel County, St. Johns College, the United States Naval Academy, and Anne Arundel Community College offer higher education. In addition, the private career and technical college ITT operates a campus in Hanover. Nearby, in the Washington, D.C. region, there are countless offerings for two-year, four-year, and graduate level postsecondary education. Scarcity is not a challenge, but geography may pose difficulty to students who are place-bound due to factors such as work, family obligations, or lack of transportation.

Figure 3.31 U.S., Maryland, and Anne Arundel County Population by Educational Attainment[86]

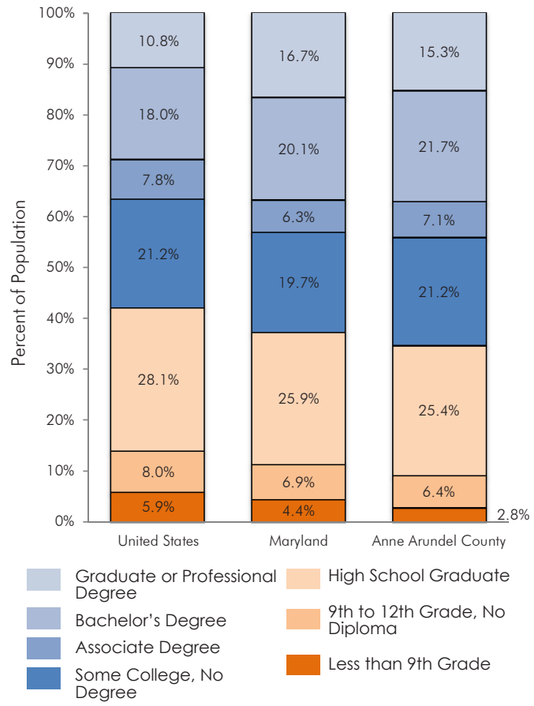
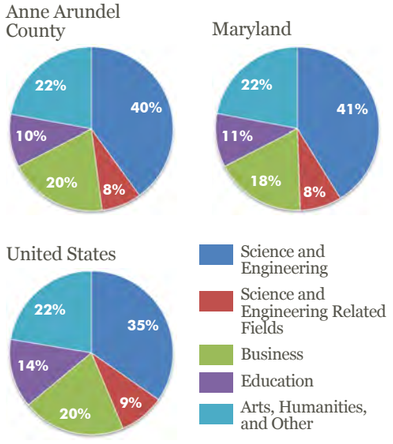


Figure 3.32 Field of First Bachelor's Degree
Source: U.S. Census 2013 Five-year Estimate



Affordability and value are key factors in college choice.

86 U.S. Census 2013 Five-Year Estimate

Figure 3.33 shows Maryland community college tuitions and aid received during the 2012-2013 school year.[87] AACC tuition was more expensive in 2013 than the average tuition at other Maryland community colleges. Students at many other Maryland community colleges received a higher percentage of grant aid. Figure 3.33 shows AACC grouped with its nearby competitors with all other Maryland community colleges listed in the table for comparison.

Part of what constitutes "value" in college education is return on investment. Young adults with only a high school diploma earned 38 percent less than their college educated peers. In 1965, high school graduates earned 19 percent less. Known as the earnings gap, the difference in income between workers based on educational attainment is increasing. A study by the Pew Research Center released in February, 2014 found that ninety percent of college graduates felt their bachelor's degrees had or will "pay off." Even among graduates who borrowed money, about 86 percent said their degrees were worth the cost. A college degree today typically yields more inflation-adjusted earnings than in previous decades. Young adults with just high-school diplomas in 2013 (the year of data collection) were much more likely to live in poverty, at 22 percent compared to 7 percent for their counterparts in 1979.[88] The study also found that:

- Young employed college graduates are more likely than those with just a high school diploma or less to say their job is a career or stepping stone to a career. In contrast, those with just a high school diploma or less were three times more likely than college graduates to say their work is "just a job" to help them get by (42 percent vs. 14 percent).
- The field of study in college matters. Those who studied science or engineering were most likely to say that their current job is "very closely" related to their college or graduate field of study, at 60 percent, compared to 43 percent for both liberal arts and business majors.
- About three-fourths of all college graduates say they regretted not doing more during school to better prepare themselves to find a job, such as getting more work experience, studying harder or looking for work sooner.[89]

The earnings results of postsecondary education hold true for graduates of two year colleges, also. According to Georgetown University's Center on Education and the Workforce, nearly thirty percent of Americans with associate degrees make more than those with bachelor's degrees. By mid-career, many of those bachelor's degree earners catch up with their associate degree earning peers. The increase in wages for graduates of associate degree programs is the result of high demand for skilled labor in occupations such as lab technician, early childhood teachers, computer engineers. drafters, radiation therapists, paralegals, and machinists.[90]

The University System of Maryland has a program called Artsys (www.artsys.usmd.edu) which helps students find articulation agreements in their fields of study. Students from AACC can attend the following colleges with a clear understanding of how their already-earned credits will apply to a four-year degree:

- Bowie State University
- Capitol College
- Coppin State University
- Frostburg State University
- Goucher College
- Hood College
- McDaniel College
- Mount S. Mary's University and Seminary
- Morgan State University
- Notre Dame of Maryland University
- Salisbury University
- St. Mary's College of Maryland
- Stevenson University
- Towson University
- University of Baltimore
- University of Maryland
- Baltimore
- Baltimore County
- College Park
- Eastern Shore

87 2012-2013 data were used because that is the most recent year to be included in all the selected categories.
88 Yen, Hope. "New Study Shows the Value of a College Education - The Boston Globe." *BostonGlobe.com*. Boston Globe Media Partners, LLC, 11 Feb. 2014. Web. 19 Mar. 2015

89 ibid.
90 Marcus, John. "Community College Grads Out-earn Bachelor's Degree Holders." *CNNMoney*. Cable News Network, 26 Feb. 2013. Web. 19 Mar. 2015.

- University College
- Washington College

Artsys is a valuable tool with which students can search by AACC Course ID to learn which equivalent courses are offered at partner colleges and universities. Students can learn which four-year programs are recommended to complement their associate degree, and compare the four-year programs across all participating colleges and universities.

Figure 3.33 Key Statistics for Maryland Two-Year Public Colleges, 2012-2013[91]

		Full-time enrollment	Published in-district tuition	Total price of attendance (1)	Percent of undergrads receiving grant aid (2)	Average amount of grant aid received	Percent of price covered by average grant amount
2-year public colleges in the Anne Arundel Region	Anne Arundel Community College	5,098	$2,910	$19,783	35%	$3,728	18.8%
	Baltimore City Community College	1,803	$2,112	$14,095	84%	$4,956	35.2%
	Howard Community College	3,705	$3,720	$20,553	51%	$3,718	18.1%
	Prince George's Community College	4,059	$2,352	$15,710	58%	$4,464	28.4%
	The Community College of Baltimore County	8,373	$2,756	$15,926	65%	$4,443	27.9%
	Averages		$2,770	$17,213	59%	$4,262	24.8%
Other Maryland 2-year public colleges	Allegany College of Maryland	1,958	$3,150	$16,780	81%	$4,866	29.0%
	Carroll Community College	1,614	$2,568	$12,530	34%	$3,545	28.3%
	Cecil College	886	$2,850	$13,102	58%	$3,721	28.4%
	Chesapeake College	920	$2,496	$15,084	61%	$3,888	25.8%
	College of Southern Maryland	3,405	$2,664	$18,260	36%	$4,491	24.6%
	Frederick Community College	2,179	$2,544	$15,197	42%	$3,670	24.1%
	Garrett College	687	$2,520	$15,538	94%	$4,815	31.0%
	Hagerstown Community College	1,382	$2,544	$16,376	61%	$3,370	20.6%
	Harford Community College	2,830	$2,088	$16,028	47%	$3,738	23.3%
	Montgomery College	9,888	$3,360	$19,980	48%	$4,668	23.4%
	Wor-Wic Community College	1,190	$2,238	$16,886	60%	$4,294	25.4%
	Averages		**$2,638**	**$15,978**	**57%**	**$4,097**	**25.8%**
	Maryland Community College System Averages		**$2,680**	**$16,364**	**57%**	**$4,148**	**25.8%**

(1) Cost of attendance for full-time, first-time degree/certificate seeking in-district undergraduate students living off campus (not with family) for academic year 2013-14. It includes in-district tuition and fees, books and supplies, off campus (not with family) room and board, and other off campus (not with family) expenses.

(2) Percent of full-time first-time undergraduates receiving federal state local or institutional grant aid

91 IPEDS Data Center

Maryland Community College For-Credit Academic Programs

The MACC data books provide information about the numbers of for-credit degrees and certificates awarded in major program categories system wide. The categories are:

Certificate	Career Programs	Transfer Programs
Business Technology	Business Technology	Arts and Sciences
Information Technology	Information Technology	Engineering and Information Technology
Health Service	Health Service	General Studies
Engineering and Science	Public Service	Teacher Education
Public Service		Business Administration

Between 2011 and 2013, several trends emerged:

- A distinct trend of robust growth in Engineering and Science was clear. Certificates and transfer programs grew (26.3% and 27.1%), but career programs stayed basically level (0.3% decline).
- Information Technology was the leader in all award categories. Certificate awards increased over 50%.
- Business Technology suffered losses. It declined 11.4% in certificate awards, had little growth in career programs (3.0%), and had 10.9% growth in transfer programs (the least growth of any transfer category except Teacher Education, which lost one percent).

In 2013, Maryland community colleges awarded:

- 8,961 Transfer Degrees, with nearly 5,000 awarded in General Studies.
- 5,288 Career Degrees, with Health Service as the leading category with 2,697 degrees awarded.
- 3,337 Certificates, with Business Technology and Health Service as the leading categories with about 1,050 certificates each.

The number of programs AACC offers somewhat reflects the leading categories of system-wide awards, though fewer engineering programs are offered at AACC than at three of its nearby peers. Figure 3.34 shows the top ten categories in which programs are offered at four Anne Arundel region campuses. Cells without color indicate a program that is not offered at another of the listed colleges.

Maryland Community College Facilities

In terms of space, some academic programs require more square footage per student than others. At the same time, all schools require some of the same sized facilities regardless of their enrollment. For example, a gymnasium is generally the same size whether the college has 1,000 FTE or 5,000 FTE. For that reason, small colleges often appear to be less efficient users of space. Square footage per FTE is one way a college can gauge when it is time to consider expansion or reallocation of space.

AACC has one of the lowest NASF/FTE in the Maryland Community College system (Figure 3.35). This means that AACC is using its space appropriately compared to the College's enrollment. Campuses with particularly high NASF/FTE have lower enrollment or may have recently built new space. New buildings do not reach peak space efficiency during their first years of occupancy because the are sized to accommodate enrollment growth.

System wide, assignable square footage on campuses is recorded in nine categories: classroom, laboratory, office, study, special use, general use, support, health care, and unclassified. In 2014, the 7,455,204 NASF in the Maryland community college system was allocated as shown in Figure 3.36.

Enrollment

In FY 2013, 83 percent of AACC's students came from Anne Arundel County, according to AACC's Fast Facts 2013-2014. Seventeen percent were from outside the county.

Figure 3.37 suggests that AACC students from the central, western, northeastern, and southern parts of the county are focused on career degrees and transfer degrees. Students in North County and near Annapolis appear to be focused on continuing education and skills development.

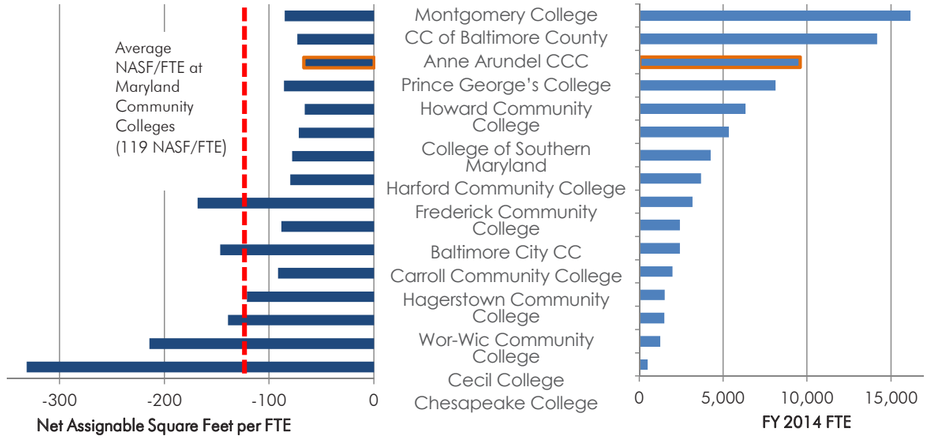
In the next decade, high school classes across the nation are expected to grow very slowly, if at all. However, in Anne Arundel county class sizes are expected to grow 11.7% (Figure 3.38). AACC experienced enrollment decline post-recession, which is typical at community colleges nationwide. Fortunately, the region's steady economy and active business development efforts will help the College's offerings to be highly valued and in-demand.

Figure 3.34 Number of Degree and Certificate Programs Offered in Key Categories[92]

Anne Arundel Community College		Community College of Baltimore County	
CIP Major Category Name	Number Offered	CIP Major Category Name	Number Offered
Health Professions	25	Health Professions	30
Business, Management, Marketing	23	Business, Management, Marketing	27
Computer and Information Sciences	16	Engineering Technologies	23
Education	9	Computer and Information Sciences	22
Homeland Security, Law Enforcement, Firefighting	9	Mechanic and Auto Repair	9
Engineering Technologies	7	Education	8
Liberal Arts and Sciences, Humanities	6	Visual and Performing Arts	8
Visual and Performing Arts	6	Parks, Recreation and Leisure	7
Communications Technologies	5	Homeland Security, Law Enforcement, Firefighting	7
Engineering	4	Construction Trades	7

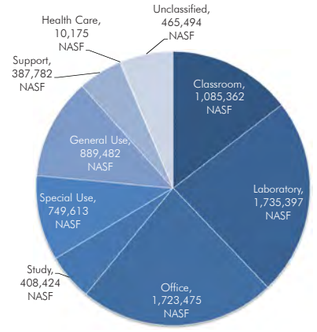
Prince George's Community College		Howard Community College	
CIP Major Category Name	Number Offered	CIP Major Category Name	Number Offered
Business, Management, Marketing	21	Health Professions	14
Health Professions	14	Engineering Technologies	12
Computer and Information Sciences	10	Business, Management, Marketing	11
Education	9	Education	8
Engineering Technologies	6	Computer and Information Sciences	4
Homeland Security, Law Enforcement, Firefighting	6	Engineering	3
Visual and Performing Arts	6	Liberal Arts and Sciences, Humanities	3
Construction Trades	5	Personal and Culinary Services	2
Family and Consumer Sciences	4	Family and Consumer Sciences	2
Liberal Arts and Sciences, Humanities	3	Parks, Recreation and Leisure	2

Figure 3.35 Net Assignable Square Feet per FTE[93]

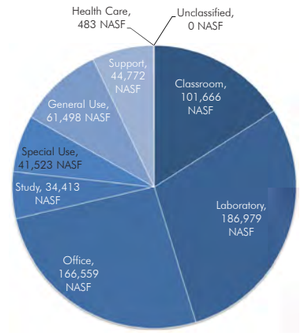


92 University System of Maryland "Maryland Higher Education Commission." Search Programs by School. Web. 20 Mar. 2015.
93 Maryland Association of Community Colleges 2015 Data Book

Figure 3.36 NASF per Space Use Category[94]

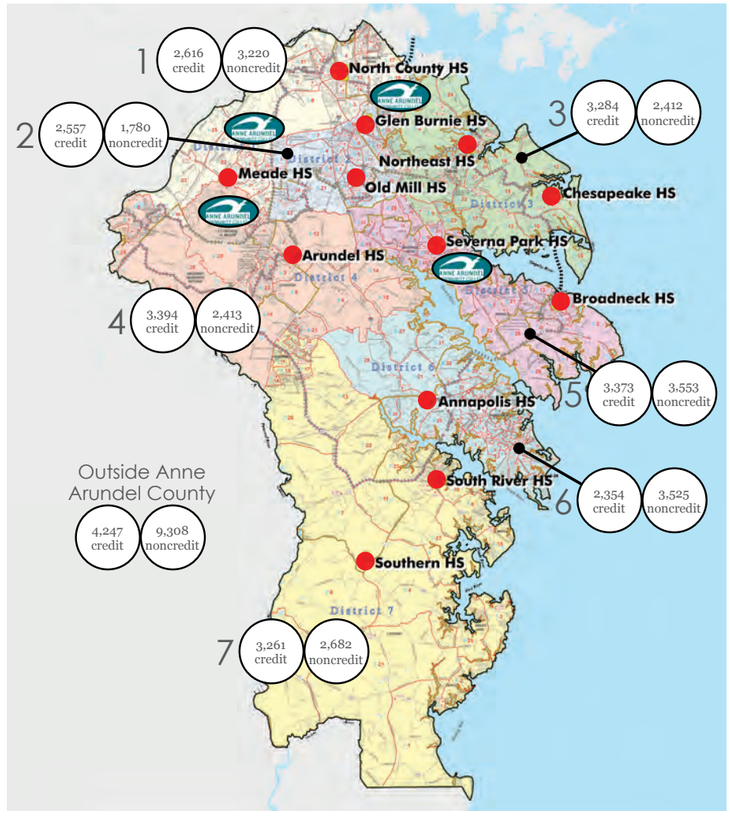


Maryland Community College System



Anne Arundel Community College

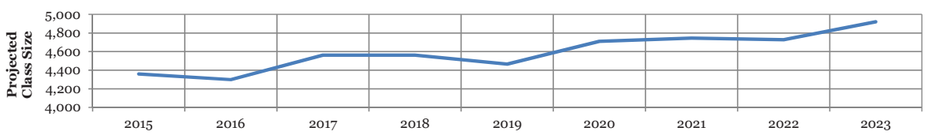
Figure 3.37 FY 2013 Headcount by County Council District[95]



94 ibid.
95 AACC Fast Facts 2013-2014

Figure 3.38 Anne Arundel County Projected High School Enrollment and Graduating Class Sizes[96]

	2015	2016	2017	2018	2019	2020	2021	2022	2023
(K-5)	37,770	38,170	38,240	37,830	37,470	37,270	37,250	37,350	37,540
(6-8)	17,800	18,000	18,320	18,960	19,620	19,940	19,760	19,500	19,220
(9-11)	17,520	17,970	18,380	18,720	19,050	19,360	20,070	20,730	21,040
Grade 12	4,980	4,910	5,210	5,210	5,100	5,380	5,420	5,400	5,620
2014 Graduation Rate	87.56%	87.56%	87.56%	87.56%	87.56%	87.56%	87.56%	87.56%	87.56%
Estimated Graduating Class	**4,360**	**4,299**	**4,562**	**4,562**	**4,466**	**4,711**	**4,746**	**4,728**	**4,921**



AACC provided to the consultant high school enrollment projections through 2021. The data included historic high school seniors from 1998 to 2014 and projected high school seniors from 2015 to 2023. Looking ahead to the mid-term of this master plan (2020), all county public high schools are expected to grow between 2014 and 2020.

- Glen Burnie is expected to grow most by numbers, adding a projected 265 seniors. Glen Burnie is also the high school expected to grow the most by percentage - 13.8 percent.
- Old Mill and Meade are also expected to grow by more than 250 seniors and by about 12 percent each.
- Most high schools experienced a spike and then drop in enrollment in the mid- to late 2000s. Exceptions are:
  - Broadneck, Severna Park, and South River, which saw steady enrollment increases.
  - Meade, which saw a great jump in enrollment starting in 2008. Gains from this jump are expected to be maintained through 2020.
  - Southern, which experienced a marked drop in enrollment starting in 2003.

96 "Public School Enrollment Projection 2014-2023." *Public School Enrollment Projection 2014-2023*. Maryland Department of Planning, State Data Center. Web. 20 Mar. 2015. The consultant combined MD Department of Planning data with graduation rates to estimate graduating class sizes.

Chapter 4
Space Assessment

Academic Program Review and Space Needs Assessment

Anne Arundel Community College (AACC) plays a critical role in the education of the community. In 2014, the College awarded more degrees and certificates than any other single campus community college in Maryland. In fall 2014, AACC attracted almost 53 percent of all county residents enrolled as first-time, full-time freshmen in any Maryland college or university. Forty-six percent of students were enrolled in transfer degree programs. The fastest growing programs included Information Assurance and Cybersecurity, Physician Assistant Professional, and Visual Arts.

The College's academic plan supports the College's mission and the specific needs of AACC's service community, and it reflects the College's Strategic Plan, Student Success 2020. Programs are reviewed regularly to ensure they align with the region's workforce development goals, as well provide a pathway for County residents to further their educational goals via transfer programs. Therefore, the purpose of the consultant's review of AACC's academic program plan was to determine its potential impact on campus facilities, now and in the future.

Implications of the Environmental Scan on Academic Programs and Physical Facilities

External factors have a significant impact on college programs, especially at community colleges. A comprehensive Environmental Scan was conducted to review and assess current and projected trends that will affect AACC in the near and long-term. The Scan's thematic sections include Economy, Population and Demographics, Workforce Outlook, Education, and Funding.

Economy

The Maryland budget will continue to be tight. AACC will need to optimize use of its resources through improved utilization of existing space and the creation of flexible space in the future.

Population and Demographics

As the population ages, Continuing Education and Workforce Development programs that focus on seniors and individuals seeking second careers will help AACC retain and grow enrollment.

Workforce Outlook

Healthcare industries are expected to contribute substantially to job growth in the future. The construction of the new Health Science and Biology Building and the expansion of programs in health care areas will tap into this growing education market.

AACC plans to strengthen programs that match emerging workforce needs in science, technology, engineering, and math related occupations. The renovation and expansion of the Dragun Science building and the consolidation of the Math program in quality space will support the College's efforts in this area. Technology and Engineering programs are already well supported by state-of-the-art facilities in the CALT, CADE and Careers buildings.

Education

Occupations that typically provide a living wage that will be in high demand in Maryland through 2024 include:

- STEM professions, such as engineering and computer-related occupations
- Healthcare Practitioners
- K-12 Teachers

AACC, through the construction of the Health Science and Biology Building, the renovation and expansion of the Dragun Science Building, the consolidation and modernization of Math facilities, and the renovation and expansion of the Child Development Center, will continue to prepare students for success in these fields.

Funding

Federal and State funding will likely continue to fall while financial and space-related demands will continue to climb at community colleges, even with only modest enrollment gains. Efficiencies must be found throughout the College and alternative revenue sources, such as public/private partnerships should be explored in the future.

Current Academic Programs

In Fall 2014, AACC offered 250 programs to advance workforce development, career readiness, skills improvement, and transfer to four-year institutions. These programs led to one of the following academic awards:

- The Associate of Arts (A.A.) transfer degree for liberal arts and fine arts.
- The Associate of Science (A.S.) transfer degree for science or technology.
- The Associate of Arts in Teaching (A.A.T.) transfer degree for baccalaureate teaching degrees and teacher certification.
- The Associate of Science in Engineering (A.S.E.) transfer degree for baccalaureate engineering degrees.
- Associate of Applied Science (A.A.S.) degrees for immediate employment.
- Certificates, which offer credentials for acquired knowledge, skills and abilities focused in specific discipline areas.
- Professional certificates, which are intended to help professionals build on current skills in a particular field. These certificate programs have an entry requirement of a completed bachelor's degree.
- Letters of Recognition, which are awarded to students who complete fewer than twelve credits in courses focused on acquisition of specific skill sets. Letters of Recognition are often part of certificate programs.

Transfer Studies AA enrolled nearly 19 percent of College FTE in Fall 2014. The LPN to RN Upward Mobility AA was the next highest enrolled degree program; its Fall 2014 FTE accounted for nearly six percent of College FTE. The five top occupational programs were Business Management AAS, Information Assurance and Cybersecurity AAS, Law Enforcement and Criminal Justice AAS, and Human Services AAS.

AACC tracks local, regional, and national trends to ensure course offerings reflect occupational trends. AACC's academic leadership regularly reviews the College's course array and makes modifications, as necessary, to align with workforce needs. The listings below are based on Fall 2014 enrollment data provided by the College. Since that time, some programs have been consolidated. Degree specialization option programs are being phased-out. This was not reflected in the Fall 2014 data from which this report was generated.

Largest Programs

Figure 4.1

In Fall 2014, fifty percent of AACC FTE were enrolled in nine programs:

Program	Award Level	Fall 2014 FTE	Percent of total FTE
Transfer Studies	AA	1,599	18.6%
Non Degree	ND	608	7.1%
LPN to RN Upward Mobility Option	AA	501	5.8%
Business Administration Transfer	AS	375	4.4%
Undeclared - Transfer	AA	316	3.7%
Business Management	AAS	307	3.6%
Information Assurance and Cybersecurity	AAS	239	2.8%
Engineering Transfer	AS	228	2.7%
Nursing (RN)	AS	190	2.2%

Fastest Growing Programs between Fall 2012 and Fall 2014

Figure 4.2

Program	Award Level	Fall 2012 FTE	Fall 2014 FTE	FTE Change
Information Assurance and Cybersecurity	AAS	151	239	89
Information Assurance and Cybersecurity	CRT	41	101	60
Physician Assistant Professional	AA	New	57	57
Undeclared - Career	AA	102	152	50
Cyber Forensics Option	AAS	13	57	44
Baking	AAS	New	38	38
Visual Arts option (AA. Art.Visual)	AA	7	37	30
Visual Design option	AA	New	22	22
Creative Writing option	AA	5	26	20
Nursing (RN)	AS	173	190	18

Smallest Programs

In Fall 2014, 122 programs enrolled fewer than 10 FTE. Out of this group, the 10 programs with the fewest FTE are shown in Figure 4.3. Thirty active programs had no students enrolled in Fall 2014.

Figure 4.3

Program	Award Level	Fall 2014 FTE
Web Technologies	AAS	0.1
Web Technologies	CRT	0.2
Speech and Language option	CRT	0.2
Intermediate to Paramedic Option	AA	0.2
Baking and Pastry Cooking Skills	CRT	0.2
C++ Language Concentration	CRT	0.3
Electromechanical option	CRT	0.3
Microsoft Office Certifications option	CRT	0.3
Early Childhood Development: Child Care 1	CRT	0.3
Health Care Delivery Systems	CRT	0.4

Fastest Declining Programs

Due to AACC's ongoing consolidation of academic award programs, a tabulation of programs with declining enrollment would reflect programs performance inaccurately. Between Fall 2012 and Fall 2014, FTE enrollment at AACC decreased by 13.6 percent, which is typical of many community colleges during this time period. Enrollment as Undeclared Career and Undeclared Certificate students increased by percentage, yet all other schools at AACC saw declines in FTE.

- The schools of Business and Law, Health Sciences, Liberal Arts, and Science and Technology (Technology) lost fewer FTE by percentage than the College average.
- The schools of Continuing Education and Workforce Development and Science and Technology (Science) lost more FTE by percentage than the College average.

Build on AACC's Strengths

The College has proven itself to be responsive to regional business and industry workforce needs and has positioned itself to be the County's go-to resource for health professions training, cybersecurity training, liberal arts transfer degrees, and STEM career and transfer degrees. The College's arts and humanities programs go hand-in-hand with STEM offerings, making AACC a valuable community Science, Technology, Engineering, Arts, and Math (STEAM) resource.

AACC has a reputation as an outstanding educational institution that is a good steward of County resources. Targeted expansion of its already-strong academic programs and selective addition of programs that complement established curricula will further enhance the College's image and its ability to serve County residents.

New Programs and Program Expansion

During campus focus groups and community meetings, many participants made suggestions regarding programs they feel the College should offer or expand. Suggested programs included:

- Court Reporting/Expanded Paralegal offerings
- Dental Assisting (program expansion)
- Veterinary Technician
- Respiratory Therapy Assistant
- Dental Hygiene Assistant
- Education (program expansion)
- Building Trades
- Logistics

The consultants examined the past performance of similar programs at community colleges in the region and applied information gleaned from the Environmental Scan and discussions with AACC leadership to develop recommendations for new academic programs. Some of these programs, which are described on the following pages, could be initiated in the near future while others should be considered as long term possibilities.

Program Recommendations

The following job descriptions and employment outlooks were sourced from the U.S. Bureau of Labor Statistics Occupational Outlook Handbook and CareerOneStop (www.careerinfonet.org). Projections of employment growth or decline are from the Bureau of Labor Statistics and represent the decade between 2012 and 2022.

Court Reporting/Expanded Paralegal Offerings

Court reporters use verbatim methods to capture, store, retrieve, and transcribe pretrial and trial proceedings. A court reporting certificate would adequately prepare students for entry level positions.

Paralegals assist attorneys by investigating facts, preparing legal documents, and researching legal precedent. A paralegal certificate can prepare students for entry level positions. In Maryland, paralegal employment is projected to grow ten percent, or 160 jobs.

AACC's Paralegal Certificate program has grown consistently since 2008 and maintained enrollment well after the recession. The Paralegal AAS program has remained steady in the past decade. Targeted marketing could help AACC launch a Court Reporting certificate and expand existing Paralegal programs.

Dental Assisting Program Expansion

Dental assistants set up equipment, prepare patients for treatment, and keep records. In Maryland, seven percent growth is projected (150 jobs) in this field. A dental assisting certificate is sufficient to prepare students for entry level positions.

Across the Maryland higher education system, dental-related programs at all degree levels have either grown or maintained enrollment for many years. AACC's existing dental assisting lab on the Arnold Campus is well utilized and often is full to capacity. This strong program should be expanded at the Glen Burnie Campus to expand career education opportunities to residents of this part of the County.

Education Program Expansion

According to the County Executive's Office, Anne Arundel County is a net importer of teachers. The County Executive reportedly would like to increase the number of teachers who are trained in County. Elementary education programs are successful at AACC and at the other Maryland community colleges. Expansion of the elementary and early childhood teacher education transfer programs at AACC is recommended to increase the number of local students in the teacher pipeline.

Between 2012 and 2022, Maryland is expected to need:

- 1,430 net new elementary school teachers
- 630 net new middle school teachers
- 1,370 net new secondary school teachers

These job growth projections represent larger gains than any other profession for which AACC program expansion is recommended.

AACC is a regional center of excellence in teacher education. The College should consider development of its existing secondary-level teacher education programs, especially in mathematics and the sciences. AACC should coordinate with local high schools and four-year teacher education programs to establish a streamlined path for students interested in teaching, especially in high school STEM subjects. The proposed new Lab School would facilitate growth in this area.

Transition of Care Certificate

When a patient transfers from one level of care to another, such as from an inpatient hospital to a rehabilitation center, there are many social services and medical challenges to overcome. A Transition of Care Certificate gives caregivers and caseworkers skills to help clients in this setting.

AACC has experience offering human services certificates in Aging Studies and Gerontology. Many existing human services certificates offered at AACC are maintaining enrollment or growing. A certificate in Transition of Care could make use of established curriculum and knowledge and bolster successful programs in patient care by teaching case management skills.

Social Services Certificate

As the population ages there will be increased demand for coordination of social services, especially regarding care of the elderly and medical services. A student who earns

a social services certificate can assist a social worker in guiding clients to the programs that best meet their needs. Similar to a transition of care certificate, a social services certificate would build on curriculum that is already established at AACC.

Potential Future Programs

The following programs, which were discussed with the Steering Committee, are presented solely for the College's future consideration. In accordance with the consultant's recommendation that AACC build on its existing strengths, the development of new, resource-intensive programs that would require the addition of faculty with expertise in these areas, along with the significant investment that would be required for new facilities, make them inappropriate choices for the College at this time.

Veterinary Technician, Respiratory Therapy, and Dental Hygiene

Due to slow projected employment growth and the high cost of equipping the specialized labs for these programs, veterinary technician, respiratory therapy, and dental hygiene programs are not recommended at this time.

An existing Veterinary Technician degree program at the Community College of Baltimore County has maintained enrollment over the past decade, but is not growing at a rate that suggests increased demand in the region. Occupational growth for veterinary technicians is projected to be slow; job growth of 70 jobs (net) is projected in Maryland between 2012 and 2022.

Respiratory Therapy programs at other Maryland Community Colleges have maintained enrollment over time. Similarly, dental hygiene has been successful at other community colleges. However, job growth for both occupations is projected to be relatively slow. Dental Hygienist jobs are expected to increase by 100 jobs (net) during the 2012-2022 decade. Respiratory Therapist jobs are expected to increase by 70 jobs (net). Neither program is recommended at this time due to the high cost of starting such programs.

Building Trades

Skilled building trades are not expected to show significant net job growth in the next ten years, but job openings due to retirements and replacements will be available. Many of these occupations, such as welders and pipefitters, pay well. However, new facilities and equipment would be required for AACC to offer these programs on their own campuses. Currently, AACC students attend building trades programs at other facilities.

AACC should consider an on-campus building trades program after other Master Plan goals are accomplished.

Logistics

AACC's Logistics and Supply Chain Management program got off to a great start; 86 certificates were awarded in 2011 when the program was still very new. Since then, FTE enrollment has fallen. Logistics programs at other Maryland community colleges are struggling. The College's Transportation, Logistics and Cargo Security Certificate program had five FTE in Fall 2014.

Most well-paying jobs in the logistics field require four-year degrees. Carefully planned articulation agreements could help logistics students achieve degrees that lead to good prospects for job placement. In Maryland, 120 net new jobs in logistics, transportation, storage, and distribution were projected for the 2012-2022 decade.

It is not recommended that the AACC logistics program be expanded at this time, but targeted marketing could help bolster enrollment.

Space Needs Analysis

Fast Facts

Academics

Fall 2014 Academic Programs: 250

Awards Offered: Associate Transfer Degrees, Associate Career Degrees, Certificates, Letters of Recognition

Enrollment Growth

Projected Headcount Growth 2014-2025: 14%

Recommendation

Build on AACC's strengths.

As part of the master planning process, a space needs analysis was prepared to document AACC's total quantitative space requirement through 2025. This section addresses enrollment projections, their impact on the College's space needs, and the development of the master plan space program. It also provides a detailed assessment of overall space need by space category in five year increments.

Interview Process

The space needs analysis and the development of the College's space program began with a series of detailed discussions and group interviews conducted by the consultants. The consulting team met with many academic and non-academic user groups to solicit ideas and recommendations regarding current facility conditions and future programmatic goals. The consultants encouraged the groups to uncover and discuss specific needs or intended changes in programs that could affect future space requirements.

The topics discussed included campus mission and image; student/faculty services and amenities; continuing education and community service; programmatic initiatives; department relationships and adjacencies; campus services; technology; and teaching environments. The information gathered during these sessions informed the development of a detailed space program of current and future needs.

Enrollment Projections

With the rising cost of a four-year college education, community colleges have become more attractive than ever to many students and their families. For those wishing to earn a bachelor's degree, attending a community college for the first two years can reduce costs while providing high-quality, personalized attention that can be difficult to find at larger institutions. However, many of the technical jobs that will be available in the coming years will only require a two-year degree. As more of the population becomes aware of the benefits of community colleges, what was once a "fall-back option" may become the avenue of choice for a college education.

Most AACC students (83 percent in fall 2014) reside in Anne Arundel County (Figure 4.5). Maryland Department of Planning projections suggest that high school enrollment in Anne Arundel County will grow faster than in the State or the region (Figure 4.6).

Figure 4.5 High School Enrollment Projections

	2014 Data	2024 Projection	Percent Change
Maryland	253,891	293,350	15.5%
Baltimore Region	112,532	131,180	16.6%
Anne Arundel County	22,712	27,020	19.0%

Figure 4.6 Students' Counties of Residence

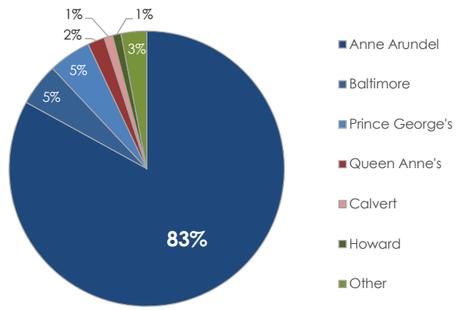
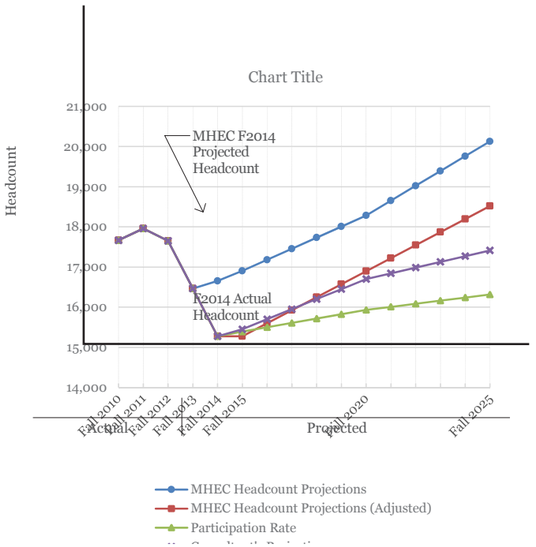


Figure 4.7 illustrates four enrollment projection scenarios for AACC growth through 2025. The Maryland Higher Education Council (MHEC) prepared headcount enrollment projections for AACC in Fall 2013. These projections suggested that enrollment would rebound robustly during the economic recovery and continue to grow about 1.9 percent per year starting in 2013 when AACC's headcount was 16,463. This would result in a fall 2023 headcount of 19,258. This is represented by the line "MHEC Headcount Projections" in Figure 4.7.

If the MHEC rate of growth (1.9 percent per year) was applied to the known Fall 2014 enrollment of 15,274 students, the resulting headcount in 2025 would be about 18,500 students. This would represent a 21.2 percent growth rate, which exceeds projected population growth during the same period. This projection is shown as the red line in Figure 4.7.

The consultant prepared two independent enrollment projections. The first, based on the assumption that AACC would maintain its current high school graduate capture rate, resulted in a projection of just under seven percent growth between 2014 and 2025. The second projection took into account AACC's plans to improve student retention efforts and increase its capture rate through targeted outreach. An annual growth rate of 1.2 percent would result in 14 percent growth between 2014 and 2025. The Steering Committee agreed that growth of 14 percent by 2025 would be a reasonable projection and an achievable goal.

Figure 4.7 Comparison of Enrollment Projections



Program Growth and Contraction

Student full-time equivalent (FTE) growth estimates were prepared for each of AACC's certificate and degree programs through 2025. Change in FTE over time is an important factor used to project space needs for classrooms, labs, and academic support space.

College-wide estimated FTE growth was guided by the enrollment target of 14 percent growth between Fall 2014 and Fall 2025. The target represents an average of anticipated change across all academic programs. Workforce needs and regional economic development initiatives are expected to cause some academic programs to grow faster than others. However, with the College's marketing efforts and increases in retention, all programs have the potential to meet or exceed the target.

Looking ahead, between Fall 2012 and Fall 2015:

- Transfer Degree FTE are expected to increase by 14.8 percent. About 62 percent of FTE are anticipated to be enrolled in Transfer programs in 2025.
- Career Degree FTE are expected to grow by 13.2 percent. Career FTE will represent about 23 percent of FTE in 2025.
- Certificate FTE are expected to increase by 13.0 percent. In 2025, about nine percent of FTE will be enrolled in Certificate programs.
- The remaining FTE will be enrolled as Non-Degree students. FTE enrollment in this category is expected to grow by nearly 12 percent. These students will represent about seven percent of 2025 FTE.
- The Transfer Studies AA degree represented roughly eighteen percent of AACC FTE 2012-2014. That percentage is not expected to change in the next decade.
- The LPN to RN Upward Mobility (Nursing) AA is likely to enroll roughly six percent of FTE.

Information Assurance and Cybersecurity AAS, Engineering Transfer AS, Nursing degrees, and Elementary/Early Childhood Education degrees are some of the programs expected to command growing percentages of AACC students in the next decade.

Many programs that currently have low enrollments (some are new programs) are expected to grow quickly. Health Care Delivery Systems CRT, Baking AAS, Video Game Development CRT, Web Design CRT, Physician Assistant Professional CRT, and Special Education Support CRT are a few examples of AACC's fast-growing small programs.

Student Credit Hours and Full-Time Day Enrollment

The projected increase in enrollment will have an impact on the number of student credit hours (SCH) that will be generated. SCH is a unit of measure applied toward the total number of hours needed for completing the requirements of a degree, certificate, or other award. (Figure 4.8)

- Between fall 2010 and fall 2014, total credit SCH decreased by 15.8 percent. Credit SCH is anticipated to increase by 15 percent by fall 2025.
- On-Campus Day SCH is anticipated to increase by 15.9 percent between fall 2014 and fall 2025.
- The anticipated increase in on-campus day SCH will result in a 15.9 percent increase in total on-campus FTDEs between 2014 and 2025.
- Total on-campus FTEs will increase by 16.1 percent in the next ten years, from 8,430 in fall 2014 to 9,783 in fall 2025

Figure 4.8 Student Credit Hour and Full-Time Day Equivalents (FTDE) Projection

Enrollment Summary	Actual Fall 2010	Actual Fall 2011	Actual Fall 2012	Actual Fall 2013	Actual Fall 2014	5-Year % Change	Projected Fall 2020	Projected Fall 2025	2014 - 2025 % Change
Headcount	17,665	17,957	17,650	16,463	15,274	-13.5%	16,343	17,412	14.0%
Total SCH	150,124	148,814	145,667	136,445	126,443	-15.8%	135,922	145,400	15.0%
Average CH per Headcount	8.5	8.3	8.3	8.3	8.3		8.3	8.4	
On-Campus Day SCH	95,880	94,486	90,178	85,101	79,052	-17.6%	85,326	91,600	15.9%
% Day	64%	63%	62%	62%	63%		63%	63%	
FTE Students	10,008	9,921	9,712	9,096	8,430	-15.8%	9,106	9,783	16.1%
FTDE Students	6,444	6,340	6,058	5,836	5,322	-17.4%	5,744	6,167	15.9%
Headcount/FTE Ratio	**1.8**	**1.8**	**1.8**	**1.8**	**1.8**		**1.8**	**1.8**	
Headcount/FTDE Ratio	**2.7**	**2.8**	**2.9**	**2.8**	**2.9**		**2.8**	**2.8**	

Figure 4.9 Credit Weekly Student Contact Hour (WSCH) Projection

On-Campus Day Credit WSCH	Actual Fall 2010	Actual Fall 2011	Actual Fall 2012	Actual Fall 2013	Actual Fall 2014	5-Year % Change	Projected Fall 2020	Projected Fall 2025	2014 - 2025 % Change
Lecture WSCH	74,469	70,613	64,235	66,103	60,054	-19.4%	64,873	69,691	16.0%
Lab WSCH	34,337	38,697	34,688	33,447	34,899	1.6%	37,699	40,499	16.0%
Total WSCH	108,806	109,310	98,923	99,550	94,953	-12.7%	102,572	110,190	16.0%
% Lab WSCH	32%	35%	35%	34%	37%		37%	37%	
WSCH/SCH Ratio	1.13	1.16	1.10	1.17	1.20		1.20	1.20	

Figure 4.10 Non-Credit Weekly Student Contact Hour Projection

"Non-Credit Eligible On-Campus Enrollment"	Actual Fall 2010	Actual Fall 2011	Actual Fall 2012	Actual Fall 2013	Actual Fall 2014	5-Year % Change	Projected Fall 2020	Projected Fall 2025	2014 - 2025 % Change
Eligible FTDEs	61	68	63	57	81	32.8%	87	94	16.0%
Eligible WSCHs - Lecture	7,349	6,549	6,188	5,732	8,106	10.3%	8,754	9,403	16.0%
Eligible WSCHs - Lab	6,270	6,394	5,952	4,423	4,426	-29.4%	4,780	5,134	16.0%
Eligible WSCHs - Total	13,619	12,943	12,140	10,155	12,532	-8.0%	13,535	14,537	16.0%
% Lab WSCH	46%	49%	49%	44%	35%		35%	35%	

Weekly Student Contact Hours

Space allocations for classroom and teaching laboratories are based on weekly student contact hours (WSCH) generated by FTDEs, or enrollments of students attending credit classes between 8:00 a.m. and 5:00 p.m. This includes only hours actually scheduled in a classroom or lab and does not include unscheduled hours in those spaces, even if required (examples include language, music, and art). (Figure 4.9)

- Of the 94,953 WSCH in fall 2014, roughly 63 percent were lecture-based and 37 percent were lab-based
- Based on projected FTE growth, total lecture WSCH are anticipated to increase from 60,054 in fall 2014 to 69,691 in fall 2025; an increase of 9,637.
- Lab WSCH are projected to increase by 7,052 between fall 2014 and fall 2025. However, as more programs shift to project-based learning, the percentage of lab WSCH may increase.
- Overall, there will be an increase of 16 percent in WSCH between fall 2014 and fall 2025.
- The greatest growth is anticipated to be in Health Professions and Science & Technology.

For the purposes of this study, non-credit eligible on-campus enrollment is projected to grow by 16 percent between fall 2014 and fall 2025. (Figure 4.10)

Faculty and Staff Projections

Offices and academic support areas make up a large part of any college's space inventory. For this reason, it is important to understand not only how many and what types of staffing currently exist, but also how many and what types are projected to be added in the future.

Academic and non-academic staff projections were developed through a series of collection efforts. The data collection began with a list of all employees by department provided by the College. All departments that were interviewed were asked for personnel counts for their areas, as well as projections for staff changes. The tally of faculty and academic support staff was then cross-referenced with the College directory.

Employee projections were made by maintaining the current Student:Faculty ratio to keep pace with projected FTE (student) growth. The final personnel count was integrated into the space program to ensure that all staff members were allocated appropriate office/work space. Figure 4.11 illustrates the faculty and staff projections that were used for this master plan.

Library Collection

The Division of Learning administers AACC's Library. Recent renovations and an addition have transformed the Andrew Truxal Library into a dynamic hub for student learning. The current collection, which is composed of books, periodicals, audio tapes, computer diskettes, compact disks, DVDs, and video tapes, is described in Figure 4.12. Over the next ten years, collections at the Truxal Library will also undergo a transformation as the role of the college library shifts from a place where knowledge is stored to one where knowledge is created.

- More periodicals, newspapers, audio tapes, computer diskettes, and maps will be converted to electronic format.
- The number of physical volumes in the College collection will decline as media delivery shifts further to digital and online methods.
- Data and resource search and retrieval will be almost entirely online, either using intra-college connections or the Internet.
- Bandwidth to accommodate online work and streaming of educational material will be an ongoing challenge for AACC, as it will be on all campuses.

Physical Space Inventory

AACC's Physical Space Inventory (PSI) shows a current total of 629,477 NSF. The area breaks down as follows:

- Arnold Campus: 516,717 NSF
- Glen Burnie Town Center: 33,395 NSF
- HCAT Institute: 6,290 NSF
- Arundel Mills: 48,751 NSF
- Center for Cyber & Professional Training: 21,298 NSF
- Sales & Service Training Center: 3,026 NSF

Figures 4.13-15 (next pages) present AACC's PSI by building and function. Total net assignable square feet (NASF) refers to the sum of all floor areas in a building that are assigned to, or available for, use by a department. Gross square feet (GSF) refers to all of the spaces in a building, including the thickness of interior and exterior walls, corridors, toilet rooms, mechanical and service areas, stairs and elevators.

Figure 4.11 Employee Data and Projections

	2014 FTE (Actual)		2020 FTE (Projected)		2025 FTE (Projected)	
Student FTE	**8,430**		**9,205**		**9,783**	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Instruction:						
Adjunct	3	1,002	3	1,094	3	1,163
Faculty	264	1	288	1	306	1
Non-Instruction:						
Administration	63	0	69	0	73	0
Contract	29	7	32	8	34	8
Professional Staff	264	13	288	14	306	15
Support Staff	261	30	285	33	303	35
Total	**884**	**1,053**	**965**	**1,150**	**1,026**	**1,222**
Student:Instructor Ratio	1:31.6	1:8.4	1:31.6	1:8.4	1:31.6	1:8.4

Figure 4.12 Andrew G. Truxal Library Collections

Physical Materials	Number of Volumes	Bound Volume Equivalent	Expected Change to Collection
Books - not reference	139,174	139,174	Decreasing in size
Books - reference	7,237	20,806	Increasing slightly
Books - reserve	1,205	1,205	Decreasing
CDs	597	150	
DVDs	2,798	700	
VHS tapes	310	78	
Periodicals, unbound	151	2,170	
Periodicals, boxed (bound)	200	832	
Newspapers, unbound	10	179	
Biology and chemistry models	31		Anatomical and water models
Miscellaneous items	91		Computers, headphones, calculators, and other equipment
Electronic Volumes	Number of Volumes	Bound Volume Equivalent	Note
Electronic databases	65	N/A	Includes records for periodicals, books, audio, visual, images
Electronic books	95,000		These materials are included in the databases listed above.
Streaming audio files	24,746		
Streaming video files	13,242		

Space Inventory

The Fall 2014 AACC physical space inventory for all campuses was provided to the consultant for use in this study. Figures 4.13-15 below and on the following pages represent the existing AACC space.

Figure 4.13 Arnold Campus Existing Space Inventory

NCES	NCES Category	Library	Annex A	Annex B	Astro-nomy	Cade	Careers	CALT	Pool	Gym	Dragun	Flores-tano	Green-house	Huma-nities Building	Isaac Cox House	Johnson Building	Ludlam Hall.	Math/ Child Devel	Pascal Center for Perf. Arts	Schwartz	Student Services Center	Student Union/ Book-store	Grounds & Athl. Outbldgs	Grand Total
110	Classroom		2,558	4,771	272	2,536	17,106	3,869		1,618	3,835	11,233		10,293		2,258		3,150		6,448		458		**70,405**
115	Classroom Service						398	20		12	134	339		110		39				79				**1,131**
210	Class Laboratory	2,391	1,716		268	20,010	20,124	33,128		691	13,098	14,637		5,286		1,221				1,077			3,147	**116,794**
215	Class Laboratory Service		98		81	2,167	2,068	2,236			4,429	3,771		314						62			560	**15,786**
220	Open Laboratory	7,633				561	1,465				469							795				1,807		**12,730**
225	Open Laboratory Service						126							477								44		**647**
310	Office	6,588	352	477	89	4,616	23,313	10,071	659	2,489	4,197	6,649		5,866	1,222	3,658	6,588	2,668	149	722	7,701	7,852	8,421	**104,347**
315	Office Service	621				199	2,509	1,040		373	377	1,162		1,093	489	1,329	3,522	83			3,848	453	1,385	**18,483**
350	Conference Room	353	598	181		387	1,242	1,118		251		182			360		1,307			137			1,627	**7,743**
410	Study	17,331																						**17,331**
420	Library Stacks	10,795					701																	**11,496**
430	Open Stack Study Room	4,785																						**4,785**
520	Athletic or Phys Ed								7,611	17,293														**24,904**
525	Athletic or Phys Ed Service								1,664	9,269													604	**11,537**
530	Media Production													689										**689**
535	Media Production Service					160								240										**400**
580	Greenhouse												732											**732**
610	Assembly																		5,039					**5,039**
615	Assembly Service																		4,475					**4,475**
620	Exhibition					1,025		465											642					**2,132**
625	Exhibition Service					228													56					**284**
630	Food Facility	207					1,006	303														10,729		**12,245**
635	Food Facility Service						735	424														1,134		**2,293**
640	Day Care																	1,671						**1,671**
645	Day Care Service																	356						**356**
650	Lounge	1,228				711	1,871	1,797									194				1,510	2,665	979	**10,955**
655	Lounge Support																					96		**96**
660	Merchandising																					6,466		**6,466**
665	Merchandising Service																					1,776		**1,776**
680	Meeting					2,619		1,945																**4,564**
685	Meeting Service					797		266																**1,063**
710	Telecommunications						2,682	964				143		123	240		135							**4,287**
715	Telecom Service						917	105																**1,022**
720	Shop		277					1,804															14,312	**16,393**
725	Shop Service																						162	**162**
730	Central Storage							179				76		628									12,203	**13,086**
750	Central Service																						7,881	**7,881**
800	Health Care																					531		**531**
10	Housekeeping	256		52		395	940	259	25	90	246	299		196		38	153	70	28	163	181	115	154	**3,660**
20	Circulation	9,236	1,546	1,310	110	11,897	29,153	23,243	1,194	7,862	9,869	15,009	98	9,888	424	2,024	3,485	2,077	2,120	2,727	6,139	5,309	6,726	**151,446**
30	Unassignable	4,684	405	369	44	4,527	11,294	9,475	2,731	3,607	2,845	4,440		2,775	219	747	3,342	673	1,629	1,027	1,721	3,920	9,867	**70,341**
40	Unusable	1,276															31						6,176	**7,483**
	Total NASF	**51,932**	**5,599**	**5,429**	**710**	**36,016**	**76,263**	**59,734**	**9,934**	**31,996**	**26,539**	**38,192**	**732**	**25,119**	**2,311**	**8,505**	**11,746**	**8,723**	**10,361**	**8,525**	**13,059**	**34,011**	**51,281**	**516,717**
	Total GSF	**67,384**	**7,550**	**7,160**	**864**	**52,835**	**117,650**	**92,711**	**13,884**	**43,555**	**39,499**	**57,940**	**830**	**37,978**	**2,954**	**11,314**	**18,757**	**11,543**	**14,138**	**12,442**	**21,100**	**43,355**	**74,204**	**749,647**

Figure 4.14 Arundel Mills, CCPT, and SSVC Existing Space Inventory

NCES Code	NCES Category	AMIL	CCPT	SSTC	Total
110	Classroom	16,703		1,298	18,001
115	Classroom Service	233			233
210	Class Laboratory	14,020	14,426		28,446
215	Class Laboratory Service	1,171	214		1,385
220	Open Laboratory	2,374		411	2,785
310	Office	7,843	2,458	860	11,161
315	Office Service	1,036	481	295	1,812
350	Conference Room	618	569		1,187
410	Study	233		162	395
420	Library Stacks	181			181
630	Food Facility	180			180
650	Lounge	2,282	1,651		3,933
665	Merchandising Service	320			320
710	Telecom	95	643		738
720	Shop	340	856		1,196
730	Central Storage	1,122			1,122
10	Housekeeping	420	35		455
20	Circulation	15,567	4,278	952	20,797
30	Unassignable	7,510	636	338	8,484
40	Unusable		890		890
Total NASF		**48,751**	**21,298**	**3,026**	**73,075**
Total GSF		**72,248**	**27,137**	**4,316**	**103,701**

Figure 4.15 Glen Burnie Town Center and Hospitality, Culinary Arts and Tourism Institute Existing Space Inventory

NCES Code	NCES Category	Glen Burnie Town Center	Hospitality, Culinary Arts and Tourism Institute	Total
110	Classroom	11,157	1,478	12,635
115	Classroom Service	287	140	427
210	Class Laboratory	6,551	3,113	9,664
215	Class Laboratory Service	392	471	863
220	Open Laboratory	1,601		1,601
310	Office	9,777	523	10,300
315	Office Service	1,042	396	1,438
350	Conference Room	567		567
650	Lounge	791	169	960
655	Lounge Support	11		11
660	Merchandising	356		356
710	Telecom	323		323
730	Central Storage	540		540
10	Housekeeping	79	54	133
20	Circulation	8,127	2,401	10,528
30	Unassignable	3,435	540	3,975
40	Unusable	195	3,530	3,725
Total NASF		**33,395**	**6,290**	**39,685**
Total GSF		**45,231**	**12,815**	**58,046**

Maryland Space Projections

In Maryland, capital projects are planned using ten-year enrollment projections that produce full-time day equivalent (FTDEs) and weekly student contact hour (WSCH) counts, which are used as the basis for determining space needs. Full- and part-time faculty counts, staff counts, and library collection data are also factored in the equation to generate an assessment of current and future space need. The following actual data for Fall 2014 and the projected data for Fall 2025 were used for this analysis.

Figure 4.16 Historic Data and Projections

	ACTUAL	PROJECTED
	Fall 2014	Fall 2025 (Adjusted)*
FTDE-C	5,322	6,176
FTDE-N	255	
FTDE-T	5,322	6,176
WSCH-Lec-C	60,054	69,691
WSCH-Lec-N	25,005	
WSCH-Lec-T	60,054	69,691
WSCH-Lab-C	34,899	40,499
WSCH-Lab-N	4,426	
WSCH-Lab-T	34,899	40,499
FTE	8,430	9,783
BVE	94,300	107,830
FT-Fac	264	306
FT-Libr	6	7
PT-Fac	1,006	1,167
FTEF	522	605
FT-Staff	594	689
PHC-T	3,219	3,735

	ACTUAL	PROJECTED
	Fall 2014	Fall 2025-MHEC Adjusted*
Headcount	15,274	17,412

* Indicates enrollment adjusted to the known 2014 FTE.

Figure 4.17 on the next page provides a summary of AACC's current and projected space needs based on these data.

Based on Maryland's capital space guidelines, the current space need for AACC is 720,785 NSF (as shown in Figure 4.17). This equates to a current space deficit of 93,335 NSF. The largest deficits are in Special Use space (44,202 NSF) and Laboratory space (35,112). There is a calculated surplus of 36,172 NSF of Classroom space.

The Maryland calculations show that in ten years there will be a need for a total of 829,544 NSF college-wide. That is over 200,000 NSF more than currently exists in the College's space inventory. In other words, the College would need to add approximately 32 percent more space to accommodate projected enrollment growth by 2025 based on Maryland's space guidelines.

Space Program Development

Detailed Space Assessment

Using the Maryland space projections as guidelines, the consultants prepared a detailed space program to provide a more precise analysis of the amount and type of space that will be needed by the College over the next ten years. Data that was gathered during interviews with academic and non-academic user groups was factored into the program. The space program accounts for:

- Proposed new construction, consisting of a Health Science and Biology Building;
- An addition to Dragun, which will be completely renovated;
- Demolition of the Pool with a small addition to the Gymnasium Building;
- Demolition of the Johnson and Schwartz Buildings;
- Repurposing of existing space to create informal learning areas, faculty and adjunct faculty office space, and needed support spaces.

The tables in Figures 4.18-20 summarize the consultant's space program by campus and division. They provide a comparison of the College's existing Physical Space Inventory to projected space totals and include an analysis of existing and projected personnel counts. (Note: Due to the multiple sources that were used to generate a list of existing personnel, the existing counts may vary slightly from the actual totals.)

This master plan includes recommendations for the reallocation of some space on AACC's off-site locations, but the only new construction included in this plan occurs on the Arnold Campus. The consultant's space program includes space changes projected to occur over the ten year period of this master plan. The table indicates that roughly 93,500 NSF of additional space will be required to accommodate the projected changes on the Arnold campus. However, 26,486 NSF of existing space will be demolished so the actual total amount of new construction required will be approximately 120,000 NSF.

Figure 4.17 MHEC Computation of Space Needs

NCES CODE	NCES CATEGORY	Need 2014	Inventory 2014	Surplus/ (Deficit)	Need 2025
100 (110-115)	CLASSROOM	66,660	102,832	36,172	77,357
200	LABORATORY	225,813	190,701	(35,112)	262,048
210-15	Class Laboratory	203,461	174,789	(28,672)	236,109
220-25	Open Laboratory	22,352	15,912	(6,440)	25,939
250-55	No Allowance				
300	OFFICE	189,787	157,038	(32,749)	219,762
310-15	Office/ Conf. Room	186,376	157,038	(29,338)	215,924
320-25	Testing/Tutoring	3,411	0	(3,411)	3,838
350-55	Included w/ 310				
400	STUDY	46,465	34,188	(12,277)	53,696
410-15	Study	33,263	17,726	(15,537)	38,600
420-30	Stack/Study	9,430	16,462	7,032	10,783
440-55	Processing/Service	3,772	0	(3,772)	4,313
500	SPECIAL USE	82,464	38,262	(44,202)	92,712
520-23	Athletic	72,220	36,441	(35,779)	80,760
530-35	Media Production	9,244	1,089	(8,155)	10,952
580-85	Greenhouse	1,000	732	(268)	1,000
600	GENERAL USE	71,263	57,148	(14,115)	79,707
610-15	Assembly	19,644	9,514	(10,130)	21,352
620-25	Exhibition	3,411	2,416	(995)	3,838
630-35	Food Facility	27,040	14,718	(12,322)	31,374
640-45	No Allowance				
650-55	Lounge	9,657	15,955	6,298	11,205
660-65	Merchandising	3,511	8,918	5,407	3,938
670-75	No Allowance				
680-85	Meeting Room	8,000	5,627	(2,373)	8,000
700	SUPPORT	37,069	46,750	9,681	42,827
710-15	Data Processing	3,492	6,370	2,878	4,132
720-25	Shop/ Storage	27,701	32,499	4,798	31,881
730-35	Included w/ 720				
740-45	Included w/ 720				
750-55	Central Service	5,322	7,881	2,559	6,176
760-65	Hazmat Storage	554	0	(554)	638
800	HEALTH CARE	1,264	531	(733)	1,435
900	No Allowance				
050-090	No Allowance				
	Total NASF:	720,785	627,450	(93,335)	829,544

Figure 4.18 Consultant Space Program Summary (All Locations)

	Personnel (FT & PT)		NASF		
Campus	Existing Fall 2014	Projected Fall 2025	Existing Fall 2014	Projected Fall 2025	Projected Variance
Arnold Main Campus	1,409	1,562	516,717	610,251	(93,534)
Arundel Mills and CCPT	140	159	70,049	70,049	0
Glen Burnie and HCAT	40	41	39,685	39,685	0
SSTC	8	8	3,026	3,026	0
		Total NASF:	629,477	723,011	(93,534)

Proposed Demolition	Fall 2014 NASF
Arnold Campus - Pool	9,934
Arnold Campus - Schwartz	8,525
Arnold Campus - Johnson	8,027
Total	26,486

	Post-Demo NASF	Projected Fall 2025 NASF	Projected Variance
Adjusted NASF	602,991	723,011	(120,020)

Figure 4.19 Consultant Space Program Summary (Arnold Campus)

	Personnel (FT & PT)		NASF		
Division	Existing Fall 2014	Projected Fall 2025	Existing Fall 2014	Projected Fall 2025	Projected Variance
Business & Law	106	116	11,335	21,920	(10,585)
Learner Support Services	196	224	71,036	77,125	(6,089)
Learning	41	44	140,124	130,398	9,726
Learning Resources Management	196	204	96,899	99,164	(2,265)
President of the College	23	24	7,586	7,586	0
Shared Conference Rooms (College-wide)	0	0	1,589	4,937	(3,348)
Science & Technology	147	167	54,128	92,113	(37,985)
Liberal Arts	373	409	64,453	67,006	(2,553)
Continuing Education & Workforce Development	81	89	24,866	31,261	(6,395)
Health Sciences	246	285	44,701	78,741	(34,040)
Total:	1,409	1,562	516,717	610,251	(93,534)

Figure 4.20 Consultant Space Program Summary (Arundel Mills, CCPT, Glen Burnie, HCAT, and SSTC Locations)

	Personnel (FT & PT)		NASF		
Arundel Mills and CCPT Divisions and Schools	**Existing Fall 2014**	**Projected Fall 2025**	**Existing Fall 2014**	**Projected Fall 2025**	**Projected Variance**
Learner Support Services	0	0	5,765	6,561	(796)
Learning	0	0	28,472	26,325	2,147
Learning Resources Management	0	0	6,130	6,379	(249)
Liberal Arts	72	82	0	0	0
Business and Law	20	22	0	0	0
Science & Technology	17	19	8,278	9,380	(1,102)
Continuing Education & Workforce Development	7	8	19,859	19,859	0
Health Sciences	24	28	1,545	1,545	0
Total:	**140**	**159**	**70,049**	**70,049**	**0**

	Personnel (FT & PT)		NASF		
Glen Burnie and HCAT Divisions and Schools	**Existing Fall 2014**	**Projected Fall 2025**	**Existing Fall 2014**	**Projected Fall 2025**	**Projected Variance**
Learner Support Services	0	0	3,695	3,695	0
Learning	0	0	20,302	20,302	0
Learning Resources Management	0	0	2,429	2,429	0
Business	3	3	0	0	0
Health and Human Services	1	1	0	0	0
Liberal Arts	24	26	0	0	0
Science & Technology	9	10	136	136	0
Continuing Education & Workforce Development	3	1	13,123	13,123	0
Total:	**40**	**41**	**39,685**	**39,685**	**0**

	Personnel (FT & PT)		NASF		
SSTC Divisions and Schools	**Existing Fall 2014**	**Projected Fall 2025**	**Existing Fall 2014**	**Projected Fall 2025**	**Projected Variance**
Continuing Education & Workforce Development	8	8	3,026	3,026	0
Total:	**8**	**8**	**3,026**	**3,026**	**0**

Classrooms should ideally be treated as a shared college resource and not as space owned by an individual division. Centralized scheduling of classrooms helps optimize the utilization of this valuable resource. College-wide, AACC currently has a total of 102,832 NSF of classrooms space (NCES code 110 and 115). Figure 4.21 shows the difference between the existing PSI classroom total; the MHEC projected need for classrooms in fall 2014 and fall 2025; the total amount of classroom space included in the consultant's space programs for fall 2025; and the delta between the projections. The consultant's 2025 projected classroom need is greater than that produced using MHEC's calculations, resulting in a smaller classroom surplus. Two factors contribute to this difference:

- The consultant used 22 SF per station for classroom station size, instead of the State-recommended 18 SF per station. 22 SF per station is a realistic space allocation to facilitate today's teaching methods.
- The CC Tables used by the State of Maryland to assess space needs are based on daytime FTE. The Arundel Mills site and the Glen Burnie Town Center site are used mainly for evening course meetings. The CC Tables do not take into account the fact that these rooms are in use after-hours. The College cannot remove these classrooms from its inventory. The space use plan proposes to maintain classrooms at Glen Burnie and Arundel Mills with few modifications.

The College has a surplus of classrooms today. Meanwhile, there are deficits in study space and office space. The proposed space plan suggests repurposing classrooms in the near term to serve as office and study spaces. Ultimately, the repurposed classrooms would be replaced in the newly constructed science buildings.

Figure 4.21 Classroom Space Need (NCES Code 110 and 115)

	Existing Inventory Fall 2014	Need Fall 2014	Projected Need Fall 2025	Surplus/(Deficit) Existing Fall 2014 to Projected Fall 2025
Maryland Space Need Projections (MHEC Projection of 17% HC Growth adjusted for actual Fall 2014 enrollment)	102,832	66,660	80,664	22,168
Maryland Space Need Projections (MHEC Growth Projections adjusted to 14% HC Growth and Fall 2014 actual enrollment)	102,832	66,660	77,357	25,475
Consultant's Space Program Calculations*	102,832	----	95,531	7,301

The Consultant's 2025 space program includes a projected need for an additional 61,446 NSF of class lab space. The Maryland utilization targets for lab utilization are lower than those used by the consultant when determining space need. The College generally achieves more efficient hourly utilization in its labs than is recommended by the State. The consultant accounted for hourly use that exceeds the State's recommendations but still leaves time for lab set-up, cleaning, and maintenance. Therefore, the projected lab need is almost 10,000 NSF less than the adjusted 2025 MHEC projected college-wide lab space deficit of 71,347 NSF. The projected 252,147 NSF of lab space should provide AACC with ample lab resources through 2025.

Figure 4.22 Class Lab Space Need (NCES Code 210, 215, and 220)

	Existing Inventory Fall 2014	Need Fall 2014	Projected Need Fall 2025	Surplus/(Deficit) Existing Fall 2014 to Projected Fall 2025
Maryland Space Need Projections (MHEC Projection of 17% HC Growth adjusted for actual Fall 2014 enrollment)	190,701	225,813	**273,249**	(82,548)
Maryland Space Need Projections (MHEC Growth Projections adjusted to 14% HC Growth and Fall 2014 actual enrollment)	190,701	225,813	**262,048**	(71,347)
Consultant's Space Program Calculations*	190,701	----	**252,147**	(61,446)

Space Program Recommendations

The reallocation of existing space and the construction of new space that is recommended by this master plan is summarized on the following pages. In the space program tables, the Fall 2014 space totals were taken from the College's existing physical space inventory. The projected Fall 2025 space need totals reflect the consultant's recommendations for new construction and modifications to existing space that are needed to support projected enrollment and program growth.

Arnold Campus Overview

The primary projects recommended in this master plan include the creation of new facilities on the Arnold Campus for the sciences: a new Health Science and Biology Building and the renovation and expansion of the Dragun Science Building for the Physical Sciences. The renovation of existing space that will be vacated due to the construction of new space will benefit other academic programs, including Mathematics, the Child Development Center, Continuing Education and Workforce Development, and Business and Law.

The Daniel C. Olson Memorial Pool Building and the Schwartz Building will be demolished to provide space for the construction of the new Health Science and Biology Building, the Dragun Addition, and the adjacent Science Quad. Utilization of the pool is reportedly low; its primary users are community members. Space in Schwartz will be replaced in the new construction.

When the Pool is removed, a modest addition will be constructed on the east facade of the David S. Jenkins Gymnasium.

Health Science and Biology Building

Transformational change will occur for the School of Health Sciences and the Department of Biology when the new building is constructed. The complete replacement of existing laboratories in a new facility will provide AACC with state-of-the-art health science and biology instructional space. This will help address accreditation challenges related to the College's aging lab facilities. Collocation of these academic programs in one building will foster an environment of collaboration and result in operational and departmental efficiencies.

Figure 4.23 illustrates programmatic changes for the Health Science Division and the Biology Department.

Figure 4.23 Space Program Summary for the Health Science and Biology Building

Health Sciences
Existing Assigned Space

Building Name	NCES Code	NASF
Florestano Building	100	10,216
	200	17,469
	300	7,404
	700	76
Annex A	100	1,763
	200	1,814
	300	352
Gymnasium	300	3,968
	500	980
Pool	300	659
Total		44,701

Biology
Existing Assigned Space

Building Name	NCES Code	NASF
Careers Center Building	200	4,793
	300	782
Dragun Science Building	200	573
	300	1,071
Florestano Building	100	143
Green House Building	500	732
Total		8,094

New Health Science and Biology Building
Assigned Space

NCES Code	Existing NASF	Proposed NASF
100	12,122	18,747
200	24,649	57,070
300	11,248	22,633
400	0	2,420
500	4,700	4,968
600	0	1,790
700	76	0
Total	52,795	107,628
Space not a part of new construction:		5,948
Total new construction:		101,680

Henry L. Dragun Science Building Addition and Renovation for Physical Sciences

The rejuvenation of the Henry L. Dragun Science Building and the addition of new state-of-the-art laboratories for the physical sciences will energize the heart of the Arnold East Campus and anchor the south side of the new Science Quad. The planned reuse of Dragun for science classrooms, offices, and study space demonstrates AACC's dedication to thoughtful stewardship of existing resources and preserves the building's important role as the home of the sciences on the Arnold Campus.

The proposed 16,800 NSF addition will consist largely of new laboratories, particularly those with high ventilation requirements, such as chemistry labs. The comprehensive renovation of Dragun will provide new physical science labs, computer labs, classrooms, offices, and study space. With the completion of this project, the majority of AACC's science programs will be located around a central Science Quad. Existing Physical Science space in CALT that support programs in that building will remain as is.

Figure 4.24 Space Program Summary for the Dragun Science Building Addition and Renovation

Physical Sciences (excluding Astronomy)
Existing Assigned Space

Building Name	NCES Code	NASF
Dragun Science Building	100	3,969
	200	12,117
	300	3,600
Careers Center Building	100	0
	200	4,551
	300	631
CALT	300	416
Humanities Building	300	89
Total		25,373

Dragun Science Building Addition and Renovation
Assigned Space*

NCES Code	Existing NASF	Proposed NASF
100	**3,969**	**7,750**
200	16,668	28,860
300	4,231	4,750
400	0	880
600	0	1,100
Total	24,868	43,340
Existing space in Dragun Building		26,539
Total Addition:		16,801

*Excludes Physical Science space in Astronomy Building, CALT and Humanities that will remain.

Business and Law & Continuing Education and Workforce Development

The Florestano Building will be vacated when the Health Science and Biology Building is completed. Florestano is well suited for classroom instruction and is an ideal location for the School of Business and Law. The building has space to accommodate new facilities for the expansion of the Law and Criminal Justice programs, such as the addition of a mock courtroom and emergency simulation labs. The relocation of the School of Business and Law would group most of the school's functions on the West Campus.

The School of Continuing Education and Workforce Development (CEWD) currently occupies space in multiple buildings around the Arnold Campus. Consolidation of the school in Florestano would provide CEWD with an identity on the campus and help improve operational efficiency. Florestano is an ideal location for CEWD given its location near parking and its suitability for classroom instruction.

When both schools are relocated to Florestano, roughly 2,500 NSF of classroom space will remain available for general use.

Figure 4.25 Space Program Summary for CEWD and Business and Law

Business and Law
Existing Assigned Space

Building Name	NCES Code	NASF
Careers Center Building	100	3,452
	300	4,979
	400	701
CALT	100	142
	200	928
Barn	300	1,133
Total		11,335

Continuing Education and Workforce Development
Existing Assigned Space

Building Name	NCES Code	NASF
CALT	200	7,520
	300	3,690
	700	754
Johnson Building	100	2,258
	200	1,221
	300	4,609
Humanities Building	200	3,269
	300	466
Florestano Building	200	939
Careers Center Building	300	140
Total		24,866

Business and Law & CEWD
Assigned Space*

NCES Code	Existing NASF	Proposed NASF
100	5,710	8,520
200	2,160	10,273
300	9,728	11,737
400	701	2,620
600	0	2,528
Total	18,299	35,678

*Excludes Business and Law & CEWD space in CALT, Humanities, and the Barn that will remain.

Relocation of Mathematics to the Careers Building

Math faculty and staff have suffered a shortage of office space for many years. As a key component of STEM education and transfer degrees, math instructional and office space needs to be updated to attract and retain both students and talented faculty. The Math Department currently has faculty and instructional space in the Careers, Schwartz, and Math buildings. Roughly 14,600 NSF will be vacated in the Careers Building when Business and Law and the Biology department relocate. Consolidating Math in Careers will provide adequate and quality space for the department and help streamline department operations and reduce duplication of resources.

The Careers Building currently houses 2,136 NSF of Mathematics labs and 303 NSF of Mathematics offices. After the consolidation of the department in Careers there will be still be over 7,500 NSF of vacant space remaining that could be used as general use classrooms or repurposed to house spaces such as lounges, adjunct offices, or new and expanding academic programs.

Figure 4.26 Space Program Summary for Math

Mathematics
Existing Assigned Space

Building Name	NCES Code	NASF
Math Building	100	3,150
	300	2,604
Careers Center Building	200	2,136
	300	303
Schwartz Building	300	480
Total		8,673

Mathematics
Assigned Space

NCES Code	Existing NASF	Proposed NASF
200*	5,286	5,286
300	3,387	4,820
Total	2,174	8,723

*Includes class labs/classrooms in Math Building dedicated to Mathematics

Renovation of the Mathematics Building for the Child Development Center and Teacher Education Lab School

The Math Building will be available for expansion of the existing Child Development Center and the creation of a modern Lab School for teacher education. Its location at the edge of the campus core, adjacent to the ring road and parking, makes it an ideal facility for this busy department with lots of public interaction. In the future, the ring road will be relocated to make more green space around the building and to create a larger drop-off area for children.

Figure 4.27 Space Program Summary for Child Development and Lab School

Child Development
Existing Assigned Space

Building Name	NCES Code	NASF
Math Building	300	147
	600	2,027
Total		2,174

Child Development and Lab School
Assigned Space

NCES Code	Existing NASF	Proposed NASF
200	0	3,449
300	147	747
600	2,027	4,527
Total	2,174	8,723

Gymnasium Addition

When the Pool is demolished, a new facade addition will need to be constructed at the east face of the Gymnasium Building. The total addition will include:

- A new entrance lobby
- New Weight Room (1,450 sf)
- New Multipurpose Room (1,450 sf)
- Storage (350 sf)

Other Space on the Arnold Campus

Adjustments to existing space on the Arnold Campus were accounted for in the space program, including the repurposing of classrooms into study space, office space, and lounge space. On the West Campus, 1,327 NSF of Continuing Professional Education offices will be relocated from the Glen Burnie Campus to space adjacent to other Continuing Education offices. Their new location will reduce duplication of resources and space.

Arundel Mills and CCPT

Within the Arundel Mills Building, space on the fourth floor could be reallocated to create a much needed Biology Lab. Two classrooms would be combined to achieve this.

The consultants heard during interviews that the student services offices in the 105 suite are crowded. There is classroom capacity to allow offices to occupy space outside this suite. One option could be for the Counseling, Advising, and Retention Offices would move out of the 105 suite into repurposed classroom or lounge space.

If the Counseling, Advising, and Retention offices move out of the 105 suite, the existing departments in the suite will have 382 NSF available for expansion.

Glen Burnie and HCAT

When the Continuing Professional Education offices move to the Arnold Campus, 1,327 NSF would become vacant on the fourth floor. This space could be converted into a new Dental Assisting Lab and corresponding lab support space.

Strategies for Space Realignment

Impact on AACC's Physical Space Inventory

It is anticipated that the new Health Science and Biology Building and the Renovation and Addition to Dragun Science Building projects will be completed before the end of 2025. Due to the current deficit of laboratory space and the need for modernization of science laboratories, it is essential to the growth of the College that these projects be completed as soon as possible.

As these two projects are completed, space will be vacated on the Arnold Campus, creating opportunities to accommodate the needs of other departments. In the interim, smaller space moves may be accomplished to help departments optimize adjacencies and be more efficient. The following improvements are a sample of changes that may take place independently of these two major capital projects.

- Classrooms may be converted to informal study space, adjunct offices, or faculty offices.
- A Veterans' Career Center could be placed in an underutilized classroom.
- An enclosure could be constructed for the Athletic Press Box.

Figure 4.28 shows the proposed space changes that would occur between 2015 and 2025 related to the construction of the Health Science and Biology Building and the Renovation and Expansion of Dragun Science Building. Construction of the Health Sciences and Biology Building will require the demolition of the Schwartz Building and the Pool. When the Pool is removed, a new facade will need to be constructed at the Gymnasium Building. Once the Health Sciences and Biology Building is completed, vacancies will be created in Florestano, Careers, and Dragun. Further space changes will occur in the Math Building, Florestano and Careers as departments are moved to new locations to accommodate their space needs. Eventually, Johnson will be demolished to facilitate the relocation of the ring road.

Figure 4.28 Facilities Inventory Changes

NCES CODE	NCES CATEGORY	Fall 2015 Before Gains/ (Losses)	Projected Changes Related to Construction of the Health Science and Biology Building							Projected Changes Related to Construction of the HPBSB (continued)		Fall 2020 After Gains/ (Losses)	Projected Changes Related to Renovation and Addition at Dragun		Departmental Relocations						Fall 2025 After Gains/ (Losses)
			Pool Changes	Schwartz Changes	Gym Changes	New HPBSB	Annex A Changes	Green-house Changes	Flores-tano Changes	Careers Changes	Dragun Changes		Dragun Changes	Careers Changes	Careers Changes (Math In)	Math Building Changes	Flores-tano Changes	Careers Changes	Arnold Campus Changes	Johnson Changes	
100 (110-115)	CLASSROOM	102,832	0	(6,527)	0	9,507	(1,763)		(10,216)		0	93,833	3,781	0	0	(3,150)	8,520	(3,452)	(1,704)	(2,297)	95,531
200	LABORATORY	190,701	0	(1,139)	0	66,310	(1,832)	0	(17,469)	(4,793)	(5,879)	225,899	16,743	(4,551)	3,150	1,854	10,273	0	0	(1,221)	252,147
210-15	Class Laboratory	174,789	0	(1,139)		66,310	(1,832)		(17,469)	(4,793)	(5,879)	209,987	16,743	(4,551)	3,150	1,854	10,273			(1,221)	236,235
220-25	Open Laboratory	15,912										15,912									15,912
250-55	Research Lab.	0										0									0
300	OFFICE	157,038	(659)	(859)	0	20,653	(352)	0	(7,993)	(782)	(974)	166,072	1,150	(631)	4,517	(2,004)	11,737	(571)	5,777	(4,987)	181,060
310-15	Office/ Conf. Room	157,038	(659)	(859)		20,653	(352)		(7,993)	(782)	(974)	166,072	1,150	(631)	4,517	(2,004)	11,737	(1,671)	5,777	(4,987)	179,960
320-25	Testing/Tutoring	0										0						1,100			1,100
350-55	Included w/ 310	0										0									0
400	STUDY	34,188	0	0	0	2,420	0	0	0	0	0	36,608	880	0	0	800	2,620	571	6,090	0	47,569
410-15	Study	17,726	0			2,420						20,146	880			800	2,620	571	6,090		31,107
420-30	Stack/Study	16,462										16,462									16,462
440-55	Processing/Service	0										0									0
500	SPECIAL USE	38,262	(9,275)	0	3,075	1,000	0	(732)	0	0	0	32,330	0	0	0	0	0	0	0	0	32,330
520-25	Athletic	36,441	(9,275)		3,075							30,241									30,241
530-35	Media Production	1,089	0									1,089									1,089
580-85	Greenhouse	732				1,000		(732)				1,000									1,000
600	GENERAL USE	59,175	0	0	0	1,790	0	0	0	0	0	60,965	1,100	0	0	2,500	2,528	0	0	0	67,093
610-15	Assembly	9,514										9,514									9,514
620-25	Exhibition	2,416										2,416					748				3,164
630-35	Food Facility	14,718										14,718									14,718
640-45	Day Care	2,027										2,027				2,500					4,527
650-55	Lounge	15,955	0			800						16,755	700				580				18,035
660-65	Merchandising	8,918										8,918	400								9,318
670-75	Recreation	0										0									0
680-85	Meeting Room	5,627	0			990						6,617					1,200				7,817
700	SUPPORT	46,750	0	0	0	0	0	0	0	0	0	46,750	0	0	0	0	0	0	0	0	46,750
710-15	Data Processing	6,370										6,370									6,370
720-25	Shop	15,478	0									15,478									15,478
730-35	Central Storage	14,748	0									14,748									14,748
740-45	Vehicle Storage	2,273										2,273									2,273
750-55	Central Service	7,881										7,881									7,881
760-65	Hazmat Storage	0										0									0
800	HEALTH CARE	531	0	0	0	0	0	0	0	0	0	531	0	0	0	0	0	0	0	0	531
900	RESIDENTIAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
050	INACTIVE AREA	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
060	ALTER. OR CONV.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
070	UNFINISHED AREA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
090	OTHER ORG. USAGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total NASF:	**629,477**	(9,934)	(8,525)	**3,075**	**101,680**	(3,947)	(732)	(35,678)	(5,575)	(6,853)	**662,988**	**23,654**	(5,182)	**7,667**	**0**	**35,678**	(3,452)	**10,163**	(8,505)	**723,011**

Computation of Space Needs: 2015 through 2025

As the previous tables illustrate, if the proposed Master Plan is implemented, AACC will have a total of 723,011 NSF college-wide by 2025. This will be sufficient to accommodate the College's expected growth. Calculations based on Maryland's space use targets resulted in an overall space need of 829,544 NSF. The Master Plan, fully implemented, includes 106,533 less NSF due to consultant-recommended efficiencies and collocation of resources.

Figure 4.29 Computation of Space Needs

NCES CODE	NCES CATEGORY	Need 2014	Inventory 2014	Surplus/ (Deficit)	Need 2025	Inventory 2025	Surplus/ (Deficit)	Actual 2025 Surplus/ (Deficit)
100 (110-115)	CLASSROOM	66,660	102,832	36,172	77,357	95,531	18,174	18,174
200	LABORATORY	225,813	190,701	(35,112)	262,048	252,147	(9,901)	(9,901)
210-15	Class Laboratory	203,461	174,789	(28,672)	236,109	236,235	126	126
220-25	Open Laboratory	22,352	15,912	(6,440)	25,939	15,912	(10,027)	(10,027)
250-55	No Allowance							
300	OFFICE	189,787	157,038	(32,749)	219,762	181,060	(38,702)	(38,702)
310-15	Office/ Conf. Room	186,376	157,038	(29,338)	215,924	179,960	(35,964)	(35,964)
320-25	Testing/Tutoring	3,411	0	(3,411)	3,838	1,100	(2,738)	(2,738)
350-55	Included w/ 310							
400	STUDY	46,465	34,188	(12,277)	53,696	47,569	(6,127)	(6,127)
410-15	Study	33,263	17,726	(15,537)	38,600	31,107	(7,493)	(7,493)
420-30	Stack/Study	9,430	16,462	7,032	10,783	16,462	5,679	5,679
440-55	Processing/Service	3,772	0	(3,772)	4,313	0	(4,313)	(4,313)
500	SPECIAL USE	82,464	38,262	(44,202)	92,712	32,330	(60,382)	(60,382)
520-23	Athletic	72,220	36,441	(35,779)	80,760	30,241	(50,519)	(50,519)
530-35	Media Production	9,244	1,089	(8,155)	10,952	1,089	(9,863)	(9,863)
580-85	Greenhouse	1,000	732	(268)	1,000	1,000	0	0
600	GENERAL USE	71,263	57,148	(14,115)	79,707	62,566	(17,141)	(22,521)
610-15	Assembly	19,644	9,514	(10,130)	21,352	9,514	(11,838)	(11,838)
620-25	Exhibition	3,411	2,416	(995)	3,838	3,164	(674)	(674)
630-35	Food Facility	27,040	14,718	(12,322)	31,374	14,718	(16,656)	(16,656)
640-45	No Allowance							
650-55	Lounge	9,657	15,955	6,298	11,205	18,035	6,830	6,830
660-65	Merchandising	3,511	8,918	5,407	3,938	9,318	5,380	
670-75	No Allowance							
680-85	Meeting Room	8,000	5,627	(2,373)	8,000	7,817	(183)	(183)
700	SUPPORT	37,069	46,750	9,681	42,827	46,750	3,923	(638)
710-15	Data Processing	3,492	6,370	2,878	4,132	6,370	2,238	
720-25	Shop/ Storage	27,701	32,499	4,798	31,881	32,499	618	
730-35	Included w/ 720							
740-45	Included w/ 720							
750-55	Central Service	5,322	7,881	2,559	6,176	7,881	1,705	
760-65	Hazmat Storage	554	0	(554)	638	0	(638)	(638)
800	HEALTH CARE	1,264	531	(733)	1,435	531	(904)	(904)
900	No Allowance							
050-090	No Allowance							
	Total NASF:	**720,785**	**627,450**	(93,335)	**829,544**	**718,484**	(111,060)	(121,001)

Chapter 5
Space Utilization

Classrooms and Class Lab Utilization

The effective use of instructional space is an essential factor in space utilization efficiency. As funding for capital expenditures is reduced, and space shortages and the need for new types of space develop, it becomes even more important for colleges to focus on the efficient use of their current resources. With this in mind, a utilization study of classrooms and class labs was conducted as a part of the Anne Arundel Community College Academic Master Plan.

For the purposes of this analysis, a classroom is defined as a room used for classes that is not tied to a specific subject or discipline by equipment in the room or the configuration of the space. Such rooms include classrooms equipped with computer workstations, as long as the computer software is not dedicated to a single academic discipline.

A class lab is a room primarily used for formally or regularly scheduled classes that require special purpose equipment or a specific room configuration for student participation, experimentation, observation, or practice in an academic discipline.[1] Included in this category are science laboratories, group studios, nursing laboratories, and vocational laboratories. Computer rooms used primarily to instruct students in the use of computers are classified as class labs if that instruction is conducted primarily in formally or regularly scheduled classes.

The following summary provides an overview of AACC's instructional spaces and their distribution and use patterns during the fall 2014 semester.

Study Methodology

Scheduling data for the fall 2014 semester for credit and non-credit courses was used for this study. The scheduling database, provided by the College, contained information such as the name of the course, course location, meeting days and times, portion of the semester in which the course was taught, and number of students enrolled in the course. After a preliminary review of the utilization study results, it became clear that some room scheduling information had not been included in the initial database. The consultants met with faculty and staff to solicit additional scheduling information for the fall 2014 term. The College also provided events and data that were downloaded from the College's R25 scheduling program to fill out the room utilization picture.

1 "Postsecondary Education Facilities Inventory and Classification Manual," July 1992, by the National Center for Education Statistics.

Data elements from the College's physical space inventory (PSI) were merged with the scheduling database to provide information about the number of student stations (seats) in each room, the area of the room, and the space classification, i.e., classroom or class lab. Room space code classifications were note adjusted and were used exactly as provided in the PSI.

Course Meetings

While the majority of courses ran the full semester, many were held during only a portion of the semester. This meant it was possible for an instructional space to be scheduled for more than one course on the same day of the week, at the same time, if the courses ran during different portions of the semester. Therefore, it was necessary to take a "snap shot" of the schedule at one point during the semester to eliminate this potential overlap and avoid duplication of data. For each campus a specific week was chosen representing maximum utilization - the peak week during which the most course meetings occurred during each semester.

Instructional Space

According to the PSI supplied by AACC, college-wide there were a total of 157 classrooms and 158 class labs available for scheduling. Figure 5.1 tallies the number of classrooms and class labs at each campus. Note that all of these spaces were scheduled for courses during the fall semester or during the peak week.

Figure 5.1

Instructional Spaces College-wide

Campus	Classrooms	Class Labs	Total
Arnold	108	122	230
Arundel Mills	30	13	43
Glen Burnie	17	8	25
CCPT	0	13	13
HCAT	2	2	4
Total	157	158	315

Target Criteria

There are three variables in the space utilization equation: the square footage per student station in each room; the percentage of available hours a room is scheduled; and the percentage of seats filled when a room is in use. A change in any one of these variables has an effect on the utilization of the space.

The room and seat utilization target criteria recommended by the Maryland Higher Education Commission (MHEC) are significantly lower than those used by other state higher education systems. Figure 5.2a summarizes MHEC utilization recommendations based on a 45-hour week for daytime courses (8:00 am to 5:00 pm).

One of the goals of an instructional space utilization study is to identify strategies to optimize the use of existing space resources. For this reason, the consultants, in consultation with the Steering Committee, used target criteria more in-line with nationally accepted recommendations (see Figure 5.2b). The seat fill target of 80 percent reflects the goal of achieving higher utilization levels. A seat utilization rate over 70 percent is considered acceptable.

Figure 5.2a Target criteria used in this study

Maryland Target Criteria		Room Utilization	Seat Utilization
Room Type	Student Station Size (NASF)	Daytime Hours 45 Hours/Week (Monday-Friday)	Target Range Day and Evening
Classrooms	18 NASF	20 Hours (44%)	60%
General/Open Computer Labs	40 NASF	20 Hours (44%)	60%
Class Labs	50 NASF Natural & Social Science	15 Hours (33%)	60%
	up to 115 NASF Arts & Vocational Technology		

Figure 5.2b Target criteria used in this study

AACC Recommended Target Criteria		Room Utilization		Seat Utilization
Room Type	Student Station Size (ASF)	Daytime Hours 45 Hours/Week (Monday-Friday)	Evening Hours 20 Hours/Week (Monday-Thursday)	Target Range Day and Evening
Classrooms	20-25 ASF	30 Hours (67%)	13 Hours (67%)	80%
General/Open Computer Labs	40 ASF	30 Hours (67%)	13 Hours (67%)	80%
Class Labs	40-50 ASF Natural & Social Science	25 Hours (55%)	11 Hours (55%)	80%
	up to 115 ASF Arts & Vocational Technology			

Square Footage per Student Station

- Ideally, 20 to 25 square feet should be provided for each student workstation in a classroom.
- Computer labs should have a minimum of 40 square feet per station.
- In science labs, student stations should be 40 to 50 square feet. Student stations in arts and vocational instruction labs can be up to 115 square feet or more, depending on what is being taught in the space.

Room Utilization

- Each classroom should be scheduled 30 hours over the course of a five-day, 45-hour week during the day. During the evening hours, each space should be scheduled 13 hours Monday through Thursday (20-hour week).
- Science or vocational labs should be scheduled 25 hours per week during the same five-day period during the day, and 11 hours per week during the same five-day period during the evening.

Seat Occupancy

- Eighty percent of seats should be filled when a course meeting is in session in a classroom or class lab. Rooms with seat occupancies within ten percent above or below the target fall within acceptable limits. Rooms with seat occupancies above 90 percent are considered over-utilized, while rooms with seat occupancies below 70 percent are thought to be under-utilized.

The consultant team used four different methods to analyze the utilization data. The following provides a description of the four types of tables/charts found in the body of this report to assist the reader with understanding the study results.

Utilization Summary Tables

Utilization summary tables were prepared for each campus to provide a detailed assessment of how instructional space was used during the peak week of all the fall 2014 semester. The results of the analysis are divided into day and evening groupings. The room area, number of seats, number of square feet per seat, and number of hours scheduled during the peak week are shown for each room. Green highlighting in the right-hand columns of the tables indicates the target criteria were met. For seat utilization light green highlighting identifies spaces that fell within ten percent below the target. For hourly utilization it identifies spaces that fell five percent below the targets. Red highlighting indicates the targets were exceeded. In all other cases where no color is shown, the utilization targets were not met indicating that additional hourly and/or seating capacity was available.

In some cases, seat utilization percentages exceeded 100 percent. This generally occurred when either the number of seats reported in a room was incorrect and/or the enrollment data from the course schedule was not accurate.

Distribution of Course Meetings by Time of Day

Room use for each day during the peak week was tracked in half-hour increments, depicting the peaks and valleys of the daily schedule and providing a detailed look at scheduling patterns. The graph provides data about the total number of available instructional spaces; the number of rooms that were scheduled during the peak week; and the maximum number of spaces that were used at any one time.

Figure 5.3 Example of Utilization Summary Table

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
CADE*123	Classroom - Music	Credit	462	21	22	77.8%	5.00	11.1%
CADE*124	Classroom - Music Appreciation	Credit	783	32	24	49.3%	19.50	43.3%
CADE*128	Electronic Piano Studio	Credit	832	13	64	98.9%	10.00	22.2%
CADE*214	CAT PC Lab	Credit	1,045	20	52	85.0%	25.50	56.7%
CADE*224	Rehearsal Hall	Credit	1,980	60	33	23.3%	2.75	6.1%
CADE*226	CAT Mul Lab	Credit	982	20	49	73.5%	27.50	61.1%

Distribution of Course Meetings by Day of Week

These bar charts track the distribution of course meetings during the peak week on a day-to-day basis. If course offerings were distributed uniformly across a five-day schedule, one would expect that 20 percent of all course meetings would occur on any given day. However, Fridays typically have lower utilization rates, especially at two-year institutions.

Scheduled Class Size Compared to Room Capacity

These tables illustrate the degree to which course enrollments correlated with room capacity during the peak week. The number in each box indicates the number of course meetings that took place in a room with a given seating capacity and enrollment. Green highlighting indicates there was a good match between the number of students enrolled and the seating capacity of the room in which the course was scheduled. Light green highlighting indicates the spaces were marginally smaller or larger than the class enrollment but within an appropriate range. Red indicates the spaces were significantly larger or smaller than the recommended size of the room for the class enrollment.

The match for class size to room capacity is based on the seat occupancy target of 80 percent utilization for both classrooms and class labs, as outlined in Figure 5.2b.

The target criteria for a student station in a classroom is 20 to 25 square feet per student. Sixty-one percent of AACC's classrooms on all campuses (including assembly spaces, conference and meeting rooms, and open labs that were used for course instruction) met the target for square feet per student. Forty-eight of the 157 classrooms (31%) were under the target.

Figure 5.4 Example of Course Distribution Graph

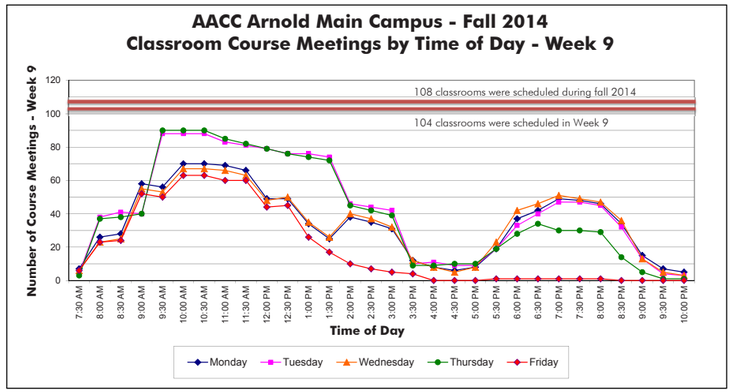


Figure 5.5 Example Course Meetings by Day of Week Chart

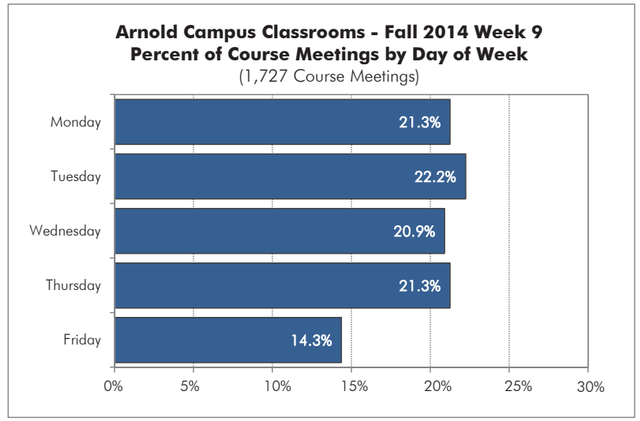


Figure 5.6 Example Scheduled Class Size/Room Capacity Table

AACC - Arnold Main Campus
Fall 2014 - Week 9

Classroom Seating Capacity	Scheduled Class Size (Enrollment)												Room Count
	10 or less	11 to 15	16 to 20	21 to 25	26 to 30	31 to 35	36 to 40	41 to 45	46 to 50	51 to 55	56 to 60	111 to 120	
11 to 15	1	1											1
16 to 20	21	9	57	10	3								10
21 to 25	71	64	118	79	5		1	3					26
26 to 30	29	52	169	136	83								21
31 to 35	30	22	33	54	38	7							11
36 to 40	33	89	118	82	89	19	74	3					26
41 to 45	1		1	4									2
46 to 50		2	2	2	10	6	16		1				2
76 to 80				5	2			2	2	2	4		1
81 to 85		2			4	5	6						1
86 to 90			8	4	2								1
96 to 100		1	2		3	2	7	15					1
121 to 130			1										1
Total Course Meetings = 1,727	186	242	509	376	239	39	104	23	3	2	4	0	104

Average Classroom Size = 680 SF; 21 SF/Seat

Instructional Space Utilization Study Conclusions

College-Wide

College-wide, a significant number of classrooms and class labs were underutilized in terms of the number of hours they were scheduled. This indicates that the existing instructional space inventory can accommodate additional course meetings. There were instances of high utilization, however. On the Arnold Campus, biology labs in both the Dragun Science and Florestano buildings were at capacity during the day, and some were also at capacity in the evening. During the evening at both Glen Burnie Town Center and the Center for Cyber and Professional Training (CCPT), classrooms and class labs were near capacity. At Arundel Mills, the two Gaming Labs were both scheduled for 32 hours per week during the day. These data indicate the potential need for additional space.

At all five AACC locations, during the day particularly, seat utilization targets were met indicating course sections were being filled, and often overfilled, when courses were scheduled.

It is important to note that class labs are often used for out of class work that is not documented by the Registrar. That is one of the reasons the hourly use target for class labs is lower than that for classrooms. Specialized labs often have low hourly utilization rates, especially when they are required for new and developing programs. There are many factors that must be considered when determining how well a room is being used. The results from this study are only one factor that must be considered when determining campus space needs.

The following provides a brief summary of the study conclusions, by campus.

Arnold Campus

- A majority of the classrooms and class labs were underutilized in terms of the hourly utilization targets, but a large number of spaces met or exceeded the seat utilization target.
- Many of the spaces that met both the hourly and seat fill targets were class labs.
- Biology labs in the Dragun Science and Florestano buildings are at capacity. Additional labs are needed to accommodate the existing number of course sections being taught.
- Other class labs, such as the Physical Science labs in the Careers Building, the Design and Drawing/ Painting Studios in the Cade Center for Fine Arts, and HCAT labs in the Humanities Building are also at capacity indicating a need for additional class lab space if these programs are expected to grow in place.
- Of the 108 available classrooms on the campus, a maximum of 90 (83%) were scheduled at the same time during the fall 2014 semester.
- Of the 122 available class labs, a maximum of 84 (69%) were scheduled at the same time during the fall of 2014 semester.
- Fridays present an opportunity for the addition of course meetings to the schedule.
- Standardizing course start and stop times would help optimize the use of instructional space.

Arundel Mills

- Utilization rates were higher in the evening. Thirty-three instructional spaces were scheduled during the day and thirty-seven were scheduled after 5 PM.
- During the day, only one classroom met the hourly utilization target but in the evening, 30 percent of the 27 scheduled classrooms met or exceeded the target range.
- During the evening, 25 percent of the 12 scheduled class labs actually exceeded the hourly target. During the evening, 30 percent of the class labs met or exceeded the target.
- During the day a significant number of course meetings were filled or overfilled. Seat utilization was also relatively good in the evenings.
- The two Gaming Labs, which were only scheduled during the day, exceeded the hourly use target of 25 hours per week.
- Class lab 314 was at capacity both day and night. Class labs 404 (Physical Science) and 411 (Biology) were at capacity during the evenings.
- A maximum of 24 (80 percent) of the 30 available classroom spaces were used simultaneously during the fall 2014 semester.
- Nine (69 percent) of the 13 available class labs were scheduled at the same time during fall 2014.
- Peak utilization of classrooms occurred in the evening Monday through Thursday.

Glen Burnie Town Center

- Glen Burnie was busier in the evenings than during the day in fall 2014.
- Many class labs were used to capacity during the evening. Only four of the scheduled 14 classrooms (29 percent) were scheduled more than 13 hours per week but 75 percent of the class labs were scheduled over 11 hours per week in the evening.
- When classrooms and class labs were scheduled, the majority of the course meetings met or exceeded the seat utilization target during the day and evening hours.

Center for Cyber and Professional Training (CCPT)

- All instructional spaces at the CCPT location are classified as class labs.
- The hourly utilization target and the seat utilization target were both exceeded in 64 percent of the 11 rooms scheduled during the day and in 50 percent of the 10 rooms that were scheduled during the evening.
- Three rooms were only scheduled during the day (304, 305B, and 333) and two rooms were only scheduled during the evening (314 and 315). This represents some additional capacity for offering course meetings in a schedule that otherwise appears to be quite tight.

Hotel, Culinary Arts and Tourism (HCAT) Institute

- The two classrooms and two class labs at this location were more heavily utilized during evening hours than during the day.
- When classroom 114 was scheduled, the course sections were full.
- There is capacity at this location to increase the number of course meetings during the day and evening hours.
- No class labs were utilized on Tuesday during the fall 2014 semester but they were scheduled on Friday.
- No lecture courses were taught on Friday.

ARNOLD CAMPUS - FALL 2014

Utilization Summary Tables

Figures 5.7 to 5.25 provide a summary of the hourly and seat fill utilization results for the scheduled instructional spaces on the Arnold Main Campus during week 9 in fall 2014. The ninth week was chosen for the analysis because 3,037 course meetings were offered during that period representing peak utilization during the semester.

After the Utilization Study was completed, additional room use data was provided to the consultant team. This data is not reflected in the utilization tables but has been captured in bulleted notes, by building, on the following pages.

Arnold Main Campus Summary

- There is sufficient classroom capacity on the Arnold Campus to add a significant number of course meetings to the schedule, though not necessarily during peak hours between 10 AM and 2 PM. While it is often prudent to offer departments priority scheduling for certain classrooms, scheduling classes in appropriately sized rooms, wherever they are on campus, helps to optimize the utilization of instructional space.
- The room use data collected in the R25 scheduling database for specialized class labs does not always reflect the many hours of individual instruction or out of class time that occurs in many rooms during the course of a semester. Therefore, low utilization rates do not necessarily mean a room is not being well used. Other factors must be considered when evaluating the utilization of specialized spaces.
- Biology labs in both the Dragun Science Building and the Florestano Building were at capacity during the day, and some were also at capacity in the evening. It is clear that additional biology labs are needed on the Arnold campus to accommodate current and projected courses for both Science and Health Sciences.
- At least one additional General Chemistry Lab is needed.
- Other class labs, such as the Physical Science labs in the Careers Building, the Design and Drawing/ Painting Studios in the Cade Center for Fine Arts, and HCAT labs in the Humanities Building are also at capacity indicating a need for additional class lab space if these programs are expected to grow.
- The existing HCAT HRM Café (HUM*214) is over-scheduled both day and night, which indicates an additional lab may be necessary, especially if the program grows.
- While the seat utilization target was met or exceeded in numerous spaces, the data indicate that many rooms were under-filled when scheduled. As buildings are renovated, the need for classrooms of specific sizes should be reviewed so the instructional space inventory can be fine-tuned to better fit course enrollments.
- Standardizing course start and stop times would help to improve room utilization.

Andrew G. Truxal Library

- LIBR*110 (an open lab) was used for scheduled courses fairly heavily during the day and minimally during the evening

Annex A

- Two of the building's four classrooms were well used but there is some additional capacity.
- When the largest classroom (ANXA*110; 64 seats) was scheduled, it was filled to capacity.
- One conference room was also scheduled for a few courses.
- There is some capacity to accommodate additional course meetings.

Figure 5.7

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Andrew G. Truxal Library								
Day Courses								
LIBR*110	Open Lab	Credit	566	20	28	90.9%	21.00	46.7%
		Class Lab Total	**566**	**20**			**21.00**	
		Day Total	**566**	**20**			**21.00**	
Evening Courses								
LIBR*110	Open Lab	Credit	566	20	28	55.0%	2.50	12.5%
		Class Lab Total	**566**	**20**			**2.50**	
		Evening Total	**566**	**20**			**2.50**	

Figure 5.8

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Annex A								
Day Courses								
ANXA*107	Conference	Non Credit	299	12	25	67.9%	8.00	17.8%
ANXA*110	Classroom	Credit	1,716	64	27	93.8%	16.00	35.6%
ANXA*112	General Purpose Class	Credit	795	40	20	55.7%	32.00	71.1%
ANXA*114	General Purpose Class	Credit	883	40	22	100.0%	26.50	58.9%
ANXA*116	General Purpose Class	Credit	880	42	21	95.2%	14.50	32.2%
		Classroom Total	**4,573**	**198**			**97.00**	
		Day Total	**4,573**	**198**			**97.00**	
Evening Courses								
ANXA*107	Conference	Non Credit	299	12	25	50.0%	2.00	10.0%
ANXA*112	General Purpose Class	Credit	795	40	20	40.0%	3.00	35.0%
		Non Credit				30.0%	4.00	
ANXA*114	Classroom - Health Profession	Non Credit	883	40	22	15.0%	5.00	25.0%
ANXA*116	Classroom - Health Profession	Non Credit	880	42	21	16.7%	2.00	10.0%
		Classroom Total	**2,857**	**134**			**16.00**	
ANXA*110	Classroom - Health Profession	Non Credit	1,716	64	27	20.3%	2.00	10.0%
		Class Lab Total	**1,716**	**64**			**2.00**	
		Evening Total	**4,573**	**198**			**18.00**	

Annex B

- ANXB*112 (American Sign Language classroom) reportedly has special equipment and lighting to support the curriculum. The room was scheduled for 26 hours per week in fall 2014.
- There is some capacity to accommodate additional course meetings.

Cade Center for Fine Arts

- The majority of the scheduled instructional spaces in the Cade building are specialized class labs dedicated to Art, Drama, Dance, and Digital Media. The course utilization data captured by the R25 scheduling system does not reflect the many hours of practice and individual instruction that occurs in these rooms during the course of a semester. Therefore, low utilization rates identified in this study do not mean a room is not being well used.
- During the day, a number of rooms did meet the hourly target criteria: CADE*103 Drama/Dance Studio; CADE*214 CAT PC Lab; CADE*226 CAT Lab; CADE*313 Design Studio #1; and CADE*326 Drawing/Painting Studio.
- When scheduled, 42 percent of the scheduled rooms met the seat utilization target.
- In the evening, CADE*224 Rehearsal Hall and CADE*302 Print/Press Studio met the hourly utilization target.
- CADE*319 is used in conjunction with classes held in CADE*313. The data for CADE*319 does not appear in R25.
- CADE*121, 122, 123, 124 and 205 are used for applied music lessons that involve individual music and voice instruction. In fall 2014, 33 sections of applied music sessions ran in these rooms involving a total of 108 students. This data was not included in the database provided for the utilization study so it does not appear in Figure 5.10.
- CADE*214 and 226 were well utilized during fall 2014 for scheduled classes. In addition, when not scheduled, they functioned as open computer labs for students.
- CADE*124, 219, and 224 were reportedly also used for non-credit courses but the hourly data was not available to the consultants.

Figure 5.9

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Annex B								
Day Courses								
ANXB*109	General Purpose Class	Credit	717	32	22	57.4%	20.00	56.7%
		Credit/Non-Credit				71.9%	5.50	
ANXB*110	General Purpose Class	Credit	791	32	25	69.4%	18.00	63.7%
		Non Credit				34.4%	10.67	
ANXB*111	General Purpose Class	Credit	787	38	21	65.8%	15.50	34.4%
ANXB*112	Classroom - American Sign Language	Credit	847	40	21	34.9%	22.00	57.8%
		Meeting				37.5%	4.00	
ANXB*113	General Purpose Class	Credit	846	40	21	66.1%	16.00	35.6%
ANXB*114	General Purpose Class	Credit	783	38	21	61.6%	14.50	32.2%
		Classroom Total	**4,771**	**220**			**126.17**	
		Day Total	**4,771**	**220**			**126.17**	
Evening Courses								
ANXB*109	General Purpose Class	Non Credit	717	32	22	28.1%	5.00	25.0%
ANXB*110	General Purpose Class	Non Credit	791	32	25	12.5%	10.00	50.0%
ANXB*111	General Purpose Class	Credit	787	38	21	52.6%	2.00	20.0%
		Non Credit				34.2%	2.00	
ANXB*112	Classroom - American Sign Language	Credit	847	40	21	47.5%	2.75	23.8%
		Non Credit				10.0%	2.00	
ANXB*113	General Purpose Class	Non Credit	846	40	21	15.0%	5.00	25.0%
ANXB*114	General Purpose Class	Non Credit	783	38	21	35.5%	4.00	20.0%
		Classroom Total	**4,771**	**220**			**32.75**	
		Evening Total	**4,771**	**220**			**32.75**	

Figure 5.10

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Cade Center for Fine Arts								
Day Courses								
CADE*205	Classroom - Art history	Credit	950	40	24	55.8%	19.50	48.9%
		Credit/Non-Credit				27.5%	2.50	
CADE*207	Classroom - Old video Conferencing	Credit	1,586	50	32	71.2%	11.00	28.9%
		Non Credit				98.0%	2.00	
		Classroom Total	**2,536**	**90**			**35.00**	
CADE*103	Drama Dance Studio	Credit	1,377	25	55	38.4%	15.50	51.1%
		Credit/Non-Credit				56.0%	7.50	
CADE*107	Drama Dance Studio	Credit	1,173	25	47	60.0%	5.00	16.7%
		Credit/Non-Credit				36.0%	2.50	
CADE*121	Classroom - Music	Credit	484	24	20	62.5%	7.50	16.7%
CADE*122	Classroom - Music	Credit	661	32	21	44.9%	14.75	32.8%
CADE*123	Classroom - Music	Credit	462	21	22	77.8%	5.00	11.1%
CADE*124	Classroom - Music Appreciation	Credit	783	32	24	49.3%	19.50	43.3%
CADE*128	Electronic Piano Studio	Credit	832	13	64	98.9%	10.00	22.2%
CADE*214	CAT PC Lab	Credit	1,045	20	52	85.0%	25.50	56.7%
CADE*224	Rehearsal Hall	Credit	1,980	60	33	23.3%	2.75	6.1%
CADE*226	CAT Mul Lab	Credit	982	20	49	73.5%	27.50	61.1%
CADE*310	Multimedia Studio	Credit	596	24	25	45.8%	7.25	16.1%
CADE*312	Screen Printing Room	Credit	863	16	54	62.5%	3.50	7.8%
CADE*313	Design Studio #1	Credit	930	22	42	82.6%	24.50	54.4%
CADE*322	Art PC Studio	Credit	1,250	20	63	83.3%	24.00	70.6%
		Credit/Non-Credit				100.0%	7.75	
CADE*323	Drawing/Painting Studio	Credit	1,118	25	45	77.6%	20.00	61.7%
		Credit/Non-Credit				72.0%	7.75	
CADE*324	Drawing/Painting Studio	Credit	1,094	25	44	64.8%	11.75	53.9%
		Credit/Non-Credit				80.0%	4.50	
		Non Credit				78.0%	8.00	
CADE*326	Drawing/Painting Studio	Credit	1,282	28	46	57.7%	23.50	52.2%
		Class Lab Total	**16,912**	**432**			**285.50**	
		Day Total	**19,448**	**522**			**320.50**	
Evening Courses								
CADE*205	Classroom - Art history	Credit	950	40	24	37.5%	3.00	15.0%
CADE*207	Classroom - Old video Conferencing	Non Credit	1,586	50	32	22.0%	5.00	25.0%
		Classroom Total	**2,536**	**90**			**8.00**	
CADE*103	Drama Dance Studio	Non Credit	1,377	25	55	64.0%	1.00	5.0%
CADE*121	Classroom - Music	Non Credit	484	24	20	13.5%	5.00	25.0%
CADE*122	Classroom - Music	Credit	661	32	21	28.1%	2.75	26.3%
		Non Credit				6.3%	2.50	
CADE*123	Classroom - Music	Non Credit	462	21	22	19.0%	1.50	7.5%
CADE*125C	Practice Module	Non Credit	66	2	33	50.0%	3.50	17.5%
CADE*214	CAT PC Lab	Credit	1,045	20	52	45.0%	2.00	10.0%
CADE*224	Rehearsal Hall	Credit	1,980	60	33	19.2%	11.00	105.0%
		Non Credit				38.8%	10.00	
CADE*226	CAT Mul Lab	Credit	982	20	49	71.7%	9.25	46.3%
CADE*302	Print/Press Studio	Non Credit	751	20	38	20.0%	12.50	62.5%
CADE*313	Design Studio #1	Credit	930	22	42	50.0%	3.75	18.8%
CADE*323	Drawing/Painting Studio	Credit/Non-Credit	1,118	25	45	60.0%	3.50	17.5%
CADE*324	Drawing/Painting Studio	Credit	1,094	25	44	12.0%	3.50	30.0%
		Non Credit				48.0%	2.50	
CADE*326	Drawing/Painting Studio	Non Credit	1,282	28	46	32.1%	3.00	15.0%
		Class Lab Total	**12,232**	**324**			**77.25**	
		Evening Total	**14,768**	**414**			**85.25**	

Careers Center Building

- During the day, 3 of the 23 classrooms met the hourly utilization target. While 52 percent of the classrooms were scheduled at least 20 hours per week, there is capacity in this building to add additional lecture course meetings. In the evening, there is significant capacity to add additional course meetings.
- During the day, 30 percent of classrooms achieved the seat utilization target.
- The Ceramics Studio (CRSC*120) met both hourly and seat fill targets during the day.
- During the day, three of the five Physical Sciences labs (CRSC*151, 155 and 188) met the hourly use target but there is some capacity for additional course meetings in Physical Science labs CRSC*153 and 186.
- 65 percent of the class labs were filled or over-filled when they were scheduled during the day, specifically the Math and computer labs. Some of these rooms were also filled well during evening courses.
- In the evening, the Micro Bio Lab (CRSC*180) was the only instructional space that met the hourly target.
- The Law Library (CRSC*250) was not used for scheduled courses but is an important resource for Paralegal students.
- CRSC*255, which met the hourly use target, and CRSC*258 were also used for student club meetings and guest lectures.
- CRSC*214 and 216 contain special maps used for Geology courses. These rooms show capacity for additional course meetings but may not be suitable for some classes.
- The reported hours for CRSC*190D and E are reportedly an underestimate. Students come and go from these assisted Math Labs throughout the day.
- Instructional spaces listed in the College's PSI that did not appear to be scheduled in fall 2014, based on R25 data, included CRSC*149, 174, 178, and 184.
- CRSC*256 (Video Conferencing Room) was used for one scheduled course that did not fall within the peak week of the study. It was reportedly also used for IPD classes that were not tracked in R25.
- Continuing Education courses were reportedly held in CRSC*215, 216 and 256 but any non-credit courses included in the R25 database were either identified as having been canceled or not held during the peak week.

Figure 5.11

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Careers Center Building								
Day Courses								
CRSC*200	Learning Theater	Credit	1,456	80	18	49.9%	15.50	34.4%
CRSC*210	General Purpose Class	Credit	705	35	20	69.2%	24.50	54.4%
CRSC*212	General Purpose Class	Credit	767	40	19	57.0%	30.00	66.7%
CRSC*214	General Purpose Class	Credit	811	40	20	63.8%	24.00	53.3%
CRSC*215	General Purpose Class	Credit	831	30	28	52.2%	21.00	46.7%
CRSC*216	General Purpose Class	Credit	789	40	20	53.4%	21.50	47.8%
CRSC*217	General Purpose Class	Credit	566	24	24	75.4%	26.00	57.8%
CRSC*219	General Purpose Class	Credit	583	30	19	50.7%	18.75	41.7%
CRSC*241	Classroom - Business	Credit	611	33	19	54.9%	19.50	43.3%
CRSC*243	Classroom - Business	Credit	601	30	20	75.6%	17.75	39.4%
CRSC*245	Classroom - Accounting	Credit	714	36	20	56.3%	19.00	42.2%
CRSC*247	Classroom - Accounting	Credit	728	36	20	57.0%	21.50	47.8%
CRSC*251	Classroom - Accounting	Credit	757	36	21	49.5%	15.75	35.0%
CRSC*253	Classroom - Accounting	Credit	714	36	20	63.0%	10.50	23.3%
CRSC*254	Math Lab - Assisted	Credit	798	28	29	**85.7%**	14.00	31.1%
CRSC*255	Classroom - Legal Studies	Credit	632	30	21	65.2%	28.00	62.2%
CRSC*258	Classroom - Legal Studies	Credit	621	32	19	54.5%	20.25	45.0%
CRSC*316	Classroom - Social Science	Credit	561	28	20	**89.0%**	13.50	30.0%
CRSC*322	Conference	Credit	508	20	25	34.0%	5.50	21.1%
		Non Credit				40.0%	4.00	
CRSC*340	Classroom - Social Science	Credit	972	40	24	**87.6%**	19.00	42.2%
CRSC*342	Classroom - Social Science	Credit	990	40	25	68.8%	24.00	53.3%
CRSC*344	Classroom - Social Science	Credit	995	40	25	**94.6%**	27.50	61.1%
CRSC*346	Classroom - Social Science	Credit	904	40	23	**85.2%**	35.00	**77.8%**
		Classroom Total	**17,614**	**824**			**476.00**	
CRSC*118	Activities Studio	Credit	722	35	21	68.4%	18.50	41.1%
CRSC*120	Ceramics Studio	Credit	2,830	24	118	78.8%	23.25	51.7%
CRSC*151	Physical Sciences	Credit	884	40	22	59.6%	29.00	**64.4%**
CRSC*153	Physical Sciences	Credit	910	40	23	58.1%	21.00	46.7%
CRSC*155	Physical Sciences	Credit	780	32	24	73.0%	29.50	**65.6%**
CRSC*180	Micro Bio lab - Berlitz Lab	Credit	1,336	24	56	**92.2%**	22.00	48.9%
CRSC*186	Physical Sciences Lab	Credit	778	38	20	65.6%	13.00	28.9%
CRSC*188	Physical Sciences Lab	Credit	941	24	39	79.6%	30.00	**66.7%**
CRSC*190D	Math Lab - Assisted	Credit	343	20	17	**113.1%**	14.75	32.8%
CRSC*190E	Math Lab - Assisted	Credit	447	20	22	**120.0%**	20.50	45.6%
CRSC*208	Computer Lab - BCTS	Credit	625	20	31	**98.0%**	16.50	36.7%
CRSC*218	Computer Lab - BCTS	Credit	755	20	38	**89.5%**	13.00	28.9%
CRSC*231	Computer Lab - BCTS	Credit	639	20	32	**100.0%**	8.00	17.8%
CRSC*233	Computer Lab - BCTS	Credit	614	20	31	**93.8%**	14.25	31.7%
CRSC*260	General Purpose Class	Credit	794	36	22	54.1%	19.00	42.2%
CRSC*262	Computer Lab - Arts & Science	Credit	818	32	26	76.6%	13.50	30.0%
CRSC*324	Class Lab (Dry)	Credit	350	14	25	64.3%	2.50	5.6%
		Class Lab Total	**14,566**	**459**			**308.25**	
		Day Total	**32,180**	**1,283**			**784.25**	

Figure 5.12

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Careers Center Building								
Evening Courses								
CRSC*150	Conference	Credit	430	24	18	20.8%	2.25	11.3%
CRSC*200	Learning Theater	Credit	1,456	80	18	56.9%	5.00	25.0%
CRSC*210	General Purpose Class	Credit	705	35	20	42.9%	7.75	38.8%
CRSC*212	General Purpose Class	Credit	767	40	19	44.2%	8.75	43.8%
CRSC*214	General Purpose Class	Credit	811	40	20	20.0%	3.00	15.0%
CRSC*215	General Purpose Class	Credit	831	30	28	33.3%	6.00	30.0%
CRSC*216	General Purpose Class	Credit	789	40	20	22.5%	3.00	15.0%
CRSC*217	General Purpose Class	Non Credit	566	24	24	41.7%	2.00	10.0%
CRSC*219	General Purpose Class	Credit	583	30	19	40.0%	5.50	47.5%
		Non Credit				21.7%	4.00	
CRSC*241	Classroom - Business	Credit	611	33	19	39.4%	6.00	56.3%
		Non Credit				27.3%	5.25	
CRSC*243	Classroom - Business	Credit	601	30	20	70.0%	6.00	30.0%
CRSC*245	Classroom - Accounting	Credit	714	36	20	44.4%	5.75	58.8%
		Non Credit				36.1%	6.00	
CRSC*251	Classroom - Accounting	Credit	757	36	21	48.6%	5.75	28.8%
CRSC*253	Classroom - Accounting	Non Credit	714	36	20	8.3%	3.00	15.0%
CRSC*255	Classroom - Legal Studies	Non Credit	632	30	21	16.7%	4.00	20.0%
CRSC*258	Classroom - Legal Studies	Credit	621	32	19	42.2%	6.00	30.0%
CRSC*316	Classroom - Social Science	Credit	561	28	20	67.9%	2.50	12.5%
CRSC*340	Classroom - Social Science	Non Credit	972	40	24	22.5%	6.50	32.5%
CRSC*342	Classroom - Social Science	Credit	990	40	25	50.5%	11.00	55.0%
CRSC*344	Classroom - Social Science	Credit	995	40	25	38.3%	5.25	26.3%
CRSC*346	Classroom - Social Science	Credit	904	40	23	35.0%	6.00	60.0%
		Non Credit				7.5%	6.00	
		Classroom Total	**16,010**	**764**			**132.25**	
CRSC*118	Activities Studio	Credit	722	35	21	62.9%	3.00	15.0%
CRSC*120	Ceramics Studio	Credit	2,830	24	118	**83.3%**	3.75	36.3%
		Credit/Non-Credit				58.3%	3.50	
CRSC*151	Physical Sciences	Credit	884	40	22	33.8%	5.00	25.0%
CRSC*153	Physical Sciences	Credit	910	40	23	30.8%	9.00	45.0%
CRSC*155	Physical Sciences	Credit	780	32	24	59.4%	2.50	12.5%
CRSC*180	Micro Bio lab - Berlitz Lab	Credit	1,336	24	56	**85.4%**	11.00	**55.0%**
CRSC*186	Physical Sciences Lab	Credit	778	38	20	37.5%	7.25	36.3%
CRSC*188	Physical Sciences Lab	Credit	941	24	39	62.5%	8.00	40.0%
CRSC*190D	Math Lab - Assisted	Credit	343	20	17	**97.5%**	7.50	37.5%
CRSC*190E	Math Lab - Assisted	Credit	447	20	22	**95.0%**	9.00	45.0%
CRSC*208	Computer Lab - BCTS	Credit	625	20	31	60.0%	3.00	15.0%
CRSC*231	Computer Lab - BCTS	Credit	639	20	32	**80.0%**	5.75	28.8%
CRSC*233	Computer Lab - BCTS	Credit	614	20	31	**90.0%**	7.50	37.5%
CRSC*260	General Purpose Class	Credit	794	36	22	52.8%	2.75	43.8%
		Non Credit				44.4%	6.00	
CRSC*262	Computer Lab - Arts & Science	Credit	818	32	26	68.8%	2.50	12.5%
CRSC*324	Class Lab (Dry)	Credit	350	14	25	64.3%	3.00	15.0%
		Class Lab Total	**13,811**	**439**			**100.00**	
		Evening Total	**29,821**	**1,203**			**232.25**	

Center for Applied Learning and Technology (CALT)

- The classrooms in CALT were under-scheduled during the day and evening. There appears to be significant capacity for additional classroom-based course meetings in this building.
- During the day, classrooms were generally well filled when scheduled.
- There are a large number of specialized class labs in this building, many of which showed low hourly utilization. As previously mentioned, this does not mean the labs were not used extensively during out of class hours.
- Computer Technology Labs CALT*243 and 249 and the Architecture Design Studio (CALT*321) all met the hourly and seat fill utilization targets during the day. Computer Technology Lab CALT*219, Architecture Design Studio CALT*321, and the Architecture CAD Lab CALT*331 met both targets in the evening.
- When class labs were scheduled during the day, 63 percent of the 35 rooms met the seat utilization target. During the evening, 45% of scheduled class labs met the seat fill target.
- Engineering faculty report that day courses were held in CALT*305 (Architecture Computer Lab) but this data was not included in the R25 database so day hours are not included in this report.
- CALT*204, an open computer lab, is sometimes scheduled for Computer Technology courses, although the two scheduled for fall 2014 were canceled. This room reportedly is used to tutor over 800 students each semester and is manned by peer tutors and faculty.
- CALT*223 (CISCO Lab) showed low utilization but it is a highly specialized lab and faculty report projected growth in Networking and Information Assurance programs will result in increased utilization of the room.
- CALT*354 (Engineering Lab), which was fairly well utilized during the day, is also reportedly open to students when not scheduled for work on group projects and homework assignments.
- Computer Technologies faculty report that a significant number of class labs are undersized for their needs. The only way to improve this reported condition, short of renovations, would be to reduce the number of students enrolled in courses to provide more room per student and additional space for equipment. Many of these rooms contain 20 student stations and the majority of courses scheduled in those rooms in fall 2014 did not enroll that many students. However, the presence of equipment in these rooms may be impinging on student space.
- CALT*270 and 272 are reportedly also used for testing at certain times during the semester.
- CALT*107 was used for a non-credit course during fall 2014 but it did not fall within the peak week so does not appear in this study.
- The Mechatronics Lab (CALT*350) reportedly has 16 student stations, not the 18 reported in the PSI. This would increase the seat utilization rate to 65.6 percent during the day and 37.5 percent in the evening.

Figure 5.13

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Center for Applied Learning and Technology								
Day Courses								
CALT*100A	Meeting Room	Non Credit	402	18	22	55.6%	4.00	8.9%
CALT*100B	Meeting Room	Non Credit	772	35	22	28.6%	4.00	8.9%
CALT*100C	Meeting Room	Non Credit	771	35	22	28.6%	4.00	8.9%
CALT*107	Lecture Room	Credit	1,223	84	15	38.4%	19.00	42.2%
CALT*109	General Purpose Class	Credit	547	24	23	67.8%	12.00	35.6%
		Non Credit				66.7%	4.00	
CALT*201	General Purpose Class	Credit	539	24	22	76.3%	11.00	24.4%
CALT*203	General Purpose Class	Credit	544	24	23	52.1%	27.00	60.0%
CALT*205	General Purpose Class	Credit	537	24	22	**81.9%**	19.00	42.2%
CALT*303	General Purpose Class	Credit	479	22	22	**85.2%**	10.00	22.2%
		Classroom Total	5,814	290			114.00	
CALT*101	CE Activities	Credit/Non-Credit	905	20	45	45.0%	2.50	5.6%
CALT*105	CE Activities	Credit	1,486	100	15	16.0%	2.50	21.1%
		Credit/Non-Credit				13.0%	2.50	
		Non Credit				17.5%	4.50	
CALT*111	General Purpose Class	Credit	578	24	24	74.0%	10.00	22.2%
CALT*128	CE Vocational Workshop	Credit	716	24	30	58.3%	2.50	5.6%
CALT*130	CE Vocational Workshop	Credit	735	24	31	**83.3%**	7.50	21.1%
		Non Credit				79.2%	2.00	
CALT*132	CE Vocational Workshop	Credit	706	24	29	72.4%	9.75	48.3%
		Non Credit				**80.6%**	12.00	
CALT*134	CE Vocational Workshop	Credit	712	24	30	**100.0%**	5.00	11.1%
CALT*136	CE Computer Lab	Non Credit	620	24	26	31.9%	5.50	12.2%
CALT*138	CE Computer Lab	Non Credit	631	24	26	36.1%	7.25	16.1%
CALT*207	Computer - Tech Enabled	Credit	537	20	27	**100.0%**	14.00	31.1%
CALT*209	Computer - Tech Enabled	Credit	532	20	27	**85.9%**	18.00	40.0%
CALT*211	Classroom - Tech Enabled	Credit	532	20	27	70.5%	17.75	39.4%
CALT*213	Classroom - Tech Enabled	Credit	533	20	27	**88.8%**	13.00	28.9%
CALT*215	Computer Lab	Credit	542	20	27	**95.0%**	5.75	12.8%
CALT*219	Computer Lab Tech	Credit	771	20	39	**93.8%**	9.25	20.6%
CALT*221	Computer Tech Lab - CISCO	Credit	747	20	37	**88.0%**	11.00	24.4%
CALT*223	Computer Tech Lab - CISCO	Credit	769	20	38	58.0%	22.00	48.9%
CALT*241	Computer Tech Lab	Credit	745	20	37	**96.7%**	22.00	48.9%
CALT*243	Computer Tech Lab	Credit	724	20	36	**85.6%**	28.00	**62.2%**
CALT*245	Computer Tech Lab	Credit	743	20	37	**92.5%**	21.00	46.7%
CALT*247	Computer Tech Lab	Credit	745	20	37	74.0%	19.50	43.3%
CALT*249	Computer Tech Lab	Credit	761	20	38	**80.0%**	24.50	54.4%
CALT*251	Computer Tech Lab	Credit	739	20	37	72.1%	12.25	27.2%
CALT*270	Computer Tech Lab	Credit	772	20	39	**88.6%**	12.25	27.2%
CALT*272	Computer Tech Lab	Credit	741	20	37	75.0%	14.25	31.7%
CALT*301	Interior Design Studio	Credit	1,110	20	56	62.0%	21.50	47.8%
CALT*307	Law Enforcement Lab	Credit	820	24	34	66.8%	33.00	**73.3%**
CALT*309	Electronic Lab	Credit	959	20	48	45.0%	3.00	6.7%
CALT*313	Electronic Lab	Credit	962	20	48	**90.0%**	2.75	6.1%
CALT*321	Architecture Design Studio	Credit	1,607	20	80	75.0%	23.50	52.2%
CALT*331	Ach Cad lab	Credit	1,162	20	58	60.0%	3.25	7.2%
CALT*341	Architecture Design Studio	Credit	1,635	20	82	**96.3%**	18.00	40.0%
CALT*350	Mechatronics lab	Credit	790	16	49	65.6%	17.00	37.8%
CALT*352	Fabrication Lab	Credit	1,294	20	65	63.3%	17.00	37.8%
CALT*354	Engineering Lab	Credit	924	20	46	**96.0%**	21.50	47.8%
		Class Lab Total	29,285	808			498.50	
		Day Total	35,099	1,098			612.50	

Figure 5.14

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Center for Applied Learning and Technology								
Evening Courses								
CALT*100A	Meeting Room	Non Credit	402	18	22	**83.3%**	2.25	11.3%
CALT*100B	Meeting Room	Non Credit	772	35	22	42.9%	2.25	11.3%
CALT*100C	Meeting Room	Non Credit	771	35	22	42.9%	2.25	11.3%
CALT*107	Lecture Room	Credit	1,223	84	15	34.5%	3.00	15.0%
CALT*109	General Purpose Class	Non Credit	547	24	23	41.7%	2.50	12.5%
CALT*201	General Purpose Class	Credit	539	24	22	68.1%	10.00	50.0%
CALT*203	General Purpose Class	Credit	544	24	23	38.9%	5.50	27.5%
CALT*205	General Purpose Class	Credit	537	24	22	79.2%	3.00	25.0%
		Non Credit				54.2%	2.00	
		Classroom Total	5,335	268			32.75	
CALT*103	CE Activities	Non Credit	784	20	39	21.7%	4.00	20.0%
CALT*105	CE Activities	Non Credit	1,486	100	15	13.0%	7.75	38.8%
CALT*111	General Purpose Class	Credit	578	24	24	37.5%	3.00	47.5%
		Non Credit				45.8%	6.50	
CALT*128	CE Vocational Workshop	Credit	716	24	30	52.8%	7.50	37.5%
CALT*130	CE Vocational Workshop	Non Credit	735	24	31	12.5%	2.50	12.5%
CALT*132	CE Vocational Workshop	Credit	706	24	29	66.7%	10.00	**62.5%**
		Non Credit				37.5%	2.50	
CALT*134	CE Vocational Workshop	Credit	712	24	30	**83.3%**	2.50	42.5%
		Non Credit				22.9%	6.00	
CALT*136	CE Computer Lab	Non Credit	620	24	26	33.3%	22.00	**110.0%**
CALT*211	Classroom - Tech Enabled	Non Credit	532	20	27	15.0%	3.00	15.0%
CALT*215	Computer Lab	Credit	542	20	27	77.5%	4.00	20.0%
CALT*219	Computer Lab Tech	Credit	771	20	39	**83.8%**	11.50	**57.5%**
CALT*221	Computer Tech Lab - CISCO	Credit	747	20	37	75.0%	4.00	20.0%
CALT*223	Computer Tech Lab - CISCO	Credit	769	20	38	50.0%	4.00	20.0%
CALT*243	Computer Tech Lab	Credit	724	20	36	55.0%	5.25	26.3%
CALT*245	Computer Tech Lab	Credit	743	20	37	65.0%	3.00	15.0%
CALT*247	Computer Tech Lab	Credit	745	20	37	65.0%	6.75	33.8%
CALT*249	Computer Tech Lab	Credit	761	20	38	25.0%	1.50	7.5%
CALT*251	Computer Tech Lab	Credit	739	20	37	45.0%	8.00	40.0%
CALT*270	Computer Tech Lab	Credit	772	20	39	70.0%	6.50	32.5%
CALT*272	Computer Tech Lab	Credit	741	20	37	**100.0%**	3.00	15.0%
CALT*301	Interior Design Studio	Credit	1,110	20	56	**82.5%**	8.75	43.8%
CALT*305	Architecture Computer Lab	Credit	536	24	22	56.9%	8.75	43.8%
CALT*309	Electronic Lab	Credit	959	20	48	70.0%	6.00	30.0%
CALT*313	Electronic Lab	Credit	962	20	48	77.5%	5.00	25.0%
CALT*321	Architecture Design Studio	Credit	1,607	20	80	73.0%	13.50	**67.5%**
CALT*331	Ach Cad lab	Credit	1,162	20	58	**82.0%**	12.75	**63.8%**
CALT*341	Architecture Design Studio	Credit	1,635	20	82	**87.5%**	8.75	43.8%
CALT*350	Mechatronics lab	Credit	790	16	49	37.5%	8.75	43.8%
CALT*354	Engineering Lab	Credit	924	20	46	**90.0%**	4.50	22.5%
		Class Lab Total	24,608	684			211.50	
		Evening Total	29,943	952			244.25	

Daniel C. Olson Memorial Pool

- The pool met the class lab hourly utilization target for class labs with a combination of credit and non-credit courses during the day.

David S. Jenkins Gymnasium

- The classrooms were well scheduled during the day.
- The two Exercise Centers (GYM*213 and 229) were heavily scheduled during the day.
- In addition, faculty reported the following additional room use data:
  - GYM*105 is used an additional two hours per week for Athletic Captain's meetings.
  - GYM*107 is used an additional two hours per week for CPR training.
  - GYM*201 is used ten hours per week for HEA classes; four hours per week for Tennis and Golf classes when it is raining; four to six hours per day for open gym; for student activity club teams; and for other College events, such as Kids in College and student workshops.
  - GYM*213 is open 21 hours per week (including Saturdays) for open gym.
  - GYM*229 is used 15 hours per week for Athletic team workouts.
  - GYM*230 is used 10 hours per week as a student athlete study hall.

Figure 5.15

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Daniel C. Olson Memorial Pool								
Day Courses								
POOL*003	Swimming Pool	Credit	7,611				5.75	67.8%
		Credit/Non-Credit					15.75	
		Non Credit					9.00	
		Class Lab Total	7,611				30.50	
		Day Total	7,611				30.50	
Evening Courses								
POOL*003	Swimming Pool	Credit/Non-Credit	7,611				4.00	20.0%
		Class Lab Total	7,611				4.00	
		Evening Total	7,611				4.00	

Figure 5.16

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
David S. Jenkin's Gymnasium								
Day Courses								
GYM*102	Classroom - Health / Phe	Credit	802	30	27	77.6%	33.50	74.4%
GYM*105	Classroom - Health / Phe	Credit	816	37	22	47.1%	24.00	53.3%
		Classroom Total	1,618	67			57.50	
GYM*107	Multi Purpose Room w/o Matts	Credit	1,070	54	20	23.1%	4.00	8.9%
GYM*109	Multi-purpose Room w/ Tile	Credit	1,259	63	20	25.9%	12.00	31.1%
		Non Credit				34.9%	2.00	
GYM*201	Main Gymnasium	Credit	10,942				6.00	31.1%
		Non Credit					8.00	
GYM*213	North Exercise Center	Credit	2,383	35	68	58.5%	29.00	64.4%
GYM*229	East Exercise Center	Credit	1,639	30	55	38.9%	14.50	54.4%
		Non Credit				100.0%	10.00	
GYM*230	Computer Lab - Health	Credit	691	30	23	82.8%	22.00	48.9%
		Class Lab Total	17,984	212			107.50	
		Day Total	19,602	279			165.00	

Figure 5.17

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
David S. Jenkin's Gymnasium								
Evening Courses								
GYM*102	Classroom - Health / Phe	Credit	802	30	27	52.0%	11.75	58.8%
GYM*105	Classroom - Health / Phe	Credit	816	37	22	18.9%	7.00	35.0%
		Classroom Total	1,618	67			18.75	
GYM*107	Multi Purpose Room w/o Matts	Non Credit	1,070	54	20	12.0%	6.50	32.5%
GYM*109	Multi-purpose Room w/ Tile	Non Credit	1,259	63	20	13.2%	3.00	15.0%
GYM*213	North Exercise Center	Credit	2,383	35	68	38.3%	6.25	31.3%
GYM*229	East Exercise Center	Credit	1,639	30	55	36.7%	2.00	10.0%
GYM*230	Computer Lab - Health	Credit	691	30	23	33.3%	2.75	13.8%
		Class Lab Total	7,042	212			20.50	
		Evening Total	8,660	279			39.25	

Dragun Science Building

- During the day, the hourly utilization target was met or exceeded in four of the six biology labs. DRGN*105 (Biology) was scheduled for 18 hours per week and DRGN*126 (Biology Lab) was scheduled for 21 hours per week. The seat fill target was met or exceeded in five of these labs.
- In the evening, five of the six biology labs were scheduled. Two met the hourly utilization target and all met the seat fill target.
- At least two additional biology labs are needed to accommodate current and projected course needs.
- One of the two Physics labs met both the hourly and seat fill targets during the day. The other Physics Lab (DRGN*202) was scheduled for 15 hours per week, indicating capacity for the addition of three more classes in this room.
- One of the three Chemistry labs (DRGN*212) was significantly over-scheduled for General Chemistry classes (42 hours per week). The other two labs (Organic Chemistry DRGN*207 and Chemistry 2 DRGN*208) were scheduled for 9 and 15 hours, respectively. DRGN*212 also met hourly and seat fill targets during the evening.
- Physical Science Lab (DRGN*215) was scheduled for 20 hours per week during the day and the seat utilization target was met. There is limited capacity for additional course meetings in this lab.
- The data indicates that at least one additional General Chemistry Lab is required.
- Science faculty reported additional room use data:
  - DRGN*105 was used for independent study sessions.
  - DRGN*111 was used for staff meetings and practical exams.
  - DRGN*207 is used extensively for chemistry student study sessions when the room is not scheduled for classes.
  - DRGN 202 is used for student study sessions when the room is not scheduled. Faculty also reported that this room was used in the evenings for 9 hours each week, not 6 as recorded in the R25 system.
  - DRGN*217 is used two hours per week for Chemistry Club and staff meetings.
- Non-credit Veterinary Assistant courses scheduled in DRGN*100 during fall 2014 did not occur during the peak week.

Florestano Building

- Both biology labs, which are used exclusively for Anatomy and Physiology courses, are over scheduled and over-filled, day and night. Faculty report that Biology Lab FLRS*229 is also used for practical exams and is in operation at 7 AM in the morning. This room was scheduled for 30 per week during the day and 12 hours per week in the evening. Based on the data, at least two additional biology labs are needed to accommodate current and projected program growth.
- DRGN*100 is used for large group meetings an average of four hours per month.
- There is a need for more open lab time in the Florestano labs, according to faculty.
- More storage space is required.
- There are no designated conference rooms in the

Figure 5.18

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Dragun Science Building								
Day Courses								
DRGN*012	Classroom - Science	Credit	573	24	24	55.2%	15.00	33.3%
DRGN*110	Lecture Room	Credit	1,492	99	15	38.1%	27.50	61.1%
DRGN*114	Classroom - Science	Credit	756	40	19	67.5%	23.00	51.1%
DRGN*217	Classroom - Science	Credit	1,014	50	20	66.5%	24.50	54.4%
		Classroom Total	3,835	213			90.00	
DRGN*100	Biology - Science	Credit	971	24	40	97.9%	24.00	53.3%
DRGN*105	Biology Lab	Credit	951	23	41	79.7%	18.00	40.0%
DRGN*111	Biology Lab	Credit	989	24	41	99.0%	24.00	53.3%
DRGN*115	Biology Lab	Credit	952	28	34	65.2%	24.00	53.3%
DRGN*119	Biology Lab	Credit	954	24	40	97.6%	42.00	93.3%
DRGN*126	Biology Lab	Credit	1,062	20	53	83.6%	21.00	46.7%
DRGN*202	Physics Lab	Credit	573	18	32	61.1%	15.00	33.3%
DRGN*203	Physics Lab	Credit	956	24	40	80.6%	24.00	53.3%
DRGN*207	Chemistry Lab	Credit	1,233	22	56	78.8%	9.00	20.0%
DRGN*208	Chemistry Lab	Credit	1,269	22	58	76.4%	15.00	33.3%
DRGN*212	Chemistry Lab	Credit	1,276	22	58	79.2%	42.00	93.3%
DRGN*215	Physical Sciences Lab	Credit	785	24	33	88.3%	20.00	44.4%
		Class Lab Total	11,971	275			278.00	
		Day Total	15,806	488			368.00	
Evening Courses								
DRGN*012	Classroom - Science	Credit	573	24	24	54.2%	2.50	12.5%
DRGN*110	Lecture Room	Credit	1,492	99	15	30.1%	8.00	40.0%
DRGN*114	Classroom - Science	Credit	756	40	19	72.5%	4.50	22.5%
DRGN*217	Classroom - Science	Credit	1,014	50	20	55.0%	5.00	25.0%
		Classroom Total	3,835	213			20.00	
DRGN*100	Biology - Science	Credit	971	24	40	91.7%	6.00	30.0%
DRGN*105	Micro Biology Lab	Credit	951	23	41	81.2%	4.00	20.0%
DRGN*111	Biology Lab	Credit	989	24	41	97.9%	12.00	60.0%
DRGN*119	Biology Lab	Credit	954	24	40	95.8%	12.00	60.0%
DRGN*126	Biology Lab	Credit	1,062	20	53	87.5%	6.00	30.0%
DRGN*202	Physics Lab	Credit	573	18	32	58.3%	6.00	30.0%
DRGN*203	Physics Lab	Credit	956	24	40	44.4%	9.00	45.0%
DRGN*207	Chemistry Lab	Credit	1,233	22	56	65.2%	9.00	45.0%
DRGN*208	Chemistry Lab	Credit	1,269	22	58	63.6%	3.00	15.0%
DRGN*212	Chemistry Lab	Credit	1,276	22	58	78.4%	12.00	60.0%
DRGN*215	Physical Sciences Lab	Credit	785	24	33	81.3%	5.00	25.0%
		Class Lab Total	11,019	247			84.00	
		Evening Total	14,854	460			104.00	

building so meetings must be held in classrooms.

- The Physical Therapy Lab (FLRS*320) met the hourly use target during the day and the Massage Classroom (FLRS*316) met the hourly use target in the evening.
- One of the 14 scheduled classrooms met the hourly use target during the day; 4 of the classrooms met the seat fill target.
- One classroom (FLRS*300) met the hourly and seat use targets in the evening.
- There appears to be capacity to accommodate additional classroom course meetings in the building.
- The following instructional spaces were not included in the R25 data:
  - FLRS*406 – EMT Lab used Monday through Friday, 8 AM to 3 PM and 6 to 10 PM
  - FLRS*408 – EMT Lab used Monday through Friday, 8 AM to 3 PM and 6 to 10 PM
  - FLRS*404 – Nursing Lab
  - FLRS*411 – Nursing Lab
  - FLRS*412 – Nursing Lab
  - FLRS*413 – Nursing Lab
  - FLRS*415 – Nursing Lab
  - FLRS*414 – Simulation Room
  - The utilization of the nursing labs and simulation room varies from day to day and semester to semester.
- Non-credit courses are reportedly held in FLRS*412 and 415 but use data was not available through R25.

Figure 5.19

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Florestano Building								
Day Courses								
FLRS*116	General Purpose Class	Credit	683	32	21	72.9%	8.00	45.6%
		Non Credit				19.8%	12.50	
FLRS*120	General Purpose Class	Credit	553	30	18	52.2%	11.50	30.0%
		Non Credit				40.0%	2.00	
FLRS*122	General Purpose Class	Credit	568	24	24	93.1%	7.50	16.7%
FLRS*204	General Purpose Class	Credit	518	24	22	76.0%	10.50	23.3%
FLRS*206	General Purpose Class	Credit	443	24	18	68.5%	10.50	23.3%
FLRS*212	General Purpose Class	Credit	695	40	17	52.5%	12.50	27.8%
FLRS*214	General Purpose Class	Credit	491	24	20	82.3%	9.50	21.1%
FLRS*216	General Purpose Class	Credit	468	24	20	91.7%	9.50	21.1%
FLRS*218	General Purpose Class	Credit	853	42	20	54.8%	28.00	62.2%
FLRS*220	Classroom - Human Services	Credit	553	30	18	52.8%	15.50	34.4%
FLRS*222	General Purpose Class	Credit	507	24	21	84.7%	7.50	25.6%
		Non Credit				25.0%	4.00	
FLRS*300	General Purpose Class	Credit	518	24	22	44.3%	24.00	53.3%
FLRS*308	General Purpose Class	Credit	488	24	20	52.8%	6.50	14.4%
FLRS*327	Video Conferencing	Credit	877	36	24	48.8%	17.50	38.9%
		Classroom Total	8,215	402			197.00	
FLRS*208	General Purpose Class	Credit	845	30	28	58.9%	15.50	34.4%
FLRS*225	Biology Lab	Credit	977	24	41	100.2%	42.00	93.3%
FLRS*229	Biology Lab	Credit	1,020	24	43	96.2%	30.00	66.7%
FLRS*310	Med Lab Tech Classroom	Credit	571	24	24	44.0%	7.00	35.6%
		Non Credit				25.0%	9.00	
FLRS*312	Pharmacy Tech Lab	Credit	663	20	33	50.0%	6.00	13.3%
FLRS*314	Medical Assistant Lab	Credit	624	20	31	44.0%	12.00	26.7%
FLRS*316	Massage Classroom	Credit	817	25	33	38.0%	18.00	40.0%
FLRS*320	Physical Therapy Lab	Credit	553	36	15	32.9%	29.00	64.4%
FLRS*325	Computer Lab	Credit	786	23	34	39.1%	6.00	13.3%
FLRS*418	Radiological Lab	Credit	698	30	23	26.7%	12.00	26.7%
FLRS*422	Physician Assistant Lab	Credit	842	30	28	43.3%	6.00	13.3%
		Class Lab Total	8,396	286			192.50	
		Day Total	16,611	688			389.50	
Evening Courses								
FLRS*101	Lecture Room	Credit	1,887	129	15	13.2%	2.75	13.8%
FLRS*116	General Purpose Class	Credit	683	32	21	56.3%	2.75	13.8%
FLRS*120	General Purpose Class	Credit	553	30	18	60.0%	9.00	45.0%
FLRS*122	General Purpose Class	Non Credit	568	24	24	29.2%	5.50	27.5%
FLRS*204	General Purpose Class	Credit	518	24	22	54.2%	3.00	15.0%
FLRS*212	General Purpose Class	Non Credit	695	40	17	30.0%	5.00	25.0%
FLRS*214	General Purpose Class	Non Credit	491	24	20	20.8%	5.00	25.0%
FLRS*216	General Purpose Class	Credit	468	24	20	45.8%	7.00	35.0%
FLRS*218	General Purpose Class	Credit	853	42	20	38.1%	3.00	15.0%
FLRS*220	Classroom - Human Services	Credit	553	30	18	26.7%	4.00	20.0%
FLRS*300	General Purpose Class	Credit	518	24	22	91.7%	16.00	80.0%
FLRS*327	Video Conferencing	Credit	877	36	24	41.7%	3.00	15.0%
		Classroom Total	8,664	459			66.00	
FLRS*119	Dental Assisting Lab	Non Credit	897	12	75	50.0%	3.50	17.5%
FLRS*208	General Purpose Class	Non Credit	845	30	28	26.7%	5.00	25.0%
FLRS*225	Biology Lab	Credit	977	24	41	97.5%	18.00	90.0%
FLRS*229	Biology Lab	Credit	1,020	24	43	106.3%	12.00	60.0%
FLRS*314	Medical Assistant Lab	Credit	624	20	31	15.0%	3.00	15.0%
FLRS*316	Massage Classroom	Credit	817	25	33	68.0%	18.00	90.0%
FLRS*325	Computer Lab	Credit	786	23	34	50.0%	6.00	30.0%
		Class Lab Total	5,966	158			65.50	
		Evening Total	14,630	617			131.50	

Humanities Building

- Hotel, Culinary Arts and Tourism (HCAT) faculty provided additional room use data:
  - HRM Café HUM*214 was used for non-credit courses four additional hours during the day, which increases hourly utilization of the room to 29.5 hours per week. In the evening, an additional four hours of non-credit courses per week should be added, which increases the hourly use of the lab to 19.5 hours per week. This room is over-scheduled both day and night, which indicates an additional lab may be necessary, especially if the program grows.
  - HRM Lab HUM*218 was also used for an additional four hours of non-credit courses during the day and during the evening. This increases the hourly utilization of this lab to 19.75 hours during the day and 9.25 hours in the evening.
  - HRM Lab HUM*207 was reportedly also used four hours per week in the evening for non-credit courses. The R25 data indicated that the room was not used for credit courses during fall 2014.
- During the day, 4 of the 15 scheduled classrooms met the hourly use target. Five different classrooms met the seat utilization target. While several other classrooms were scheduled over 20 hours per week, there is capacity for additional classroom-based course meetings in the building.
- HUM*117, 122 and 125 were also reportedly used for non-credit courses during the day but the hourly use information was not included in the R25 data.
- HUM*117 was also used for Amaranth Student Literary Journal meetings.
- HUM*200 was also used for Journalism practicum meetings.
- Liberal Arts faculty do not like to teach in HUM*014 and HUM*015. They reported that the rooms were not initially designed as classroom space and they are not conducive to teaching and learning.

Figure 5.20

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Humanities Building								
Day Courses								
HUM*014	General Purpose Class	Credit	540	24	23	81.0%	16.00	35.6%
HUM*015	Classroom - Seminar	Credit	499	20	25	80.0%	14.50	32.2%
HUM*100	General Purpose Class	Credit	372	20	19	98.7%	16.50	36.7%
HUM*101	Teaching Theater	Credit	498	27	18	73.4%	30.00	66.7%
HUM*104	General Purpose Class	Credit	783	36	22	57.9%	24.00	53.3%
HUM*105	General Purpose Class	Credit	506	27	19	73.1%	30.50	67.8%
HUM*112	Lecture Room	Credit	2,013	90	22	22.8%	13.50	35.6%
		Credit/Non-Credit				28.9%	2.50	
HUM*117	Classroom - Seminar	Credit	407	20	20	60.7%	8.00	17.8%
HUM*122	General Purpose Class	Credit	449	21	21	73.8%	24.50	54.4%
HUM*123	General Purpose Class	Credit	438	20	22	94.7%	17.00	37.8%
HUM*124	General Purpose Class	Credit	443	20	22	97.3%	17.00	37.8%
HUM*125	General Purpose Class	Credit	758	40	19	50.8%	28.25	62.8%
HUM*126	General Purpose Class	Credit	612	33	19	59.7%	22.75	50.6%
HUM*129	General Purpose Class	Credit	764	40	19	47.1%	22.75	50.6%
HUM*208	General Purpose Class	Credit	564	28	20	72.0%	28.00	62.2%
		Classroom Total	**9,646**	**466**			**315.75**	
HUM*116	Computer Classroom - English	Credit	713	20	36	96.3%	22.00	48.9%
HUM*200	Computer Classroom - Develop Ed	Credit	914	20	46	91.0%	19.00	42.2%
HUM*207	HRM Lab	Non Credit	927	12	77	116.7%	37.50	83.3%
HUM*212	Communications Laboratory	Credit	597	20	30	89.2%	15.50	34.4%
HUM*214	HRM Café	Credit	790	24	33	49.2%	25.50	56.7%
HUM*218	HRM Lab	Credit	1,345	16	84	75.0%	15.75	35.0%
		Class Lab Total	**5,286**	**112**			**135.25**	
		Day Total	**14,932**	**578**			**451.00**	
Evening Courses								
HUM*015	Classroom - Seminar	Credit	499	20	25	93.0%	8.00	40.0%
HUM*100	General Purpose Class	Credit	372	20	19	80.0%	5.50	27.5%
HUM*101	Teaching Theater	Credit	498	27	18	63.0%	2.50	22.5%
		Non Credit				40.7%	2.00	
HUM*104	General Purpose Class	Credit	783	36	22	55.6%	2.75	13.8%
HUM*105	General Purpose Class	Non Credit	506	27	19	55.6%	2.00	10.0%
HUM*117	Classroom - Seminar	Credit	407	20	20	50.0%	3.00	15.0%
HUM*123	General Purpose Class	Non Credit	438	20	22	65.0%	3.00	15.0%
HUM*124	General Purpose Class	Non Credit	443	20	22	30.0%	2.00	10.0%
HUM*125	General Purpose Class	Credit	758	40	19	17.5%	2.75	13.8%
HUM*129	General Purpose Class	Credit	764	40	19	38.8%	7.00	35.0%
HUM*208	General Purpose Class	Credit	564	28	20	67.9%	3.00	30.0%
		Credit/Non-Credit				67.9%	3.00	
		Classroom Total	**6,032**	**298**			**46.50**	
HUM*116	Computer Classroom - English	Credit	713	20	36	88.3%	5.25	26.3%
HUM*200	Computer Classroom - Develop Ed	Credit	914	20	46	55.0%	5.00	25.0%
HUM*212	Communications Laboratory	Credit	597	20	30	85.0%	2.50	12.5%
HUM*214	HRM Café	Credit	790	24	33	48.6%	15.50	77.5%
HUM*218	HRM Lab	Credit	1,345	16	84	106.3%	5.25	26.3%
		Class Lab Total	**4,359**	**100**			**33.50**	
		Evening Total	**10,391**	**398**			**80.00**	

Johnson Building

- Only non-credit courses were offered in this building in fall 2014.
- Classroom hourly utilization, based on R25 data, was very low during the day and evening.
- Computer Lab JOHN*100 was scheduled 24 hours during the day and 8.5 hours during the evening. This indicates Continuing Education might benefit from access to another computer lab.

Math Building/Child Development Center

- During the day, three of the six classrooms met the hourly use target and five of the six classrooms were filled when scheduled.
- Math Computer Lab MATH*206 was scheduled for 15 hours per week during the day. In addition, the room is used as an open lab for students to work on class assignments using specific software. Open lab hours are MWF 11 AM to 7 PM and TTH from 7 AM to 10 AM and 2 PM to 7 PM.
- Classrooms are small and crowded; rooms have as little as 15 to 16 square foot per student station.

Figure 5.21

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Johnson Building								
Day Courses								
JOHN*105	General Purpose Class	Non Credit	378	24	16	83.3%	3.50	7.8%
JOHN*107	General Purpose Class	Non Credit	374	24	16	85.4%	3.50	7.8%
JOHN*109	General Purpose Class	Non Credit	380	24	16	41.7%	4.00	8.9%
		Classroom Total	**1,132**	**72**			**11.00**	
JOHN*100	Computer Lab	Non Credit	477	16	30	68.8%	24.00	53.3%
		Class Lab Total	**477**	**16**			**24.00**	
		Day Total	**1,609**	**88**			**35.00**	
Evening Courses								
JOHN*101	General Purpose Class	Non Credit	378	20	19	65.0%	2.00	10.0%
JOHN*104	General Purpose Class	Non Credit	376	20	19	65.0%	5.00	25.0%
JOHN*105	General Purpose Class	Non Credit	378	24	16	26.4%	6.50	32.5%
JOHN*107	General Purpose Class	Non Credit	374	24	16	26.4%	6.50	32.5%
JOHN*109	General Purpose Class	Non Credit	380	24	16	11.1%	5.75	28.8%
		Classroom Total	**1,886**	**112**			**25.75**	
JOHN*100	Computer Lab	Non Credit	477	16	30	67.2%	8.50	42.5%
		Class Lab Total	**477**	**16**			**8.50**	
		Evening Total	**2,363**	**128**			**34.25**	

Pascal Center for Performing Arts

- The Theater (PCPA*107) was scheduled for four hours during the day and five hours during the evening for credit courses during the peak week.
- The Theater was used for additional credit and non-credit courses that did not fall within the peak week of the study

Physical Plant

- The Art Sculpture Studio (PLNT*006) was used for 19.25 per week during the day and for 2.5 hours per week in the evening.
- The 3D Design Studio (PLNT*009) was only scheduled during the day for 7.5 hours per week.

Schwartz Building

- During the day, 3 of the 12 scheduled classrooms met the hourly utilization target and 50 percent of the rooms were well filled when in use. In the evening, utilization was low, even though many non-credit courses were scheduled in the classrooms.
- During the day, Continuing education courses were reportedly offered in SCHZ*203, but the hourly use information was not included in the R25 data.

Figure 5.22

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Math Building/ Child Development Center								
Day Courses								
MATH*100	Classroom - Developmental Math	Credit	364	20	18	**100.0%**	11.50	25.6%
MATH*102	Classroom - Mathematics	Credit	604	35	17	74.8%	21.50	47.8%
MATH*106	Classroom - Mathematics	Credit	604	39	15	65.2%	28.50	63.3%
MATH*108	Classroom - Developmental Math	Credit	389	25	16	**89.0%**	18.00	44.4%
		Non Credit				**92.0%**	2.00	
MATH*200	Classroom - Mathematics	Credit	585	33	18	**80.4%**	28.75	63.9%
MATH*204	Classroom - Mathematics	Credit	604	30	20	77.5%	32.00	**71.1%**
		Classroom Total	3,150	182			142.25	
MATH*206	Math Computer Lab	Credit	409	30	14	**84.0%**	15.00	33.3%
		Class Lab Total	409	30			15.00	
		Day Total	3,559	212			157.25	
Evening Courses								
MATH*102	Classroom - Mathematics	Credit	604	35	17	67.1%	5.00	25.0%
MATH*106	Classroom - Mathematics	Credit	604	39	15	37.2%	8.00	40.0%
MATH*108	Classroom - Developmental Math	Credit	389	25	16	76.0%	7.00	35.0%
MATH*200	Classroom - Mathematics	Credit	585	33	18	39.4%	7.00	35.0%
MATH*204	Classroom - Mathematics	Credit	604	30	20	52.2%	9.50	47.5%
		Classroom Total	2,786	162			36.50	
		Evening Total	2,786	162			36.50	

Figure 5.23

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Pascal Center for Performing Arts								
Day Courses								
PCPA*107	Theater	Credit	2,897				4.00	8.9%
		Class Lab Total	2,897				4.00	
		Day Total	2,897				4.00	
Evening Courses								
PCPA*107	Theater	Credit	2,897				5.00	25.0%
		Class Lab Total	2,897				5.00	
		Evening Total	2,897				5.00	

Figure 5.24

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Physical Plant								
Day Courses								
PLNT*006	Art Sculpture Studio	Credit	1,427	20	71	76.9%	19.25	42.8%
PLNT*009	3D Design Studio	Credit	1,062	20	53	50.0%	7.50	16.7%
		Class Lab Total	2,489	40			26.75	
		Day Total	2,489	40			26.75	
Evening Courses								
PLNT*006	Art Sculpture Studio	Non Credit	1,427	20	71	25.0%	2.50	12.5%
		Class Lab Total	1,427	20			2.50	
		Evening Total	1,427	20			2.50	

Figure 5.25

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Schwartz Building								
Day Courses								
SCHZ*100	Classroom - Mathematics	Credit	529	25	21	53.7%	13.50	30.0%
SCHZ*102	General Purpose Class	Credit	543	25	22	77.8%	27.00	60.0%
SCHZ*105	General Purpose Class	Credit	544	25	22	74.9%	23.25	51.7%
SCHZ*107	General Purpose Class	Credit	531	28	19	**88.3%**	34.50	**76.7%**
SCHZ*200	General Purpose Class	Credit	529	25	21	79.1%	14.75	32.8%
SCHZ*201	General Purpose Class	Credit	533	30	18	71.4%	24.25	53.9%
SCHZ*202	General Purpose Class	Credit	543	30	18	**91.7%**	18.25	40.6%
SCHZ*203	General Purpose Class	Credit	544	28	19	79.2%	22.50	50.0%
SCHZ*204	General Purpose Class	Credit	542	28	19	73.8%	29.00	64.4%
SCHZ*205	General Purpose Class	Credit	544	30	18	71.6%	28.00	62.2%
SCHZ*206	General Purpose Class	Credit	535	28	19	**86.4%**	20.00	44.4%
SCHZ*207	General Purpose Class	Credit	531	30	18	61.3%	19.50	43.3%
		Classroom Total	6,448	332			274.50	
SCHZ*101	Classroom - Reading	Credit	533	20	27	**96.7%**	10.00	22.2%
		Class Lab Total	533	20			10.00	
		Day Total	6,981	352			284.50	
Evening Courses								
SCHZ*100	Classroom - Mathematics	Non Credit	529	25	21	24.0%	6.00	30.0%
SCHZ*102	General Purpose Class	Credit	543	25	22	32.0%	3.50	27.5%
		Non Credit				44.0%	2.00	
SCHZ*105	General Purpose Class	Credit	544	25	22	**92.0%**	7.00	45.0%
		Non Credit				60.0%	2.00	
SCHZ*107	General Purpose Class	Non Credit	531	28	19	71.4%	6.00	30.0%
SCHZ*200	General Purpose Class	Non Credit	529	25	21	32.0%	6.00	30.0%
SCHZ*201	General Purpose Class	Credit	533	30	18	56.7%	7.00	51.3%
		Non Credit				26.7%	3.25	
SCHZ*202	General Purpose Class	Credit	543	30	18	76.7%	3.50	47.5%
		Non Credit				43.3%	6.00	
SCHZ*203	General Purpose Class	Credit	544	28	19	64.3%	10.00	50.0%
SCHZ*204	General Purpose Class	Credit	542	28	19	47.6%	3.50	17.5%
SCHZ*205	General Purpose Class	Credit	544	30	18	70.0%	3.00	45.0%
		Non Credit				46.7%	6.00	
SCHZ*206	General Purpose Class	Credit	535	28	19	**89.3%**	1.75	38.8%
		Non Credit				50.0%	6.00	
SCHZ*207	General Purpose Class	Credit	531	30	18	56.7%	7.50	37.5%
		Classroom Total	6,448	332			90.00	
		Evening Total	6,448	332			90.00	

Distribution of Course Meetings by Time of Day

Figures 5.26 and 5.27 show classroom and class lab occupancy for week 9 of the fall 2014 semester. Of the available 108 classrooms on the Arnold Campus, 104 were scheduled for classes during the peak week.

- The number of course meetings between 8:00 AM and 1:30 PM stayed fairly consistent Monday, Wednesday and Friday.
- Tuesday and Thursday between 9:30 AM and 1:30 PM was the most popular time during the week for lecture-based classes.
- There was an increase in the number of course meetings from 6:00 PM until 8:30 PM, Monday through Thursday.
- Few courses occurred on Friday afternoon, which is typical at community colleges in particular.
- 87 percent (90) of classrooms scheduled during the peak week were in use on Tuesday and Thursday between 9:30 and 10:30 AM. On Monday, Wednesday and Friday, a maximum of 70 classrooms (67 percent) of the 104 classrooms were scheduled.
- Additional classroom course meetings could be added to the course schedule if they were offered out of the peak 9:30 AM to 1:30 PM time slot and/or shifted to a Monday, Wednesday, Friday schedule.

Of the available 122 class labs on the Arnold Campus, 118 were scheduled for classes during the peak week.

- A maximum of 84 class labs were in use at any one time, which occurred on Tuesdays between 11:00 and 11:30 AM.
- Due to the specialized nature of class labs, it is not unusual to see a lower percentage of available spaces in service at any one time.
- The most popular time of week for lab classes was between 9:30 AM and 2 PM.
- The number of class labs offered in the evening was fairly consistent Monday through Thursday with few labs being taught on Friday afternoons.

Distribution of Course Meetings by Day of Week

The charts in Figure 5.28 illustrate the daily distribution of the 3,037 course meetings held during week 9 of the fall 2014 semester. 1,727 were held in classrooms and 1,310 were held in class labs.

If courses were distributed evenly over the course of the week, one would expect to see 20 percent of all courses occurring on any given day. This is generally not the case, however, as fewer courses occur on Fridays.

On the Arnold Campus, classroom-based courses were fairly well distributed Monday through Thursday with a respectable percentage offered on Fridays. A slightly larger percentage of class labs were offered on Tuesdays and Thursdays.

Figure 5.26

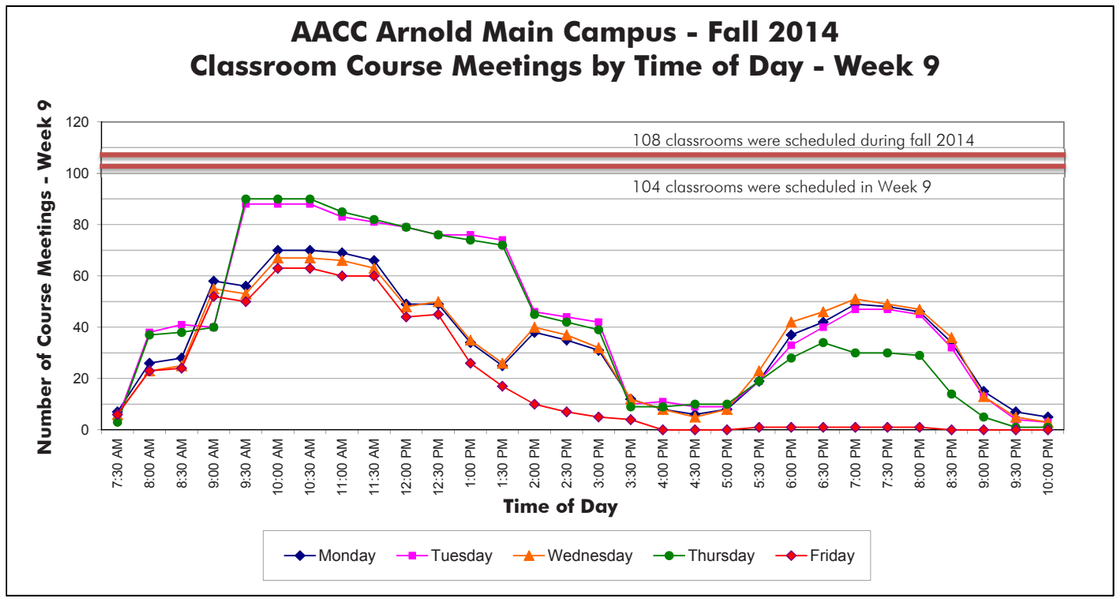


Figure 5.27

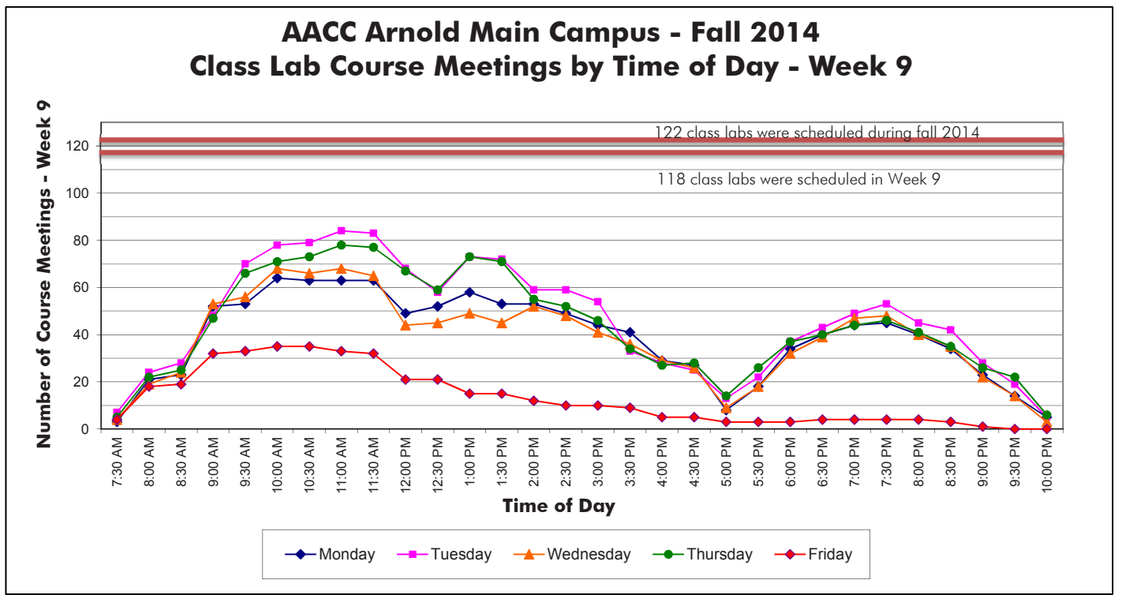
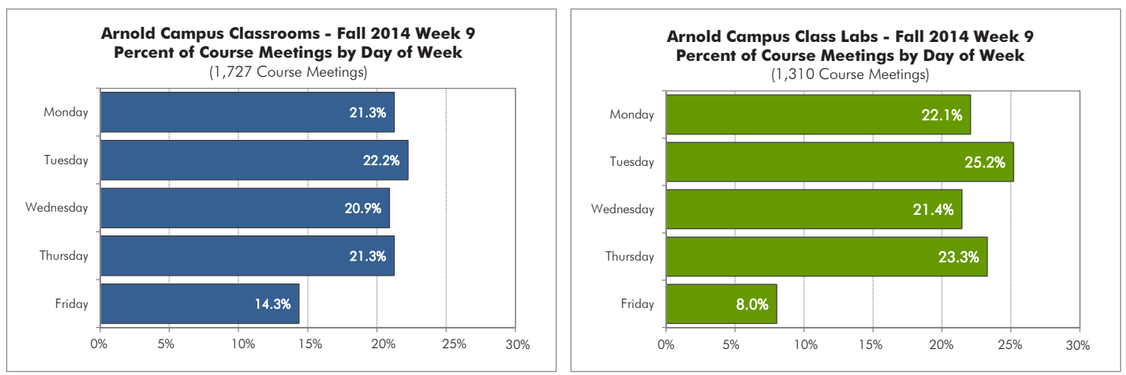


Figure 5.28



Scheduled Class Size Compared to Room Capacity

Figure 5.29 shows the degree to which class size correlated with room capacity during Week 9 of the fall 2014 semester.

- Of the 1,727 course meetings held in classrooms, 55 percent were in scheduled in spaces that had the appropriate number of seats, based on a seat fill utilization target of 80 percent.
- 43 percent of classes were scheduled in classrooms that were larger than necessary. Just 2 percent were held in classrooms that reportedly had too few seats.
- Of the 1,310 class lab course meetings, 51 were held in either the GYM*201, PCPA*107 Theater, or POOL*003, for which seating capacity is not applicable.
- Of the remaining 1,259 course meetings, 65 percent were scheduled in rooms that had the appropriate number of seats for the course enrollment.
- 31 percent were held in class labs that had significantly more seats than necessary. Just 4 percent of the course meetings were held in rooms that were reportedly too small for the enrollment.

Figure 5.29

AACC - Arnold Main Campus
Fall 2014 - Week 9

Classroom Seating Capacity	Scheduled Class Size (Enrollment) 10 or less	11 to 15	16 to 20	21 to 25	26 to 30	31 to 35	36 to 40	41 to 45	46 to 50	51 to 55	56 to 60	111 to 120	Room Count
11 to 15	1	1											1
16 to 20	21	9	57	10	3								10
21 to 25	71	64	118	79	5		1	3					26
26 to 30	29	52	169	136	83								21
31 to 35	30	22	33	54	38	7							11
36 to 40	33	89	118	82	89	19	74	3					26
41 to 45	1		1	4									2
46 to 50		2	2	2	10	6	16		1				2
76 to 80				5	2			2	2	2	4		1
81 to 85		2			4	5	6						1
86 to 90			8	4	2								1
96 to 100		1	2		3	2	7	15					1
121 to 130			1										1
Total Course Meetings = 1,727	186	242	509	376	239	39	104	23	3	2	4	0	104

Average Classroom Size = 680 SF; 21 SF/Seat

Class Lab Seating Capacity	Scheduled Class Size (Enrollment) 10 or less	11 to 15	16 to 20	21 to 25	26 to 30	31 to 35	36 to 40	41 to 45	46 to 50	51 to 55	56 to 60	111 to 120	Room Count
10 or less	7												1
11 to 15	4	7											3
16 to 20	68	103	297	30	2								51
21 to 25	58	81	106	135	9								36
26 to 30	12	22	20	15	26							2	8
31 to 35	11	12	17	52	21								6
36 to 40	5	25	21	14	18	6	3						5
51 to 55	6	2											1
56 to 60	1	5	2					1					1
61 to 65	2	8	6	2									2
96 to 100	4	5	3		3								1
Total Course Meetings = 1,259*	178	270	472	248	79	6	3	1	0	0	0	2	115 *

*Note: 3 spaces not included - GYM*201 Main Gymnasium, PCPA*107 Theater, and POOL*003 Swimming Pool (no seats) (51 course meetings total)

Average Class Lab Size = 893 SF; 38 SF/Seat

Match between course enrollment & room capacity
Course enrollment appropriate for room capacity
Mismatch between course enrollment & room capacity

The Scheduling Process

Figures 1.30 to 1.32 show the large number of non-standard course start and stop times on the Arnold Main Campus during the fall 2014 semester. Scheduling variations like these are likely made to accommodate individual faculty and course needs, but they make it very difficult to establish an efficient schedule, especially for students. The effect of excessive non-uniform class start and end times throughout the week means that a class may use a room beyond the next regular start time, thereby preventing another class from being scheduled at that time. This results in lower utilization rates for the affected instructional spaces. A standardized schedule makes it easier to maximize the use of instructional space because more course meetings can be fit into a single room over the course of a day.

Figure 5.30

Arnold - Main Campus

Monday

Start Time	End Time	Total
06:00 AM	06:50 AM	2
06:00 AM Total		**2**
07:00 AM	07:50 AM	3
	08:00 AM	2
07:00 AM Total		**5**
07:30 AM	08:35 AM	2
	08:50 AM	2
07:30 AM Total		**4**
07:35 AM	08:50 AM	1
07:35 AM Total		**1**
07:40 AM	08:50 AM	2
07:40 AM Total		**2**
08:00 AM	08:50 AM	22
	09:00 AM	2
	09:10 AM	2
	09:15 AM	1
	09:45 AM	3
	09:50 AM	6
	10:50 AM	3
	11:00 AM	1
	12:30 PM	1
	03:00 PM	1
	03:30 PM	14
08:00 AM Total		**56**
08:30 AM	11:30 AM	2
08:30 AM Total		**2**
08:45 AM	09:50 AM	2
	10:50 AM	1
	12:00 PM	3
08:45 AM Total		**6**
09:00 AM	09:50 AM	60
	09:55 AM	1
	10:15 AM	2
	10:35 AM	2
	10:45 AM	5
	10:50 AM	2
	10:55 AM	1
	11:00 AM	1
	11:10 AM	1
	11:15 AM	1
	11:30 AM	5
	11:40 AM	1
	11:50 AM	2
	12:00 PM	8
09:00 AM Total		**92**
09:20 AM	10:30 AM	5
09:20 AM Total		**5**
09:30 AM	10:45 AM	2
09:30 AM Total		**2**
10:00 AM	10:50 AM	80
	11:35 AM	2
	11:45 AM	3
	11:50 AM	8
	12:10 PM	3
	12:50 PM	1
10:00 AM Total		**97**
10:30 AM	11:45 AM	1
10:30 AM Total		**1**
10:40 AM	11:50 AM	5
10:40 AM Total		**5**
11:00 AM	11:50 AM	74
	12:15 PM	6
	12:45 PM	8
	01:15 PM	1
	01:30 PM	1
	01:50 PM	5
	02:00 PM	1
11:00 AM Total		**96**
11:10 AM	01:00 PM	1
11:10 AM Total		**1**
11:30 AM	01:30 PM	1
	01:45 PM	2
11:30 AM Total		**3**
12:00 PM	12:50 PM	36
	01:00 PM	1
	01:10 PM	8
	01:15 PM	3
	01:20 PM	1
	01:30 PM	1
	01:40 PM	1
	01:45 PM	5
	01:50 PM	3
	02:00 PM	1
	02:15 PM	1
	03:45 PM	4
12:00 PM Total		**65**

Tuesday

Start Time	End Time	Total
07:00 AM	07:50 AM	1
	08:00 AM	2
	12:00 PM	1
07:00 AM Total		**4**
07:30 AM	08:50 AM	1
	09:15 AM	5
07:30 AM Total		**6**
08:00 AM	08:50 AM	2
	09:15 AM	45
	09:45 AM	1
	10:50 AM	3
	11:30 AM	2
	12:30 PM	2
	03:00 PM	1
	03:30 PM	15
08:00 AM Total		**71**
08:30 AM	09:30 AM	4
	10:20 AM	1
	10:30 AM	1
	11:30 AM	3
08:30 AM Total		**9**
08:45 AM	10:50 AM	1
08:45 AM Total		**1**
09:00 AM	09:50 AM	3
	10:45 AM	4
	10:50 AM	6
	11:10 AM	1
	11:40 AM	2
	11:50 AM	4
	12:00 PM	2
09:00 AM Total		**22**
09:30 AM	10:45 AM	107
	11:15 AM	2
	11:20 AM	3
	11:30 AM	3
	11:45 AM	2
	12:10 PM	1
	12:20 PM	6
	12:30 PM	1
09:30 AM Total		**125**
10:00 AM	10:50 AM	4
	11:30 AM	1
	11:40 AM	1
	11:45 AM	3
	12:10 PM	3
	12:00 PM	1
	12:50 PM	1
10:00 AM Total		**14**
10:30 AM	12:15 PM	1
	12:20 PM	1
	12:00 PM	1
10:30 AM Total		**3**
11:00 AM	01:15 PM	2
	01:30 PM	1
	01:50 PM	2
	11:45 AM	3
	12:15 PM	101
	12:35 PM	1
	12:45 PM	4
	11:50 AM	6
	12:50 PM	6
11:00 AM Total		**126**
11:30 AM	01:15 PM	4
	02:20 PM	1
	02:30 PM	1
11:30 AM Total		**6**
12:00 PM	01:45 PM	3
	02:00 PM	1
	03:30 PM	1
	12:50 PM	1
12:00 PM Total		**6**

Wednesday

Start Time	End Time	Total
06:00 AM	06:50 AM	2
06:00 AM Total		**2**
07:00 AM	07:50 AM	3
	08:00 AM	2
	12:00 PM	1
07:00 AM Total		**6**
07:30 AM	08:35 AM	2
07:30 AM Total		**2**
07:35 AM	08:50 AM	1
07:35 AM Total		**1**
07:40 AM	08:50 AM	2
07:40 AM Total		**2**
08:00 AM	08:50 AM	20
	09:50 AM	6
	09:00 AM	2
	09:10 AM	2
	09:45 AM	2
	10:50 AM	2
	11:00 AM	1
	12:30 PM	1
	03:00 PM	1
	03:30 PM	15
08:00 AM Total		**52**
08:30 AM	10:30 AM	1
	11:30 AM	3
	12:30 PM	1
08:30 AM Total		**5**
08:45 AM	09:50 AM	2
	10:50 AM	1
08:45 AM Total		**3**
09:00 AM	02:30 PM	1
	09:50 AM	58
	09:55 AM	1
	10:15 AM	2
	10:35 AM	2
	10:45 AM	5
	10:50 AM	2
	10:55 AM	1
	11:10 AM	1
	11:15 AM	1
	11:30 AM	5
	11:40 AM	1
	12:00 PM	5
09:00 AM Total		**87**
09:20 AM	10:30 AM	5
09:20 AM Total		**5**
09:30 AM	10:45 AM	2
	11:30 AM	1
09:30 AM Total		**3**
10:00 AM	10:50 AM	78
	11:35 AM	2
	11:45 AM	3
	12:10 PM	3
	11:50 AM	8
	12:50 PM	1
10:00 AM Total		**95**
10:30 AM	11:30 AM	1
	11:45 AM	1
10:30 AM Total		**2**
10:40 AM	11:50 AM	5
10:40 AM Total		**5**
11:00 AM	01:15 PM	1
	01:30 PM	1
	01:50 PM	4
	12:15 PM	4
	12:45 PM	8
	11:50 AM	73
	03:00 PM	1
11:00 AM Total		**92**
11:10 AM	01:00 PM	1
	12:10 PM	1
11:10 AM Total		**2**
11:30 AM	01:45 PM	2
11:30 AM Total		**2**
12:00 PM	01:10 PM	8
	01:15 PM	3
	01:20 PM	1
	01:30 PM	1
	01:40 PM	1
	01:45 PM	1
	01:50 PM	4
	02:00 PM	2
	02:15 PM	1
	03:30 PM	3
	12:50 PM	36
12:00 PM Total		**61**

Thursday

Start Time	End Time	Total
07:00 AM	07:50 AM	1
	08:00 AM	2
	12:15 PM	1
07:00 AM Total		**4**
07:30 AM	08:50 AM	1
	09:15 AM	2
07:30 AM Total		**3**
08:00 AM	08:50 AM	2
	09:15 AM	44
	09:45 AM	1
	10:50 AM	4
	11:30 AM	2
	12:30 PM	2
	03:00 PM	1
	03:30 PM	15
08:00 AM Total		**71**
08:30 AM	09:30 AM	3
	10:20 AM	1
	11:30 AM	1
08:30 AM Total		**5**
08:45 AM	10:50 AM	1
08:45 AM Total		**1**
09:00 AM	02:30 PM	1
	09:50 AM	3
	10:00 AM	1
	10:45 AM	6
	10:50 AM	6
	11:00 AM	1
	11:10 AM	1
	11:40 AM	1
	11:50 AM	4
	12:00 PM	5
09:00 AM Total		**29**
09:30 AM	10:45 AM	106
	11:20 AM	3
	11:30 AM	2
	11:45 AM	2
	12:10 PM	1
	12:20 PM	5
09:30 AM Total		**119**
10:00 AM	10:50 AM	4
	11:45 AM	2
	12:10 PM	3
	12:00 PM	5
10:00 AM Total		**9**
10:30 AM	12:15 PM	1
	12:20 PM	1
	12:00 PM	1
10:30 AM Total		**3**
11:00 AM	01:15 PM	2
	01:30 PM	1
	01:50 PM	3
	02:00 PM	1
	11:45 AM	3
	12:15 PM	100
	12:35 PM	1
	12:45 PM	6
	11:50 AM	6
	12:50 PM	6
11:00 AM Total		**129**
11:30 AM	02:20 PM	1
11:30 AM Total		**1**
12:00 PM	01:45 PM	4
	03:45 PM	1
	03:00 PM	2
	12:50 PM	1
12:00 PM Total		**8**

Friday

Start Time	End Time	Total
06:00 AM	06:50 AM	2
06:00 AM Total		**2**
07:00 AM	07:50 AM	3
	08:00 AM	2
	12:15 PM	1
07:00 AM Total		**6**
07:30 AM	02:30 PM	1
	08:35 AM	2
	08:50 AM	2
07:30 AM Total		**5**
07:40 AM	08:50 AM	2
07:40 AM Total		**2**
08:00 AM	08:50 AM	22
	09:50 AM	3
	04:00 PM	1
	05:00 PM	2
	09:00 AM	2
	09:10 AM	2
	09:15 AM	1
	09:45 AM	1
	11:00 AM	1
	03:30 PM	15
08:00 AM Total		**52**
08:30 AM	04:00 PM	1
08:30 AM Total		**1**
08:45 AM	03:45 PM	4
	09:50 AM	2
08:45 AM Total		**6**
09:00 AM	09:50 AM	57
	04:00 PM	1
	04:30 PM	1
	05:30 PM	1
	10:15 AM	1
	10:35 AM	2
	11:00 AM	1
	12:15 PM	1
	12:45 PM	4
09:00 AM Total		**69**
09:20 AM	10:30 AM	5
09:20 AM Total		**5**
09:30 AM	10:45 AM	1
	11:30 AM	1
09:30 AM Total		**2**
10:00 AM	10:50 AM	72
	11:35 AM	2
	11:45 AM	1
	11:50 AM	2
	12:50 PM	1
10:00 AM Total		**78**
10:30 AM	11:45 AM	1
10:30 AM Total		**1**
10:40 AM	11:50 AM	5
10:40 AM Total		**5**
11:00 AM	01:50 PM	3
	11:50 AM	71
11:00 AM Total		**74**
12:00 PM	01:10 PM	8
	01:20 PM	1
	01:30 PM	1
	01:50 PM	1
	02:45 PM	1
	04:00 PM	9
	12:50 PM	35
12:00 PM Total		**56**

Figure 5.31

Arnold - Main Campus

Monday

Start Time	End Time	Total
12:15 PM	05:30 PM	1
12:15 PM Total		**1**
12:30 PM	01:30 PM	1
	01:45 PM	4
	02:20 PM	2
	02:30 PM	1
	02:40 PM	3
	03:20 PM	1
12:30 PM Total		**12**
01:00 PM	01:50 PM	10
	02:10 PM	2
	02:15 PM	5
	02:30 PM	1
	02:45 PM	6
	03:00 PM	1
	03:10 PM	1
	03:45 PM	1
	03:50 PM	2
	04:00 PM	1
	04:15 PM	3
	04:30 PM	1
	04:55 PM	2
	05:00 PM	3
01:00 PM Total		**39**
01:20 PM	02:30 PM	2
	03:05 PM	1
01:20 PM Total		**3**
01:30 PM	02:45 PM	1
	02:50 PM	1
	03:15 PM	1
01:30 PM Total		**3**
02:00 PM	02:50 PM	2
	03:15 PM	23
	03:30 PM	3
	03:45 PM	1
	03:50 PM	1
	04:00 PM	4
	04:05 PM	1
	04:10 PM	1
	04:15 PM	1
	04:30 PM	1
	04:40 PM	1
	04:45 PM	1
	04:50 PM	5
02:00 PM Total		**45**
02:30 PM	03:45 PM	3
	04:35 PM	1
	05:30 PM	3
02:30 PM Total		**7**
02:40 PM	04:30 PM	1
02:40 PM Total		**1**
02:45 PM	05:25 PM	1
02:45 PM Total		**1**
03:00 PM	04:40 PM	2
	04:45 PM	2
	05:10 PM	1
	05:50 PM	1
03:00 PM Total		**6**
03:30 PM	04:45 PM	7
	05:20 PM	1
	05:30 PM	2
	05:50 PM	1
03:30 PM Total		**11**
04:00 PM	06:30 PM	1
04:00 PM Total		**1**
04:30 PM	06:15 PM	1
	07:00 PM	1
	10:00 PM	1
04:30 PM Total		**3**
05:00 PM	06:15 PM	2
	06:45 PM	1
05:00 PM Total		**3**
05:10 PM	06:55 PM	4
05:10 PM Total		**4**
05:30 PM	06:20 PM	1
	06:45 PM	13
	07:20 PM	1
	07:30 PM	2
	07:50 PM	1
	08:20 PM	2
	08:30 PM	2
	09:05 PM	1
	10:00 PM	3
	10:45 PM	1
05:30 PM Total		**27**
05:35 PM	07:20 PM	1
05:35 PM Total		**1**
06:00 PM	07:00 PM	2
	07:30 PM	3
	07:45 PM	1
	08:00 PM	4
	08:30 PM	8
	08:45 PM	1
	08:50 PM	1
	09:00 PM	16
	09:15 PM	5
	09:30 PM	5
	09:45 PM	1
	10:00 PM	6
06:00 PM Total		**53**

Tuesday

Start Time	End Time	Total
12:15 PM	05:15 PM	1
12:15 PM Total		**1**
12:30 PM	01:45 PM	78
	02:00 PM	5
	02:15 PM	5
	02:40 PM	4
	02:45 PM	4
	05:00 PM	1
	03:00 PM	7
	03:15 PM	2
	03:20 PM	3
	03:30 PM	1
12:30 PM Total		**110**
01:00 PM	01:50 PM	4
	02:30 PM	1
	02:40 PM	1
	02:45 PM	5
	02:50 PM	3
	03:40 PM	1
	03:45 PM	1
	03:50 PM	3
	04:30 PM	1
	05:30 PM	2
	03:30 PM	1
	04:00 PM	1
01:00 PM Total		**28**
01:30 PM	04:00 PM	1
	03:15 PM	4
01:30 PM Total		**5**
02:00 PM	02:50 PM	2
	03:35 PM	1
	03:45 PM	1
	04:00 PM	1
	04:10 PM	1
	04:45 PM	1
	04:50 PM	5
	03:15 PM	36
	03:30 PM	6
02:00 PM Total		**54**
02:30 PM	04:30 PM	2
	04:35 PM	1
02:30 PM Total		**3**
02:40 PM	04:30 PM	1
	05:30 PM	1
02:40 PM Total		**2**
02:50 PM	03:15 PM	1
02:50 PM Total		**1**
03:00 PM	04:30 PM	1
	04:40 PM	1
	04:45 PM	1
	04:50 PM	2
	05:00 PM	1
	05:05 PM	3
	05:10 PM	2
	05:50 PM	1
03:00 PM Total		**12**
03:30 PM	04:45 PM	4
	05:30 PM	3
03:30 PM Total		**7**
03:45 PM	05:15 PM	1
03:45 PM Total		**1**
04:00 PM	05:15 PM	1
	05:50 PM	1
	06:00 PM	1
	06:10 PM	1
04:00 PM Total		**4**
04:30 PM	05:20 PM	1
04:30 PM Total		**1**
05:00 PM	06:00 PM	1
05:00 PM Total		**1**
05:10 PM	06:55 PM	3
05:10 PM Total		**3**
05:15 PM	06:45 PM	1
05:15 PM Total		**1**
05:30 PM	06:30 PM	1
	06:45 PM	16
	07:00 PM	1
	07:30 PM	2
	07:35 PM	1
	07:40 PM	3
	08:20 PM	2
	08:30 PM	5
	09:45 PM	2
	10:00 PM	1
	10:30 PM	1
05:30 PM Total		**35**
06:00 PM	06:50 PM	1
	07:00 PM	2
	07:15 PM	1
	07:50 PM	2
	08:00 PM	1
	08:30 PM	7
	08:45 PM	6
	08:50 PM	3
	09:00 PM	6
	09:15 PM	6
	09:30 PM	3
	09:45 PM	1
	09:55 PM	1
	10:00 PM	8
06:00 PM Total		**48**

Wednesday

Start Time	End Time	Total
12:30 PM	01:30 PM	1
	01:45 PM	4
	02:20 PM	2
	02:30 PM	1
	02:40 PM	3
	03:20 PM	1
	03:30 PM	2
12:30 PM Total		**14**
01:00 PM	01:50 PM	10
	02:10 PM	2
	02:15 PM	5
	02:30 PM	1
	02:45 PM	6
	03:45 PM	1
	03:50 PM	2
	04:00 PM	1
	04:30 PM	1
	03:00 PM	2
	03:10 PM	1
01:00 PM Total		**32**
01:20 PM	02:30 PM	2
	03:05 PM	1
01:20 PM Total		**3**
01:30 PM	02:45 PM	1
	02:50 PM	1
	03:15 PM	1
01:30 PM Total		**3**
02:00 PM	02:50 PM	3
	03:45 PM	1
	03:50 PM	1
	04:00 PM	3
	04:05 PM	1
	04:10 PM	1
	04:15 PM	1
	04:30 PM	1
	04:40 PM	1
	04:45 PM	2
	04:50 PM	7
	03:15 PM	23
	03:30 PM	3
02:00 PM Total		**48**
02:30 PM	03:45 PM	3
	04:30 PM	1
	04:35 PM	1
02:30 PM Total		**5**
02:35 PM	04:20 PM	1
02:35 PM Total		**1**
02:40 PM	04:30 PM	1
02:40 PM Total		**1**
02:45 PM	05:25 PM	1
02:45 PM Total		**1**
03:00 PM	04:40 PM	2
	04:45 PM	2
	05:10 PM	1
	05:50 PM	1
03:00 PM Total		**6**
03:30 PM	04:45 PM	7
	05:20 PM	1
	05:30 PM	2
	05:50 PM	1
	07:40 PM	1
03:30 PM Total		**12**
04:00 PM	06:30 PM	1
04:00 PM Total		**1**
04:30 PM	05:25 PM	1
	07:00 PM	1
	10:00 PM	1
04:30 PM Total		**3**
04:45 PM	06:45 PM	1
04:45 PM Total		**1**
05:00 PM	05:45 PM	4
	06:15 PM	2
	07:00 PM	1
05:00 PM Total		**7**
05:10 PM	06:55 PM	4
05:10 PM Total		**4**
05:30 PM	06:20 PM	1
	06:45 PM	13
	07:25 PM	1
	07:30 PM	3
	07:50 PM	1
	08:00 PM	1
	08:15 PM	2
	08:20 PM	2
	08:30 PM	2
	09:40 PM	1
	10:00 PM	1
	10:45 PM	1
05:30 PM Total		**29**
05:35 PM	07:20 PM	1
05:35 PM Total		**1**
05:45 PM	09:00 PM	4
05:45 PM Total		**4**
06:00 PM	07:00 PM	1
	07:30 PM	1
	07:45 PM	1
	08:00 PM	8
	08:15 PM	1
	08:30 PM	8
	08:45 PM	1
	08:50 PM	3
	09:00 PM	18
	09:15 PM	4
	09:45 PM	1
	10:00 PM	3
	10:15 PM	2
	10:30 PM	1
06:00 PM Total		**53**

Thursday

Start Time	End Time	Total
12:15 PM	05:30 PM	1
12:15 PM Total		**1**
12:30 PM	01:45 PM	79
	02:00 PM	5
	02:15 PM	5
	02:30 PM	1
	02:40 PM	4
	02:45 PM	4
	05:00 PM	1
	03:15 PM	2
	03:20 PM	2
12:30 PM Total		**103**
01:00 PM	01:50 PM	4
	02:30 PM	1
	02:45 PM	7
	02:50 PM	3
	03:40 PM	1
	03:50 PM	3
	04:00 PM	1
	05:00 PM	1
	05:30 PM	2
	06:00 PM	1
	03:10 PM	2
	03:30 PM	1
01:00 PM Total		**27**
01:15 PM	05:00 PM	1
01:15 PM Total		**1**
02:00 PM	02:50 PM	2
	03:45 PM	2
	03:50 PM	1
	04:00 PM	1
	04:10 PM	1
	04:50 PM	6
	03:15 PM	35
	03:30 PM	6
02:00 PM Total		**54**
02:30 PM	04:35 PM	1
	05:30 PM	1
02:30 PM Total		**2**
02:40 PM	04:30 PM	1
02:40 PM Total		**1**
02:50 PM	03:15 PM	1
02:50 PM Total		**1**
03:00 PM	04:40 PM	1
	04:45 PM	3
	04:50 PM	2
	05:00 PM	1
	05:05 PM	3
	05:10 PM	2
	05:50 PM	1
03:00 PM Total		**13**
03:30 PM	04:45 PM	4
	05:30 PM	3
	06:00 PM	1
03:30 PM Total		**8**
03:45 PM	05:15 PM	1
03:45 PM Total		**1**
04:00 PM	05:15 PM	1
	05:50 PM	1
	06:00 PM	3
	06:10 PM	1
04:00 PM Total		**6**
04:30 PM	05:20 PM	1
	05:45 PM	1
	06:45 PM	1
	07:00 PM	1
04:30 PM Total		**4**
05:00 PM	08:00 PM	1
05:00 PM Total		**1**
05:10 PM	06:55 PM	3
05:10 PM Total		**3**
05:15 PM	06:45 PM	1
05:15 PM Total		**1**
05:30 PM	06:30 PM	1
	06:45 PM	16
	07:00 PM	1
	07:20 PM	1
	07:30 PM	2
	07:35 PM	1
	07:40 PM	3
	08:20 PM	1
	08:30 PM	3
	10:00 PM	3
	10:45 PM	1
05:30 PM Total		**33**
05:45 PM	09:00 PM	4
05:45 PM Total		**4**
06:00 PM	06:50 PM	1
	07:00 PM	3
	07:15 PM	1
	08:15 PM	3
	08:30 PM	7
	08:50 PM	4
	09:00 PM	5
	09:15 PM	5
	09:40 PM	2
	09:45 PM	1
	09:55 PM	2
	10:00 PM	5
06:00 PM Total		**39**

Friday

Start Time	End Time	Total
12:15 PM	05:30 PM	1
12:15 PM Total		**1**
12:30 PM	02:20 PM	2
	03:30 PM	2
12:30 PM Total		**4**
01:00 PM	01:50 PM	10
	02:10 PM	1
	03:50 PM	1
	04:00 PM	1
01:00 PM Total		**13**
01:20 PM	02:30 PM	2
01:20 PM Total		**2**
01:30 PM	02:50 PM	1
01:30 PM Total		**1**
02:00 PM	02:50 PM	1
	03:50 PM	1
	04:50 PM	2
02:00 PM Total		**4**
02:30 PM	05:30 PM	1
02:30 PM Total		**1**
03:00 PM	08:50 PM	1
03:00 PM Total		**1**
05:00 PM	08:30 PM	1
	09:15 PM	1
05:00 PM Total		**2**
05:30 PM	08:30 PM	1
	09:30 PM	2
05:30 PM Total		**3**
06:00 PM	09:15 PM	1
06:00 PM Total		**1**

Figure 5.32

Arnold - Main Campus

Monday

Start Time	End Time	Total
06:05 PM	06:55 PM	1
06:05 PM Total		**1**
06:30 PM	07:00 PM	3
	07:45 PM	1
	08:30 PM	1
	09:00 PM	6
	09:20 PM	2
	09:30 PM	7
06:30 PM Total		**20**
06:45 PM	07:45 PM	2
06:45 PM Total		**2**
07:00 PM	07:30 PM	2
	08:15 PM	3
	08:30 PM	5
	09:00 PM	5
	09:30 PM	1
	09:40 PM	1
	09:45 PM	4
	09:50 PM	5
	10:00 PM	2
07:00 PM Total		**28**
07:10 PM	08:25 PM	1
	08:55 PM	6
	09:10 PM	2
	09:20 PM	1
07:10 PM Total		**10**
07:15 PM	09:45 PM	1
07:15 PM Total		**1**
07:20 PM	09:05 PM	1
07:20 PM Total		**1**
07:30 PM	08:00 PM	2
	08:45 PM	1
	09:20 PM	1
07:30 PM Total		**4**
07:50 PM	08:50 PM	2
07:50 PM Total		**2**
08:00 PM	08:30 PM	1
08:00 PM Total		**1**
		736

Tuesday

Start Time	End Time	Total
06:30 AM	07:45 AM	1
06:30 AM Total		**1**
06:30 PM	07:00 PM	3
	08:30 PM	7
	09:00 PM	6
	09:15 PM	4
	09:20 PM	1
	09:30 PM	5
	09:45 PM	1
06:30 PM Total		**27**
07:00 PM	07:30 PM	2
	08:00 PM	2
	08:15 PM	1
	09:00 PM	16
	09:30 PM	3
	09:40 PM	1
	09:45 PM	4
	09:50 PM	4
	10:00 PM	1
07:00 PM Total		**34**
07:05 PM	07:55 PM	1
07:05 PM Total		**1**
07:10 PM	08:25 PM	3
	08:55 PM	3
	09:20 PM	1
07:10 PM Total		**7**
07:15 PM	08:30 PM	1
07:15 PM Total		**1**
07:30 PM	08:00 PM	2
	08:30 PM	1
	08:45 PM	1
	09:05 PM	2
07:30 PM Total		**6**
07:45 PM	09:55 PM	2
07:45 PM Total		**2**
11:40 AM	01:30 PM	2
11:40 AM Total		**2**
		791

Wednesday

Start Time	End Time	Total
06:05 PM	06:55 PM	1
06:05 PM Total		**1**
06:30 PM	07:00 PM	1
	07:45 PM	1
	09:00 PM	7
	09:20 PM	2
	09:30 PM	11
06:30 PM Total		**22**
07:00 PM	07:30 PM	1
	07:50 PM	1
	08:15 PM	3
	08:30 PM	3
	09:00 PM	8
	09:30 PM	3
	09:40 PM	1
	09:45 PM	3
	09:50 PM	6
07:00 PM Total		**29**
07:10 PM	08:25 PM	1
	08:55 PM	6
	09:10 PM	2
	09:20 PM	1
07:10 PM Total		**10**
07:15 PM	08:15 PM	1
	09:45 PM	1
07:15 PM Total		**2**
07:20 PM	09:05 PM	1
07:20 PM Total		**1**
07:30 PM	08:00 PM	1
	08:45 PM	1
07:30 PM Total		**2**
		723

Thursday

Start Time	End Time	Total
06:30 AM	07:45 AM	1
06:30 AM Total		**1**
06:30 PM	08:30 PM	4
	09:00 PM	8
	09:20 PM	1
	09:30 PM	6
06:30 PM Total		**19**
06:45 PM	07:45 PM	1
06:45 PM Total		**1**
07:00 PM	08:15 PM	1
	08:30 PM	2
	09:00 PM	9
	09:30 PM	2
	09:40 PM	1
	09:45 PM	1
	09:50 PM	6
07:00 PM Total		**22**
07:05 PM	07:55 PM	1
07:05 PM Total		**1**
07:10 PM	08:25 PM	3
	08:55 PM	3
	09:20 PM	1
07:10 PM Total		**7**
07:15 PM	08:15 PM	1
	09:45 PM	2
07:15 PM Total		**3**
07:30 PM	08:30 PM	1
	09:05 PM	2
07:30 PM Total		**3**
07:45 PM	09:55 PM	2
07:45 PM Total		**2**
07:50 PM	08:50 PM	1
07:50 PM Total		**1**
11:40 AM	01:30 PM	1
11:40 AM Total		**1**
		746

Friday

Start Time	End Time	Total
06:30 PM	09:00 PM	1
	09:30 PM	8
06:30 PM Total		**9**
07:00 PM	09:00 PM	1
07:00 PM Total		**1**
		407

ARUNDEL MILLS - FALL 2014

Utilization Summary Tables

Figures 5.33 and 5.34 provide a summary of the hourly and seat fill utilization results for the scheduled instructional spaces on the Arundel Mills Campus during week 9 in fall 2014. The ninth week was chosen for the analysis because 400 course meetings were offered during that period representing peak utilization during the semester.

Figure 5.33

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Arundel Mills Site - Fall 2014 - Week 9								
Day Courses								
AMIL*003	Casino Classroom	Non Credit	407	20	23	65.0%	20.00	44.4%
AMIL*004	General Purpose Class	Non Credit	639	32	20	37.5%	32.00	71.1%
AMIL*104	Lecture Room	Credit	1,771	134	13	28.2%	19.75	43.9%
AMIL*201	General Purpose Class	Credit	505	27	19	47.7%	12.50	27.8%
AMIL*211	General Purpose Class	Credit	499	24	21	58.3%	2.50	11.1%
		Credit/Non-Credit				75.0%	2.50	
AMIL*212	General Purpose Class	Credit	498	24	21	58.3%	3.00	6.7%
AMIL*214	General Purpose Class	Credit	524	24	22	31.9%	3.75	8.3%
AMIL*305	Seminar Room	Non Credit	379	17	22	100.0%	10.00	22.2%
AMIL*308	General Purpose Class	Non Credit	487	24	20	91.7%	10.00	22.2%
AMIL*315	General Purpose Class	Credit	528	24	22	45.8%	1.75	3.9%
AMIL*316	General Purpose Class	Non Credit	491	24	20	20.8%	2.00	4.4%
AMIL*318	General Purpose Class	Credit	516	24	22	82.7%	22.00	48.9%
AMIL*401	General Purpose Class	Credit	518	24	22	73.8%	19.50	43.3%
AMIL*403	General Purpose Class	Credit	541	24	23	78.1%	14.50	32.2%
AMIL*405	General Purpose Class	Credit	881	32	28	56.9%	8.00	35.6%
		Non Credit				87.5%	8.00	
AMIL*406	General Purpose Class	Credit	764	40	19	66.0%	21.50	47.8%
AMIL*409	General Purpose Class	Credit	487	24	20	80.4%	16.50	36.7%
AMIL*410	Classroom w/ Videotaping	Credit	476	24	20	100.0%	4.50	10.0%
AMIL*413	General Purpose Class	Credit	462	24	19	68.8%	23.00	51.1%
AMIL*414	General Purpose Class	Credit	497	27	18	62.6%	13.50	30.0%
AMIL*415	General Purpose Class	Credit	605	32	19	68.5%	15.50	34.4%
		Classroom Total	12,475	649			286.25	
AMIL*005	Gaming Lab	Non Credit	611	32	61	34.4%	32.00	71.1%
AMIL*018	Gaming Lab	Non Credit	1,472	32	61	45.3%	32.00	71.1%
AMIL*203	Computer Lab	Credit	692	20	35	100.0%	3.50	10.0%
		Non Credit				5.0%	1.00	
AMIL*205	Class Lab (Dry)	Credit	723	20	36	86.3%	14.00	31.1%
AMIL*209	Computer Lab	Credit	734	20	37	60.0%	5.50	12.2%
AMIL*213	Computer Lab	Credit	717	20	36	81.5%	11.00	24.4%
AMIL*306	Computer Lab	Credit	732	24	31	79.2%	5.00	11.1%
AMIL*311	Computer Lab	Credit	712	20	36	57.5%	9.00	28.9%
		Credit/Non-Credit				75.0%	4.00	
AMIL*314	Class Lab (Dry)	Credit	736	24	31	95.1%	33.50	74.4%
AMIL*404	Physical Sciences Lab	Credit	1,596	24	67	79.2%	6.00	13.3%
AMIL*407	Classroom - Science	Credit	773	24	32	86.1%	7.50	16.7%
AMIL*411	Biology Lab	Credit	1,498	24	62	94.4%	18.00	40.0%
		Class Lab Total	10,996	284			182.00	
Arundel Mills Site Day Course Total			**23,471**	**933**			**468.25**	

Figure 5.34

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Arundel Mills Site - Fall 2014 - Week 9								
Evening Courses								
AMIL*003	Casino Classroom	Non Credit	407	20	23	100.0%	16.00	80.0%
AMIL*004	General Purpose Class	Non Credit	639	32	20	53.1%	16.00	80.0%
AMIL*104	Lecture Room	Credit	1,771	134	13	17.5%	6.00	30.0%
AMIL*108	Conference Room	Credit	335	18	19	58.3%	5.75	28.8%
AMIL*109	Seminar Room	Credit	323	18	18	76.4%	8.25	41.3%
AMIL*201	General Purpose Class	Credit	505	27	19	81.5%	11.00	55.0%
AMIL*214	General Purpose Class	Non Credit	524	24	22	35.7%	17.50	87.5%
AMIL*215	General Purpose Class	Credit	491	24	20	100.0%	3.50	17.5%
AMIL*301	General Purpose Class	Credit	525	24	22	72.2%	8.25	41.3%
AMIL*302	Seminar Room	Credit	395	20	20	50.0%	2.50	27.5%
		Non Credit				40.0%	3.00	
AMIL*304	Seminar Room	Non Credit	321	14	23	78.6%	5.00	25.0%
AMIL*307	Conference	Non Credit	309	12	26	66.7%	5.00	25.0%
AMIL*308	General Purpose Class	Credit	487	24	20	41.7%	7.25	51.3%
		Non Credit				16.7%	3.00	
AMIL*312	General Purpose Class	Credit	499	24	21	66.7%	9.00	45.0%
AMIL*313	General Purpose Class	Credit	499	24	21	72.9%	9.00	45.0%
AMIL*315	General Purpose Class	Credit	528	24	22	63.3%	13.00	65.0%
AMIL*316	General Purpose Class	Credit	491	24	20	81.3%	5.75	28.8%
AMIL*318	General Purpose Class	Credit	516	24	22	68.8%	6.50	32.5%
AMIL*401	General Purpose Class	Credit	518	24	22	56.3%	5.75	28.8%
AMIL*403	General Purpose Class	Credit	541	24	23	63.7%	13.50	67.5%
AMIL*405	General Purpose Class	Credit	881	32	28	69.3%	13.25	66.3%
AMIL*406	General Purpose Class	Credit	764	40	19	36.9%	15.75	78.8%
AMIL*409	General Purpose Class	Credit	487	24	20	61.5%	10.00	50.0%
AMIL*410	Classroom W/ Videotaping	Credit	476	24	20	87.5%	8.75	43.8%
AMIL*413	General Purpose Class	Credit	462	24	19	62.5%	3.00	15.0%
AMIL*414	General Purpose Class	Credit	497	27	18	64.6%	13.50	67.5%
AMIL*415	General Purpose Class	Credit	605	32	19	63.1%	11.50	57.5%
		Classroom Total	14,796	762			256.25	
AMIL*203	Computer Lab	Credit	692	20	35	93.8%	9.50	47.5%
AMIL*205	Class Lab (Dry)	Credit	723	20	36	95.0%	4.00	25.0%
		Non Credit				20.0%	1.00	
AMIL*209	Computer Lab	Credit	734	20	37	65.0%	5.50	27.5%
AMIL*213	Computer Lab	Credit	717	20	36	95.0%	2.50	37.5%
		Non Credit				30.0%	5.00	
AMIL*306	Computer Lab	Credit	732	24	31	58.3%	5.50	32.5%
		Non Credit				29.2%	1.00	
AMIL*311	Computer Lab	Non Credit	712	20	36	60.0%	3.50	17.5%
AMIL*314	Class Lab (Dry)	Credit	736	24	31	94.4%	11.00	55.0%
AMIL*404	Physical Sciences Lab	Credit	1,596	24	67	100.0%	3.00	15.0%
AMIL*407	Classroom - Science	Credit	773	24	32	59.0%	14.00	70.0%
AMIL*411	Biology Lab	Credit	1,498	24	62	95.8%	12.00	60.0%
		Class Lab Total	8,913	220			77.50	
Arundel Mills Site Evening Course Total			**23,709**	**982**			**333.75**	

- During the day, only one classroom met the hourly use target. Thirty-eight percent of classrooms were well filled when scheduled.
- The two Gaming Labs (AMIL*005 and 018) and Math Lab AMIL*314 were over-scheduled and the Math Lab was overfilled when in use. With the exception of Biology Lab AMIL*411, which was scheduled for 18 hours per week, all other class labs were underutilized during the day.
- Almost all of the class labs were filled or overfilled when they were scheduled during the day, indicating that additional lab sections may be needed to accommodate future enrollment growth.
- During the evening, seven classrooms met or came within five percent of the hourly utilization target; two exceeded the target. Only one of these spaces

also met the seat utilization target. The six other classrooms that were well filled when scheduled did not met the hourly use goal.

- Math Lab AMIL*314, AMIL*407, and Biology Lab AMIL*411 met the hourly use target and the Math and Biology labs also met the seat fill target in the evening. This indicates that an additional Biology Lab may be needed as enrollment increases at Arundel Mills.
- Continuing Education courses were reportedly also held in AMIL*306 and 413.
- Hotel, Culinary Arts and Tourism (HCAT) faculty provided additional room use data:
  - AMIL*003 is used four additional hours each week, during the day and evening, for non-credit courses.
  - AMIL*004 should be called a Gaming Lab.

Distribution of Course Meetings by Time of Day

Figures 5.35 and 5.36 show classroom and class lab occupancy for week 9 in the fall 2014 semester.

All 30 of the available classrooms were scheduled during the peak week.

- Evening courses drive the need for classroom space at Arundel Mills.
- A maximum of 24 classrooms were in use at any one time, which occurred on Mondays between 6:30 and 7:00 PM.
- Few courses occurred on Friday; none were scheduled after 4:30 PM.
- Based on the fall 2014 schedule, there is available capacity for additional classroom course sections, especially during the day.

Of the available 13 class labs, 12 were scheduled for classes during the peak week.

- More class labs were scheduled in the afternoon than in the morning.
- There were a good number of class lab sections also taught in the evenings after 6 PM on Monday through Thursday.
- A maximum of 9 class labs were used at the same time.
- No labs were scheduled after noon on Fridays, which is typical at community colleges.

Distribution of Course Meetings by Day of Week

Figure 5.37 illustrates the daily distribution of the 400 course meetings held during the peak week. Classroom course meetings were distributed fairly evenly Monday through Thursday with a smaller percentage of classrooms used on Friday. Class lab use peaked on Tuesday. Few class labs were taught on Friday.

Figure 5.35

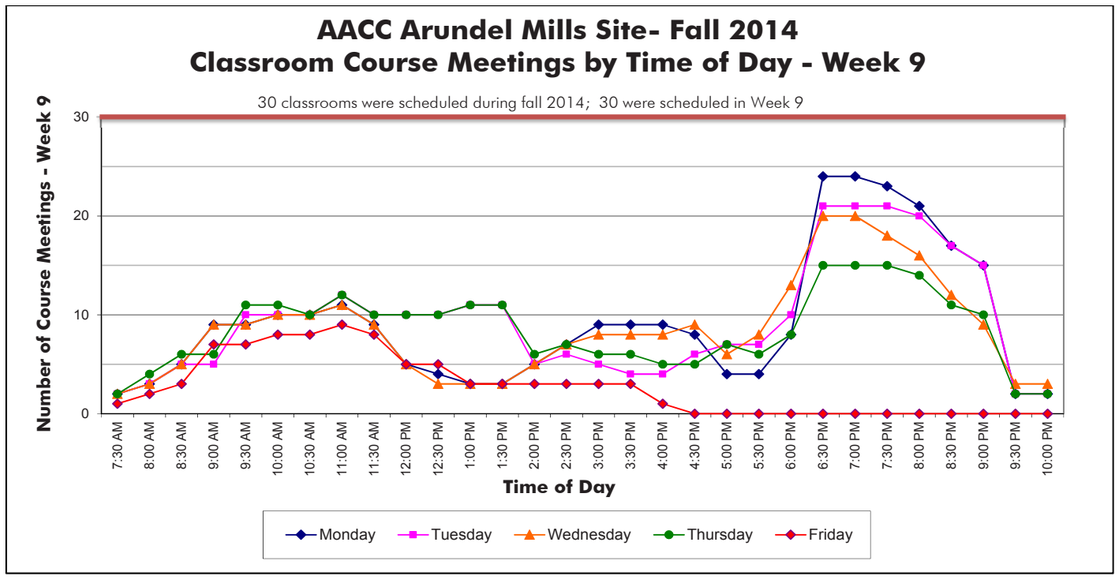


Figure 5.36

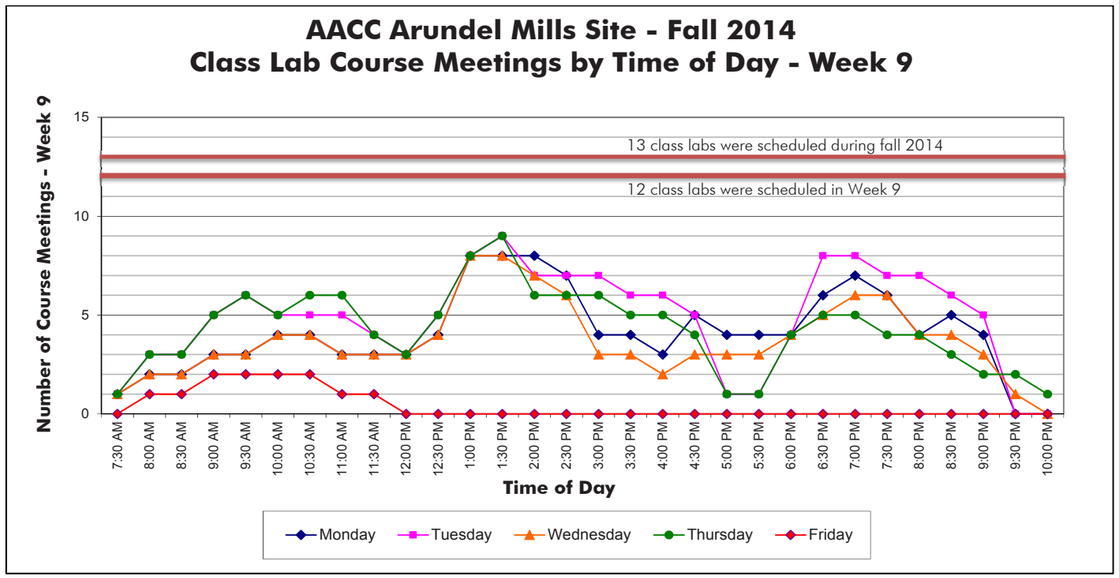
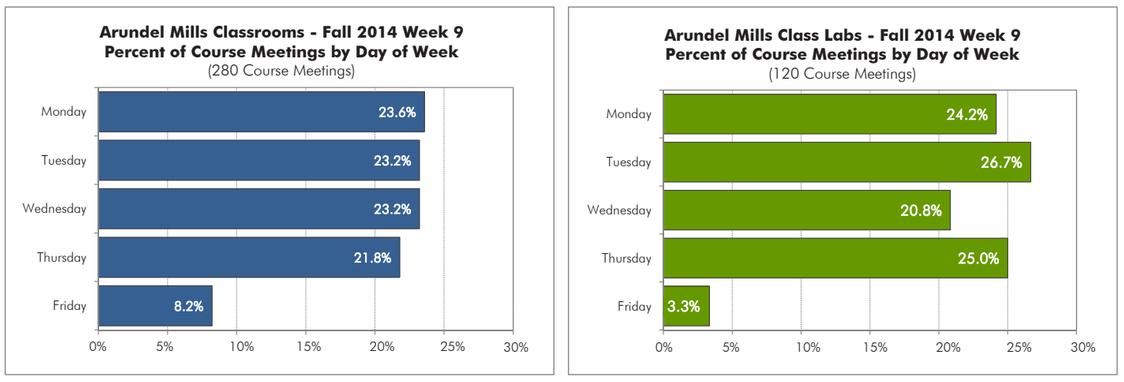


Figure 5.37



Scheduled Class Size Compared to Room Capacity

Figure 5.38 illustrates the degree to which class size correlated with room capacity during week 9 in fall 2014.

- Of the 280 course meetings scheduled in classrooms, 60 percent were held in rooms that had the appropriate number of seats, based on a seat utilization target of 80 percent.
- 40 percent of classes were scheduled in classrooms that were larger than necessary.
- Of the 120 course meetings held in class labs, 83 percent were scheduled in rooms that had the appropriate number of seats for the course enrollment.
- 13 percent of course meetings were held in class labs that had significantly more seats than necessary while 4 percent were held in class labs that had too few seats.

Figure 5.38

AACC - Arundel Mills Site
Fall 2014 - Week 9

	Scheduled Class Size (Enrollment)							
Classroom Seating Capacity	10 or less	11 to 15	16 to 20	21 to 25	26 to 30	31 to 35	36 to 40	Room Count
11 to 15	2	2						2
16 to 20	4	7	10					5
21 to 25	22	26	67	33				16
26 to 30	7	5	12	9				2
31 to 35	4	5	17	9	7			3
36 to 40	4	6		4	3	5	3	1
131 to 140			1		1	1	4	1
Total Course Meetings = 280	43	51	107	55	11	6	7	30

Average Classroom Size = 539 SF; 21 SF/Seat

	Scheduled Class Size (Enrollment)							
Class Lab Seating Capacity	10 or less	11 to 15	16 to 20	21 to 25	26 to 30	31 to 35	36 to 40	Room Count
10 or less	4	4						1
16 to 20	7	15	21					5
21 to 25	3	6	18	42				6
Total Course Meetings = 120	14	25	39	42	0	0	0	12

Average Class Lab Size = 916 SF; 44 SF/Seat

Match between course enrollment & room capacity
Course enrollment appropriate for room capacity
Mismatch between course enrollment & room capacity

GLEN BURNIE TOWN CENTER - FALL 2014

Utilization Summary Tables

Figures 5.39 and 5.40 provide a summary of the hourly and seat fill utilization results for the scheduled instructional spaces on the Glen Burnie Town Center during week 12 in fall 2014. The twelfth week was chosen for the analysis because 196 course meetings were offered during that period representing peak utilization during the semester.

- During the day, 3 of the 13 scheduled classrooms met the hourly utilization target. There appears to be significant capacity to accommodate additional classroom-based courses during the day.
- GBTC*302, which was used for a variety of credit and non-credit courses, was scheduled for 30 hours per week during the day.
- Biology Lab GBTC*303 was scheduled for 12 hours per week during the day, indicating some capacity for increasing the number of biology sections being offered.
- During the evening, many of the classrooms and almost all of the class labs were near capacity in terms of the hours scheduled and seats filled.
- Continuing Education courses were reportedly also held in GBTC*311, 409 and 514.

Figure 5.39

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Glen Burnie Town Center - Fall 2014 - Week 12								
Day Courses								
GBTC*202	General Purpose Class	Non Credit	575	22	26	36.4%	28.00	62.2%
GBTC*203	Seminar Room	Non Credit	476	20	24	50.0%	5.00	11.1%
GBTC*204	Teaching Theater	Credit	475	20	24	**101.7%**	8.50	18.9%
GBTC*205	Teaching Theater	Credit	477	20	24	**105.0%**	2.50	63.3%
		Non Credit				61.0%	26.00	
GBTC*206	Teaching Theater	Non Credit	496	20	25	**110.0%**	12.00	26.7%
GBTC*212	General Purpose Class	Non Credit	755	30	25	30.0%	20.00	44.4%
GBTC*214	General Purpose Class	Non Credit	721	28	26	57.1%	8.00	17.8%
GBTC*323	General Purpose Class	Credit	532	20	27	**105.0%**	3.00	6.7%
GBTC*409	Teaching Theater	Credit	967	36	27	**118.5%**	7.50	16.7%
GBTC*411	Teaching Theater	Non Credit	897	36	25	72.2%	12.00	26.7%
GBTC*513	General Purpose Class	Non Credit	500	20	25	**100.0%**	12.00	26.7%
GBTC*514	General Purpose Class	Credit	680	24	28	**120.8%**	3.75	8.3%
GBTC*539	Teaching Theater	Non Credit	529	20	26	10.0%	52.50	**116.7%**
		Classroom Total	8,080	316			200.75	
GBTC*302	Class Lab (Dry)	Credit	596	20	30	38.8%	12.00	**66.7%**
		Non Credit				**85.0%**	18.00	
GBTC*303	Class Lab (Wet)	Credit	1,275	24	53	**93.8%**	12.00	26.7%
GBTC*414	Class Lab (Dry)	Credit	686	24	29	76.7%	5.75	12.8%
GBTC*415	Class Lab (Dry)	Non Credit	595	24	25	79.2%	18.00	40.0%
		Class Lab Total	3,152	92			65.75	
Glen Burnie Town Center Day Course Total			**11,232**	**408**			**266.50**	

Figure 5.40

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Glen Burnie Town Center - Fall 2014 - Week 12								
Evening Courses								
GBTC*103	General Purpose Class	Credit	628	28	22	39.3%	3.00	52.5%
		Non Credit				67.9%	7.50	
GBTC*203	Seminar Room	Non Credit	476	20	24	30.0%	7.00	35.0%
GBTC*204	Teaching Theater	Credit	475	20	24	61.7%	10.50	52.5%
GBTC*205	Teaching Theater	Credit	477	20	24	**90.0%**	7.00	35.0%
GBTC*206	Teaching Theater	Credit	496	20	25	**115.0%**	5.50	27.5%
GBTC*212	General Purpose Class	Non Credit	755	30	25	65.0%	20.00	**100.0%**
GBTC*214	General Purpose Class	Credit	721	28	26	75.0%	2.75	**105.0%**
		Non Credit				**90.8%**	18.25	
GBTC*311	Teaching Theater	Credit	440	16	28	68.8%	4.00	20.0%
GBTC*323	General Purpose Class	Credit	532	20	27	60.0%	2.00	**85.0%**
		Non Credit				**120.0%**	15.00	
GBTC*409	Teaching Theater	Credit	967	36	27	**88.0%**	8.75	43.8%
GBTC*411	Teaching Theater	Credit	897	36	25	52.8%	3.00	53.8%
		Non Credit				41.7%	7.75	
GBTC*513	General Purpose Class	Credit	500	20	25	**115.0%**	2.75	**98.8%**
		Non Credit				**100.6%**	17.00	
GBTC*514	General Purpose Class	Credit	680	24	28	79.2%	9.00	45.0%
GBTC*539	Teaching Theater	Non Credit	529	20	26	**85.0%**	5.00	25.0%
		Classroom Total	8,573	338			155.75	
GBTC*302	Class Lab (Dry)	Credit	596	20	30	45.0%	4.00	51.3%
		Non Credit				50.0%	6.25	
GBTC*303	Class Lab (Wet)	Credit	1,275	24	53	76.4%	9.00	45.0%
GBTC*307	Physical Sciences Lab	Credit	1,420	24	59	60.4%	6.00	30.0%
GBTC*413	Class Lab (Dry)	Credit	657	24	27	54.2%	2.50	**72.5%**
		Non Credit				**100.0%**	12.00	
GBTC*414	Class Lab (Dry)	Credit	686	24	29	79.2%	4.00	**95.0%**
		Non Credit				**100.0%**	15.00	
GBTC*415	Class Lab (Dry)	Credit	595	24	25	70.8%	5.00	**100.0%**
		Non Credit				**100.0%**	15.00	
GBTC*416	Class Lab (Dry)	Non Credit	588	20	29	**100.0%**	15.00	**75.0%**
GBTC*417	Class Lab (Dry)	Non Credit	489	20	24	**100.0%**	15.00	**75.0%**
		Class Lab Total	6,306	180			108.75	
Glen Burnie Town Center Evening Course Total			**14,879**	**518**			**264.50**	

Distribution of Course Meetings by Time of Day

Figures 5.41 and 5.42 show classroom and class lab occupancy for week 12 during the fall 2014 semester. Evening courses drive the need for classroom and class lab space at Glen Burnie.

Of the 17 available classrooms, 15 were scheduled for classes during the peak week.

- Morning classes were most popular between 9:00 and 11:30 AM.
- There was a significant lull between noon and 6:00 PM.
- The number of course meetings peaked between 6:00 PM and 8:00 PM on Tuesday and Thursday with 15 classrooms in use simultaneously.
- Fewer evening course meetings were held on Monday and Wednesday.

Of the available 8 instructional spaces, all 8 were scheduled for classes during the peak week.

- During the day, most class lab courses took place between 9:00 and 11:30 AM.
- More class labs were scheduled on Wednesday evenings when seven of the eight available labs were in use at the same time.
- Few class labs were held on Friday.

Distribution of Course Meetings by Day of Week

Figure 5.43 illustrates the distribution of the 196 course meetings taught during the fall 2014 semester. More classroom-based courses were taught on Tuesday and Thursday. Monday and Wednesday were the preferred days for class labs with almost one-third of all class lab-based courses occurring on Wednesday. Very few courses were taught on Friday.

Figure 5.41

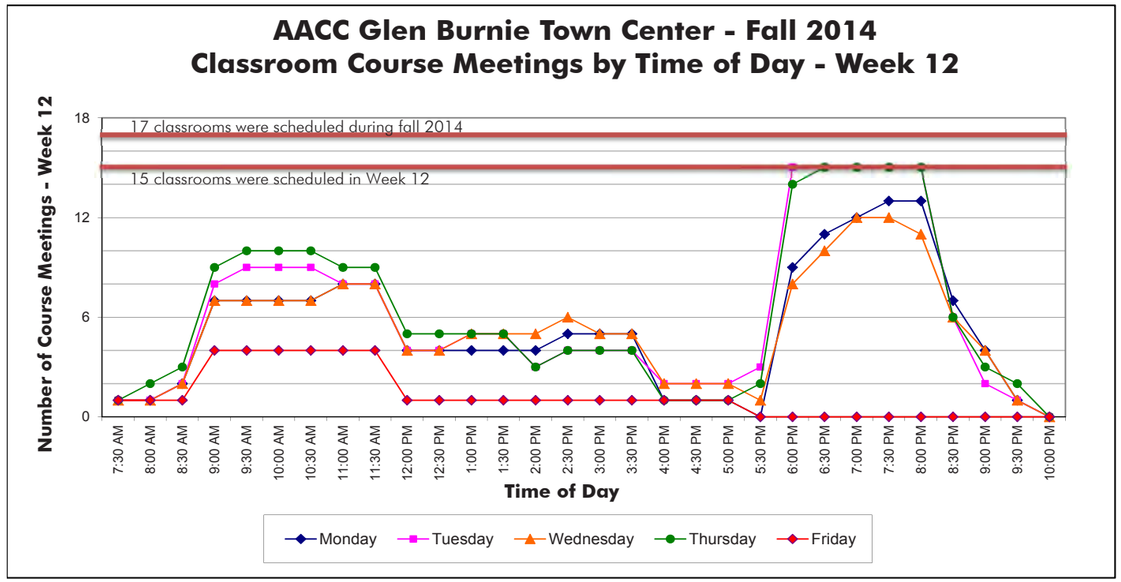


Figure 5.42

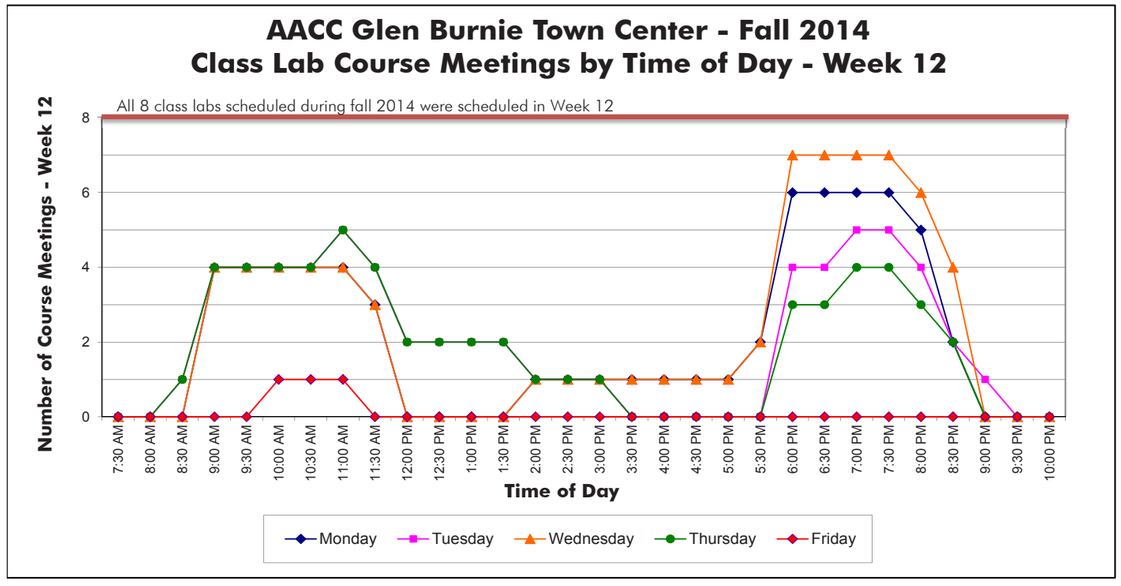
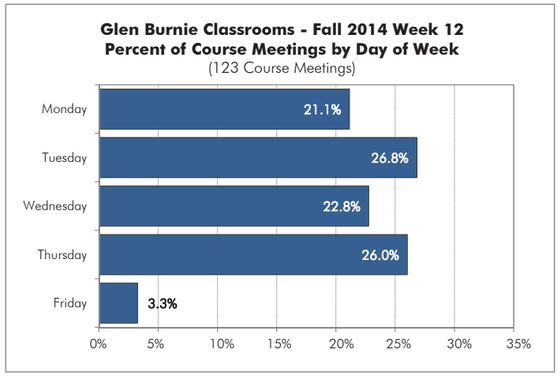
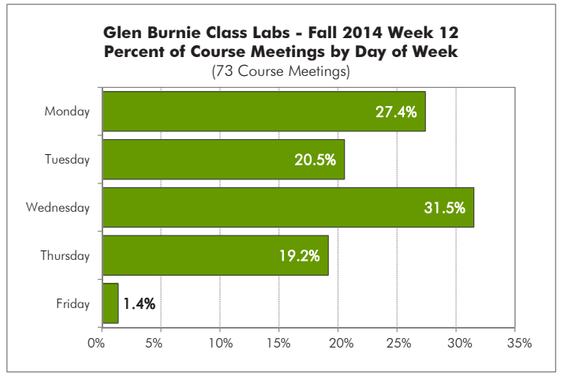


Figure 5.43





Scheduled Class Size Compared to Room Capacity

Figure 5.44 shows the degree to which class size correlated with room capacity during week 12 of the fall 2014 semester.

- Of the 123 course meetings scheduled in classrooms, 50 percent were in rooms that had the appropriate number of seats, based on a seat utilization target of 80 percent.
- 24 percent of classes were scheduled in classrooms that were larger than necessary. Conversely, 26 percent were held in classrooms that reportedly had too few seats.
- Of the 73 course meetings held in class labs, 37 percent were scheduled in rooms that had the appropriate number of seats for the course enrollment.
- A total of 20 percent were held in class labs that had significantly more seats than necessary and 43 percent of the course meetings were held in rooms that were reportedly too small for the enrollment.

Figure 5.44

AACC - Glen Burnie Town Center
Fall 2014 - Week 12

	Scheduled Class Size (Enrollment)									
Classroom Seating Capacity	10 or less	11 to 15	16 to 20	21 to 25	26 to 30	31 to 35	36 to 40	41 to 45	46 to 50	Room Count
16 to 20	12	19	11	25	1					8
21 to 25	4		4	2	1					2
26 to 30	9	1	7	5	6					3
36 to 40	1		3		5		2	2	3	2
Total Course Meetings = 123	26	20	25	32	13	0	2	2	3	15

Average Classroom Size = 610 SF; 25 SF/Seat

	Scheduled Class Size (Enrollment)									
Class Lab Seating Capacity	10 or less	11 to 15	16 to 20	21 to 25	26 to 30	31 to 35	36 to 40	41 to 45	46 to 50	Room Count
16 to 20	8		6	1	12					3
21 to 25		7	15	6	12	6				5
Total Course Meetings = 73	8	7	21	7	24	6	0	0	0	8

Average Class Lab Size = 788 SF; 35 SF/Seat

Match between course enrollment & room capacity
Course enrollment appropriate for room capacity
Mismatch between course enrollment & room capacity

CENTER FOR CYBER & PROFESSIONAL TRAINING - FALL 2014

Utilization Summary Tables

Figure 5.45 provides a summary of the hourly and seat fill utilization results for the scheduled instructional spaces at the Center for Cyber and Professional Training (CCPT) during week 16 in fall 2014. The sixteenth week was chosen for the analysis because 79 course meetings were offered during that period representing peak utilization during the semester.

Figure 5.45

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Center for Cyber & Professional Training (CCPT) - Fall 2014 - Week 16								
Day Courses								
CCPT*304	Class Lab (Dry)	Non Credit	1,114	20	56	20.0%	40.00	**88.9%**
CCPT*305A	Class Lab (Dry)	Non Credit	777	12	65	51.7%	16.00	35.6%
CCPT*305B	Class Lab (Dry)	Non Credit	783	12	65	**104.2%**	16.00	35.6%
CCPT*308	Class Lab (Dry)	Credit	1,184	20	59	46.7%	12.00	**115.6%**
		Non Credit				40.0%	40.00	
CCPT*313	Class Lab (Dry)	Credit	1,063	20	53	**97.5%**	7.00	15.6%
CCPT*316	Class Lab (Dry)	Non Credit	1,063	20	53	**100.0%**	40.00	**88.9%**
CCPT*317	Class Lab (Dry)	Non Credit	1,063	20	53	**100.0%**	40.00	**88.9%**
CCPT*331	Class Lab (Dry)	Non Credit	1,123	20	56	**100.0%**	40.00	**88.9%**
CCPT*332	Class Lab (Dry)	Non Credit	1,192	21	57	**95.2%**	40.00	**88.9%**
CCPT*333	Class Lab (Dry)	Non Credit	890	16	56	**125.0%**	40.00	**88.9%**
CCPT*340A	Class Lab (Dry)	Credit	894	16	56	37.5%	3.75	8.3%
		Class Lab Total	11,146	197			334.75	
CCPT Day Course Total			**11,146**	**197**			**334.75**	

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Center for Cyber & Professional Training (CCPT) - Fall 2014 - Week 16								
Evening Courses								
CCPT*305A	Class Lab (Dry)	Non Credit	777	12	65	16.7%	6.00	30.0%
CCPT*308	Class Lab (Dry)	Credit	1,184	20	59	70.0%	17.00	**85.0%**
CCPT*313	Class Lab (Dry)	Credit	1,063	20	53	40.0%	8.00	40.0%
CCPT*314	Class Lab (Dry)	Credit	1,063	20	53	62.5%	6.50	**232.5%**
		Non Credit				60.0%	40.00	
CCPT*315	Class Lab (Dry)	Credit	1,063	20	53	**82.5%**	8.00	40.0%
CCPT*316	Class Lab (Dry)	Credit	1,063	20	53	77.5%	5.00	25.0%
CCPT*317	Class Lab (Dry)	Credit	1,063	20	53	**90.0%**	4.00	**62.5%**
		Non Credit				30.0%	8.50	
CCPT*331	Class Lab (Dry)	Credit	1,123	20	56	**88.3%**	9.75	48.8%
CCPT*332	Class Lab (Dry)	Credit	1,192	21	57	71.4%	10.00	50.0%
CCPT*340A	Class Lab (Dry)	Credit	894	16	56	**83.3%**	10.75	53.8%
		Class Lab Total	10,485	189			133.50	
CCPT Evening Course Total			**10,485**	**189**			**133.50**	

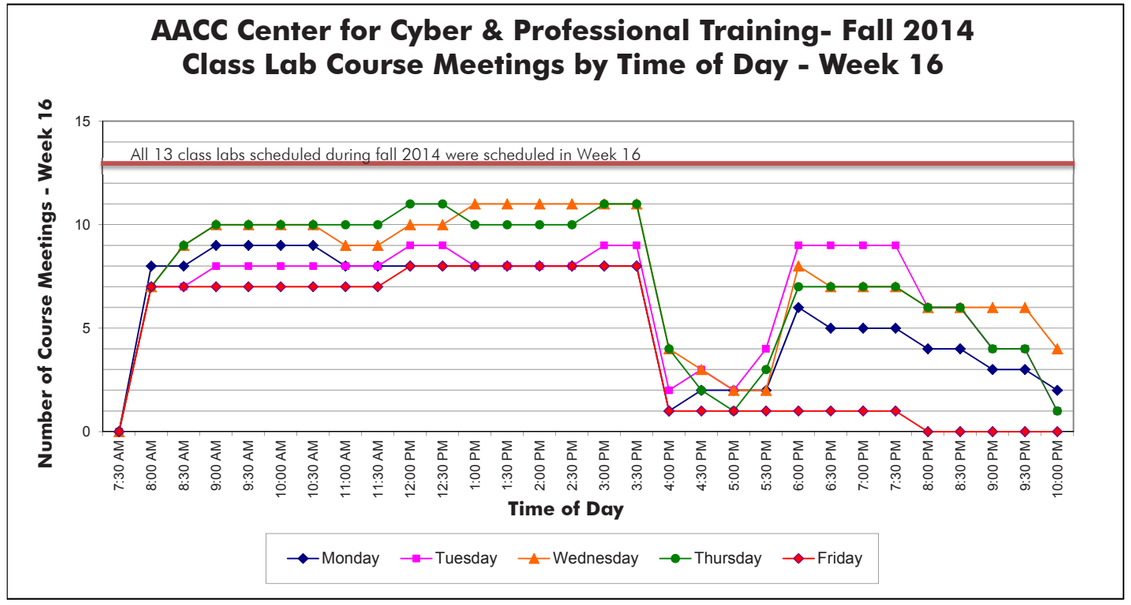
- During the day, 64 percent of all spaces were over-scheduled and overfilled.
- During the evening, 50 percent of the rooms were also at or near capacity.
- While some additional course sections could have been offered at the Center, capacity was limited based on the utilization target criteria.

Distribution of Course Meetings by Time of Day

Figure 5.46 shows class lab occupancy for week 16 of the fall 2014 semester. All of the 13 available instructional spaces were scheduled for classes during the peak week.

- Classes began at 8:00 AM Monday through Friday and room use remained steady until 3:30 PM.
- There was an evening bump in the number of class labs that were taught Monday through Thursday with peak use occurring on Tuesdays between 6:00 and 7:30 PM.
- Few courses were held on Friday evenings.
- A maximum of 11 class labs were scheduled simultaneously. This occurred in the afternoons on Wednesday and Thursday.

Figure 5.46



Distribution of Course Meetings by Day of Week

Figure 5.47 illustrates the distribution of the 79 course meetings held during the peak week. The majority of classes took place Tuesday through Thursday.

Scheduled Class Size Compared to Room Capacity

Figure 5.48 shows the degree to which class size correlated with room capacity during week 16 of the fall 2014 semester.

- Of the 79 course meetings held during the peak week, 43 percent were scheduled in rooms that had the appropriate number of seats for the size of the class, based on a seat fill target of 80 percent.
- 25 percent of courses were held in class labs that had significantly more seats than required and 32 percent were held in rooms that were reportedly too small for the enrollment.

Figure 5.47

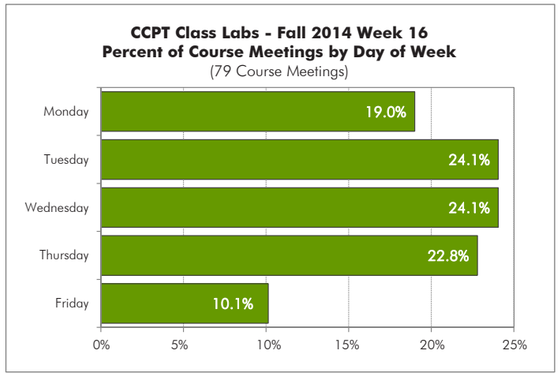


Figure 5.48

AACC - Center for Cyber and Professional Training
Fall 2014 - Week 16

Class Lab Seating Capacity	Scheduled Class Size (Enrollment) 10 or less	11 to 15	16 to 20	21 to 25	Room Count
11 to 15	3	4			2
16 to 20	19	13	12	20	10
21 to 25	1		2	5	1
Total Course Meetings = 79	23	17	14	25	13

Average Class Lab Size = 1,021 SF; 57 SF/Seat

Match between course enrollment & room capacity
Course enrollment appropriate for room capacity
Mismatch between course enrollment & room capacity

HOTEL, CULINARY ARTS & TOURISM INSTITUTE - FALL 2014

Utilization Summary Tables

Figure 5.49 provides a summary of the hourly and seat fill utilization results for the scheduled instructional spaces at the Hotel, Culinary Arts and Tourism (HCAT) Institute during week 15 in fall 2014. The fifteenth week was chosen for the analysis because 14 course meetings were offered during that period representing peak utilization during the semester.

- During the day, all of the rooms fell short of the hourly utilization target. Two of the three spaces where well filled when scheduled.
- During the evening, classroom HCAT*117 and class lab HCAT*112 were well utilized, meeting the hourly use target. The other two instructional spaces fell short of the hourly goal.
- Based on the fall 2014 schedule, there is capacity at HCAT for additional course sessions.

Distribution of Course Meetings by Time of Day

Figures 5.50 and 5.51 show room occupancy for week 15 of the fall 2014 semester.

Both of the classrooms were scheduled for classes during the peak week.

- During the day, generally only one of the classrooms was in use at any given time, with the exception of Tuesday.
- Both classrooms were in use between 5:00 and 8:30 PM on Thursday.

Both class labs were scheduled for classes during the peak week.

- Only one class lab was in use at any given time.
- No classes were held between 11:00 AM and 2:30 PM on any day.
- No class labs were held on Tuesday.
- Morning classes occurred only on Wednesday.

Distribution of Course Meetings by Day of Week

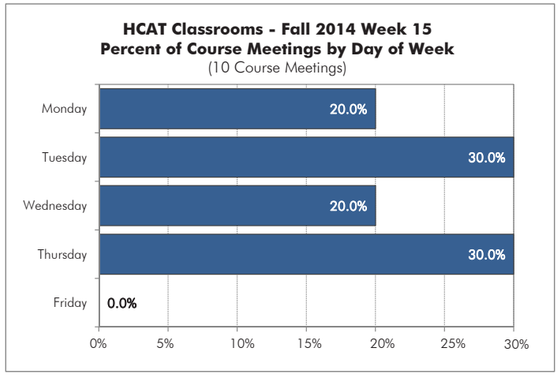
Figure 5.52 illustrates the distribution of the 14 course meetings that were held during the peak week. Sixty percent of all classroom-based courses occurred on Tuesday and Thursday. Class lab sessions were distributed equally between Monday, Wednesday, Thursday and Friday.

Figure 5.49

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Hotel, Culinary Arts and Tourism (HCAT) Institute - Fall 2014 - Week 15								
Day Courses								
HCAT*114	Café Classroom	Credit	461	20	23	70.0%	15.25	33.9%
HCAT*117	General Purpose Class	Credit	597	24	25	39.6%	10.25	22.8%
		Classroom Total	1,058	44			25.50	
HCAT*116	Computer Lab	Credit	711	20	36	75.0%	2.75	6.1%
		Class Lab Total	711	20			2.75	
HCAT Institute Day Course Total			**1,769**	**64**			**28.25**	

Room No.	Room Name	Credit/ Non-Credit	Area	Seats	Area/ Seat	Percent Seats Occupied	Hours Scheduled in Week	Percent Hours Scheduled
Hotel, Culinary Arts and Tourism (HCAT) Institute - Fall 2014 - Week 15								
Evening Courses								
HCAT*114	Café Classroom	Credit	461	20	23	75.0%	10.25	51.3%
HCAT*117	General Purpose Class	Credit	597	24	25	52.8%	13.25	66.3%
		Classroom Total	1,058	44			23.50	
HCAT*112	Class Lab (Wet)	Non Credit	1,053	18	59	44.4%	10.00	50.0%
HCAT*116	Computer Lab	Credit	711	20	36	60.0%	3.00	15.0%
		Class Lab Total	1,764	38			13.00	
HCAT Institute Evening Course Total			**2,822**	**82**			**36.50**	

Figure 5.52



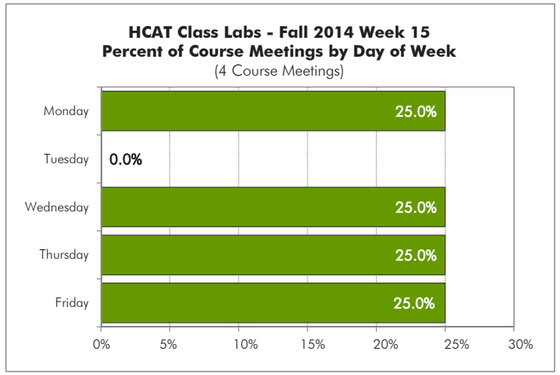


Figure 5.50

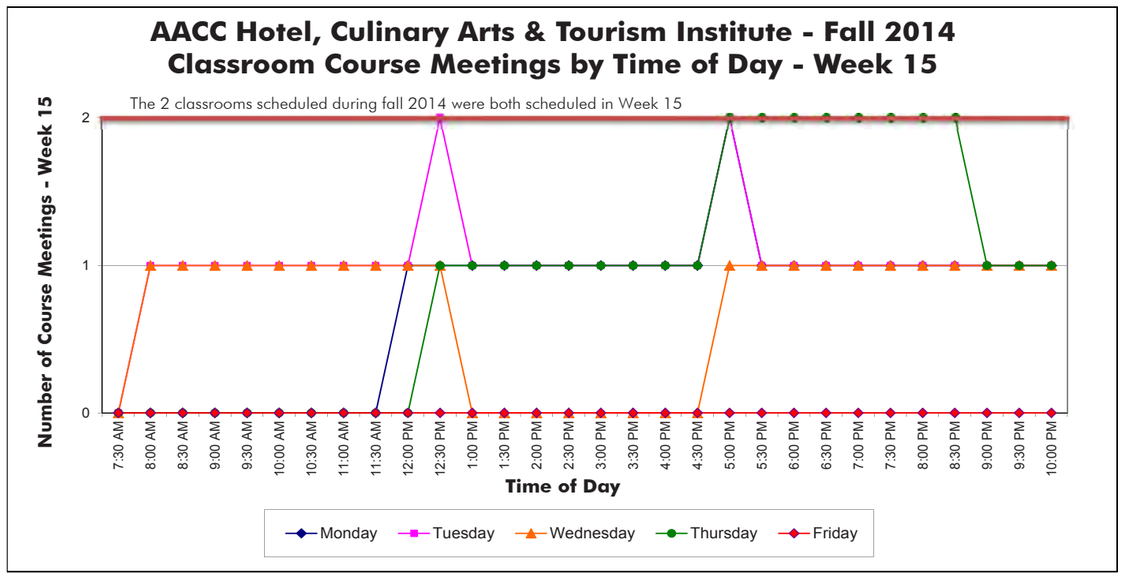
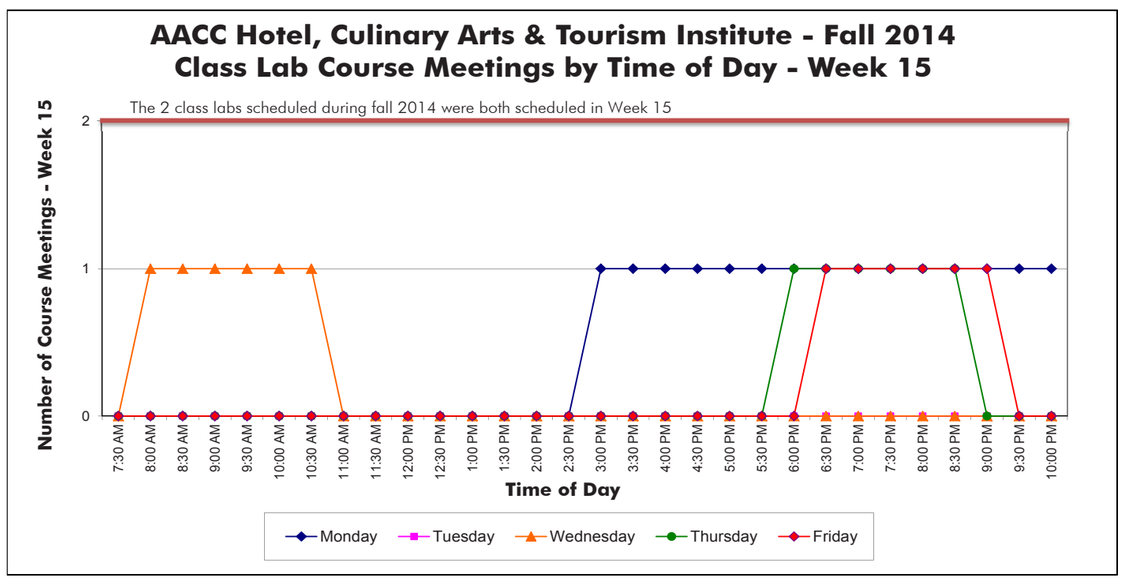


Figure 5.51



Scheduled Class Size Compared to Room Capacity

Figure 5.53 shows the degree to which class size correlated with room capacity during week 15 of the fall 2014 semester.

- Of the 10 scheduled course meetings in classrooms, 50 percent were held in rooms that had the appropriate number of seats, based on a seat utilization target of 80 percent.
- Of the 4 course meetings held in class labs, two were held in rooms that were appropriately sized.
- In fall 2014, HCAT*117 was used for classes. It has since been converted into a Student Resource Center.

Figure 5.53

AACC - Hotel, Culinary Arts and Tourism Institute
Fall 2014 - Week 15

	Scheduled Class Size (Enrollment)			
Classroom Seating Capacity	10 or less	11 to 15	16 to 20	Room Count
16 to 20	1	2	2	1
21 to 25	3	1	1	1
Total Course Meetings = 10	4	3	3	2

Average Classroom Size = 529 SF; 27 SF/Seat

	Scheduled Class Size (Enrollment)			
Class Lab Seating Capacity	10 or less	11 to 15	16 to 20	Room Count
16 to 20	2	2		2
Total Course Meetings = 4	2	2	0	2

Average Class Lab Size = 882 SF; 44 SF/Seat

Match between course enrollment & room capacity
Course enrollment appropriate for room capacity
Mismatch between course enrollment & room capacity

Chapter 6
Recommendations

Near-Term Projects

(1-5 Years)

N1 | Learning Landscape Improvements Campus Wide

Total GSF: varies
Project Cost: $300,000 annually / 4 years
Project Completion: 2019
Low-cost interior renovations to make better use of existing spaces on campus. These improvements may include creating touchdown spaces in wide corridors and adding data and power in student lounges.

N2 | Relocate the Modular Building

Total GSF: 18,000
Project Cost: $981,228
Project Completion: 2017
The Modular Building is one of the first facilities visitors and students see when arriving to campus. Relocating the Modular Building adjacent to Annex A will positively impact the arrival sequence and overall appearance of campus while providing swing space for future renovations.

N3 | Construct Health Science and Biology Building

Total GSF: 172,856
Project Cost: $121,330,243
Project Completion: 2020
The Health Science and Biology Building will completely replace all existing laboratories on campus in a new facility that houses state-of-the-art health science and biology instructional space. Before this building can be built, several smaller projects must be completed including razing the Pool and Schwartz.

N3.1 | Raze Pool and Install New Gym Facade

Total GSF: 14,000
Project Cost: $753,389
Project Completion: 2019
The Daniel C. Olson Memorial Pool Building will be demolished to provide space for the construction of the new Health Science and Biology Building and the adjacent Science Quad. After the Pool is demolished, a modest addition will be constructed on the east facade of the David S. Jenkins Gymnasium. This addition will repair the wall and provide space for a new entrance lobby, weight room, multipurpose room, and storage.

N3.2 | Raze Schwartz and Relocate Classrooms

Total GSF: 13,952
Project Cost: $489,656
Project Completion: 2019
The Schwartz Building will be demolished to provide space for the construction of the new Health Science and Biology Building and the adjacent Science Quad. Classrooms and offices will be relocated to the Modular Building.

N3.3 | Relocate Ring Road and Provide New Parking

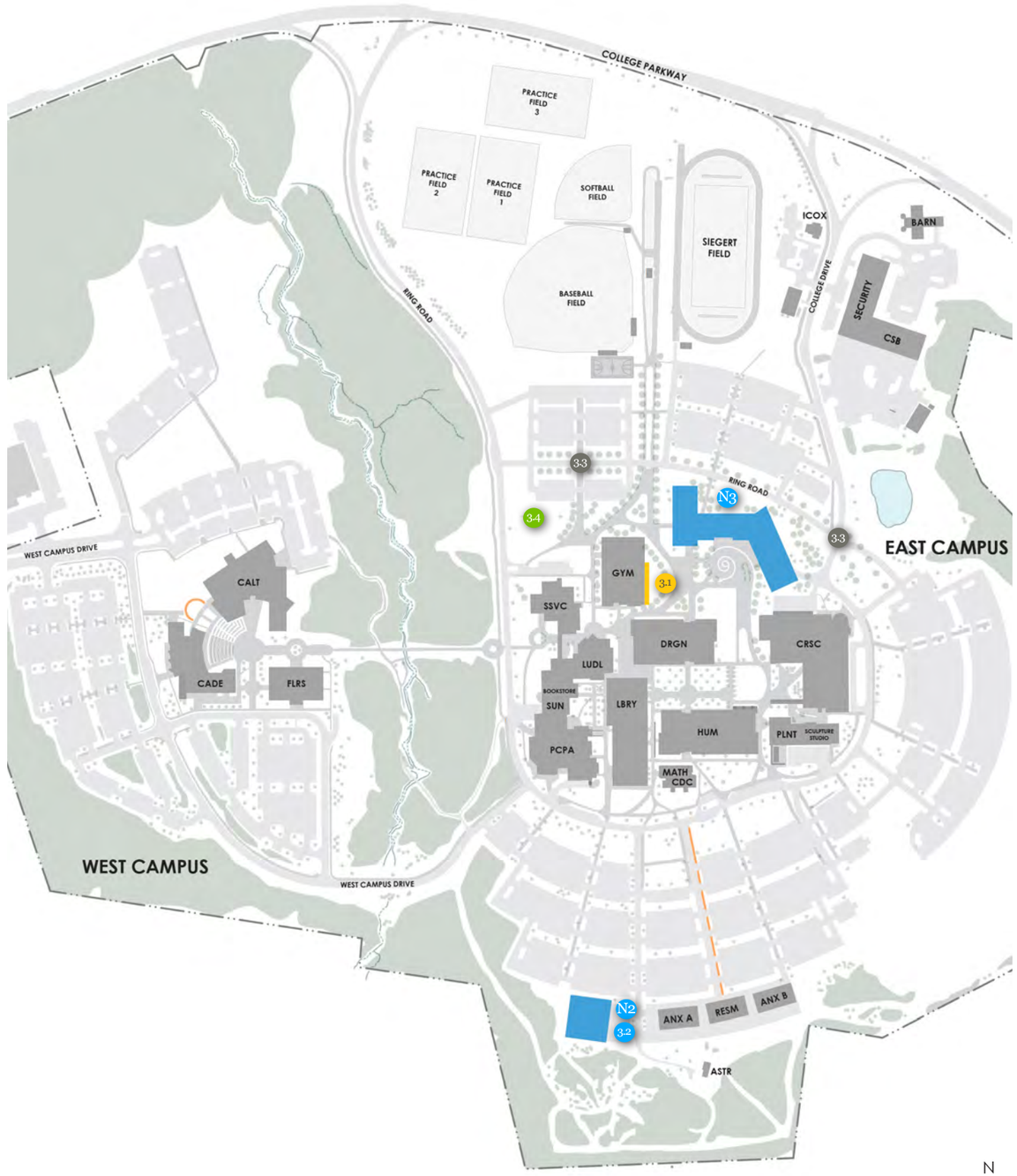
Total GSF: 70,000
Project Cost: $3,930,725
Project Completion: 2019
A portion of Ring Road will be demolished and relocated to create space for the Health Science and Biology Building.

N3.4 | Campus Entrance Monument Sign

Total GSF: N/A
Project Cost: $421,149
Project Completion: 2019
A new green space will be added to beautify the space previously occupied by the Modular Building. This area will feature a new entry sign, additional parking for campus, and be heavily landscaped to improve the overall arrival sequence to campus as one approaches the Student Services Center.

N4 | Campus Art Design Guidelines

Project Completion: 2020
Develop a set of design guidelines to promote the installation of public art projects across campus. The guidelines should identify areas of campus that are appropriate for public art while creating policies for art commissioning, installation, and removal.



Mid-Term Projects

(6-8 Years)

M1 | Partial Renovation of Careers Building

Total GSF: 6,956
Project Cost: $2,234,242
Project Completion: 2021
The Careers Building will be vacated when Business and Law and the Biology department relocate providing an opportunity for the Math Department to consolidate its departmental space and resources.

M2 | Renovate and Expand Child Development Center

Total GSF: 13,117
Project Cost: $2,987,494
Project Completion: 2022
With the Math Building vacant, the Child Development Center has the opportunity to expand and add a modern Lab School for teacher education.

M3 | Renovate Dragun and Expand for Physical Sciences

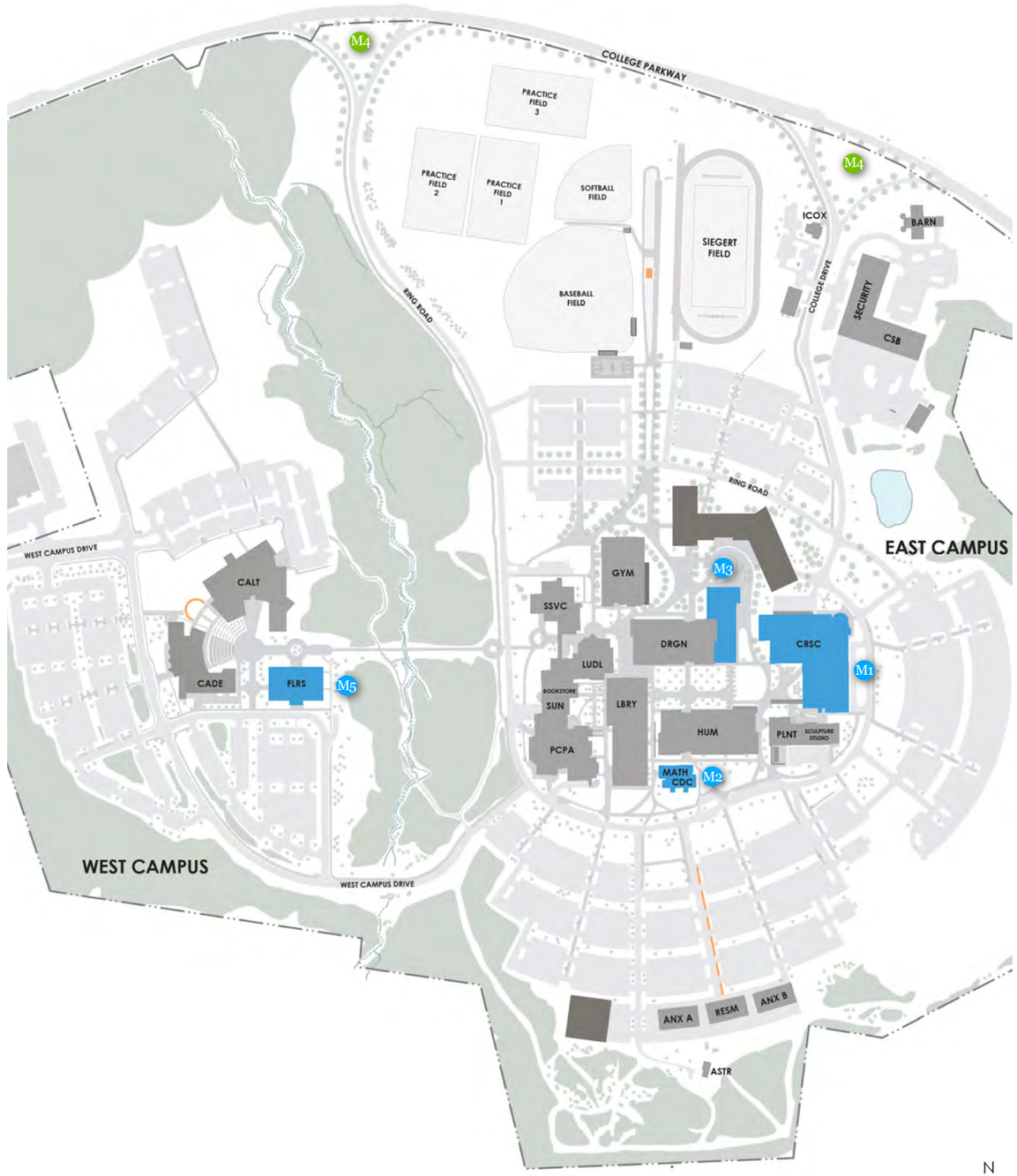
Total GSF: 73,678
Project Cost: $34,335,984
Project Completion: 2022
The rejuvenation of the Dragun Science Building and the addition of new laboratories for physical science will energize the heart of East Campus and provide an anchor to the south side of the new Science Quad.

M4 | Campus Gateway Improvements along College Parkway

Total GSF: 220,000
Project Cost: $1,042,218
Project Completion: 2023
Entrances along College Parkway will be improved with landscaping and signage to signify visitor's arrival to the Arnold Campus.

M5 | Renovate Florestano

Total GSF: 33,293
Project Cost: $10,514,716
Project Completion: 2023
The completion of the Health Science and Biology Building will leave the Florestano Building vacant, thereby creating space for The School of Business and Law and the School of Continuing Workforce Development (CEWD).



Long-Term Projects
(8+ Years)

L1 | Complete Relocation of Ring Road
Total GSF: 360,000
Project Cost: $23,648,873
Project Completion: 2025
The remainder of Ring Road will be relocated to create a green buffer between East Campus and the adjacent parking areas. By doing so, the campus has multiple opportunities for growth and expansion in future years.

L1.1 | Raze Johnson
Total GSF: 11,314
Project Cost: $464,520
Project Completion: 2024
The Johnson Building will be razed in order to complete the full relocation of Ring Road. This project must occur before construction of the roadway begins.

L2 | Renovate and Expand Student Services Center
Total GSF: 25,269
Project Cost: $9,494,936
Project Completion: 2026
A renovation and addition to the Student Services Center will create a beautiful space for new students and visitors to experience campus for the first time. Moreover, this facility will provide more room for departments and services within the center to expand.

L3 | Renovate Dining Hall
Total GSF: 18,000
Project Cost: $10,391,315
Project Completion: 2027
The existing Dining Hall will be renovated with new systems that allow the campus to accommodate students needs.

Anticipated Probable Costs

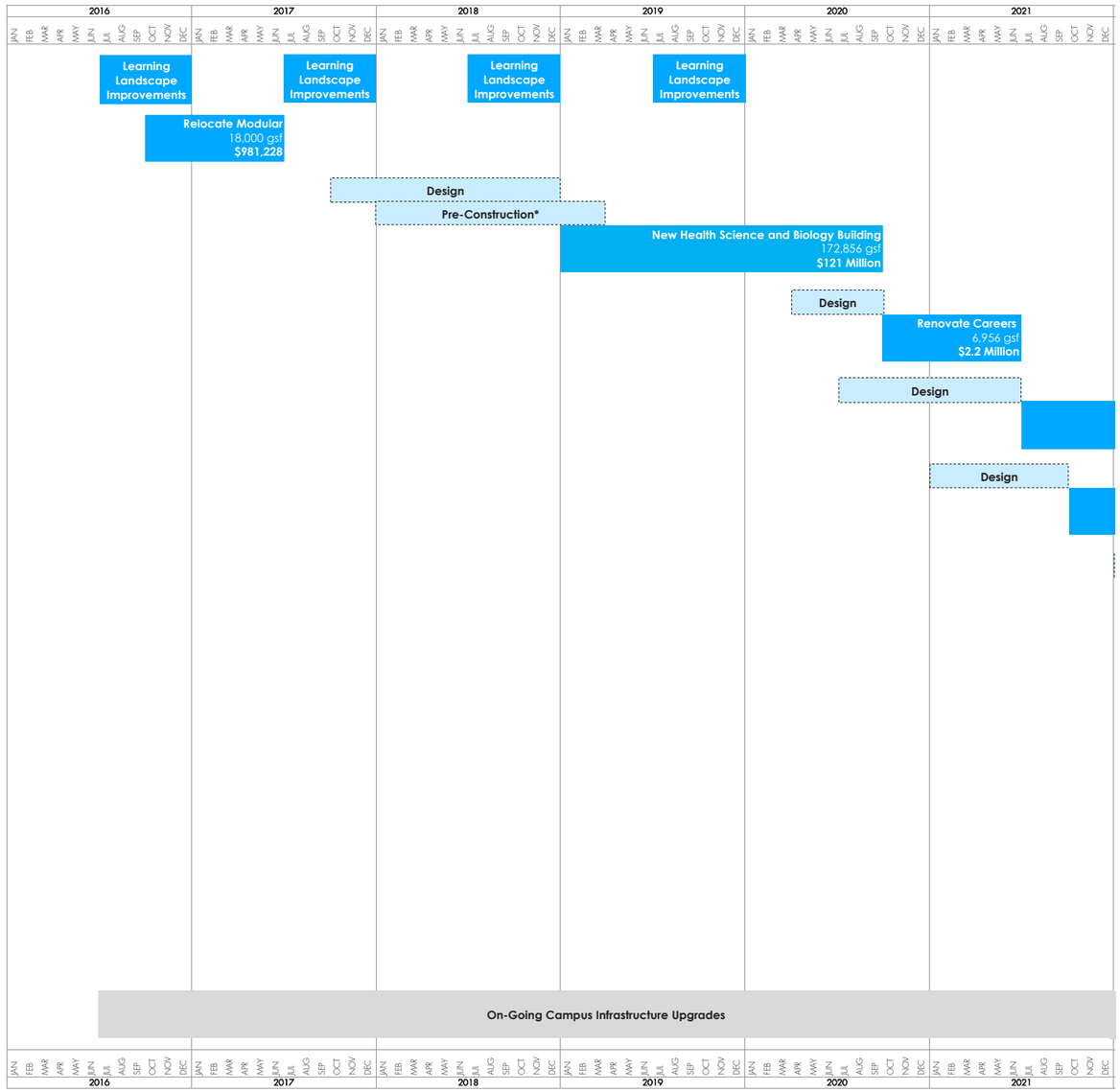
Cost Summary

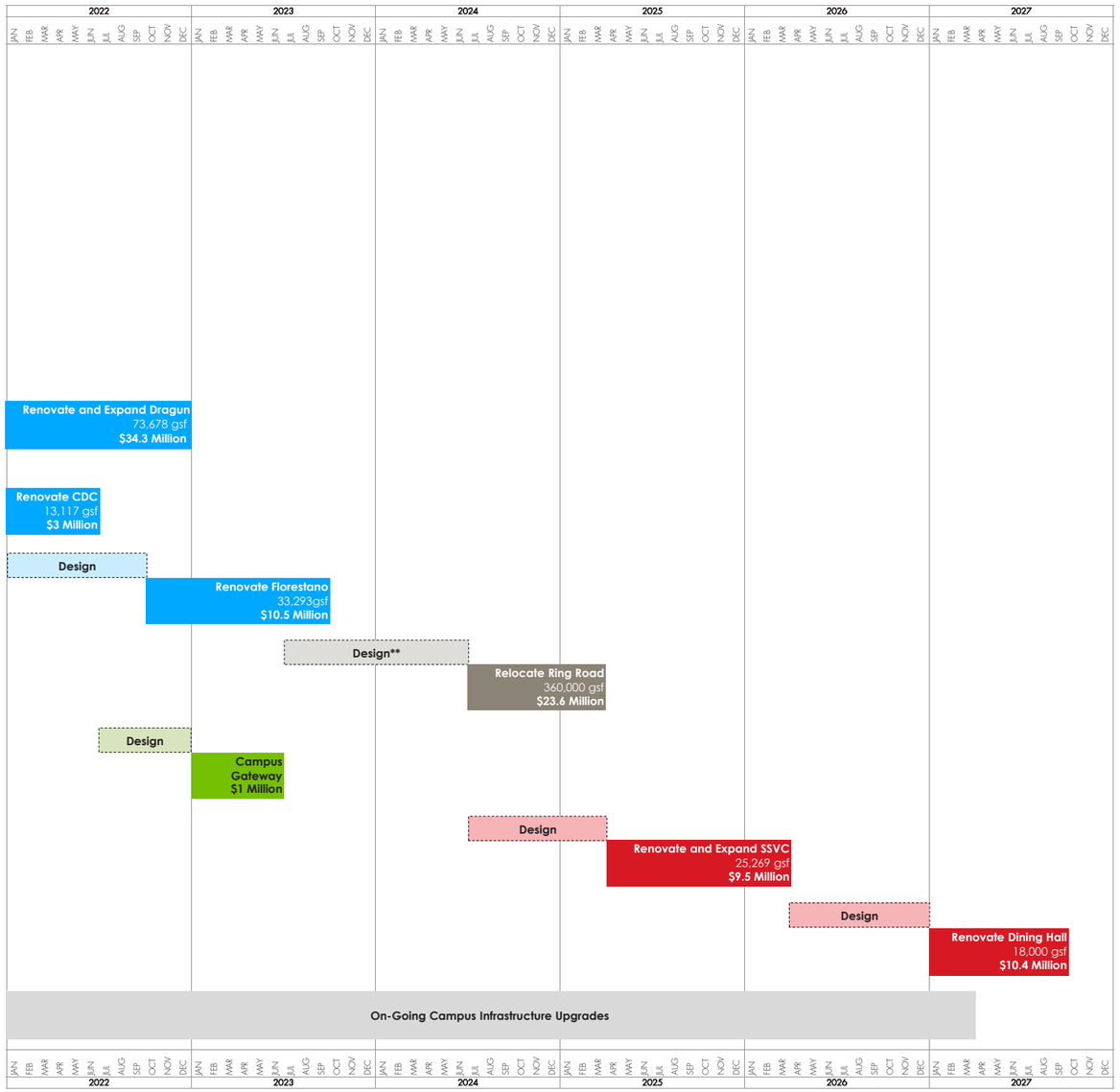
Proj. No.	Project Name	Construction Cost	Quantity	Unit Cost	Professional Fees, Equipment, Construction Contingencies	Total Project Costs 2016 Dollars	Estimated Year of Mid-Point Construction	Total Project Cost w/ Escalation	Total Project Cost by Term w/ Escalation
NEAR-TERM (1-5 Years)									**$129,256,226**
N1	Learning Landscape Improvements Campus Wide	$1,000,000	20	$50,000	$200,000	$1,200,000	2018	$1,349,837	
N2	Relocate the Modular Building	$810,000	18,000	$45	$97,200	$907,200	2017	$981,228	
N3	Construct Health Science and Biology Building*	$86,428,000	172,856	$500	$17,285,600	$103,713,600	2019	$121,330,243	
N3.1	Raze Pool and Install Gym Façade	$560,000	14,000	$40	$84,000	$644,000	2019	$753,389	
N3.2	Raze Schwartz and Relocate Classrooms	$348,800	13,952	$25	$69,760	$418,560	2019	$489,656	
N3.3	Partial Relocation of Ring Road	$2,800,000	70,000	$40	$560,000	$3,360,000	2019	$3,930,725	
N3.4	Campus Entrance Monument Sign	$300,000	1		$60,000	$360,000	2019	$421,149	
MID-TERM (6-8 Years)						$110,603,360		$129,256,226	**$51,114,654**
M1	Partial Renovation of Careers Building	$1,530,320	6,956	$220	$306,064	$1,836,384	2021	$2,234,242	
M2	Renovate and Expand Child Development Center	$1,967,550	13,117	$150	$393,510	$2,361,060	2022	$2,987,494	
M3	Renovate Dragun and Expand for Physical Sciences	$22,613,522	73,678	$325	$4,522,704	$27,136,227	2022	$34,335,984	
M4	Campus Gateway Improvements along College Parkway	$660,000	2	$330,000	$132,000	$792,000	2023	$1,042,218	
M5	Renovate Florestano	$6,658,600	33,293	$200	$1,331,720	$7,990,320	2023	$10,514,716	
LONG-TERM (8+ Years)						$40,115,991		$51,114,654	**$46,432,949**
L1	Complete Relocation of Ring Road**	$14,400,000	360,000	$40	$2,880,000	$17,280,000	2024	$23,648,873	
L1.1	Raze Johnson Building	$282,850	11,314	$25	$56,570	$339,420	2024	$464,520	
L2	Renovate and Expand Student Services Center	$5,559,180	25,269	$220	$1,111,836	$6,671,016	2025	$9,494,936	
L3	Renovate Dining Hall	$5,400,000	18,000	$300	$1,350,000	$6,750,000	2027	$10,391,315	
	On-going Campus Infrastructure Upgrades					$2,000,000	2021	$2,433,306	
						$33,040,436		$46,432,949	
GRAND TOTAL		**$151,318,822**			**$30,440,964**	**$183,759,787**		**$226,803,829**	**$226,803,829**

All estimates are in 2016 dollars and account for escalation.
*Pre-Construction will include Projects N3.1 - N3.4
**Pre-Construction will include Project L1.1

Implementation

Planned Project Timeline





*Pre-Construction will include Projects N3.1-N3.4 identified in the Anticipated Probable Costs Summary.

**Pre-Construction will include Project L1.1 identified in the Anticipated Probable Costs Summary.

Appendix A

Building Conditions

Building Conditions

In 2014 a Facilities Condition Assessment was conducted by EMG Corporation to capture the campus' current building and site conditions in preparation for the facilities master plan. Detailed reviews for 27 of AACC's 35 owned and leased properties were conducted. Information shown herein collates results from these assessments, current space data, and existing floor plans. Within the Assessment report each building was rated as good, fair, or poor. The buildings reviewed appear to be well maintained and are in fair-good overall condition. Buildings rated 'good' only require routine maintenance. Buildings rated 'fair' require repairs or replacements due to current physical conditions or estimated remaining useful life. Each detailed assessment should be referenced to determine the specific needs of each facility.

Figure A1.1 Arnold Campus

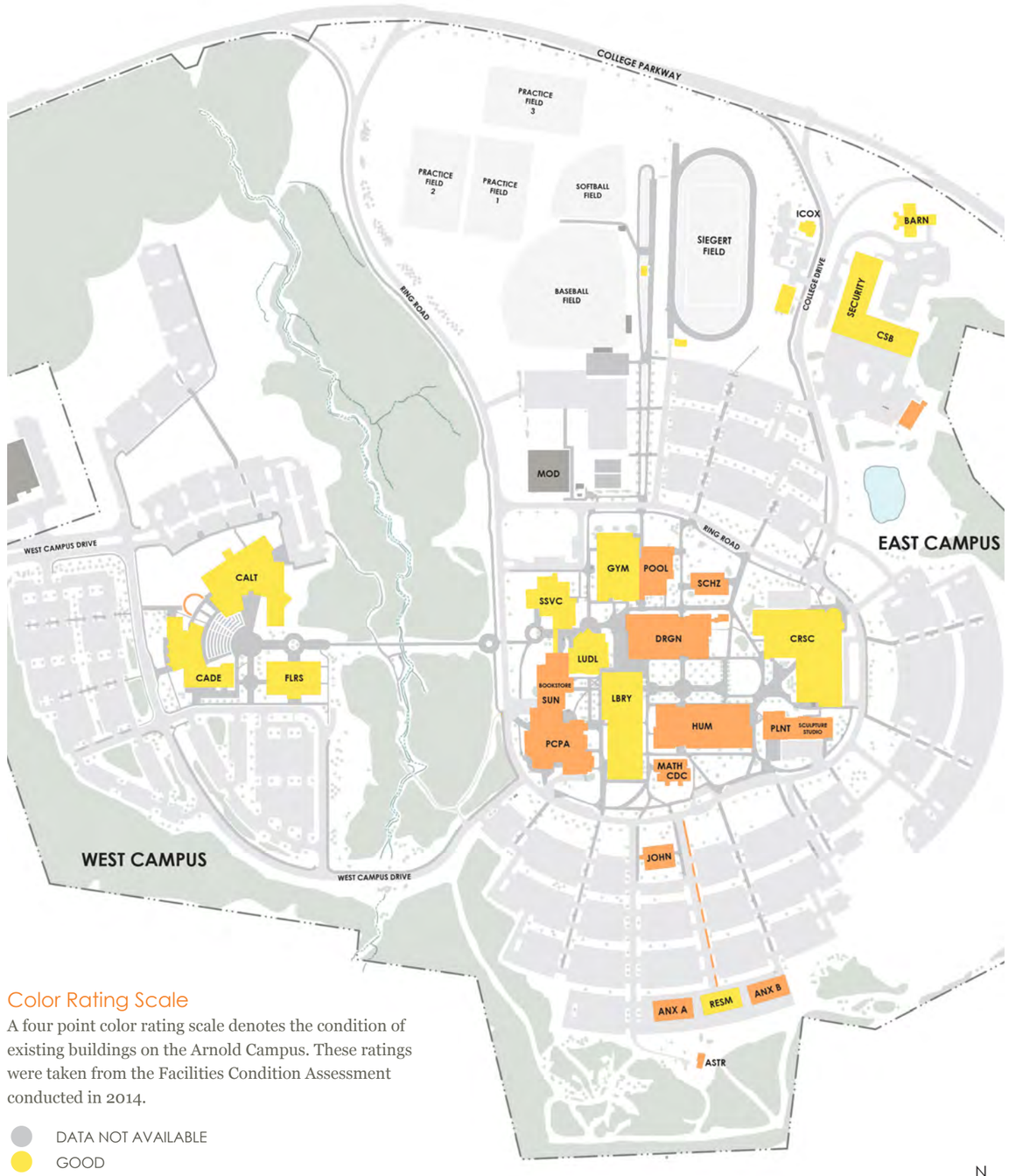
#	Key	Building Name	GSF (Gross Sq. Ft.)	Building Rating 2014
1	LUDL	Ludlum Hall Administration Building**	18,757	Good
2	ASTR	Astronomy Building	864	Fair
3	CRSC	Careers Center Building	117,650	Good
4	GYM	David S. Jenkin's Gymnasium	43,555	Good
5	HUM	Humanities Building	37,978	Fair
6	LIBR	Andrew G. Truxal Library**	67,384	Good
7	PLNT	Physical Plant	13,408	Fair
8	POOL	Daniel C. Olson Memorial Pool	13,884	Fair
9	DRGN	Dragun Science Building	39,499	Fair
10	SUN	Student Union	43,355	Fair
11	MATH	Math Building/Child Development Center	11,543	Fair
12	PCPA	Pascal Center for Performing Arts	14,138	Fair
13	ATST	Athletic Storage*	604	Good
14	BARN	Barn*	11,967	Good
15	GRND	Grounds Building	3,025	Fair
16	JOHN	Johnson Building	11,314	Fair
17	STOR	Grounds Storage	3,006	Fair
18	SCHZ	Schwartz Building	12,442	Fair
19	ICOX	Isaac Cox House	2,954	Good
20	FLRS	Florestano Allied Health Building	57,940	Good
21	CADE	Cade Center for Fine Arts	52,835	Good
22	SSVC	Student Services Center	21,100	Good
23	RESM	Resource Management Building	6,759	Good
24	CALT	Center for Applied Learning and Technology	92,711	Good
25	CSB	Central Services Building	32,538	Good
29	ANXA	Annex A	7,550	Fair
30	ANXB	Annex B	7,160	Fair
31	ATRM	Athletic Building Restroom	624	Good
34	GRHS	Greenhouse Building*	830	Fair
36	EQST	Equipment Storage*	2,273	Good

Figure A1.2 Off-Site and Leased Space

#	Key	Building Name	GSF (Gross Sq. Ft.)	Building Rating 2014
26	HCAT	Hospitality, Culinary Arts and Tourism Institute	12,815	Good
27	GBTC	Glen Burnie Town Center	45,231	Good
28	AMIL	Arundel Mills	72,248	Good
32	SSTC	Sales & Service Training*	4,316	Good
35	CCPT	Center for Cyber and Professional Development*	27,137	Good

*Buildings indicated were not reviewed as part of the 2014 Facilities Condition Assessment and are not featured in Appendix A.

**Buildings indicated were not reviewed as part of the 2014 Facilities Condition Assessment, but are featured herein.



Color Rating Scale

A four point color rating scale denotes the condition of existing buildings on the Arnold Campus. These ratings were taken from the Facilities Condition Assessment conducted in 2014.

- DATA NOT AVAILABLE
- GOOD
- FAIR
- POOR

1. Ludlum Hall Administration Building (LUDL)

Fast Facts

Constructed
- 1976

Renovated
- 2014

Construction Type
- Masonry bearing walls and metal framed roofs; Steel frame with concrete topped metal decks; Flat roof with Thermoplastic Polyolefin (TPO) roofing membrane

By The Numbers
- Net Assignable Square Feet: 11,746
- Gross Square Feet: 18,757
- Floors Above Grade: 2

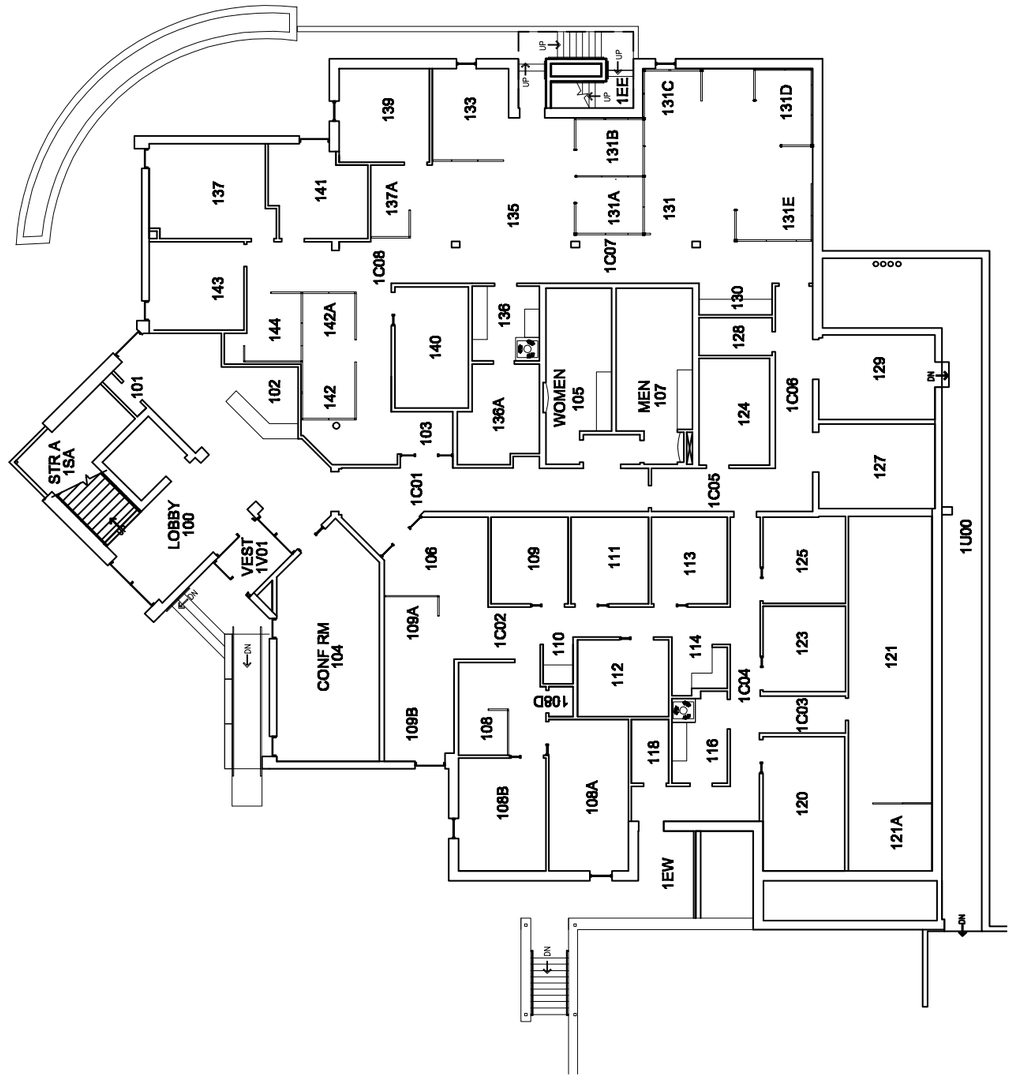
Utilities
- HVAC: Chilled water and heating water from central plant
- Electric: Fed from BGE transformer
- Sprinklers: Yes

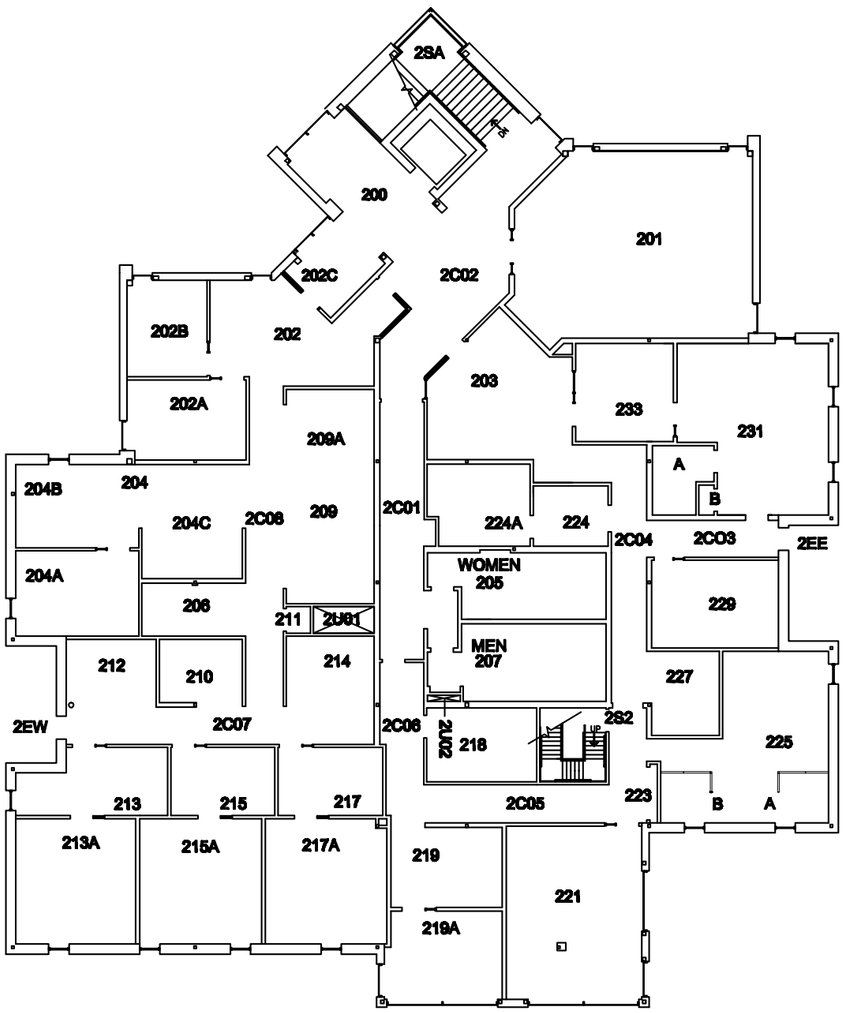
Departments
- Senior Leadership, Human Relations, Public Relations and Marketing

Building Use
ADMINISTRATION

Building Summary
The Ludlum Building is exclusively administrative offices.

The Building is in excellent overall condition. It was completely renovated in 2014.



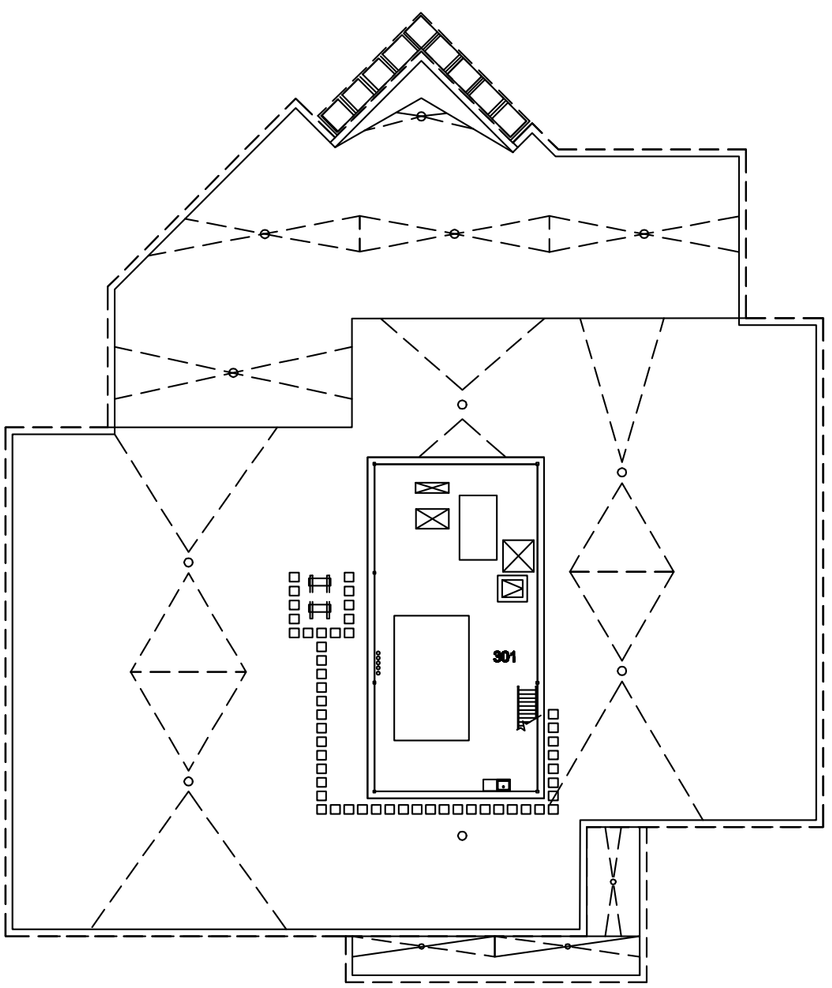


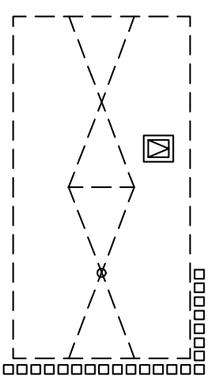
LUDL (Ludlam Hall Administration Building)

SECOND FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	03/23/14		
PROJECT NUMBER:		SCALE:	NTS





PENTHOUSE ROOF

LUDL (Ludlam Hall Administration Building)

PENTHOUSE FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	03/23/14		
PROJECT NUMBER:		SCALE:	NTS

2. Astronomy Building (ASTR)

Fast Facts

Constructed
- 1980

Renovated
- 2007 - Renovated

Construction Type
- Masonry walls and wood-framed roofs; Shed roofs with asphalt shingles and flat roofs with built up membrane at lab.

By The Numbers
- Net Assignable Square Feet: 710
- Gross Square Feet: 864
- Floors Above Grade: 1

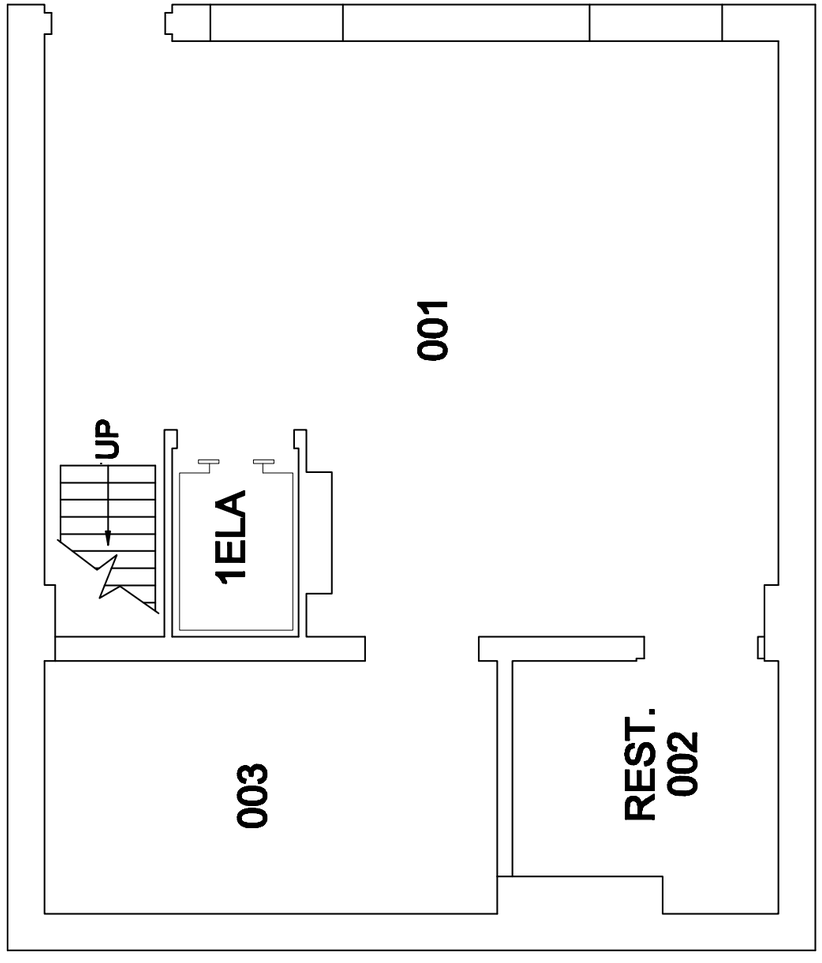
Utilities
- HVAC: Thru-the-wall air-conditioning with electric heat
- Electric: Fed from transformer that serves the Resource Management Building.
- Sprinklers: None

Departments
- Office and Classroom

Building Use
ACADEMICS

Building Summary
The Astronomy building, built in 1980, is located on the East side of Arnold at the highest point of campus. It was renovated in 2007 to meet accessible needs by adding an ADA lift and bathroom, as well as a new exterior stair. The building houses an office, a classroom, and a telescope bay with retractable roof.

The facility is in fair condition. There is visible moisture in the telescope lab on the underside of the retractable roof and is thought to be the result of roof leaks.

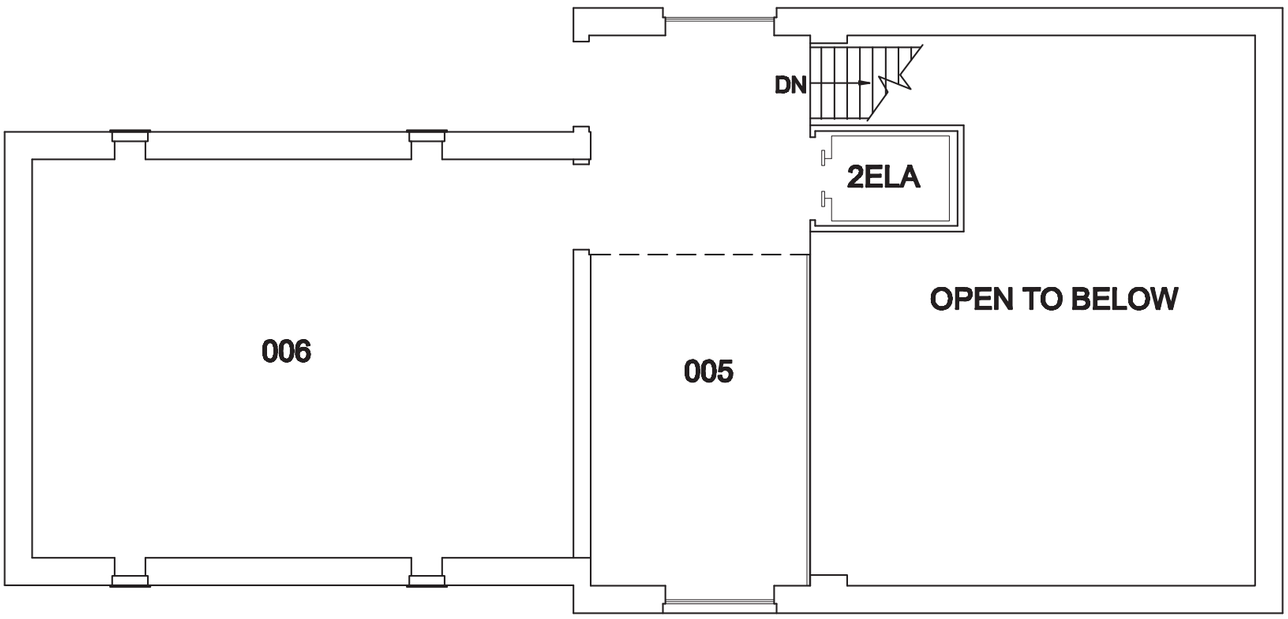


LOWER LEVEL FLOOR PLAN

DRAWN BY: CH
APPROVED BY: INITIALS
DATE: 05/03/11
SCALE: 1" = 1/4"
PROJECT NUMBER:

ASTR (Astronomy Building)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012



ASTR (Astronomy Building)

UPPER LEVEL FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	05/03/14		
PROJECT NUMBER:		SCALE:	1' = 3/16"

3. Careers Center Building (CRSC)

Fast Facts

Constructed
- 1973

Renovated
- 2006 - Renovation
- 2009 - Renovation

Construction Type
- CMU load bearing exterior walls, interior steel columns and steel framed roof; Gabled roofs with asphalt shingles and flat roofs with (TPO) membrane.

By The Numbers
- Net Assignable Square Feet: 76,263
- Gross Square Feet: 117,650
- Floors Above Grade: 2

Utilities
- Sprinklers: Yes
- HVAC: Heated water and chilled water from the central plant with its own set of pumps in central plant.
- Electric: Fed from the Physical Plant primary loop

Departments
- Environmental Center Labs, World Language Labs, Video Conferencing Classrooms, Ceramics Lab and Pavilion, Computer Commons, Classrooms, Offices and Learning/Study Areas

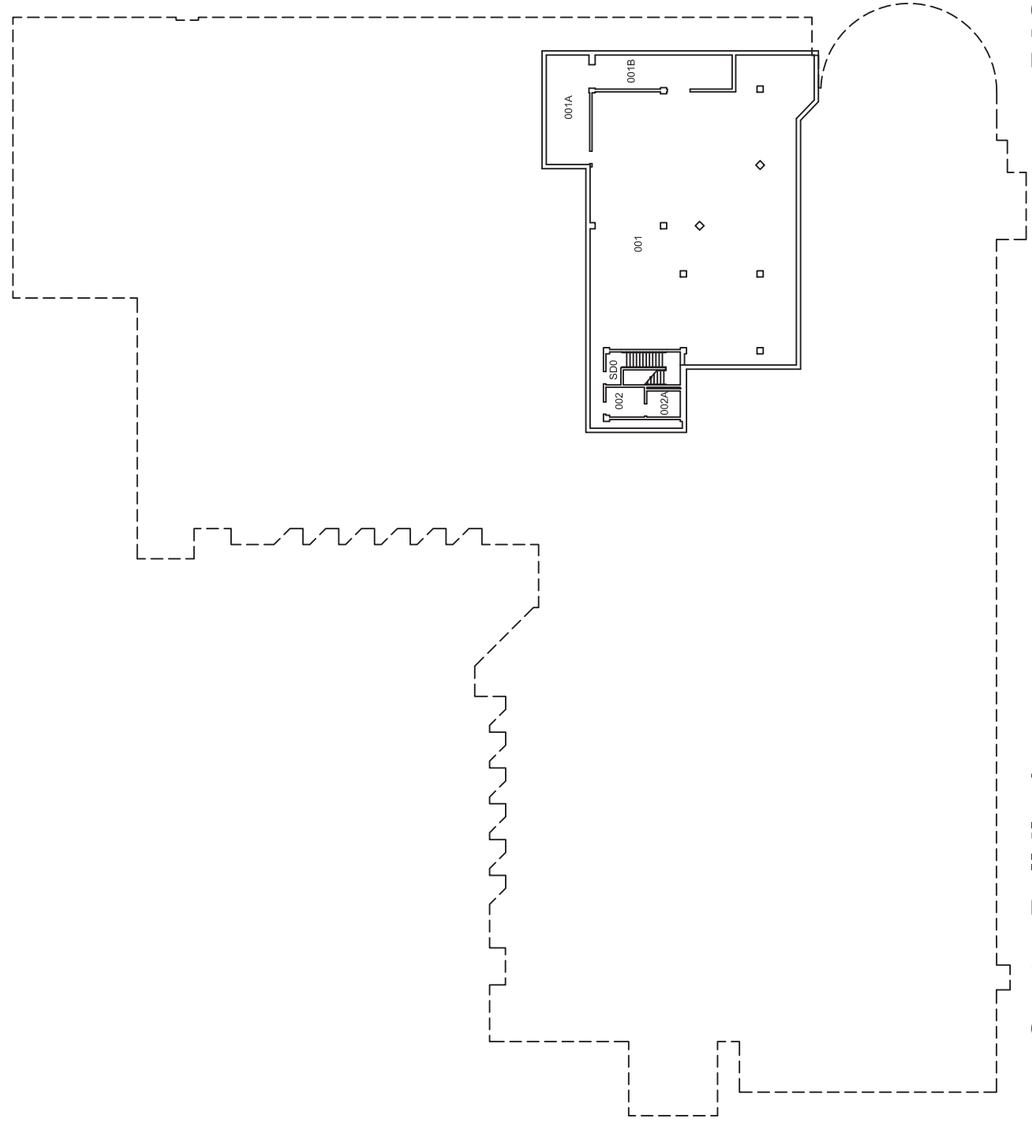
Building Use

ACADEMICS

Building Summary

The Careers Center offers many amenities for the Arnold Campus. It is home to the Berlitz Memorial Microbiology and Environmental Studies Laboratory and several administrative service units.

The building is in fair overall condition with classrooms that are in good condition. The building also has breakout and lounge spaces and corridors that are unobscured and free of clutter. Some improvements have been made such as the replacement of the roof-mounted condensing units. Primary deficiencies include a decentralized location for the ceramics lab, which is separate from the sculpture studio in the Physical Plant building, and the other arts spaces in Cade.

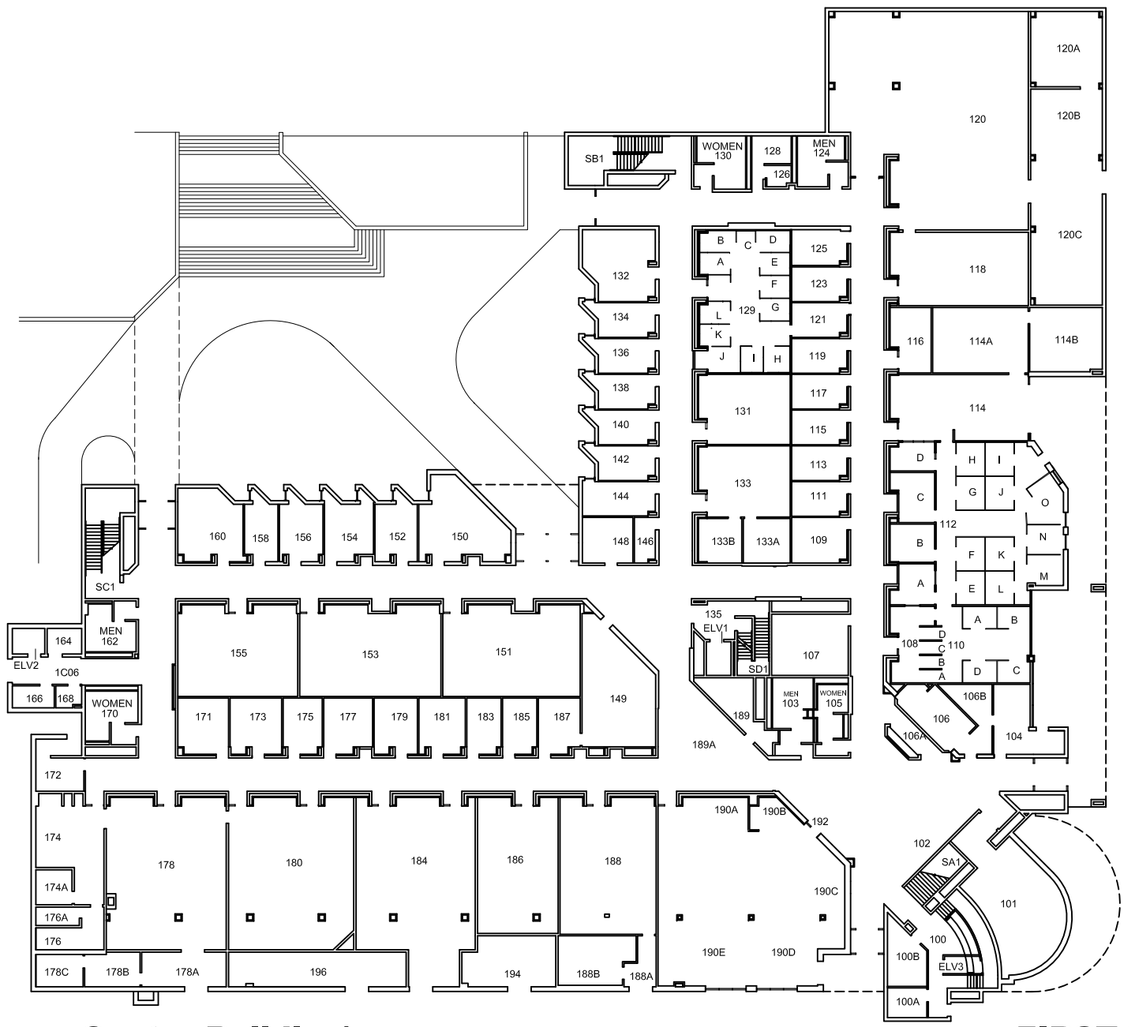


BASEMENT PLAN

DRAWN BY: RGE
APPROVED BY: RGE
DATE: 03/27/2014
SCALE: NTS
PROJECT NUMBER:

CRSC (Careers Center Building)

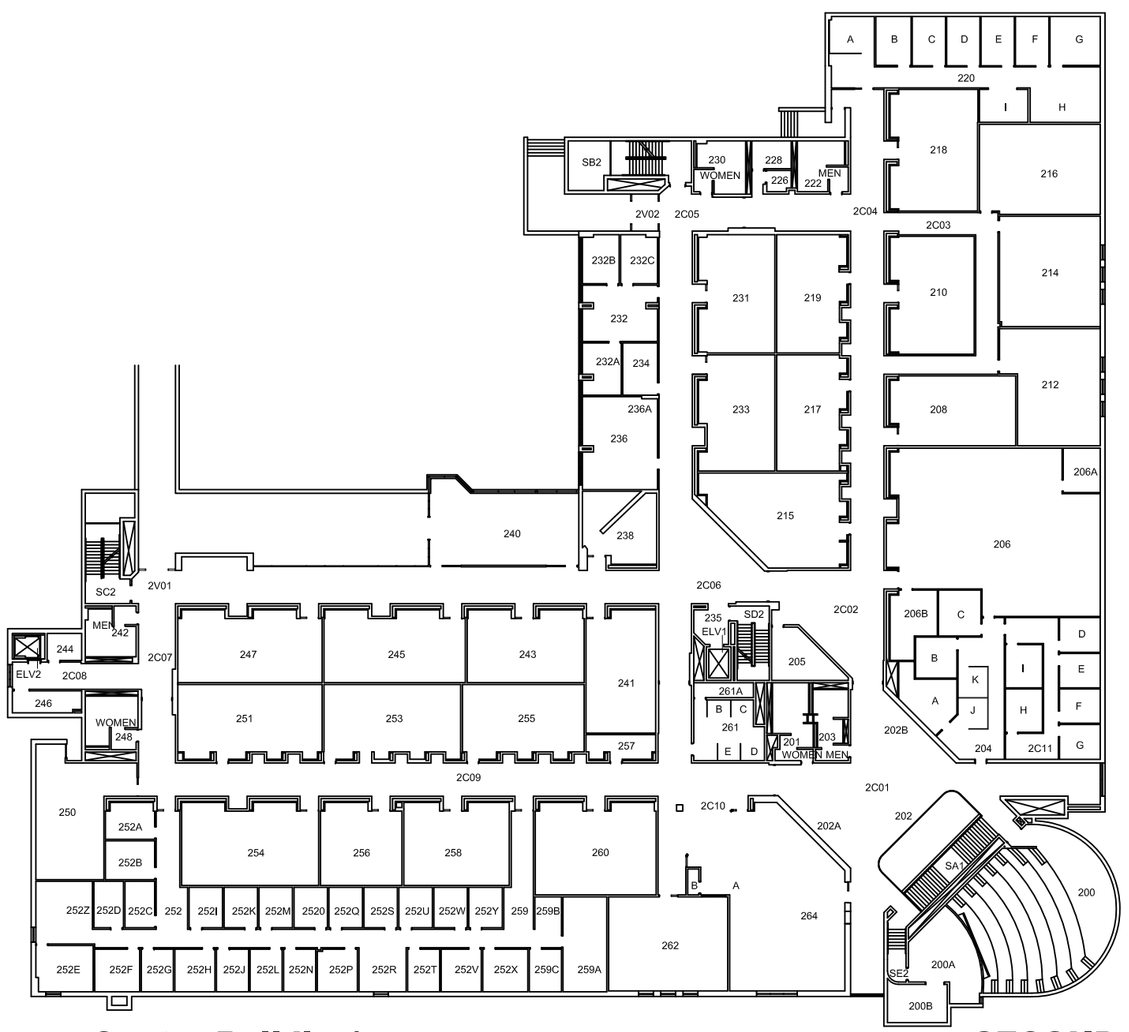
FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012



CRSC (Careers Center Building) FIRST FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

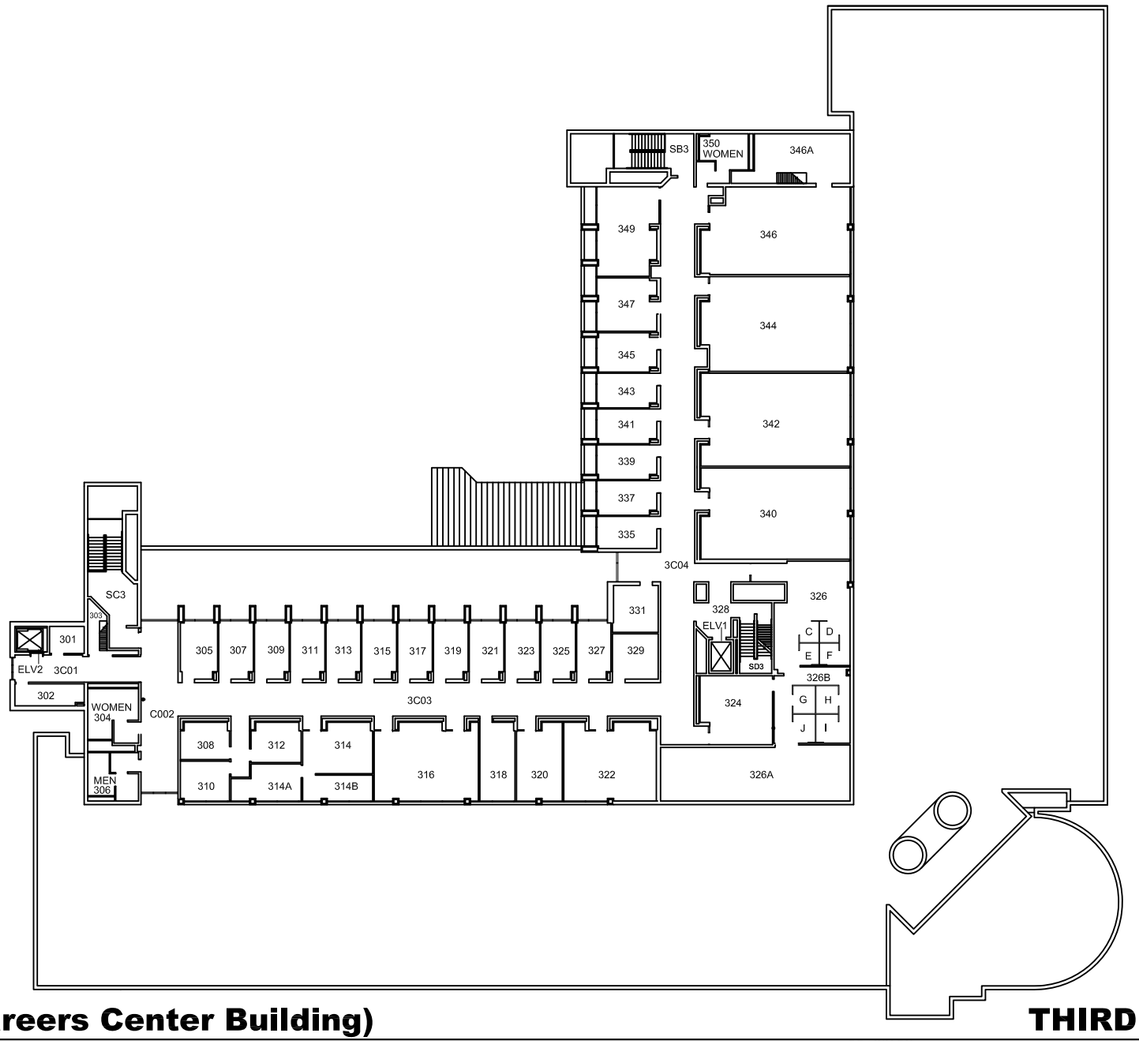
DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	05/03/14		
PROJECT NUMBER:		SCALE:	NTS



CRSC (Careers Center Building) SECOND FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	7/24/2014		
PROJECT NUMBER:		SCALE:	NTS



CRSC (Careers Center Building)

THIRD FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	03/25/2014		
PROJECT NUMBER:		SCALE:	NTS

4. David S. Jenkin's Gymnasium (GYM)

Fast Facts

Constructed
- 1967

Renovated
- 1999 - Renovation

Construction Type
- Concrete masonry bearing walls with a steel framed roof structure; Flat roofs with built-up membrane

By The Numbers
- Net Assignable Square Feet: 31,996
- Gross Square Feet: 43,555
- Floors Above Grade: 2

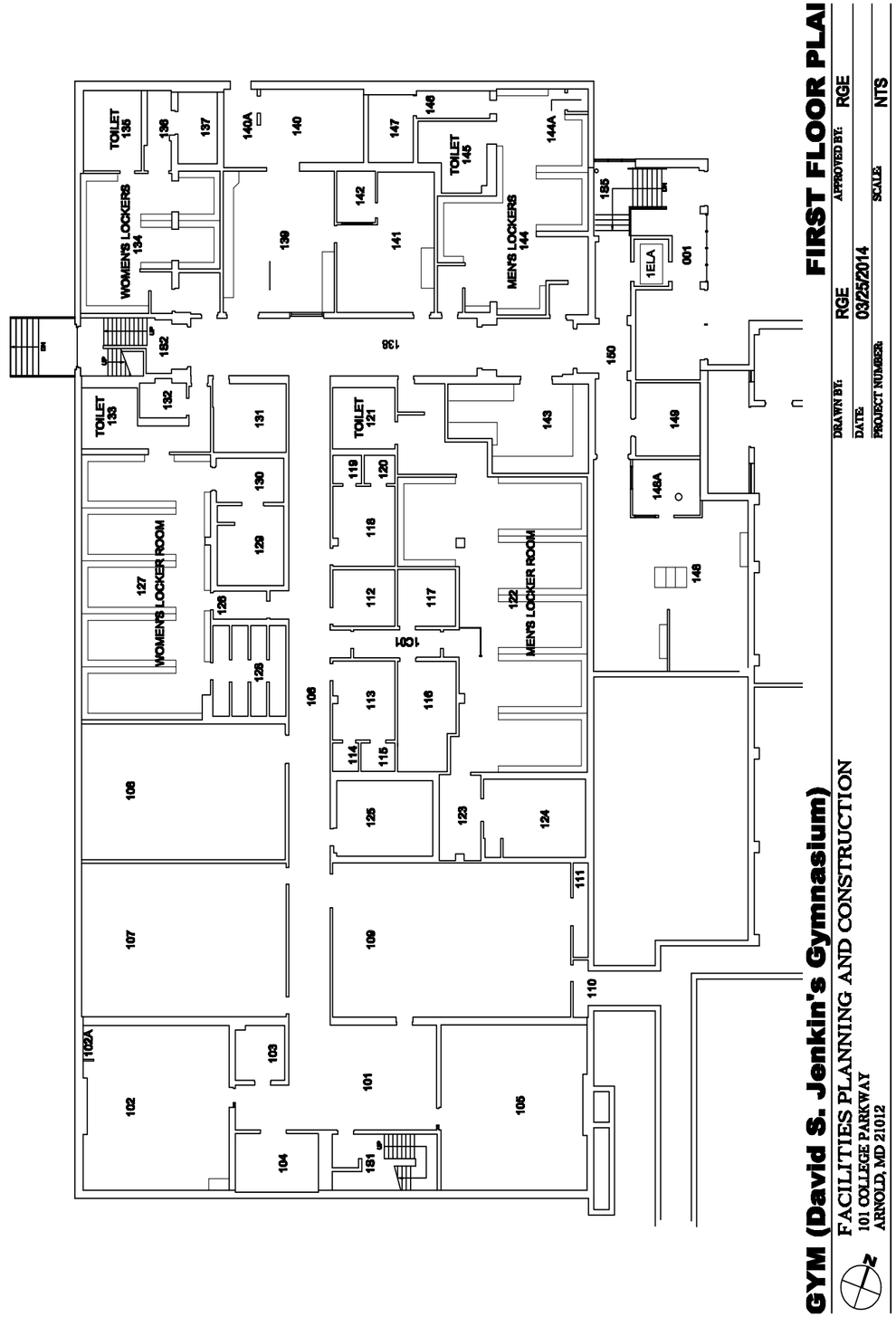
Utilities
- Sprinklers: Yes
- HVAC: Heating water and chilled water from central plant
- Electric: Fed from Physical Plant primary loop.

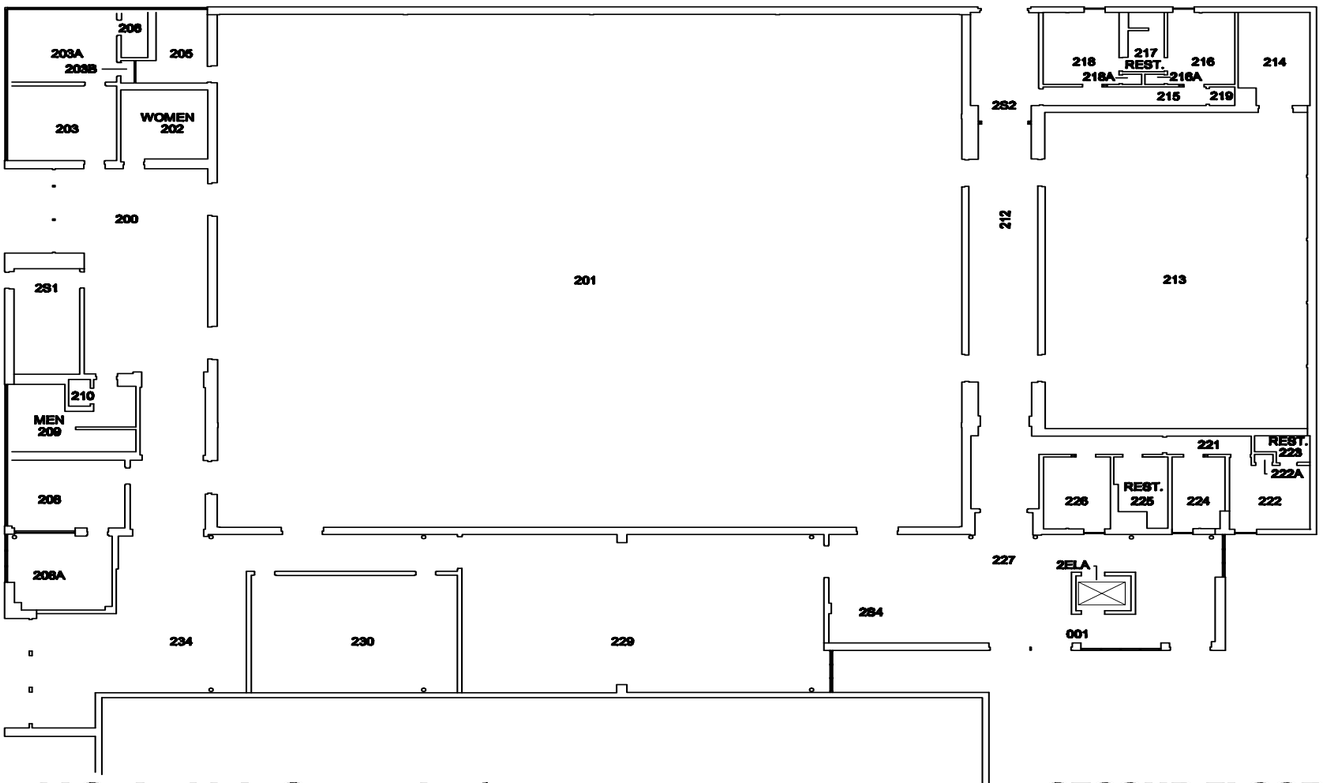
Departments
- Health and Physical Education

Building Use
ATHLETICS AND RECREATION

Building Summary
The Jenkins Gymnasium houses two exercise centers, which have cardio equipment and weight rooms. The building provides space for intercollegiate and intramural sports, as well as pick-up games during open hours.

The building is in good overall condition as a result of improvements that have been made over the years which include an upgrade to the HVAC controls and terrazzo refurbishment.





GYM (David S. Jenkin's Gymnasium)

SECOND FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	03/24/2014		
PROJECT NUMBER:		SCALE:	NTS

5. Humanities (HUM)

Fast Facts

Constructed
- 1967

Renovated
- 1993 - Partial Renovation
- 2007 - Accessibility Improvements

Construction Type
- Steel column frame with masonry veneer with slab on grade and slab on bar joist floors; CMU and stud interior partitions; Steel framed roof with tectum deck

By The Numbers
- Net Assignable Square Feet: 25,119
- Gross Square Feet: 37,978
- Floors Above Grade: 2

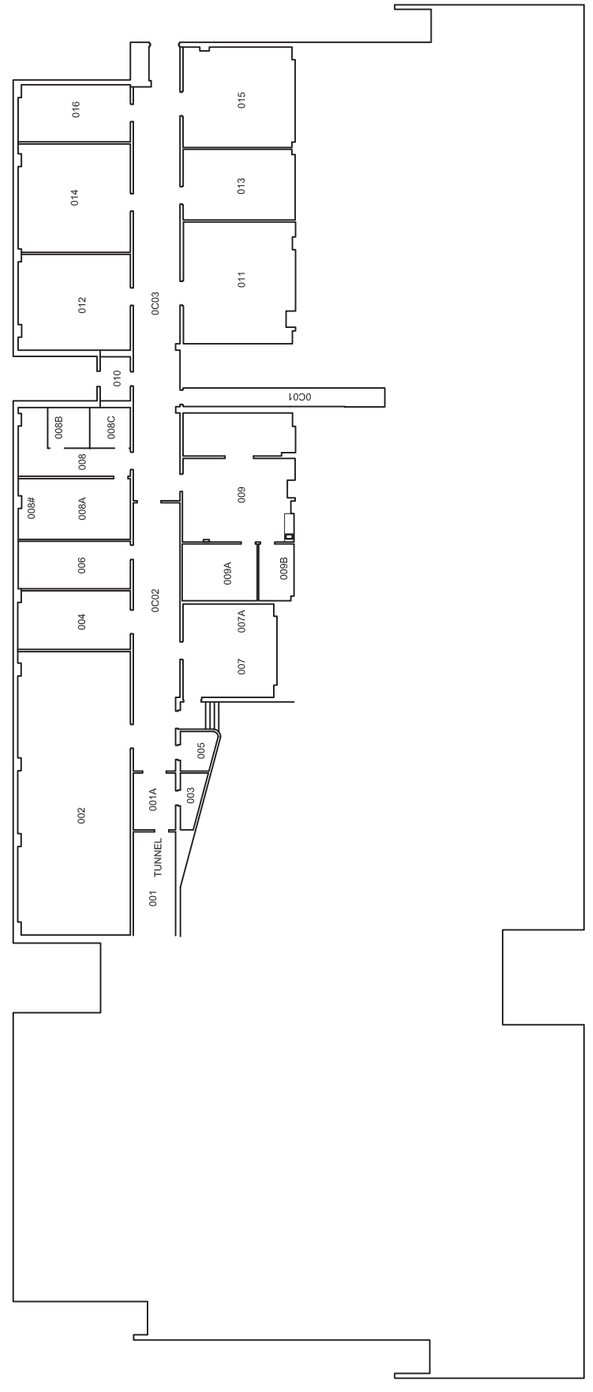
Utilities
- Sprinklers: Yes
- HVAC: Heat and chilled water from central cooling plant.
- Electric: Fed from the Physical Plant primary loop. Electrical equipment, with the exception of the coil in the main transformer, is original to the building's construction. Primary switchgear in the Humanities Building feeds the Truxal Library, Johnson, and Truxal buildings.

Departments
- English, Communications

Building Use
ACADEMICS

Building Summary
The Humanities building is located on the south side of the quad on the Arnold Campus. The building houses English and Communications, World Languages, Women's Studies, and kitchens for the HCAT program.

The building is in good condition; however, it has noticeably cluttered corridors that negatively impact its usable space. Ceilings in the corridors are low due to added sprinkler systems, doors open into the corridor and take up space, and items within the hallways seem to clutter them further. Improvements to lounges and break out spaces should be considered to tidy up the corridors.



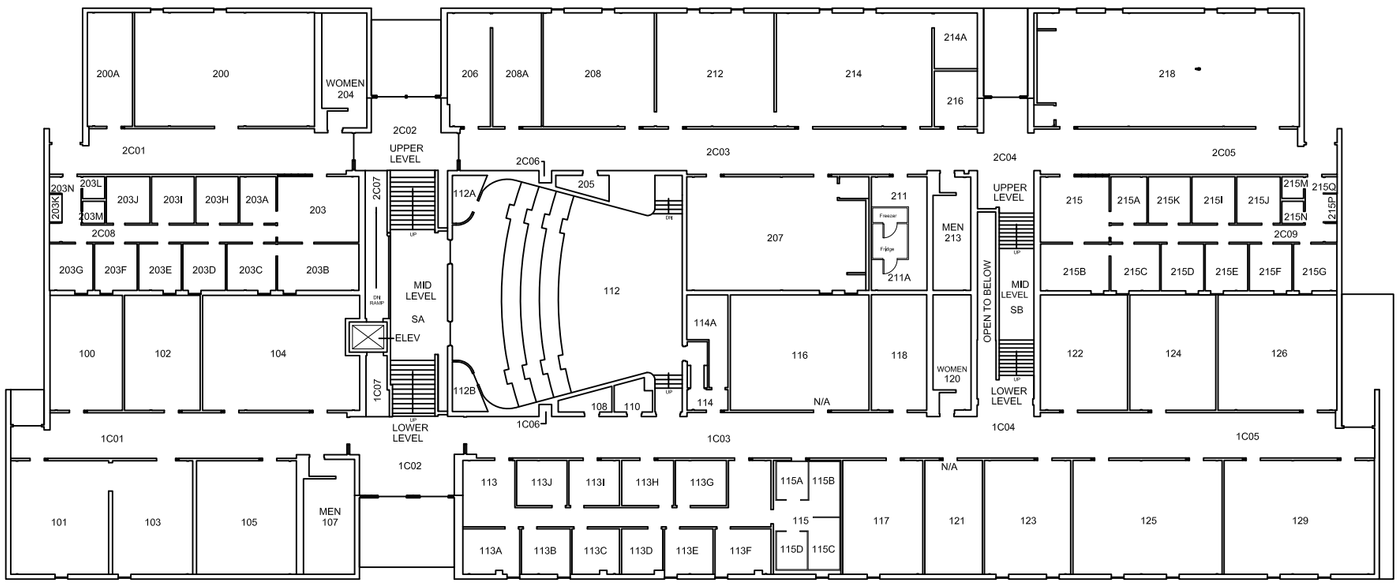
BASEMENT FLOOR PLAN

DRAWN BY: RGE
APPROVED BY: RGE
DATE: 03/24/14
PROJECT NUMBER:
SCALE: 1" = 1/32"

HUM (Humanities Building)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

N



HUM (Humanities Building)

FIRST & SECOND FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	03/25/2014		
PROJECT NUMBER:		SCALE:	1' = 1/32"

6. Andrew G. Truxal Library (LBRY)

Fast Facts

Constructed
- 1967

Renovated
- 2012

Construction Type
- Masonry bearing walls and metal framed roofs; Steel frame with concrete topped metal decks; Flat roof with Thermoplastic Polyolefin (TPO) roofing membrane

By The Numbers
- Net Assignable Square Feet: 51,932
- Gross Square Feet: 67,384
- Floors Above Grade: 3

Utilities
- Sprinklers: Yes
- HVAC: Chilled water and heating water from central plant.
- Electric: Fed from BGE transformer.

Departments
- Research Library, Student Success Center, Reading Lab, Technology Learning Center (TLC), Veterans' Center

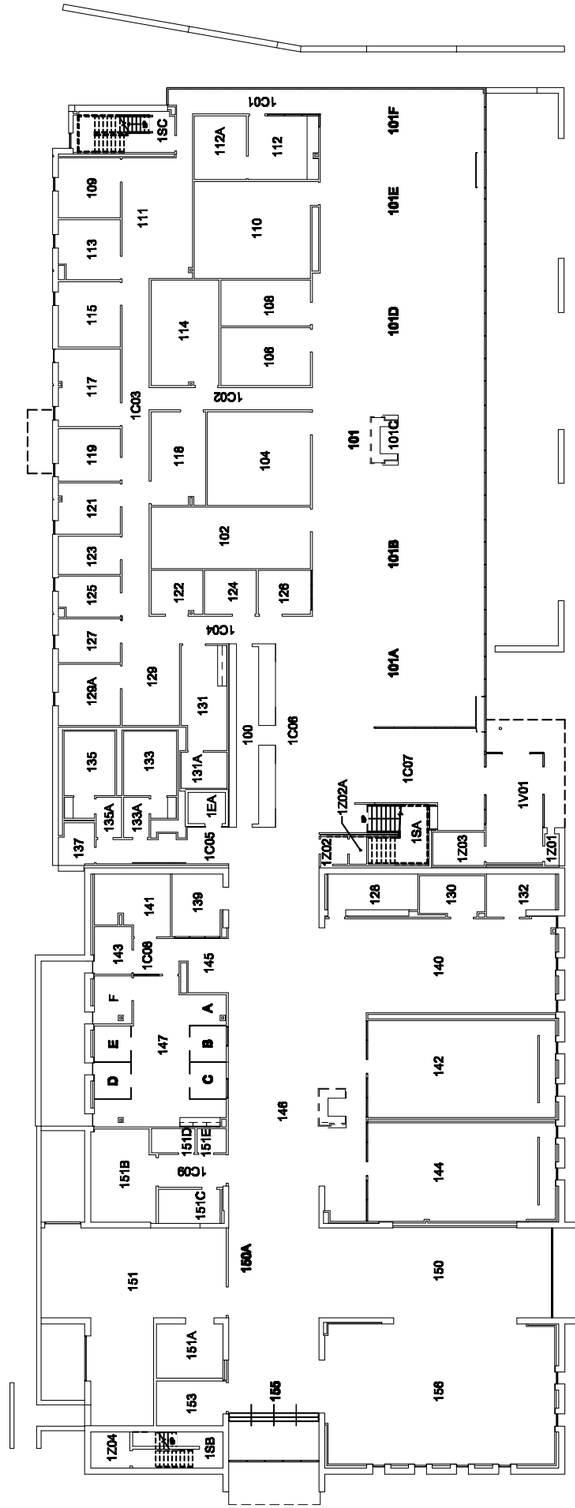
Building Use

ACADEMICS

Building Summary

The Truxal Library is the academic hub of the campus. Its central location on the east quad serves the college well.

The Building is in excellent overall condition. It was renovated and increased in square footage by 43% in 2012

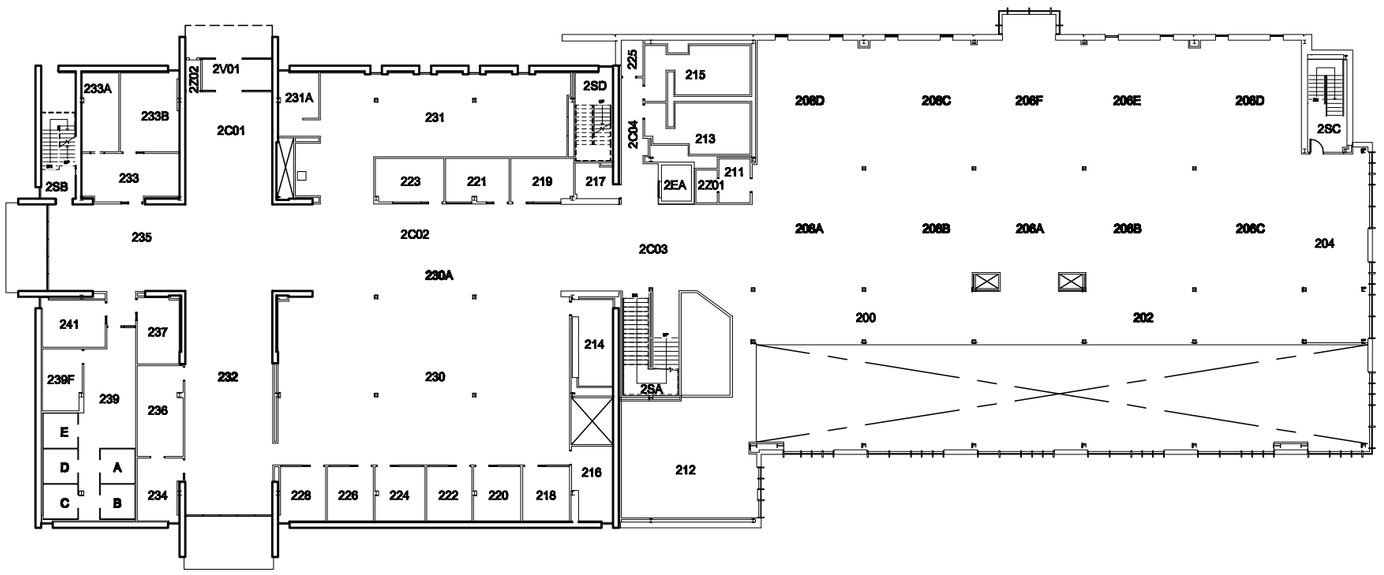


FIRST FLOOR PLAN

DRAWN BY: RGE
APPROVED BY: RGE
DATE: 01/17/14
SCALE: NTS
PROJECT NUMBER:

LBRY (Andrew G. Truxal Library)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

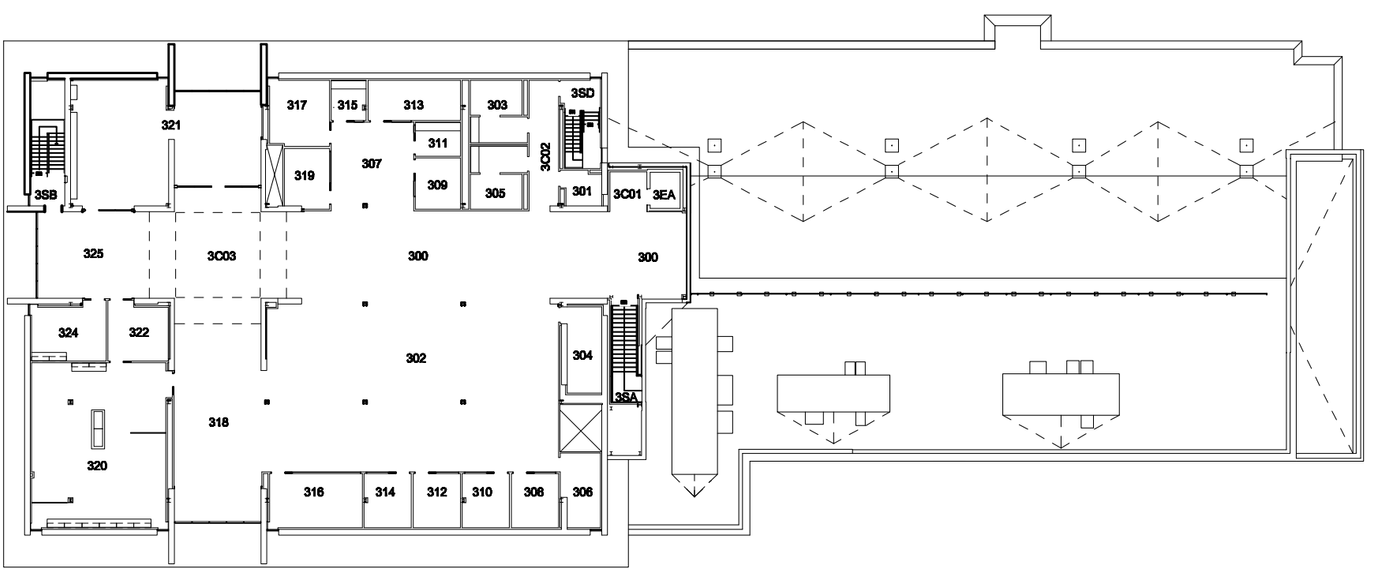


LBRY (Andrew G. Truxal Library)

SECOND FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	01/17/14		
PROJECT NUMBER:		SCALE:	NTS



LBRY (Andrew G. Truxal Library)

THIRD FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	INITIALS
DATE:	01/17/14		
PROJECT NUMBER:		SCALE:	NTS

7. Physical Plant (PLNT)

Fast Facts

Constructed
- 1967

Renovated
- 1983 - Partial Renovation
- 2008 - Converted to Sculpture & Ceramics Labs

Construction Type
- Masonry bearing walls and steel-framed roofs; Flat roof with thermoplastic polyolefin (TPO) roofing membrane.

By The Numbers
- Net Assignable Square Feet: 5,157
- Gross Square Feet: 13,408
- Floors Above Grade: 2

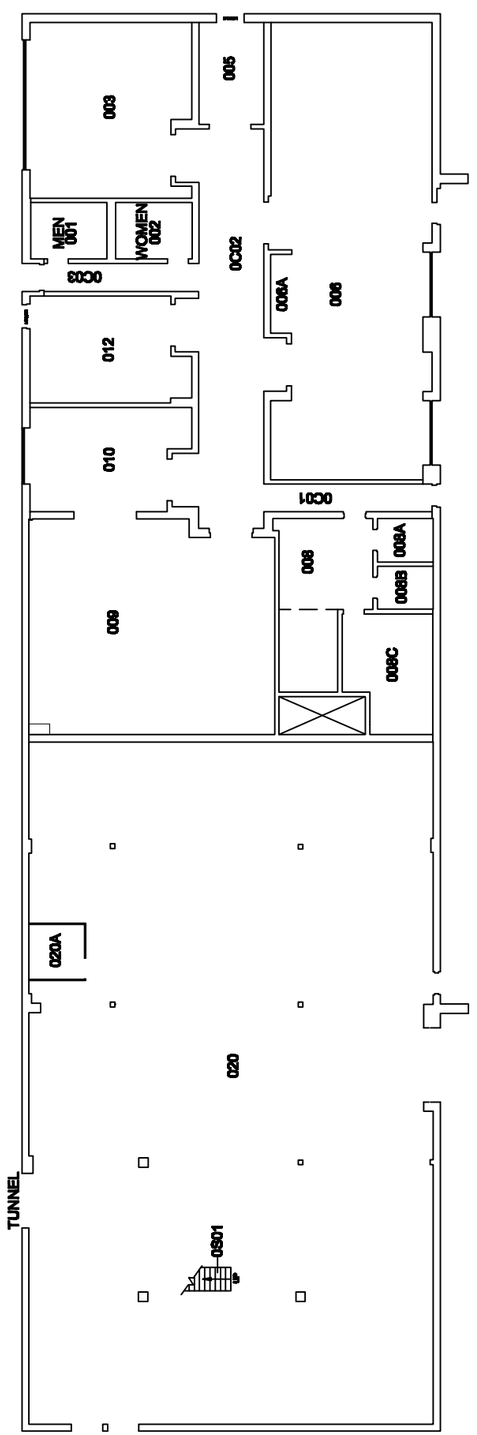
Utilities
- Sprinklers: Yes
- HVAC: Heated and ventilated utilizing distribution systems
- Electric: Fed from primary system. Includes BGE primary meter and feeders to the primary campus loop.

Departments
- Sculpture and Ceramics Studios

Building Use
INFRASTRUCTURE

Building Summary
The Physical Plant Building serves multiple purposes. The building houses the chillers and the boilers along with the main electrical switches for most of East Campus. It also includes up-to-date sculpture studios and one temporary ceramic studio.

The sculpture studios are located in this building, thereby fragmenting the studios from other art program offerings on campus. It also reduces much needed centrally located storage space. One positive reason for locating the studios at the Physical Plant is that it keeps a dirty, noisy program out of an academic building.



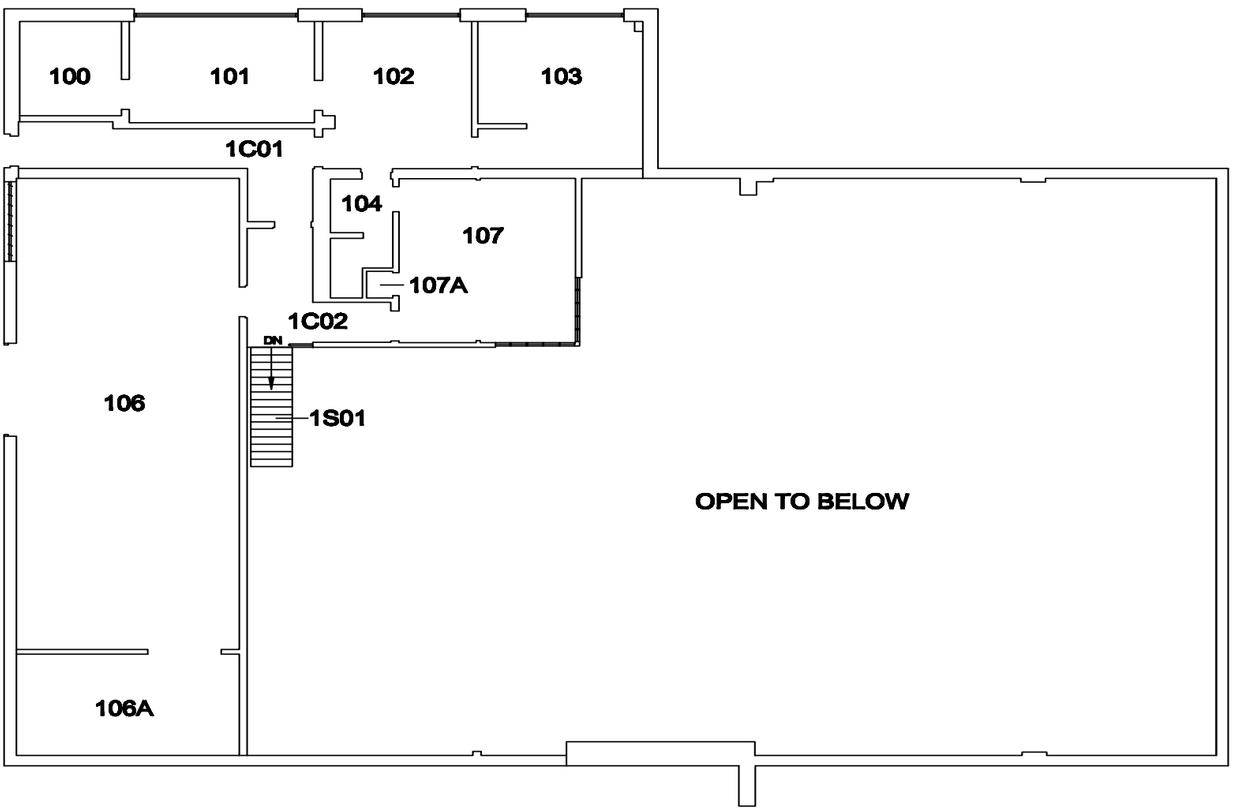
GROUND FLOOR PLAN

DRAWN BY: RGE
APPROVED BY: RGE
DATE: 07/04/14
SCALE: NTS
PROJECT NUMBER:

PLNT (Physical Plant)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

N



PLNT (Physical Plant)

FIRST FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	CH	APPROVED BY:	INITIALS
DATE:	05/04/11		
PROJECT NUMBER:		SCALE:	NTS

8. Daniel C. Olson Memorial Pool (POOL)

Fast Facts

Constructed
- 1975

Renovated
- 2005 - Locker Room Improvements
- 2009 - Renovation of Pool and Pool Deck
- 2010 - Motor control center and misc. electrical equipment replacements

Construction Type
- Concrete masonry bearing walls and steel-framed roofs; Sloped roof with standing seam copper roofing

By The Numbers
- Net Assignable Square Feet: 9,934
- Gross Square Feet: 13,884
- Floors Above Grade: 1

Utilities
- Sprinklers: None
- HVAC: Heated water from Physical Plant with a pool dehumidification unit.
- Electric: Fed from the Plant's primary loop. Most electrical equipment remains from the 1975 construction.

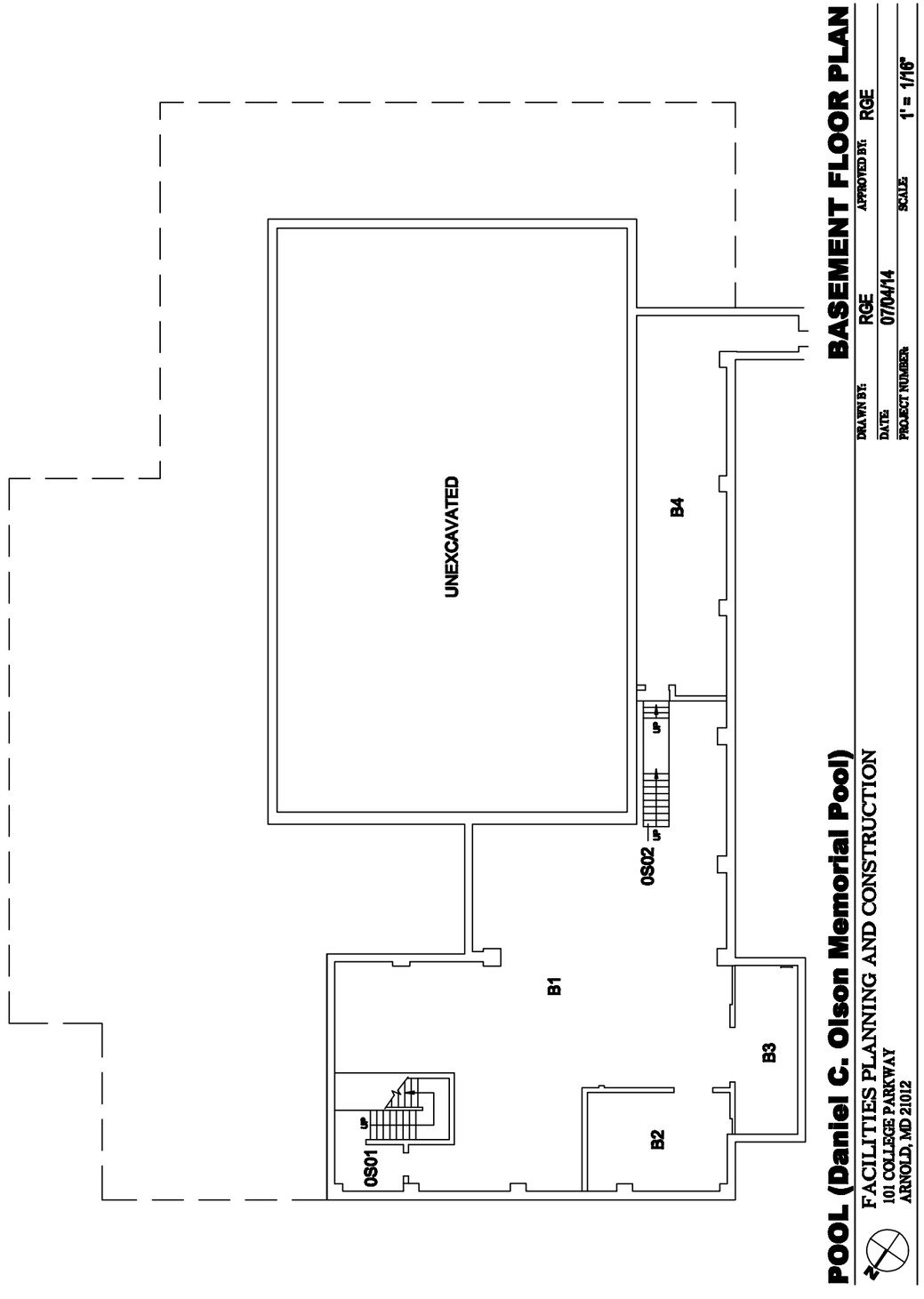
Departments
- Credit and non-credit swim classes, swim meets, and open swims and lessons

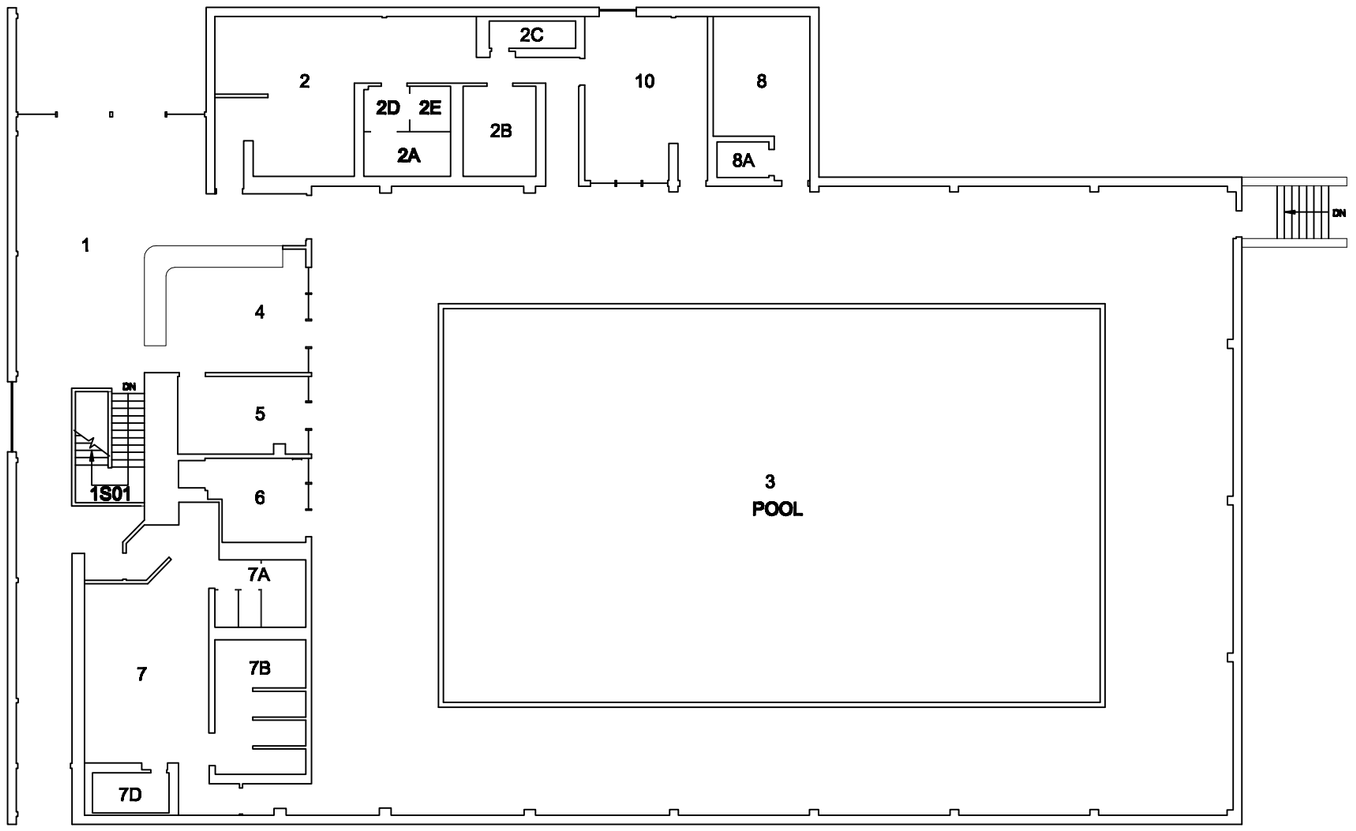
Building Use
ATHLETICS AND RECREATION

Building Summary
The olympic-size Daniel C. Olson Memorial Pool is available for use by students, staff, faculty, and community members. It is used for swim classes, meets, lessons, and open swims. Utilization of the pool is reportedly low as it is primarily used for non-credit classes and community use.

The pool is currently in fair condition due to some strategic maintenance to the structure and finishes. The equipment is nearly all from the original construction and will be extremely costly to replace. The annual net operating cost for the pool is over $400,000. This cost directly impacts the bottom line of the College as the membership dues cannot support the daily operating costs, much less the extensive upgrades that will be required to improve its infrastructure and equipment.

Annual operational expenses, costs to modernize the pool, and its under-use by credit bearing courses justify the recommendation of the Master Plan to demolish the pool. Furthermore, the new science facilities proposed in its place meet the College's strategic plan and will help drive enrollment and retention.





POOL (Daniel C. Olson Memorial Pool)

FIRST FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	CH	APPROVED BY:	INITIALS
DATE:	05/04/11		
PROJECT NUMBER:		SCALE:	1' = 1/16"

9. Dragun Science Building (DRGN)

Fast Facts

Constructed
- 1967

Renovated
- 1996 - Roof Expansion
- 2007 - Partial Renovation

Construction Type
- Masonry bearing walls and steel-framed roofs; Flat roofs with built-up membrane

By The Numbers
- Net Assignable Square Feet: 26,539
- Gross Square Feet: 39,499
- Floors Above Grade: 2

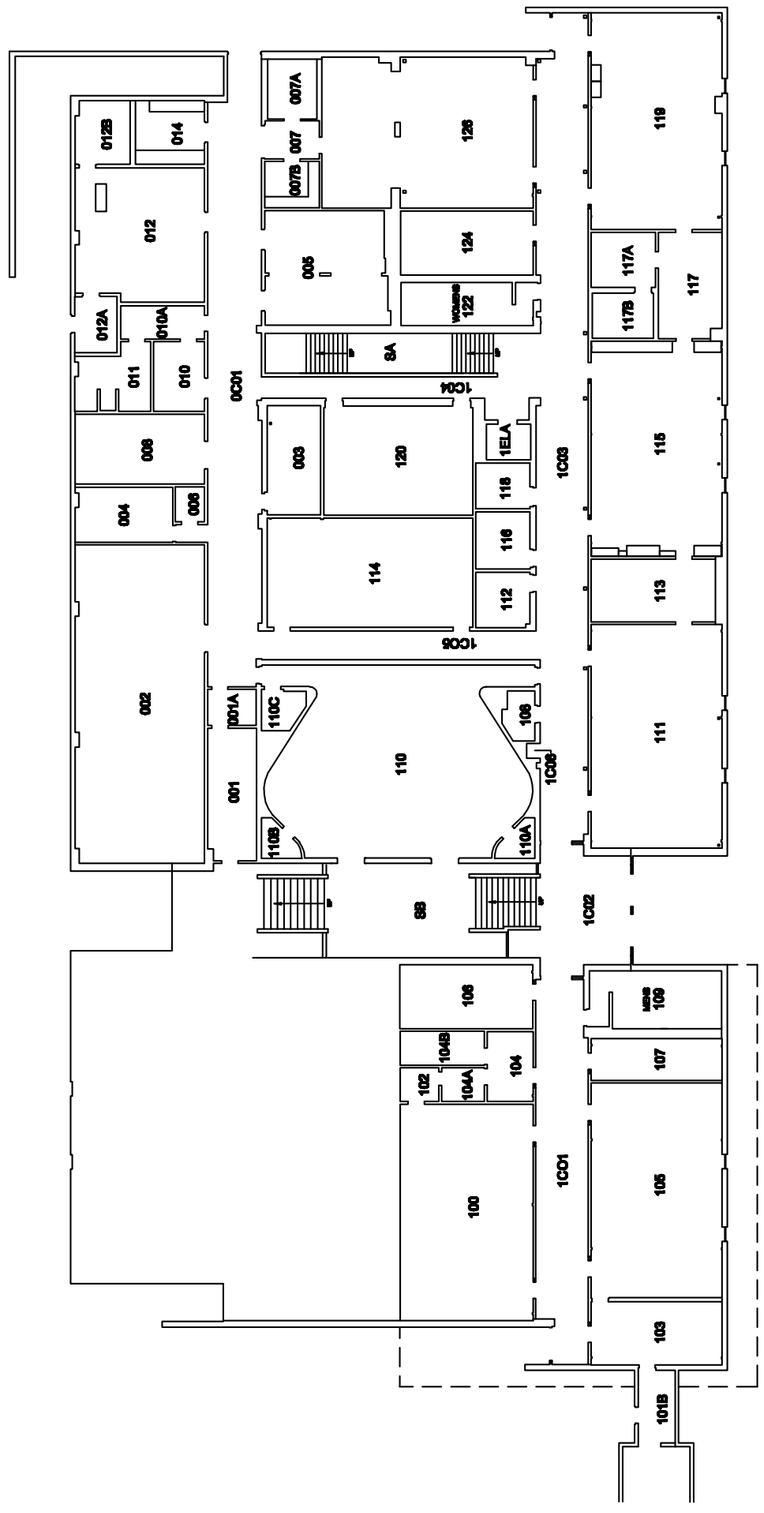
Utilities
- Sprinklers: Yes
- HVAC: Heated water and chilled water from the central plant
- Electric: Fed from primary loop that originates at the Physical Plant

Departments
- Astronomy, Biology, Chemistry, Physical Science and Physics

Building Use
ACADEMICS

Building Summary
The Dragun Science Building is located on the north side of the quad. It is home to the Astronomy, Chemistry, Biology, Physics, and Physical Science departments.

The overall building is in fair condition; however, its roof membrane is in fair to poor condition. Several leaks have been reported by maintenance personnel. Primary deficiencies include undersized science labs and inadequate provision of lab support space such as recitation spaces and storage. It should also be noted that cluttered corridors negatively impact the buildings usable space. Breakout and lounge spaces are needed to keep corridors clear and to house trash cans, recycling receptacles, and vending machines.



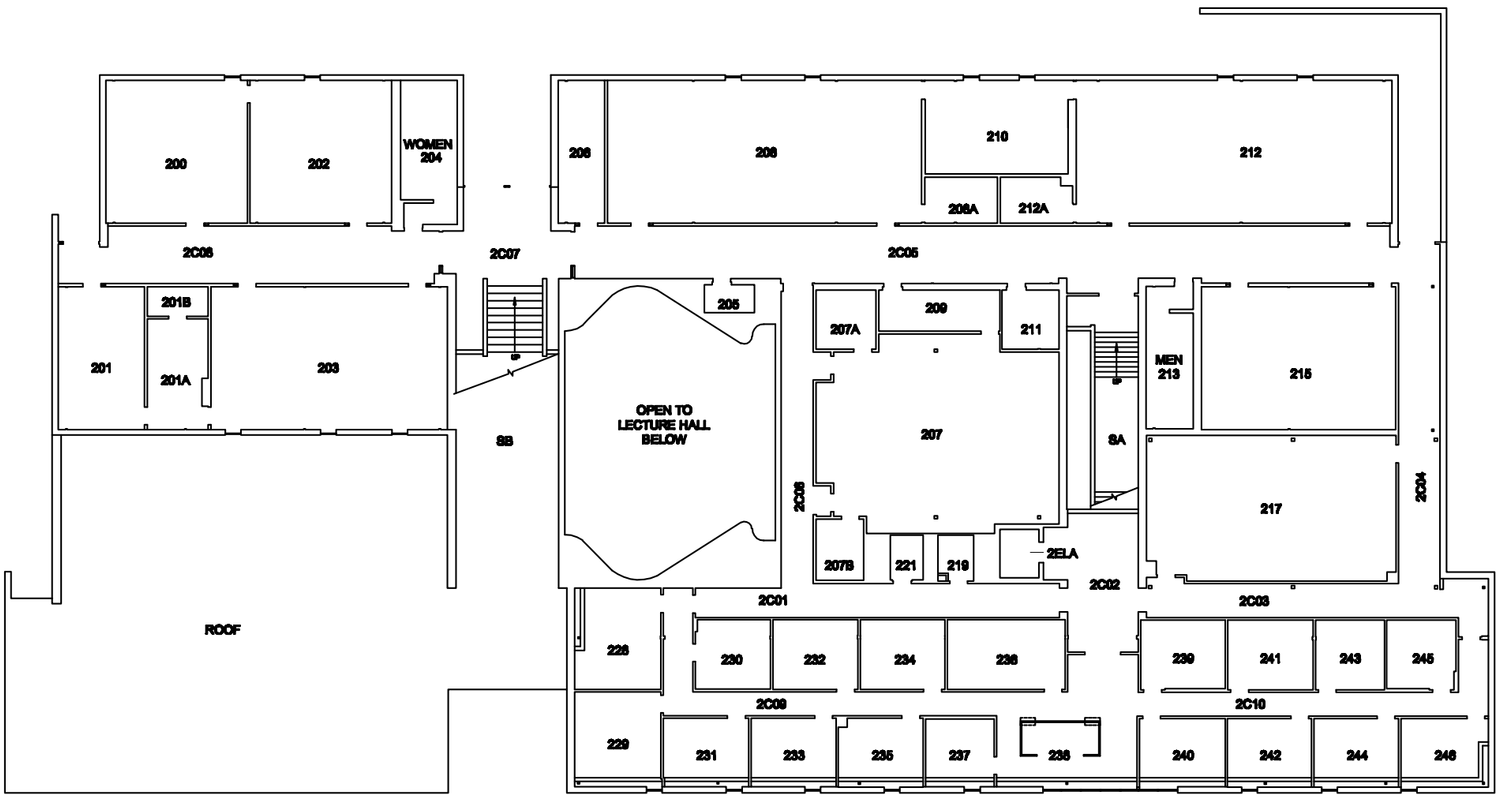
FIRST FLOOR PLAN

DRAWN BY: RGE
APPROVED BY: RGE
DATE: 03/25/2014
SCALE: NTS
PROJECT NUMBER:

DRGN (Dragun Science Building)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

N



DRGN (Dragun Science Building)

SECOND FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	03/27/2014		
PROJECT NUMBER:		SCALE:	NTS

10. Student Union (SUN)

Fast Facts

Constructed
- 1975

Renovated
- 2002

Construction Type
- Slab on grade steel column frame with masonry veneer; Built-up roof with gravel ballast

By The Numbers
- Net Assignable Square Feet: 34,011
- Gross Square Feet: 43,355
- Floors Above Grade: 2

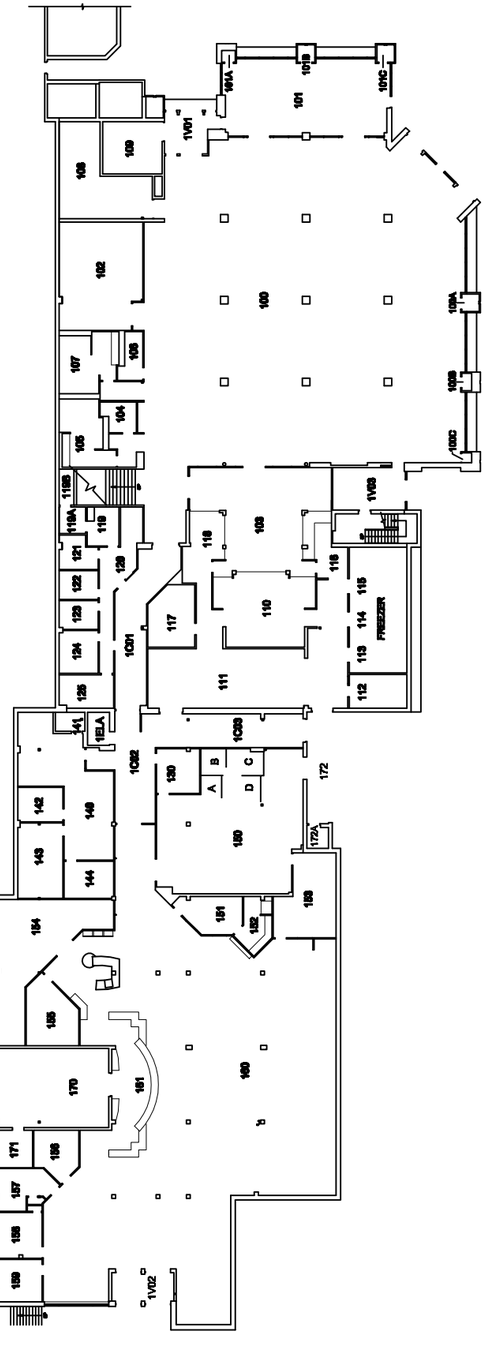
Utilities
- Sprinklers: Yes
- HVAC: Heat and chilled water from central cooling plant.
- Electric: Fed from BGE transformer installed in 2002. Some electrical equipment remains from 1975 construction.

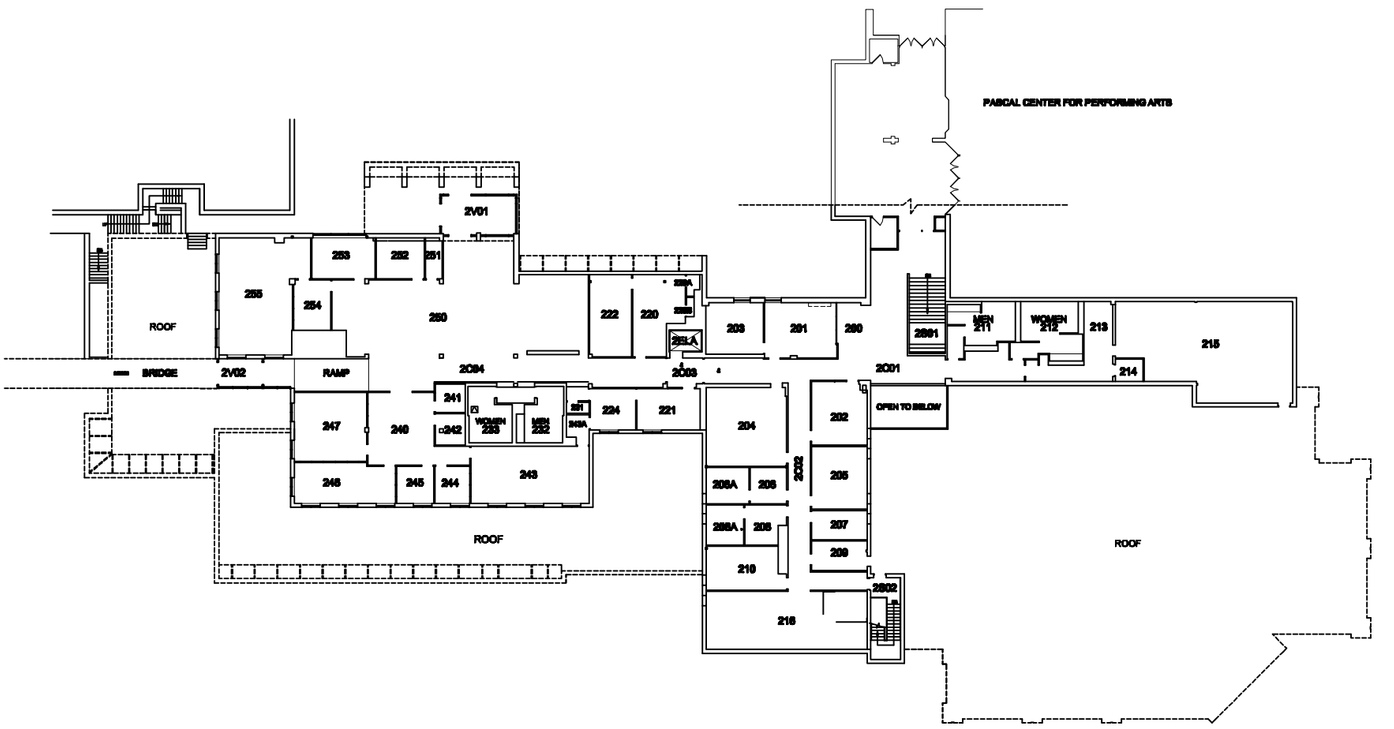
Departments
- Bookstore, Union Deli, Market Dining Hall, Health Services, Student Life, Student Association offices, Testing Center

Building Use
STUDENT LIFE

Building Summary
The Student Union offers many amenities for the Arnold Campus including the AACC Bookstore, the Union Deli and Market Dining Hall, Student Life and Student Association offices, Health Services, and the Testing Center. It is connected to the Student Services Center and the Pascal Center for the Performing Arts.

The building is in fair overall condition. As a result of its multiple functions, this building is heavily used. Primary issues include cluttered corridors especially near the Health Services department, insufficient server area for the dining hall, and acoustic issues.





SUN (Student Union)

SECOND FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	7/30/14		
PROJECT NUMBER:		SCALE:	NTS

11. Math Building / Child Development Center (MATH)

Fast Facts

Constructed
- 1986

Renovated
- 2006 - Renovation

Construction Type
- Masonry bearing walls and metal-framed roofs; Steel frame with concrete-topped metal decks; Flat roof with thermoplastic polyolefin (TPO) roofing membrane.

By The Numbers
- Net Assignable Square Feet: 8,723
- Gross Square Feet: 11,543
- Floors Above Grade: 2

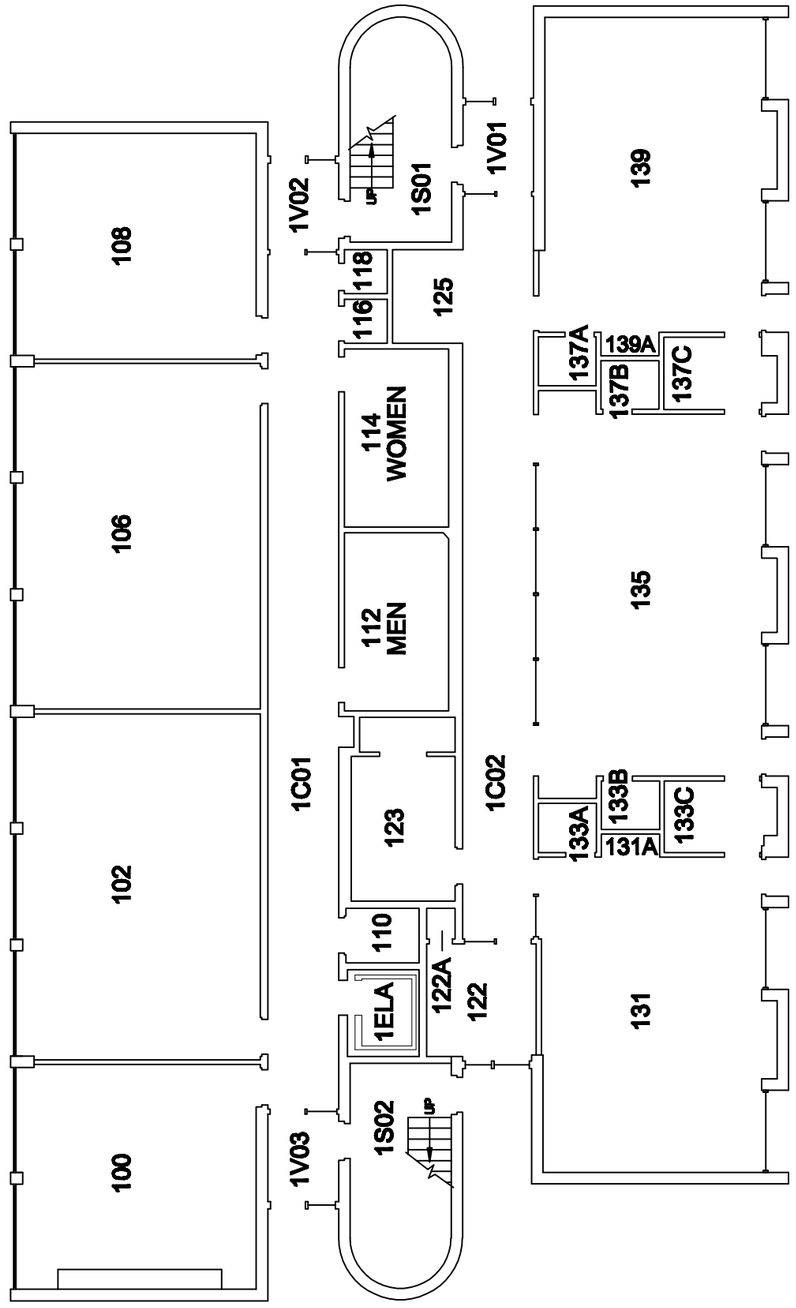
Utilities
- Sprinklers: Partial
- HVAC: Heating water and chilled water from central plant with a rooftop chiller for use when central plant cooling system is shut down.
- Electric: Fed from Humanities Building. Electrical equipment remains from the original 1986 construction.

Departments
- Math Department, Classrooms, and Administration and Child Development Center

Building Use
ACADEMICS

Building Summary
The Math Building houses administrative offices, the Math Department, and classrooms. It is also home to Anne Arundel Community College's nationally accredited Child Development Center.

The construction of this building is identical to the Schwartz Building. Math offices are a maze of partitions and finishes throughout the building need to be updated. The building is in fair overall condition; however, the exterior painted metal lintel show signs of corrosion and gypsum board soffits have areas of deteriorated paint.



MATH (Math Building/ Child Development Center) **SECOND FLOOR PLAN**

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	05/04/14		
PROJECT NUMBER:		SCALE:	NTS

12. Pascal Center for Performing Arts (PCPA)

Fast Facts

Constructed
- 1983

Renovated
- 2008 - Systematic Improvements

Construction Type
- Concrete masonry unit (CMU) bearing walls and steel-framed roofs; Flat roofs with built-up membrane.

By The Numbers
- Net Assignable Square Feet: 10,361
- Gross Square Feet: 14,138
- Floors Above Grade: 2

Utilities
- Sprinklers: Yes
- HVAC: Heating water and chilled water from central plant
- Electric: Fed from BGE transformer. Most electrical remains from 1983 construction

Departments
- Theatre and Art Gallery

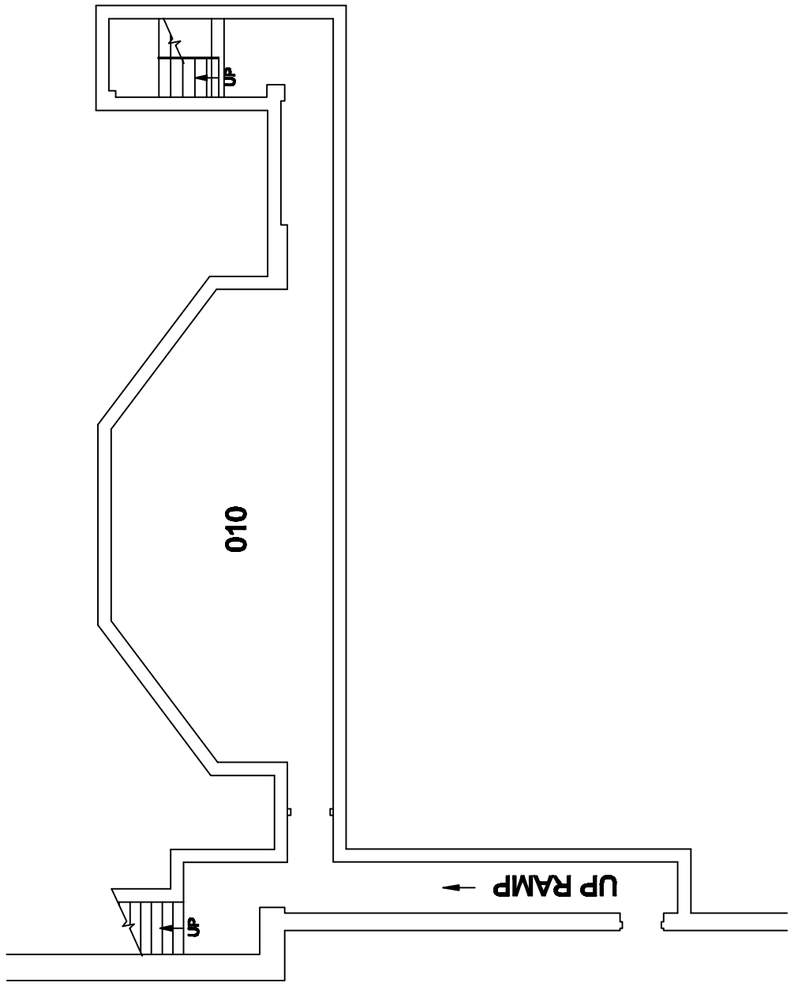
Building Use

STUDENT LIFE

Building Summary

The Pascal Center for the Performing Arts Theatre includes a lobby, ticket area, public restrooms, stage, backstage, control room and dressing rooms. The building is connected to the Student Union and requires additional upgrades, including ADA modifications to restrooms, stage refinishing, etc.

The building is in fair overall condition. Deficiencies include inadequate and insufficient performing space, especially back of house support; lack of dressing rooms, restrooms, storage, and shops; lack of instructional space for lighting, set design, costuming, and sound.



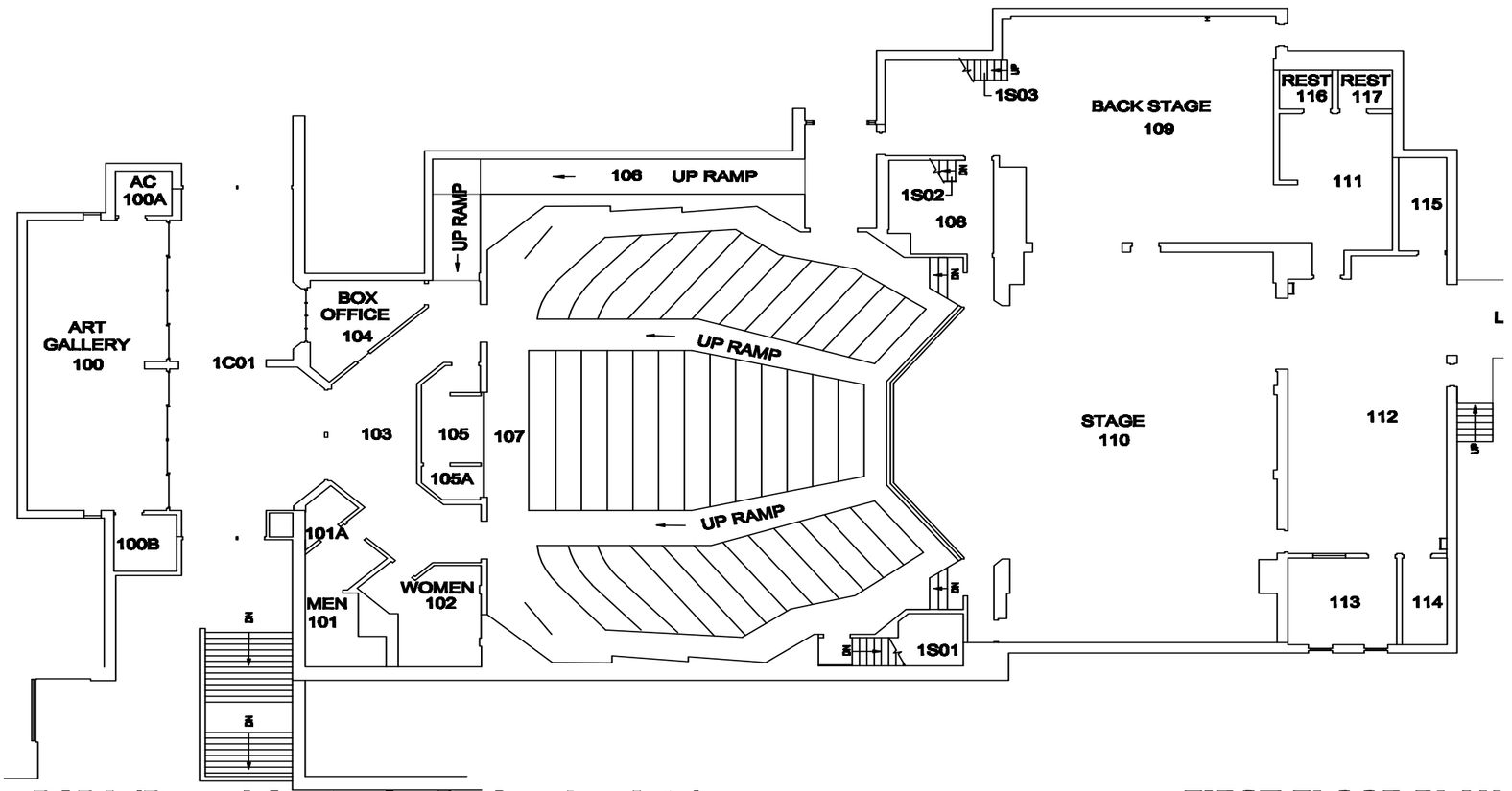
LOWER LEVELFLOOR PLAN

DRAWN BY: CH
APPROVED BY: INITIALS
DATE: 05/04/11
SCALE: 1" = 3/32"
PROJECT NUMBER:

PCPA (Pascal Center for Performing Arts)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

N

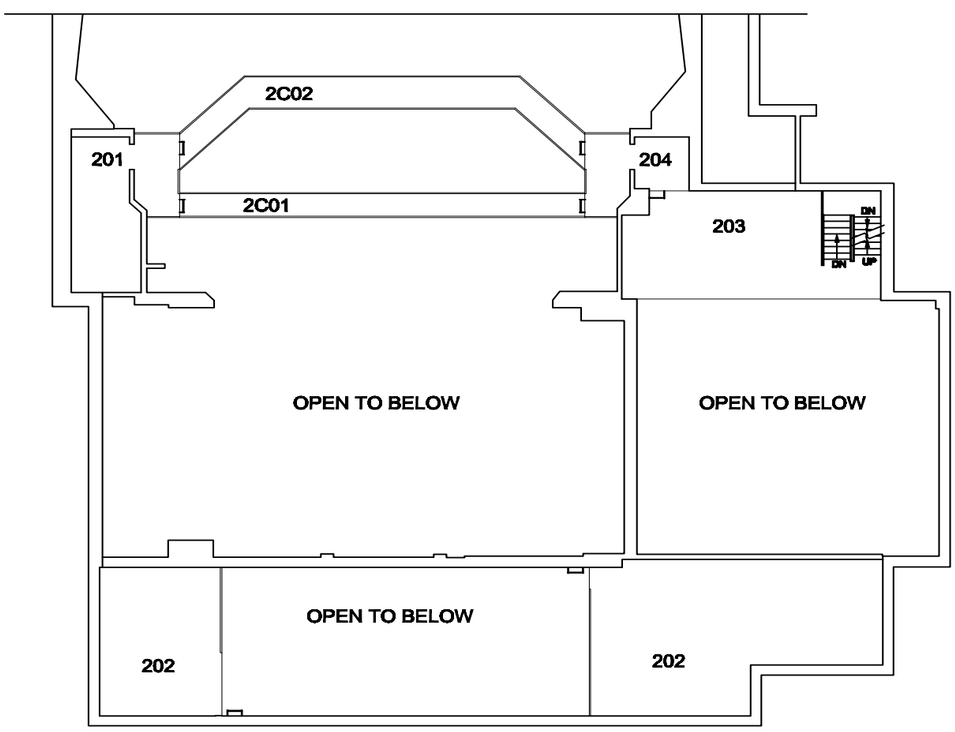


PCPA (Pascal Center for Performing Arts)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

FIRST FLOOR PLAN

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	07/04/14		
PROJECT NUMBER:		SCALE:	1' = 1/16"

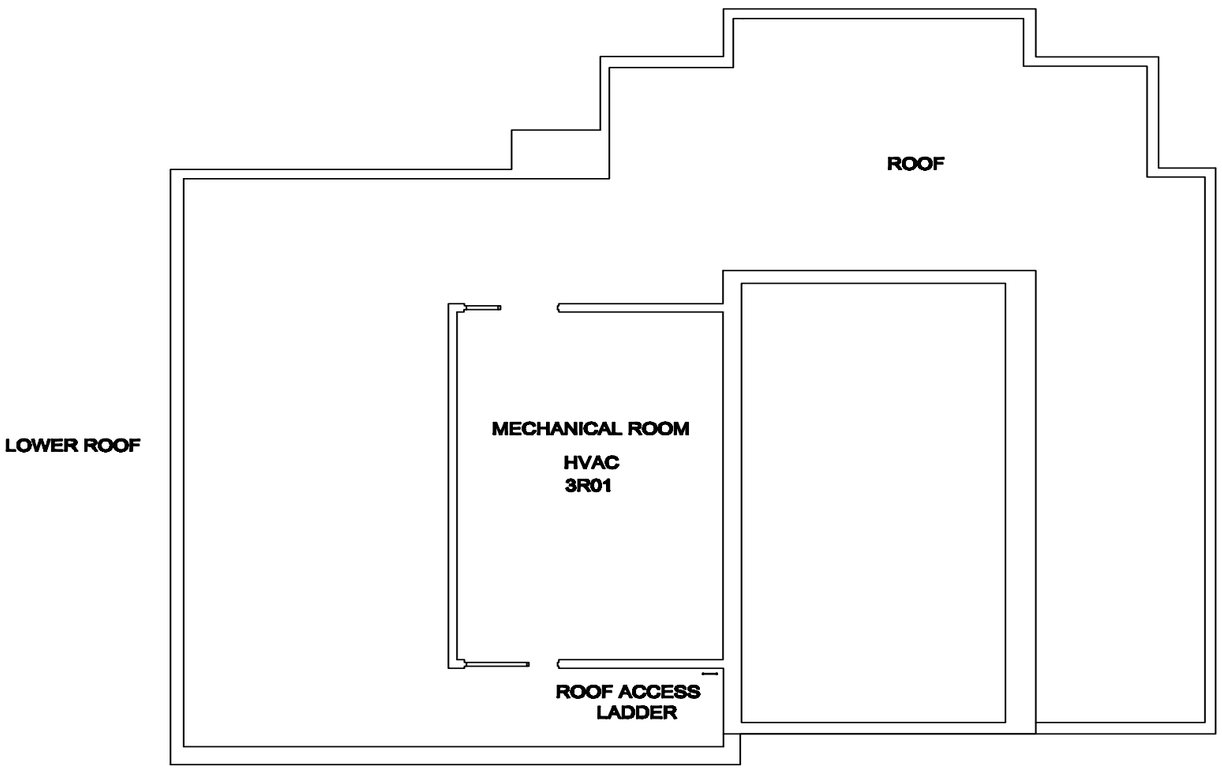


PCPA (Pascal Center for Performing Arts)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

SECOND FLOOR PLAN

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	07/04/14		
PROJECT NUMBER:		SCALE:	1' = 1/16"



PCPA (Pascal Center for Performing Arts)

ROOF FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	CH	APPROVED BY:	INITIALS
DATE:	05/04/11		
PROJECT NUMBER:		SCALE:	1' = 1/16"

15. Grounds Building (GRND)

Fast Facts

Constructed
- 1988

Construction Type
- Pr-manufactured steel structure on concrete slab; Gabled roofs with standing seam metal roof

By The Numbers
- Net Assignable Square Feet: 2,919
- Gross Square Feet: 3,025
- Floors Above Grade: 1

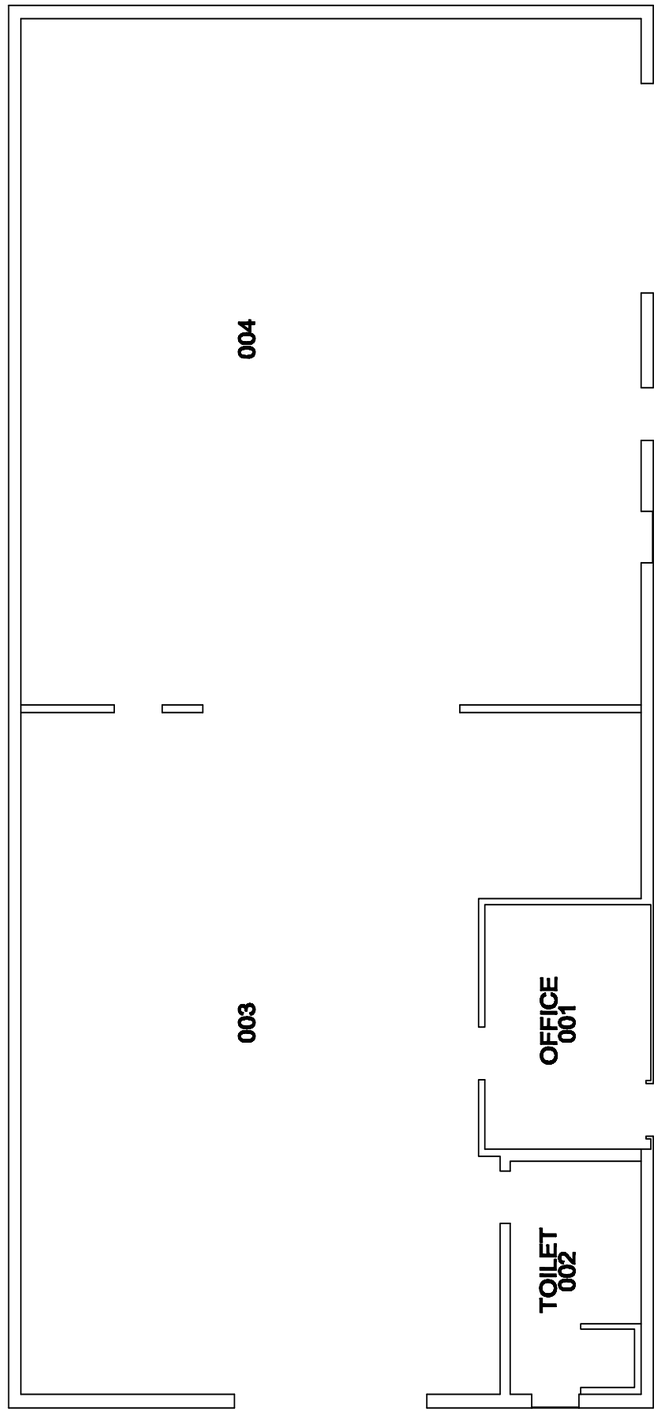
Utilities
- Sprinklers: None
- HVAC: Electric heat and ventilated. Electrical equipment remains from the 1988 construction.
- Electric: Fed from Central Services Building.

Departments
- N/A

Building Use
INFRASTRUCTURE

Building Summary
The Grounds Building is used as storage for the Biology Water/Field equipment.

The building has received no recent improvements, but remains in fair overall condition.



16. Johnson Building (JOHN)

Fast Facts

Constructed
- 1982

Renovated
- 2006 - Renovation

Construction Type
- Masonry bearing walls and wood-framed roofs; Gabled roofs with asphalt shingles; Flat roofs with built-up membrane.

By The Numbers
- Net Assignable Square Feet: 8,505
- Gross Square Feet: 11,314
- Floors Above Grade: 2

Utilities
- Sprinklers: Partial
- HVAC: Packaged rooftop unit with DX cooling. Heating is electric heat.
- Electric: Fed from Humanities Building. Electrical equipment remains from the original 1982 construction.

Departments
- General Classrooms, Computer Labs

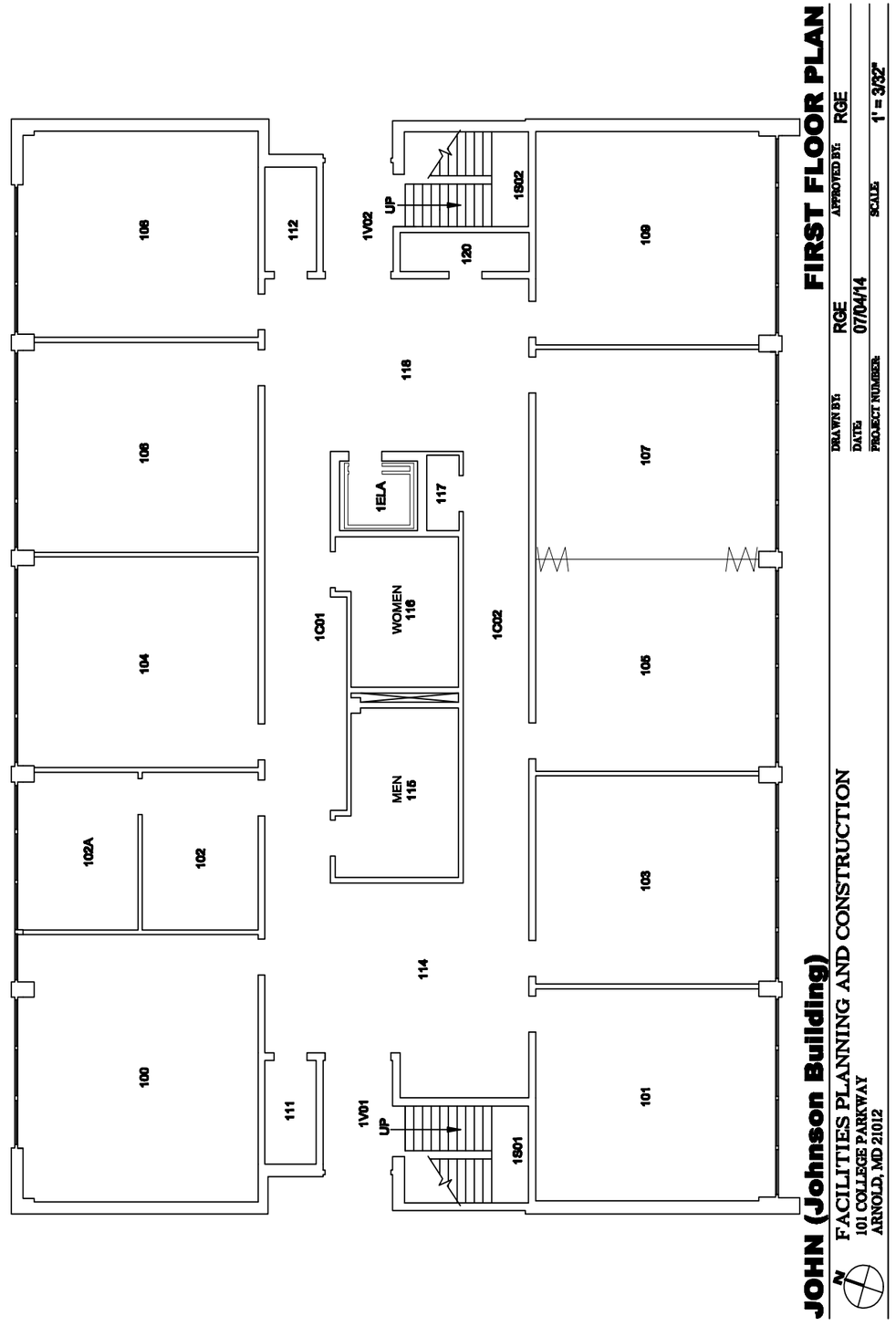
Building Use

ACADEMICS

Building Summary

The Johnson Building is named for A. Cathryn Johnson, a member of the Anne Arundel County Board of Education at the time of the college's inception. Ms. Johnson was instrumental in the original plan to develop a community college for the County and was an educator for the College during its early years.

Issues include the heating, cooling, and electrical distribution systems need to be overhauled, along with adding communication and security wiring, and the building fire protection and sprinkler system should be upgraded to conform to current codes and regulations.



JOHN (Johnson Building)

SECOND FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	07/04/14		
PROJECT NUMBER:		SCALE:	1" = 3/32"

18. Schwartz Building (SCHZ)

Fast Facts

Constructed
- 1990

Renovated
- N/A

Construction Type
- Masonry bearing walls and steel-framed roofs; Flat roofs with built-up membrane

By The Numbers
- Net Assignable Square Feet: 8,525
- Gross Square Feet: 12,442
- Floors Above Grade: 2

Utilities
- Sprinklers: None
- HVAC: Heating water and chilled water from central plant
- Electric: Fed from the Physical Plant primary loop. Electrical equipment remains from the 1990 construction.

Departments
- General Classrooms, Computer Labs and Office Space

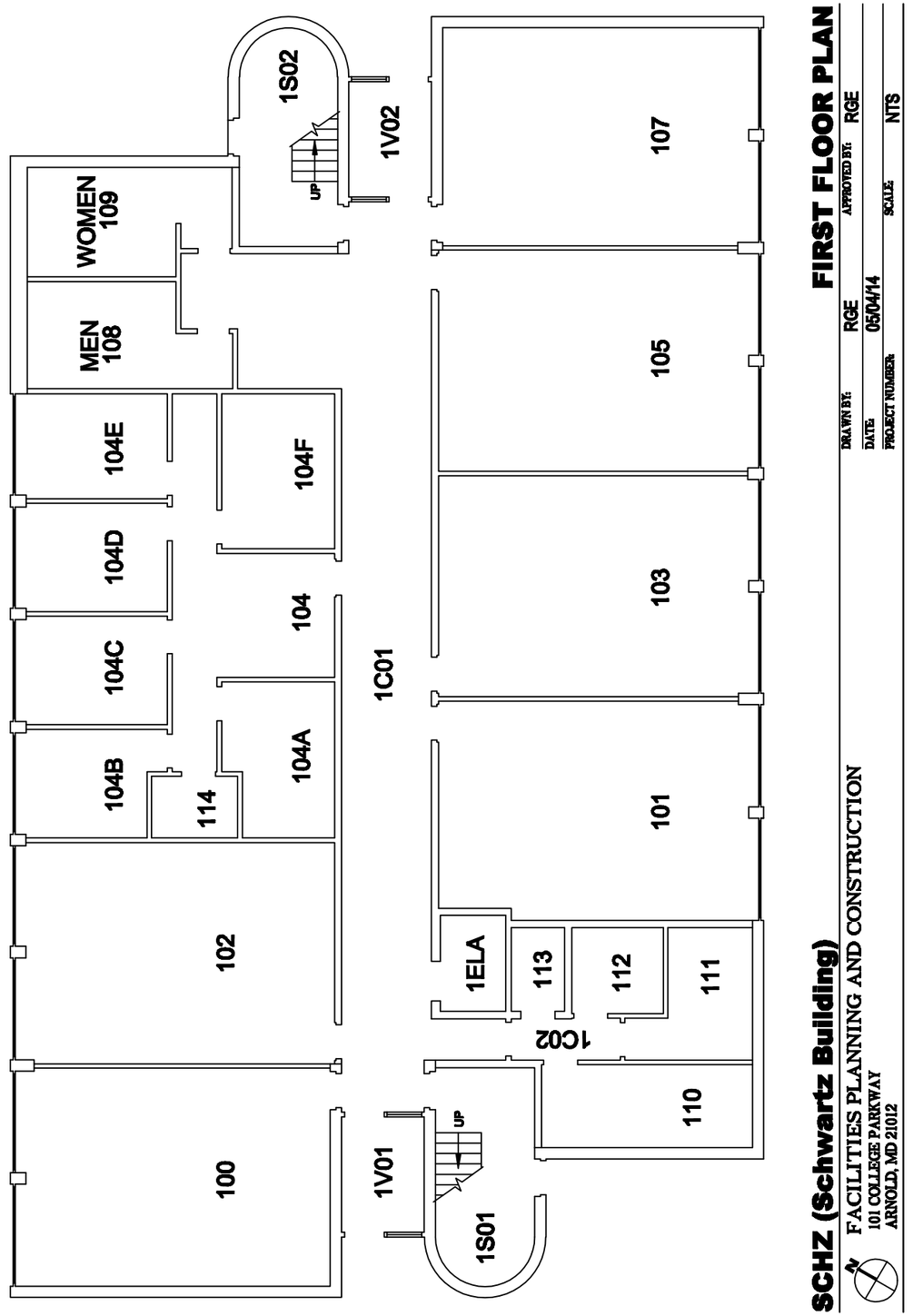
Building Use

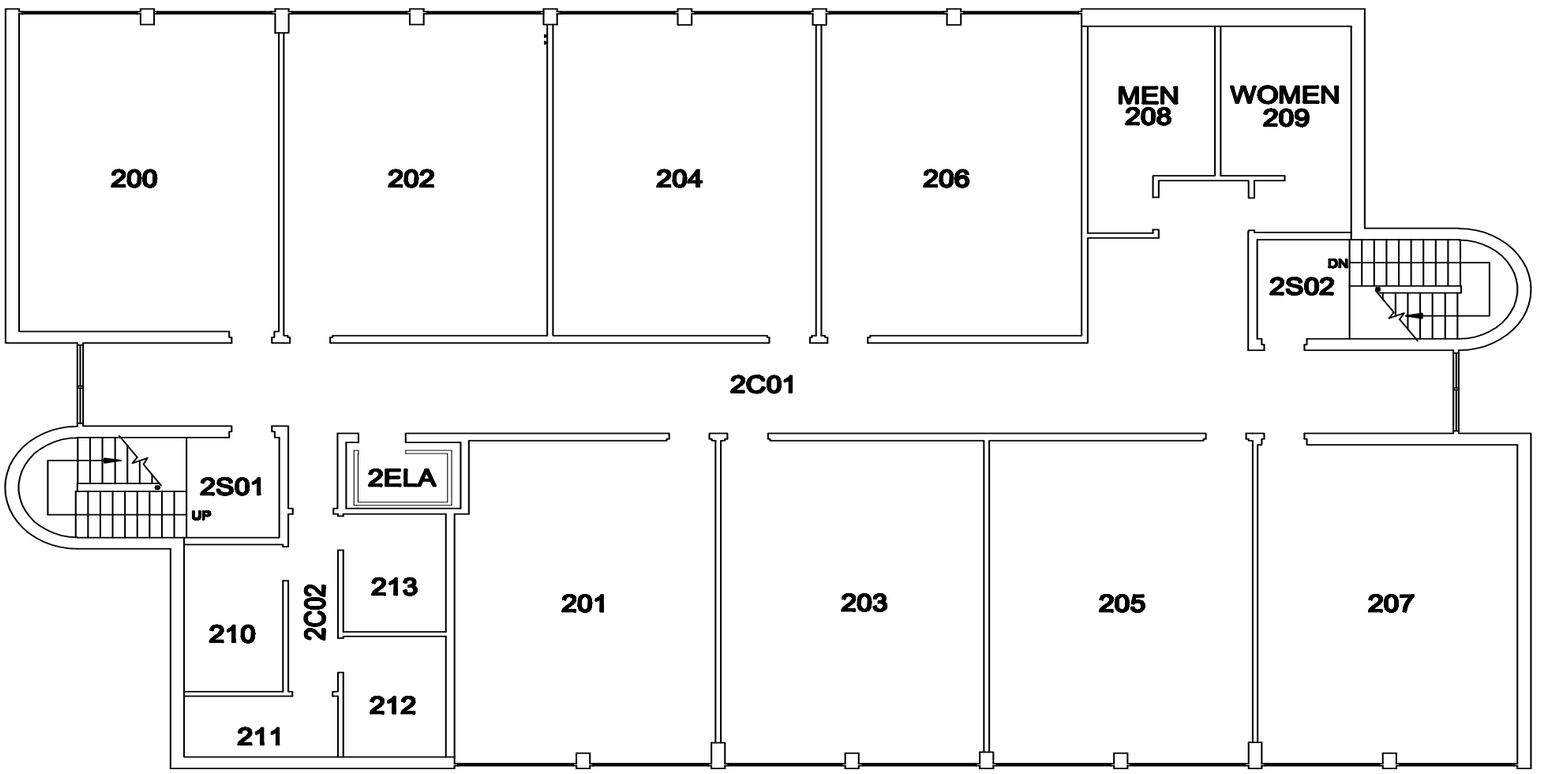
ACADEMICS

Building Summary

The Schwartz Building is identical to Math Building/ Child Development Center. It was named after Dr. Lila R. Schwartz, the Anne Arundel Community College Board of Trustees emeritus. The building contains computer labs, general classrooms, and office space.

The storefront window system will need to be replaced due to age. Interior space modifications and updates are necessary. The air handling units are reported to be in fair to poor condition and will need to be replaced as they are original to the building.





SCHZ (Schwartz Building)

SECOND FLOOR PLAN

FACILITIES PLANNING AND CONTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	05/04/14		
PROJECT NUMBER:		SCALE:	NTS

19. Isaac Cox House (ICOX)

Fast Facts

Constructed
- 1830

Renovated
- 1990 - Renovation
- 2009 - Renovation

Construction Type
- Masonry bearing walls and columns with wood framed roof; Gabled roofs with asphalt shingles.

By The Numbers
- Net Assignable Square Feet: 2,311
- Gross Square Feet: 2,954
- Floors Above Grade: 3

Utilities
- Sprinklers: Yes
- HVAC: Split systems with DX cooling and electric heat
- Electric: Fed from BGE overhead lines. Original fuse panel replaced with a circuit breaker panel in 1991.

Departments
- AACC Foundation Inc., AACC Institutional Advancement Office

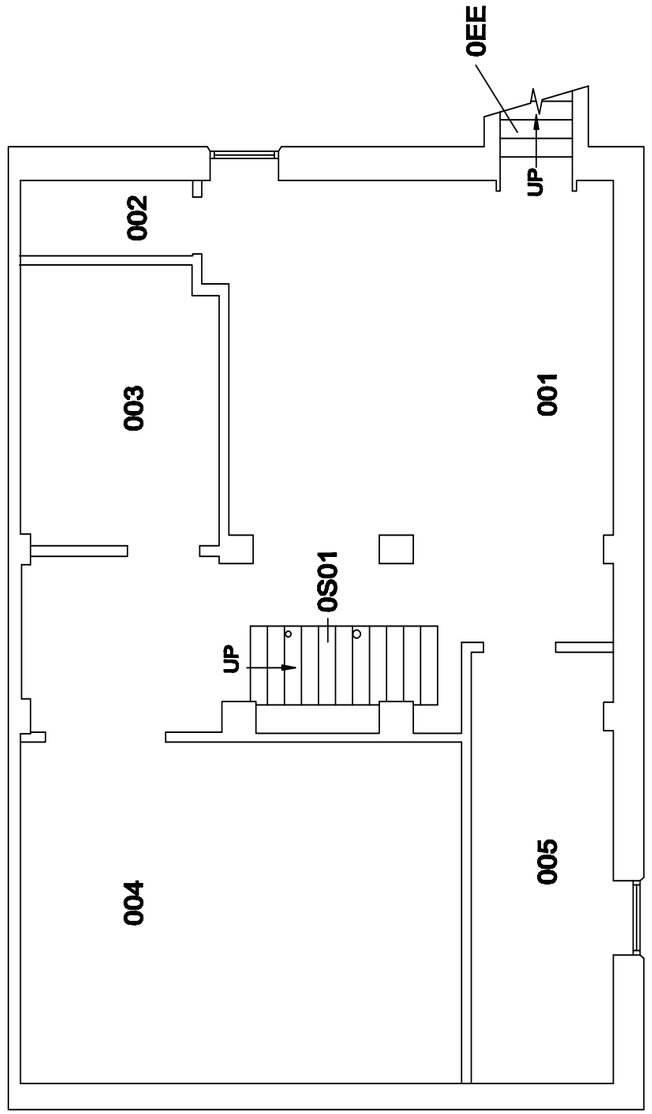
Building Use

ADMINISTRATION

Building Summary

The Isaac Cox House is the home for the Anne Arundel Community College Foundation Inc. and the AACC Institutional Advancement Office, including Development and Alumni Relations.

The building is in good overall condition. Primary deficiencies include inadequate space to accommodate all of Institutional Advancement and no gathering space for large groups. The most recent improvement to the building was the addition of a second floor air handler.

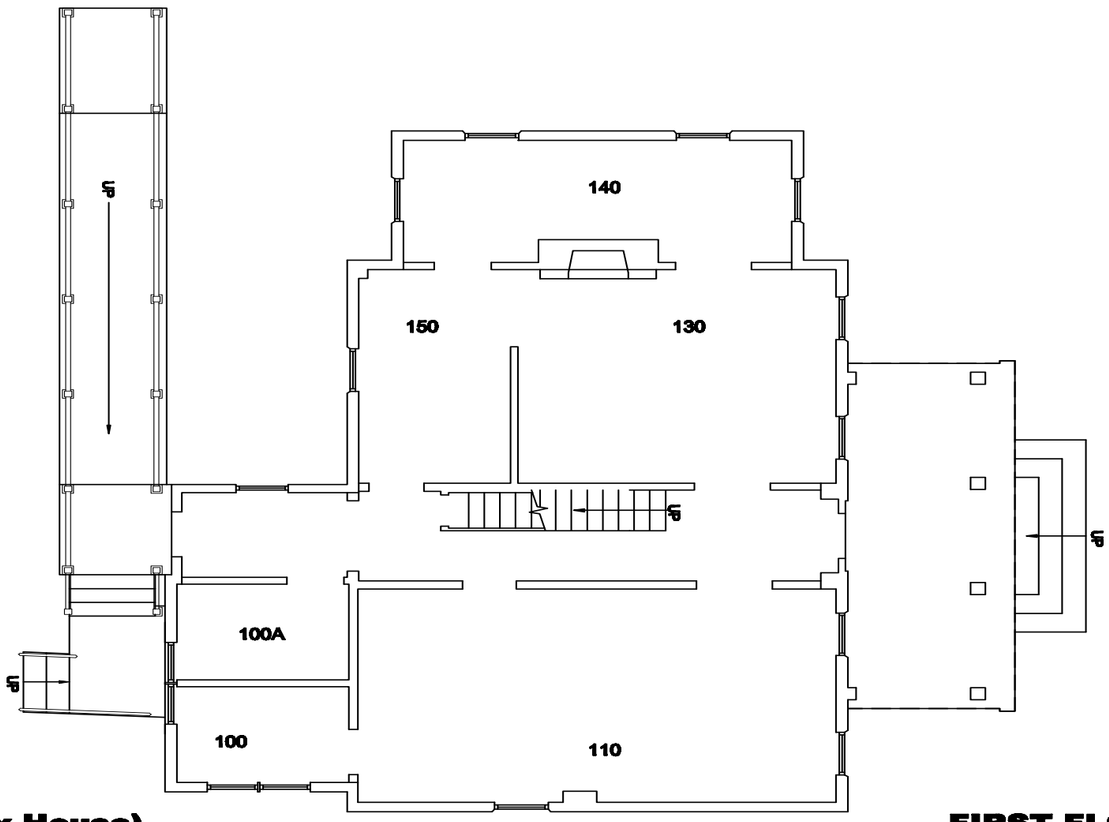


BASEMENT FLOOR PLAN

DRAWN BY: RGE
APPROVED BY: RGE
DATE: 07/04/14
SCALE: 1" = 3/16"
PROJECT NUMBER:

ICOX (Isaac Cox House)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

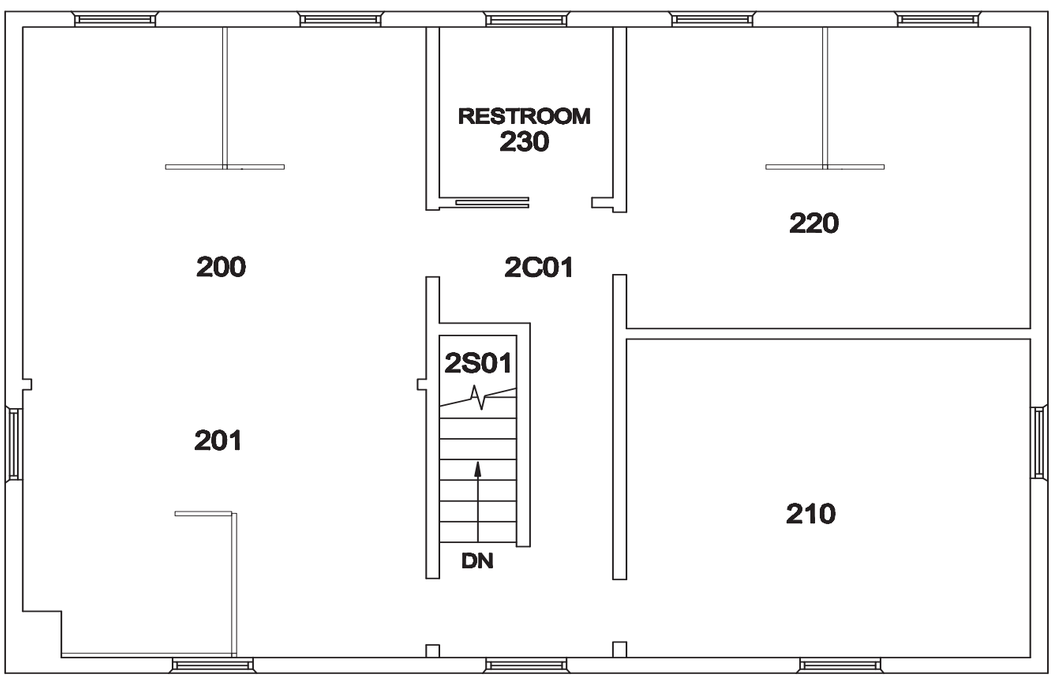


ICOX (Isaac Cox House)

FIRST FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	07/27/14		
PROJECT NUMBER:		SCALE:	1" = 1/8"

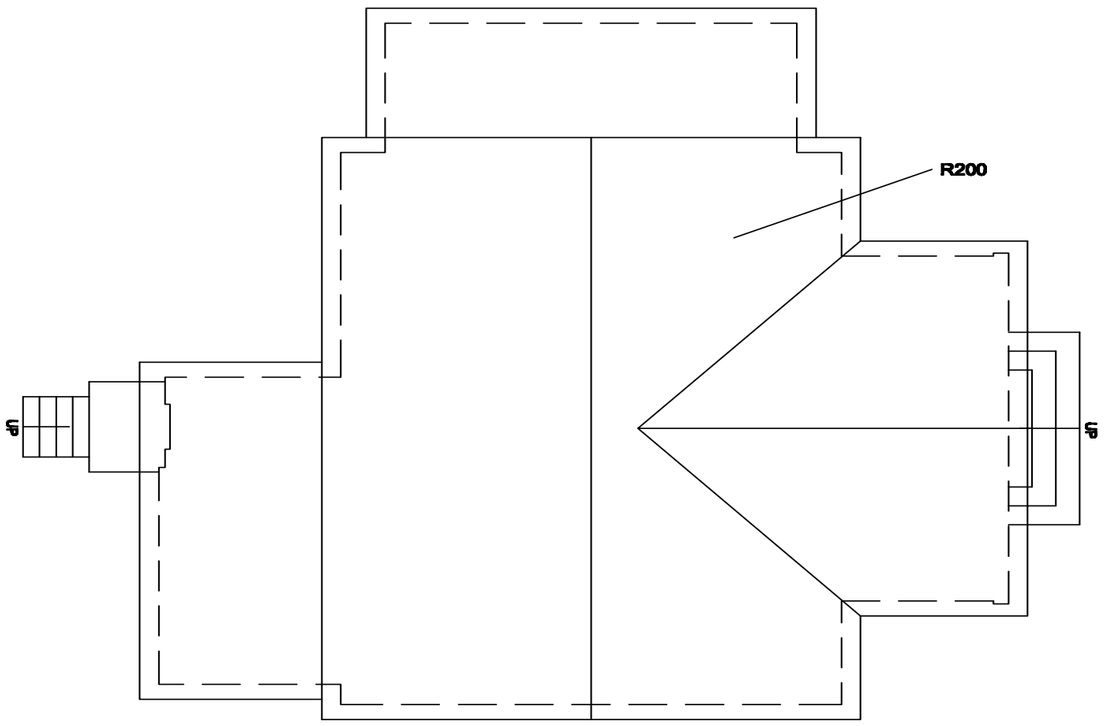


ICOX (Isaac Cox House)

SECOND FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	CH	APPROVED BY:	INITIALS
DATE:	05/04/11		
PROJECT NUMBER:		SCALE:	1" = 3/16"



ICOX (Isaac Cox House)

ROOF PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	07/19/14		
PROJECT NUMBER:		SCALE:	1" = 1/8"

20. Florestano Allied Health Building (FLRS)

Fast Facts

Constructed
- 1993

Construction Type
- Steel frame with concrete-topped metal decks; Flat roof with thermoplastic polyolefin (TPO) roofing membrane

By The Numbers
- Net Assignable Square Feet: 38,192
- Gross Square Feet: 57,940
- Floors Above Grade: 4

Utilities
- Sprinklers: Yes
- HVAC: Packaged rooftop units with DX cooling serving VAV terminals. Heating water boilers supply heating coils in VAV terminals
- Electric: Fed from BGE transformer

Departments
- Health Professions, Human Services, Homeland Security and Criminal Justice Institute Programs

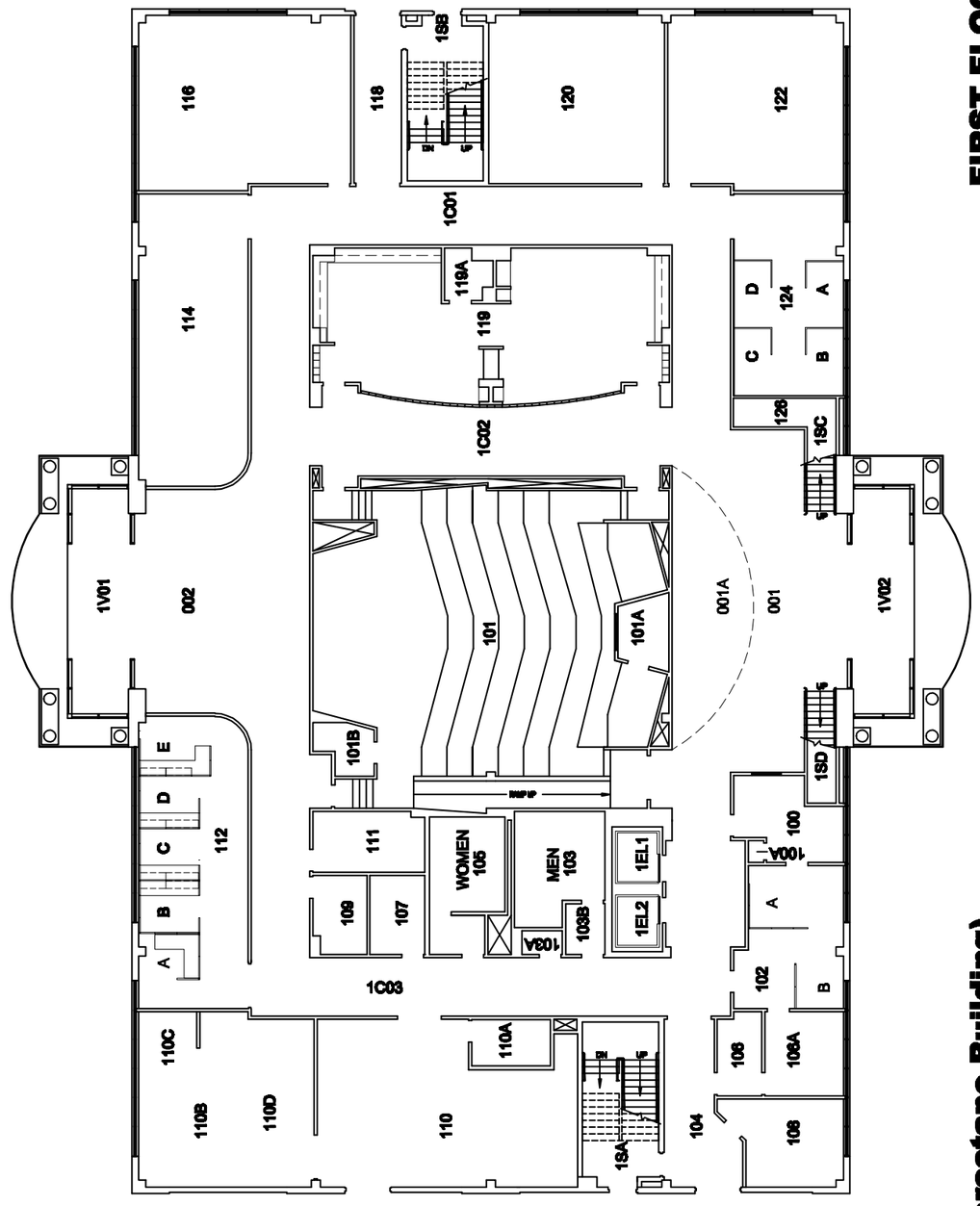
Building Use

ACADEMICS

Building Summary

The Florestano Allied Health Building was built on West Campus and houses multiple college programs. Dedicated labs exist for each health profession program, as well as a Dental Assisting Lab for continuing education. Public areas are heavily used and seem to meet the needs of the student body.

The building is in good overall condition. The building houses the Homeland Security and Criminal Justice Institute in what otherwise could be a building dedicated to the health sciences, which is significantly lacking in space. Renovations for laboratory functions are difficult given the low floor to ceiling dimensions. Moisture and staining was observed on ceiling tiles in a few classrooms and the south entrance vestibule.



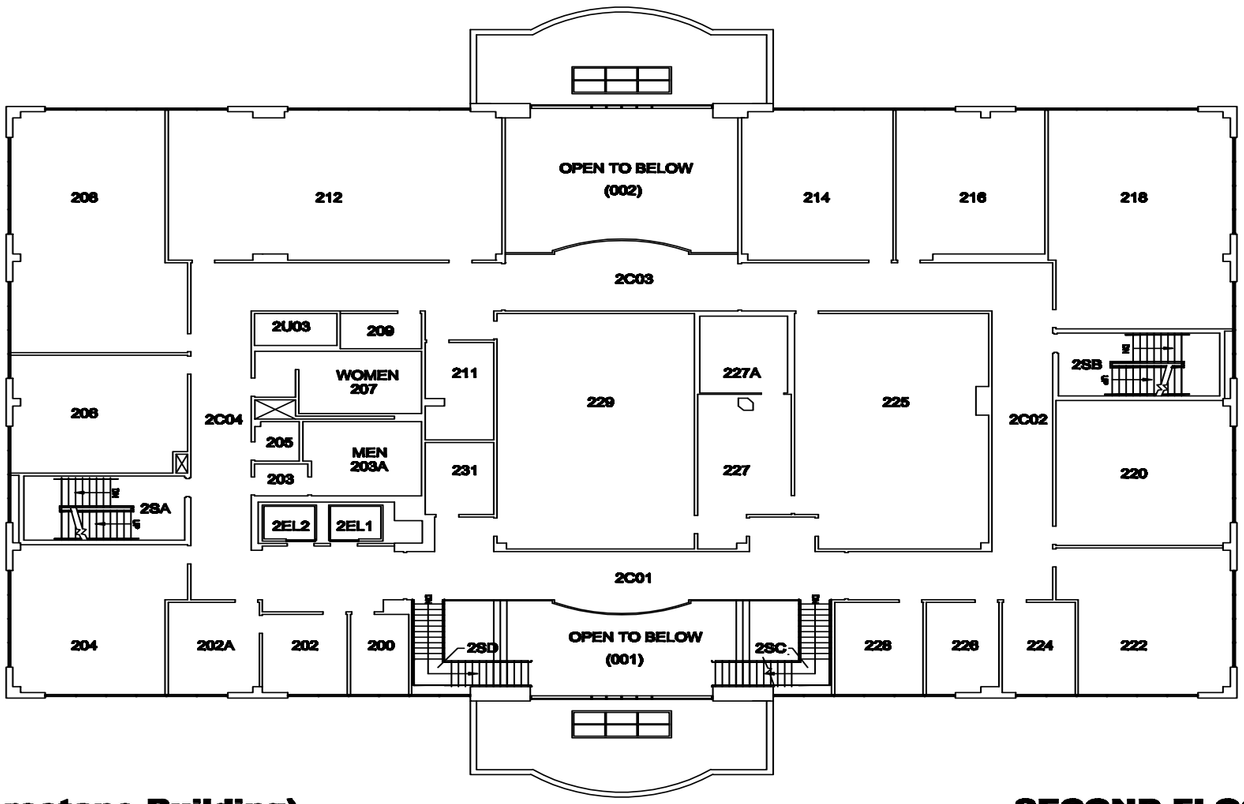
FIRST FLOOR PLAN

DRAWN BY: RGE
APPROVED BY: RGE
DATE: 07/24/2014
SCALE: NTS
PROJECT NUMBER:

FLRS (Florestano Building)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

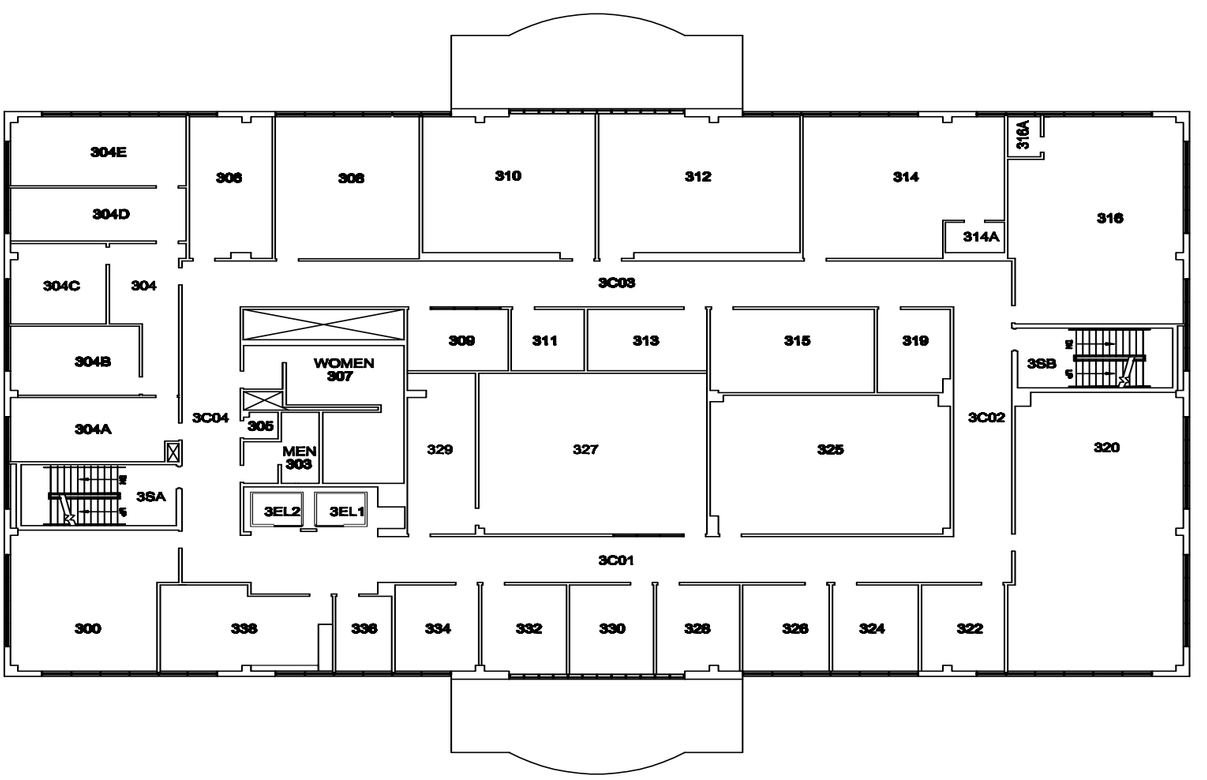
N



FLRS (Florestano Building) **SECOND FLOOR PLAN**

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

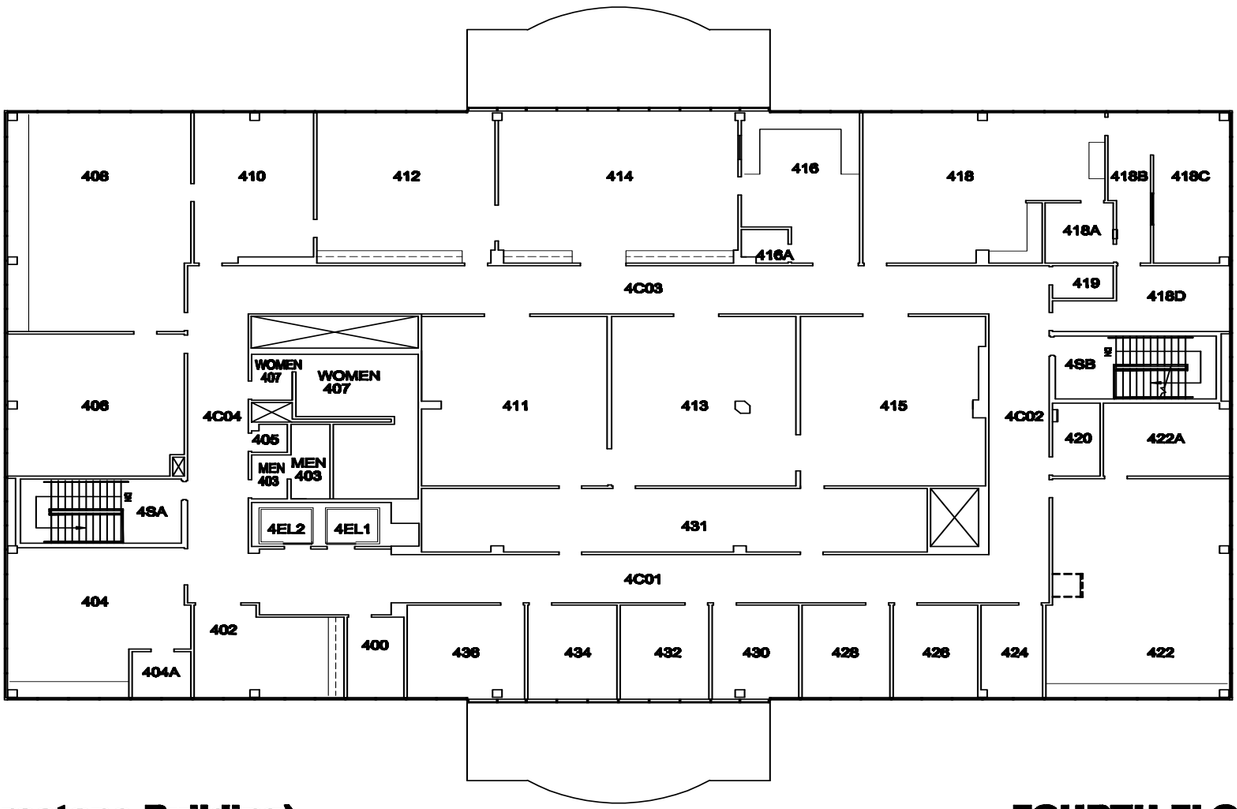
DRAWN BY:	JH	APPROVED BY:	INITIALS
DATE:	11/1/13		
PROJECT NUMBER:		SCALE:	NTS



FLRS (Florestano Building) **THIRD FLOOR PLAN**

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	07/24/14		
PROJECT NUMBER:		SCALE:	NTS



FLRS (Florestano Building)

FOURTH FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	07/24/14		
PROJECT NUMBER:		SCALE:	NTS

21. John A. Cade Center for Fine Arts (CADE)

Fast Facts

Constructed
- 1997

Renovated
- 1993 - Partial Renovation
- 2007 - Accessibility Improvements

Construction Type
- Slab on grade steel frame with CMU exterior envelope; Built up roof with gravel ballast and metal standing seam

By The Numbers
- Net Assignable Square Feet: 36,016
- Gross Square Feet: 52,835
- Floors Above Grade: 3

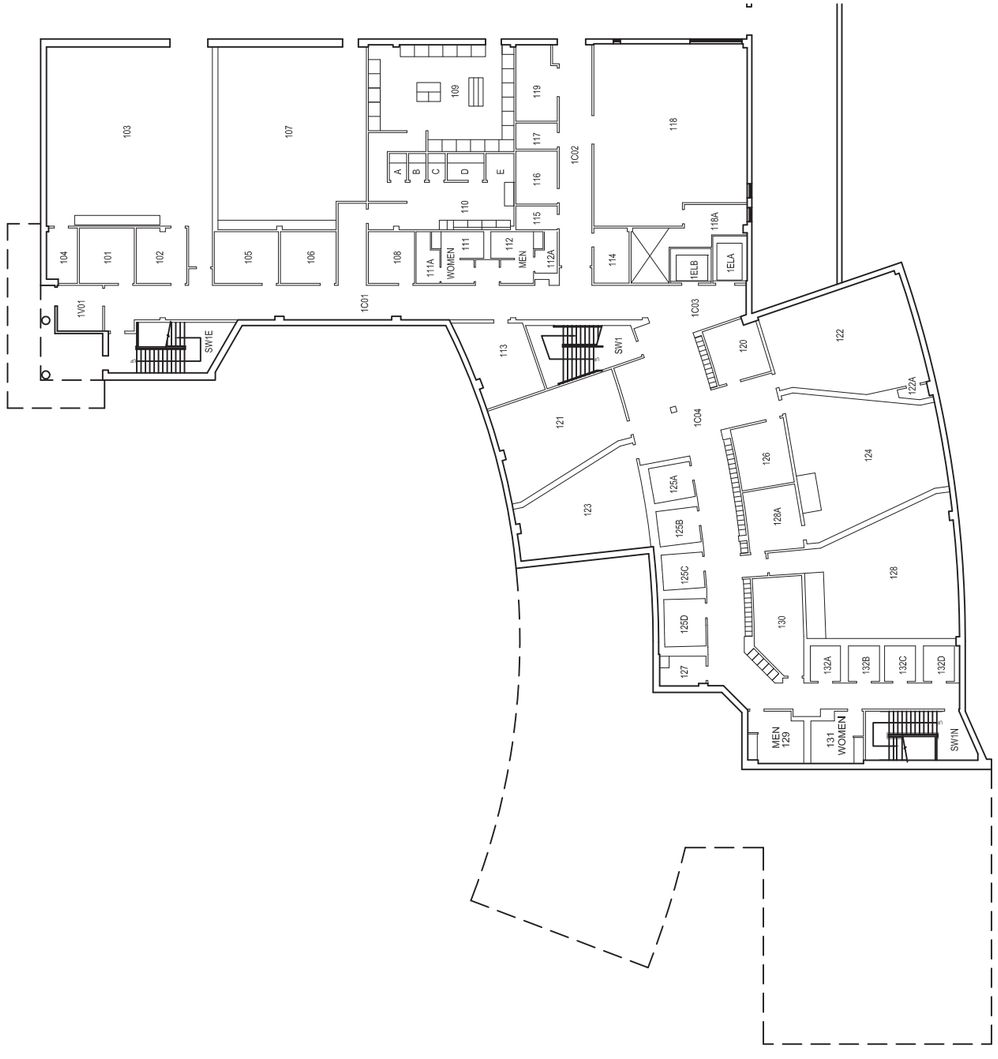
Utilities
- Sprinklers: Yes
- HVAC: Hot water boiler heating system and chilled water central cooling system with chiller and cooling tower.
- Electric: Fed from BGE transformer. Electrical equipment remains from 1997 construction.

Departments
- Art, Communications Arts Technology, Theater Arts, Dance, and Music

Building Use
ACADEMICS

Building Summary
The Cade Center for Fine Arts was built in 1997. The facility is named for John A. Cade, a strong advocate for Maryland's community colleges and the arts. The facility houses programs for Art, Dance, Music, Theater Arts, and Communications Arts Technology. The building also contains art studios, practice rooms for dance and music, and the Cade Center for Fine Arts Gallery.

The building is generally in good condition, but is too small to meet the needs for all the Fine Arts Departments. As a result these departments are spread across campus.

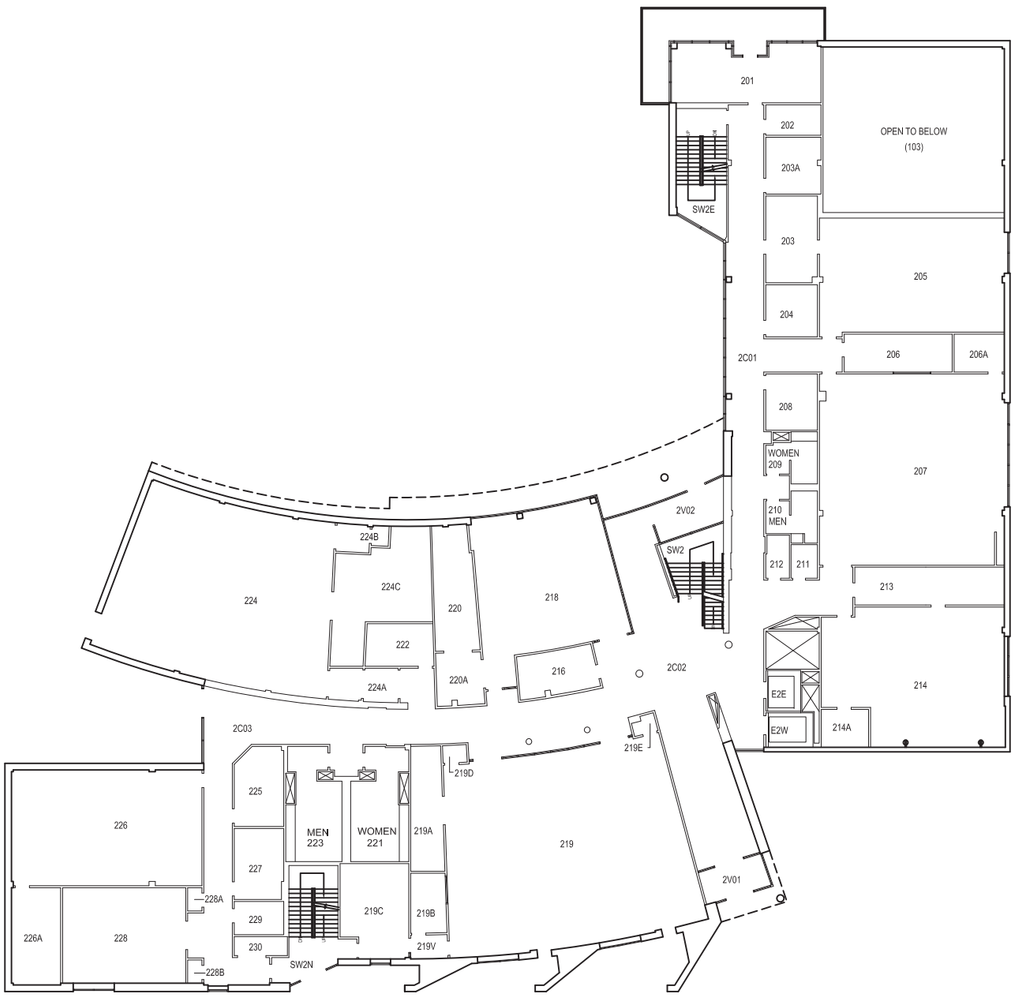


FIRST FLOOR PLAN

DRAWN BY: RGE
APPROVED BY: RGE
DATE: 07/24/2014
PROJECT NUMBER:
SCALE: 1" = 1/32"

CADE (Cade Center for Fine Arts)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

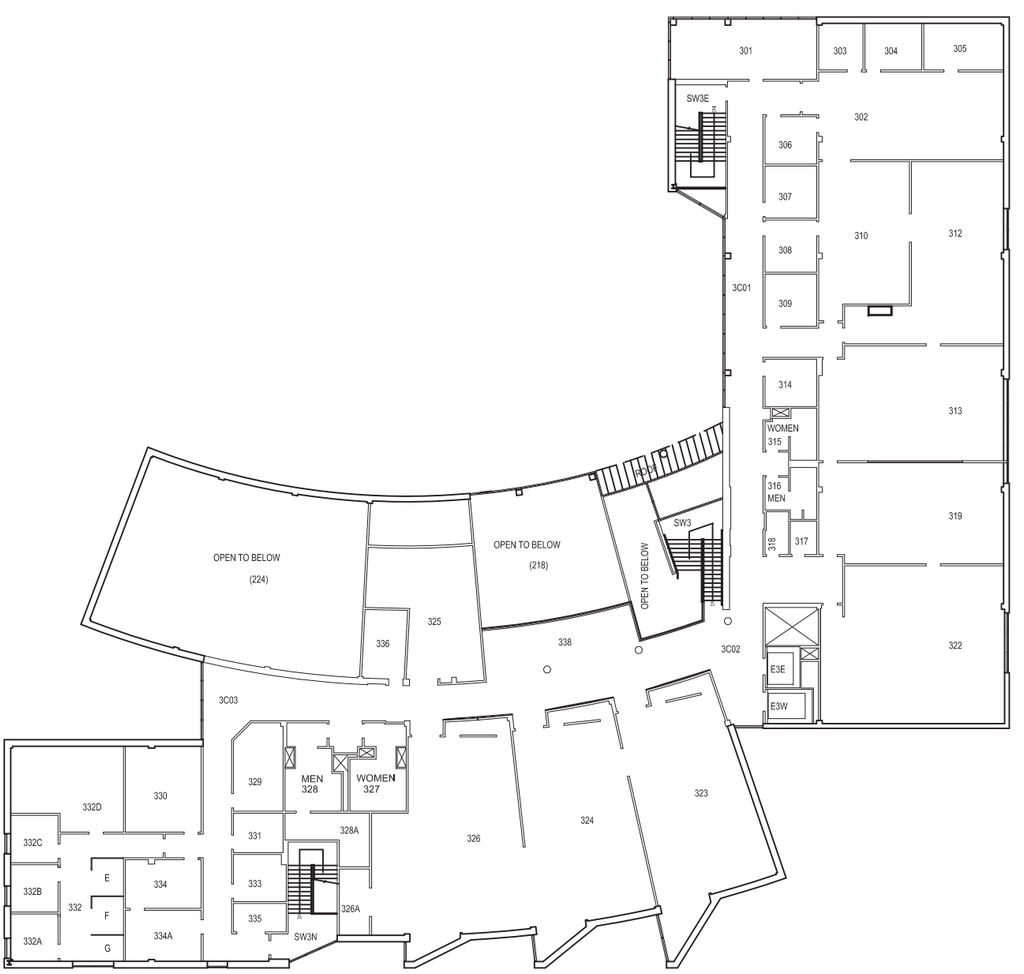


CADE (Cade Center for Fine Arts)

SECOND FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	7/24/2014		
PROJECT NUMBER:		SCALE:	1' = 1/32"



CADE (Cade Center for Fine Arts)

THIRD FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	3/20/2014		
PROJECT NUMBER:		SCALE:	1' = 1/32"

22. Student Services (SSVC)

Fast Facts

Constructed
- 1975

Renovated
- 2002

Construction Type
- Steel frame with concrete-topped metal decks; Flat roof with built-up membrane

By The Numbers
- Net Assignable Square Feet: 13,059
- Gross Square Feet: 21,100
- Floors Above Grade: 2

Utilities
- Sprinklers: Yes
- HVAC: Rooftop units with DX cooling
- Electric: Fed from BGE transformer. Electrical equipment was installed in 2002.

Departments
- Academic Advising, Admissions, Registration, The Registrar's Office, Financial Aid, Campus Information and Visitors' Services and Cashier's Office.

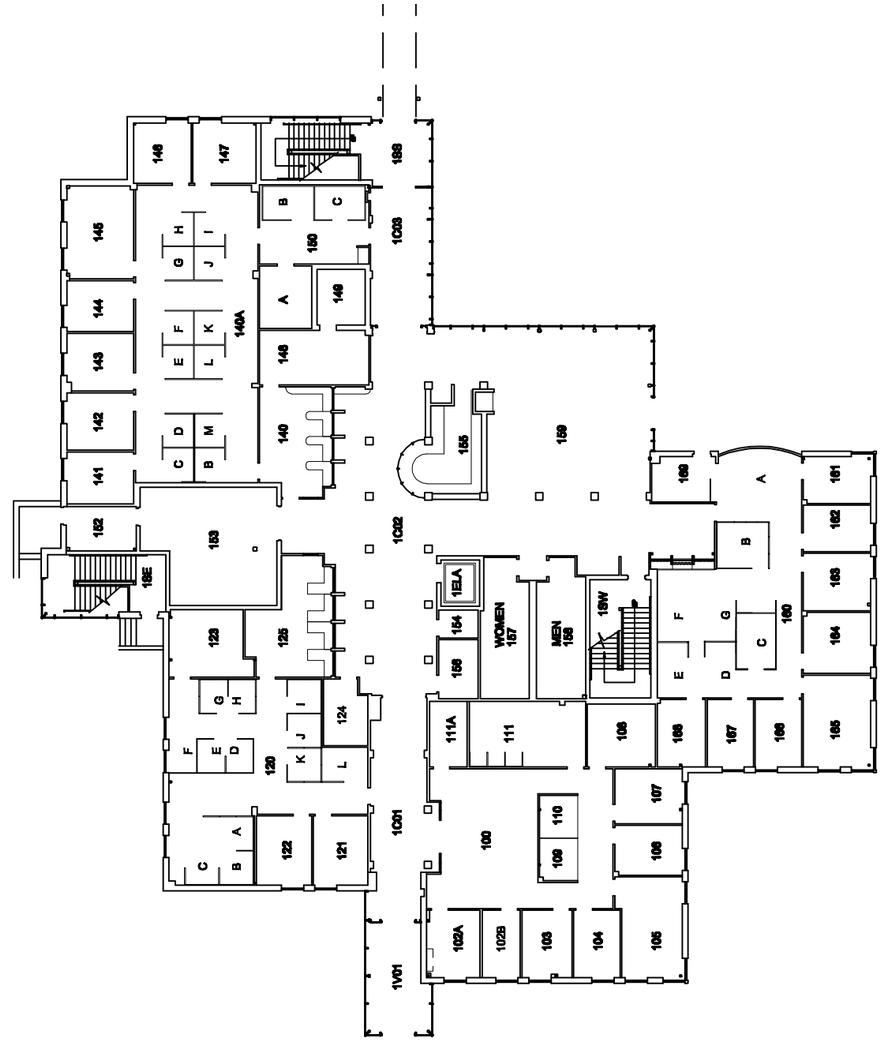
Building Use

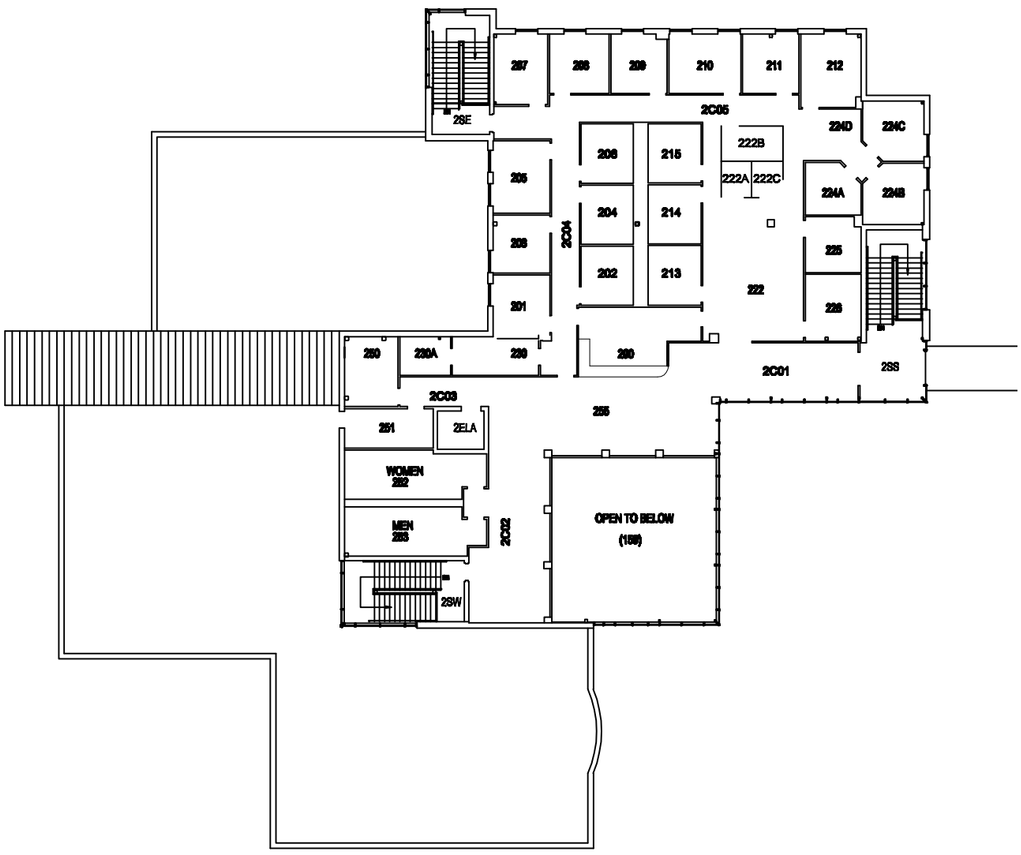
ADMINISTRATION

Building Summary

The Student Services Center houses admissions, registration, the registrar's office, financial aid, academic advising, campus information, visitor's services, and the cashier's office.

The building is in good overall condition.





SSVC (Student Services Center)

SECOND FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	3/27/2014		
PROJECT NUMBER:		SCALE:	NTS

23. Resource Management (RESM)

Fast Facts

Constructed
- 2003

Construction Type
- Conventional wood frame structure on concrete slab; Flat roofs with EPDM membrane

By The Numbers
- Net Assignable Square Feet: 4,257
- Gross Square Feet: 6,759
- Floors Above Grade: 1

Utilities
- Sprinklers: None
- HVAC: Packaged rooftop units with DX cooling
- Electric: Fed from the Physical Plant primary loop, feeds the Astronomy Building. Electrical equipment is from the 2003 construction.

Departments
- Business Offices, Purchasing, Finance Departments, Sponsored Programs and Classrooms

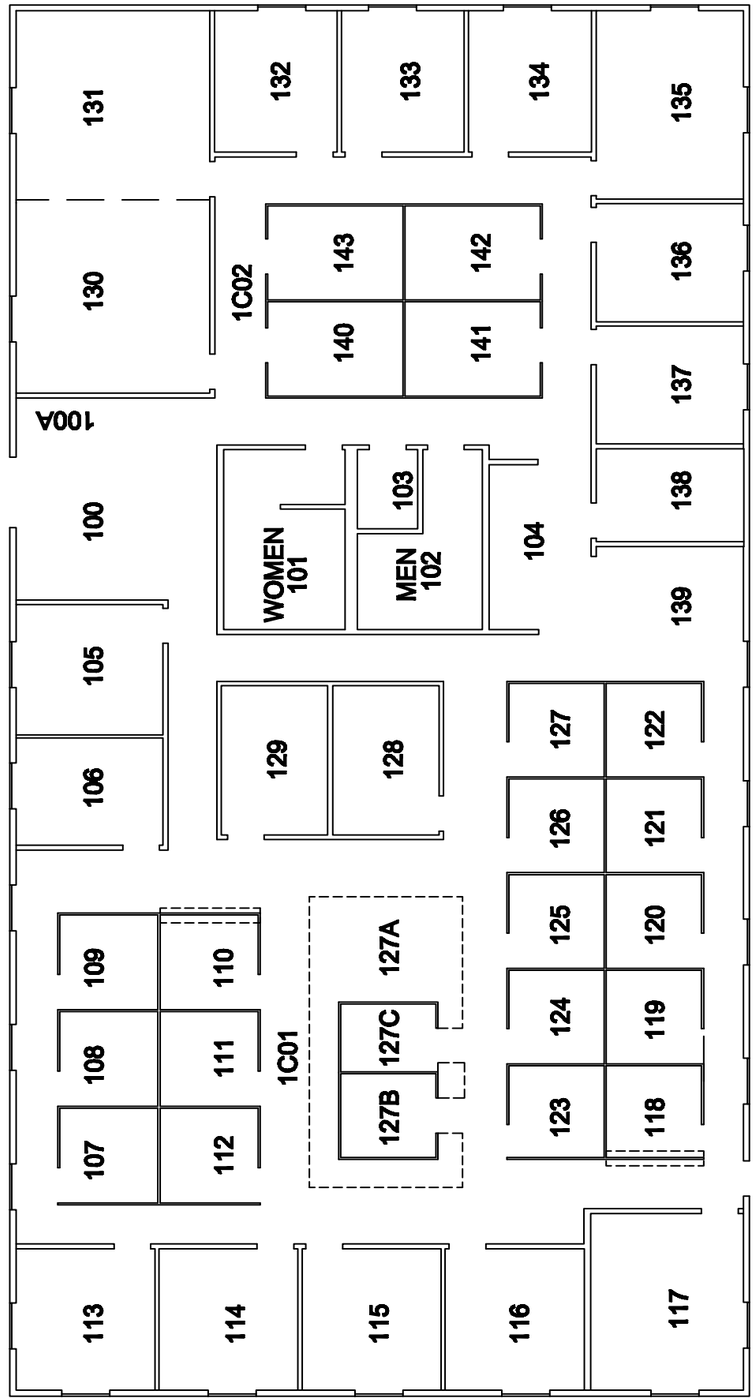
Building Use

INFRASTRUCTURE

Building Summary

The Resource Management Building and Annexes A & B are used for surge space for many different campus programs. The College's Business Office is located within this building.

The buildings are in good condition and should serve for 10-15 years with routine maintenance.



FIRST FLOOR PLAN

DRAWN BY: RGE
APPROVED BY: RGE
DATE: 03/27/2014
PROJECT NUMBER:
SCALE: NTS

RESM (Resource Management Building)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

24. Center for Applied Learning & Technology (CALT)

Fast Facts

Constructed
- 2004

Construction Type
- Steel frame with concrete-topped metal decks; Flat roofs with built-up membrane

By The Numbers
- Net Assignable Square Feet: 59,734
- Gross Square Feet: 92,711
- Floors Above Grade: 3

Utilities
- Sprinklers: Yes
- HVAC: Rooftop units with DX cooling serving VAV terminals
- Electric: Fed from BGE transformer

Departments
- Architecture, Interior Design, Computer Technology, Cybercrime and Engineering Classrooms

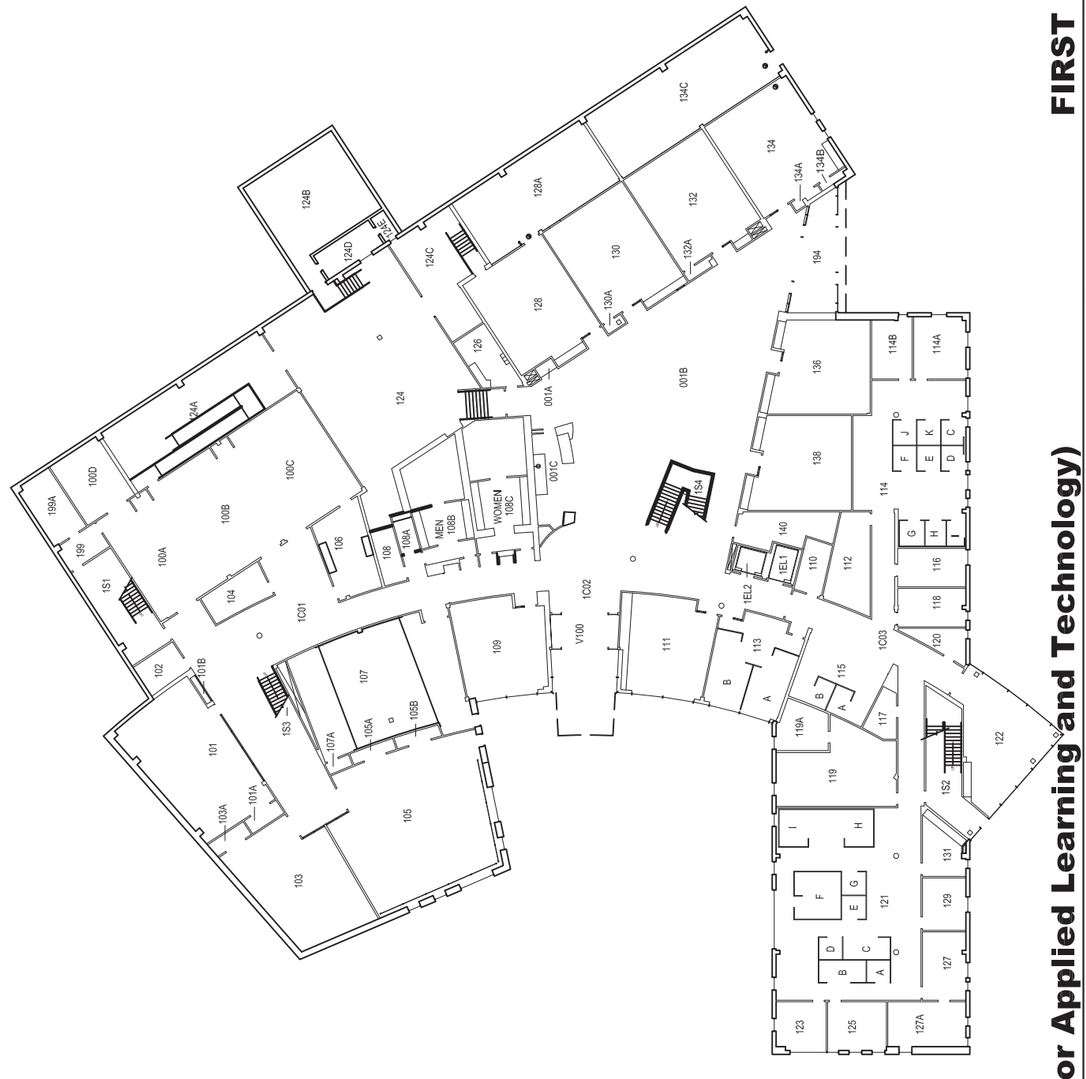
Building Use

ACADEMICS

Building Summary

This building includes a large three story atrium space featuring a cafe and student seating, as well as a partial green roof. It is meeting the space requirements for the Center for Applied Learning and Technology.

The building is in good overall condition with no major improvements required. Interior finishes and spaces are up to date and are in good condition. Primary deficiencies include the unrealized conference spaces that were originally planned for this building. As a consequence, the College suffers from lack of adequate conference space.

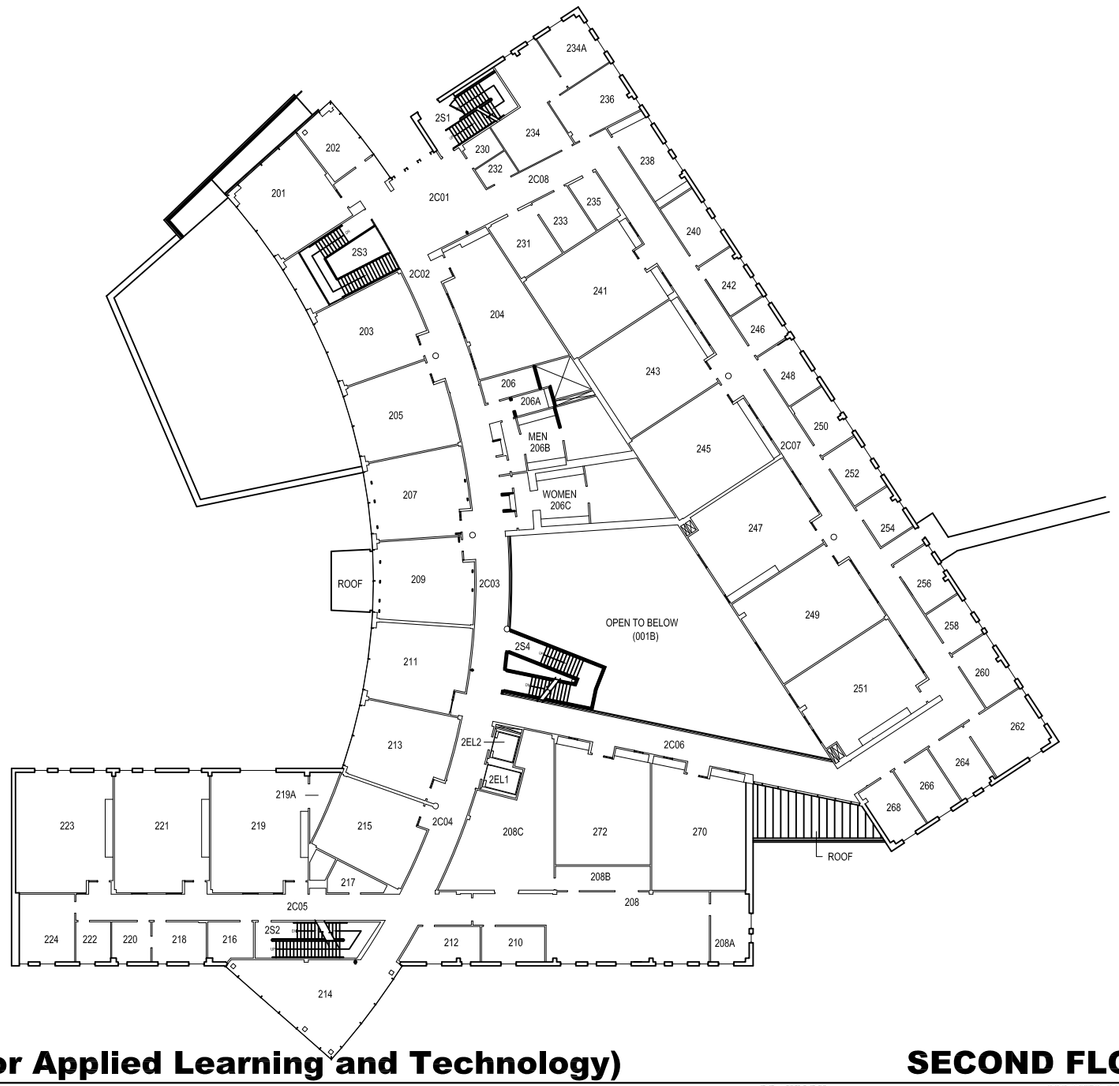


FIRST FLOOR PLAN

DRAWN BY: RGE
APPROVED BY: RGE
DATE: 07/24/2014
PROJECT NUMBER:
SCALE: NTS

CALT (Center for Applied Learning and Technology)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

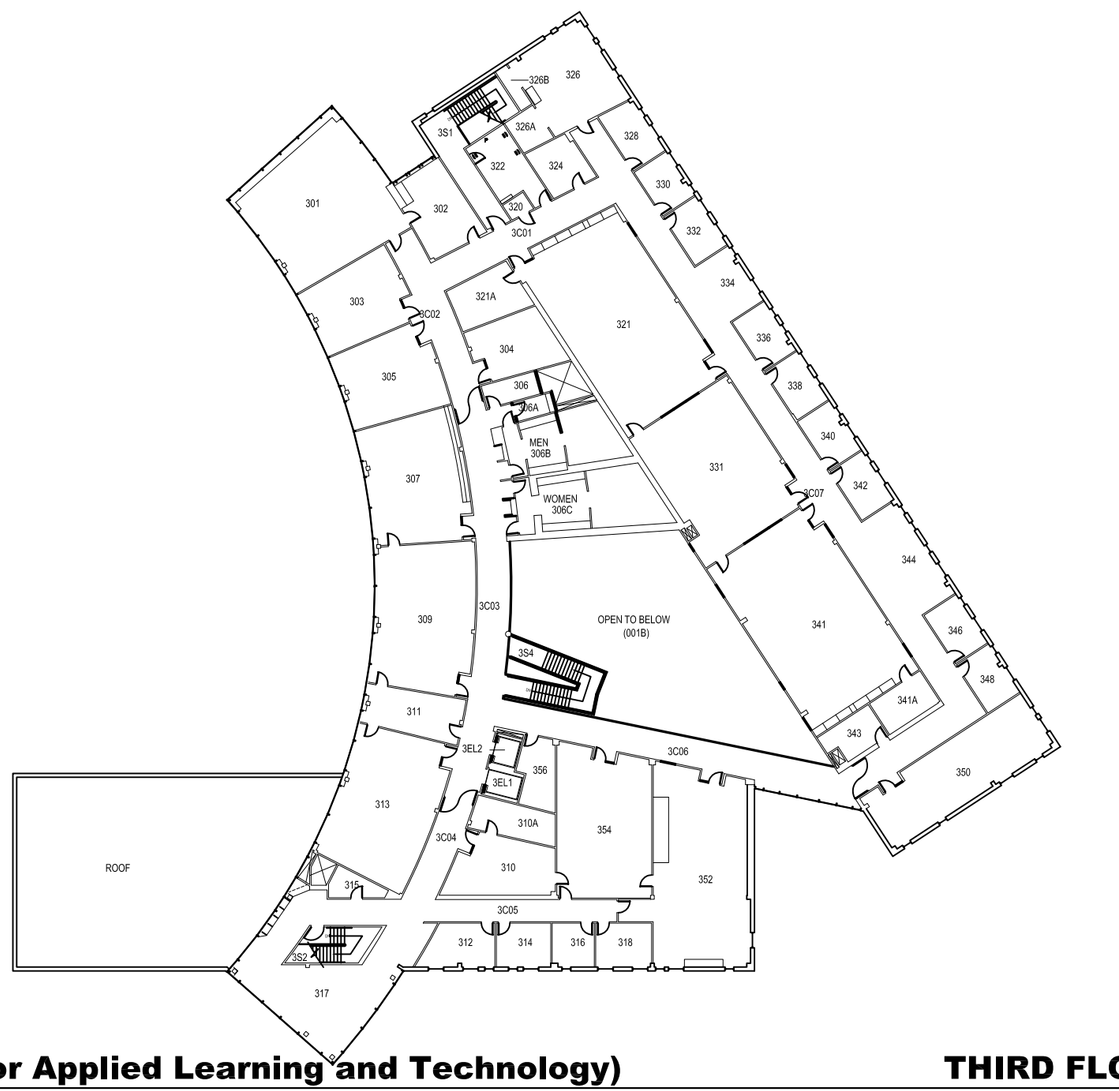


CALT (Center for Applied Learning and Technology)

SECOND FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	03/27/2014		
PROJECT NUMBER:		SCALE:	NTS



CALT (Center for Applied Learning and Technology)

THIRD FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	3/27/2014		
PROJECT NUMBER:		SCALE:	NTS

25. Central Services Building (CSB)

Fast Facts

Constructed
- 2007

Construction Type
- Steel frame; Low slope roof with standing seam metal panels

By The Numbers
- Net Assignable Square Feet: 27,274
- Gross Square Feet: 32,538
- Floors Above Grade: 1

Utilities
- Sprinklers: Yes
- HVAC: Repairs and Grounds - heated only; Offices - split DX system with indoor air-handling unit and VAV terminals
- Electric: Fed from BGE transformers. Feeds the Barn and Grounds Storage Buildings

Departments
- Offices of Capital Development, Document Services, Facilities Management and Public Safety

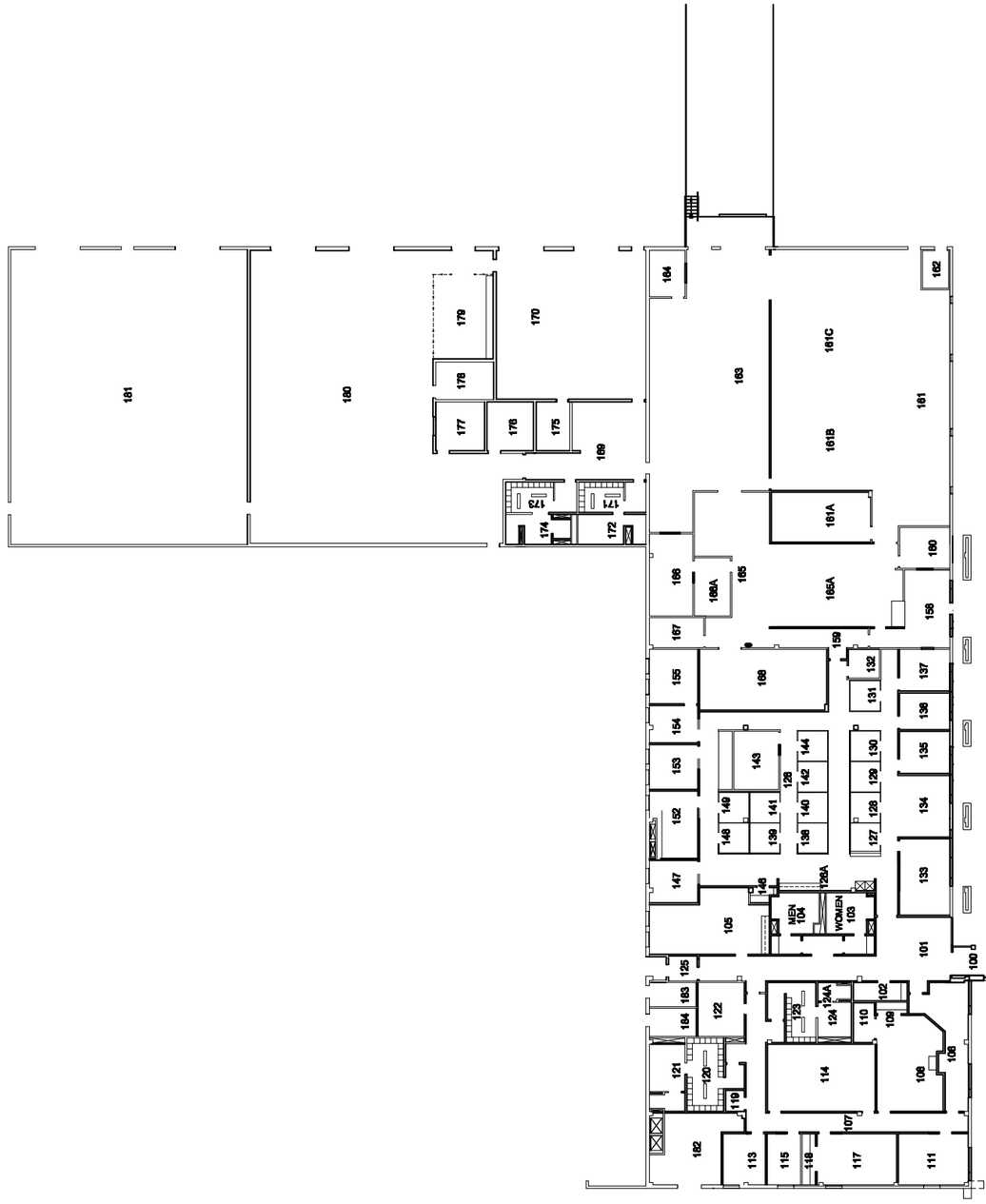
Building Use

INFRASTRUCTURE

Building Summary

The Central Services Building was built in 2007 and is the newest building on campus. It accommodates multiple academic departments and has space available for vehicle repair, grounds maintenance, and storage.

The building is in good overall condition with no major improvements required. The primary deficiency is a lack of storage space for shop facilities.



26. HCAT Facility (HCAT)

Fast Facts

Constructed
- 2001

Construction Type
- Brick veneer exterior; Steel frame with concrete-topped metal decks; Flat roofs with single-ply membrane

By The Numbers
- Net Assignable Square Feet: 6,290
- Gross Square Feet: 12,815
- Floors Above Grade: 2

Utilities
- Sprinklers: Yes
- HVAC: Package roof top units, split system heat pumps, and direct fired heaters
- Electric: 800 amps, 120/208 volt three-phase four-wire alternating current; owned and maintained by BGE.

Departments
- Cafe Classrooms, Kitchens, Computer Labs, Classrooms

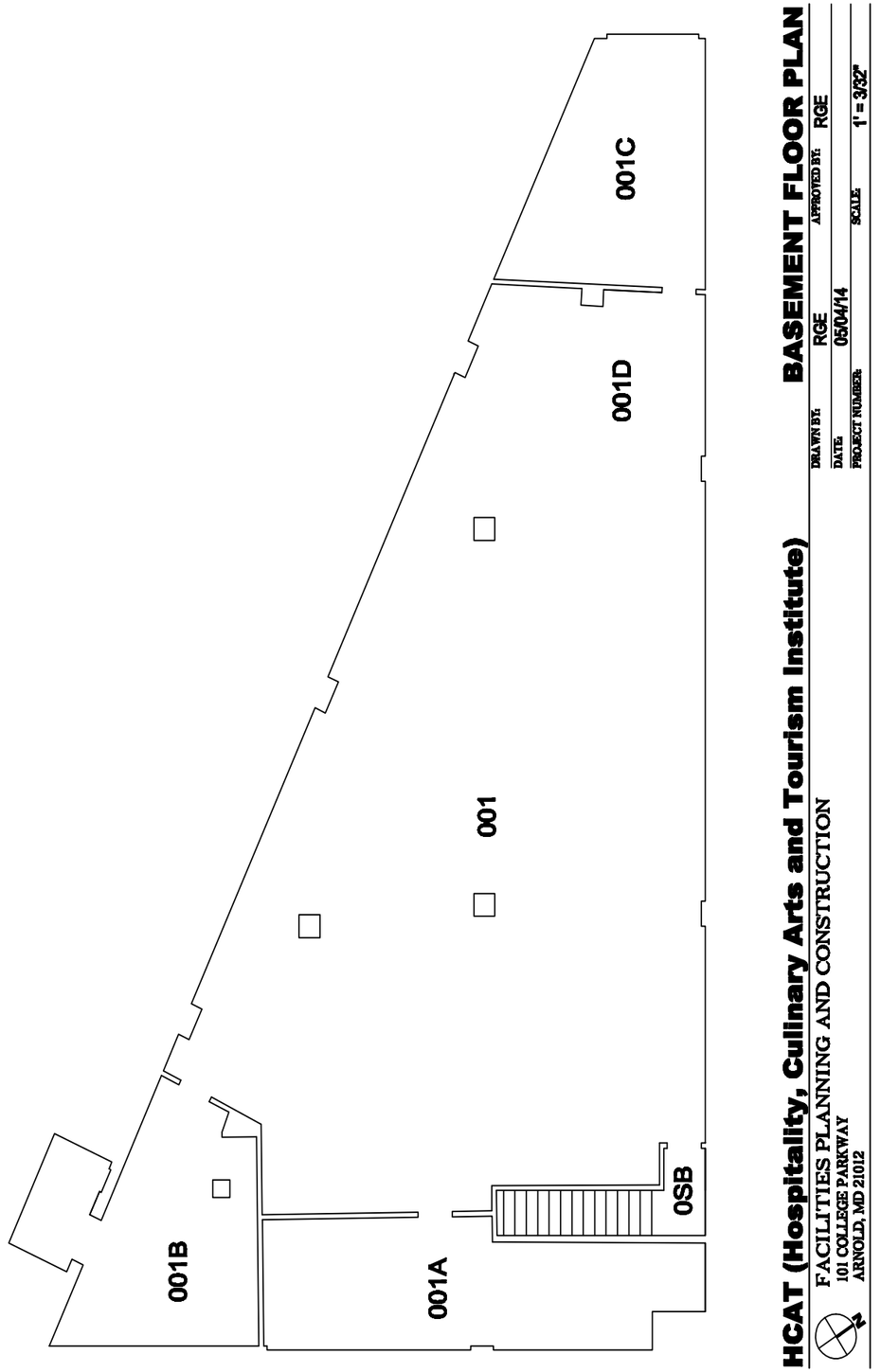
Building Use

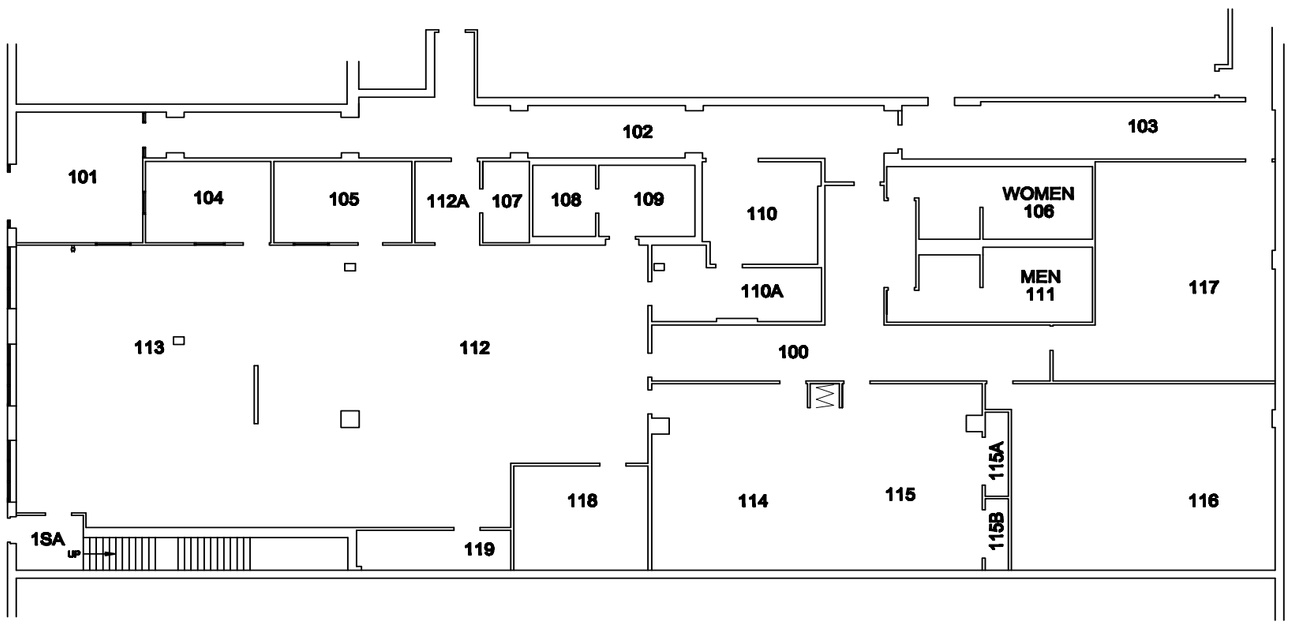
ACADEMICS

Building Summary

The HCAT Institution features a computer lab, a smart classroom, two cafe classrooms, and 6,335 square feet of instructional kitchens.

The building is in good overall condition. There have been no improvements required.

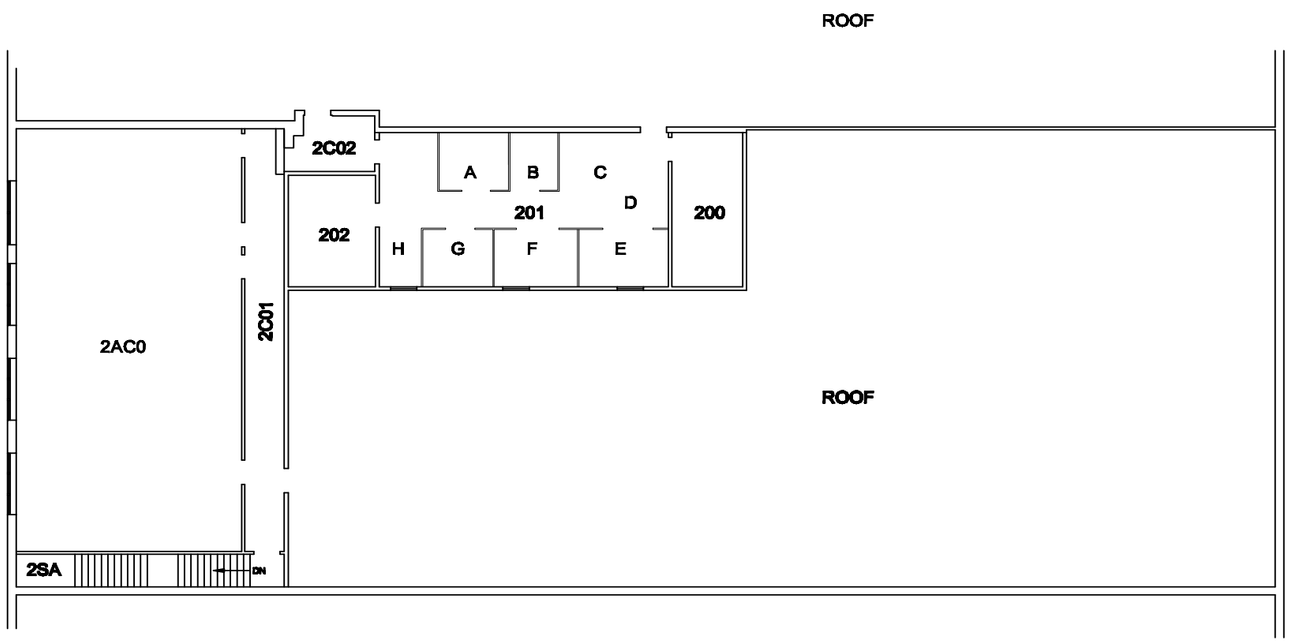




HCAT (Hospitality, Culinary Arts and Tourism Institute) **FIRST FLOOR PLAN**

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

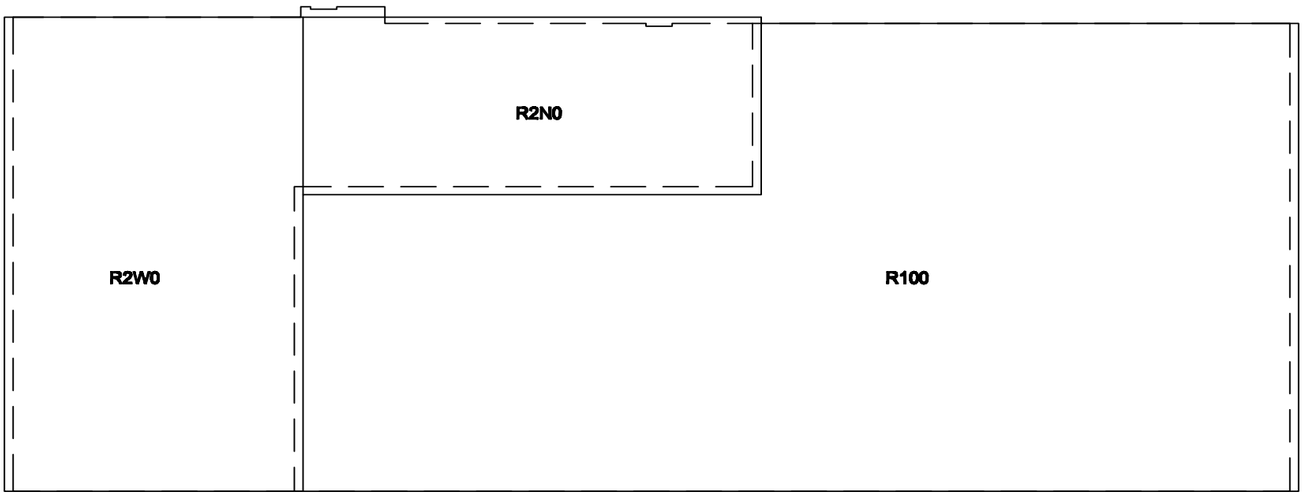
DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	05/04/14		
PROJECT NUMBER:		SCALE:	1' = 1/16"



HCAT (Hospitality, Culinary Arts and Tourism Institute) **SECOND FLOOR PLAN**

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	05/27/14		
PROJECT NUMBER:		SCALE:	1' = 1/16"



HCAT (Hospitality, Culinary Arts and Tourism Institute) **ROOF PLAN**

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	05/27/14		
PROJECT NUMBER:		SCALE:	1' = 1/16"

27. Glen Burnie Town Center (GBTC)

Fast Facts

Constructed
- 1982

Renovated
- 2000 - Renovation

Construction Type
- Steel frame with concrete-topped metal decks; Flat roof with thermoplastic polyolefin (TPO) roofing membrane

By The Numbers
- Net Assignable Square Feet: 33,395
- Gross Square Feet: 45,231
- Floors Above Grade: 5

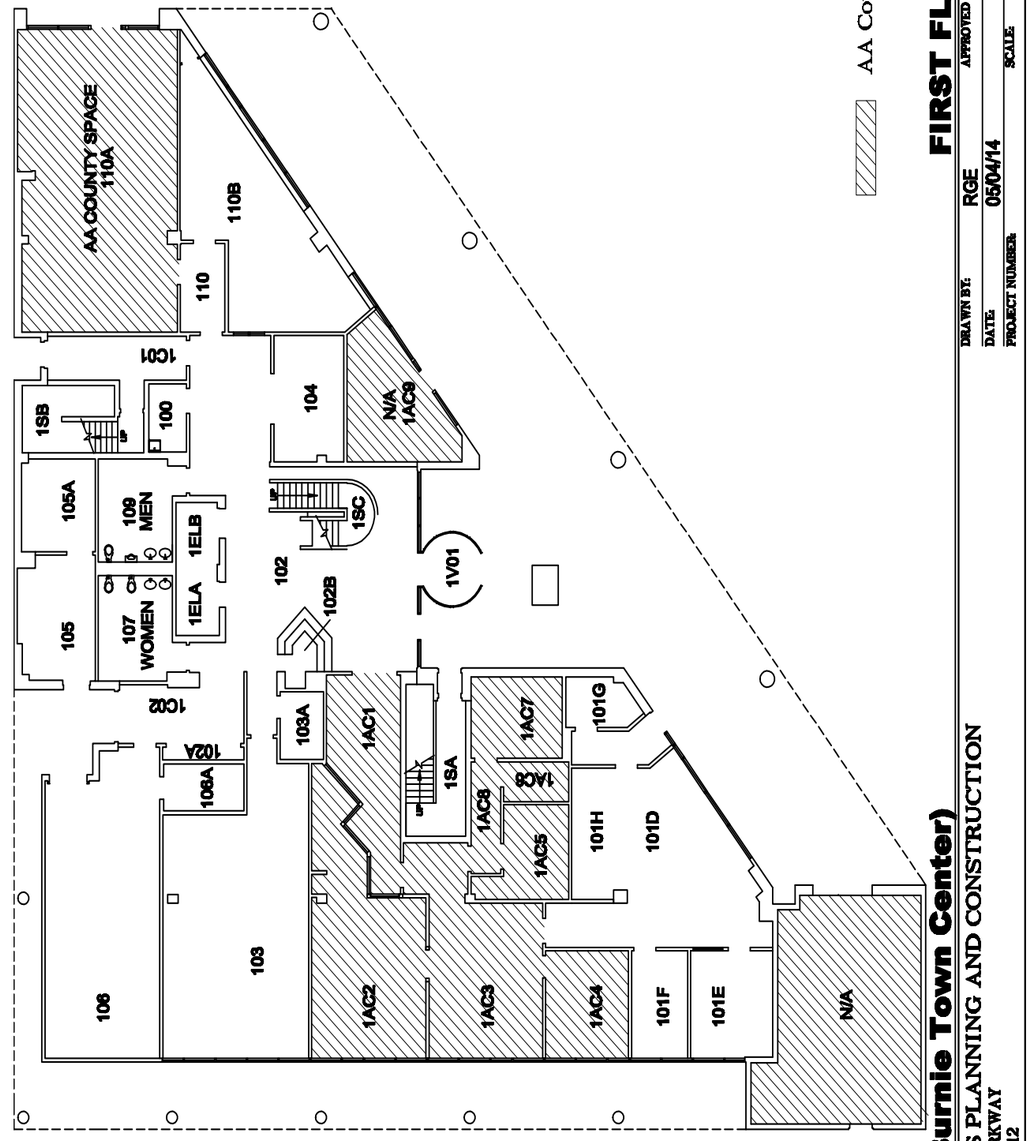
Utilities
- Sprinklers: None
- HVAC: Rooftop electric split system condensing units with high-capacity air handling units
- Electric: 1,200 amps, 277/480 volt three-phase four-wire alternating current; systems and meters owned and operated by BGE.

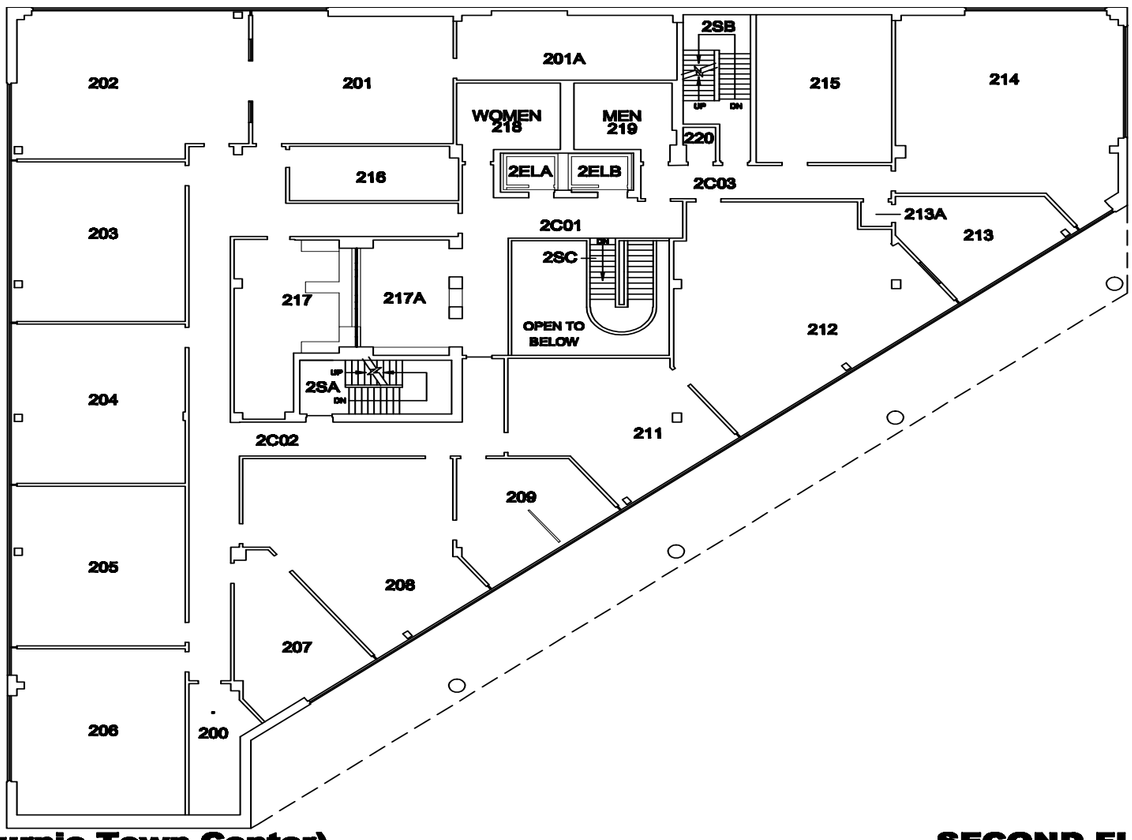
Departments
- Center for Workforce Solutions, Computer Labs, Classrooms, Student Services

Building Use
ACADEMICS

Building Summary
Arundel Center North at Glen Burnie Town Center (GBTC) offers general purpose classrooms, science and computer labs, seminar rooms, and student services. It is also home to the college's Center for Workforce Solutions contract training operations that offers area employers a way to get customized training for their businesses.

The building is in good overall condition. The building has had some improvements which include replacement of the ductless split system for the IT server room.



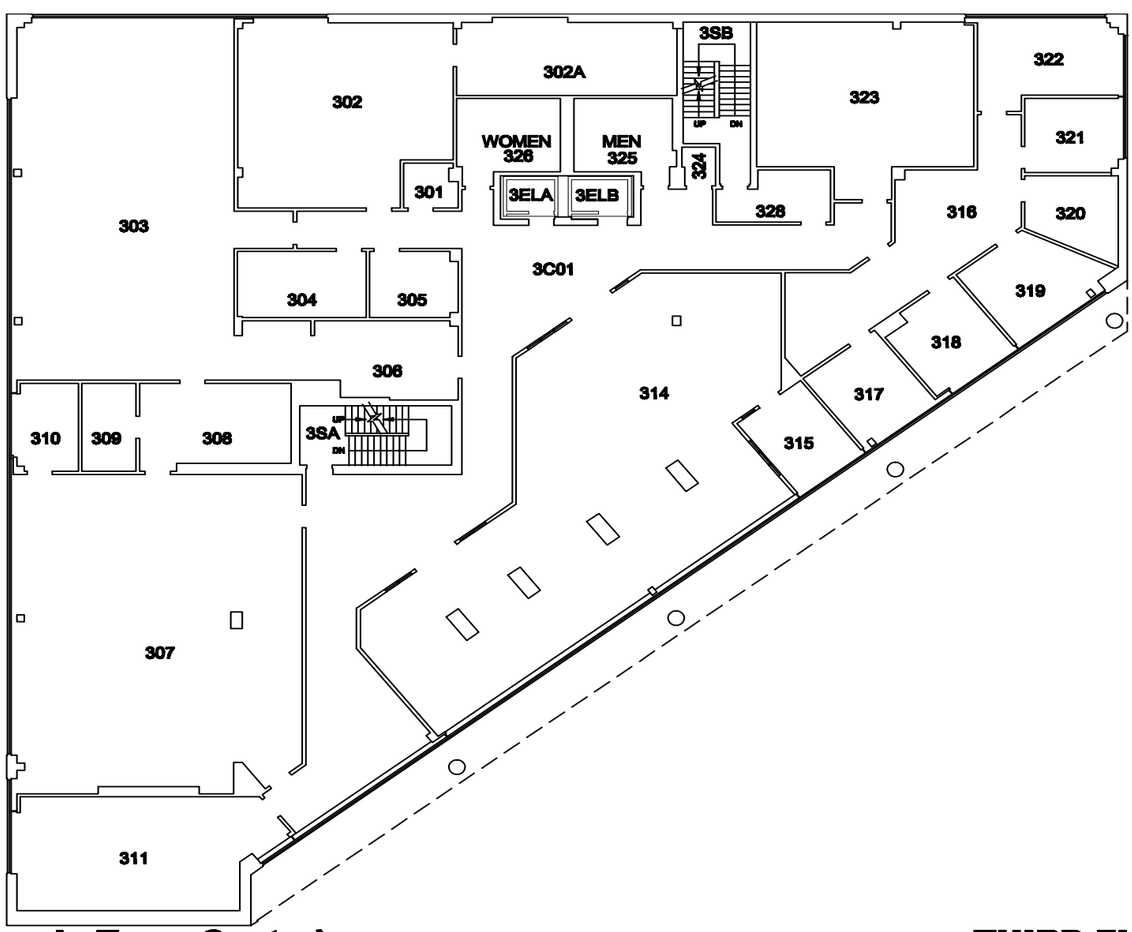


GBTC (Glen Burnie Town Center)

SECOND FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	05/04/14		
PROJECT NUMBER:		SCALE:	NTS

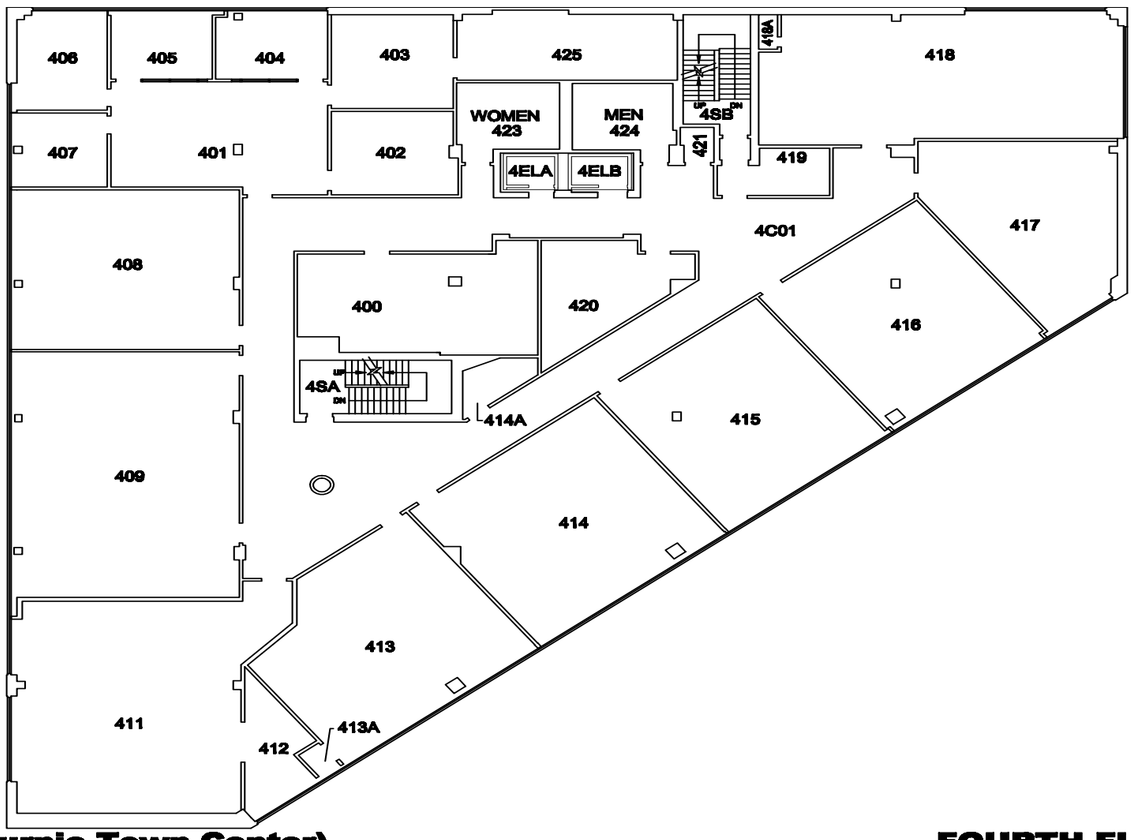


GBTC (Glen Burnie Town Center)

THIRD FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

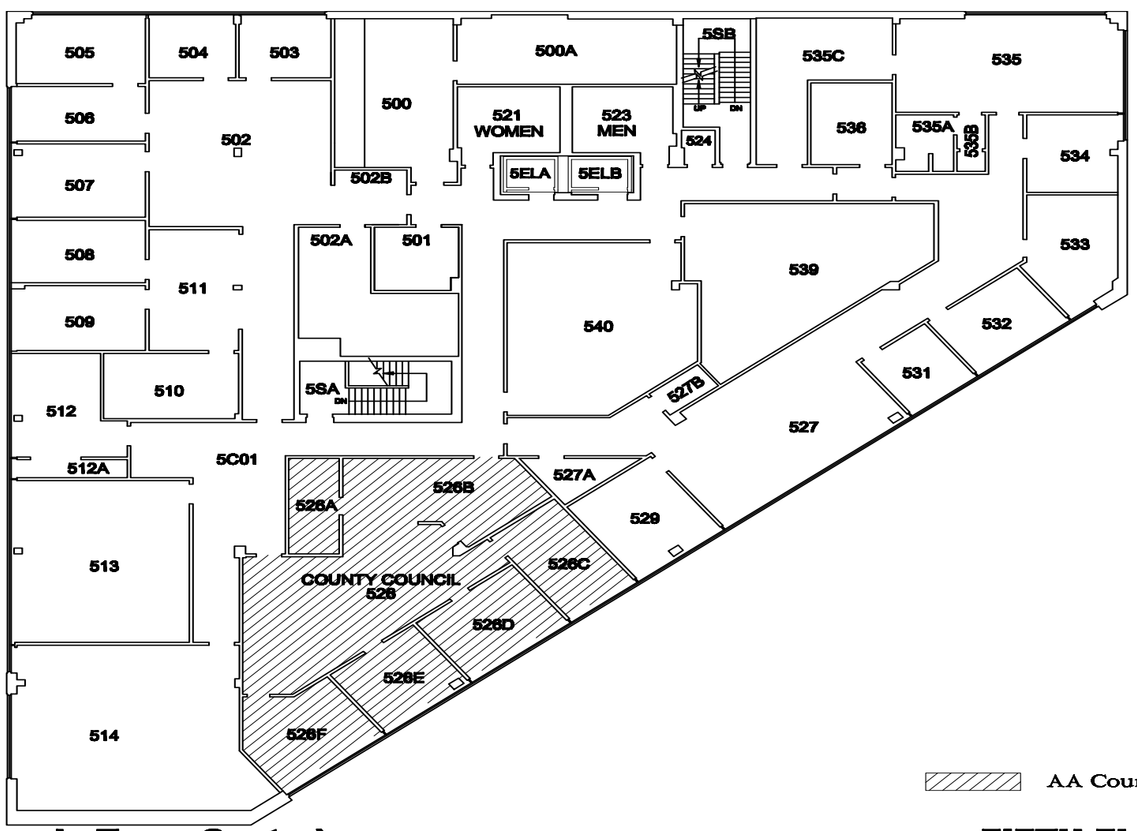
DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	05/04/14		
PROJECT NUMBER:		SCALE:	NTS



GBTC (Glen Burnie Town Center) — **FOURTH FLOOR PLAN**

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	05/03/14		
PROJECT NUMBER:		SCALE:	NTS



AA County Space

GBTC (Glen Burnie Town Center) — **FIFTH FLOOR PLAN**

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	05/03/14		
PROJECT NUMBER:		SCALE:	NTS

28. Arundel Mills (AMIL)

Fast Facts

Constructed
- 2003

Construction Type
- Steel frame with a concrete-topped metal deck construction; Flat roofs with built-up membrane; Concrete panels and exposed CMU exterior finish

By The Numbers
- Net Assignable Square Feet: 48,751
- Gross Square Feet: 72,248
- Floors Above Grade: 5

Utilities
- Sprinklers: Yes
- HVAC: Roof-mounted packaged air-conditioners, boilers, variable air volume (VAV) boxes, and air handlers
- Electric: 3,000 amps, 277/480 volt three-phase four-wire alternating current (AC)

Departments
- Classrooms, Seminar Rooms, Computer Labs, Science Labs, Lecture Hall

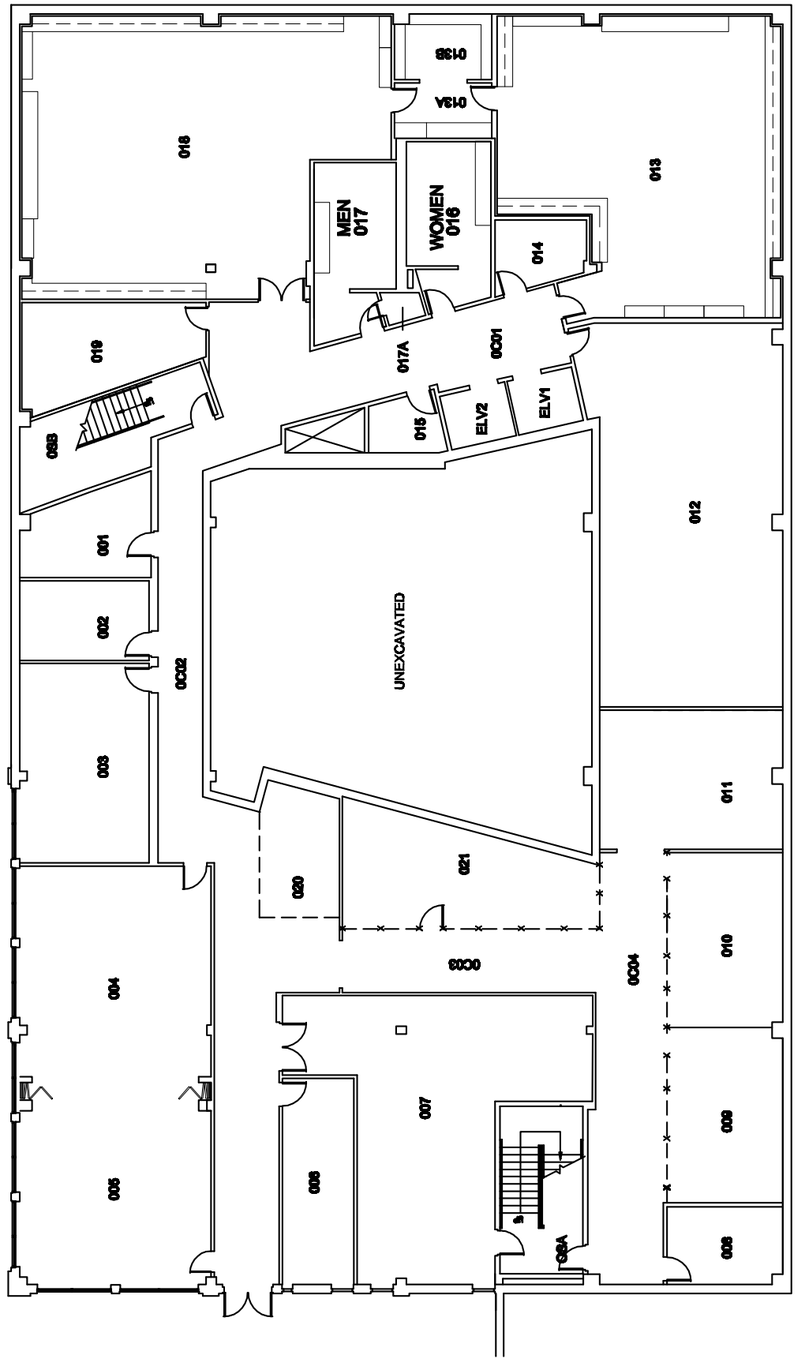
Building Use

ACADEMICS

Building Summary

This state-of-the-art building offers a full array of credit and noncredit programs on the Arundel Mills campus. The building features 25 general classrooms, seminar rooms, a 134-set lecture hall, and fully-outfitted computer and science labs.

The property has had no capital improvements over the past few years. It appears to be well maintained and is in good overall condition.

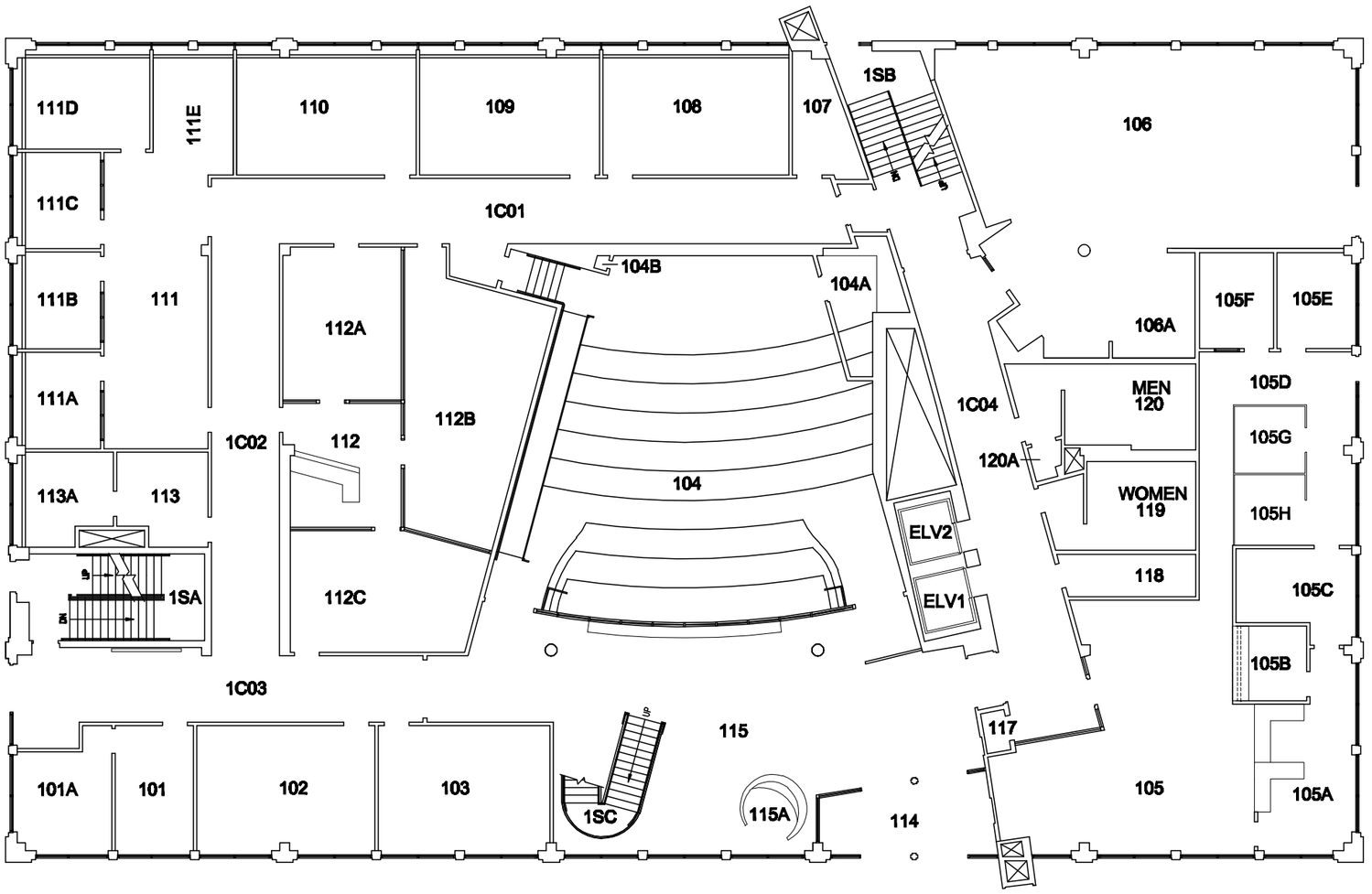


BASEMENT FLOOR PLAN

DRAWN BY: CH
APPROVED BY: INITIALS
DATE: 11/1/13
SCALE: NTS
PROJECT NUMBER:

AMIL (Arundel Mills)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

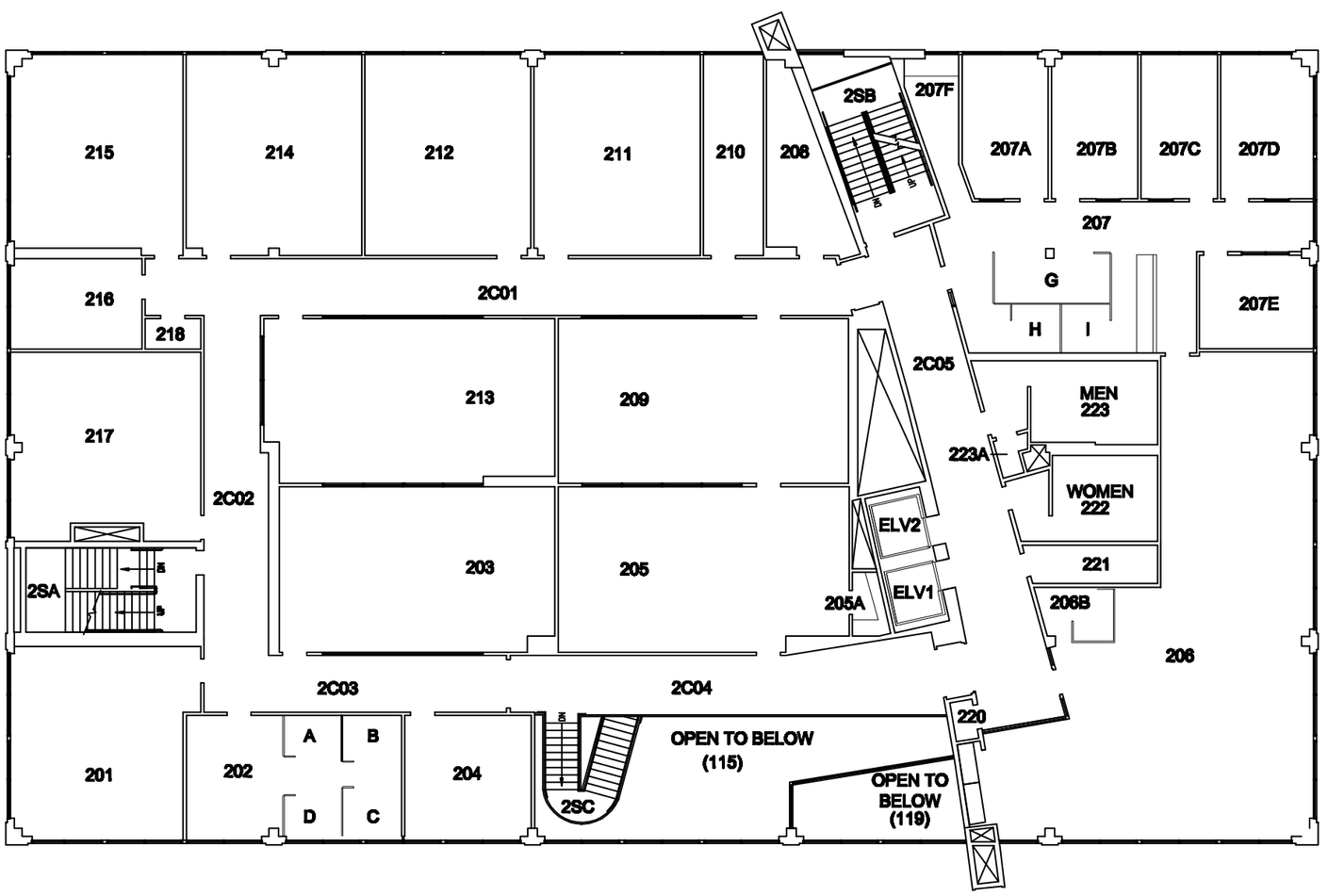


AMIL (Arundel Mills)

FIRST FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	11/1/14		
PROJECT NUMBER:		SCALE:	NTS

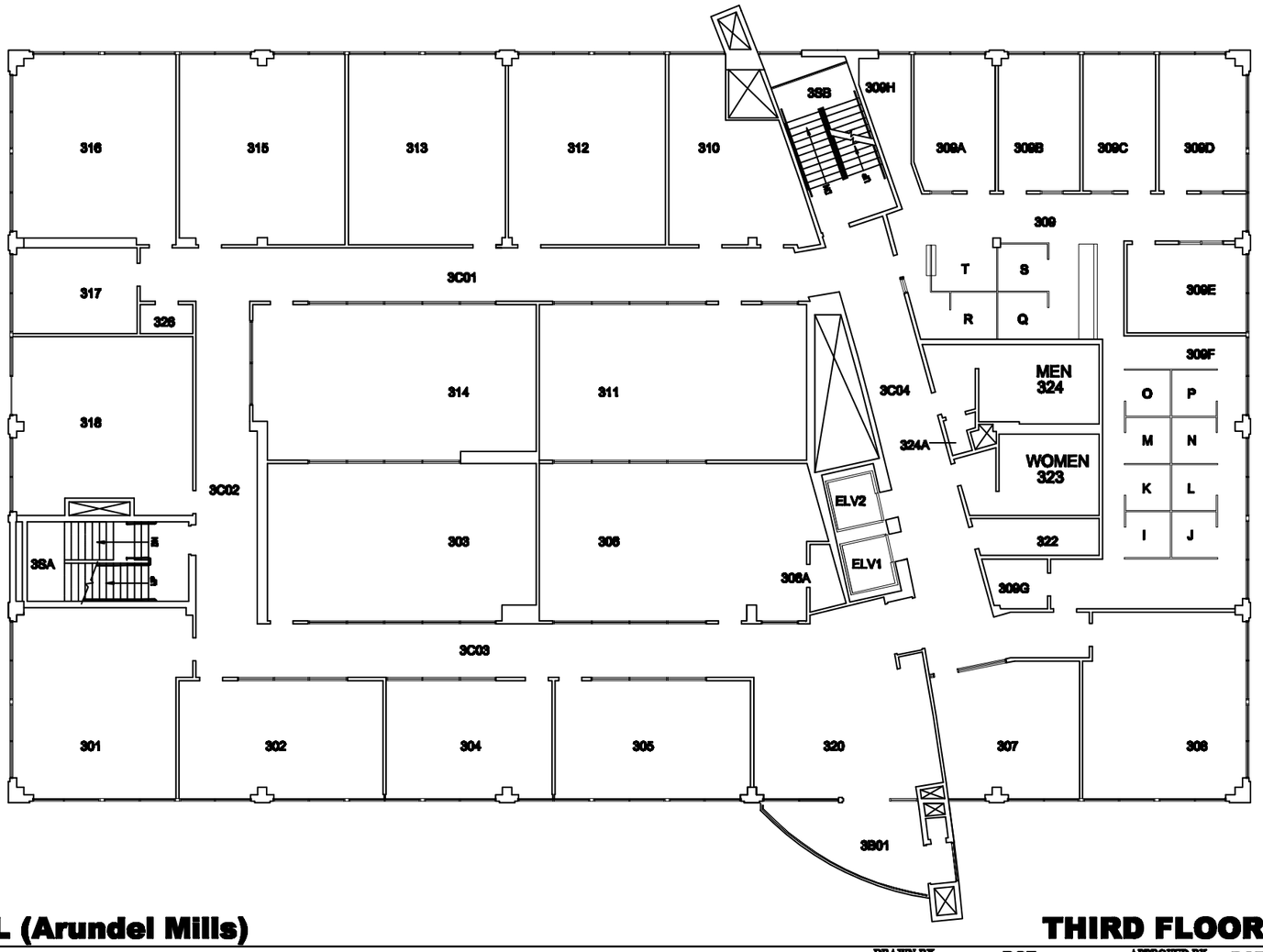


AMIL (Arundel Mills)

SECOND FLOOR PLAN

FACILITIES PLANNING AND CONSRTUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	11/1/14		
PROJECT NUMBER:		SCALE:	NTS

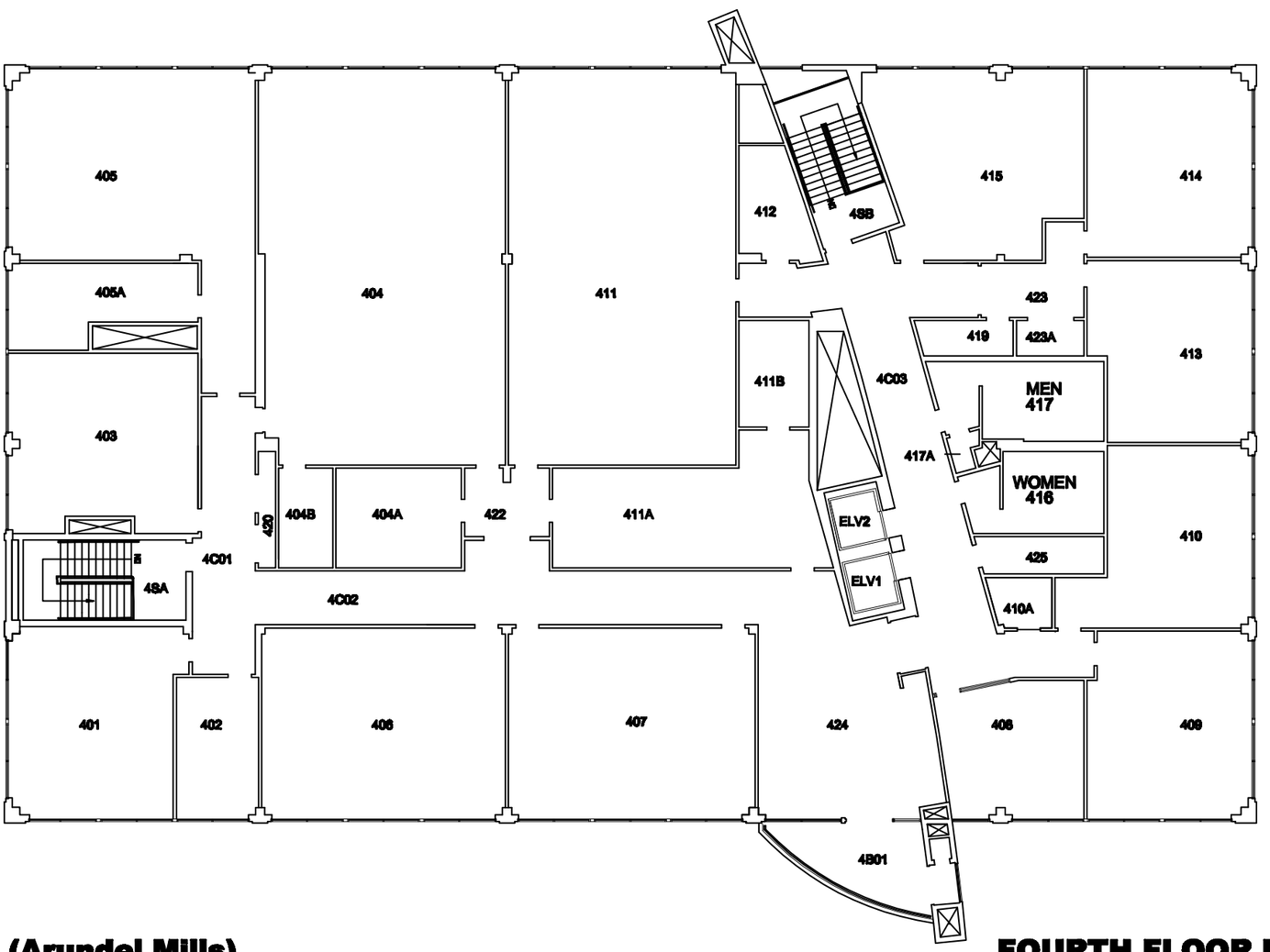


AMIL (Arundel Mills)

THIRD FLOOR PLAN

OFFICE OF CAPITAL DEVELOPMENT
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	RGE	APPROVED BY:	RGE
DATE:	11/1/14		
PROJECT NUMBER:		SCALE:	NTS



AMIL (Arundel Mills)

FOURTH FLOOR PLAN

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

DRAWN BY:	CH	APPROVED BY:	INITIALS
DATE:	11/1/13		
PROJECT NUMBER:		SCALE:	NTS

29. Annex A (ANXA)

Fast Facts

Constructed
- 2007

Construction Type
- Conventional wood frame structure on concrete slab; Flat roofs with EPDM membrane

By The Numbers
- Net Assignable Square Feet: 5,599
- Gross Square Feet: 7,550
- Floors Above Grade: 1

Utilities
- Sprinklers: None
- HVAC: Packaged rooftop units with DX cooling
- Electric: Fed from Physical Plant primary loop, feeds the Astronomy Building

Departments
- General Purpose Classrooms

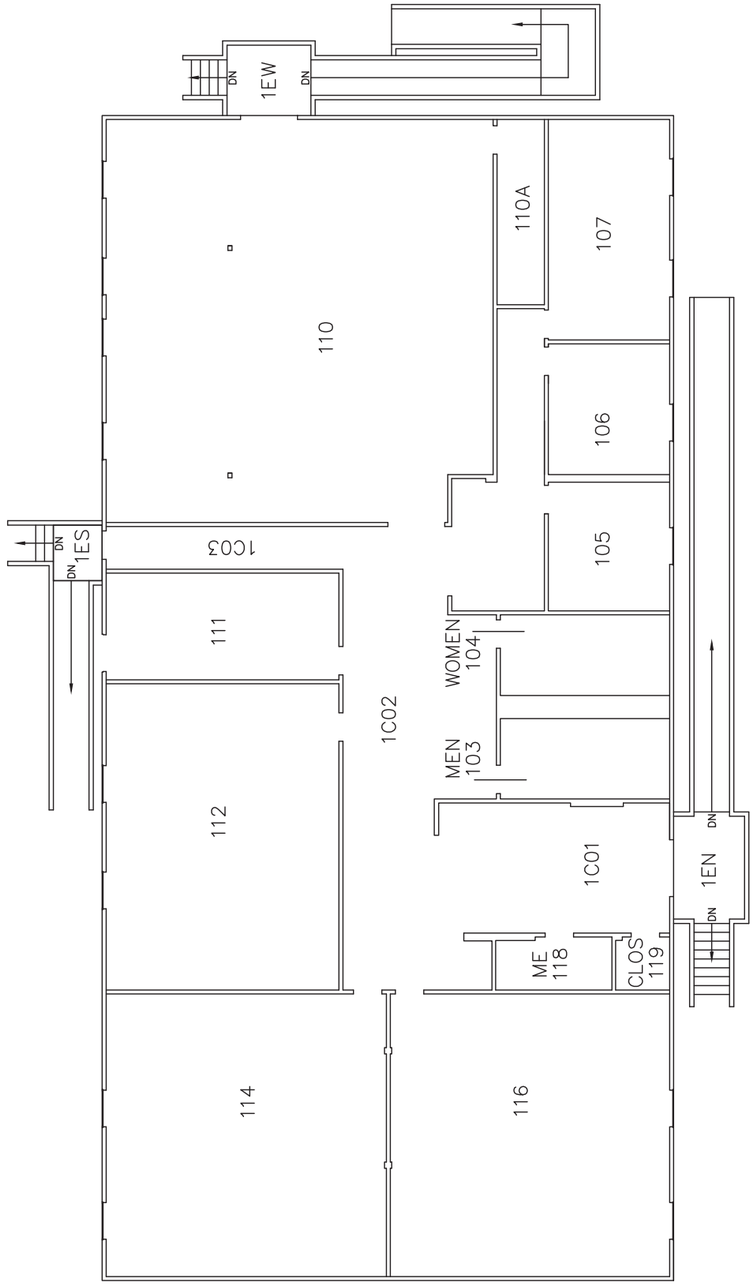
Building Use

ACADEMICS

Building Summary

Annex A is one of two classroom building assisting to the Resource Management Building. The annexes are used as surge space for many different campus programs. The buildings are in good condition and should serve for 10-15 years with routine maintenance.

It has been well maintained and is in fair condition. The property has had limited improvements including a roof seam replacement and a new ductless mini-split A/C.



FIRST FLOOR PLAN

DRAWN BY: RGE
APPROVED BY: RGE
DATE: 12/4/14
PROJECT NUMBER:
SCALE: NTS

ANX A (Annex A)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

N

30. Annex B (ANXB)

Fast Facts

Constructed
- 2008

Construction Type
- Conventional wood frame structure on footings; Flat roofs with EPDM membrane

By The Numbers
- Net Assignable Square Feet: 5,429
- Gross Square Feet: 7,160
- Floors Above Grade: 1

Utilities
- Sprinklers: None
- HVAC: Packaged rooftop units with DX cooling
- Electric: Fed from Physical Plant primary loop, feeds the Astronomy Building

Departments
- General Purpose Classrooms

Building Use
ACADEMICS

Building Summary
Annex B is one of two classroom buildings assisting to the Resource Management Building. The annexes are used as surge space for many different campus programs. The buildings are in good condition and should serve for 10-15 years with routine maintenance.

The building has been well maintained and is in fair condition. There have been some improvements over the past few years which consist of replacing the seams of the EPDM roofing.

FIRST FLOOR PLAN

DRAWN BY: RGE
APPROVED BY: RGE
DATE: 02/13/14
PROJECT NUMBER:
SCALE: 1" = 1/16"

ANX B (Annex B)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012
N

31. Athletic Restrooms (ATRM)

Fast Facts

Constructed
- 1986

Renovated
- 2014 - Renovation

Construction Type
- CMU exterior bearing walls that support a steel framed roof construction; Flat roofs with a single-ply membrane; Brick masonry exterior veneer accented with metal panels

By The Numbers
- Net Assignable Square Feet: 624
- Gross Square Feet: 624
- Floors Above Grade: 1

Utilities
- Sprinklers: None
- HVAC: The building is not heated or cooled. The bathrooms are ventilated by two mechanical exhaust fans.
- Electric: 100 amps, 120/208 volt three-phase four-wire alternating current (AC)

Departments
- N/A

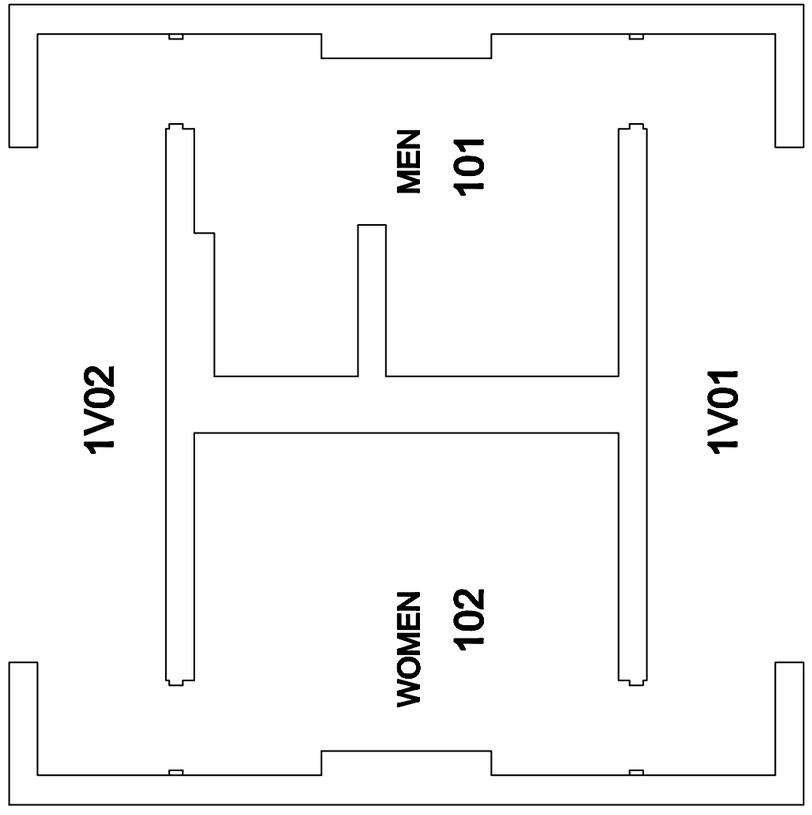
Building Use

ATHLETICS AND RECREATION

Building Summary

The athletic restrooms provide facilities that service the athletic fields located on the Arnold Campus. The restrooms are in generally good condition. The common areas were recently renovated in 2014.

Routine maintenance to interior fixtures, floor finishes, ceiling tiles, as well as fixtures and faucets shall occur on an annual basis. It is also recommended that a full ADA Compliance Survey be completed.



FIRST FLOOR PLAN

DRAWN BY: RGE
APPROVED BY: RGE
DATE: 05/03/11
SCALE: 1" = 3/16"
PROJECT NUMBER:

ATRM (Athletic Building Restroom)

FACILITIES PLANNING AND CONSTRUCTION
101 COLLEGE PARKWAY
ARNOLD, MD 21012

Appendix B
Detailed Space Programs

Anne Arundel Community College

10/22/2015 DRAFT

Anne Arundel Community College-Wide Space Summary

Assigned Square Footage

Arnold Main Campus Division/Department	Personnel (FT & PT) Existing Fall 2014	Personnel (FT & PT) Projected Fall 2025	NASF Existing Fall 2014	NASF Projected Fall 2025	NASF Projected Variance	Comments
Business & Law	106	116	11,335	21,920	(10,585)	
Learner Support Services	196	224	71,036	77,125	(6,089)	
Learning	41	44	140,124	130,398	9,726	Instructional space redistributed in new construction.
Learning Resources Management	196	204	96,899	99,164	(2,265)	
President of the College	23	24	7,586	7,586	0	
Shared Conference Rooms (College-wide)	0	0	1,589	4,937	(3,348)	Additional conference rooms to be created around campus.
Science & Technology	147	167	54,128	92,113	(37,985)	
Liberal Arts	373	409	64,453	67,006	(2,553)	
Continuing Education & Workforce Development	81	89	24,866	31,261	(6,395)	
Health Sciences	246	285	44,701	78,741	(34,040)	
	1,409	**1,562**	**516,717**	**610,251**	**(93,534)**	

Arundel Mills & CCPT Division/Department	Personnel (FT & PT) Existing Fall 2014	Personnel (FT & PT) Projected Fall 2025	NASF Existing Fall 2014	NASF Projected Fall 2025	NASF Projected Variance	Comments
Learner Support Services	0	0	5,765	6,561	(796)	
Learning	0	0	28,472	26,325	2,147	
Learning Resources Management	0	0	6,130	6,379	(249)	
Liberal Arts	72	82	0	0	0	
Business and Law	20	22	0	0	0	
Science & Technology	17	19	8,278	9,380	(1,102)	
Continuing Education & Workforce Development	7	8	19,859	19,859	0	
Health Sciences	24	28	1,545	1,545	0	
	140	**159**	**70,049**	**70,049**	**0**	

Glen Burnie & HCAT Division/Department	Personnel (FT & PT) Existing Fall 2014	Personnel (FT & PT) Projected Fall 2025	NASF Existing Fall 2014	NASF Projected Fall 2025	NASF Projected Variance	Comments
Learner Support Services	0	0	3,695	3,695	0	
Learning	0	0	20,302	20,302	0	
Learning Resources Management	0	0	2,429	2,429	0	
Business	3	3	0	0	0	
Health and Human Services	1	1	0	0	0	
Liberal Arts	24	26	0	0	0	
Science & Technology	9	10	136	136	0	
Continuing Education & Workforce Development	3	1	13,123	13,123	0	Offices on fourth floor repurposed to Dental Assisting Lab.
	40	**41**	**39,685**	**39,685**	**0**	

SSTC Division/Department	Personnel (FT & PT) Existing Fall 2014	Personnel (FT & PT) Projected Fall 2025	NASF Existing Fall 2014	NASF Projected Fall 2025	NASF Projected Variance	Comments
Continuing Education & Workforce Development	8	8	3,026	3,026	0	
	8	**8**	**3,026**	**3,026**	**0**	
		Total NASF	**629,477**	**723,011**	**(93,534)**	**Additional NSF Needed**

Proposed Demolition - Arnold Campus	NASF Existing Fall 2014
Pool	9,934
Schwartz	8,525
Johnson	8,027
	26,486

	Post-Demo NASF	Projected Fall 2025 NASF	Projected Variance	
Adjusted NASF	**602,991**	**723,011**	**120,020**	**Additional NSF Needed**

10/22/2015 DRAFT

Anne Arundel Community College

Arnold Main Campus - Business & Law

Assigned Square Footage

Personnel	Existing Fall 2014	Projected Fall 2025	NASF Existing Unit Capacity	NASF Projected Unit Capacity	NASF Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Offices								
Dean	1	1	*144 sf*	1+4	1	200 sf	200 sf	CRSC*232A
Administrative Staff Workstations	2	2		1	2	60 sf	120 sf	
Faculty	29	32	*5,558 sf*	2	18	160 sf	2,880 sf	CRSC*309, CRSC*313, CRSC*326, CRSC*345, CRSC*347, CRSC*349, CRSC*311, CRSC*318, CRSC*319, CRSC*326B, CRSC*326C, CRSC*326D, CRSC*326E, CRSC*326F, CRSC*326G, CRSC*326H, CRSC*326, CRSC*326J, CRSC*335, CRSC*343, CRSC*315, CRSC*317, CRSC*321, CRSC*337, CRSC*341, CRSC*329, CALT*224, CALT*208A, CALT*210, CALT*246, CALT*252, CALT*254, CRSC*305, CRSC*307, CRSC*339, CRSC*192, CRSC*232, CRSC* 232C, CALT*208B (List includes office support space)
Adjunct Faculty	62	68		8	6	160 sf	960 sf	Bullpen type office; no assigned workstations. Provide a computer and phone at each workstation; lockable storage for adjunct faculty belongings and course related materials.
Professional	9	10		1	10	120 sf	1,200 sf	3 Instructional Specialists; 1 Instructional Coord.; 1 Program Coord.
Support Staff Workstations	3	3		1	3	80 sf	240 sf	
Total Personnel and Associated Space	**106**	**116**	**5,702 sf**				**5,600 sf**	

Number of Spaces	Existing Fall 2014	Projected Fall 2025	Existing Unit Capacity	Projected Unit Capacity	NASF Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Academic Support Space								
Department Storage	0	1	*0 sf*	1	1 sf	100 sf	100 sf	
Administrative Workroom	1	1	*157 sf*	1	1	157 sf	157 sf	CALT*208B
Reception Area	0	1	*0 sf*	2+4	1	140 sf	140 sf	
Kitchenette	0	1	*0 sf*	N/A	1	50 sf	50 sf	
Conference Room	0	1	*0 sf*	12	1	270 sf	270 sf	
Conference Room	0	1	*0 sf*	24	1	530 sf	530 sf	
Business Departments & Entrepreneurial Studies Institute					3	80 sf	240 sf	Used for student study rooms, business interviews, and Volunteer Income Tax
Small Study Rooms/VITA Rooms	0	3	*0 sf*	4	8	60 sf	480 sf	Dean indicated additional space is needed but area of existing Incubator and
Business Incubator/Business Resource Area	0	1	*0 sf*	1				
Shared Amenities					1	280 sf	280 sf	
Faculty Staff Lounge	0	1	*0 sf*	N/A	1	300 sf	300 sf	
Student Lounge/Vending	0	1	*0 sf*	N/A				
Total Academic Support Space	**1**	**12**	**157 sf**				**2,547 sf**	

Arnold Main Campus - Business & Law

Assigned Square Footage

Laboratory Space	Number of Spaces: Existing Fall 2014	Number of Spaces: Projected Fall 2025	NASF: Existing Fall 2014	NASF: Projected Unit Capacity	NASF: Proj Unit	NASF: NASF/ Unit	NASF: Projected Fall 2025	Comments
Homeland Security								
Computer - Tech Enabled	1	1	*928 sf*	16			928 sf	CALT*208
Computer Security Lab	1	1	*253 sf*	N/A			253 sf	
Legal Studies								
Mock Trial Courtroom	0	1	*0 sf*	N/A	1	1,600 sf	1,600 sf	Multipurpose space: mock trial room, classroom, meeting room, etc. Dean indicates room is a potential revenue generator; also used by Homeland Security and CJ programs.
Mock Trial Courtroom Storage	0	1	*0 sf*	N/A	1	80 sf	80 sf	
Interview Rooms/Study Rooms	0	2	*0 sf*	4	2	80 sf	160 sf	
Mock Lock-up Facility	0	1	*0 sf*	N/A	1	240 sf	240 sf	Requested by Dean for Legal Studies, Homeland Security, CJ and for potential use by Police Academy. Consists of one holding room and exterior office area.
Homeland Security and Criminal Justice								
Emergency Operations Simulation Room	0	1	*0 sf*	N/A	1	600 sf	600 sf	
Security/Surveillance Lab	0	1	*0 sf*	16	1	640 sf	640 sf	
Building/TSA Security Training Lab	0	1	*0 sf*	16	1	640 sf	640 sf	
Police Tactics Simulation Room	0	1	*0 sf*	N/A	1	800 sf	800 sf	
Forensic Science/Forensic Studies Lab	0	1	*0 sf*	24	1	1,400 sf	1,400 sf	
National Incident Managmenet System (NIMS)/Incident Command System (ICS) Computer Lab	0	1	*0 sf*	24	1	960 sf	960 sf	
Defensive Tactics Training Lab	0	1	*0 sf*	N/A	1	600 sf	600 sf	
Police Academy/Forensic Science Storage	0	1	*0 sf*	N/A	1	140 sf	140 sf	
Fire Management Program Simulators								Assume this would be outdoor space.
Laboratory Space Subtotal	**2**	**15**	**1,181 sf**				**9,041 sf**	

Summary	Existing Fall 2014	Projected Unit Capacity			Projected Fall 2025	Comments
Academic Support Space	*5,859 sf*	N/A			8,147 sf	
Dedicated Classrooms/Classroom Service						
Business & Law Classrooms	*2,199 sf*	N/A	3	730 sf	2,190 sf	Accounting: CRSC*245, 247, 251
Legal Studies Institute Classrooms	*1,253 sf*	N/A	3	500 sf	1,500 sf	Legal Studies: CRSC*255, 258
Stack						
Legal Studies Institute - Law Library	*701 sf*	N/A	1	900 sf	900 sf	CRSC*250
Central Storage						
Business Administration	*142 sf*	N/A			142 sf	Shop/Storage BARN*001D
Laboratory Space	*1,181 sf*	N/A			9,041 sf	
Summary Business Law Space	**11,335 sf**				**21,920 sf**	

Arnold Main Campus - Learner Support Services

Assigned Square Footage

Personnel	Personnel: Existing Fall 2014	Personnel: Projected Fall 2025	NASF: Exist Unit	NASF: Existing Fall 2014	NASF: Proj Unit	NASF: NASF/ Unit	NASF: Projected Fall 2025	Comments
Admissions & Enrollment Development	7	8						7 FT
Administrative Office			11	*1,174 sf*			1,174 sf	SSVC: 102A, 102B, 103, 104, 105, 106, 107, 108, 109, 110, 111A (avg size 108 SF); plus Office Service: Rm 100 (701 SF) and 111 (248 SF)
Application Services	13	15						Part of Information Services; 13 found when cross-referenced with directory
Administrative Office			1	*410 sf*			410 sf	CRSC*252D
Staff Office			23	*2,429 sf*			2,429 sf	CRSC: 252C, F-N, Q, T-Y and 259C; HUM*008#, HUM*008B, HUM*008C (average size 106 SF)
Assistant Dean/Child Development Center	7	8						7 FT listed for whole Child Dev Center
Administrative Office			2	*141 sf*	4	120 sf	480 sf	MATH 122 and 125, plus a closet (proposed: 2 admin per office)
Assistant Dean/Office	2	2						2 found when cross-referenced with directory
Administrative Office			1	*211 sf*			211 sf	SUN*203
Staff Office			1	*137 sf*			137 sf	SUN*224, plus a closet
Assistant Dean/Student Achievement & Success Program	4	5						4 FT
Staff Office			5	*786 sf*			786 sf	LIBR*122, 125, 127, 129, 129A (avg 157 SF)
Assistant Dean/Tutoring								Part of Student Services
Administrative Office			1	*419 sf*			419 sf	LIBR*111
Staff Office			1	*178 sf*			178 sf	LIBR*113
Athletics	5	6						5 FT
Faculty Office			5	*868 sf*			868 sf	GYM*113, 116, 117, 118, 203A (smallest 106 SF, largest 209 SF)
Office			1	*128 sf*			128 sf	GYM*148A, plus a closet
Counseling, Advising, & Retention Services	33	38						23 FT; 10 PT
Administrative Office			25	*2,647 sf*			2,647 sf	SSVC*200-15; SSVC*222A-C; SSVC*224A-D; SSVC*225-226.
Customer Support Services	23	26						23 FT; 10 PT
Faculty Office			3	*383 sf*			383 sf	CRSC*112 A,B,C
Staff Office			16	*1,572 sf*			1,572 sf	CRSC*110, 110A-N, FLRS*315. One is 275 SF. FLRS is 326 SF. The rest are between 54 SF and 81 SF.
Office			2	*816 sf*			816 sf	HUM*009, HUM*009A. 009 is 626 SF.
Dean/ Student Services	6	7						5 FT; 1 PT
Administrative Office (private)								Private offices.
Administrative Office (shared)			2	*515 sf*			515 sf	
Enrollment Services	3	3						3 FT
Administrative Office			1	*284 sf*			284 sf	SUN*201.
Office			1	*139 sf*			139 sf	SUN*119.
Financial Aid Office	13	15						13 FT
Administrative Office			7	*870 sf*			870 sf	SSVC*161-167.
Staff Office			6	*311 sf*			311 sf	SSVC*160B-G

Arnold Main Campus - Learner Support Services

Assigned Square Footage

Health Services	1	1						1 FT
Existing Administrative Office			2	*241 sf*			241 sf	SUN*120 and 123 - 120 is 161 SF
Existing Staff Office			1	*130 sf*			130 sf	SUN*125 plus a closet
Administrative Office								Two private offices (FT nurse, visiting healthcare providers)
Staff Office								2 staff share office
Information Services	5	6						5 FT
Department Head Office			1	*192 sf*			192 sf	CRSC*252E
Staff Office			4	*985 sf*			985 sf	CALT*235, 114, 252O, 252P. 114 is 655 sf, the others around 100 sf
Office			1	*132 sf*			132 sf	CRSC*234
Instructional Support	17	19						16 FT; 1 PT
Staff Office			1	*129 sf*			129 sf	CRSC*252A
LSS	2	2						2 FT
Administrative Office			1	*189 sf*			189 sf	SUN*221.
Staff Office			3	*1,261 sf*			1,261 sf	LIBR*100 LIBR*112A SUN*216
Network Services	12	14						12 FT
Staff Office			14	*1,986 sf*			1,986 sf	CRSC*200A CRSC*204 CRSC*204A CRSC*204B CRSC*204C CRSC*204D CRSC*204E CRSC*204F CRSC*204G CRSC*204H CRSC*204I CRSC*204J CRSC*204K CRSC*236A. 200A and 204 are over 300 SF.
Planning & Operations	1	1						Part of Information Services; 1 found when cross-referenced with directory
Faculty Office			1	*90 sf*			90 sf	CRSC*112D
Staff Office			1	*140 sf*			140 sf	CRSC*252B
Planning, Research & Institutional Assesment (PRIA)	6	7						6 FT
Staff Office			8	*1,371 sf*			1,371 sf	CRSC*220 CRSC*220A CRSC*220B CRSC*220C CRSC*220D CRSC*220E CRSC*220F CRSC*220G. 220 is 421 SF.
Records & Registration	21	24						19 FT; 2 PT
Administrative Offices (private)			20	*1,533 sf*			1,533 sf	SSVC*140B SSVC*140C SSVC*140D SSVC*140E SSVC*140F SSVC*140G SSVC*140H SSVC*140I SSVC*140J SSVC*140K SSVC*140L SSVC*140M SSVC*141 SSVC*142 SSVC*143 SSVC*144 SSVC*145 SSVC*146 SSVC*147 SSVC*148
Administrative Offices (workstations)							0 sf	
Staff Office			2	*119 sf*			119 sf	SSVC*150B, SSVC*150C.
Student Conduct & Special Projects								Part of Student Services
Administrative Office (private)			1	*143 sf*			143 sf	SUN*252.
Administrative Office (workstations)								

Arnold Main Campus - Learner Support Services

Assigned Square Footage

Student Engagement	3	3						Part of Student Services; 3 found when cross-referenced with directory
Administrative Office			7	*1,059 sf*			1,059 sf	SUN*202 SUN*205 SUN*206 SUN*206A SUN*207 SUN*208 SUN*209.
Staff Office			1	*108 sf*			108 sf	SUN*208A.
Office			1	*236 sf*			236 sf	SUN*210. Student Clubs.
Student Information Services	8	9						
Administrative Office			1	*205 sf*			205 sf	SSVC*155
Faculty Office			1	*139 sf*			139 sf	CRSC*121
Staff Office			1	*107 sf*			107 sf	SSVC*150A
Office			12	*841 sf*			841 sf	CRSC*129 CRSC*129A CRSC*129B CRSC*129C CRSC*129D CRSC*129E CRSC*129F CRSC*129G CRSC*129H CRSC*129I CRSC*129K CRSC*129L
Technology Learning Center								Part of Student Services
Staff Office			2	*227 sf*			227 sf	LIBR*124, LIBR*126
Testing & Assessment Services	4	5						Part of Student Services
Administrative Office			4	*783 sf*			783 sf	SUN*240, 253, 254 - 3 occupants in 240 when cross-referenced with directory.
Staff Office			2	*193 sf*			193 sf	SUN*244, 245 - 1 occupant found when cross-referenced with directory.
Total Personnel and Associated Space	**196**	**224**		**26,957 sf**			**27,296 sf**	

	Number of Spaces		NASF				
Academic Support Space	**Existing Fall 2014**	**Projected Fall 2025**	**Existing Fall 2014**	**Proj Unit**	**NASF/ Unit**	**Projected Fall 2025**	**Comments**
Admissions & Enrollment Development Office Service	2	2	*949 sf*	2		949 sf	
Assistant Dean/Child Development Center Office Service	1	1	*6 sf*	1		6 sf	
Assistant Dean/Office Office Service	1	1	*18 sf*	1		18 sf	
Athletics Office Service	1	1	*9 sf*	1		9 sf	
Counseling, Advising, & Retention Services Office Service	3	3	*630 sf*	5		630 sf	
Customer Support Services Office Service	3	3	*494 sf*	3		494 sf	
Dean/ Student Services Office Service	2	2	*29 sf*	2		29 sf	
Financial Aid Office Service	1	1	*95 sf*	3		95 sf	
Health Services Office Service	1	1	*25 sf*	1		25 sf	
Information Services Office Service	4	4	*558 sf*	4		558 sf	
Information Services Conference	1	1	*304 sf*	1		304 sf	
LSS Office Service	5	5	*1,143 sf*	5		1,143 sf	
LSS Conference	2	2	*205 sf*	2		205 sf	
PRIA Office Service	2	2	*294 sf*	2		294 sf	
Records & Registration Office Service	1	1	*250 sf*	1		250 sf	
Student Information Services Office Service	1	1	*80 sf*	1		80 sf	
Testing & Assessment Services Office Service	2	2	*116 sf*	1		116 sf	
Total Academic Support Space	**33**	**33**	**5,205 sf**			**5,205 sf**	

Arnold Main Campus - Learner Support Services

Assigned Square Footage

Laboratory Space	Number of Spaces Existing Fall 2014	Number of Spaces Projected Fall 2025	NASF Existing Fall 2014	NASF Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Assistant Dean/Technology Learning Center							
Open Lab	1	1	*1,465 sf*			1,465 sf	
Enrollment Services							
Activities Studio	1	1	*722 sf*			722 sf	
LSS							
Open Lab Service	2	2	*126 sf*			126 sf	
Technology Learning Center							
Open Lab	6	6	*5,245 sf*			5,245 sf	
Testing & Assessment Services							
Open Lab	4	4	*1,807 sf*			1,807 sf	
Open Lab Service	1	1	*44 sf*			44 sf	
Total Laboratory Space	**15**	**15**	**9,409 sf**			**9,409 sf**	

Summary	Existing Fall 2014	Projected Fall 2025	Existing Fall 2014	Proj Unit	NASF/ Unit	Projected Fall 2025	Comments
Academic Support Space			*32,162 sf*			32,501 sf	
Dedicated Classrooms/Classroom Service							
Information Services			*407 sf*			407 sf	Classroom Seminar HUM*117
LSS			*976 sf*			976 sf	FLRS*300, Lecture SUN*204
LSS Service			*12 sf*			12 sf	GYM*102A
Athletic or Physical Education (520, 525)							
Athletics			*7,611 sf*			7,611 sf	Swimming Pool POOL*003 - Pool will be demolished
Athletics Service			*11,237 sf*			11,237 sf	12 rooms in the Pool building will be demolished
New Athletics Multipurpose Room				1	1,450 sf	1,450 sf	Part of new gym entry addition
New Weight Room				1	1,450 sf	1,450 sf	Part of new gym entry addition
New Storage Room				2	175 sf	350 sf	Part of new gym entry addition
Media Production (530, 535)							
Application Services			*89 sf*			89 sf	Media Production HUM*009B
Application Services			*600 sf*			600 sf	Media Production HUM*011
Application Services Service			*240 sf*			240 sf	Media Service HUM*008A
LSS Service			*75 sf*			75 sf	Media Service CADE*202
LSS Service			*85 sf*			85 sf	Media Service CADE*206A

Arnold Main Campus - Learner Support Services

Assigned Square Footage

Day Care (640, 645)							
Assistant Dean/Child Development Center	1	1	*524 sf*			524 sf	Day Care MATH*131
Assistant Dean/Child Development Center	1	1	*629 sf*			629 sf	Day Care MATH*135
Assistant Dean/Child Development Center	1	1	*518 sf*			518 sf	Day Care MATH*139
Assistant Dean/Child Development Center	1	1	*356 sf*			356 sf	Day Care Service: MATH*123, 131A,133A, 133B, 133C, 137A, 137B,137C, 139A
Day Care Rooms	0	3	*0 sf*	3	640 sf	1,920 sf	
Activity Space	0	1	*0 sf*	1	220 sf	220 sf	
Curriculum Planning Room	0	1	*0 sf*	1	140 sf	140 sf	
Staff Break Room	0	1	*0 sf*	1	120 sf	120 sf	
Storage	0	1	*0 sf*	1	100 sf	100 sf	
Meeting Room (685)							
LSS Service			*94 sf*			94 sf	Meeting Service CADE*219B
Central Computer or Telecommunications (710, 715)							
LSS			*2,038 sf*			2,038 sf	Data Processing: CALT*208C,231, CRSC*236, FLRS*319, HUM*114A, ICOX*004, LUDL*124
Network Services			*2,249 sf*			2,249 sf	Data Processing CRSC*206
Network Services Service			*120 sf*			120 sf	Computer/Technology Service CRSC*206A
Planning & Operations			*797 sf*			797 sf	Computer/Technology Service CRSC*114A, 114B
Shop (720)							
LSS			*277 sf*			277 sf	Shop/Storage ANXA*111
Health Care (810, 820, 830, 850, 870, 880)							
Existing Health Services			*85 sf*			85 sf	Nurse Station SUN*121
Existing Health Services			*92 sf*			92 sf	Patient Room SUN*119
Existing Health Services			*120 sf*			120 sf	Treatment SUN*124
Existing Health Services			*63 sf*			63 sf	Public Waiting SUN*120B
Existing Health Services			*132 sf*			132 sf	Patient Bathrooms SUN*119A, 122
Existing Health Services			*39 sf*			39 sf	Supplies SUN*119B
Laboratory Space			*9,409 sf*			9,409 sf	
Summary Division Space			**71,036 sf**			**77,125 sf**	

Arnold Main Campus - Learning

Assigned Square Footage

Personnel	Personnel: Existing Fall 2014	Personnel: Projected Fall 2025	NASF: Exist Unit	NASF: Existing Fall 2014	NASF: Proj Unit	NASF: NASF/ Unit	NASF: Projected Fall 2025	Comments
Andrew Truxal Library								
Staff Office	6	7	10	*1,389 sf*			1,389 sf	(LIBR*130 LIBR*233 LIBR*233B LIBR*239A LIBR*239B LIBR*239C LIBR*239D LIBR*239E LIBR*241 LIBR*322) Some of the existing offices are large enough to accommodate growth.
Office	10	11	10	*1,298 sf*			1,298 sf	(LIBR*139 LIBR*141 LIBR*147 LIBR*147A LIBR*147B LIBR*147C LIBR*147D LIBR*147E LIBR*147F LIBR*150A) Some of the existing offices are large enough to accommodate growth.
Assessment Of Prior Learning / Off-Site And Weekend College								
Staff Office	1	1	1	*100 sf*			100 sf	(CADE*332C)
Contract								
Staff Office			1	*326 sf*			326 sf	(CRSC*160)
Institutional Professional Development & Adjunct Faculty Development								
Faculty Office			1	*142 sf*			142 sf	(CRSC*310)
Instructional Design								
Faculty Office	2	2	2	*477 sf*			477 sf	(ANXB*107, 108A)
Staff Office	3	4	2	*490 sf*			490 sf	(CADE*332A, 332D) The existing offices are large enough to accommodate growth.
Instructional Partnerships								
Staff Office	2	2	2	*82 sf*			82 sf	(CALT*121A, 121G (Plus other offices in high schools))
Office	1	1	1	*184 sf*			184 sf	(LUDL*204A)
Learning & Academic Affairs								
Office	4	4	3	*438 sf*			438 sf	(LUDL*202, 202C, 209A)
Learning Advancement								
Staff Office			3	*781 sf*			781 sf	(CADE*330, 331, 332)
Office			3	*765 sf*			765 sf	(LIBR*234, 239, 324)
Learning Advancement And The Virtual Campus								
Department Head Office	1	1	1	*173 sf*			173 sf	(CADE*334A)
Staff Office	1	1	1	*164 sf*			164 sf	(CADE*334)
Learning Outcomes Assessment								
Staff Office	1	1	1	*100 sf*			100 sf	(CADE*332B)

Arnold Main Campus - Learning

Assigned Square Footage

LNG								
Faculty Office			17	*2,382 sf*			2,382 sf	(CALT*322 CALT*328 CRSC*261B CRSC*261C CRSC*261D CRSC*261E CRSC*323 CRSC*325 CRSC*327 DRGN*106 DRGN*228 GYM*112 GYM*131 HUM*206 HUM*211 HUM*215 SCHZ*104) SCHZ*104 will be demolished and replaced in another location
New Swing Space - Office Workstations					13	60 sf	780 sf	
Staff Office			4	*593 sf*			593 sf	(CALT*121H CALT*121I CALT*212 CRSC*261)
Office			1	*94 sf*			94 sf	(CALT*222)
Hoteling/Adjunct Office			1	*127 sf*	1	140 sf	140 sf	(SCHZ*104A) Replace SCHZ office
Student Office			1	*248 sf*			248 sf	(HUM*208A)
Sarbanes Center For Public And Community Service								
Faculty Office	3	3	2	*273 sf*			273 sf	(CRSC*308, 312)
Staff Office	5	5	3	*761 sf*			761 sf	(CRSC*132, 314, 314A)
Supplemental Instruction								
Staff Office	1	1	2	*384 sf*			384 sf	(LIBR*109, 115)
Total Personnel and Associated Space	**41**	**44**		**11,771 sf**			**12,564 sf**	

Academic Support Space	Number of Spaces: Existing Fall 2014	Number of Spaces: Projected Fall 2025	NASF	NASF: Existing Fall 2014	NASF: Proj Unit	NASF: NASF/ Unit	NASF: Projected Fall 2025	Comments
Andrew Truxal Library Office Service	2	2		*337 sf*			337 sf	
Andrew Truxal Library Conference	1	1		*148 sf*			148 sf	
Instructional Design Conference	1	1		*181 sf*			181 sf	
Learning Advancement Office Service	2	2		*284 sf*			284 sf	
LNG Office Service	17	17		*2,052 sf*			1,674 sf	378 SF in Johnson to be demolished
LNG Conference	7	7		*2,135 sf*			1,998 sf	137 SF in Schwartz to be demolished
New Small Consultation/Meeting Rooms					1	80 sf	80 sf	
New Conference Rooms					1	130 sf	130 sf	
New Work Area					1	35 sf	35 sf	
New Lounge/Vending					1	80 sf	80 sf	
Total Academic Support Space	**30**	**30**		**5,137 sf**			**4,947 sf**	

Arnold Main Campus - Learning

Assigned Square Footage

Laboratory Space	Number of Spaces Existing Fall 2014	Number of Spaces Projected Fall 2025		NASF Existing Fall 2014	NASF Proj Unit	NASF NASF/ Unit	NASF Projected Fall 2025	Comments
Andrew Truxal Library								
Class Lab	2	2		*1,805 sf*			1,805 sf	
LNG								
Class Lab	31	29		*24,311 sf*			23,234 sf	2 labs in Schwartz demolished
Class Lab Service	15	14		*2,180 sf*			2,118 sf	1 service space in Schwartz demolished
Open Lab	2	2		*795 sf*	2	400 sf	800 sf	MATH*206, 208 converted to Lab School; replaced by renovated space in CRSC.
Open Lab Service	1	1		*477 sf*			477 sf	HUM*012
Supplemental Instruction								
Class Lab	1	1		*203 sf*			203 sf	LIB*108
Open Lab	6	6		*2,388 sf*			2,388 sf	LIBR*102, 104, 106, 110, 114, 118
Total Laboratory Space	**58**	**55**		**32,159 sf**			**31,025 sf**	

Summary	Existing Fall 2014	Proj Unit	NASF/ Unit	Projected Fall 2025	Comments
Academic Support Space	*16,908 sf*			17,511 sf	
Dedicated Classrooms/Classroom Service					
LNG - General Purpose Classroom	*35,060 sf*			25,383 sf	SPACES REMOVED: 6 classrooms in Math Building converted to Lab School; 12 classrooms in Schwartz demolished
LNG - Lecture Room	*1,770 sf*			1,770 sf	CALT*107, 109
LNG - Seminar Room	*4,363 sf*			4,363 sf	CRSC*200, HUM*013, 014, 112
LNG - Teaching Theater	*2,488 sf*			2,488 sf	GYM*102, 105, HUM*100, 101
LNG Service	*526 sf*			408 sf	(CALT*107A, CRSC*100, HUM*112A, 112B, JOHN*120, SCHZ*213) Johnson and Schwartz demolished
Study Room (410)					
Andrew Truxal Library	*12,636 sf*			12,636 sf	14 Study Labs
Andrew Truxal Library	*4,475 sf*			4,475 sf	23 Study Rooms
Supplemental Instruction	*220 sf*			220 sf	Study Room LIBR*112
New Veterans' Center	*0 sf*			600 sf	Includes computers, study space, lounge

Arnold Main Campus - Learning

Assigned Square Footage

Stack (420)							
Andrew Truxal Library	10	10	*10,795 sf*			10,795 sf	LIBR*156, 206B, 206C, 206D, 206E, 208A, 208B, 208C, 208D, 302
Open Stack (430)							
Andrew Truxal Library	3	3	*4,785 sf*			4,785 sf	LIBR*140, 212, 230
Athletic or Physical Education (520, 525)							
LNG	1	1	*10,942 sf*			10,942 sf	Main Gymnasium GYM*201
LNG Service	2	2	*300 sf*			300 sf	GYM*205, 214
Lounge (650)							
Andrew Truxal Library	1	1	*1,228 sf*			1,228 sf	LIBR*231
Learning Advancement And The Virtual Campus	1	1	*343 sf*			343 sf	CRSC*107
Meeting Room (685)							
LNG Service	1	1	*182 sf*			182 sf	CADE*206
Shop (720)							
LNG	1	1	*944 sf*			944 sf	Shop/Storage CALT*134C
Laboratory Space			*32,159 sf*			31,025 sf	
Summary Division Space			**140,124 sf**			**130,398 sf**	

Arnold Main Campus - Learning Resources Management

Assigned Square Footage

	Personnel		NASF					
Personnel	**Existing Fall 2014**	**Projected Fall 2025**	**Exist Unit**	**Existing Fall 2014**	**Proj Unit**	**NASF/ Unit**	**Projected Fall 2025**	**Comments**
Administrative Services								
Office - Private	4	4	2	*319 sf*			319 sf	CSB*154, 155
Auxiliary Services								
Administrative Office	5	5	13	*2,626 sf*			2,626 sf	SUN*130 SUN*140 SUN*142 SUN*143 SUN*144 SUN*151 SUN*152 SUN*153 SUN*155 SUN*156 SUN*157 SUN*158 SUN*159
Staff Office	13	14	5	*324 sf*			324 sf	SUN*112 SUN*150A SUN*150B SUN*150C SUN*150D
Business & Financial Resources								
Administrative Office	10	10	14	*735 sf*	10	140 sf	1,400 sf	SSVC*120A SSVC*120B SSVC*120C SSVC*120D SSVC*120E SSVC*120F SSVC*120G SSVC*120H SSVC*120I SSVC*120J SSVC*120K SSVC*120L SSVC*121 SSVC*122
Administrative Staff	6	6						
Staff Office (Workstations)	32	32	32	*2,959 sf*			2,959 sf	RESM*107-129, 132, 135-137, 140, 141, 142
Creative Services								
Office			5	*671 sf*			671 sf	LUDL*131C-E, 133, 139
Document Services								
Office	12	12	2	*214 sf*			214 sf	CSB*131, 137
Facilities Maintenance & Operations								
Administrative Office	2	2	3	*621 sf*			621 sf	PLNT*102, 103, 107
Staff Office	7	7	2	*226 sf*			226 sf	FLRS*110D, GRND*001
Office	41	45	12	*1,245 sf*			1,245 sf	CSB*127 CSB*128 CSB*129 CSB*130 CSB*134 CSB*135 CSB*136 CSB*138 CSB*144 CSB*175 CSB*177 PLNT*020A
Facilities Planning & Construction								
Office	7	7	7	*539 sf*			539 sf	CSB*139 CSB*140 CSB*141 CSB*142 CSB*148 CSB*149 CSB*153
Human Resources								
Administrative Office	1	1	1	*145 sf*			145 sf	
Office	11	12	12	*1,477 sf*			1,477 sf	LUDL*102 LUDL*108A LUDL*108B LUDL*109 LUDL*109A LUDL*109B LUDL*111 LUDL*112 LUDL*113 LUDL*121A LUDL*123 LUDL*125
LRM								
Faculty Office			1	*225 sf*			225 sf	GYM*203
Marketing Research & Strategy								
Office			4	*353 sf*			353 sf	LUDL*131A, 131B, 137A, 141
Public Relations & Marketing								
Office	13	13	7	*718 sf*			718 sf	LUDL*142A LUDL*143 LUDL*144 LUDL*130 LUDL*131 LUDL*137 LUDL*142
Public Safety & Police								
Office	31	33	5	*1,256 sf*			1,256 sf	CSB*108 CSB*111 CSB*113 CSB*115 CSB*117
Workplace Safety & Risk Management								
Office	1	1	1	*146 sf*			146 sf	
Total Personnel and Associated Space	**196**	**204**		**14,799 sf**			**15,464 sf**	

Arnold Main Campus - Learning Resources Management

Assigned Square Footage

	Number of Spaces		NASF					
Academic Support Space	**Existing Fall 2014**	**Projected Fall 2025**		**Existing Fall 2014**	**Proj Unit**	**NASF/ Unit**	**Projected Fall 2025**	**Comments**
Administrative Services Office Service	4	4		*378 sf*			378 sf	CSB*118, 126A, 146, 166A
Administrative Services Conference	3	3		*976 sf*			976 sf	CSB*114, 133, 143
Auxiliary Services Office Service	2	2		*15 sf*			15 sf	SUN*157A, 158A
Business & Financial Resources Office Service	6	6		*956 sf*			956 sf	RESM*104 RESM*127A RESM*139 SSVC*120 SSVC*120M SSVC*125
Creative Services Conference	1	1		*159 sf*			159 sf	LUDL*140
Facilities Maintenance & Operations Office Service	2	2		*234 sf*			234 sf	PLNT*100, 101
Facilities Planning & Construction Office Service	1	1		*189 sf*			189 sf	CSB*152
Human Resources Office Service	8	8		*972 sf*			972 sf	LUDL*103 LUDL*106 LUDL*108C LUDL*110 LUDL*114 LUDL*116 LUDL*118 LUDL*121
Human Resources Conference	2	2		*593 sf*			593 sf	LUDL*104, 120
LRM Office Service	5	5		*713 sf*			713 sf	CRSC*261A GYM*208 GYM*216A SSVC*123 SUN*213
Public Relations & Marketing Office Service	3	3		*515 sf*			515 sf	LUDL*135, 136, 136A
Public Safety & Police Office Service	3	3		*382 sf*			382 sf	CSB*106, 109, 110
Total Academic Support Space	**40**	**40**		**6,082 sf**			**6,082 sf**	

Arnold Main Campus - Learning Resources Management

Assigned Square Footage

Summary	Existing Fall 2014			Projected Fall 2025	Comments
Academic Support Space	*20,881 sf*			21,546 sf	
Dedicated Classrooms/Classroom Service					
Facilities Maintenance & Operations Service	*120 sf*			120 sf	
Assembly (615)					
LRM Service	*1,178 sf*			1,178 sf	PCPA*201, 202, 203, 204
Food Facility (630, 635)					
Auxiliary Services	*11,847 sf*			11,847 sf	Food: CALT*001A, 106, CRSC*104, 106, 106A, 106B, SUN*100, 102, 103, 110,
Auxiliary Services	*207 sf*			207 sf	Vending: LIBR*231A, 231B
Auxiliary Services Service	*2,222 sf*			2,222 sf	Food Service: CALT*001C, 126, CRSC*101, SUN*113, 114, 115, 116, 117, 118
LRM	*191 sf*			191 sf	Food: CRSC*202A, 202B
LRM Service	*71 sf*			71 sf	Food Service: SUN*106
Lounge (650, 655)					
Auxiliary Services	*907 sf*			907 sf	SUN*101 (Proposed: Reconfigure SUN*101, add additional lounge space
Auxiliary Services Service	*96 sf*			96 sf	SUN*100A, 100B, 100C, 101A, 101B, 101C
LRM	*8,477 sf*			10,077 sf	CADE*201, 338, CALT*214, 317, CRSC*102, 189A, 202, 240, CSB*105, 169,
Merchandising (660, 665)					
Auxiliary Services	*6,054 sf*			6,054 sf	SUN*160
Auxiliary Services	*412 sf*			412 sf	SUN*161
Auxiliary Services Service	*1,154 sf*			1,154 sf	SUN*150
Auxiliary Services Service	*622 sf*			622 sf	SUN*154
Central Service (750)					
Document Services	*7,881 sf*			7,881 sf	CSB*158, 160, 161, 161A, 161B, 161C, 163, 164, 165, 165A, 166
Shop (720, 725, 730 included with 720)					
Facilities Maintenance & Operations	*17,860 sf*			17,860 sf	Shop/Storage: CSB*132, 168, 170, 178, 179, 180, 181, EQST*001, GRND*003,
Facilities Maintenance & Operations Service	*162 sf*			162 sf	Shop Service CSB*176
LRM	*1,119 sf*			1,119 sf	Shop/Storage: CALT*102, 199A, CSB*119, 122, HUM*006, 007, 007A
Facilities Planning & Construction	*1,953 sf*			1,953 sf	Shop/Storage BARN*001
Facilities Planning & Construction	*1,245 sf*			1,245 sf	Shop/Storage BARN*001B
Facilities Planning & Construction	*1,706 sf*			1,706 sf	Shop/Storage BARN*001C
Facilities Planning & Construction	*2,302 sf*			2,302 sf	Shop/Storage STOR*100
Public Safety & Police	*356 sf*			356 sf	CSB*182
Workplace Safety & Risk Management	*142 sf*			142 sf	Shop/Storage BARN*001E
Athletic or Physical Education (520)					
LRM	*2,383 sf*			2,383 sf	North Exercise Center GYM*213
Meeting Room (680, 685)					
LRM	*2,094 sf*			2,094 sf	Assembly Style: CADE*219
LRM	*2,470 sf*			2,470 sf	Meeting Room: CADE*228, CALT*100A, 100B, 100C
LRM Service	*787 sf*			787 sf	CADE*219A, 219C, 219D, 219E, 228A, 228B, CALT*100D
Laboratory Space	*0 sf*			0 sf	
Summary Division Space	**96,899 sf**			**99,164 sf**	

A - LRM
10/22/2015

Arnold Main Campus - President of the College

Assigned Square Footage

	Personnel		NASF					
Personnel	Existing Fall 2014	Projected Fall 2025	Exist Unit	Existing Fall 2014	Proj Unit	NASF/ Unit	Projected Fall 2025	Comments
President's Office								
President	1	1	1	*406 sf*	1	406 sf	406 sf	LUDL*231
President's Executive Assistant	1	1	1	*169 sf*	1	169 sf	169 sf	LUDL*233
President's Office Assistant	1	1	1	*75 sf*	1	75 sf	75 sf	LUDL*225B
President's Special Assistant	1	1	1	*195 sf*	1	195 sf	195 sf	LUDL*229
Administrative Assistant to BOT	1	1	1	*75 sf*	1	75 sf	75 sf	LUDL*225A
Chief Diversity Officer	1	1	1	*134 sf*	1	134 sf	134 sf	LUDL*202B
Vacant	0	1	1	*77 sf*	1	77 sf	77 sf	LUDL*204B
Office	0	0	1	*58 sf*	1	58 sf	58 sf	LUDL*220
Institutional Advancement/Foundation								
Executive Director	1	1	1	*159 sf*	1	159 sf	159 sf	ICOX*140
Foundation Coordinator/Executive Assistant	1	1	1	*237 sf*	1	237 sf	237 sf	ICOX*130
Development Assistant	1	1	1	*172 sf*	1	172 sf	172 sf	ICOX*220; Shared office
Donor Relations and Scholarship Specialist	1	1	1	*203 sf*	1	203 sf	203 sf	ICOX*200
Manager Major Giving	1	1	1	*181 sf*	1	181 sf	181 sf	ICOX*210
Communications/Annual Fund Coordinator	1	1						ICOX*220; Shared office
Office			1	*117 sf*	1	117 sf	117 sf	ICOX*150
Office			1	*153 sf*	1	153 sf	153 sf	ICOX*201
Federal Compliance Manager/Legal Studies Institute								
Federal Compliance Manager	1	1	1	*130 sf*	1	130 sf	130 sf	CRSC*232B
Sponsored Programs								
Director, Sponsored Programs	1	1	1	*121 sf*	1	121 sf	121 sf	RESM*133
Coordinator, Sponsored Programs	1	1	1	*121 sf*	1	121 sf	121 sf	RESM*134
Office			1	*93 sf*	1	93 sf	93 sf	RESM*143
Vice President, Learning								
Vice President, Learning	1	1	1	*264 sf*	1	264 sf	264 sf	LUDL*217A
Executive Assistant	1	1	1	*126 sf*	1	126 sf	126 sf	LUDL*217
Program Assistant	1	1	1	*107 sf*	1	107 sf	107 sf	LUDL*214
Assoc. Vice President/Interim Dean Sci & Tech	1	1	1	*165 sf*	1	165 sf	165 sf	LUDL*202A
Office	0	0	1	*134 sf*	1	134 sf	134 sf	LUDL*204C
Learning Resources Management								
Vice President, LRM	1	1	1	*262 sf*	1	262 sf	262 sf	LUDL*213A
Executive Assistant	1	1	1	*160 sf*	1	160 sf	160 sf	LUDL*213
Learner Support Services								
Vice President	1	1	1	*267 sf*	1	267 sf	267 sf	LUDL*215A
Executive Assistant	1	1	1	*125 sf*	1	125 sf	125 sf	LUDL*215
Total Personnel and Associated Space	**23**	**24**	28	**4,486 sf**	28		**4,486 sf**	

A - President
10/22/2015

Arnold Main Campus - President of the College

Assigned Square Footage

Academic Support Space	Number of Spaces Existing Fall 2014	Number of Spaces Projected Fall 2025		NASF Existing Fall 2014	NASF Proj Unit	NASF NASF/ Unit	NASF Projected Fall 2025	Comments
President's Office Service	12			*1,696 sf*	1	1,696 sf	1,696 sf	
President's Office Conference	2			*555 sf*	1	555 sf	555 sf	LUDL*219A; LUDL*221
Institutional Advancement/Foundation Conf. Room	1			*360 sf*	1	360 sf	360 sf	ICOX*110
Institutional Advancement/Foundation Office Service	3			*489 sf*	1	489 sf	489 sf	
Total Academic Support Space	**18**	**0**		**3,100 sf**	**4**	**3,100 sf**	**3,100 sf**	

Summary	Existing Fall 2014	Projected Fall 2025	Comments
Offices	*4,486 sf*	4,486 sf	
Academic Support Space	*3,100 sf*	3,100 sf	
Summary Division Space	**7,586 sf**	**7,586 sf**	

A - President
10/22/2015

Arnold Main Campus - Shared Conference Rooms

Assigned Square Footage

Academic Support Space	Number of Spaces Existing Fall 2014	Number of Spaces Projected Fall 2025		NASF Existing Fall 2014	NASF Proj Unit	NASF NASF/ Unit	NASF Projected Fall 2025	Comments
College-wide Shared Conference Rooms	5	5		*1,589 sf*			1,589 sf	RESM*105, 130 and 131; CRSC*150 and 322
Small Conference Rooms	0	4		*0 sf*	4 sf	265 sf	1,060 sf	12 seats
Medium Confererence Rooms	0	3		*0 sf*	3 sf	396 sf	1,188 sf	18 seats
Large Conference Rooms	0	2		*0 sf*	2 sf	550 sf	1,100 sf	25 seats
Total Academic Support Space	**5**	**14**		**1,589 sf**			**4,937 sf**	

A - Shared Conf
10/22/2015

Arnold Main Campus - School of Science & Technology

Assigned Square Footage

Personnel	Personnel: Existing Fall 2014	Personnel: Projected Fall 2025	NASF: Exist Unit	NASF: Existing Fall 2014	NASF: Proj Unit	NASF: NASF/ Unit	NASF: Projected Fall 2025	Comments
Architecture and Interior Design								
Adminstration								
Faculty	5	5	3	*406 sf*	3	160 sf	480 sf	(CALT*316, 330, 332)
Adjunct Faculty	5	6						Share Adjunct Office space and meeting space with Computer Technologies adjuncts (listed below)
Professional	1	1						Instructional Specialist shares space in Adjunct Office
Science & Technology (Science): Astronomy/Chemistry/Physics/Physical Science/Sustainable Energy Systems								
Department Chair					1	160 sf	160 sf	
Faculty	15	17	10	*1,919 sf*	10	160 sf	1,600 sf	(DRGN*201,211, 231, 241, DRGN*237 DRGN*238 HUM*215I) Two faculty per office plus 1 for growth
Adjunct Faculty	28	32	1	*89 sf*	3	160 sf	480 sf	(ASTR*005)
Office Manager					1	120 sf	120 sf	
Chemistry Lab Manager					1	120 sf	120 sf	
Astronomy, Physical Science, Physics Lab Manager					3	120 sf	360 sf	
Chemistry/Physics Technical Specialist					1	120 sf	120 sf	
Chemistry Lab Assistant					1	80 sf	80 sf	Workstation in the lab
Program Assistant/Program Assistant Evenings					1	120 sf	120 sf	2 PT workers share office
Biology								
Department Chair					1	160 sf	160 sf	
Faculty					18	160 sf	2,880 sf	
Adjunct Faculty					4	160 sf	640 sf	
Office Manager					1	120 sf	120 sf	
Lab Manager					2	120 sf	240 sf	
Technical Specialist					2	80 sf	160 sf	
Program Assistant					1	160 sf	160 sf	Two will share an office
Reception					1	180 sf	180 sf	
Existing Faculty	17	20	11	*1,853 sf*	0	0 sf	0 sf	(CRSC*171 CRSC*173 CRSC*177 CRSC*179 DRGN*104 DRGN*112 DRGN*233 DRGN*235 DRGN*239 DRGN*245 DRGN*245) Replaced in new programmed space.

Arnold Main Campus - School of Science & Technology

Assigned Square Footage

Computer Technologies								
Staff Office			1	*192 sf*	1	*192 sf*	192 sf	(CALT*234A)
Office			1	*188 sf*	1	*188 sf*	188 sf	(CALT*202)
Faculty	24	27	13	*1,986 sf*	17	*160 sf*	2,720 sf	(CALT*240 CALT*248 CALT*250 CALT*256 CALT*258 CALT*260 CALT*266 CALT*268 CALT*336 CALT*338 CALT*340 CALT*342 CALT*348) Two faculty per office, plus 1 for growth. Plus 2 for adjuncts from other (smaller) departments.
Adjunct Faculty	38	43	0	*0 sf*	3	*160 sf*	480 sf	Repurpose 1 General Purpose Classroom in CALT (see Learning program)
Engineering								
Office			1	*199 sf*	1	199 sf	199 sf	(CALT*312)
Faculty	5	6	2	*314 sf*	3	160 sf	480 sf	(CALT*318, 346) Two faculty members in each office.
Adjunct Faculty	7	8	0	*0 sf*	1	160 sf	160 sf	CWB Mechatronics contractor to share space in Adjunct Office.
Contractor	1	1	0	*0 sf*	0	0 sf	0 sf	CWB Mechatronics Instructional Specialist - Share space in the Science/Tech Adjunct Offices
Instructional Technologies								
Faculty Office			2	*360 sf*	2	180 sf	360 sf	(CADE*226A, 218)
Learning Advancement / Virtual Campus/NSC								
Staff Office			1	*170 sf*	1	170 sf	170 sf	(CALT*264)
National STEM Grant								
Staff Office			1	*110 sf*	1	110 sf	110 sf	(RESM*106)
STEM Center								
Adminstration								
Faculty								
Adjunct Faculty	1	1						Share space in the Science/Tech Adjunct Offices
Professional								
Network Support								
Staff Office			1	*116 sf*	1	116 sf	116 sf	(CALT*216)
Network Support Specialist						0 sf		
Staff Office			1	*282 sf*	1	282 sf	282 sf	(CALT*311)
Science & Technology (Technology)								
Faculty Office			8	*1,304 sf*	8		1,342 sf	(CALT*314 CRSC*175 CRSC*178A DRGN*104B DRGN*232 DRGN*234 DRGN*244 DRGN*246) - Offices outside Dragun to remain as-is, Dragun offices reprogrammed to 160 SF each, two faculty occupants each.
Technology Support Staff								
Faculty			1	*148 sf*	1	148 sf	148 sf	(CALT*242)
Staff			1	*412 sf*	1	412 sf	412 sf	(CALT*234)
Total Personnel and Associated Space	**147**	**167**		**10,048 sf**			**15,539 sf**	

Arnold Main Campus - School of Science & Technology

Assigned Square Footage

Academic Support Space	Number of Spaces Existing Fall 2014	Number of Spaces Projected Fall 2025		NASF Existing Fall 2014	NASF Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Computer Technologies Office Service	1	1		*240 sf*	1	320 sf	320 sf	240 nsf (CALT*238) plus one 80 nsf Adjunct Meeting Room
Computer Technologies Conference	1	1		*283 sf*	1	283 sf	283 sf	(CALT*262)
Engineering Office Service	1	1		*137 sf*	1	137 sf	137 sf	(CALT*343)
Biology Office Service								
Workroom	0	1		*0 sf*	1	140 sf	140 sf	
Adjunct Faculty Meeting Rooms	0	1		*0 sf*	1	80 sf	80 sf	
Kitchenette	0	1		*0 sf*	1	100 sf	100 sf	
Files/Storage	0	2		*0 sf*	1	400 sf	400 sf	
Biology Conference	0	1		*0 sf*	1	240 sf	240 sf	Ten seats
Environmental Center					1	1,000 sf	1,000 sf	
Science & Technology Office Service	4			*627 sf*			0 sf	(CRSC*178B CRSC*178C DRGN*230 DRGN*236) Replaced in new program space
Physical Science Office Service								
Reception	0	1		*0 sf*	1	180 sf	180 sf	
Workroom	0	1		*0 sf*	1	140 sf	140 sf	
Adjunct Faculty Meeting Rooms	0	1		*0 sf*	1	80 sf	80 sf	
Kitchenette	0	1		*0 sf*	1	100 sf	100 sf	
Files/Storage	0	2		*0 sf*	1	300 sf	300 sf	
Physical Science Large Conference	0	1		*0 sf*	1	550 sf	550 sf	25 seats
Physical Science Small Conference	1	1		*255 sf*	1	240 sf	240 sf	(CALT*236) 10 seats
Total Academic Support Space	**8**	**17**		**1,542 sf**			**4,290 sf**	

Arnold Main Campus - School of Science & Technology

Assigned Square Footage

Laboratory Space	Number of Spaces Existing Fall 2014	Number of Spaces Projected Fall 2025		NASF Existing Fall 2014	NASF Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Astronomy								
Class Lab	1	1		*268 sf*	1	268 sf	268 sf	(ASTR*006)
Class Lab Service	1	1		*81 sf*	1	81 sf	81 sf	(ASTR*003)
Biology								
Biology Fundamentals Lab	5	10		*5,070 sf*	2	1,400 sf	2,800 sf	(CRSC*174 CRSC*178 CRSC*180 CRSC*184 DRGN*200)
Zoology					1	1,400 sf	1,400 sf	
Microbiology					1	1,400 sf	1,400 sf	
Environmental Science					1	1,400 sf	1,400 sf	
Botany/Genetics					1	1,400 sf	1,400 sf	
General/Advanced Biology					2	1,400 sf	2,800 sf	
Multidisciplinary Lab					1	1,400 sf	1,400 sf	
Biology Computer Lab					1	600 sf	600 sf	15 stations
Biology Tutoring Lab					1	400 sf	400 sf	
Biology Open Study Lab					1	480 sf	480 sf	
Class Lab Service	3	6		*296 sf*	6	567 sf	3,400 sf	(CRSC*174A CRSC*176 CRSC*176A)
Computer Technologies								
Class Lab	14	14		*9,919 sf*			9,919 sf	(Ten in CALT, Four in CRSC)
Science & Technology								
General Chemistry 1 Lab		2			2	1,400 sf	2,800 sf	
General Chemistry 2 Lab		1			1	1,400 sf	1,400 sf	
Organic Chemistry Lab		1			1	1,400 sf	1,400 sf	
Physical Science Lab		4			4	1,400 sf	5,600 sf	
Geology Lab		1			1	1,400 sf	1,400 sf	
Fundamental Physics Lab		2			2	1,400 sf	2,800 sf	
Physics Lab		2			2	1,400 sf	2,800 sf	
Physical Science Computer Lab					1	1,000 sf	1,000 sf	25 stations
Physical Science Tutoring Lab					1	400 sf	400 sf	
General Interdisciplinary Lab (Open Lab)		2			2	1,400 sf	2,800 sf	
Chemical Storage		1			1	250 sf	250 sf	
Class Lab Service	30	32		*4,429 sf*		5,250 sf	5,250 sf	Distributed space
Existing Class Labs	18			*16,818 sf*				Includes existing Biology - Five in CRSC, Thirteen in DRGN - Replaced in new programmed space (both Physical Sciences and Biology)
Existing Open Lab	1			*469 sf*				(DRGN*005) Replaced in new programmed space
Physical Science								
Class Lab Service	1			*258 sf*				(CRSC*188B)
Total Laboratory Space	**74**	**80**		**37,608 sf**			**55,648 sf**	

Arnold Main Campus - School of Science & Technology

Assigned Square Footage

Summary	Existing Fall 2014	Proj Unit	NASF/ Unit	Projected Fall 2025	Comments
Academic Support Space	*11,590 sf*			19,829 sf	
Dedicated Classrooms/Project Space/Classroom Service					
Biology Project Rooms		3	100 sf	300 sf	4-5 seats
Biology Small Classrooms		3	550 sf	1,650 sf	25 seats
Biology Medium Classrooms		2	700 sf	1,400 sf	32 seats
Biology Classroom Service	*143 sf*			257 sf	(FLRS*211)
Physical Science Maker Spaces		4	240 sf	960 sf	
Physical Science Medium Classrooms		8	700 sf	5,600 sf	32 seats
Physical Science Large Science Learning Theater		1	1,800 sf	1,800 sf	100 seats
Science & Technology Service	*134 sf*			547 sf	(Classroom Service: DRGN*110A, 110B, 110C)
Astronomy	*272 sf*			272 sf	(Assembly Room ASTR*001)
Existing Science & Technology	*3,079 sf*				Seminar Rooms: DRGN*012, 110, 217 - Replaced in new programmed space
Study Space (400)					
Biology Quiet Study Room		1	300 sf	300 sf	
Physical Science Quiet Study		1	300 sf	300 sf	
Physical Science Small Group Study		1	100 sf	100 sf	4-5 seats
Physical Science Large Group Study		2	240 sf	480 sf	
Greenhouse (580)					
Biology & Environmental Center Greenhouse	*615 sf*	1	800 sf	800 sf	(GRHS*101)
Biology & Environmental Center Support	*117 sf*	1	200 sf	200 sf	(GRHS*101A)
Lounges (600)					
Student Lounge		1		400 sf	
Faculty Lounge		1		300 sf	
Vending/Café		1		400 sf	
Exhibition Space (620)					
Architecture & Interior Design Exhibition	*172 sf*			172 sf	(CALT*334)
Architecture & Interior Design Exhibition	*293 sf*			293 sf	(CALT*344)
Central Computer or Telecommunications					
Instructional Technologies	*105 sf*			105 sf	Computer/Technology Service (CALT*220)
Laboratory Space	*37,608 sf*			55,648 sf	
Summary Division Space	**54,128 sf**			**92,113 sf**	

Arnold Main Campus - Liberal Arts

Assigned Square Footage

	Personnel		NASF					
Personnel	Existing Fall 2014	Projected Fall 2025	Exist Unit	Existing Fall 2014	Proj Unit	NASF/ Unit	Projected Fall 2025	Comments
Dean's Office								
Dean's Office	1	1	1	*145 sf*			145 sf	(HUM*215B)
Faculty	3	3	2	*194 sf*			194 sf	(HUM*215C HUM*215J)
Liberal Arts Adjunct Faculty Office Space								
Adjunct Faculty Shared Office Space					15	160 sf	2,400 sf	Create Adjunct Resource Suite
African American Studies/American Studies/Anthropology/Geography/Sociology								
Adminstration	1	1		*0 sf*			0 sf	(See Social Sciences)
Faculty	8	9		*0 sf*			0 sf	
Adjunct Faculty	15	17		*0 sf*			0 sf	
Professional	1	1		*0 sf*			0 sf	
English & Communications								
Faculty	36	41		*2,735 sf*			2,735 sf	(1 room in CADE, 12 rooms on Level 1 of HUM, 14 rooms on Level 2 of HUM. Avg size 101 SF, HUM*200A is 229 SF, HUM*203B is 171 SF)
Adjunct Faculty	48	55		*0 sf*				
Professional	1	1		*409 sf*			409 sf	Program Data Management Specialist
Office				*49 sf*			49 sf	(HUM*115)
Gender and Sexuality Studies								
Faculty	3	3		*0 sf*			0 sf	
Adjunct Faculty	1	1		*0 sf*				
History, Philosophy, and Political Science								
Faculty	9	10		*0 sf*			0 sf	(See Social Sciences)
Adjunct Faculty	6	7		*0 sf*				
Office	2	2		*0 sf*			0 sf	
Liberal Arts								
Faculty			2	*325 sf*			325 sf	(CADE*120 CADE*329)
Adjunct Faculty								
Professional			1	*151 sf*			151 sf	(CADE*216)

Arnold Main Campus - Liberal Arts

Assigned Square Footage

Mathematics								
Chair	1	1		0 sf	1	160 sf	160 sf	
Faculty	26	30	16	2,747 sf	18	160 sf	2,880 sf	(12 in Math Bldg relocated, 4 in Schwartz demolished) Two faculty per office, plus two extra offices for 4 future faculty
Adjunct Faculty	43	49		0 sf				
Professional	0	0	1	260 sf	1	120 sf	120 sf	(Dean, PRIA MATH*223A)
Support Staff	1	1		0 sf	0	0 sf	0 sf	Mathematics Computer Laboratory Assistant; locate in lab
Office Manager	0	0	1	153 sf	1	120 sf	120 sf	
Lab Manager	0	0	1	150 sf	1	120 sf	120 sf	(CRSC*190A) To remain in same space
Performing Arts								
Faculty	5	5	4	610 sf			610 sf	(CADE*101, 105, 106, 130)
Adjunct Faculty	12	12		0 sf			0 sf	
Professional	1	1	1	149 sf			149 sf	(Program Coordinator, Performing Arts: Dance PCPA*113)
Psychology and Sports Studies								
Faculty	11	12		0 sf			0 sf	(See Social Sciences)
Adjunct Faculty	19	20		0 sf				
Professional	1	1		0 sf			0 sf	
Reading								
Faculty	2	2	2	317 sf			317 sf	(LIBR*119, 121)
Adjunct Faculty	6	7		0 sf			0 sf	
Professional	1	1		0 sf			0 sf	(Curriculum Coordinator)
Staff Office			1	237 sf			237 sf	(LIBR*117)
Social Science & World Languages								
Staff Office			1	460 sf			460 sf	
Social Sciences								
Faculty	12	12	14	2,229 sf			2,229 sf	(Avg 159 SF; CADE*208 and thirteen rooms in CRSC)
Adjunct Faculty	22	23		0 sf				
Staff Office			2	607 sf			607 sf	(CRSC*131, 134)
Visual Arts/Humanities								
Faculty	15	16	10	1,301 sf			1,301 sf	(Avg 130 SF; CRSC*123 and nine rooms in CADE)
Adjunct Faculty	36	39		0 sf				
Support Staff	1	1		0 sf			0 sf	(Audiovisual Technologies Technician)
Staff Office			1	108 sf			108 sf	
Office	3	3	4	675 sf			675 sf	(PLNT*008, 008B, 008C, CADE 216)
World Languages								
Faculty	6	6	4	633 sf			633 sf	(CRSC*181, 183, 185, 187)
Adjunct Faculty	14	15		0 sf				
Staff Office			1	184 sf			184 sf	(CRSC*109)
Total Personnel and Associated Space	**373**	**409**		**14,828 sf**			**17,318 sf**	

Arnold Main Campus - Liberal Arts

Assigned Square Footage

Academic Support Space	Number of Spaces Existing Fall 2014	Number of Spaces Projected Fall 2025		NASF Existing Fall 2014	NASF Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Dean's Office Service	1			75 sf			75 sf	(HUM*215A)
English & Com Office Service	4			341 sf			341 sf	(HUM*113C, 113D, 203A, 215K)
Liberal Arts Office Service	1			199 sf			199 sf	(CADE*203) plus 80sf meeting room for Adjuncts added in CRSC
Mathematics Office Service	2	1		77 sf	1	140 sf	140 sf	(MATH*223, 223B) Relocated to renovated space in CRSC.
Total Academic Support Space	**8**	**1**		**692 sf**			**755 sf**	

Laboratory Space	Number of Spaces Existing Fall 2014	Number of Spaces Projected Fall 2025		NASF Existing Fall 2014	NASF Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
English & Communications								
English Computer Classroom	1			713 sf			713 sf	(HUM*713)
Liberal Arts								
Class Lab	11			9,981 sf			9,981 sf	(CADE*113 CADE*214 CADE*302 CADE*310 CADE*312 CADE*313 CADE*319 CADE*322 CADE*323 CADE*324 CADE*326)
Open Lab	1			80 sf			80 sf	CADE*214A
Class Lab Service	7			1,388 sf			1,388 sf	(CADE*213 CADE*215 CADE*303 CADE*304 CADE*305 CADE*325 CADE*326A)
Mathematics								
Math Lab - Assisted	6	6		2,136 sf			2,136 sf	(CRSC*190, 190B-F) To remain in same location
Performing Arts								
Class Lab	12			9,047 sf			9,047 sf	(CADE*103 CADE*107 CADE*121 CADE*122 CADE*123 CADE*124 CADE*128 CADE*128A CADE*224 CADE*102 CADE*109 CADE*110)
Open Lab/Practice Module	8			481 sf			481 sf	(CADE*125A CADE*125B CADE*125C CADE*125D CADE*132A CADE*132B CADE*132C CADE*132D)
Class Lab Service	10			779 sf			779 sf	(CADE*104 CADE*110A CADE*110B CADE*110C CADE*110D CADE*110E CADE*122A CADE*126 CADE*222 CADE*224B)
Reading								
Reading Classroom	1			383 sf			383 sf	(LIBR*116)
Visual Arts								
Ceramics Studio	1			2,830 sf			2,830 sf	(CRSC*120)
Ceramics Studio Service	3			1,514 sf			1,514 sf	(CRSC*120A, B, C)
Visual Arts/Humanities								
Class Lab	4			3,147 sf			3,147 sf	(PLNT*006, 009, 010, 012)
Class Lab Service	1			560 sf			560 sf	(PLNT*003)
World Languages								
Class Lab	1			582 sf			582 sf	(CRSC*149)
Total Laboratory Space	**67**	**6**		**33,621 sf**			**33,621 sf**	

Arnold Main Campus - Liberal Arts

Assigned Square Footage

Summary	Existing Fall 2014			Projected Fall 2025	Comments
Academic Support Space	*15,520 sf*			18,073 sf	
Dedicated Classrooms/Classroom Service					
Liberal Arts	*4,422 sf*			4,422 sf	(Social Science: CRSC*316, 340, 342, 344, 346)
Assembly & Exhibition Space					
Liberal Arts	*915 sf*			915 sf	(CADE*218)
Liberal Arts	*110 sf*			110 sf	(CADE*220A)
Liberal Arts Service	*228 sf*			228 sf	(CADE*220)
Performing Arts	*2,897 sf*			2,897 sf	(Theater PCPA*107)
Performing Arts	*2,142 sf*			2,142 sf	(Theater PCPA*110)
Performing Arts Service	*3,297 sf*			3,297 sf	
Visual Arts/Humanities	*642 sf*			642 sf	(Art Gallery PCPA*100)
Visual Arts/Humanities Service	*56 sf*			56 sf	(PCPA*100B)
Central Storage					
Performing Arts	*603 sf*			603 sf	(Shop/Storage BARN*001A)
Laboratory Space	*33,621 sf*			33,621 sf	
Summary Liberal Arts Space	**64,453 sf**			**67,006 sf**	

Arnold Main Campus - Continuing Education & Workforce Development

Assigned Square Footage

	Personnel		NASF						
Personnel	Existing Fall 2014	Projected Fall 2025	Exist Unit	Existing Fall 2014	Proj. Unit Capacity	Proj Unit	NASF/ Unit	Projected Fall 2025	Comments
Personnel									
Dean	1	1	1	*237 sf*	1			237 sf	CALT*127A
Administrative Staff	12	14	3	*1,320 sf*	1	14	60 sf	840 sf	CALT*116, 127; JOHN*212, JOHN*216. Proposed: 6 workstations in CALT*116 and CALT*127. Repurpose one CR for 8 workstations.
Faculty	7	8	0	*0 sf*	0	0	0 sf	0 sf	2 faculty per office + 1 office for growth
Adjunct Faculty	Varies	Varies	0	*0 sf*	20	2	160 sf	320 sf	Provide bullpen offices for adjunct faculty touch-down spaces.
Center on Aging									
Administrative Office	4	4	3	*648 sf*	2	2	160	320 sf	JOHN*102, 102A, 209. Proposed: Two admin per office.
Community & Professional Programs									
Staff Office	3	3	2	*268 sf*	2	2	268	268 sf	CALT*121B, 125
Continuing Education & Workforce Development									
Faculty Office (Occupational Skills)	4	4	1	*182 sf*	2	1	182	182 sf	HUM*211, 216
Continuing Professional Education									
Staff Office	11	11	5	*732 sf*	2	10	160	1,600 sf	CALT*113, CALT*113A, CALT*113B, CALT*114J, CALT*118 (Proposed: Keep existing seats in CALT, plus relocate 7 seats from Glen Burnie to the Arnold Campus. Right-size all offices.)
CyberCenter									
Office	4	4	1	*162 sf*	2			162 sf	CALT*123
English Language Learning & Adult Education									
Administrative Office	3	3	5	*995 sf*	1	3	120	360 sf	JOHN*206, 206A-C, 207A
Office	6	6	1	*145 sf*	2	3	160	480 sf	JOHN*204
Hotel, Culinary Arts, and Tourism (HCAT) Institute									
Staff Office	3	3	3	*267 sf*	1			267 sf	CALT*121C, 121D, 129
Office	3	3	1	*284 sf*	3			284 sf	HUM*016
Instructional Support Center (ISC)									
Staff Office	13	13	14	*1,202 sf*	2			1,202 sf	CALT*114A-114K; CALT*115-115B; CALT*121F
Lifelong Learning									
Administrative Office	7	7	9	*928 sf*	2	4	160	640 sf	JOHN*201A, JOHN*201B, JOHN*203, JOHN*203A, JOHN*207B, JOHN*207C, JOHN*207D, JOHN*207E
Teacher Education & Child Care (TEACH) Institute									
Staff Office			2	*178 sf*	2	1	160	160 sf	CRSC*133B, CALT*121A
Lab School Director Office	0	1	0	*0 sf*	1	1	140	140 sf	New in Math Building
Lab School Faculty/Staff Offices	0	4	0	*0 sf*	2	2	160	320 sf	New in Math Building
Total Personnel and Associated Space	**81**	**89**		**7,548 sf**				**7,782 sf**	

Arnold Main Campus - Continuing Education & Workforce Development

Assigned Square Footage

Academic Support Space	Number of Spaces: Existing Fall 2014	Number of Spaces: Projected Fall 2025		NASF: Existing Fall 2014	NASF: Proj. Unit Capacity	NASF: Proj Unit	NASF: NASF/ Unit	NASF: Projected Fall 2025	Comments
Center on Aging Office Service	2	2	2	*575 sf*	N/A			575 sf	JOHN*200, JOHN*205, JOHN*211
Continuing Ed & Workforce Development Office Service	1	1	1	*153 sf*	N/A			153 sf	CALT*131
Dean/Continuing Education & Workforce Development Office Service	1	1	1	*253 sf*	N/A			253 sf	CALT*112
English Language Learning & Adult Education Office Service	1	1	1	*376 sf*	N/A			376 sf	JOHN*202
Lab School Office Support	0	1	0	*0 sf*	N/A	1	140	140 sf	New in Math Building
Total Academic Support Space	**5**	**6**		**1,357 sf**				**1,497 sf**	

Laboratory Space	Number of Spaces: Existing Fall 2014	Number of Spaces: Projected Fall 2025		NASF: Existing Fall 2014	NASF: Proj. Unit Capacity	NASF: Proj Unit	NASF: NASF/ Unit	NASF: Projected Fall 2025	Comments
Continuing Education & Workforce Development									
CE Vocational Workshop	4	4		*2,869 sf*				2,869 sf	CALT*128, 130, 132, 134
CE Activities Labs	3	3		*3,175 sf*				3,175 sf	CALT*101, 103, 105
CE Computer Labs	4	4		*2,103 sf*				2,103 sf	CALT*136, 138; JOHN*100, 106
Dental Assisting Laboratory	1	1		*897 sf*				897 sf	FLRS*119
Class Lab	1	1		*369 sf*				369 sf	JOHN*108
Class Lab Service	5	5		*267 sf*				267 sf	CALT*101A, CALT*103A, CALT*105A, CALT*105B, CALT*130A, CALT*132A, CALT*134A, CALT*134B, FLRS*119A
Hotel, Culinary Arts, and Tourism (HCAT) Institute									
Class Lab	3	3		*3,062 sf*				3,062 sf	HUM*207, 214, 218
Class Lab Service	2	2		*207 sf*				207 sf	HUM *211A
Teaching Lab School									
Class Labs	0	TBD		*0 sf*				3,449 sf	New in Math Building
Total Laboratory Space	**23**	**23**		**12,949 sf**				**16,398 sf**	

Summary	Existing Fall 2014	Proj. Unit Capacity			Projected Fall 2025	Comments
Academic Support Space	*8,905 sf*				9,279 sf	
Dedicated Classrooms/Classroom Service	*2,258 sf*				3,730 sf	
Training Room	*0 sf*	*50*	1	1,100 sf	1,100 sf	
Central Storage						
Continuing Education & Workforce Development	*754 sf*				754 sf	Shop/Storage CALT*128A
Laboratory Space	*12,949 sf*				16,398 sf	
Summary Division Space	**24,866 sf**				**31,261 sf**	

A- Cont Ed & Workf Dev
10/22/2015

Arnold Main Campus - Health Sciences

Assigned Square Footage

Personnel	Personnel: Existing Fall 2014	Personnel: Projected Fall 2025	NASF: Exist Unit	NASF: Existing Fall 2014	NASF: Proj. Unit Capacity	NASF: Projected No. Unit	NASF: NASF/ Unit	NASF: Projected Fall 2025	Comments/Existing Space
Dean's Office									
Dean's Office	1	1	1	*288 sf*	1+4	1	200 sf	200 sf	FLRS*304E; Dean Claire Smith
Administration	1	1	1	*222 sf*	1	1	120 sf	120 sf	FLRS*304D
Office Manager	1	1	1	*142 sf*	1	1	120 sf	120 sf	FLRS*100
Administrative Staff Workstations	3	4	6	*590 sf*	1	4	60 sf	240 sf	FLRS*112, 112A, B, C, D, E
Admissions & Advising									
Coordinator	1	1	1	*69 sf*	1	1	120 sf	120 sf	FLRS*106
Admissions Assistants Workstations	2	2	1	*271 sf*	1	2	60 sf	120 sf	FLRS*102
Office			1	*124 sf*	0	0	0 sf	0 sf	FLRS*106A
Instructional Services									
Manager	1	1	1	*147 sf*	1	1	120 sf	120 sf	FLRS*202
Instructional Coordinators Workstations	2	3	1	*180 sf*	1	3	60 sf	180 sf	FLRS*202A
Laboratory									
Health Professions Lab Manager	1	1	1	*382 sf*	1	1	120 sf	120 sf	FLRS*416
Health Professions Lab Technicians	3	3	1	*168 sf*	3	1	180 sf	180 sf	FLRS*426
Anatomy & Physiology Lab Technician Workstation	0	1	0	*0 sf*	1	1	80 sf	80 sf	
Retention & Student Services									
Student Success Coach/Mentor	2	2	2	*270 sf*	1+1	2	120 sf	240 sf	FLRS*309 and 424
Projected Faculty									
Chair		9	0	*0 sf*	1	9	160 sf	1,440 sf	Emergency Medical Technician; Health & Human Services; Health Technologies; Nursing & Healthcare Initiatives; Surgical Technology; Physical Therapist Assistant; Physician Assistant; Radiologic Technology; Veterinary Technology (2 more if add'l programs added: Respiratory Care; Dental Assisting)
Faculty		44	0	*0 sf*	2	26	160 sf	4,160 sf	Projected 53 FT faculty (excluding 9 chair positions) @ 2 per office; include additional four offices for future growth
Adjunct Faculty		195	0	*0 sf*	8	20	160 sf	3,200 sf	Bullpen type office; no assigned workstations. Provide a computer and phone at each workstation; lockable storage for adjunct faculty belongings and course related materials.
Adjunct Faculty Meeting Rooms			0	*0 sf*	2-4	10	80 sf	800 sf	Small meeting rooms; one associated with every two adjunct faculty bullpen offices for confidential meetings with students.

A- Health Sciences
10/22/2015

Arnold Main Campus - Health Sciences

Assigned Square Footage

Emergency Medical Technician (EMT)									
Chair	1		1	174 sf					FLRS*428; Miller
Instructor	1		1	274 sf					FLRS*402; Clark and Kim; CWB Associate Instructional Specialist
Adjunct Faculty	31			0 sf					
Health Sciences/Health & Human Services									
Chair	1		1	211 sf					GYM*208A
Office Manager	1	1	0	0 sf	1	1	120 sf	120 sf	GYM*208 (not in PSI)
Faculty	10		0	0 sf					
Adjunct Faculty	46		0	0 sf					
Professional	4	5	0	0 sf	1	5	120 sf	600 sf	Asst. Dir. Aquatics; Program Coord. Dance; Instructional Specialist; Head Athletic Trainer
Support Staff	3	3	0	0 sf	0	0	0 sf	0 sf	Located in Pool: Pool Aide 1; Pool Technical Assistant; Pool Technical Assistant PT
Offices - Gymnasium			6	763 sf		6	763 sf	763 sf	Health, Fitness & Exercise Studies offices
Offices - Pool			3	659 sf					POOL*004, 010 and 005
Workstation			1	49 sf					FLRS*124B
Faculty Offices			2	225 sf					FLRS*124C and 432
Staff Office			1	175 sf					FLRS*313
Administration Office			1	109 sf					FLRS*231
Health Technologies									
Faculty	4		2	191 sf					FLRS*124D and 226
Adjunct Faculty	15		0	0 sf					
Health Information Technology									
Coordinator/Associate Professor	1		1	176 sf					FLRS*228
Medical Assisting									
Coordinator/Associate Professor	1		1	144 sf					FLRS*224
Medical Laboratory Technician									
Coordinator/Associate Professor	1		1	107 sf					FLRS*311
Nursing & Health Care Initiatives									
Administration Office	1	1	1	251 sf	1	1	250 sf	250 sf	FLRS*304A; Batturs-Martin
Nursing Program Assistant	1	1	1	156 sf	1	1	120 sf	120 sf	FLRS*304; Burnside
Faculty	19		6	1,342 sf					990 SF in FLRS; 352 SF in ANXA
Adjunct Faculty	59		0	0 sf					
Office			1	210 sf					FLRS*304B

Arnold Main Campus - Health Sciences

Assigned Square Footage

Pharmacy Technician									
Chair			0	0 sf					
Faculty			0	0 sf					
Physical Therapist Assistant (PTA)									
Administration	1	1	1	170 sf	1	1	170 sf	170 sf	FLRS*322
Faculty	2		0	0 sf					
Adjunct Faculty	5		0	0 sf					
Professional	2	2	2	350 sf	1	2	120 sf	240 sf	FLRS*324 and 328; Instr. Specialist; Academic Coord. of Clinical Ed.
Physician Assistant (Offices at Arundel Mills per PSI)									
Faculty	1		0	0 sf					
Adjunct Faculty	1		0	0 sf					
Professional	2	2	0	0 sf	1	3	120 sf	360 sf	Coordinator, Physician Assistant; Clinical Coordinator
Public Health									
Faculty	1		0	0 sf					
Radiologic Technology (RAD)									
Faculty	4		2	346 sf					FLRS*430 and 434
Adjunct Faculty	3		0	0 sf					
Surgical Technology									
Faculty	2		0	0 sf					
Adjunct Faculty	4		0	0 sf					
Therapeutic Massage									
Faculty			0	0 sf					
Adjunct Faculty			0	0 sf					
Science Personnel									
Faculty			0	0 sf					
Adjunct Faculty			0	0 sf					
Total Personnel and Associated Space	**246**	**285**		**8,935 sf**		**104**		**14,063 sf**	

Arnold Main Campus - Health Sciences

Assigned Square Footage

Academic Support Space	Number of Spaces: Existing Fall 2014	Number of Spaces: Projected Fall 2025	Exist Unit	NASF: Existing Fall 2014	NASF: Proj. Unit Capacity	NASF: Projected No. Unit	NASF/ Unit	NASF: Projected Fall 2025	Comments
Dean's Office									
Dean/Instructional Services Office Service	1	0	1	*277 sf*	0	1	200 sf	200 sf	FLRS*306
Secure File Storage	0	1	0	*0 sf*	1	1	300 sf	300 sf	
Administrative Workroom	0	1	0	*0 sf*	1	1	200 sf	200 sf	Parts I & II had 380 SF
Shared Office Support									
Reception Area	0	1	0	*0 sf*	2+4	1	180 sf	180 sf	
Kitchenette	0	1	0	*0 sf*	N/A	1	50 sf	50 sf	
Faculty Workroom	0	1	0	*0 sf*	N/A	1	120 sf	120 sf	
Conference Room	0	1	0	*0 sf*	12	1	270 sf	270 sf	12 seats
Conference Room	0	1	0	*0 sf*	24	1	530 sf	530 sf	24 seats
Health Sciences Office Service	4	0	4	*509 sf*	0	0	0 sf	0 sf	FLRS*100A, 111, 304F and 338
Nursing Office Service	1	0	1	*220 sf*	0	0	0 sf	0 sf	FLRS*124
PHE Office Service	1	0	1	*6 sf*	0	0	0 sf	0 sf	GYM*218A
Student Services									
Study Area Copy/Printer Station	0	1	0	*0 sf*	3	1	100 sf	100 sf	Parts I & II had 2 at 100 SF ea.
Small Group Study Room	0	4	0	*0 sf*	4	4	100 sf	400 sf	
Large Group Study Room	0	2	0	*0 sf*	8	2	200 sf	400 sf	
Quiet Study Lounge	0	1	0	*0 sf*	12	1	300 sf	300 sf	Parts I & II had 2 at 300 SF each
Student Success/Testing Center	0	1	0	*0 sf*	30	1	1,200 sf	1,200 sf	
Shared Amenities									
Faculty Staff Lounge	0	1	0	*0 sf*	30	1	400 sf	400 sf	Parts I & II had 500 SF
Student Lounge/Vending	0	1	0	*0 sf*	30	1	400 sf	400 sf	Parts I & II had 500 SF
Distributed Informal Learning Areas	0	12	0	*0 sf*	N/A	12	60 sf	720 sf	
Meeting Room	0	1	0	*0 sf*	840	1	840 sf	840 sf	Seat 26-60, depending on room set-up
Meeting Room Storage	0	1	0	*0 sf*	150	1	150 sf	150 sf	
Total Academic Support Space	**7**	**32**		**1,012 sf**		**33**		**6,760 sf**	

Arnold Main Campus - Health Sciences

Assigned Square Footage

Laboratory Space	Number of Spaces: Existing Fall 2014	Number of Spaces: Projected Fall 2025	Exist Unit	NASF: Existing Fall 2014	NASF: Proj. Unit Capacity	NASF: Projected No. Unit	NASF/ Unit	NASF: Projected Fall 2025	Comments
Health Professions Laboratories									
EMT Laboratory	1	2	1	*851 sf*	24	2	1,950 sf	3,900 sf	FLRS*408
EMT Lab Storage	0	1	0	*0 sf*	N/A	1	500 sf	500 sf	
General Purpose Class Lab	1	0	0	*845 sf*	0				FLRS*208
Health Professions Lab	1	0	1	*568 sf*	24				FLRS*318
Health Professions Control Lab	0	0	0	*0 sf*	N/A				
Medical Laboratory Technician Lab	1	1	1	*571 sf*	12	1	750 sf	750 sf	FLRS*310
Medical Laboratory Tech Prep Training Room	0	1	0	*0 sf*	12	1	500 sf	500 sf	
Medical Assistant Laboratory	1	1	1	*624 sf*	16	1	1,400 sf	1,400 sf	FLRS*314
Medical Assisting Laboratory	1	0	0	*779 sf*	0				FLRS*414 (Existing Simulation Room)
Theraputic Message Lab	1	1	1	*817 sf*	20	1	1,400 sf	1,400 sf	FLRS*316
Nursing Laboratory	5	13	1	*3,146 sf*	10	13	700 sf	9,100 sf	FLRS*404, 411, 412, 413, 415; also used for practical nursing program and patient care technician program.
Nursing Class Lab Service	1	1	1	*98 sf*	N/A	1	600 sf	600 sf	ANXA*110A
Pharmacy Technician Lab	1	1	1	*663 sf*	12	1	1,050 sf	1,050 sf	FLRS*312
Physical Therapy Assistant Laboratory	1	1	1	*553 sf*	16	1	1,400 sf	1,400 sf	FLRS*320
Physical Therapy Assistant Lab Storage	0	1	0	*0 sf*	N/A	1	300 sf	300 sf	
Physician Assistant Laboratory	1	2	1	*842 sf*	16	2	1,660 sf	3,320 sf	FLRS*422
Radiological Technology Laboratory	1	1	1	*698 sf*	16	1	1,200 sf	1,200 sf	FLRS*418
Radiological Technology Lab Storage	0	1	0	*0 sf*	N/A	1	200 sf	200 sf	
Surgical Technology Laboratory	0	1	0	*0 sf*	8	1	1,200 sf	1,200 sf	
Class Lab Service	14	0	0	*2,749 sf*	0				
Simulation Suite									
Simulation Labs	0	2	0	*0 sf*	1+6	2	180 sf	360 sf	Space for up to six students and instructor.
Debriefing Room	0	2	0	*0 sf*	1+6	2	140 sf	280 sf	Space for up to six students and instructor.
Control Room	0	1	0	*0 sf*	2	1	120 sf	120 sf	Space for equipment and two faculty.
SIM Man and Supply Storage	0	1	0	*0 sf*	N/A	1	180 sf	180 sf	Space large enough to accommodate two gurneys so SIM mannequins (2 adults, one pediatric in a crib, and one child) can be rolled in and out of Simulation Labs without having to lift mannequins out of beds. Locate adjacent to Simulation Labs with clear access for gurneys. Provide doors of sufficient width to accommodate gurneys.
Simulation Suite Office	0	1	0	*0 sf*	1	1	120 sf	120 sf	For Nursing SIM Coordinator. Locate within Simulation Suite.

Arnold Main Campus - Health Sciences

Assigned Square Footage

Science Laboratory Facilities									
Anatomy & Physiology Lab	2	3	2	*1,997 sf*	24	3	1,400 sf	4,200 sf	FLRS*225 and 229
Anatomy & Physiology Training Lab	0	1	0	*0 sf*	24	1	1,400 sf	1,400 sf	
Anatomy & Physiology Lab Prep/Storage	2	2	2	*428 sf*	N/A	2	600 sf	1,200 sf	
Computer Labs									
Computer Laboratory	1	1	1	*786 sf*	24	1	960 sf	960 sf	FLRS*325
Computer Commons	0	1	0	*0 sf*	36	1	1,440 sf	1,440 sf	
Computer Lab Support	0	1	0	*0 sf*	N/A	1	150 sf	150 sf	
Continuing Education & Workforce Development									
Dental Assisting Laboratory	1	1	1		16	1	1,280 sf	1,280 sf	FLRS*119; 897 SF
Class Lab Service	1	1	1						FLRS*119A; 42 SF (space incorporated into proposed lab area)
Total Laboratory Space	**38**	**47**		**17,015 sf**		**46**		**38,510 sf**	

Summary	Existing Fall 2014	Projected Fall 2025	Exist Unit	Existing Fall 2014	Proj. Unit Capacity	Projected No. Unit	NASF/ Unit	Projected Fall 2025	Comments
Academic Support Space				*9,947 sf*				20,823 sf	
Dedicated Classrooms/Classroom Service									
Health Services	15	0		*10,020 sf*					FLRS*116, 206, 308, 327, 101, 114, 406, 120, 122, 204, 214, 216, 218, 220, 222
Health Services Service	3	0		*196 sf*					FLRS*101A, 101B, 109
Nursing Classroom/Class Lab	0	0		*1,716 sf*					ANXA*110
Nursing	0	0		*1,763 sf*					Classroom - Health Profession ANXA*114, 116
Interactive Multimedia Classroom	0	8		*0 sf*	30	6	750 sf	4,500 sf	
Interactive Multimedia Special Purpose Classroom Complex	0	1		*0 sf*	60+16	1	1,740 sf	1,740 sf	
Interactive Multimedia Classroom	0	3		*0 sf*	40	3	1,000 sf	3,000 sf	
Interactive Multimedia Classroom	0	1		*0 sf*	60	1	1,500 sf	1,500 sf	
Videoconferencing Classroom	0	1		*0 sf*	40	1	1,500 sf	1,500 sf	
Classroom Support	0	1		*0 sf*	N/A	1	200 sf	200 sf	
Videoconferencing Lecture Hall	0	1		*0 sf*	140	1	2,800 sf	2,800 sf	
Lecture Hall Secure Storage	0	1		*0 sf*	N/A	1	200 sf	200 sf	
Athletic or Physical Education									
Health Sciences	1	1	1	*1,639 sf*	*1,639 sf*		1	1,639 sf	East Exercise Center GYM*229
Health Sciences	1	1	1	*1,070 sf*	*1,070 sf*		1	1,070 sf	Multi Purpose Room GYM*107
Health Sciences	1	1	1	*1,259 sf*	*1,259 sf*		1	1,259 sf	Multi Purpose Room GYM*109
Central Storage									
Health Sciences	1	1		*76 sf*				0 sf	FLRS*420
Laboratory Space				*17,015 sf*				38,510 sf	
	Summary Division Space			**44,701 sf**				**78,741 sf**	

Arundel Mills & CCPT

Assigned Square Footage

Learner Support Services	Personnel Existing Fall 2014	Personnel Projected Fall 2025	NASF Exist Unit	NASF Existing Fall 2014	NASF Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Counseling, Advising, & Retention Services				**1,122 sf**			**796 sf**	
Office			2	*382 sf*			487 sf	PREV: AMIL*105D, 105E SUGGESTED: AMIL*308 (two offices, one consult room,hotelling space)
Office Service			1	*740 sf*			309 sf	PREV: AMIL*105 SUGGESTED: AMIL*307
Enrollment Services				**373 sf**			**1,113 sf**	
Office			2	*373 sf*			373 sf	AMIL*105A, 105C
Office Servce			1	*0 sf*			740 sf	AMIL*105 (lobby for LSS functions in the 105 suite)
Financial Aid Office				**180 sf**			**283 sf**	
Office			2	*180 sf*			283 sf	AMIL*105B, 105F SUGGESTED: ADD AMIL*105E
Instructional Support				**395 sf**			**395 sf**	
Staff Office			5	*395 sf*			395 sf	AMIL*202, 202A, 202B, 202C, 202D
LSS				**980 sf**			**1,259 sf**	
Staff Office			4	*242 sf*			521 sf	AMIL*105G, 105H, 206B, 206C ADD:105D
Data Processing			2	*738 sf*			738 sf	
Testing & Assessment Services				**2,715 sf**			**2,715 sf**	
Office			2	*471 sf*			471 sf	AMIL*112, CCPT*310
Class Lab			1	*1,011 sf*			1,011 sf	
Open Lab			3	*1,045 sf*			1,045 sf	AMIL*112A,B,C,
Lounge			1	*188 sf*			188 sf	
Total Arundel Mills & CCPT - Learner Support Services				**5,765 sf**			**6,561 sf**	

Arundel Mills & CCPT

Assigned Square Footage

Learning	Personnel Existing Fall 2014	Personnel Projected Fall 2025	Exist Unit	NASF Existing Fall 2014	Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Contract				**660 sf**			**660 sf**	
Faculty Office			1	*430 sf*			430 sf	AMIL*111
Office			2	*230 sf*			230 sf	AMIL*111A&B
LNG				**27,812 sf**			**25,665 sf**	
Faculty Office			4	*851 sf*			851 sf	AMIL*103, 111E, 210, 405A
Staff Office			1	*51 sf*			51 sf	AMIL*115A
Office			3	*479 sf*			479 sf	AMIL*111C, D, 216
Office Service			1	*26 sf*			26 sf	
Conference			2	*618 sf*			559 sf	PREV: AMIL*307, 408 SUGGESTED: AMIL*408 and a portion of AMIL*211
Class Lab			9	*6,371 sf*			6,371 sf	(9 rooms)
Class Lab Service			2	*62 sf*			62 sf	(2 rooms)
Open Lab			1	*1,329 sf*			1,329 sf	
General Purpose Classroom			5	*2,362 sf*			2,362 sf	(5 rooms)
Lecture Room			1	*1,771 sf*			1,771 sf	
Seminar Room			5	*1,741 sf*			1,741 sf	(5 rooms)
Teaching Theater			20	*10,829 sf*			8,741 sf	(16 rooms)
Classroom Service			5	*233 sf*			233 sf	(5 rooms)
Study Room			1	*233 sf*			233 sf	
Shop/Storage			1	*856 sf*			856 sf	
Total Arundel Mills & CCPT - Learning	**0**	**0**		**28,472 sf**			**26,325 sf**	

Learning Resources Management	Personnel Existing Fall 2014	Personnel Projected Fall 2025	Exist Unit	NASF Existing Fall 2014	Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Auxiliary Services				**500 sf**			**500 sf**	
Food			1	*180 sf*			180 sf	
Merchandising Service			1	*320 sf*			320 sf	
Facilities Maintenance & Operations				**919 sf**			**919 sf**	
Office			2	*199 sf*			199 sf	(2 rooms)
Storage/Shop			2	*720 sf*			720 sf	(2 rooms)
LRM				**4,592 sf**			**4,841 sf**	
Office			1	*105 sf*			105 sf	CCPT*302
Lounge			5	*3,745 sf*			3,994 sf	(5 rooms) plus a portion of AMIL*211
Shop/Storage			2	*742 sf*			742 sf	(2 rooms)
Public Safety & Police				**119 sf**			**119 sf**	
Office			1	*119 sf*			119 sf	AMIL*113A
Total Arundel Mills & CCPT - Learning Resources Management	**0**	**0**		**6,130 sf**			**6,379 sf**	

Arundel Mills & CCPT

Assigned Square Footage

Science & Technology	Personnel Existing Fall 2014	Personnel Projected Fall 2025	Exist Unit	NASF Existing Fall 2014	Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Science & Technology				**0 sf**			**0 sf**	
Faculty	3	3						
Adjunct Faculty	3	4						
Biology				**2,117 sf**	**5**		**3,219 sf**	
Adjunct Faculty	5	6						
Biology Lab			1	*1,498 sf*	2		2,600 sf	AMIL*411 SUGGESTED ADD AMIL*414 AND 415 (combine into one lab)
Class Lab Service			2	*619 sf*	3		619 sf	AMIL*411A&B
Chemistry				**210 sf**			**210 sf**	
Class Lab Service			1	*210 sf*			210 sf	
Computer Technologies				**0 sf**			**0 sf**	
Adjunct Faculty	6	6						
National STEM Grant				**330 sf**			**330 sf**	
Office			2	*330 sf*			330 sf	(2 rooms)
Total Personnel	**17**	**19**						
Science & Technology				**2,460 sf**			**2,460 sf**	
Class Lab			2	*2,369 sf*			2,369 sf	(2 rooms)
Class Lab Service			1	*91 sf*			91 sf	
STEM Center				**3,161 sf**			**3,161 sf**	
Department Head Office			1	*142 sf*			142 sf	
Administrative Office			1	*144 sf*			144 sf	
Staff Office			2	*376 sf*			376 sf	(2 rooms)
Class Lab			2	*2,310 sf*			2,310 sf	(2 rooms)
Class Lab Service			2	*189 sf*			189 sf	(2 rooms)
Total Arundel Mills & CCPT - Science & Technology	**17**	**19**		**8,278 sf**			**9,380 sf**	

Arundel Mills & CCPT

Assigned Square Footage

Continuing Education & Workforce Development	Personnel Existing Fall 2014	Personnel Projected Fall 2025	NASF Exist Unit	NASF Existing Fall 2014	NASF Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Continuing Professional Education				**715 sf**			**715 sf**	
Office			1	*146 sf*			146 sf	
Conference			2	*569 sf*			569 sf	(2 rooms)
CyberCenter				**15,139 sf**			**15,139 sf**	
Office			9	*1,190 sf*			1,190 sf	(9 rooms)
Office Service			4	*439 sf*			439 sf	(4 rooms)
Class Lab			14	*13,415 sf*			13,415 sf	(14 rooms)
Class Lab Service			1	*95 sf*			95 sf	
CyberCenter (Center for Workforce Solutions)				**119 sf**			**119 sf**	
Class Lab Service			1	*119 sf*			119 sf	
Hotel, Culinary Arts & Tourism Institute (HCAT)				**1,635 sf**			**1,635 sf**	
Staff Office			1	*163 sf*			163 sf	
Gaming Lab			1	*1,472 sf*			1,472 sf	
Instructional Support Center				**42 sf**			**42 sf**	
Office Service			1	*42 sf*			42 sf	
School of Science & Technology				**180 sf**			**180 sf**	
Office			1	*180 sf*			180 sf	
Teacher Education & Childcare Institute (TEACH)				**1,871 sf**			**1,871 sf**	
Administrative Office			1	*51 sf*			51 sf	
Faculty	1	1	3	*535 sf*			535 sf	(3 rooms)
Adjunct Faculty	6	7						
Staff			10	*385 sf*			385 sf	(10 rooms)
Office			3	*540 sf*			540 sf	(3 rooms)
Total Personnel	**7**	**8**						
Office Service			3	*179 sf*			179 sf	(3 rooms)
Stack			1	*181 sf*			181 sf	
Technology Training				**158 sf**			**158 sf**	
Office			1	*158 sf*			158 sf	
Total Arundel Mills & CCPT - Continuing Education & Workforce De	**7**	**8**		**19,859 sf**			**19,859 sf**	

Arundel Mills & CCPT

Assigned Square Footage

Health Sciences	Personnel Existing Fall 2014	Personnel Projected Fall 2025	NASF Exist Unit	NASF Existing Fall 2014	NASF Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Emergency Medical Technician				**0 sf**			**0 sf**	
Adjunct Faculty	3	3		*0 sf*			0 sf	
Health and Human Services				**0 sf**			**0 sf**	
Faculty	1	2		*0 sf*			0 sf	
Adjunct Faculty	11	13		*0 sf*			0 sf	
Health Technologies				**0 sf**			**0 sf**	
Adjunct Faculty	1	1		*0 sf*			0 sf	
Physician Assistant				**1,545 sf**			**1,545 sf**	
Administrative Office			1	*88 sf*			88 sf	
Faculty	1	1		*0 sf*			0 sf	
Adjunct Faculty	4	5		*0 sf*			0 sf	
Professional	3	3		*0 sf*			0 sf	
Office			6	*1,294 sf*			1,294 sf	(6 rooms)
Student Office			2	*72 sf*			72 sf	(2 rooms)
Total Personnel	**24**	**28**						
Office Service			1	*91 sf*			91 sf	
Total Arundel Mills & CCPT - Health Sciences	**24**	**28**		**1,545 sf**			**1,545 sf**	

Total Arundel Mills & CCPT	**Total Personnel**	**140**	**159**	**70,049 sf**	**70,049 sf**

Glen Burnie & HCAT

Assigned Square Footage

Learner Support Services	Personnel Existing Fall 2014	Personnel Projected Fall 2025	Exist Unit	NASF Existing Fall 2014	Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Counseling, Advising, & Retention Services				**247 sf**			**247 sf**	
Administrative Office			1	*247 sf*			247 sf	
ETS				**895 sf**			**895 sf**	
Administrative Office			4	*895 sf*			895 sf	(4 rooms)
Financial Aid Office				**239 sf**			**239 sf**	
Administrative Office			1	*239 sf*			239 sf	
Instructional Support				**1,221 sf**			**1,221 sf**	
Staff Office			2	*662 sf*			662 sf	(2 rooms)
Office			1	*468 sf*			468 sf	
Data Processing			1	*91 sf*			91 sf	
LSS				**418 sf**			**418 sf**	
Administrative Office			1	*186 sf*			186 sf	
Data Processing			1	*232 sf*			232 sf	
Planning & Operations				**112 sf**			**112 sf**	
Staff Office			1	*112 sf*			112 sf	
Student Services				**563 sf**			**563 sf**	
Administrative Office			1	*563 sf*			563 sf	
Total Glen Burnie & HCAT- Learner Support Services				**3,695 sf**			**3,695 sf**	

Learning	Personnel Existing Fall 2014	Personnel Projected Fall 2025	Exist Unit	NASF Existing Fall 2014	Proj Unit	NASF/ Unit	NASF Projected Fall 2025	
LNG				**20,302 sf**			**20,302 sf**	
Administrative Office			1	*173 sf*			173 sf	
Office Service			1	*141 sf*			141 sf	
Class Lab			9	*6,551 sf*			6,551 sf	(9 rooms)
Class Lab Service			5	*392 sf*			392 sf	(5 rooms)
Open Lab			1	*1,601 sf*			1,601 sf	
General Purpose Classroom			10	*5,772 sf*			5,772 sf	(10 rooms)
Seminar Room			1	*476 sf*			476 sf	
Teaching Theater			8	*4,909 sf*			4,909 sf	(8 rooms)
Classroom Service			3	*287 sf*			287 sf	(3 rooms)
Total Glen Burnie & HCAT- Learning				**20,302 sf**			**20,302 sf**	

Glen Burnie & HCAT

Assigned Square Footage

Learning Resources Management	Personnel Existing Fall 2014	Personnel Projected Fall 2025	Exist Unit	NASF Existing Fall 2014	Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Auxiliary Services				**356 sf**			**356 sf**	
Merchandising			1	*356 sf*			356 sf	
Facilities Maintenance & Operations				**329 sf**			**329 sf**	
Office Service			1	*329 sf*			329 sf	
LRM				**1,697 sf**			**1,697 sf**	
Staff Office			1	*60 sf*			60 sf	
Lounge			2	*960 sf*			960 sf	(2 rooms)
Lounge Service			1	*11 sf*			11 sf	
Shared Conference Room			1	*126 sf*			126 sf	GBTC*532
Shop/Storage			1	*540 sf*			540 sf	
Public Safety & Police				**47 sf**			**47 sf**	
Staff Office			1	*47 sf*			47 sf	
Total Glen Burnie & HCAT - Learning Resources Management				**2,429 sf**			**2,429 sf**	

Science & Technology	Personnel Existing Fall 2014	Personnel Projected Fall 2025	Exist Unit	NASF Existing Fall 2014	Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Astron/Chem/Phys/Phys Sci/Sustain Energy Syst				**0 sf**			**0 sf**	
Faculty	1	1		*0 sf*			0 sf	
Adjunct Faculty	1	1		*0 sf*			0 sf	
Biology				**136 sf**			**136 sf**	
Adjunct Faculty	6	7		*0 sf*			0 sf	
Staff Office				*136 sf*			136 sf	
Computer Technologies				**0 sf**			**0 sf**	
Adjunct Faculty	1	1		*0 sf*			0 sf	
Total Personnel	**9**	**10**						
Total Glen Burnie & HCAT - Science & Technology	**9**	**10**		**136 sf**			**136 sf**	

Glen Burnie & HCAT

Assigned Square Footage

Continuing Education & Workforce Development	Personnel Existing Fall 2014	Personnel Projected Fall 2025	NASF Exist Unit	NASF Existing Fall 2014	NASF Proj Unit	NASF/ Unit	NASF Projected Fall 2025	Comments
Community & Professional Programs				**128 sf**			**128 sf**	
Administrative Office			1	*128 sf*			128 sf	
Continuing Education & Workforce Development				**238 sf**			**238 sf**	
Administrative Office			2	*238 sf*			238 sf	(2 rooms)
Continuing Professional Education				**1,363 sf**			**36 sf**	
Administrative Office			7	*1,327 sf*			0 sf	Relocate to repurposed classrooms on Arnold Campus
Office Service			1	*36 sf*			36 sf	
Educational Talent Search				**203 sf**			**203 sf**	
Office Service			3	*203 sf*			203 sf	(3 rooms)
English Language Learning & Adult Education				**441 sf**			**441 sf**	
Conference			1	*441 sf*			441 sf	
GBTC College Services/Instructional Support Center				**208 sf**			**208 sf**	
Staff Office			1	*208 sf*			208 sf	
Dental Assisting				**0 sf**			**1,327 sf**	
Dental Assisting Laboratory			1	*0 sf*	1	1,267	1,267 sf	Repurpose former CPE office suite on Fourth Floor
Class Lab Service			1	*0 sf*	1	60	60 sf	
Hotel, Culinary Arts & Tourism Institute (HCAT)				**6,121 sf**			**6,121 sf**	
Department Head Office			1	*76 sf*			76 sf	
Adjunct Faculty	1	1	5	*301 sf*			301 sf	(5 rooms)
Staff Office			1	*146 sf*			146 sf	
Total Personnel	**1**	**1**						

Glen Burnie & HCAT

Assigned Square Footage

Office Service			4	*396 sf*			396 sf	(4 rooms)
Class Lab			3	*3,113 sf*			3,113 sf	(3 rooms)
Class Lab Service			4	*471 sf*			471 sf	(4 rooms)
General Purpose Classroom			3	*1,478 sf*			1,478 sf	(3 rooms)
Classroom Service			3	*140 sf*			140 sf	(3 rooms)
Instructional Support Center				**315 sf**			**315 sf**	
Administrative Office			1	*315 sf*			315 sf	
Occupational Skills				**902 sf**			**902 sf**	
Administrative Office			5	*902 sf*			902 sf	(5 rooms)
Teacher Education & Child Care (TEACH) Institute				**0 sf**			**0 sf**	
Adjunct Faculty	2	2		*0 sf*			0 sf	
Total Personnel	**2**	**2**						
Technology Training				**1,085 sf**			**1,085 sf**	
Administrative Office			2	*1,085 sf*			1,085 sf	(2 rooms)
Workforce Solutions (Center for Workforce Solutions (CWS))				**2,119 sf**			**2,119 sf**	
Administrative Office			10	*1,786 sf*			1,786 sf	(10 rooms)
Office Service			3	*333 sf*			333 sf	(3 rooms)
Total Glen Burnie & HCAT - Cont. Ed. & Workforce Devel.	**3**	**1**		**13,123 sf**			**13,123 sf**	
Total Glen Burnie & HCAT **Total Personnel**	**40**	**41**		**39,685 sf**			**39,685 sf**	

SSTC

Assigned Square Footage

Continuing Education & Workforce Development	Personnel Existing Fall 2014	Personnel Projected Fall 2025	Exist Unit	NASF Existing Fall 2014	NASF Projected Fall 2025	Comments
English Language Learning & Adult Education				**3,026 sf**	**3,026 sf**	
Office			12	*860 sf*	860 sf	(12 rooms)
Total Personnel	**8**	**8**				
Office Service			5	*295 sf*	295 sf	(5 rooms)
Open Lab			2	*411 sf*	411 sf	(2 rooms)
Seminar Room			2	*1,298 sf*	1,298 sf	(2 rooms)
Study Room			1	*162 sf*	162 sf	
Total SSTC	**8**	**8**		**3,026 sf**	**3,026 sf**	