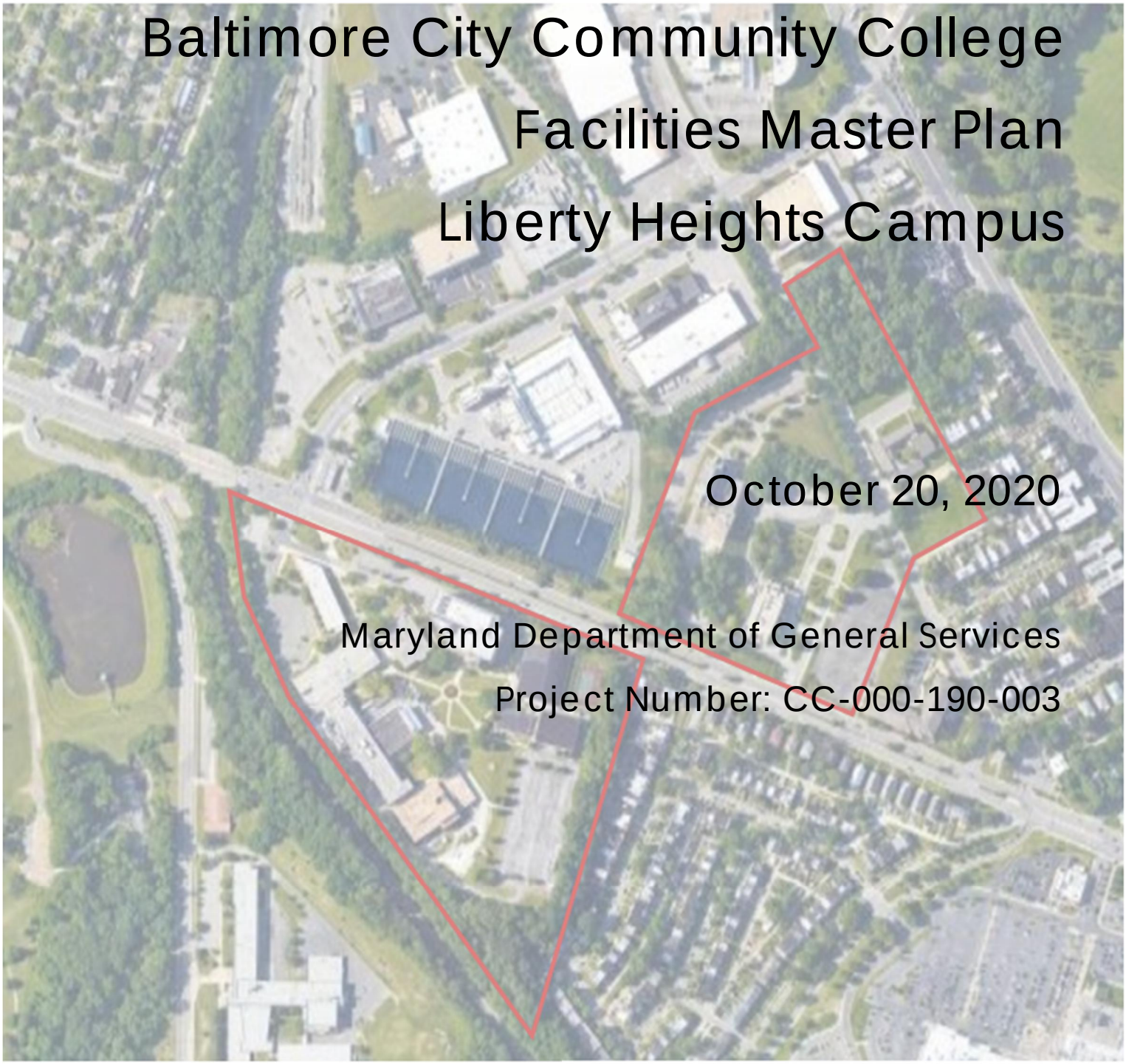
Baltimore City Community College
Facilities Master Plan
Liberty Heights Campus



October 20, 2020

Maryland Department of General Services

Project Number: CC-000-190-003

Baltimore City Community College
2901 Liberty Heights Avenue
Baltimore, Maryland 21215

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Baltimore City Community College
Facilities Master Plan
Liberty Heights Campus

Maryland Department of General Services
Project Number: CC-000-190-003

Introduction

Introduction

Summary of Scope

This Facilities Master Plan for the Baltimore City Community College (BCCC) provides an overview and vision of campus development at the College's Liberty Heights campus. This planning document is intended to provide a basis for the re-alignment and modernization of the college's physical facilities to support the college's current and future programs. A previous facilities master plan was developed in 2007. The acquisition of the former Bon Secours property on the north side of Liberty Heights Avenue prompted a substantial revision to the 2007 plan in 2011. Since that time, BCCC programs have experienced substantial growth in specific academic and workforce training sectors that necessitate re-alignment of the college's teaching facilities to match the demands imposed by these growth patterns.

This master plan includes site analysis of the Liberty Heights campus complex, a facilities and infrastructure assessment, and a space needs analysis founded on enrollment and program projections through 2029.

This master plan has been developed with a planning horizon of ten years, matching the college's academic strategic plan horizon. It includes proposals for major construction projects to align facilities with enhanced program use, as well as modernization projects. A historical pattern of deferred equipment replacement has led to substantial emphasis on the regeneration of campus infrastructure, which is described in this document as a program of systemic repairs, replacement and improvement, much of which is essential infrastructure, rather than new or renovated program space.

Projects identified in this document will be developed in accordance with Maryland DBM and DGS procedures and policies, through evaluation of individual project needs, justification, programming, funding, planning and construction. The master plan addresses broad requirements stemming from the educational program and infrastructure needs, and does not identify detailed program requirements. It expresses broad concepts for future campus development in general terms, expressed as a site plan and general program and area requirements, as well as recommendations for capital projects.

The master plan provides a reference to inform college administration and state review and funding agencies of the college's facility requirements over time. It is recommended that interim modifications be undertaken as plans for its implementation are developed. The master plan is meant to be a working document, not a rigid framework.

The master plan process may be summarized as follows:

- Review of the college's mission and instructional programs, and their vision for the future
- Examination of trends in the choice and growth of academic programs
- The College's goals for new programs and for the discontinuation of lower-priority programs
- An inventory of the college's facilities and infrastructure
- Identification of capital projects that will be required in the next ten years to support the college's goals and aspirations

This master plan document includes evaluations of existing facilities, and makes recommendations for the renovation, removal or replacement of some facilities, and for the construction of new facilities, prioritized by need. It does not cover regular maintenance work, such as the replacement of individual system components smaller than boilers and chillers, or regular programs of painting, finish replacement or paving. This report also omits detailed discussion of information technology infrastructure, telecommunications systems and the like, beyond suggestions for the physical facilities that house those systems.

This plan should be periodically re-examined and updated as the college's needs and abilities dictate. A two-year interval for review and update as projects are advanced or completed should be followed, with a full re-examination of priorities and developments that will require a new master plan in ten years.

Each capital project will require a project justification, programming and design and construction phases according to state requirements. Individual major equipment replacement projects may require minimal programming and design work.

The Planning Process

The master plan was developed in late 2019 and early 2020, beginning with the collection of data on physical facilities and academic data. A survey was undertaken of the physical facilities at the Liberty Heights campus and the former Bon Secours property across Liberty Heights Avenue. The original study mandate covered only the Liberty Heights campus. It was subsequently expanded to cover general programming for downtown workforce and academic programs. Other off-campus facilities are mentioned, but have not been examined in detail. The Bard Building, downtown was the subject of separate evaluations prior to the commencement of this study, which recommended its demolition and the redevelopment of the site.

Each building was examined for existing space allocation and utilization, while building finishes, systems and envelopes were surveyed. Alternatives were evaluated, and a preferred plan was selected for development.

The College developed data on existing, past and future enrollments and trends. Meetings were conducted with College staff, state agencies and the Board of Trustees

to understand issues arising from the physical infrastructure of the college, and to develop priorities for future operations. Separately from review of pure space allocation, the arrangement, equipment and use of existing allocated space was evaluated to establish its suitability for use by the college's current and future programs.

The planning process was integrated with justification and programming for three capital projects that were identified during the master planning process: the Library, Nursing Building, and the deferred systems replacement program. These three projects are the highest priorities for renovation and expansion of critical campus programs and infrastructure. Part I justification documentation has been developed to coordinate with the master plan.

Executive Summary

Description of the Campus

BCCC is Baltimore's urban-serving institution of higher education. The main Liberty Heights campus is located at the crest of the Liberty Heights hill in northwest Baltimore, at 2901 Liberty Heights Avenue, to the south of the street. The college's environs are a mixture of low and medium density residential districts, parks and commercial areas.

The campus was opened new as a component of the Baltimore City school system in 1959. The primary campus infrastructure dates to that time. The gymnasium and library are essentially as originally built. The main campus is landlocked, surrounded by streets, railroads and residential areas.

A nursing building was added to the campus in 1977, and the Life Sciences Building was constructed in 1996. Temporary modular structures were built in front of the gymnasium for administrative space, child care and the facilities department in 2001 and 2006.

In 2011 the college acquired property on the north side of Liberty Heights Avenue from the Bon Secours Health System. The tract included three major buildings, which remain. None of these buildings were designed for public use or for education. They are surrounded by large areas of parking and undeveloped green space. The parcel of 18.5 acres is now referred to as North Campus.

About 75 percent of the Main Building was substantially renovated between 2004 and 2008, with a final phase that renovated the administrative area in 2018, but the Fine Arts Wing remains as built in 1965.

A campus loop road is in final planning stages and construction is expected to begin in 2021.

Campus Population

In fall of 2019, total campus enrollment was 4909 students, with a full-time equivalent of 1579 FTE. BCCC is authorized 469 full-time faculty, administrative, and support staff. The College is authorized 528 part-time faculty and staff.

Enrollment has trended generally upward since in recent years, with a fall 2019 enrollment of 1,579 full time students and 3,330 part-time students for a total enrollment of 4,909. Fall 2019 credit hours amounted to 41,232 hours, for a full-time equivalent enrollment of 2,748.

Enrollment growth over the next ten years projects roughly 50% growth in credit hours and FTDE by 2029, with corresponding growth in contact hours. Staffing is expected to grow commensurately.

Space needs analysis shows that rebalancing is needed between categories of classroom, lab and office space. However, the overall trend in space requirements indicates that existing shortfalls will continue, with significant shortfalls in office, study,

assembly, food service, athletics and support spaces. These will be partially remedied by proposed capital projects. Beyond changes in space requirements, the capital projects are also needed to offset underinvestment in facility renewals and maintenance, and to assure a safe, effective learning environment. Renovation projects will require temporary relocation or consolidation of programs and services while projects are undertaken.

The Campus and Facilities in 2020

Figure 0-1 - Existing Campus Buildings

Liberty Heights Campus

The Liberty Heights campus comprises the academic core of the college, and houses the bulk of its instructional space and administration. Land-locked on its hilltop site, the campus has five main buildings disposed around a central green space. A limited

amount of parking is disposed in the margin between the buildings and the campus boundary, with a large parking lot in the southeast corner of the campus.

Nursing Building

The Nursing Building was built in 1977. It is a 36,668 square foot three-story building with a 120 seat lecture hall, health program-related classroom and lab space, and administrative space. It has not been substantially renovated since it was built, and the instructional spaces are obsolete for the current curriculum, which demands nursing simulation labs capable of accommodating large class sizes.

The Nursing Building's systems date to its original construction. HVAC controls are by obsolete pneumatic systems. The building lacks sprinklers. No significant measures have been taken to accommodate the Americans with Disabilities Act (ADA). In particular, toilets and the fire alarm system do not comply with ADA requirements. The building's heat is supplied by the 25-year-old boilers in Main Hall. The Nursing Building has its own chiller and cooling tower, which are in need of replacement.

The Nursing Building has been identified as a leading candidate for comprehensive renovation and expansion.

Library

The Bard Library is one of the original BCCC campus buildings. Constructed in 1965, it is a two-story 38,936 square-foot structure (including basement) containing traditional library stacks and reading space. It is functionally obsolete, with original HVAC systems and exterior envelope. Current college programs place emphasis on learning commons-style spaces with access to online resources via wireless devices and fixed workstations, which are limited in the Bard Library. The building lacks sprinklers and ADA accessibility features. Like the Nursing Building, it receives heat from Main Hall, and has its own air-cooled chiller.

With the Nursing Building, the Bard Library is a prominent candidate for renovation and reprogramming.

Life Sciences Building

The Life Sciences Building was built in 1996 on a prominent site along Liberty Heights Avenue, and it is the chief campus building visible from off campus. It houses life science-related classrooms, laboratories and administrative space. It is heavily used. The building has its own HVAC systems. Boiler replacements are a priority, but the building has new air-cooled chillers. Elevators in the building are unreliable and require replacement. The building meets ADA standards extant at the time it was constructed and has full sprinkler coverage.

Physical Education Center

The Physical Education Center was built in 1965, and was renovated in 1993. As one of the original campus buildings, it is in good repair, but is underused relative to its size on campus. The main level of the building houses lobbies and a competition basketball

court with spectator seating the building's full basement houses offices, lockers, support spaces and some classroom space.

Harper Hall

Harper Hall is a two-story modular structure erected in 2001. It housed a day care center, a data center and staff offices, all of which are being moved to other locations on campus in preparation for demolition. The building is owned by the college, not leased. It is planned to be removed when the campus loop road is constructed.

Facilities Building

The Facilities building is a one-story modular structure adjoining Harper Hall in front of the gymnasium. Built in 2006, it is an unsprinklered structure of about 5,640 square feet. The site of Harper Hall and the facilities building is a leading candidate for future development on the Liberty Heights campus. Harper Hall's functions are being relocated to Main Hall and the South Pavilion.

Main Hall

The principal instructional building on the BCCC campus, Main Hall houses central administrative offices, student aid programs, a dining area, faulty offices and numerous general-purpose classrooms. It also houses the boiler system that provides steam to Main Hall, the Nursing Building, Bard Library and the Fine Arts wing. Main Hall was completely renovated in three phases starting in 2001, with new systems for HVAC, fire protection, power and data distribution and finishes. The original boiler plant remains.

In general, Main Hall functions satisfactorily. Some of the common spaces, such as the dining facility and the bookstore, require functional adaptation.

Fine Arts Wing

The Fine Arts Wing is part of the original Main Hall structure, dating to 1965. When Main Hall was renovated in 2004-2008, the Fine Arts wing was left un-renovated. Its principal feature is a 500-seat auditorium, which lacks modern sound and light systems. In previous master plans an arts center on the Bon Secours property was proposed to replace the Fine Arts wing's function. The Fine Arts Wing's systems are original to the building, and it has seen no updates. It lacks a sprinkler system and ADA accommodation.

Infrastructure

Except for the heating provided from Main Hall to the library and the Nursing Building, campus systems are decentralized. Each building has its own unique systems, and each building operates separately, with a separate maintenance and repair schedule for its own central systems. The campus has suffered from lagging replacement of critical systems, such as roofing, boilers, chillers, finishes, utility piping, and smaller system components. A catch-up program is required to address these issues. Site utilities require similar levels of remedial attention.

North Campus

The 18.5 acre site on the north side of Liberty Heights Avenue, slightly to the east of the main campus, was owned by the Bon Secours Health System until BCCC acquired the property in 2011. Located at 2600 Liberty Heights Avenue, the acquisition was intended to provide expansion for the BCCC campus in the long run, and additional parking capacity. The site was the location of Provident Hospital, which was closed in the 1990s and mostly demolished. The West Pavilion is a remnant of the main hospital, and the South and North Pavilions were part of the hospital campus.

South Pavilion

The South Pavilion is the former medical pavilion for Bon Secours. It is a relatively modern building, built to commercial standards, and has a flexible and adaptable arrangement. The South Pavilion can be used by the college for a variety of purposes as needs arise. However, as a commercial building, it does not have the same longevity as other college buildings and will require systemic renovation at some point in the future.

West Pavilion

The West Pavilion is what remained of Provident Hospital after the clinical core of the hospital was demolished in the 1990s. It comprises the hospital's central plant, administrative offices and the nurses' dormitory. The former office space remains in use by the college, while some upper-floor space has been used as float space for administrative activities that have been displaced during renovations. The former central plant areas are largely unused, with most of their former equipment intact but inoperable. The West Pavilion should not be retained beyond its useful time as float space.

North Pavilion

The North Pavilion is the former community health clinic for Bon Secours, housing substance abuse outreach and other community health initiatives until it was sold. Its original function and design is poorly suited for college use. The North Pavilion is presently unused and un-occupiable, with moisture damage causing hazardous interior conditions. Remediation will require extensive renovation, and the building is recommended for demolition.

Downtown

As the College seeks to maintain a presence in downtown Baltimore, the College is exploring opportunities for development partnerships that may yield instructional space in a mixed-use development for core academic, workforce and specialty programs. About 40,000 square feet of such space is presently envisioned as part of a larger development, replacing existing leased space.

Capital projects

BCCC has seen significant underinvestment in physical facilities, resulting in a significant backlog of systems and functional renovation projects. Changing programs and program focus require realignment of facilities to match the expected needs, and to

ensure that facilities live up to student expectations for current instructional programs. The college must aggressively pursue updated facilities to meet these demands.

The present major capital project will be the campus loop road. This will provide continuous vehicular access to the entire perimeter of the main campus.

The college's chief priority is the renovation and expansion of the Bard Library to become a Learning Commons. This project will address severe deficiencies in campus study space, creating a central commons space with a variety of options for access to college services, information and social opportunities. The Learning Commons project will completely renovate and expand the 1965 library building with modern systems and finishes.

As a second, but still urgent priority, a multi-year capital campaign is proposed to address major systems replacements. Initial projects will deal with backlogged items, such as:

- Roof replacements for Facilities, Fine Arts, Life Sciences and the South Pavilion
- Chillers for Fine Arts and Physical Education
- Boilers for Life Sciences and Physical Education
- Locker room upgrades for Physical Education
- Controls for Physical Education
- Replacement of the campus video surveillance system DVR and cameras, and installation of a dedicated fiber optic security network.

The third priority capital project is the renovation and expansion of the Nursing Building to accommodate new programs and to provide modern teaching and simulation facilities.

Additional long-term projects are the replacement of the Fine Arts Wing, replacement of the Facilities Office, and the renovation of the Physical Education Facility. Space needs also point to a requirements for a downtown campus space, leased or negotiated as the Bard Building site is redeveloped.

Capital project summary

A detailed summary of proposed projects is presented in Chapter 6.

- Campus Loop Road –Complete the roadway around the campus, raze Harper Hall and add a second entrance. This project has been designed and awaits bidding.
- Address systems replacement backlog, roofing, paving, chillers, boilers, elevators. There is a lengthy backlog of projects across the campus. A total of 39 individual projects have been identified over the next eight years.
- Bard Library – Renovate and expand as a campus learning commons.

- Nursing Building – Renovate and expand to accommodate current needs and new programs
- Update the central campus axis and open space, building on site improvements commenced during the library and nursing building projects
- Raze the North Pavilion and develop parking on the site.
- Renovate or replace the Fine Arts Wing of the Main Building.
- Remove the modular Facilities Building and accommodate elsewhere on campus.
- Renovate the gymnasium and expand the fitness center
- Renovate the South Pavilion
- Renovate and improve the campus landscape, adding landscaping, paving, lighting and site amenities

Baltimore City Community College
Facilities Master Plan
Liberty Heights Campus

Maryland Department of General Services
Project Number: CC-000-190-003

Chapter 1
Overview of the College

Chapter 1

Overview of the College

1.1 Mission, Vision and Strategic Priorities

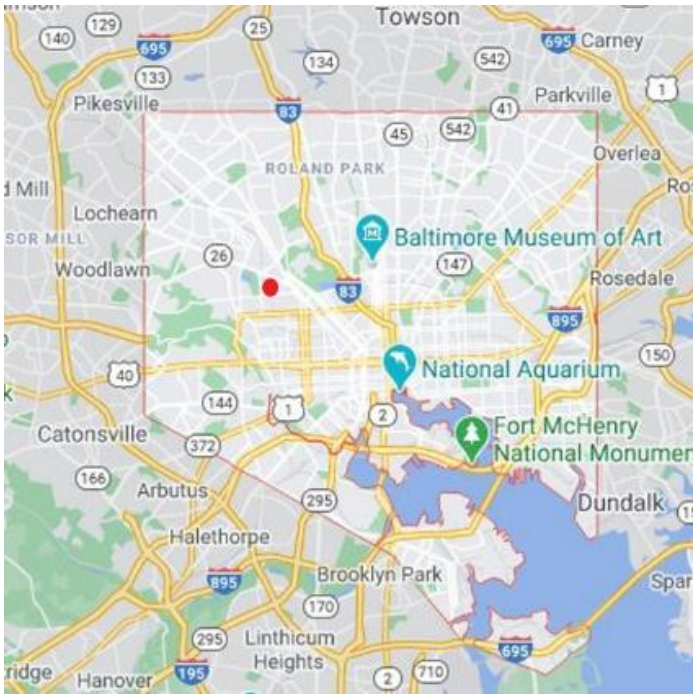


Figure 1-1 – Map of Baltimore

The College Setting

Baltimore City Community College is an urban-serving institution of higher education and, therefore, plays a unique role in the city's social and economic fabric. Primarily serving the City of Baltimore, BCCC must meet the higher education demands of an increasingly diverse ethnic and racial community having a vast array of ages, backgrounds, career motivations, and economic resources. Coupled with the reality that Baltimore's poverty, unemployment, and illiteracy rates remain significantly higher than that of the surrounding region, BCCC's urban setting makes it unique among Maryland community colleges.

Mission

Baltimore City Community College provides quality, affordable, and accessible education meeting the professional and personal goals of a diverse population, changing lives, and building communities.

Baltimore City Community College (BCCC) provides outstanding educational, cultural, and social experiences to the residents of Baltimore City, the state of Maryland, and surrounding areas. The College's accessible, affordable, comprehensive programs include

college transfer and career preparation, technical training, and life skills training.

The College provides a variety of student services that meet and support the learning needs of an increasingly diverse student population. BCCC is a dynamic higher education institution that is responsive to the changing needs of its stakeholders: individuals, businesses, government, and educational institutions of the community at large.

Vision
Baltimore City Community College is an innovator in providing quality career pathways and educational opportunities for a diverse population of learners to exceed the challenges of an ever-changing competitive workforce and environment.

Core Values
The College's core values represent the most important underlying principles and beliefs that are the basis for the vision, strategies, plans, policies, and actions of Baltimore City Community College.

Integrity – Unwavering adherence to a strict moral and ethical standard.
Respect – Showing genuine concern and regard for the dignity of others while practicing civility, accepting, appreciating, and supporting individual differences.
Diversity – Recognizing, accepting, appreciating, and supporting individual differences and lifestyles.
Teaching – Impacting knowledge skills, and values that are essential to the success of the individual and growth of the community.
Learning – Gaining knowledge, skills, and understanding that are useful to the individual and college community by promoting intellectual curiosity.
Excellence – Providing excellent teaching, student services, customer services and community engagement.
Leadership – Empowering, nurturing, and inspiring individuals to be leaders in their own sphere.
Professionalism – Adhering to the highest standard of customer service.

Strategic Priorities
Strategic Plan Goals and Objectives 2018 – 2022

- Goal 1: Student success – Provide equitable access to a learning environment that supports a diverse population of learners and promotes student goal attainment.

  1.1 – Align, support and deliver courses, programs, and services to ensure progression, transferability and employability.

  1.2 –Utilize contemporary educational methods to improve and advance students' academic and workforce preparation and goals.

1.3 – Enhance the student experience by increasing awareness of and engagement with College activities and support services.

1.4 – Increase persistence and goal attainment across all student populations.

- Goal 2: Community engagement – Implement a comprehensive approach to engage current and future students, alumni, and the community.

  2.1 – Reposition the College's brand to increase awareness of programs and services and highlight targeted initiatives.

  2.2 – Grow partnerships with business and industry, government agencies, community members, educational institutions, and all potential partners in serving our students and community.

  2.3 – Strengthen partnerships to promote and increase access to student learning and transfer opportunities, collaborative planning, and resource sharing.

- Goal 3: Institutional framework – Optimize resources to effectively and efficiently support existing and emerging initiatives.

  3.1 – Ensure facilities, technology, staffing and instructional resources support a quality learning and working environment.

  3.2 – Promote an environment of professionalism and civility.

  3.3 – Invest resources to attract, grow and retain a highly-qualified and diverse faculty and staff.

  3.4 – Develop and implement a plan to ensure faculty and staff knowledge retention and fluid transition during times of employee turnover.

  3.5 – Improve the College's financial sustainability.

1.2 Realignment Tasks

In 2017, the Maryland General Assembly mandated that BCCC realign its strategies and operations to better serve students, employers and the community. The legislature articulated 12 realignment tasks. The College reports our progress in realigning BCCC to be a stronger, more effective economic engine for the Baltimore region to the Joint Chairs on an annual basis. The framework clearly reflects the strong commitment, capacity, and will reestablish Baltimore City Community College as a vital provider of higher education focused on student success and to position the College for future growth.

The Realignment Tasks are as follows:

1. Review and strategically align core course offerings of BCCC, consistent with accreditation requirements, and focused on the needs of students at BCCC and the workforce in Baltimore City.
2. Make workforce development and job placement top educational priorities of BCCC.
3. Improve student pathways to success, including remedial education, attainment of a degree or a postsecondary certificate, and transfer to four-year institutions of higher education.
4. Enter into memoranda of understanding in order to establish student pathways to success with the Baltimore City Public School System (BCPSS), institutions of higher education, and employers.
5. Align the budget of BCCC with realistic enrollment projections.
6. Engage in a comprehensive review of all positions, faculty, and staff at BCCC.
7. Establish strong relationships with key stakeholders, including those specified.
8. Develop and market a brand for BCCC. (VP Advancement & Strategic Partnerships)
9. Address the information technology (IT) and infrastructure needs of BCCC, including whether oversight by the Department of Information Technology is advisable.
10. Develop or sell all unused or underutilized real estate, including the Inner Harbor site.
11. Identify any barriers in State or local laws or regulations that impede the ability of BCCC to operate efficiently and effectively, including procurement and capital construction projects.
12. The Board of Trustees shall review and, if necessary, revise the strategic plan.

1.3 Governance and Organization

BCCC's governance is vested in the nine-member Board of Trustees of the College. Eight of its members are appointed by the governor, with the advice and consent of the Senate, to six-year terms. Each academic year a student is selected to serve as a voting member of the Board. Student representation is achieved through a comprehensive application and selection process, coordinated by the Office for Student Activities.

The Board is responsible for setting policy for the institution and the selection of the President of the College. The President has overall operational authority and responsibility for Baltimore City Community College and as such, exercises general supervision of all divisions. The President shares administrative responsibility with Cabinet each with a broad range of responsibilities for Academic Affairs, Student Affairs, Workforce Development and Continuing Education, Finance and Administration, Information Technology, Internal Audit, General Counsel, Advancement and Strategic Partnerships, and Institutional Effectiveness, Research and Planning. Faculty and staff also participate in the governance of the

College through standing and ad hoc committees, the Faculty Senate, and representation on the College Council.

Student Government

The College encourages students to assume the responsibilities of self-government recognizing this is an important facet of higher education. The student body is known as the Associated Students of Baltimore City Community College. The 15-member executive group of the Associated Students is known as the Student Governance Board (SGB). Its purposes are to promote the academic, cultural, and social growth of the student body; provide experience in the principles and practices of democratic government; and appropriate monies supplied by the Student Activity Fee. The SGB is represented on the College Council, and its representative is invited to submit information to the Board of Trustees at its monthly meetings.

Faculty and Staff

During the fiscal year 2019-2020, BCCC is authorized 469 full-time faculty, administrative, and support staff. In addition, the College is authorized 528 part-time faculty and staff. The following table illustrates the distribution of personnel who are critical to the mission, strategic priorities and learning experience at Baltimore City Community College.

Organizational Units

The Liberty Heights campus is the college's primary instructional and administrative component, with particular concentration in life sciences and nursing programs, in addition to broader academic instruction.

This study focuses on the Liberty Heights campus. The college has programs in leased space at Reisterstown Plaza, the University of Maryland Biopark, and downtown. These facilities are not included in this master plan.

Historical Summary

BCCC is the third-oldest community college in Maryland. It was established as Baltimore Junior College (BJC) in 1947 as a unit of Baltimore City Public Schools at Baltimore City College High School. In 1959 the college acquired the facilities of the Park School on Liberty Heights Avenue and moved to the new location, occupying one of the old school buildings. In 1965 the campus was extensively redeveloped with all-new construction for the college.

In 1968 the college was re-named the Community College of Baltimore and was organized as a separate entity within Baltimore City government. In 1990 the college was re-organized as a state-sponsored institution, and became BCCC in 1992.

In 2011 the college acquired the former Provident Hospital property on the north side of Liberty Heights Avenue from the Bon Secours Health System.

1.4 Facility History

In 1959 BJC moved to its present 19-acre site on Liberty Heights Avenue. The first three new buildings to be built were Main Hall, the Library and the Physical Education Building, in 1965. In the 1970s the Nursing Building was built next to Main Hall. A second campus was established near the Inner Harbor to create a presence in downtown Baltimore. After two years as the New Community College of Baltimore, the college was finally renamed BCCC in 1992.

The Life Sciences Building was constructed in 1996. The modular Harper Hall was built in 2001 to provide temporary space while Main Hall was renovated. A similar building was built in 2006 for the facilities department. Main Hall was renovated 2012-18, except for the Fine Arts Wing.

The former Bon Secours medical campus was purchased in 2011, with the North, West and South Pavilions. The West Pavilion is the former nurses' dormitory of now-demolished Provident Hospital, and includes much of the old hospital's central infrastructure, now long abandoned. The South Pavilion was the hospital's medical office pavilion. The North Pavilion was a community substance abuse treatment center.

Physical Description

BCCC is Baltimore's urban-serving institution of higher education. Lacking on-campus student housing, all of the college's arrive each day by car or rapid transit for their classes, whether they are at Liberty Heights, downtown, or at a satellite location. The campus lies between two subway stations, West Cold Spring about a mile to the north, and Mondawmin about 2500 feet to the east. Both are sufficiently far from the campus to limit their usefulness for access without transferring to a bus, particularly given the campus's elevation relative to Mondawmin. The subway underlies Liberty Heights Avenue for much of its length along the north side of the campus, limiting connection opportunities in that direction.

The Liberty Heights campus is located at the crest of the Liberty Heights hill in northwest Baltimore, at 2901 Liberty Heights Avenue, to the south of the street. The college's environs are a mixture of low and medium density residential districts, parks and commercial areas.

West of the campus is Hanlon Park and three Baltimore City schools. The Ashburton neighborhood to the northwest is primarily a single-family residential district. To the north, sharing Liberty Heights, are Baltimore City waterworks facilities and a light industrial zone. Less than a mile to the east are Druid Hill Park and Mondawmin Mall. About 2500 feet to the southeast, across Gwynns Falls Parkway, is Coppin State University. No direct route connects Coppin with BCCC.

The Liberty Heights campus is closely bounded to the west and south by CSX railroad rights-of-way. The north side is bounded by Liberty Heights Avenue, which, like the railroad, is depressed below the elevation of the college campus over much of its length. The sole point of vehicular access to the south campus is at the intersection of Liberty Heights

Avenue and Druid Park Drive. As Liberty Heights Avenue runs eastward it descends, with high retaining walls on the south side of the street and one stairway from the campus down to street level. On the east side, toward downtown, the campus is bounded by a residential area along Burlieth Avenue. A steep embankment separates the college from the residences, with no access to the area to the east from campus.

The primary campus infrastructure dates to the 1960s, as do most of the buildings.

A nursing building was added to the campus in 1977, and the Life Sciences Building was constructed in 1996. Temporary modular structures were built in front of the gymnasium for administrative space, child care and the facilities department in 2001 and 2006.

In 2011 the college acquired property on the north side of Liberty Heights Avenue from the Bon Secours Health System. The tract included three major buildings, which remain. The South Pavilion included administrative space, the West Pavilion was a skilled-care nursing facility, and the North Pavilion was a community health facility. None of these buildings were designed for public use or for education. They are surrounded by large areas of parking and undeveloped green space. The parcel of 18.5 acres is now referred to as North Campus.

Most recently, 75 percent of Main Hall was substantially renovated between 2004 and 2008, with a final phase that renovated the administrative area in 2018, but the Fine Arts Wing remains as built in 1965.

A campus loop road is in final planning stages and construction is expected to begin in 2021. Harper Hall, a temporary modular building, will be removed A somewhat newer modular building for the facilities department will remain in use for some time to come.

The Liberty Heights campus is bounded to the west and south by CSX railroad rights-of-way. The north side is bounded by Liberty Heights Avenue, which, like the railroad, is depressed below the elevation of the college campus over much of its length by as much as 50 feet. The sole point of vehicular access is at the intersection of Liberty Heights Avenue and Druid Park Drive. As Liberty Heights Avenue runs eastward it descends, with 20-foot high retaining walls on the south side of the street and one stairway from the campus down to street level. On the east side, toward downtown, the campus is bounded by a residential area along Burlieth Avenue. A steep embankment separates the college from the residences, with no access to the area to the east from campus.

The North Campus, added in 2011, is bounded on the west by the Baltimore City Waterworks, on the south by Liberty Heights Avenue, on the north by residential areas, and on the east by mixed residential and commercial development.

1.5 Instructional Programs

As a public comprehensive, open admissions two-year urban-serving community college, BCCC offers a wide range of transfer, career, continuing education and personal development education programs. These programs lead to the Associate of Arts (A.A.), Associate of Science (A.S.), and Associate of Applied Science (A.A.S.) degrees and Certificates in specialized areas. During the 2019-2020 academic year, the College offered 30-degree programs in transfer and career areas, 10 Areas of Concentration, and 18 certificates. Additional programs are offered at various off-campus sites throughout Baltimore City. A more detailed examination of BCCC's Instructional programs are presented in Chapter 2. As of fall semester 2019, BCCC is fully accredited by the Middle States Commission on Higher Education.

The classes with the highest numbers of credit hours at the main campus are core curriculum classes, such as English, mathematics and biology. Specialty classes in dental hygiene and nursing are in particular demand. Enrollment is low for programs in construction management, engineering and environmental science. In general, enrollment is dominated by programs related to nursing and health.

Programs within the College are currently fully approved or accredited as follows:

School of Arts and Social Sciences
Education, Social and Behavioral Sciences Department
Associate of Arts

- Allied Human Services, AA
- Arts and Science Transfer, Theatre AOC, AA
- Arts and Sciences Transfer, Art AOC, AA
- Arts and Sciences Transfer, Music AOC, AA
- Arts and Sciences Transfer, Psychology AOC, AA
- Elementary Education/Generic Special Education PreK-12, AA
- General Studies, AA
- Teacher Education, AA

Associate of Applied Science

- Addiction Counseling, AAS
- Early Childhood Education, AAS
- Law Enforcement and Correctional Administration, Correctional Administration, AAS
- Law Enforcement and Correctional Administration, Law Enforcement Administration, AAS
- Legal Assistant, AAS

Associate of Science

- Teacher Education, Math/Science Concentration, AS

Certificate
- Addiction Counseling Certificate (M128)

- Allied Human Services Certificate (M048)
- Early Childhood Education Certificate (M251)
- Special Education Assistant Certificate (M116)

School of Business, Science, Technology, Engineering and Mathematics
Business and Technology Department
Associate of Applied Science
- Accounting, AAS
- Business Management, AAS
- Business Marketing, AAS
- Computer Information Systems, AAS
- Computer-Aided Drafting and Design (CADD), AAS
- Construction Supervision, AAS
- Cyber Security and Assurance, AAS
- Fashion Design, AAS
- Fashion Design, Fashion Retailing Concentration, AAS
- Office Administration, AAS
- Robotics/Mechatronics Technology, AAS
- Transportation and Supply Chain Management Degree AAS

Associate of Science
- Business Administration, AS

Certificate
- Accounting Certificate (M211)
- Computer Aided Drafting and Design Certificate (M717)
- Construction Supervision Certificate (M401)
- Cyber Security and Assurance Certificate (M710)
- Fashion Design Certificate (M186)
- Information Technology Basic Skills Certificate (M709)
- Robotics and Mechatronics Certificate (M716)
- Transportation and Supply Chain Management Certificate (M719)

Mathematics and Engineering Department
Associate of Science
- Arts and Sciences Transfer, Actuarial Science AOC, AS
- Arts and Sciences Transfer, Pure and Applied Mathematics AOC, AS
- Engineering, AS

Associate of Science in Engineering
- Electrical Engineering, ASE

Natural and Physical Science Department
Associate of Applied Science
- Biotechnology, AAS

Associate of Science
- Arts and Sciences Transfer, Science AOC, AS

Certificate
- Biotechnology Lab Certificate (M405)
- Lab Animal Certificate (M404)

School of Nursing and Health Professions
Nursing Health Professions
Associate of Applied Science
- Dental Hygiene, AAS
- Health Information Technology, AAS
- Paramedicine, AAS
- Physical Therapist Assistant, AAS
- Respiratory Care, AAS
- Surgical Technologist, AAS

Associate of Science
- Nursing, AS

Certificate
- Coding Specialist Certificate (M205)
- Paramedic Bridge Certificate (M711)
- Paramedic Certificate (M713)
- Practical Nursing Certificate (M216)

1.6 Glossary

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

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

Class Laboratory: Spaces that are used primarily for formally or regularly scheduled classes that require special purpose equipment for a specific room configuration for student participation, experimentation, observation, or practice in an academic discipline.

Classroom: Spaces that are not tied to as specific subject or discipline by equipment or room configuration.

Core Space: Space necessary because of existence of the institution or program without regard to other factors.

Credit Hour: A numerical value awarded a student for successfully completing a course.

Facilities Inventory: Room-by-room and building-by-building listing of assignable spaces, their primary use, their size and their capacity.

Full-Time Equivalent Faculty (FTEF): A base factor statistic equal to full-time faculty plus 25% of all part-time faculty. Note: This statistic is used in this document for facilities planning purposes only, and the calculation may differ from the FTEF computed for budgetary or other reporting purposes.

Full-Time Equivalent Student (FTE or FTES): The total number of on campus credit hours taught during a given semester, divided by 15. Note: This statistic is used in this document for facilities planning purposes only, and the calculation may differ from the FTE computed for budgetary or other reporting purposes.

Full-Time Day Equivalent Student (FTDE or FTDES): The total number of on campus credit hours taught before 5:00 p.m. during a given semester, divided by 15. Note: This statistic is used in this document for facilities planning purposes only, and the calculation may differ from the FTDE computed for budgetary or other reporting purposes.

Gross Square Feet (GSF): The sum of square feet of space in a building included within the outside faces of exterior walls for all stories or areas that have floor surface. Included are all structural, mechanical, service and circulation areas.

Net Assignable Square Feet (NASF): The sum of all areas on all floors of a building assigned to, or available for assignment to an occupant for specific use. Excluded are those spaces defined as structural, mechanical, service and circulation areas.

On-Campus: Refers to BCCC's Liberty Campus

Student Contact Hour: A measure of time of scheduled interface between students and teacher. Usually expressed in terms of Weekly Student Contact Hour (WSCH), which is the number of hours per week of required interface.

Baltimore City Community College
Facilities Master Plan
Liberty Heights Campus

Maryland Department of General Services
Project Number: CC-000-190-003

Chapter 2
Background Data

Chapter 2

Background Data

2.1 Instructional Organization

Three academic divisions, each headed by a dean and supported by Associate Deans, offer the credit instructional programs for Baltimore City Community College: School of Arts and Social Sciences, School of Nursing and health Professions and School of Business Science Technology and Engineering. Each division is comprised of several departments and/or programs. This instructional organization is administered by the Vice President for Academic
Affairs.

Associate Degree Designations

Associate degree programs require completion of a minimum of 60 credits including an established set of requirements for graduation. The Associate degree often parallels the first two years of study at a four-year college or university. Students need only two additional years of study to complete a Bachelor degree. The Associate degree is also suitable for career exploration, advancement and skills upgrading. The Associate of Applied Science (A.A.S.) degree focuses on specific occupational areas, and is intended to provide students with entry-level employment skills, instruction for employed students seeking to upgrade skills, and training for students preparing for a career change. The Associate of Arts (A.A.) degree focuses in the liberal arts, humanities, and fine arts. Scientific and technical studies are the focus of students pursuing the Associate of Science (A.S.) degree.

Non-Traditional Studies

Baltimore City Community College offers a variety of opportunities for students to earn college credits through nontraditional course formats and individualized program advising. These formats are oriented toward self-directed students who either have encountered obstacles in meeting their educational goals through conventional academic scheduling, or who prefer the flexibility afforded through these options. Through non-traditional course formats, students can access a broadened learning environment, develop a new kind of relationship with academic faculty, and pursue a personalized approach to study which is tailored to fit their individual situations and learning styles. Examples of non-traditional learning formats available at BCCC include: Online Courses, Individual Study, Independent Study, and Telecourses.

In addition to the program formats offered by Baltimore City Community College, various statewide programs are available to Baltimore City residents at other Maryland community colleges. City students enrolled in these programs are eligible for in-county tuition rates at the host institution. Eligible high school juniors and seniors may earn college credits while still in high school under BCCC's Early Enrollment program. College credits earned by Early Enrollment students can often be applied toward high school

graduation requirements and, in all cases, will be a part of the student's permanent college record.

2.2 Workforce Development and Continuing Education

The Workforce Development and Continuing Education Division (WDCED) serves the residents and business community of Baltimore City. WDCED offers workforce development programming, short term job training programs designed for students to earn industry credentials and enter the workforce. In addition, WDCED includes the Adult Basic Education (ABE) Department, which provides academic programming for students who want to earn their high school diploma, and the English Language Services (ELS) Department, which offers classes in English as a Second Language (ESL) and Citizenship preparation. The WDCED Division also includes Career Services, which assists students in career readiness and job placement and retention services. The organization structure consists of four program areas (Departments) and the offices of Operations, Budgets and Contracts to provide financial managements, accountability and human resource services. Each Department is headed by a Director. This functional organization is administered by the Vice President for Workforce Development and Continuing Education.

The WDCED partners with local business and industry to offer cost effective, in-demand, contract and customized training that significantly contributes to Baltimore's economic and workforce development. WDCED has aligned programs to develop and industry sector-based Career Pathways. By linking entry-level thorough advanced training and education, students can gain the knowledge, skills, and abilities to enter and advance in employment with family sustaining wages and opportunities for advancement. WDCED offers a wide range of workforce development programs across 8 industry sectors (health and biosciences, IT and cybersecurity, business and workplace skills, hospitality and tourism, construction and manufacturing technologies, environmental and natural resources and transportation distribution and logistics) that provide certification and licensure to students looking to enter the workforce in their chosen career field. Workforce training locations include the Harbor Campus, Reisterstown Road Plaza Campus, South Pavilion Campus, University of Maryland Baltimore Biopark Campus, and the Liberty Campus. ESL and ABE courses are also offered at many community sites across Baltimore City. Courses are available both in person and virtual to accommodate all types of learners and schedules.

The following table represents Maryland Association of Community Colleges (MACC) data showing that non-credit courses accounted for nearly 29% of BCCC's state-funded FTE enrollment in Fiscal Year 2020. Although Maryland space planning models do not provide for consideration of continuing education student enrollment data when computing space needs, it is rather obvious that the implications of this statistic on BCCC's facilities needs are significant. The recent decline of English as a Second Language students due to national, State and local policy impacted the more recent reduction of non-credit FTE.

Table 2-1
State-Funded FTE Enrollment (FY 2010 - FY 2020)

	Fiscal Year										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
Credit FTE	4,350	4,522	4,163	3,310	3,165	2,990	2,529	2,302	2,206	2,478	2,591
Non-Credit FTEs	2,248	2,477	2,586	2,636	2,596	2,389	2,102	2,291	1,768	1,505	1,054
Total Eligible FTEs	6,598	6,999	6,749	5,946	5,761	5,379	4,631	4,593	3,974	3,983	3,645
Non-Credit %	34.1%	35.4%	38.3%	44.3%	45.1%	44.4%	45.4%	49.9%	44.5%	37.8%	28.9%

* FY 2020 FTEs are unaudited. Source: CC-2 and CC-3 Reports

2.3 Enrollments

2.3.1 Historical Trends

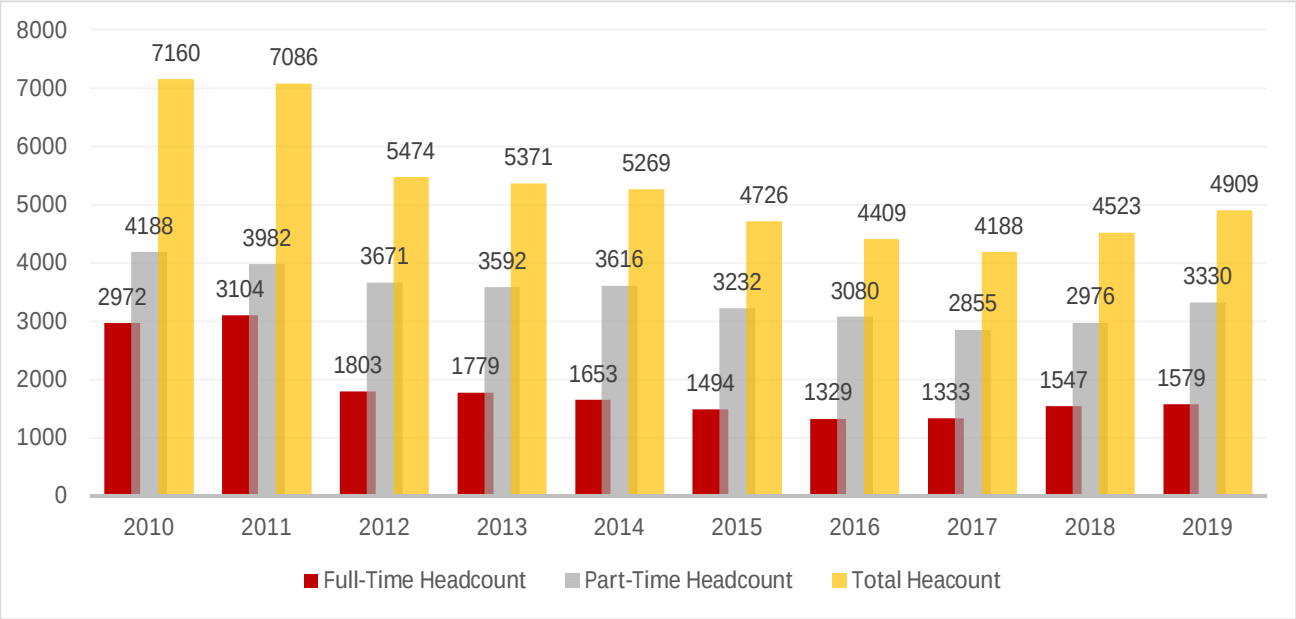
By analyzing an institution's student body composition during the past few years, it is possible to deduce trends in the numbers and types of students enrolled, number of credit hours generated, and choices among continuing programs. A preliminary examination of the table below, which shows fall credit headcount enrollment trends for students attending Baltimore City Community College during the past ten years, reflects a ten-year change of 31% and a fluctuating 2.0% average annual growth rate for total headcount students. Enrollment from 2000 through 2004 saw a steady increase, followed by a slight dip in 2005 to 2007. Enrollment has been trending upwards again from 2008 to the present day. The mix of full-time to part-time students has changed significantly since 2000. In that year, 32% of BCCC's students were classified as full-time. In the fall semester of 2010, 42% of the students are full-time. Enrollment growth rate for full-time students over the last ten years is more than 10 times that of part-time students.

Table 2-2

Historical Fall Enrollment Headcount Trends				
Fall Semester		Full-Time Headcount	Part-Time Headcount	Total Headcount
2010		2972	4188	7160
2011		3104	3982	7086
2012		1803	3671	5474
2013		1779	3592	5371
2014		1653	3616	5269
2015		1494	3232	4726
2016		1329	3080	4409
2017		1333	2855	4188
2018		1547	2976	4523
2019		1579	3330	4909
				% Change total
% Change 2010 - 2019		-47%	-20%	-31%
	Full-Time	2972	1579	-47%
	Part-Time	4188	3330	-20%
	Total	7160	4909	-31%

Source: Baltimore City Community College Office of Institutional Research

Table 2-3



Source: Baltimore City Community College Office of Institutional Research

2.3.2 Current Enrollment

During the fall semester of 2019, 2,748 FTE Baltimore City Community College students generated 41,232 credit hours of enrollment. The following table shows the enrollment distribution in terms of main campus, satellite locations, off-campus and distance learning.

Table 2-4

Current Credit Enrollment Distribution (Fall 2019)

	Total	Total
Location	Credit Hrs	Credit FTEs
Liberty Campus	29,654	1,977
Satellite Locations	1,502	100
Off Campus	1,324	88
Distance (Online)	8,752	583
Total BCCC	41,232	2,748
Source: Baltimore City Community College Office of Institutional Research		

A comprehensive summary of actual on-campus credit hours generated by the main campus (Liberty) and the satellite locations (the aggregate total of BioPark, RPC, and WDCE) is provided in the table on the following page. The data are further organized by Day (before 5:00 p.m.), Evening (after 5:00 p.m.), and Weekend (Saturday and

Sunday). The majority (74%) of BCCC's on-campus enrollment is concentrated during the day at the Liberty Campus. The overall on-campus enrollment (95%) has been concentrated at Liberty Campus due to past construction and the decision to de-commission the Harbor Bard Building for academic purposes. Both Liberty and the satellite locations experience larger credit enrollments during the day versus evening (Liberty: 74% and Satellite Locations: 89%). Overall, 75% of on-campus enrollments occur before 5:00 p.m.

Table 2-5
Comparative Summary: Day, Evening, Weekend
On Campus Credit Hour Generation (Fall 2019)

	Liberty		Satellite Locations		Total On-Campus	
Generations	Credit Hrs		Credit Hrs		Credit Hrs	
Credit Hours: Day	21995	1466	1342	89	23337	1555
Credit Hours: Evening	6024	402	160	11	6184	413
Credit Hours: Weekend	1635	109	0	0	1635	109
Credit Hours: Total	29654	1977	1502	100	31156	2077
% Day	74%	74%	89%	89%	75%	75%
% Evening	20%	20%	11%	11%	20%	20%
% Weekend	6%	6%	0%	0%	5%	5%
% Total	95%	95%	5%	5%	100%	100%
Source: Baltimore City Community College Office of Institutional Research						

One factor in identifying the academic thrust of an institution is the student subject selection distribution among disciplines. For purposes of establishing the integrity and substance of parameters required for providing appropriate rationale for educational space planning and thorough consideration and application of the Maryland Higher Education Commission (MHEC) *Space Allocation Guidelines for Community Colleges*, systematic relationships between credit hours and weekly student contact hours (WSCH) are established. Analysis of student subject selection distribution among disciplines and the crucial ratios between credit hour and contact hour generation is fundamental to the application of guidelines for determining quantitative indicators of space needs. For example, the total number of credit hours during the day at Liberty Campus for fall 2019 was 21,995, but the total number of contact hours generated by students occupying spaces was 23,337. For purposes of facility and space planning, this derived difference is a crucial factor for determining the quantity and quality of existing educational environments and facilities. It also ensures a relatively stable foundation for extrapolating future needs. If credit hours are used to estimate instructional space needs, extrapolations would result in a shortfall of estimated need. The table below summarizes the detail presented on the next two pages.

Table 2-6
On-Campus Credit vs. Contact Hour Generation: Baltimore City Community College
Fall 2019 (Day Only)

		Number	Credit	WSCH	WSCH	WSCH
Location		Enrolled	Hours	Lecture	Lab	Total
Liberty Campus		7,680	21,995	21,059	2,559	24,118
Satellite Location		484	1,342	1,195	441	1,636
Totals		8,164	23,337	22,254	3,000	25,754
Source: Baltimore City Community College Office of Institutional Research						

Table 2-7
On-Campus Credit vs. Contact Hour Generation: Liberty Campus
Fall 2019 (Day Only)

	Course Code	Number Enrolled	Credit Hours	WSCH Lecture	WSCH Lab	WSCH Total
English, Humanities, Visual and Performing Arts Dept.						
Art	ART	118	354	354		354
Developmental Reading/English	RENG	638	2542	2552		2552
English	ENG	541	1623	1623		1623
English Language Instruction	ELI	50	237	237		237
Music	MUS	36	80	80		80
Speech	SP	243	729	729		729
Public Services, Education, and Social Sciences Dept.						
Addiction Counseling	ADC	62	186	186		186
Allied Human Services	AHS	111	406	406		406
Criminal Justice	CRJ	47	141	141		141
Early Childhood Education	ECE	16	48	48		48
Education	EDU	15	45	45		45
Health and Life Fitness	HLF	172	343	413		413
Health	HEA	62	170	178		178

	Course Code	Number Enrolled	Credit Hours	WSCH Lecture	WSCH Lab	WSCH Total
History	H	167	501	501		501
Philosophy	PHI	66	198	198		198
Psychology	PSY	244	732	732		732
Sociology	SOC	121	363	363		363
Special Education	SED	10	30	30		30
Computers, Mathematics, Engineering and Sciences Dept.						
Biology	BIO	938	1886	1422	1392	2814
Chemistry	CHE	157	324	261	189	450
Developmental Mathematics	MAT	645	3182	3182		3182
Engineering Transfer	EGN	22	66	66		66
Environmental Science	ES	19	57	57		57
Mathematics	MAT	403	1301	1301		1301
Physics	PHY	22	55	44	33	77
Robotics	RBT	15	60	60		60
Nursing and Health Dept.						
Allied Health	AH	18	54	54		54
Dental Hygiene	DH	179	360	262	345	607
Dental Science	DS	30	45	30	45	75
Emergency Medical Services/Paramedicine	EMS	50	225	175	100	275
Nursing	NUR	313	891	891		891
Physical Therapy Assistant	PTT	80	191	128	186	314
Respiratory Care	RC/RESP	99	137	245	0	245
Surgical Technology	SGT	23	32	18	42	60
Business and Technology Dept.						
Accounting	ACCT	48	144	144		144
Business Administration	BUAD	275	825	825		825
Business Computer Applications	BCAP	196	588	784		784
Computer Information Systems	CISS	232	589	560	64	624
Computer Literacy	CLT	167	334	334		334
Computer-Aided Drafting & Design	CADD	69	103	68	70	138
Construction Supervision	CON	6	18	18		18
Cooperative Education	COP	43	129	129		129
Cyber Security and Assurance	ITSA	114	174	120	54	174
Economics	ECO	33	99	99		99
Electronics Technology	ELC	26	39	26	39	65
Fashion	FASH	80	240	321		321

	Course Code	Number Enrolled	Credit Hours	WSCH Lecture	WSCH Lab	WSCH Total
Management	MGMT	142	426	426		426
Marketing	MKTG	47	141	141		141
CIS{ Networking	ITNT	38	114	114		114
Transportation & Supply Chain Management	TSCM	3	9	9		9
Orientation Courses						
Preparation for Academic Achievement	PRE	429	429	429		429
Liberty Totals		7680	21995	21559	2559	24118

Source: Baltimore City Community College Office of Institutional Research

Table 2-8
On-Campus Credit vs. Contact Hour Generation: Satellite Locations
Fall 2019 (Day Only)

		Course Code	Number Enrolled	Credit Hours	WSCH Lecture	WSCH Lab	WSCH Total
BioPark							
Computer, Mathematics, Engineering, and Sciences Dept.							
Biology		BIO	153	299	219	240	459
Biotechnology		BTC	44	112	102	30	132
Chemistry		CHE	57	101	66	105	171
Lab Animal Science		LSS	12	36	36		36
Mathematics		MAT	17	61	61		61
Physics		PHY	44	88	66	66	132
BioPark Totals			327	697	550	441	991
Harbor							
English, Humanities, Visual and Performing Arts Dept.							
English Language Instruction		ELI	157	645	645		645
Harbor Totals			157	645	645	0	645
Satellite Totals			484	1342	1195	441	1636

Source: Baltimore City Community College Office of Institutional Research

2.3.3 Faculty and Staff

Baltimore City Community College is authorized 414 full-time faculty, administrative, and support staff. In addition, the College has authorized 437authorized PINS. The following table illustrates the distribution of personnel who are critical to BCCC's mission, strategic priorities and learning experience.

Table 2-9
Current Faculty and Staff (Authorized)

Category	FT	PT	Total	FTEF
Faculty (Credit)	108	291	399	174
Faculty (Non-Credit)	0	81	81	32
Librarians	3	0	3	3
Sub-Total Staff	111	372	483	209
Administrative/Professionals	99	3	102	na
Support Staff	204	191	395	na
Sub-Total Staff	303	194	497	na
Total Faculty and Staff	414	566	980	209

Source: Baltimore City Community College Office of Institutional Research

Table 2-10

2019-2029 statistical projections, Liberty Heights Campus

Input Item	Actual Fall 2019	Projected Fall 2029
Staff Requiring Office Space		
FT Faculty (Credit)	106	168
PT Faculty (Credit)	153	243
FTE Faculty (Credit)	144	228
FT Staff (All)	437	465
Planning Headcount		
PHC = 50% (FTDE+FTEF+FTE Staff)	1,131	1,491

Source: Baltimore City Community College Office of Institutional Research

2.3.4 Library Volumes

BCCC Libraries contain learning resources in diverse formats including, books, print and electronic periodicals, reference tools, audiovisual materials and indexes. The Bard Library at Liberty Campus houses strong collections in allied health, the social sciences, literature, African-American studies and multicultural education.

Table 2-11 - current collection at the Liberty Campus

	Physical (A)	Digital/Electronic (B)
40 Books (title count)	52,179	7,472
40a Books (volume count)	54,134	
41 Databases		47
42 Media	1,255	95,481
43 Serials	137	42,486
44 Total	53,571	145,486
45 External Contributions from Consortia / Network(s)	$0	$0

Source: Baltimore City Community College Office of Institutional Research

Table 2-12

2019-2029 statistical projections, Liberty Heights Campus

Input Item	Actual Fall 2019	Projected Fall 2029
Library Information Factor		
Bound Volume Equivalent (BE)	74,880	104,750

Source: Baltimore City Community College Office of Institutional Research

2.3.5 Facilities Inventory

An inventory of space use was provided to the design team by the BCCC, with space assignments coded according to the Higher Education General Information Survey (HEGIS) space use coding system. The data is examined in Chapter 3, Space Needs, to establish the space requirements of the BCCC.

The data set used in this master plan differs from that in the 2007/2011, in that the current study is confined to the Liberty Heights and North Campus facilities. It excludes

BCCC facilities at Reisterstown Plaza and University of Maryland, Biopark, as well as downtown operations. All of the facilities in this report are considered permanent facilities. However, certain operations in the South Pavilion are tenants in leased space. Adjustments have been indicated where appropriate for available space.

Table 2-13

2019-2029 statistical projections, Liberty Heights Campus

Input Item	Actual Fall 2019	Projected Fall 2029
Student Data (On-Campus Before 5 p.m.)		
Credit Hours (Course Credits * Enrollment)	24,523	34,336
FTDE (Credit) ([Seats*Credit Hours]/15)	1,648	2,289
Contact Hour Data (On-Campus Before 5 p.m.)		
WSCH (Lecture)	20,256	*34,564*
WSCH (Laboratory)	2,942	4,722
WSCH (Total)	23,198	38,116

Source: Baltimore City Community College Office of Institutional Research

2.3.6 Parking

Liberty Heights Campus
There are 515 parking spaces distributed among six lots at the Liberty Campus site. Another 428 spaces are located across the street on the North Campus property, and 240 spaces are available in leased space at the Palladium, across from the college's main entrance. All existing parking is on surface lots as there are no parking structures on the Liberty Campus.

Parking capacity as observed by the college is at present sufficient for daily use. Peak class time parking appears to be adequate. Most student parking is on leased space across Liberty Heights Avenue, and most faculty parking is in Lot A at the southeast corner of the main campus. Additional parking is available on the north campus property, but is distant from destinations on the main campus, with minimal security and no shuttle service. Nighttime parking at the north campus is not desirable, due to safety concerns. Lighting in all lots is inadequate.

The campus loop road project will diminish parking at the main campus by 44 spaces. It will improved access overall and repair a number of deficient pavement conditions.

Further discussion of existing Liberty Campus parking is presented in Chapter 5. Chapter 6 includes recommendations for modifications to and future development of campus parking.

Baltimore City Community College
Facilities Master Plan
Liberty Heights Campus

Maryland Department of General Services
Project Number: CC-000-190-003

Chapter 3
Space Needs

Chapter 3

Space Needs

Since the original 2007 Master Plan, BCCC's Office of Institutional Research (OIR) has continued to track enrollment trends at the various sites that make up the College. Three major physical changes since the original 2007 Master Plan have dramatically impacted the BCCC's vision for the future, and have necessitated a revision to the projected space needs of the institution. These changes include:

- The acquisition of the North Campus (former Bon Secours site adjacent to the Liberty Campus)
- The Harbor Campus Bard Building has been taken off-line
- BCCC has also opened satellite locations to specifically satisfy demand for programs in support of high-growth industry sectors. These satellite locations consist of the Life Sciences Institute at University of Maryland, BioPark, and the Reisterstown Road Plaza Campus, which are not part of this master plan.

In addition to these space changes, BCCC anticipates a marked increase in both student retention and new enrollment from new and expanded programs. Program enhancements will interface with new space acquisitions to increase BCCC's effectiveness and marketability in the Maryland higher education market, specifically the Baltimore region. The overall result is anticipated to be a significant increase in enrollment numbers (and hence FTDE) for BCCC. These developments are displayed in the OIR graphic above, along with anticipated FTDE distributions by site over the next 10 years. The original 2007 Master Plan anticipated the restoration of the Harbor Campus enrollment, but the graphic displays how drastically that priority has shifted due to the acquisition of new properties by BCCC. The focus is now clearly on expanding and enhancing the Liberty (and Bon Secours) Campus, with strong growth also anticipated at an east Baltimore location. These new acquisitions reflect and support BCCC's stated academic priorities, including a renewed emphasis on developmental education and related enhancements. These changes support the vision of a vibrant and unified central campus with strong support facilities strategically placed throughout the city. Each of these changes and subsequent impact(s) is discussed in further detail in the following paragraphs.

3.1 The Harbor Campus Bard Building

The Harbor Campus Bard Building has been challenged with escalating repairs, failing systems and air quality concerns in recent years. In FY 2007 and FY 2008 emergency mold remediation occurred in the Bard Building-Harbor Campus. Permanent remediation and correction of deficiencies including upgrading of the utility system, HVAC, fire suppression electrical and plumbing in addition to replacing the external building façade/cladding to stop the penetration of weather and moisture was estimated at $30.4 million (FY 2008 estimate).

In 2010 as a result of the decline of the building and the rising cost of repairs, programs located at the Bard Building were relocated and the building was taken off line. These

developments drastically affect the BCCC's vision moving forwards, as a primary goal of the original 2007 Master Plan was restoration of the Harbor Campus enrollment to mid-1980's levels. The pending mixed-use development obviously changes this projection. However, previous research by the OIR has concluded that the declining enrollments at Harbor prior to its decommissioning were NOT due to declining student demand, but rather a variety of other interrelated and debilitating factors. Hence, this demand must be met at the BCCC's other facilities – a reality which has already started to strain the school's existing inventory.

3.2 Downtown Programs

With the removal of the Bard Building from service and withdrawal from the Gompers building, BCCC has identified programs for development in a future development to be associated with the eventual disposition of the Bard property. This development will incorporate programs that continue to operate in leased space downtown.

At present, core classes in GED, ESL and four basic curriculum classes operate in leased space. It is expected that approximately 40,000 square feet will be needed for these and future classes in a future mixed-use development. The downtown curriculum will include core curricula, workforce education and selected specialty programs. It is envisioned that a developed-led mixed-use project will incorporate this space as part of the disposition of the Bard Building property.

Strategies for Improved Retention

BCCC is in the process of implementing the *Strategic Enrollment Management and Retention Plan.* This plan envisions improved retention across various subsets of the student population as a result of a variety of factors, including:

- Enhancements to student support services (i.e. the Student Success Center)
- *Performance Alert Intervention System*
- Improved tutoring services

Enhancement of Programs

BCCC anticipates increased enrollment as a result of program enhancements and additions. Curriculum development at BCCC is a cooperative effort of faculty, administration and the BCCC Office of Institutional Research and Planning; colleagues in city high schools and area four-year institutions; and the Maryland Higher Education Commission. A number of program enhancements and additions are in the developmental stage at any given time. Programs evolve to reflect changes in instructional delivery methodology, technology, and needs of the market.

BCCC continually reviews its course offerings to best serve the needs of the student population, and attempts to anticipate program surges based on specific demand (i.e. a renewed focus on developmental offerings throughout BCCC; identification of an East Baltimore location as a full-service "stand-alone" facility). In addition to its current disciplines, BCCC plans to develop new programs and to specifically target expansions in support of high-growth industry sectors, workforce development, energy and sustainability.

BCCC has developed an enrollment projection model that uses the Maryland Higher Education's ten-year projected student enrollments as its base. Additional enrollments resulting from the addition of new programs in high-growth, high-demand degree areas are identified as offering opportunity for exceeding current projections.
The Workforce Development and Continuing Education Division (WDCED) offers "market-driven" programs and courses. Since WDCED's offerings must be extremely flexible, changes in course offerings are continuous. This flexibility is essential in order to meet the ever changing needs of its unique market. As the City's general population ages, it is expected that large numbers of Baby Boomers will demand continuing education and personal enrichment opportunities. The latest enrollment projections from the Maryland Higher Education Commission project BCCC's State-funded non-credit FTE to increase 1% from 2,177 FTE to 2,205 FTE over the next decade.

BCCC believes that demand for critical skills in top growth occupations, amplified need for developmental education programs and services, flexibility in contract and workforce training, and aging of the general population will be the primary drivers for future program offerings and student enrollments.

3.3 Modernization of Instructional Delivery
Due to ever changing technology for both teaching and learning, much of higher education must rethink its learning environments. Although the lecture/lab instructional delivery mode will continue to be used, colleges and universities will increasingly supplement that delivery methodology with specialized learning environments that allow for both scheduled and unscheduled instruction and learning in discipline related simulated environments.
Central to BCCC's intensified efforts to enhance and refine its learning environments are the major thrusts of restoring and maintaining existing and currently planned facilities, as well as the aesthetic environment. These thrusts are to be developed, guided, and modified within the parameters of systematic, coordinated planning efforts. The short and long-term outcomes of each planning methodology will provide direct evidence of the revitalization of levels of integrity that reflect optimal teaching and learning environments.

Contemporary learning environments are required in order for BCCC to enhance its success in attracting and retaining a representative level of Baltimore City's available student population. BCCC will continue to stress the importance of providing new facilities, renovating and rehabilitating existing facilities, and removing some obsolete facilities from inventory. Contemporary teaching/learning environments include the provision of detailed and unique needs for classroom, laboratory, library/study, and office space, as well as ancillary spaces required for supporting future programmatic impetus.
Improved literacy and refinement of technology in educational institutions dictate the provision of instructional spaces that are designed for both unique and/or shared functions. These spaces will further require adequate consistency with a global reconfiguration that increases the utilization efficiency ratio. The lack of sufficient

numbers of smart classrooms and other contemporary, flexible instructional and learning spaces has directly and indirectly curtailed BCCC's ability to fully develop the inherent potential of its credit and non-credit course offerings. Future environments should be such that the distinction between a computer lab and a lecture classroom will disappear because the technology and furnishings will be unobtrusive but available on demand. All furnishings will be easily movable or the instructional area will automatically be able to configure the furnishings based upon immediate need. With the exception of science labs, physical education spaces, and some visual and performing arts studios, the idea of rooms belonging exclusively to an instructional area will disappear. Credit classrooms would be available to Continuing Education learners and vice versa.

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

3.4 Implication of Instructional Programs on Facilities

All of the previously discussed factors (opportunities for physical expansion, expected increases in retention, program enhancements, and today's technological requirements) suggest significant growth in enrollment and a need for specific, specialized facilities. BCCC believes that the demand for occupational skills will drive program offerings in the coming years. Many of these programs, allied health and technology in particular, require specialized classrooms, labs and other facilities that can be flexibly adjusted for a variety of teaching/learning settings.
This growth is not automatic, but presents a unique opportunity for BCCC to better serve the target population. It is up to BCCC to provide the programs to accommodate the anticipated demand. This demand is used in subsequent sections to develop space needs and suggested physical development.

3.5 Space Needs Analysis

Space needs analysis is a tool for comparing the space presently available for academic services to the forecast needs of the institution. Space needs are not static, but change according to changes in instructional programs, curriculum, and student enrollment. They may also face temporary pressures resulting from renovation and modernization programs that take facilities out of service.

The College has provided data on current space inventory and utilization, staffing, and current and projected enrollment. These input values were applied according to the Maryland Higher Education Commission's *Allocation Guidelines for Community Colleges* (COMAR Title 13B) to derive a summary of current and projected space requirements for the college as a whole. These broad guidelines address classroom,

office, laboratory, specialty and support space for the Liberty Heights Campus, but do not define the space needs of specific academic programs. They are a tool for assessing the general requirements of the campus.

Space needs were projected from a baseline of the 2019 enrollment, forward to 2029. In accordance with Title 13B guidelines, hours and counts were itemized according to FTDES, weekly student contact hours (WSCH), and full-time faculty equivalents.

Harper Hall was inventoried, but is not included in totals, as it is largely vacant and slated for removal. What remains in Harper Hall are IT offices, which are planned to move elsewhere on campus.

Table 3-1
2019-2029 statistical projections, Liberty Heights Campus

Input Item	Actual Fall 2019	Projected Fall 2029
Student Data (On-Campus Before 5 p.m.)		
Credit Hours (Course Credits * Enrollment)	24,523	34,336
FTDE (Credit) ([Seats*Credit Hours]/15)	1,648	2,289
Contact Hour Data (On-Campus Before 5 p.m.)		
WSCH (Lecture)	21,793	*34,564*
WSCH (Laboratory)	2,942	4,722
WSCH (Total)	23,198	38,116
Library Information Factor		
Bound Volume Equivalent (BE)	74,880	104,750
Staff Requiring Office Space		
FT Faculty (Credit)	106	168
PT Faculty (Credit)	153	243
FTE Faculty (Credit)	144	228
FT Staff (All)	437	465
Planning Headcount		
PHC = 50% (FTDE+FTEF+FTE Staff)	1,012	1,491

3.6 Enrollment Trends

Table 3-8 reflects decreases in BCCC's (BCCC) daytime on-campus credit hours, Full-Time Day Equivalents (FTDEs), and Weekly Student Contact Hours (WSCH) from fall 2010 to fall 2019. In fall 2010, BCCC's unduplicated credit headcount stood at 7,045 students and remained relatively stable at 6,963 in fall 2011. However, BCCC experienced an unprecedented enrollment decline of 21.5% (1,496 students) in fall 2012 largely due to

changes in federal financial aid requirements, and the decline continued through fall 2017.

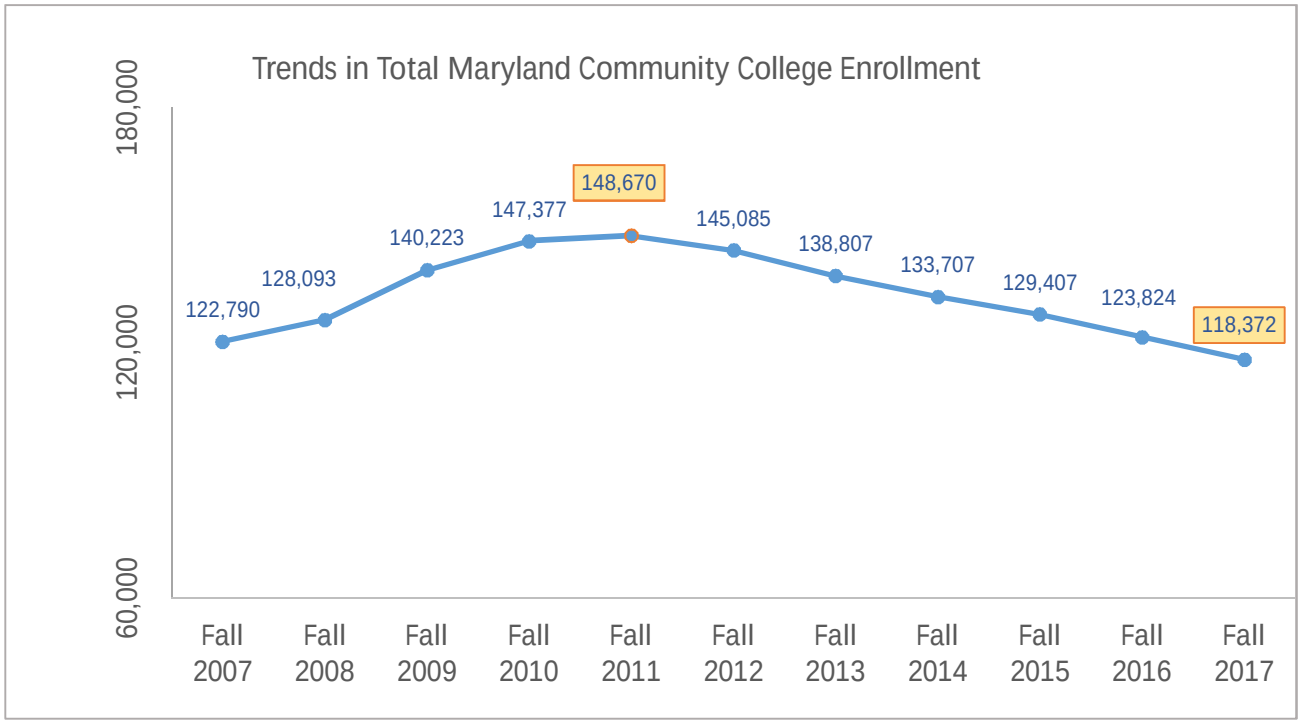
The fall 2010 data included many credit hours, FTDEs, and WSCH generated based on developmental education courses. From 2010-2017 BCCC had 12 credits of developmental math education with most of students testing into the lowest level course. In 2018 BCCC reduced the number of math developmental credits from 12 to 9. Similarly, in 2010, English had 5 levels of development courses equating to 20 credit hours. The College had three developmental English courses at four credits each and two developmental Reading courses at four credits each. Over the course of subsequent years, the College streamlined those five courses into two "RENG" (Reading/English) courses at four credits each. These changes resulted in English going through two reductions in credit hours. The first decreased the credit hours from 20 to 12 and the second went for 12 to 8, all occurring in the last 10 years. These significant programmatic changes resulted in significant decreases in contact hours impacting the seats and hours that drive all three of the input items reflected on Table 3-8. In 2010, the College counted developmental English courses taught in computer rooms as lab contact hours as opposed to lecture contact hours. The 2019 calculations reflect the appropriate distribution of contact hours for classes held in computer lab that do not qualify for lab designation.

The College has gradually increased its online course offerings over the course of the ten-year period in response to the needs of a non-traditional student population. Certificates and degrees that can be completed through entirely online or through a combination of face-to-face and online classes include Coding Specialist, Accounting, Allied Human Services, Arts & Sciences Transfer (Psychology AOC), Business Administration Early Childhood Education, General Studies, Health Information Technology, Law Enforcement & Correctional Administration, and Legal Assistant.

In addition, BCCC experienced the closure of its Bard building at the Inner Harbor site. In 2009 BCCC deleted 24 Career Technical Education programs from its portfolio. The Bard location was host to many general education courses and programs that had lab components associated with the 24 programs. The students in these programs were taught out from 2009 to 2011. The contact and credit hours for the student registrations would have been included in the 2010 calculation even though the programs were deleted. Several of the degree programs that were discontinued included Electronics, Developmental Disabilities, Dietetic Technician, Telecommunications, Fire Science, Computer Science, PC Applications, Environmental Science, Food Service Management/Hotel Restaurant Management, Word and Information Processing, Medical Transcriptionist, Legal Administrative Assistant, and Medical Administrative Assistant. Given the current workforce needs, several of these programs are under review for reinstatement.

BCCC's credit enrollment decline is representative of the trend throughout Maryland for community colleges. As illustrated in Exhibit X, fall 2017 marked the sixth year of declining enrollment for community with a total decrease of 30,928 students across the State, aligning with the pre-Recession figures.

Table 3-2



While other Maryland community colleges are experiencing flat or declining enrollment, BCCC experienced an increase of 8.0% (335 students) to 4,523 in fall 2018 largely due to the Mayor's Scholars Program (MSP). The College's MSP partnership with the Mayor's Office and Baltimore City Public Schools brought over 300 recent high school graduates from Baltimore City to the College's campus in the summer of 2018 and fall 2018. The trend continued in fall 2019 when the College experiences another increase of 8.5% (386 students) to 4,909.

3.7 Facility Inventory of Space by use, category and location
Table 3-3

HEGIS CODE	SPACE	Main Hall	Life Science	Library	Nursing	Physical Education	Facilities	West Pavillion	South Pavillion	TOTAL
100	CLASSROOM	21,793	8,104	0	7,297	1,045	0	0	0	38,239
200	LABORATORY									
210-15	Class Laboratory	20,232	21,996	866	5,534	412	0	0	0	49,040
220-25	Open Laboratory	2,748	3,286	0	0	0	0	0	0	6,034
250-55	No Allowance	0	0	0	0	0	0	0	0	0
300	OFFICE									
310-15	Office/ Conf. Room	57,116	10,827	1,384	5,414	1,867	3,403	4,346	781	85,138
320-25	Testing/Tutoring	2,896	0	0	0	0	0	0	0	2,896
350-55	Included w/ 310	2,469	0	0	0	0	0	0	0	2,469
400	STUDY									
410-15	Study	0	0	800	0	0	0	0	0	800
420-30	Stack/Study	0	0	13,600	0	0	0	0	0	13,600
440-55	Processing/Service	0	0	1,265	0	0	0	0	0	1,265
500	SPECIAL USE									
510	Armory	0	0	0	0	0	0	0	0	0
520-23	Athletic	0	0	0	0	20,027	0	0	0	20,027
530-35	Media Production	0	0	0	0	0	0	0	0	0
580-85	Greenhouse	0	793	0	0	0	0	0	0	793
600	GENERAL USE									
610-15	Assembly	6,561	0	0	1,924	0	0	0	0	8,485
620-25	Exhibition	1,366	0	0	0	0	0	0	0	1,366
630-35	Food Facility	6,144	0	0	0	0	0	0	0	6,144
640-45	No allowance	0	0	0	0	0	0	0	0	0
650-55	Lounge	4,777	247	0	0	284	0	0	0	5,308
660-65	Merchandising	4,000	0	0	0	378	0	0	0	4,378
670-75	No Allowance	0	0	0	0	0	0	0	2,518	2,518
680-85	Meeting Room	0	0	0	0	0	0	0	1,367	1,367
700	SUPPORT									
710-15	Data Processing	1,220	1,172	0	0	0	0	0	0	2,392
720-25	Shop	865	0	0	0	0	899	0	0	1,764
730-35	Included with 720	8,318	509	626	192	0	0	837	0	10,482
740-45	Included with 720	0	0	0	0	0	0	0	0	0
750-55	Central Service	0	0	0	0	0	0	0	0	0
760-65	Hazmat Storage	606	0	0	0	0	0	0	0	606
800	HEALTH CARE	0	0	0	0	0	0	0	0	0
900	No Allowance	0	0	0	0	0	0	0	0	0
050-090	No Allowance	0	0	0	0	0	0	0	0	0
	Subtotal									265,111
	Total NASF	141,111	46,934	18,541	20,361	24,013	4,302	26,934	24,712	306,908
	Total GROSS SF	246,732	81,200	38,376	36,688	35,705	5,640	69,450	38,860	552,651
	INACTIVE AREA	0	0	0	0	0	0	0	0	0
	ALTER. OR CONV.	0	0	0	0	0	0	21,751	0	21,751
	UNFINISHED AREA	0	0	0	0	0	0	0	0	0
	OTHER ORG. USAGE	0	0	0	0	0	0	0	20,046	20,046

Source: Baltimore City Community College Office of Institutional Research

Space inventories reflect little change in the core campus over the past ten years. The President's office and associated staff offices moved into the renovated administration wing from dispersed locations in Harper Hall and the West Pavilion in 2018. Harper Hall is to be demolished and is not counted in the inventory. Apart from Human Resource offices, previously occupied office space in the West Pavilion is vacant, and the upper floors are unused and un-renovated for other use. The college is exploring partnership options for West Pavilion use while holding the space for future float space use.

The North Pavilion is vacant and unusable. It is not counted and is recommended for demolition unless partnership proposals arise.

The South Pavilion is available for BCCC use as classroom or office space. The West Pavilion is available for office space.

Space utilization varies by building, with efficiencies between 60 and 70 percent. The low space use of the library appears to be an artifact of historical space use calculation in a building with few fixed space assignments, and will be re-assessed as Part II planning work progresses for the library/learning commons project. It does not reflect effective usage in NASF, and is also affected by the isolated and marginally-useful, but substantial basement space, whose use is to be reassigned to support and utility applications.

3.8 Summary of Space Use Findings
Table 3-4

					2019 - 2029				
HEGIS CODE	SPACE	Need Current	Inventory Current	Surplus/ (Deficit)	Additions	Deletions	Need 10 Years	Inventory 10 Years	Surplus/ (Deficit)
100	CLASSROOM	32,675	38,239	5,564	3,060	1,469	51,504	39,830	-11,674
200	LABORATORY	20,594	55,564	34,970	5,000	866	33,054	52,012	18,958
210-15	Class Laboratory	20,594	49,530	28,936	5,000	866	33,054	49,264	16,210
220-25	Open Laboratory		6,034	6,034	0	0		2,748	2,748
250-55	No Allowance								
300	OFFICE	99,146	89,618	-9,528	5,000	0	118,132	92,139	-25,993
310-15	Office/ Conf. Room	102,482	84,253	-18,229	5,000	0	116,238	89,243	-26,995
320-25	Testing/Tutoring	2,400	2,896	496	0	0	1,894	2,896	1,002
350-55	Included w/ 310								
400	STUDY	20,984	15,665	13,500	13,500	3,200	28,972	25,965	-3,007
410-15	Study	10,500	800	-9,700	13,500		14,306	14,300	-6
420-30	Stack/Study	7,488	13,600	6,112	0	3,000	10,476	10,600	124
440-55	Processing/Service	2,996	1,265	-1,731	0	200	4,190	1,065	-3,125
500	SPECIAL USE	32,544	25,174	-7,370	500	0	45,121	21,926	-23,195
510	Armory	0	0	0	0	0	0	606	606
520-23	Athletic	29,800	20,027	-9,773	0	0	41,890	20,027	-21,863
530-35	Media Production	1,744	0	-1,744	500	0	2,231	500	-1,731
580-85	Greenhouse	1,000	793	-207	0	0	1,000	793	-207
600	GENERAL USE	36,569	45,620	9,051	4,400	3,200	43,249	30,248	-13,001
610-15	Assembly	12,360	8,485	-3,875	0	0	13,478	8,485	-4,993
620-25	Exhibition	1,590	1,366	-224	0	2,000	1,895	1,366	-529
630-35	Food Facility	11,536	6,144	-5,392	2,400	0	15,208	8,544	-6,664
640-45	Day care		1,826						
650-55	Lounge	3,393	5,308	7,979	0	0	4,473	5,308	835
660-65	Merchandising	1,690	4,378	8,742	0	1,200	2,195	3,178	983
670-75	Recreation		2,518						
680-85	Meeting Room	6,000	1,367	-4,633	2,000	0	6,000	3,367	-2,633
700	SUPPORT	20,649	20,088	-561	1,750	190	20,857	7,952	-12,905
710-15	Data Processing	2,500	2,582	82	1,000	190	2,500	3,582	1,082
720-25	Shop	13,872	1,764	-12,108	500	0	14,080	3,364	-10,716
730-35	Central storage		12,216						
740-45	Vehicle storage		2,164						
750-55	Central Service	4,000	756	-3,244	250	0	4,000	1,006	-2,994
760-65	Hazmat Storage	277	606	329	0	0	277	0	-277
800	HEALTH CARE	536	0	-536	0	0	658	669	11
900	No Allowance								
050-090	No Allowance		123,161						
	Total NASF:	263,697	289,968	45,090	33,210	8,925			-70,806

Source: Baltimore City Community College Office of Institutional Research

Classroom (HEGIS 100)
General classroom facilities not connected with a specific subject, with no specialized classroom equipment. The category covers a variety of sizes and includes support spaces directly associated with the space.

The guidelines assume 20 hours per week use with 60% seat occupancy, 18 NASF per student.
The Liberty Heights campus presently has 117% of currently needed classroom space. By 2029 BCCC is expected to have 77% of guidelines. Significant scope exists for reapportionment of rooms presently coded as lab spaces to classrooms.

Laboratory (HEGIS 200)
Special purpose spaces with specific room configurations and equipment. Spaces include science labs, art studios, musical studios and computer labs.

The guidelines assume 15 hours per week use with 60% seat occupancy, 50 NASF per student for natural and social science labs, and 115 NASF per student for technical and career labs. The distribution assumes that 80% of lab hours are in natural and social sciences, and 20% in technical and career labs.

The Liberty Heights campus presently has 270% of currently needed lab space. By 2029 BCCC is expected to have an excess of 157%.

While the campus as a whole has more lab space than is recommended by the Higher Education Commission guidelines, the bulk of campus lab spaces are in the Life Sciences Building and Main Hall, serving general sciences curricula in the former, and largely non-science studies in the latter. A broad rebalancing of space attributions is expected to begin to reconcile these space assignments, as space assigned to computer labs is reclassified or repurposed. Core simulation lab space and dedicated nursing lab space is confined to the Nursing Building, which at present contains only 4608 square feet of HEGIS category 200 space. An estimated 5,000 square feet of additional simulation lab space is needed to support the nursing programs in that building, for a total of about 10,000 square feet of lab space for nursing studies.

Reassignment of about 10,000 square feet of lab space to office space would bring space assignments into better balance in the long run. However, given the need for float space during renovation projects, lab space can be held in reserve to keep instruction on the main campus while renovation takes place in the Library and Nursing Building.

Office (HEGIS 300)
Individual or shared space for administrative, service and academic functions. File rooms, conference rooms, break rooms, copy rooms and other spaces that support the office activity are included.

The guidelines assume 166 NASF per person requiring office space, with an additional 1120 NASF for student offices.

The Liberty Heights campus presently has 90% of currently needed office space. By 2029 BCCC is expected to have 77% of guidelines. Space is available in the West Pavilion, which had previously been used as float space. With reallocation of other space in anticipation of projects, the office space totals may be adjusted over time.

Study (HEGIS 400)
Study space houses library collections, library operations and study spaces.
The guidelines assume 25 NASF per seat for 25% of FTDE. Stack space is 0.1 NASF per bound volume equivalent. Processing occupies 40% of stack space plus 1200 NASF.

Study space at the Liberty Heights campus is severely deficient, with only 8% of needed study space. Stack/study space, on the other hand, has 217% of current requirement.

The existing Bard Library is proposed as a capital improvement project to renovate the existing structure and to expand it to provide an up-to-date facility with appropriate arrangements and space allocations suited to present academic requirements. Based on rough program data, the proposed program would meet targets for space inventory ten years hence.

Athletics and Physical Education (HEGIS 520-25)
Athletic facilities include indoor spaces devoted to physical education activities, such as gymnasiums, dance studios, spectator areas, swimming pools locker rooms and associated storage areas.

The guidelines assume 10 NASF per FTDE over 1500, plus 34,000 NASF of core space.
The Liberty Heights campus presently has only 67% of currently needed athletic space.
By 2029 BCCC is expected to have 48 % of recommended guidelines.

Media Production (HEGIS 530)
Media production spaces are devoted to multimedia production rooms and studios.
The guidelines assume 0.8 NASF per FTDE over 1500, plus 1600 NASF of core space.

The Liberty Heights campus lacks any dedicated space of this kind. However, there are facilities off campus for this purpose, and modern technology reduces the need for dedicated space of this kind. The program for the library renovation will include at least 500 square feet of space for this purpose, leaving a current deficit of about 1700 square feet to be located elsewhere on campus.

Greenhouse (HEGIS 580)
Greenhouses are spaces with transparent walls and roofs used for horticulture. The guidelines assume 1000 NASF of such space on campus. The greenhouse on the Life Sciences Building is 793 square feet. It is expected to continue in service.

Assembly (HEGIS 610)
Assembly spaces are gathering points for large groups of people for performances, ceremonies, lectures or multimedia presentations. Support spaces such as stages, orchestra pits, dressing rooms, lighting booths and other such spaces are included in this category. The guidelines assume 2 NASF per FTDE over 1500, plus a 12,000 NASF core.

The college has 68% of the allocated assembly space. With student population growth over ten years, this is expected to fall to 63% of allocation.

Exhibition (HEGIS 620)
Exhibition spaces provide space for displays of art, artifacts, or physical assemblages. Such spaces also include planetariums and museums. The guidelines assume 0.5 NASF per FTDE over 1500, plus a 1,500 NASF core.

The college has 86% of the allocated assembly space. With student population growth over ten years, this is expected to fall to 72% of allocation. It should be noted that the existing planetarium is included in this total, but is out of use.

Food Facility (HEGIS 630)
Food facilities include cafeterias, snack bars, kitchens and service areas.

The guidelines assume 10.2 NASF per planning headcount combination of FTDE, FTEF and staff.

The college has 53% of the allocated food service area. With student population growth over ten years, this is expected to be 56% of allocation, even if proposed coffee shop space is included in the library renovation program.

Lounge (HEGIS 650)
The guidelines assume 3 NASF per planning headcount combination of FTDE, FTEF and staff.

The college has 156% of lounge space guidelines. It also has 2518 sf of recreation space. Some of this space may be reallocated.

Merchandising (HEGIS 660)
Bookstores, convenience stores, personal services and apparel sales are included in merchandising.

The guidelines assume 0.5 NASF per FTDE over 1500, plus a 1,600 NASF core.

The college has 259% of the allocated merchandising space. With student population growth over ten years and some reallocation, this is would fall to 145% of allocation.

Meeting Room (HEGIS 680)
Rooms available for non-class meetings. The guidelines assume 6000 NASF.

The college has 23% of meeting space suggested by guidelines. It is projected to have 56% in ten years.

Data Processing (HEGIS 710)
Server rooms and information technology spaces devoted to equipment.
The guidelines assume a 2,500 NASF core.

Space coded as data rooms amounts to 2532 square feet. Data center relocation is presently in process to a new location. Another 1000 square feet will be required in ten years.

Support (HEGIS 700)
Shop and service space is severely deficient. Only 1353 square feet of space are designated as shop space, with a current guideline allocation of 12,519 square feet. In ten years the requirement will be 14,080 square feet. All of the existing space is in the temporary Facilities modular building. There is no dedicated hazardous materials storage space. Substantial storage space is in the basement under the administration wing, but is unsuited for shop use.

Health Care (HEGIS 800)
Health care space comprises dedicated patient care spaces in infirmaries, veterinary clinics or teaching hospitals.

The college presently has no space devoted to health care use, with a 536 square foot guideline requirement.

Baltimore City Community College
Facilities Master Plan
Liberty Heights Campus

Maryland Department of General Services
Project Number: CC-000-190-003

Chapter 4
Facilities

Chapter 4

Facilities

With few exceptions, the Liberty Campus buildings are old and require significant renovation to remedy defects of condition, out-of-date life safety systems and conditions, and to address functional obsolescence.

The Library and Nursing Building are obsolete or obsolescent and do not meet current requirements for support of the college's mission and curriculum. Main Hall has been the object of a three-phase renovation program that has addressed many of the original building's issues, but has left the Fine Arts Wing un-renovated and in poor condition. The Life Science Building is 23 years old and heavily used, and is in need of mid-life systems replacement. The Physical Education Center is 55 years old, and a candidate for upgrading in the medium-term future. Harper Hall is a temporary building slated for removal. The Facilities Building is in comparatively satisfactory condition, but is not suitable for use in the long term, both functionally and materially.

On the north side of Liberty Heights Avenue, the former Bon Secours/Provident Hospital buildings are of mixed value. The North Pavilion was damaged by flooding in 2018, with mold contamination. Its isolated location and functional arrangement do not lend themselves to use by the College. The South Pavilion is a commercial building from the 1990s that, like the Life Sciences Building, requires mid-life systems replacement to continue to function, but has a high degree of functional flexibility. The West Pavilion is the remnant of the original Provident Hospital, containing the former hospital's nurses dormitory, auditorium and central plant. Much of the West Pavilion is unused due to hazardous materials or is poorly suited to re-use. Some portions of the West Pavilion are used for administrative purposes and could continue in such use with short-term fixes. Its systems are obsolete, and the West Pavilion is a candidate for demolition in the mid-term.

The design team surveyed each campus building, assessing its condition and suitability for use. Using this data, the team developed a facility condition matrix, scoring each building on a series of weighted measures to develop a relative score of the condition of each building.

The facilities assessment follows, with subsequent pages detailing the condition of each campus building.

Table 4-1 – 2019 Facilities Assessment

LOCATION	PHYSICAL							
	Site Layout, parking & Walkways	Exterior Conditions (Doors)	Exterior Conditions (Windows and Walls)	Interior Conditions (Walls, Ceilings, Etc.)	Roof Conditions	Flooring (Tile, Carpet, Etc.)	Air Conditioning Systems (Central Plant)	Air Handling or RTU Systems
Weight Factor	1	3	3	2	3	2	2	3
Main Hall	75	90	90	90	85	90	90	85
	75	**270**	**270**	**180**	**255**	**180**	**180**	**255**
Nursing	80	75	65	75	85	75	60	60
	80	**225**	**195**	**150**	**255**	**150**	**120**	**180**
Library	85	70	60	70	70	70	60	60
	85	**210**	**180**	**140**	**210**	**140**	**120**	**180**
Life Sciences	80	80	88	85	90	85	95	85
	80	**240**	**264**	**170**	**270**	**170**	**190**	**255**
Fine Arts	65	75	60	60	65	70	55	55
	65	**225**	**180**	**120**	**195**	**140**	**110**	**165**
Gymnasium	65	75	65	75	70	80	85	85
	65	**225**	**195**	**150**	**210**	**160**	**170**	**255**
Facilities	60	80	75	75	75	70	75	70
	60	**240**	**225**	**150**	**225**	**140**	**150**	**210**
North Pavillion	55	75	60	55	55	55	55	60
	55	**225**	**180**	**110**	**165**	**110**	**110**	**180**
West Pavillion	75	85	75	65	70	75	65	70
	75	**255**	**225**	**130**	**210**	**150**	**130**	**210**
South Pavillion	85	80	75	80	75	80	80	80
	85	**240**	**225**	**160**	**225**	**160**	**160**	**240**

LOCATION	PHYSICAL								
	Electrical Disteribution (Outlets, Power)	Fire and Life Safety (Sprinkler, Alarm)	Heating Systems	Communication Systems (Phone, Intercom)	Water/Sewer	Lavatories	Lighting	Accessibility (A.D.A.)	
Weight Factor	3	3	3	1	1	1	2	3	
Main Hall	90	90	80	90	75	85	90	92	1387
	270	**270**	**240**	**90**	**75**	**85**	**180**	**276**	**3151**
Nursing	70	60	75	70	80	65	74	65	1134
	210	**180**	**225**	**70**	**80**	**65**	**148**	**195**	**2528**
Library	65	60	75	65	75	75	70	70	1100
	195	**180**	**225**	**65**	**75**	**75**	**140**	**210**	**2430**
Life Sciences	80	85	65	85	80	80	85	85	1333
	240	**255**	**195**	**85**	**80**	**80**	**170**	**255**	**2999**
Fine Arts	60	60	75	60	75	65	70	60	1030
	180	**180**	**225**	**60**	**75**	**65**	**140**	**180**	**2305**
Gymnasium	75	85	80	75	80	80	80	80	1235
	225	**255**	**240**	**75**	**80**	**80**	**160**	**240**	**2785**
Facilities	75	75	75	80	75	75	80	75	1190
	225	**225**	**225**	**80**	**75**	**75**	**160**	**225**	**2690**
North Pavillion	65	75	55	60	65	60	55	60	965
	195	**225**	**165**	**60**	**65**	**60**	**110**	**180**	**2195**
West Pavillion	75	75	60	75	75	75	65	70	1150
	225	**225**	**180**	**75**	**75**	**75**	**130**	**210**	**2580**
South Pavillion	75	85	75	80	80	80	75	80	1265
	225	**255**	**225**	**80**	**80**	**80**	**150**	**240**	**2830**

LOCATION	FUNCTIONAL							
	Core Facilities	Specialty Instruction	Offices	Security Standards	Common Space	Lecture	Administration Areas	
Weight Factor	2	2	1	1	1	1	1	
Main Hall	90	90	90	70	85	80	90	595
	180	**180**	**90**	**70**	**85**	**80**	**90**	**775**
Nursing	70	64	70	70	65	80	70	489
	140	**128**	**70**	**70**	**65**	**80**	**70**	**623**
Library	65	60	65	70	60		65	385
	130	**120**	**65**	**70**	**60**	**0**	**65**	**510**
Life Sciences	85	88	75	70	70	75	75	538
	170	**176**	**75**	**70**	**70**	**75**	**75**	**711**
Fine Arts	60	60	65	70	60	70	65	450
	120	**120**	**65**	**70**	**60**	**70**	**65**	**570**
Gymnasium	80	85	75	70	65		75	450
	160	**170**	**75**	**70**	**65**	**0**	**75**	**615**
Facilities	75	0	75	70	70		75	365
	150	**0**	**75**	**70**	**70**	**0**	**75**	**440**
North Pavillion	55	55	55	75	70		55	365
	110	**110**	**55**	**75**	**70**	**0**	**55**	**475**
West Pavillion	60		75	75	70	55	75	410
	120	**0**	**75**	**75**	**70**	**55**	**75**	**470**
South Pavillion	80	75	80	70	75		75	455
	160	**150**	**80**	**70**	**75**	**0**	**75**	**610**

LOCATION	ADJUSTMENTS		SCORING					
	Analysis of Energy Management	Age of Building	Physical Rating	Functional Rating	Adjusted Total Points	Total Possible Points		Overall Rating*
Weight Factor	2	3						
Main Hall	90	95	87.53	86.09	4391	4900		90%
	180	**285**						
Nursing	55	70	70.22	69.21	3471	4900		71%
	110	**210**						
Library	55	60	67.5	56.65	3230	4800		67%
	110	**180**						
Life Sciences	80	90	83.31	78.98	4140	4900		84%
	160	**270**						
Fine Arts	55	60	64.03	63.32	3165	4900		65%
	110	**180**						
Gymnasium	80	65	77.36	68.32	3755	4800		78%
	160	**195**						
Facilities	65	60	74.72	48.88	3440	4800		72%
	130	**180**						
North Pavillion	55	60	60.97	52.77	2960	4800		62%
	110	**180**						
West Pavillion	55	60	71.67	52.21	3340	4900		68%
	110	**180**						
South Pavillion	75	75	78.61	67.76	3815	4800		79%
	150	**225**						

*Overall Scoring Scale: 95-100 = Superior | 85-94 = Good | A1:AJ4 75-84 = Adequate | 65-74 = Not Adequate | 64 or Less = Poor

4.1 Liberty Campus

Main Building

Building Designation:	MNB
Number of Floors:	4 (three usable for program functions)
Net Assignable Square Feet (NASF):	152,596
Gross Building Area (GSF):	244,555
Net-to-Gross Efficiency:	62.4%
Year Constructed:	1965
Renovations:	2004 - Main Spine and Mechanical Plant -added 9,600 gross square feet) 2008 - Student Services Wing -added approximately 11,800 square feet 2018 - Administration Wing -added approximately 1,730 square feet Under the previous facility master plan a 2017 project was proposed for the Fine Arts Wing, with additional classroom space. This project has not advanced.
Contains:	Student life spaces, student services, testing, tutoring, bookstore, cafeteria, faculty lounge, campus security offices, visual and performing arts, offices, conference rooms, general use classrooms, and computer Labs.
General Condition:	Renovated spaces: Excellent to good Un-renovated spaces: Poor to very poor
Adequacy of Space:	Inadequate in the un-renovated areas, functionally obsolete. Renovated areas are generally adequate, though circulation is cramped.
Sprinkler Systems:	None in un-renovated space. Provided in renovated areas.
Asbestos / Hazardous Materials:	None documented.

Figure 4-1 – Main Building from the center of campus

Architectural General

The Main Building is the primary campus building, housing the main administrative and student services spaces, as well as many classrooms and faculty offices. It is the outcome of a series of construction campaigns that have combined into one large, consolidated building. Phase 1 of a three-phase renovation to the Main Building was completed in 2004 and the north-west wing of the building has been renovated (New Phase 3 of the three-phase renovation) which houses student services, dining, classrooms and labs. Phase 2 included demolition of the south-east wing and construction of a new wing built in its footprint, providing administration offices. The remaining portion of the main spine was renovated. The Fine Arts wing remains un-renovated and is in poor condition.

The Main Building presents a unified composition for the eastern two thirds of its elevation before transitioning abruptly to the original 1965 façade of the Fine Arts Wing. In the newer section the materials are brick and decorative concrete masonry with tinted glazing and curtainwall systems. The Fine Arts section retains its original brick and brightly-colored composite panel façade.

The administration wing comprises the central section of the Main Building, but the main entrance to the building is through the eastern end of the building, closest to the library and the Nursing Building. The administration wing is largely self-contained, with no

public link to the rest of the building. The Fine Arts Wing cannot be accessed directly from the remainder of the Main Building and in its present configuration it represents a neglected outpost.

Student services facilities are updated and attractive, but after ten years are facing new pressures. The small cafeteria space is undersized for the use it receives and needs expansion. The bookstore, on the lower level, is probably oversized for its current usage.

Building interiors, systems and technology reflect the renovation campaigns. Renovated areas are well-lighted, clean and up to date. The Fine Arts area requires extensive renovation in all respects. Arts studios require reprogramming and reorganization for best use. The auditorium space, as the largest such space on campus, has great potential, but apart from a seating replacement project, it is outdated and not up to current standards for accommodation or media presentation capability.

Phase I of the $39 million construction project updated classrooms and administrative space along the spine of the building, replacing the building's cooling system. Phase III renovated the westernmost wing to serve as the Student Services Wing. Phase II was delayed for funding and scope adjustments, and renovated the main administrative areas and updated the electrical service.

The Fine Arts Wing is under-used due to the age of its systems and enrollment levels in its curriculum. The auditorium has received modest upgrades, including new seating, but systems are old. An adjoining conference area has kitchen prep areas and, with systems upgrades, could be more fully utilized. Finishes in the Fine Arts Wing require substantial upgrades. Functional arrangements date to the original construction and are of limited use to the current academic program. The wing has no sprinklers and requires substantial alarm system and ADA work.

Structural

Flooring systems are reinforced masonry (Doxplank) construction, which require careful attention to penetrations and utility routing. Overhead clearances are limited for retrofit work.

Accessibility

Renovated sections of the Main Building all generally meet current ADA standards. The Fine Arts Wing has received minimal ADA upgrades, and requires a major overhaul to address changes in elevation, door clearances, railings, hardware, toilets and life safety systems. Some awkward vertical transitions remain in older sections of the Main Building.

Figure 4-2 - Main Building classroom

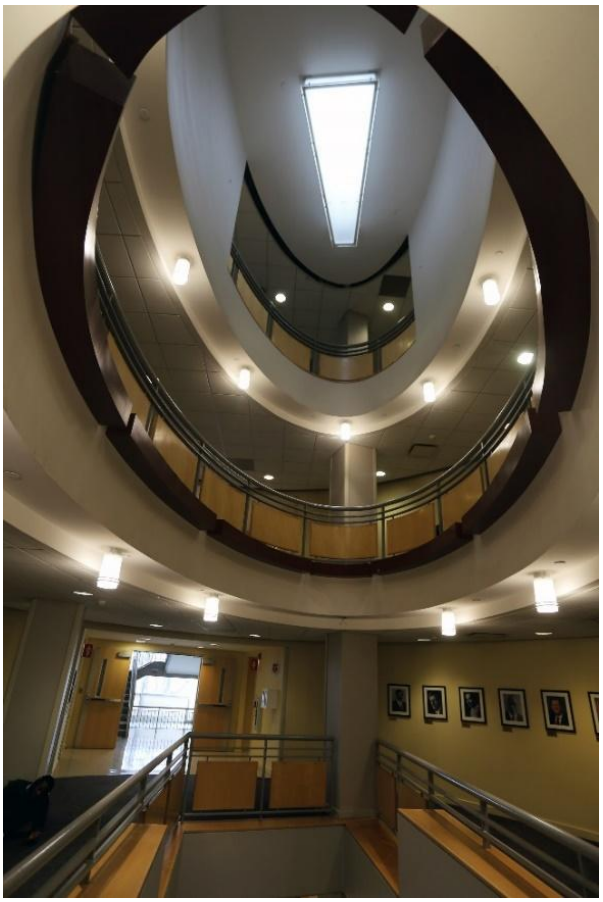


Figure 4-3 – Main Building atrium

The center of the Main Building features a small four-story atrium. It is an attractive landmark, but cramped and out of scale with the rest of the building,

Figure 4-4 - Main Building corridor

Wayfinding in the Main Building is difficult, given the sprawling nature of the building. Hospital-style wayfinding markers have been used in some locations to give direction.

Figure 4-5 - Main Building wayfinding

Figure 4-6 - Main Building lobby

Figure 4-7 - Main Building dining

The dining area in Main Hall is attractive and updated, but smaller than needed for the campus, especially since the campus has no nearby off-campus dining options. A small outdoor terrace expands options in fine weather, but the food service component is significantly under-sized. The bookstore is, by contrast, oversized, and it is recommended that some of the bookstore be repurposed for snacks and coffee to remedy the shortfall in dining space.

Figure 4-8 - Main Building administrative wing

Fine Arts wing

Figure 4-9 - Fine Arts exterior

The Fine Arts exterior is dated in appearance and in performance, and requires replacement.

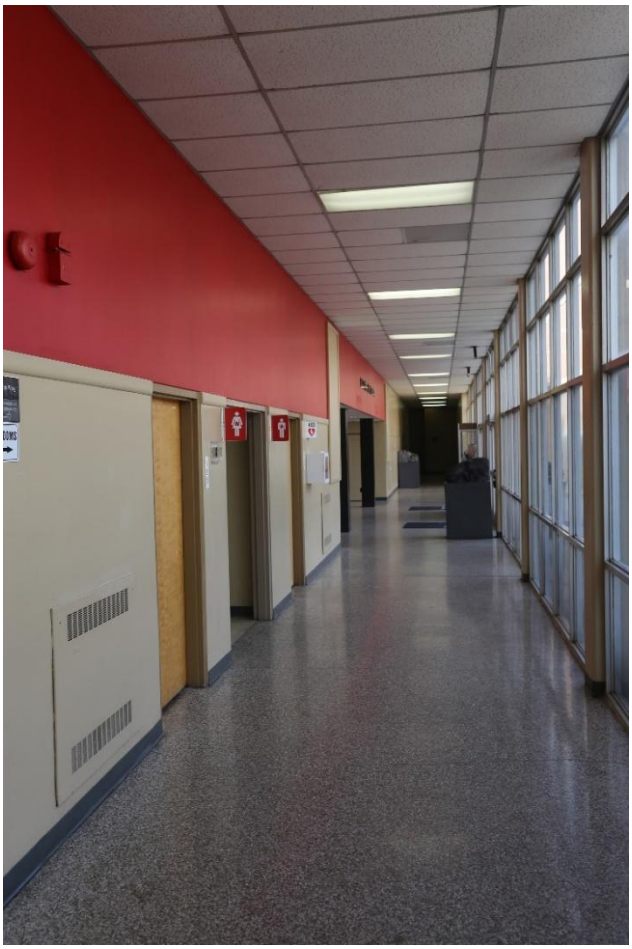


Figure 4-10 - Fine Arts lobby

Figure 4-11 - Fine Arts corridor

Figure 4-12 - Auditorium

Figure 4-13 - Fine Arts conference area

Finishes in the Fine Arts wing are worn, and require updating or replacement.

Figure 4-14 - Fine Arts kitchen area

Systems

Mechanical

The mechanical systems in Phases 1 and 2 have been replaced. New heating and cooling systems were installed to support the renovations. Phase 2 consisted of the Administration Wing. The mechanical systems in the un-renovated Fine Arts areas are old, inefficient, and in poor condition. Major plumbing deficiencies exist in the Fine Arts Wing as well. I

The main building contains a heating plant that also serves the Nursing Building and Library Building. The plant consists of three (3) dual fuel boilers and associated distribution pumps. There is no excess capacity to serve buildings other than the Main, Nursing, and Library Buildings. Also, in the Main Building is a new cooling plant that just serves the Main Building, itself. The plant consists of new chillers, cooling towers, ice storage tanks and associated pumps. The cooling plant supplies low temperature water to air handling units strategically located in the building. Low temperature air is supplied to series fan-powered variable air volume terminal units with hot water re-heat. Pipes are capped for extension to Phase 2 areas.

Un-renovated areas (i.e. Phase 2) currently experience operational problems. Systems date to 1965 and have exceeded their useful lives. In addition, the lack of automated control and system integration in the building contributes to the lack of comfort and energy efficiency in the building. The newly installed Johnson Controls Energy Management System is integrated into to Phase 1 and Phase 3. In the near future, the new control system will also extend to Phase 2. However, the Fine Arts Wing will continue to operate with the older and inadequate controls that exist. Additionally, there is a

need to extend the Johnson Controls Energy Management System to all buildings on campus in order to efficiently manage the building systems on campus.

Systems in the main building are up-to-date and suitable for the present use. The systems in the Fine Arts Wing are failing and require replacement.

Electrical

The electrical systems in previous construction phases been replaced and upgraded. The Fine Arts Wing was programmed for renovation or replacement in previous master plans. However, the basement of the Fine Arts Wing houses a BGE substation that must remain active to support loads on and off the Campus. Phasing of renovations and/or demolition and construction must consider and accommodate continued operation of the BGE substation. When the Fine Arts Wing is demolished, construction of a new substation in another location should be considered, if possible.

The main building contains switchgear, which appears to have ample capacity to serve the building. Power distribution in un-renovated portions of the building is not adequate to support technology needs. The ability to add technology has been limited by the availability of power. Un-renovated areas have obsolete equipment. Systems date to 1965 and have exceeded their useful lives.

Main Building Renovated Area

Mechanical Systems

Central Plant

The central chilled water plant consists of two water cooled screw chillers and two cooling towers on the roof above them. The chilled water pumps have a primary secondary loop for distribution. The primary pumps are constant volume and have a triplex configuration. The condenser water pumps are also constant volume piped in triplex configuration. The secondary chilled water pumps have a variable flow, duty-standby configuration, each pump having a CFD. The cooling towers are cross flow towers sitting on dunnage on the roof directly above the mechanical room. The chilled water is a propylene glycol mixture.

Figure 4-15 Condenser Water Pumps

Figure 4-16 Cooling Tower

The heating water plant is served by three large dual file fire-tube hot-water boilers. The heating water is circulated by four sets of constant volume pumps. The system also has thermostatic mixing valves in the mechanical room.

Figure 4-17 Fire Tube Boiler

Air Handling

Each floor is divided up into three wings. There is a mechanical room on each wing of each floor. In each mechanical room is a Variable Air Volume air handler serving the floor on that wing. The configuration of each air handler in the various mechanical rooms is identical. The units have supply and return air fans, separate return air filters, as well as filters in the unit for mixed air. The control valves and damper on the units are all pneumatic. The units handle ventilation and conditioning of air. The units have freeze protection pumps on both the heating water side and chilled water side. This is confusing since the chilled water contains glycol.

Figure 4-18 VAV Air Handler, Typical for Each Wing

Terminal Units
Terminal units are VAV air terminals with heating water reheat, corridors and vestibules have cabinet hydronic heaters.

Controls
There is evidence of a new building automation system in the main mechanical room, however, every actuator in the building appears to be pneumatic and there is a brand new compressor in the mechanical room. It is assumed that all controls are digital but all actuators have transducers controlling a pneumatic signal.

Condition
The condition of the air handlers and chilled water plant is excellent. They appear to be brand new. The diffusers throughout the building also appear to be new. The VAV system is baseline in terms of energy efficiency but the systems appear to be brand new and have many years of useful life ahead of them. The cooling tower is older and does not appear to have been replaced when the new systems were installed. They are not in bad condition but definitely not new like the rest of the chilled water plant. A slight leak was noticed on the seams of one of the towers. The boilers and heating water plant are older than the chilled water plant. The pipe insulation in the heating plant looks old, some of it was missing but there are no leaks. The pumps also appear to be old but not leaking and not a lot of rust. The boilers are fire tubes which are very durable and with proper care will last a long time. No air separation was noticed in the boiler which usually contributes to poor conditions inside the heating water pipes.

Plumbing & Fire Protection System

Domestic Water Main Service
Domestic water service is from a 20-inch City Main at Liberty Heights Avenue. A water meter vault is located at the main water service on the sidewalk. Backflow preventer is not installed at this 8-inch school main which distributes domestic water to each building on South Campus.

8-inch domestic water service enters the ground floor Boiler Room into Main Building. This incoming service without backflow preventer does not meet the current code and local water authority requirement.

Figure 4-19A Domestic water heaters in boiler rooms

Figure 4-19B Domestic water heaters in boiler rooms

Domestic Hot Water System
The domestic water heaters located in the Boiler Room are two horizontal water heaters with 325 gallon storage capacity and boiler water as energy source. Hot water recirculation system had been provided. Backflow preventers have been provided at boiler room mechanical makeup water line connection.

Plumbing Fixtures
The observed plumbing fixtures in the main building are in good condition. Plumbing fixtures are low water consumption type and barrier free fixtures meet current ADA standards.

Fire Suppression System
The building is served fully throughout by wet-pipe sprinkler system and manual wet standpipe system.

Electrical Systems, Main Building

Existing Electrical Service

The existing MV substation located in the sub-basement of the existing administration building provides electrical power for the Main Administration Building, Fine Arts Building and Nursing Building. There are two incoming service with voltage of 13.8KV from BGE feeding this substation. Each of these buildings has its own dedicated MV feeder and dry-type transformer rated 13.8KV to 480Y/277V. The switchgear that feeds the entire administration building has a capacity of 2000KVA and is located on the first floor of the old building.

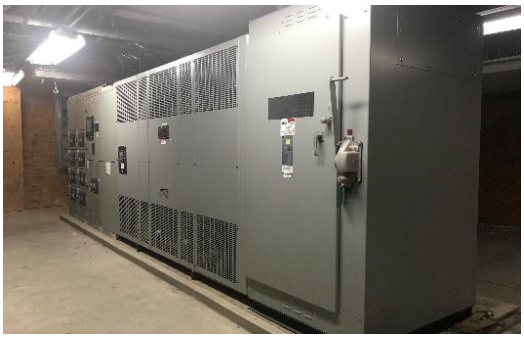


Figure 4-20 Switchgear with Transformer and 480V feeder outputs for the entire Administration Building

Existing Power Distribution System

Main Power Distribution Panel is 480Y/277V, 3PH, 4000A as part of building MV switchgear installed in the 1st floor electrical room. This switchgear is provided in recent renovation of the building and it is in good working condition.

Power to the loads in the building provided from floor electrical rooms via a 480Y/277V, 3-ph vertical busduct system. In each floor electrical room, the distribution panel fed from the busduct system, will provide feeder to 480V panelboards. To feed 280/120V loads low voltage branch panelboards feeding from dry-type transformers are provided. Distribution transformers rating 480V to 208Y/120V are connected to the floor vertical busduct via appropriate disconnect switches.

Branch Panelboards related to each are located inside the related floor electrical room. Based on our observation, most of power distribution equipment which was part of the recent renovation are in good working condition. However, there some recessed type panelboards which are original and in fair condition.

Wires & Conduits

Although, wires & conduits are embedded in the walls, the installation date is the same as when the panels originally were installed, however there is some new wiring provided during the recent renovation. For wires that were originally installed, we recommend conductivity and insulation tests be performed.

Existing Emergency/Stand-By Power System

Stand-By Generator

Existing emergency generator by GENERAC rated 250 KW, 480Y277V, 3-ph. Generator installation date is around 2002. Existing condition seems fair. However, the unit should be tested and serviced for high efficiency performance.

ATS Switches

Two Existing emergency transfer switches by GE rated 600A and 100A 3P, 480V, 3-P

Emergency power distribution

There is a main emergency distribution panel 'EDP-GEN' to feed the emergency load in the building via existing transfer switches.

Existing Interior Lighting System

Light Fixtures

Existing Lighting Conditions – Corridors /Office: recessed downlight fixtures and ceiling recessed fixtures with prismatic lens and fluorescent lamps. In a recent building renovation, new fixtures with higher energy efficient type with LED light source were installed and all are in good condition. Recommend the fixtures for other parts of the building be upgraded to energy efficient type with LED light source.

Lobby and hallways: different types of downlights and spotlights.

Existing Mechanical Room/Electrical Room/Utility Room/Storage: Industrial surface or pendant mounted to the ceiling with fluorescent lamps.
Existing Egress Lighting & Exit Lights

All lighting fixtures for egress pathways are powered by emergency generator via related transfer switch and panels. Based on our observation during the site survey all fixtures seem in good working condition.

Same as egress pathways emergency fixtures, all exit lights are fed from the existing emergency panels which are backed up by the existing stand-by generator. All existing exit lights are in fair condition.

Existing Receptacles
Existing power receptacles are a combination of recessed, floor box and surface mounted receptacles in various areas of the building. Recessed type receptacles are mainly in corridors, offices and surface mounted receptacles are in utility rooms, service area. Condition of the receptacles are fair.

Existing Fire Alarm System
Fire Alarm Control Panel
Building has an addressable FACP by Simplex and it is in good condition.

Fire Alarm Annunciator Panel
Mounted in the main entrance area, FAAP is by Simplex too. Working condition of existing annunciator panel is good.

Fire Alarm Initiation and notification Devices
All these devices are addressable type and in good condition.

Existing Tel/Data System
Building has an MDF room including all necessary data racks/equipment. There are several IDF rooms on each floor. Existing IDF rooms are occupied by required data racks and equipment.

Tel/Data Outlets
Tel/data outlets are mostly recessed type and installed in offices and necessary areas. In the recent renovation existing tel/data system in the building is upgraded and it seems in good working condition. However, wiring in some data rooms required re-arrangement.

Electrical System Issues & Recommendations for Immediate Attention

Power distribution system:
Some of the branch panelboards in different locations seem old. Recommend breakers inside panels be verified/tested and replaced if necessary. Door locks to be repaired.

Some of the existing power wiring in the building, which was not replaced during the recent renovation, is old. Recommend conductivity and insulation test to be performed on all wiring related to panel feeders and large equipment. Replacement of damaged wires as necessary.

Regarding the existing stand-by generator unit, related ATS, emergency panel and other related components; we recommend the entire system be completely tested, serviced/maintained by a generator service company to ensure the emergency power system in the building is working properly.

Interior Lighting System
Existing light fixtures in some parts of the building are ceiling mounted fluorescent type with prismatic lens. Recommend all fixtures to be tested, cleaned and re-lamped. If complete fixture or part of the fixture such as lens or ballast is damaged, damaged part to be replaced.

Recommend light control devices in all locations to be tested and related wiring to be verified for possible damages. If a light control switch in any location is not working properly or damaged, replace it with a new device.

Fire Alarm System
Existing fire alarm system is addressable type. Recommend complete existing fire alarm system including FACP, FAAP, initiating and notification devices and related wiring to be carefully tested by a company specialist in servicing fire alarm systems to ensure the existing system in the building operates correctly. Replace any device/component which is damaged or not functioning properly.

Electrical Systems, Admin Wing

Existing Electrical Service and Power Distribution
Electrical power for the new section is provided from MV substation located in sub-basement of the old part of the building via vertical busduct run through floor electrical rooms. In each floor electrical room, a distribution panel (480V) is provided to feed lighting and mechanical loads. Power to low voltage (208/120V) loads on each floor is provided by dry-type transformers which are connected to the vertical busduct via disconnect switches. All power distribution equipment and panels in this addition are new and in good working condition.

Wires & Conduits
All wires & conduits in this part of the building are new and embedded in the walls or above ceilings. They are all in good working condition.

Existing Emergency Power Distribution System
Emergency power for loads in the new section is provided by an existing emergency generator in the old part of the building via emergency power distribution system and existing automatic transfer switches and panels described in the old part of the administration building report.

Existing Interior Lighting System
Existing Lighting Conditions – Corridors /Office: recessed downlight fixtures and ceiling recessed direct/indirect fixtures and higher energy efficient type and LED light sources are new and in good working condition.

Existing Mechanical Room/Electrical Room/Utility Room/Storage: Industrial surface or pendant mounted to the ceiling with fluorescent lamps.

Existing Receptacles
All existing power receptacles in this part of building are recessed type and new. They all are in good condition.

Existing Fire Alarm System
Fire alarm system for the new addition is extended from the main building. All devices are new and addressable with related wiring in good working condition.

Existing Tel/Data System
Tel/data system for the new addition is extended from IDF rooms located in the original building. In some cases, new IDF rooms are provided and connected to the existing data system in the old part of the building. All devices and wiring are new and in good working condition.

Main Building - Fine Arts Wing

Existing Central Plant
Heat Water Plant: The Fine Arts wing gets all of its heating water from the main admin building.
Chilled Water Plant: There is an existing air-cooled chiller on the roof right next to the mechanical room. Chilled water is distributed by a simplex constant volume pumping system.

Air Handling
There are multiple constant volume four pipe air handling systems serving different parts of the building. The units handle both ventilation and conditioning of air. One of the

auditoriums has its own packaged air-cooled split system with hydronic heat and works in stand-alone mode. The stand-alone air handler is in much better condition than the hydronic air handlers.

Terminal Units
The spaces that are not served by a dedicated air handler have hydronic unit ventilators of cabinet fan coils for heating. Most of these spaces have window units for air conditioning installed in a boarded window for cooling and perimeter units for heating.

Hydronic System
The existing hydronic system is a two- pipe switch over system that cannot simultaneously cool and heat. A seasonal switchover valve is used. Piping and insulation are in decrepit condition.

Controls
All controls in the building are pneumatic. There is a pneumatic compressor in the mechanical room.

The existing HVAC system is in poor condition. The chiller looks like it had two compressors recently replaced but the rest of the chiller is in horrible condition, very old and run down looking. The air handlers in the mechanical room also look very old. The insulation in the mechanical room is in terrible condition with missing insulation, sweating pipes and a lot of shoddy insulation repairs made with duct tape. The terminal units on the lower floors appear to be old and beaten up. Other than the stand alone split system, the existing mechanical systems in this building are antiquated and in terrible condition. This building is in need of a renovation.

Plumbing & Fire Protection System

Domestic Water Service
Domestic water service is from the Main Building.

Domestic Hot Water System
Domestic water is provided from the Main Building.

The observed plumbing fixtures in the Fire Arts Building are in fair condition. An electric water cooler in the Conference center is not functional. Another electric water cooler in the corridor appears to have been replaced recently. It is in good condition.

Fire Suppression System
The building is served by wet-pipe sprinkler system at partial area - basement and auditorium stage. There is a fire hose cabinet on one side of stage, but it does not meet the International Building Code requirement: “Stages greater than 1,000 square feet in area shall be equipped with a Class III wet standpipe system with 1.5 and 2.5 hose connections on each side of the stage.”

Electrical Systems
Electrical service for this building is provided from the main administration building. Power distribution panels are located in several electrical closets to feed the electrical loads in the building. Main voltage for the building is 480Y/277V and distribution transformer used to provide voltage system 208Y/120V for low voltage loads and receptacles in the building. Recessed and surface mounted branch panelboards are located throughout the building and next to other electrical equipment. Some of the panels are old and in poor condition, some panels installed in recent years are in fair condition.

Wires & Conduits
Although wires & conduits are embedded in the walls, the installation date is the same as when the panels were installed. We recommend conductivity and insulation tests be performed for all wires.

Existing Emergency/Stand-By Power System
An existing stand-by generator by ONAN is dedicated to emergency loads in this building. ATS switch related to emergency system in the corner of utility room of the building. There is no accurate record of the generator installation date and based on our survey record, they seem old and in poor condition. Existing condition seems fair. We recommend the unit be completely tested and serviced for high efficiency performance. Also, there is an emergency power distribution panel to feed all emergency loads in the building.

Light Fixtures
Existing Lighting Conditions – Theater/Corridors /Office: Downlight fixtures in theater, 2x4 recessed in ceiling with prismatic lens and four T8 fluorescent lamps in corridors. Higher energy efficient LED light source is available at this time and an upgrade is recommended.

Existing Lighting Conditions
Public Restrooms: 1x4 recessed and surface mounted fixtures with fluorescent lamps and prismatic or parabolic lenses. Higher energy efficient LED light source are available in the market for these types of fixtures. We recommend replacing these fixtures with LED type.

Existing Lighting Conditions
Mechanical Room/Electrical Room/Utility Room/Storage: surface or pendant industrial fixtures with fluorescent lamps.

Lighting Controls
Corridor/Offices/Mechanical Room/Electrical Room/storage: standard on/off switch

Stage and theater: controlled via dimming lighting control system.

Existing Receptacles
Existing power receptacles are a combination of recessed and surface mounted receptacles in various areas of the building. Condition of the receptacles in the building is fair. Wiring needs to be tested for insulation and conductivity.

Existing Fire Alarm System

Fire Alarm Control Panel
The existing FACP is mounted on the wall next to the electrical panels/equipment. The existing FACP is a conventional type system with capacity of 8 zones. We recommend this system be replaced with an addressable type. Fire Alarm Annunciator for the building is included in the existing FAAP panel which covers the entire administration building and is installed next to the main building entrance.

There are existing Fire Alarm Initiation and notification devices throughout the building. In the event the existing conventional fire alarm system is replaced with a new addressable type, we recommend all fire alarm devices be replaced with addressable devices.

Electrical system issues and recommendations for immediate attention

Power distribution system:
All branch panelboards located in different corridors of the building are old and door locks on one of them is damaged. Recommend breakers inside panels to be verified/tested and replaced if necessary. Door locks to be repaired

All existing power wiring in the building is old. Recommend conductivity and insulation test to be performed on all wiring related to panel feeders and large equipment. Replacement of damaged wires as necessary.

Regarding the age of the existing stand-by generator unit, related ATS, emergency panel and other related components; we recommend the entire system to be completely tested, serviced/maintained by a generator service company to ensure the emergency power system in the building will work properly.

Emergency Lighting
As mentioned in the report, existing fixtures for emergency egress pathways are old and there are locations that may not be covered by existing fixture layout. Recommend the location/layout of the existing emergency fixtures be verified, additional fixtures be installed in egress pathways which do not have full coverage. Existing emergency fixtures to be tested, re-lamped and cleaned, and also related batteries to be replaced (if necessary).

Recommend to verify location of all existing exit lights and provide additional exit lights as necessary. Also recommend all existing exit lights be tested, re-lamped, cleaned and related batteries to be replaced as required.

Interior Lighting System

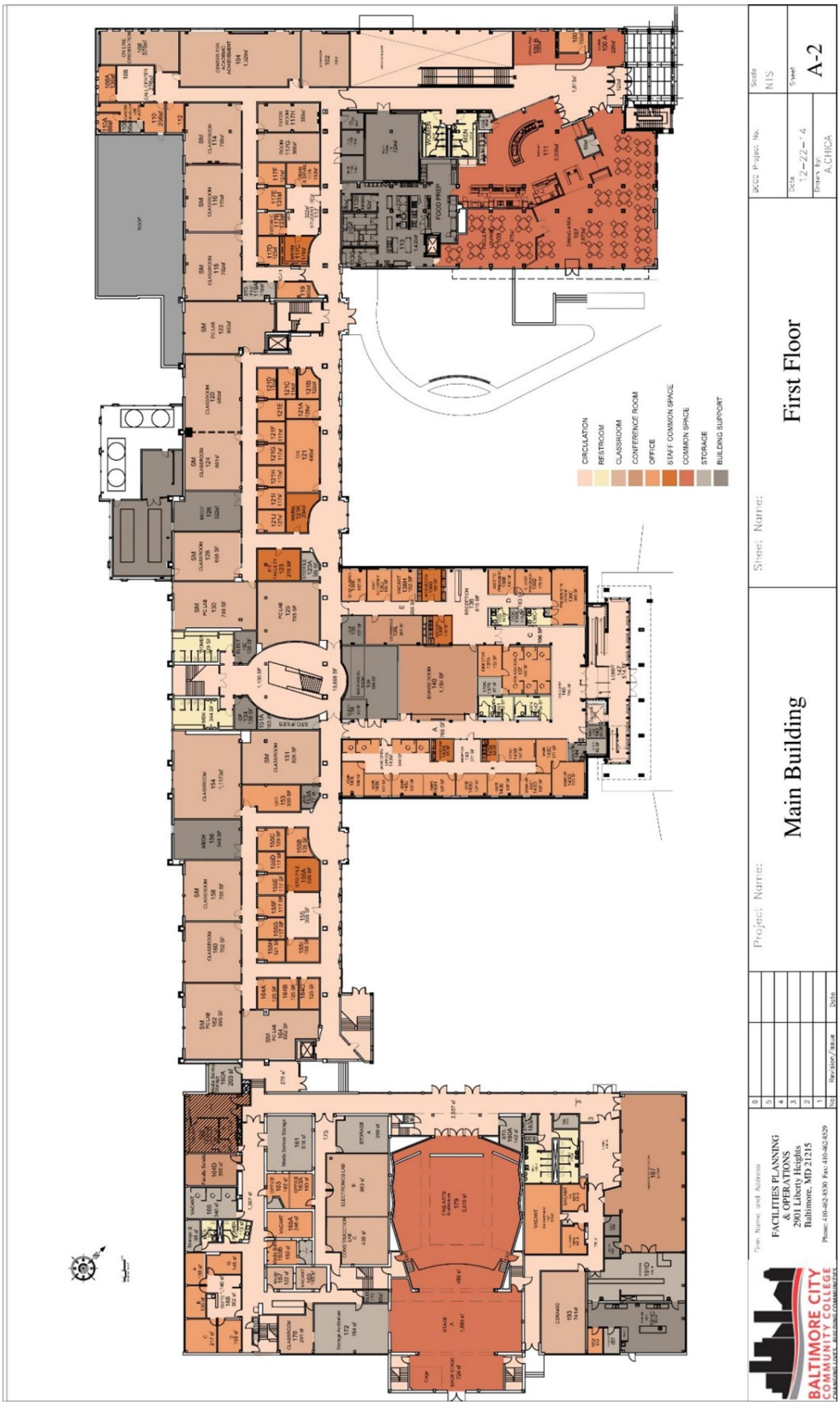
Existing light fixtures in the building are generally ceiling mounted fluorescent type with prismatic lens. Light fixtures in each location are controlled by wall mounted toggle switches. Recommend all fixtures be tested, cleaned and re-lamped. Complete fixture or part of the fixture such as lens, ballast are damaged, damaged part to be replaced if needed.

Recommend light control devices in each location be tested and related wiring be verified for proper performance. If a light control switch in any location is damaged, replace with a new device.

Fire Alarm System

Existing fire alarm system is conventional zoned system. Related FACP is located in electrical room. Recommend complete existing fire alarm system including FACP, FAAP, initiating and notification devices and related wiring to be carefully tested by a company specialist in servicing fire alarm systems to make sure existing system in the building operates correctly. Replace any device/component which is damaged or not functioning properly.

Ground Floor
Main Building
Sheet Name:
Project Name:
Scale
NTS
Sheet
A-1
Date
12-22-14
Drawn By:
ALCHICA
BCCC Project No.
CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
PARKING AREA
LOT D
FACILITIES PLANNING
& OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
BALTIMORE CITY
COMMUNITY COLLEGE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Sheet Name:
First Floor
Project Name:
Main Building
BCCC Project No.
Scale
NTS
Date
12-22-14
Sheet
A-2
Drawn by
A.CHICA
Firm Name and Address
FACILITIES PLANNING
& OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Phone: 410-462-5630 Fax: 410-462-5629
Revision / Issue
Date
BALTIMORE CITY
COMMUNITY COLLEGE

Second Floor
Main Building
A-3
NTS
12-22-14
ACHICA
FACILITIES PLANNING
& OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
BALTIMORE CITY
COMMUNITY COLLEGE
CIRCULATION
RESTROOM
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CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
ROOF

CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
Third Floor
Main Building
ROOF
A-4
BALTIMORE CITY COMMUNITY COLLEGE

4.2 Bard Library

Building Designation:	LIB
Number of Floors:	3, including one level below-grade primarily housing systems
Net Assignable Square Feet (NASF):	22,748
Gross Building Area (GSF):	38,963
Net-to-Gross Efficiency:	58.4%
Year Constructed:	1965
Renovations:	1989, previous master plan called for Replacement and 15,000 square feet of expansion in 2016
Additions:	none
Contains:	Library Print Media Collections, Offices, Computer Lab, General Classroom, Study Rooms
General Condition:	Poor
Adequacy of Space:	Functionally and materially obsolete
Sprinkler Systems:	Not sprinklered
Asbestos / Hazardous Materials:	None

Figure 4-21 – Library exterior

Architectural – General

The library houses a small collection of books. Its primary use is as the chief study space on campus.

Substantially unaltered from 1965, the library exterior is composed of red brick, precast concrete panels and single-pane aluminum-framed glazing. The library is built into a hillside, so that the lower levels have comparatively little outside glazing. Interior finishes are basic and uninviting, and the interior arrangement is open, with little variety in available space. Building systems are obsolete and need replacement. The elevator does not meet current requirements for accessibility.

The open plan provides no acoustic privacy, and lacks a range of spaces suited for individual, small group or general study. Study space is in general poorly suited, essentially desks, tables and chairs in an open space around disused book shelving.

Figure 4-22 – Library sign

The library is in unsatisfactory condition, with obsolete envelope, HVAC and functional arrangements. It urgently requires renovation and updating to meet functional demands and to address out-of-date systems. It reflects its original role as a repository for bound books, and does not meet current curriculum requirements for electronic media and information-sharing.

Figure 4-23 – Library interior

Figure 4-24 – Library interior

Structural

In common with Main Hall, flooring systems are reinforced masonry (Doxplank) construction, which require careful attention to penetrations and utility routing. Overhead clearances are limited for retrofit work.

Accessibility

The building is accessible from the main entrance. An elevator has been retrofitted behind the main stairs, opening into common space on the first and second floors, but ending in a classroom space in the basement. Since there are toilets only on the

second floor and in the basement, and since the bulk of the basement facilities represent 2/3 of the toilets in the building, access to toilets is awkward at best, and unavailable if the classroom is in use or secured. Railings and stairways do not meet current ADA standards, and alarm systems are not up to current standards.

Figure 4-25 – Basement toilets

Figure 4-26 – Study area

Mechanical

The Library has stand-alone cooling and receives hot water for heating from a central heating plant located in the Main Building. The heating pipe distribution system from the Main Building is old and reported to be in poor condition. The mechanical systems are original, from 1965, and have exceeded their expected useful lives. Additionally, the need to renovate and expand the Library is already identified in the current CIP.

There is a need to extend the Johnson Controls Energy Management System to the Labara Building in order to efficiently manage all of the building systems on campus from a central location. The Johnson Controls Energy Management System will allow for improved maintenance, response to alarms, and management of energy usage.

It is recommended that the heating piping between the Main Building and the Library be replaced. The piping is in poor condition and requires replacement to insure efficient and reliable heating for the building. Additionally, mechanical systems should be replaced or upgraded in the near future as part of the renovation and expansion, including extension of the Johnson Controls Energy Management System to this building.

Electrical

The electrical systems are original, from 1965, and have exceeded their expected useful lives.

Electrical systems should be replaced or upgraded in the near future as part of the renovation and expansion. The need to renovate and expand the Library is already identified in the current CIP. Electrical service to the building will have to be increased to support the expansion and increased mechanical loads.

Bard Library – Mechanical

Scope of Work

The assessment team examined the existing conditions of the buildings and all of their mechanical systems in the buildings to evaluate the proposed plan for future use of the existing buildings with the consideration given to the potential re-use of the existing systems.

Codes and Standards

- 2015 International Mechanical Code
- 2015 International Energy Conservation Code (IECC)
- 2006 NFPA 31 Standard for Oil Burning Equipment.

Existing Conditions Assessment

Heating Systems

The library does not have its own heating plant. The library receives heating water via underground piping from the main building. The heating is done by hydronic perimeter units and by the hot deck of a dual duct VAV system. The perimeter units do not appear to be damaged or in bad condition.

Cooling Plant

Central Plant

The system uses chilled water provided by a direct expansion Carrier chiller located in the basement. It appears to date from a renovation in 1988. The entire output of chilled water feeds the dual duct VAV air handler also in the basement. The chiller has reciprocating compressors which have not been offered on chillers of this size for at least 25 years. The condenser also appears very old as it has many signs of damaged fins, very bad paint and unreadable nameplates. The condition of this system is poor. The compressors used in this system also have many moving parts unlike modern compressors for systems of this size which have a single moving part making it easier to maintain them. The chiller would not be recommended for reuse.

Figure 4-27- Chiller and Condensing Unit

Figure 4-28- Chiller and Condensing Unit

Piping

The heating water piping coming from the main building serves the dual duct VAV air handler and the perimeter heat. The piping observed in the mechanical room appears to be in very poor condition. A lot of leaks, missing insulation and rusted piping was observed. Definitely would not consider reusing any piping serving the air handling unit.

The chilled water piping also looks very dilapidated. Many instances of missing insulation, no air separation or chemical treatment was noticed. The interior of the piping is most likely in poor condition. The simplex pump looks very old as well. Would not reuse piping in any major renovation.

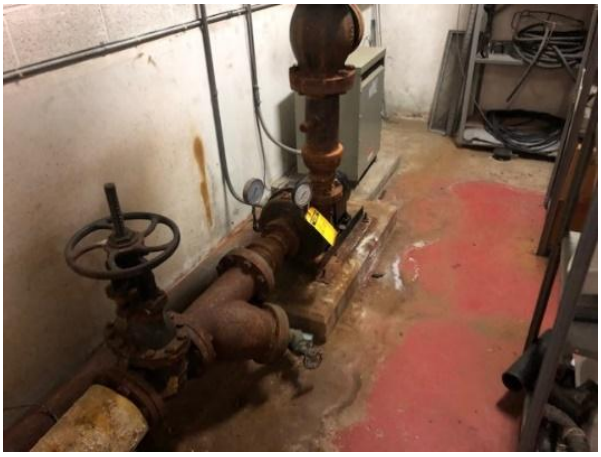


Figure 4-29 & Figure 4-30 – Library Piping Showing Missing Insulation and Leaks

Air Systems

The entire library is cooled and heated by a hydronic dual duct system. This system works by a having an air handling unit connected to heating water and chilled water. The air handler maintains a hot deck and a cold deck. Each deck is ducted to the terminal units, hence the term dual duct system. The terminal units modulate between the hot deck and the cold deck to maintain the desired set point in the space. The

system provides cooling and heat for the entire building. The unit uses 3 way hydronic control valves.

AHU: The existing AHU appears to be very old. As dual duct has not been a preferred system for at least thirty years. Dual duct terminal units and systems sold today are for replacements, not new installations. The unit is not damaged and does not appear to be leaking, however is does have an aged appearance. This system has no VFD on the fan therefore; the terminal unit basically serves as mixing boxes to mix the air from the two decks

Figure 4-31 - Existing Dual Duct AHU

Terminal Units

Dual duct boxes: The spaces control temperature by mixing air from the two decks of the air handler in the basement that are equipped with pneumatic controls. Each one is ducted to circular diffusers located throughout the library. The observed terminal units appear to be in good condition. The circular air diffusers also appear to be in good condition.

Controls
There is some evidence of electronic monitoring, a network 8,000 control system was observed, but every actuator in the building and every thermostat was pneumatic. Pneumatic controls have more maintenance issues than electronic controls, are incapable of PID control and do not have any remote monitoring capability or advanced programming capability. A noticeable hissing sound could be heard at numerous thermostats throughout the building indicating air leaks.

Recommendations
It is not recommended to retain any of the systems in the event the building is renovated. The central cooling equipment and piping is dilapidated, only repairs necessary to keep it running while needed is warranted. The system itself is most inefficient and has a very difficult time maintaining proper comfort. The chiller has maintenance intensive compressors which are not sold with modern units. The dual duct system is no longer being designed because of issues controlling humidity in moderate load conditions. It was necessary to leave heating on all year to basically reheating to maintain humidity levels which is not permitted by modern energy code. The pneumatic controls are also antiquated and lack the programming and monitoring capabilities of modern controls. This system should not be used for any major renovation of the building.

Library

Plumbing / Fire Protection System
The conditions for the existing Plumbing / Fire Protection System focus on below items.

Domestic Water Service
Domestic water service is from the Main Building.

Domestic Hot Water System
Domestic water is provided from the Main Building.

Plumbing Piping System and equipment
The condition of the plumbing piping is unknown at this time, but appears to be adequately serving the building. The age of the building needs to be determined. Piping systems typically have service life of 50 years. Assessment can be made once age is established.

Utility room piping insulation is in fair condition. One of the duplex sewage ejectors appears to have been recently replaced. The other ejector pump appears to have been replaced a number of years ago (i.e. It is not from the original construction).

Plumbing Fixtures
Many of the plumbing fixtures in the first floor restrooms appear to have been replaced recently and many are provided with relatively new controls. However, the piping installed is exposed in the toilet rooms and the appearance of the overall toilet rooms are worn and in need of renovations. The exposed piping diminishes the aesthetic effect of the new fixtures and trim. Many of the fixtures and trim could be salvaged during a renovation project. ADA fixtures are located on second floor only. The piping is concealed but the flush control valve is old style and needs to be replaced.

Fire Suppression System
No sprinkler and standpipe systems are in this building.

Library Building

Scope of Work
The assessment team examined the existing conditions of the building and the various electrical systems involved. The purpose of the study is to verify the existing electrical systems and to assess the condition of each system based on related application in the building.

Codes & Standards
- 2014 International Building Code (IBC_
- 2014 International Energy Conservation Code (IECC)
- 2014 NFPA 70, National Electrical Code (NEC)
- ANSI/ASME Elevators and Escalators Safety Code A17.1
- National Electrical Manufacturers Association (NEMA)
- Illuminating Engineering Society of North America (IESNA)
- State and County Codes & regulations
- Requirements specified in the county ED specification

Existing Conditions Assessment

Existing Electrical Service and Power Distribution Systems
Existing electrical power for the building is provided from Main Admin building via a 400A main disconnect located in the mechanical room. Voltage systems in the building is 208Y/120V, 3PH. Power from the main distribution panel (MDP) is provided to other panels via wires and conduits. MDP panel is wall mounted, with capacity of 400A located inside the existing mechanical room. Branch panelboards are located in different locations in corridors on each floor. According to available drawings, the existing power distribution system and related equipment and panels were installed in 1987. Except for the wire attached to MDP which is rusty and damaged, the rest seems to be in fair condition.

Existing Emergency/Stand-By Power System

- Emergency power: There is no dedicated stand-by generator for this building.
- Emergency power for life safety load in this building is provided by light fixtures with backup batteries.

Existing Interior Lighting System

Light Fixtures

Existing Lighting
Office areas: Mostly ceiling recessed 2x4 prismatic fixtures with fluorescent lamps
Library area: recessed type (in some area pendent mounted) parabolic fixtures with fluorescent lamps

Lighting Controls
Wall mounted toggle switches in almost every area are used to control light fixtures.

Existing Fire Alarm System
Conventional Fire Alarm system is used for the building. The existing system includes zoning panel, alarm bells and wall mounted pull boxes. There is no visual alarm device in the building. The system and related devices are old (installed in 1987) and may not comply with ADA.

Electrical System Issues & Recommendations for Immediate Attention

Library Building

Emergency Lighting
Recommend the location/layout of the existing emergency fixtures be verified, additional fixtures be installed in egress pathways which do not have full coverage. Existing emergency fixtures to be tested, re-lamped and cleaned, and also related batteries to be replaced (if necessary).

Recommend to verify location of all existing exit lights and provide additional exit lights as necessary. Also recommend all existing exit lights be tested, re-lamped, cleaned and related batteries to be replaced as required.

Interior Lighting System
Existing light fixtures in the building are generally ceiling mounted fluorescent type with prismatic lens. Light fixtures in each location are controlled by wall mounted toggle switches. Recommend all fixtures be tested, cleaned and re-lamped. If complete

fixture or part of the fixture such as lens, ballast are damaged, damaged part to be replaced.

Recommend light control devices in each location be tested and related wiring be verified for proper performance. If a light control switch in any location is damaged, replace with a new device.

Fire Alarm System

Existing fire alarm system is conventional zoned system. Related FACP is located in electrical room. Recommend complete existing fire alarm system including FACP, initiating and notification devices and related wiring to be carefully tested by a company specialist in servicing fire alarm systems to make sure the existing system in the building operates correctly. Replace any device/component which is damaged or not functioning properly.

CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
0' 2' 5' 10' 20FT
Graphic Scale
CRAWL SPACE
MECHANICAL
05
1,803sf
COMPUTER LAB
01
866sf
ELEV-MACH
01 A
66sf
01 D
AHU
IDF
STORAGE
01 C
433sf
STORAGE
01 B
170sf
EXIT
16
s.f.
28
s.f.
JAN 02
110s.f.
WOMEN
03
MEN
04
Sheet Name:
Basement Floor
Project Name:
Bard Library - LIB
BCCC Project No.
Scale
NTS
Date
12-22-14
Sheet
A-1
Drawn by:
A.CHICA
Firm Name and Address
FACILITIES PLANNING
& OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Phone: 410-462-8539 Fax: 410-462-8429
No.
Revision/Issue
Date
BALTIMORE CITY
COMMUNITY COLLEGE

CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
0' 2' 5' 10' 20FT
Graphic Scale
N
PRESENTATION ROOM 104 409sf
260 sf
EXIT
STUDY ROOM 105 90 sf
STUDY ROOM 106 122 sf
STUDY ROOM 107 90 sf
STUDY ROOM 108 90 sf
OPEN STUDY AREA 100A
OPEN STUDY AREA 100
OPEN STACK AREA 400 sf
OPEN AREA 6,880sf
150 sf
up
INFO DESK 410 sf
DIRECTOR 103 214sf
RECEIVING 102 633sf
IDF
102A
EXIT
WORKROOM 101 1,265sf
Firm Name and Address
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Phone: 410-462-8530 Fax: 410-462-8529
No. Revision/Issue Date
Project Name:
Bard Library - LIB
Sheet Name:
First Floor
BCCC Project No.:
Scale
NTS
Date
12-22-14
Sheet
A-2
Drawn By:
ALCHICA
BALTIMORE CITY COMMUNITY COLLEGE

CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
0' 2' 5' 10' 20FT
Graphic Scale
CONFERENCE 204 288sf
CONF. ROOM 205 195sf
EXIT
STUDY ROOM 203 309sf
OPEN READING AREA 200A
1,140sf
OPEN STACK STUDY ROOM
1,550sf
OPEN READING AREA 6,800sf 200
COMP. LAB 202 275sf
WOMEN 131sf
MEN 132sf
dw
210sf
OFFICE 201 299sf
201A
201B
EXIT
Second Floor
Sheet Name:
Bard Library - LIB
Project Name:
Scale NTS
Sheet A-3
Date 12-22-14
Drawn By: A.CHICA
BCCC Project No.
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Revision/Issue
Date
BALTIMORE CITY COMMUNITY COLLEGE

4.3 Physical Education Center

Building Designation:	PEC
Number of Floors:	2
Net Assignable Square Feet (NASF):	24,013
Gross Building Area (GSF):	46,292
Net-to-Gross Efficiency:	51.9 %
Year Constructed:	1965
Renovations:	1993 2009 – A new chiller was installed and connected to the chilled water system installed during the 1993 renovations for the future installation and integration of a chiller into the building system.
Additions:	None
Contains:	Arena, Concessions, Staff Offices, Dance Studio, Exercise Room, General Classrooms, Locker Rooms, Training and Hydrotherapy Suite, Coach Offices, Lounge
General Condition:	Good
Adequacy of Space:	Fair
Sprinkler Systems:	Provided
Asbestos / Hazardous Materials:	None

Figure 4-32 – Physical Education Center exterior

Architectural – General

The Physical Education Center is an arched gymnasium buttressed by concrete piers at the arch support points, spanning the main playing floor. The perimeter of the upper level around the playing floor comprises lobbies, circulation space, offices and

concessions, with a few classrooms or studios. The gym is used for athletics and for large campus assemblies.

A lower level houses team rooms, lockers, offices and service spaces. The building is in generally good condition. Cosmetic upgrades would be helpful to update the appearance of the building and it's interior.

The exterior uses brick and precast panels, with exposed concrete buttresses. The interior finishes are mainly painted concrete block and vinyl tile.

Figure 4-33 - Interior of the arena

As noted in the attached condition assessment, the Physical Education Center is in satisfactory condition, but will require substantial work in the mid-term horizon to address deferred replacement of systems and finishes, and to bring the facility up to current accessibility standards. Its comparatively isolated location on the campus and the imposition of temporary modular buildings such as the Facilities Building and Harper Hall have harmed its prominence and connection to the campus.

Structural

In common with other buildings built at about the same time on campus, the Physical Education Center has low structural clearances and restrictions on structural penetrations. Cement fiber roof deck panels (Tectum) are showing age and moisture damage in some locations.

Figure 4-34 – Damaged Tectum and framing at gym roof overhang

Figure 4-35 – Mechanical clutter and encroachment at the front of the gymnasium

Harper Hall and the Facilities Building have encroached on the front of the building, obscuring it from the rest of the campus. Mechanical equipment has been placed so that even with the removal of the temporary structures, the equipment will be discordant with the approach to the building.

Mechanical

The Physical Education Building has stand-alone cooling and heating systems. To mitigate cooling issues in the PE Center and address the ventilation and humidity control throughout the building a new chiller and condenser unit was integrated into the heating and cooling systems in 2009. The mechanical systems are original, from 1965, and have exceeded their expected useful lives. The need to renovate and expand the PE Building has already been identified and will be incorporated in a future Capital Improvement Plan.

There is a need to extend the Johnson Controls Energy Management System to the Nursing Building in order to efficiently manage all the building systems on campus from a central location. The Johnson Controls Energy Management System will allow for improved maintenance, response to alarms, and management of energy usage.

Mechanical Analysis

Although a new chiller has been incorporated into the PE Centers mechanical system in 2009, mechanical systems should be replaced or upgraded in the near future as part of the renovation and expansion, including extension of the Johnson Controls Energy Management System to this building.

Electrical

The electrical systems are original, from 1965, and have exceeded their expected useful lives.

Electrical Analysis

Electrical systems should be replaced or upgraded in the near future as part of the renovation and expansion. The need to renovate and expand the PE Building has already been identified for inclusion in a future Capital Improvement Plan submission. Electrical service to the building will have to be increased to support the expansion and increased mechanical loads.

Physical Education Assessment

Central Plant

Heating Plant: The heating plant is two-cast iron natural gas fired boilers and two constant volume circulating pumps with configuration of pumps as duty standby.

Figure 4-36 - Cast Iron Boilers

Cooling Plant

There is a single air cooled chiller outside the mechanical room. The chilled water distribution is done by constant volume pumps in a duty standby configuration. The chilled water is a propylene glycol-water mix.

Figure 4-37 - Existing Chiller

Air Handling

The main gym is served by two constant volume four pipe air handlers which serve both ventilation and air conditioning. The remaining offices and areas in the building are also served by four pipe fan coils. There is no sign of a makeup air unit so it is assumed all terminal units provide heat and air conditioning.

Terminal Units

All terminal units are four pipe fan coils that are ducted to diffusers.

Controls

Controls are decentralized with each terminal unit responding to its own thermostat to control the valve position.

Condition

The existing heating and chilled water plants are in excellent condition. The equipment appears to be recently installed. The piping insulation in the mechanical room is in

excellent condition. The terminal units seem to be older but nothing appears to be in bad condition. The gymnasium units are probably more recent as it seems they were D/X units at one time. The abandoned condensers were observed outside. It is assumed that the gym units were recently converted to hydronic.

Physical Education Center

Plumbing / Fire Protection System
The conditions for the existing Plumbing / Fire Protection System focus on below items.

Domestic Water Service
Water service is from 8-inch school in campus. 4-inch water service enters the ground floor of the Mechanical Room and splits to 4-inch domestic water service and 4-inch fire service without backflow preventer at each side.

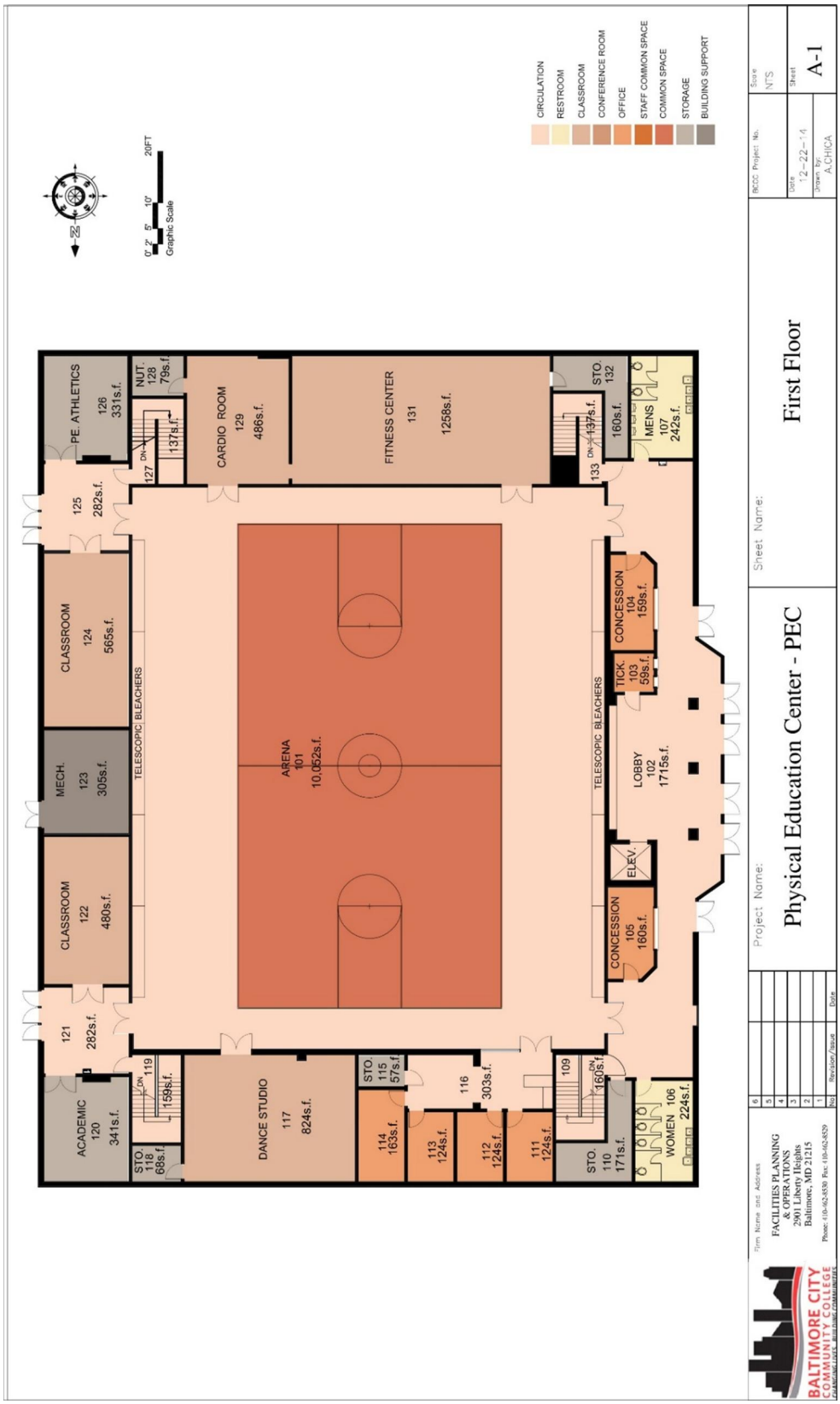
Domestic Hot Water System
Domestic hot water is generated by a gas fired water heater with 900 gallon storage capacity. Hot water recirculation system has been provided.

Plumbing Fixtures
Many of the plumbing fixtures appear to have been replaced recently and many are provided with relatively new proximity controls. However, the piping is installed in the toilet rooms is exposed and the appearance of the overall toilet rooms are worn and in need of renovations. Many of the fixtures and trim could be salvaged during a renovation project.

Electric water cooler is on poor condition. The ADA requirement of dual height has not been provided.

Fire Suppression System
The building is served fully throughout by a wet-pipe sprinkler system. The sprinkler system is fed by a 4-inch fire service and boost with a fire pimp.

CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
Graphic Scale
0' 2' 5' 10' 20FT
MECH. 50 1013s.f.
MENS COACHES 28 308s.f.
TEAM ROOM 30 380s.f.
OFFICIALS LOCKER 32 182s.f.
SHOWERS/ RESTROOM 33
MENS LOCKER ROOM 36 990s.f.
MENS TEAM ROOM 26 272s.f.
TRAINER PT. STAFF 43 146s.f.
STORAGE 49 148s.f.
TRAINING 45 503s.f.
REF. DISHW. 42 140s.f.
WHIRL-POOL 41 143s.f.
STO. 39 98s.f.
LAUNDRY 21 502s.f.
EXAM RM 44 162s.f.
ELEC. 54 110s.f.
STO. 03 115s.f.
SAUNA 04 69s.f.
RESTROOM 37 239s.f.
SHOWERS 38 287s.f.
RESTROOM 15 234s.f.
SHOWERS 16 259s.f.
WOMENS LOCKER ROOM 18 916s.f.
PART TIME COACHES 09 399s.f.
WOMENS COACHES 19 251s.f.
BOOK STORE STO.
MULTI PURPOSE 02 391s.f.
ELEV.
FEMALE OFFICIALS 121s.f.
STUDY HALL 11 284s.f.
WOMENS TEAM 23 281s.f.
WOMENS TEAM 06 298s.f.
STO. 68s.f.
Sheet Name:
Ground Floor
Project Name:
Physical Education Center - PEC
BCCC Project No.
Scale
NTS
Date
12-22-14
Drawn by:
A.CHICA
Sheet
A-2
Firm Name and Address
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Phone: 410-462-8530 Fax: 410-462-8529
BALTIMORE CITY COMMUNITY COLLEGE


CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
Graphic Scale
0' 2' 5' 10' 20FT
PE. ATHLETICS 126 331s.f.
NUT. 128 79s.f.
CARDIO ROOM 129 486s.f.
FITNESS CENTER 131 1258s.f.
STO 132
MENS 107 242s.f.
125 282s.f.
CLASSROOM 124 565s.f.
MECH. 123 305s.f.
CLASSROOM 122 480s.f.
121 282s.f.
ACADEMIC 120 341s.f.
STO. 118 68s.f.
DANCE STUDIO 117 824s.f.
ARENA 101 10,062s.f.
TELESCOPIC BLEACHERS
CONCESSION 104 159s.f.
TICK. 103 59s.f.
LOBBY 102 1715s.f.
ELEV.
CONCESSION 105 160s.f.
WOMEN 106 224s.f.
STO. 110 171s.f.
111 124s.f.
112 124s.f.
113 124s.f.
114 163s.f.
STO. 115 57s.f.
116 303s.f.
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119 159s.f.
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Sheet Name:
First Floor
Project Name:
Physical Education Center - PEC
Firm Name and Address
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Phone: 410-462-8830 Fax: 410-462-8839
Revision/Issue
Date
BCCC Project No.
Scale
NTS
Date
12-22-14
Sheet
A-1
Drawn by
A.CHICA
BALTIMORE CITY COMMUNITY COLLEGE

4.4 Nursing Building

Building Designation:	NRS
Number of Floors:	3
Net Assignable Square Feet (NASF):	21,790
Gross Building Area (GSF):	36,593
Net-to-Gross Efficiency:	59.5%
Year Constructed:	1977
Renovations:	None
Additions:	None
Contains:	General Classrooms, Fashion Design Program, Allied Health Labs, Auditorium, Faculty and Administrative Offices
General Condition:	Fair
Adequacy of Space:	Inadequate
Sprinkler Systems:	None
Asbestos / Hazardous Materials:	None

Figure 4-38A – The Nursing building corner at the main entrance to the campus

Architectural – General

The Nursing Building is a three-story trapezoidal building at the point closest to the campus entrance. The plain red-brick building frames the main pedestrian path into the campus along with the library, and leaves something to be desired as a campus gateway. The Nursing Building includes a lecture hall at the pointed end, and the remainder of the building is classroom and lab space. Finishes are basic and aging. The building is deficient in ADA compliance in terms of accessible toilets and fire alarm systems. It is not sprinklered. Building systems are obsolete. The building houses nursing instruction spaces and labs, which are not well suited to the current instruction program, and are inadequate for the current heavy demand for such spaces. Institution of new programs will require substantial renovation and expansion. The building envelope dates to the time of its construction and is thermally inefficient.

Figure 4-38B – The Nursing Building main façade and the "moat"

Accessibility

The Nursing Building has access from grade at two levels, occupying the slope of a hillside. It is somewhat isolated from adjoining circulation by the fall in terrain. Since it was constructed before ADA provisions were formulated, it lacks most accessibility features, and only partial retrofits have been attempted. Stairs, the elevator, hardware, door clearances, life safety systems and toilet facilities require comprehensive rework.

Figure 4-39 – Typical corridor

Figure 4-40 – Toilet out of service

Mechanical

The Nursing Building has stand-alone cooling and receives hot water for heating from a central heating plant located in the Main Building. The heating pipe distribution system from the Main Building is old and reported to be in poor condition. The mechanical systems are original, from 1977, and have reached or exceeded their expected useful lives.

Mechanical Analysis

It is recommended that the heating piping between the Main Building and the Nursing Building be replaced. The piping is in poor condition and requires replacement to insure efficient and reliable heating for the building. Additionally, mechanical systems should be replaced or upgraded in the near future, including extension of the Johnson Controls Energy Management System to this building.

Electrical
The electrical systems are original, from 1977, and have reached or exceeded their expected useful lives.

Electrical Analysis
Electrical systems should be replaced or upgraded in the near future.

Mechanical

Scope of work
The assessment team examined the existing conditions of the building involved and all of the mechanical systems in the building to evaluate the proposed plan for future use of the existing building with the consideration given to the potential re-use of the existing systems.

Codes and Standards

- 2015 International Mechanical Code_
- 2015 International Energy Conservation Code (IECC)
- 2006 NFPA 31 Standard for Oil Burning Equipment.

Existing Central Plant System

Heat
The Nursing building receives heating water via underground piping from the Main Admin. via underground piping.

Chilled Water
The building has a water-cooled chiller in the ground level mechanical room. The cooling tower is on dunnage on the ground outside the hydronic system. The system has constant volume pumps for the dual temperature water and the perimeter heating loop.

Figure 4-41 - Building Cooling Tower

Air Handling

The air handling units serving the classrooms are dual duct units one per floor except for the ground floor which had unit ventilators using louvers for ventilation and a two-pipe system. The auditorium has its own dedicated air handler. All units are equipped with freeze protection pumps.

Figure 4-42 - Zone Dampers on Multizone Unit

Terminal Units

Ground floor has unit ventilators, first and second floor have perimeter radiation heaters as well as the zone output of the multizone units.

Controls
All controls in the building are pneumatic.

Existing Condition
All systems appear old though not decrepit. The cooling tower showed signs of scale and had no particle separation which may mean the interior of the piping and chiller tubes may have fouling. Some of the insulation has been repaired, but all piping was insulated. Some split systems and through the wall heat pumps were installed on the ground floor indicating the unit ventilators are not doing well. The system itself, the multizone is no longer designed for new systems. Multizones are mostly sold as replacement units as they have trouble with humidity control unless reheat is on year-round.

Nursing

Plumbing / Fire Protection System
The conditions for the existing Plumbing / Fire Protection System focus on below items.

Domestic Water Service
Domestic water service is from 8-inch school in campus. 2 1/2-inch water service enters first floor Mechanical Room without backflow preventer inside the building. Utility room piping insulation is in fair to poor condition.

Domestic Hot Water System
Domestic hot water is generated by 80 gallon storage; 4500w electric water heaters located at each floor Janitor closet. These appear to be in good working order.

Storm Drainage System
The building's primary storm drainage system consists of roof drains collecting and emergency overflow drain. Given the age of the building and lack of noticeable discharge points, we assume that is not independent emergency overflow piping drainage system.

Figure 4-43 – Storm drainage system

Plumbing Fixtures

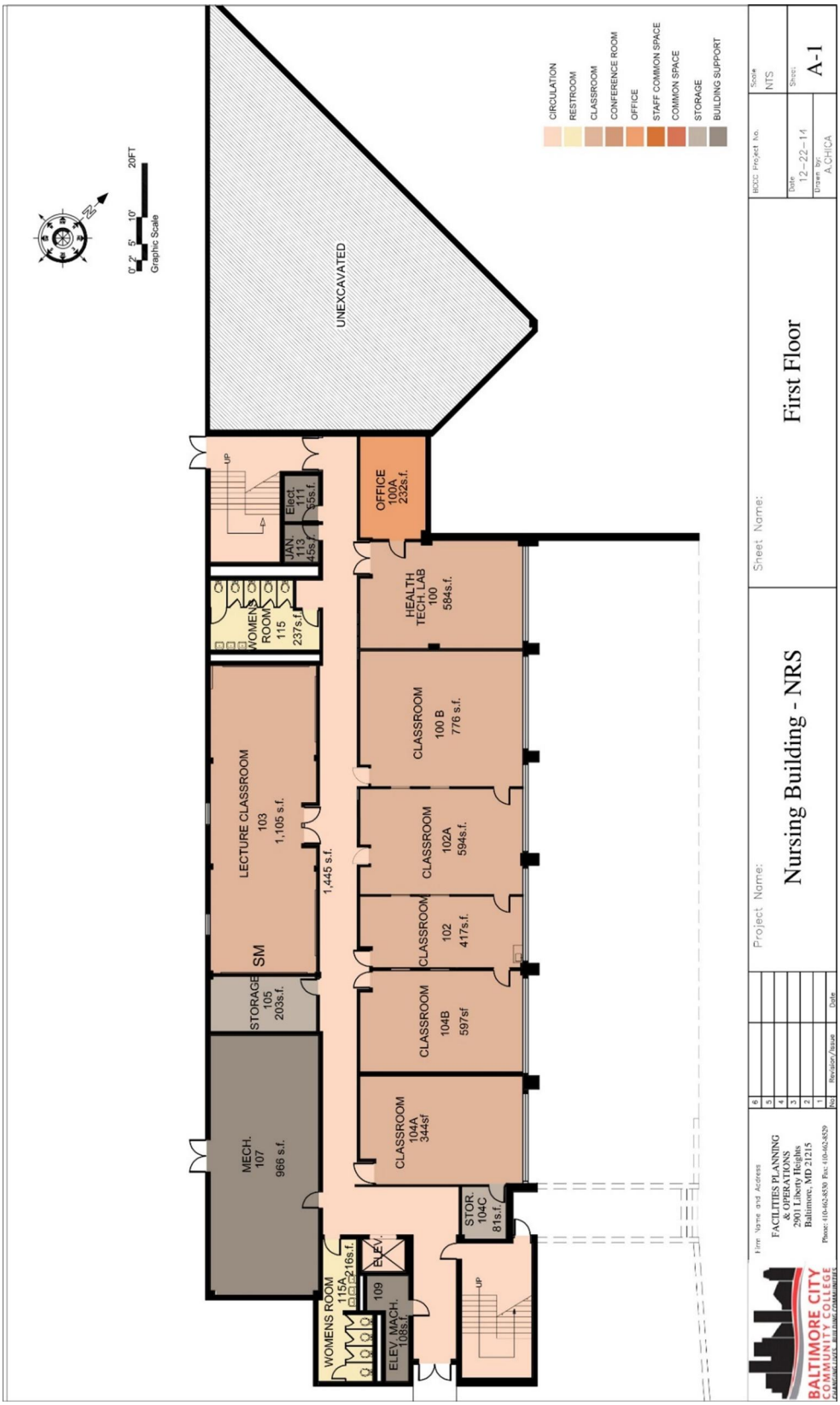
Many of the plumbing fixtures appear to have been replaced recently, and many are provided with relatively new proximity controls. However, the appearance of the overall toilet rooms are worn and in need of renovations. Many of the fixtures and trim could be salvaged during a renovation project.

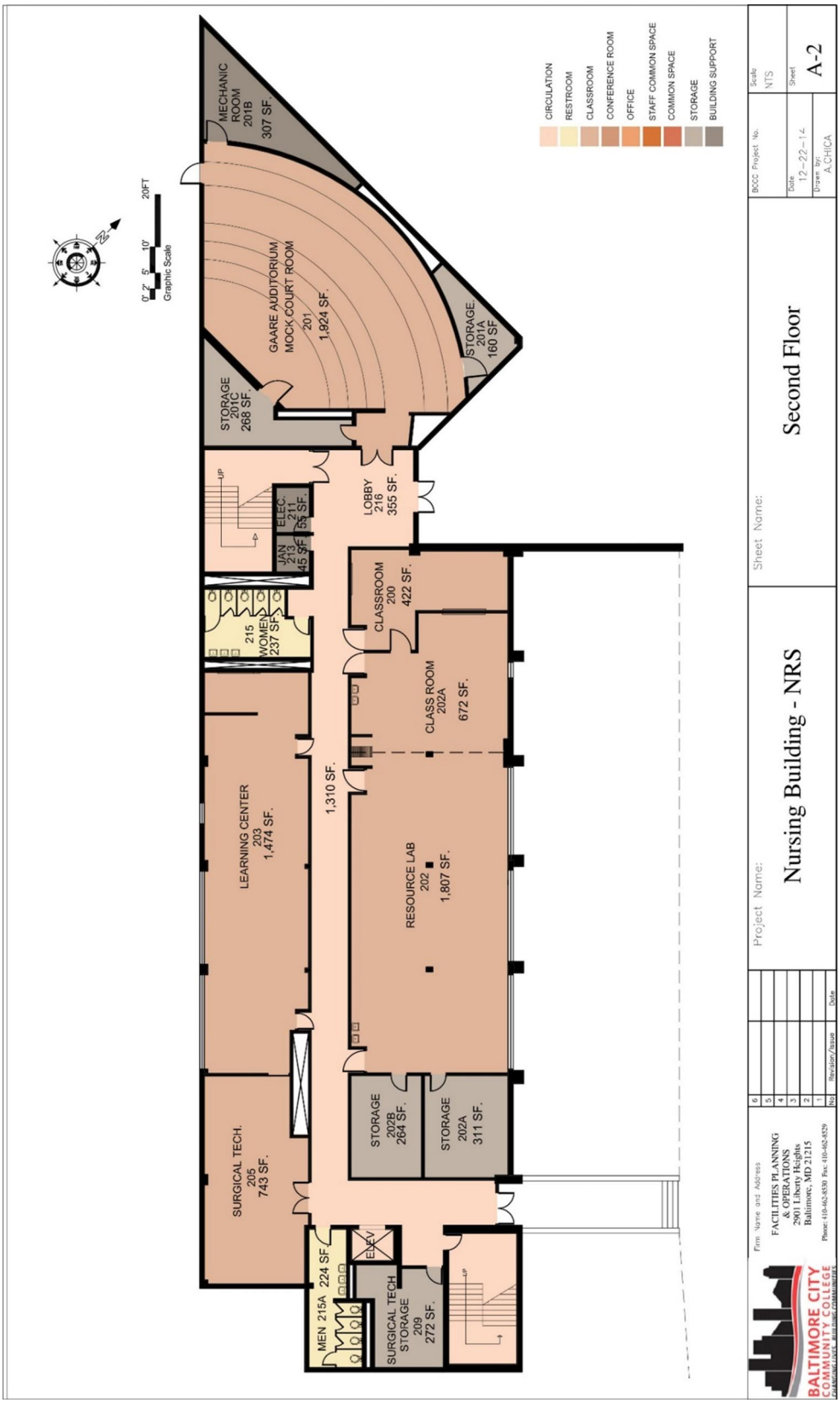
Relatively new electric water coolers have been provided, including some with bottle filling stations; however, these are all mounted at standard heights and do not provide the ADA requirement of dual height units.

The janitor's sink appears to be original to the building and is worn.

Fire Suppression System

The building is not provided with a fire suppression system. A fire sprinkler retrofit is recommended.


UNEXCAVATED
CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
0' 2' 5' 10' 20FT
Graphic Scale
MECH. 107 966 s.f.
STORAGE 105 203s.f.
SM
LECTURE CLASSROOM 103 1,105 s.f.
1,445 s.f.
WOMENS ROOM 115 237s.f.
JAN 113 45s.f.
Elect 111 55s.f.
UP
OFFICE 100A 232s.f.
HEALTH TECH LAB 100 584s.f.
CLASSROOM 100 B 776 s.f.
CLASSROOM 102A 594s.f.
CLASSROOM 102 417s.f.
CLASSROOM 104B 597sf
CLASSROOM 104A 344sf
STOR. 104C 81s.f.
WOMENS ROOM 115A 216s.f.
109
ELEV.
ELEV. MACH. 108s.f.
Sheet Name:
First Floor
Project Name:
Nursing Building - NRS
BCCC Project No.
Scale
NTS
Date
12-22-14
Sheet:
A-1
Drawn by:
A. CHICA
Firm Name and Address
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Phone: 410-462-8530 Fax: 410-462-8529
BALTIMORE CITY COMMUNITY COLLEGE
Revision/Issue
Date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GAARE AUDITORIUM MOCK COURT ROOM 201 1,924 SF.
STORAGE 201C 268 SF.
STORAGE 201A 160 SF
LOBBY 216 355 SF.
ELEC 211 55 SF.
JAN 213 45 SF.
215 WOMEN 237 SF.
CLASSROOM 200 422 SF.
CLASS ROOM 202A 672 SF.
LEARNING CENTER 203 1,474 SF.
1,310 SF.
RESOURCE LAB 202 1,807 SF.
STORAGE 202B 264 SF.
STORAGE 202A 311 SF.
SURGICAL TECH. 205 743 SF.
MEN 215A 224 SF
ELEV
SURGICAL TECH STORAGE 209 272 SF.
CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
Graphic Scale
Firm Name and Address
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Phone: 410-462-8330 Fax: 410-462-8329
Revision/Issue
Date
Project Name:
Nursing Building - NRS
Sheet Name:
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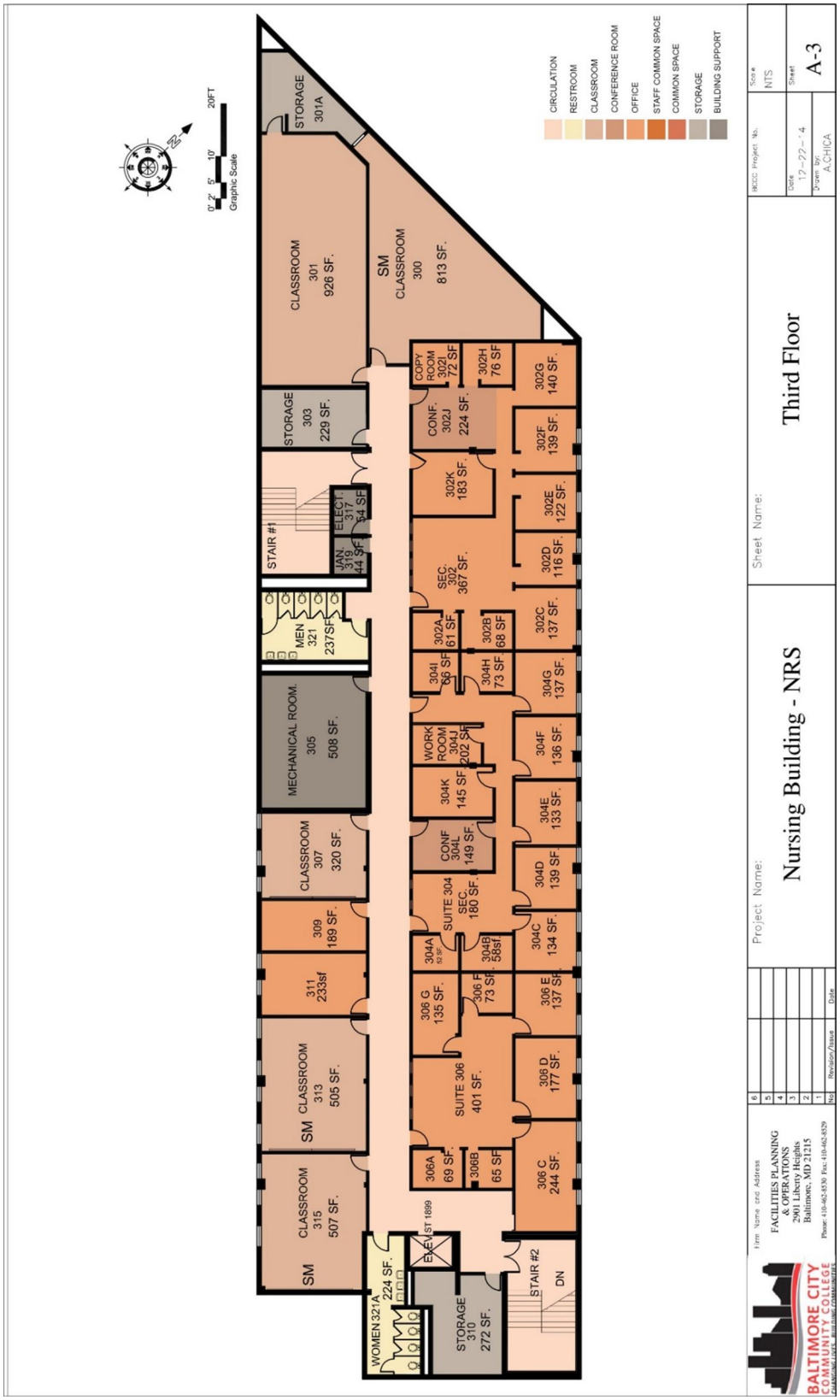
BCCC Project No.
Scale
NTS
Date
12-22-14
Sheet
A-2
Drawn by:
A.CHICA
BALTIMORE CITY COMMUNITY COLLEGE


CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
Graphic Scale
0' 2' 5' 10' 20FT
STORAGE 301A
CLASSROOM 301 926 SF.
SM CLASSROOM 300 813 SF.
STORAGE 303 229 SF.
STAIR #1
ELECT. 317 54 SF
JAN. 319 44 SF
MEN 321 237SF
MECHANICAL ROOM. 305 508 SF.
CLASSROOM 307 320 SF.
309 189 SF.
311 233sf
SM CLASSROOM 313 505 SF.
SM CLASSROOM 315 507 SF.
WOMEN 321A 224 SF.
ELEV. ST 1899
STORAGE 310 272 SF.
STAIR #2 DN
306A 69 SF.
306B 65 SF
306 C 244 SF.
SUITE 306 401 SF.
306 D 177 SF.
306 G 135 SF.
306 F 73 SF.
306 E 137 SF.
304A 52 SF
SUITE 304 SEC. 180 SF.
304B 58sf
304C 134 SF.
CONF 304L 149 SF.
304D 139 SF.
304K 145 SF.
WORK ROOM 304J 202 SF.
304E 133 SF.
304F 136 SF.
304I 66 SF
304H 73 SF
304G 137 SF.
302A 61 SF
SEC. 302 367 SF.
302B 68 SF
302C 137 SF.
302K 183 SF.
302D 116 SF.
CONF. 302J 224 SF.
COPY ROOM 302I 72 SF
302H 76 SF
302E 122 SF.
302G 140 SF.
302F 139 SF.
Project Name:
Nursing Building - NRS
Sheet Name:
Third Floor
MCCC Project No.
Date 12-22-'4
Drawn by: ACHICA
Scale NTS
Sheet A-3
Firm Name and Address
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Phone: 410-462-8330 Fax: 410-462-8329
No. Revision/Issue Date
BALTIMORE CITY COMMUNITY COLLEGE

4.5 Life Science Building

Building Designation:	LSB
Number of Floors:	4
Net Assignable Square Feet (NASF):	49,190
Gross Building Area (GSF):	89,437
Net-to-Gross Efficiency:	55%
Year Constructed:	1996
Renovations:	None
Additions:	None
Contains:	General Classrooms, Science Labs, Computer Labs, Faculty Offices, Conference Rooms, Greenhouse, Main Data Center, Dental Program and Clinic
General Condition:	Good
Adequacy of Space:	Adequate, with exceptions for lab space
Sprinkler Systems:	Fully sprinklered
Asbestos / Hazardous Materials:	None

Figure 4-44 - The Life Sciences Building from Main Hall, with the library in the foreground

Architectural – General

The Life Sciences Building is the principal science instructional building on campus, housing most of the college's laboratory space. The red-brick building was constructed in 1996 and is the most prominent building on campus for passers-by on Liberty Heights Avenue. The Life Sciences Building is heavily used, with little in the way of public space

and study space. Almost all space in the building is devoted to classrooms, offices and lab space. The single elevator in the main lobby is unreliable, as is another isolated elevator at the rear of the building.

Figure 4-45 – Life Sciences from near the gymnasium

Classrooms and labs are in good condition, but are in almost constant use. Systems require a mid-life replacement program. The roof is a candidate for replacement. The elevators require replacement as well.

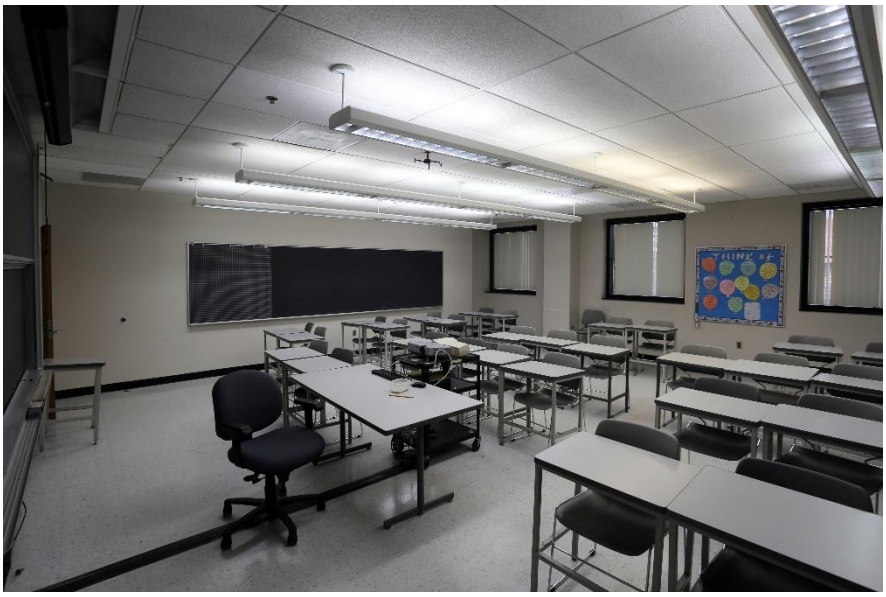


Figure 4-46 – Typical classroom

Figure 4-47 – Central lobby on an upper floor

Mechanical

The Life Sciences Building has stand-alone cooling and heating systems. The original 1996 mechanical systems chiller units have been replaced and the addition of 2 new chiller units will increase the cooling capacity.

There is a need to extend the Johnson Controls Energy Management System to the Life Sciences Building in order to efficiently manage all the building systems on campus from a central location. The Johnson Controls Energy Management System will allow for improved maintenance, response to alarms, and management of energy usage.

Mechanical Analysis
Consideration should be given to extend the Johnson Controls Energy Management System to this building.

Electrical
The electrical systems are original, from the 1996. No major deficiencies in electrical power distribution have been reported.

Electrical Analysis
With the addition of the Data Center and the Dental Program and Clinic, the load on the existing Emergency Generator is more that it was originally designed to carry. An electrical load capacity and distribution study is needed to determine the proper size generator or supplemental generators are needed to integrate these areas fully into Emergency Generator Power system due to the frequency of outages experienced.

Life Sciences Building

Existing Central Plant System
Heating Water is provided by two dual fuel cast iron boilers. The boilers are located in the penthouse of the building. The boilers have water distribution by duplex constant volume pumps. The existing boilers seem to have some age on them as evidenced by the rusted condition of the outer casing.

Figure 4-48 - Cast Iron Boilers Serving Life Sciences Building

Chilled water is provided by three brand new air-cooled chillers located on the roof right outside the Mechanical Penthouse. Chilled water pumping is by a primary and secondary pumping. The secondary pump is a duplex constant volume chilled water pump. The primary pump is lead lag with a pump serving each chiller. The chillers and associated piping are new but it seems the existing piping indoors and pumps are much older and have signs of damaged insulation and rust.

Figure 4-49 - New Chillers

Air Handling

All of the classrooms are served by a variable volume reheat system. The main air supply is provided by two built up air handlers in the penthouse. The air handlers appear to have energy recovery but it could not be verified as the doors were difficult to open with the units running. All control valves are three way. The air handlers take all of the output from the air-cooled chillers and provide ventilation and cooling for all of the rooms in the Life Science Building.

Terminal Units

All of the classrooms have variable air volume terminal units with hot water reheat. It appears all return is through the plenum space above the suspended ceiling in each classroom. The corridors and staircases use hydronic cabinet haters. The data rooms all use independent mini split systems.

Controls

All controls in the building are pneumatic. There are some indications of monitoring by a BMS, but all observed actuators are pneumatic.

Conditions

The air-cooled chillers are brand new and appear to have been installed within the past year. All of the piping going to the chillers looks new. The rest of the piping in the penthouse is old but not in bad condition. The heating water pumps and secondary heating water pumps appear old but in decent condition and are all operational. The primary chilled water pumps are inline pumps and are run down with numerous leaks and rust on all of the pumps. The boilers are also in bad condition. The casings are rusted out; however, no leaks were noticed. The air handlers also seem old but in good condition. The VAV constant volume reheat system is not as outdated as the systems in the library or nursing building but is generally used as a baseline system for all energy models.

Life Science

Plumbing / Fire Protection System
The conditions for the existing Plumbing / Fire Protection System focus on below items.

Water Service
Building water service is from 8-inch water service which enters first floor Mechanical Room and splits to 8-inch fire service and 4" domestic water service.

Domestic Hot Water System
Domestic hot water is generated by two 300 gallon storage gas fired domestic water heaters at penthouse.

Natural Gas System
Gas is supplied to penthouse mechanical room to serve HVAC equipment and domestic water heaters.

Strom Drainage System
The building's primary storm drainage system consists of roof drains collecting and emergency overflow drain piping system. There were no reports by school staff of leaking problems for this building.

Plumbing Fixtures
The observed plumbing fixtures are in good condition. Plumbing fixtures are low water consumption type and barrier free fixtures met current ADA standards..

Fire Suppression System
The building is served fully throughout by an Auto Sprinkler System with dry–pipe system to parking garage, wet-pipe system to heated area, and pre-action system to computer rooms. The sprinkler system is fed by an 8-inch fire service and boost with a fire pump. A diesel –engine driven generator is located in the penthouse for emergency power to accommodate emergency requirements.

Figure 4-50 - Fire pump test heads and Fire Department Connection

Figure 4-51 - Diesel-engine drive Emergency Generator

Life Sciences Building

Scope of Work

The assessment team examined the existing conditions of the building and the various electrical systems involved. The purpose of the study is to verify the existing electrical systems and to assess the condition of each system based on related application in the building.

Existing Condition Assessment

Existing Electrical Service

Existing metering number is 'BGE-161 211 157'. Main switch is 208Y/120V, 3PH, 4w, 2500A. BGE is the utility company. The secondary feeders enter the main electrical room and terminate at the Current Transformer (C/T) section.

Existing Power Distribution System

Main Power Distribution Panel

Main distribution panel (MDP) is 480Y/277V, 3PH, 2500A, installed in 1995. Based on our survey, the existing MDP is in fair condition.

Branch Panelboards

Branch Panel boards are spread out in different areas of the building in order to feed the loads scattered in various locations. The condition of existing panelboards seems fair. There are electrical closets on each floor.

Wires & Conduits

Although, wires & conduits are embedded in the walls, the installation date is the same as when the panels were installed. We recommend conductivity and insulation tests to be performed for all wires.

Existing Emergency/Stand-By Power System

Stand-By Generator (No 1):

This MTU generator is used to backup all server rooms and data racks loads. This generator is almost new and in a good condition.

Figure 4-52 - Emergency generator

Stand-By Generator (No 2):
Existing emergency generator by ONAN rated 350 KW, 480Y/277V. No accurate record of the generator installation date. However, year 1995-1996 according to the existing drawings and Generator label. This generator is used to feed all emergency loads in the building. Existing condition of this generator also seems fair. However, the unit should be tested and have a service maintenance contract for better performance and high efficiency.

ATS Switches
Existing emergency system includes 2 transfer switches, ATS 1 & 2 to transfer power to different types of emergency loads.

Emergency power distribution panels
There are a few emergency panelboards to distribute emergency power from ATS switches to emergency loads in the building. These panels are mostly located inside the electrical room.

Existing Interior Lighting System

Light Fixtures

Existing Lighting Conditions
Corridors/Office: Downlight and 2x4 recessed in ceiling fixtures with parabolic diffusers and T8 fluorescent lamps. Higher energy efficient LED light source is available at this time and upgrade is recommended.

Existing Lighting Conditions - Mechanical Room/Electrical Room/Utility Room/Storage: surface or pendant mounted to the ceiling industrial type with fluorescent lamps.

Lighting Controls
Corridor/Offices/Mechanical Room/Electrical Room/storage: standard on/off switch.
Stage and theater: controlled via Portable control switch for dimming and on/off.

Exterior: controlled via photocell.

Existing Egress Lighting & Exit Lights

Egress lighting
Egress Path Lighting – All fixtures fed by the existing emergency generator in the building. During the site visit it was noticed that in some locations/egress paths, there are not enough lighting coverage. We recommend this issue to be verified and appropriate fixtures to be installed.

Exit Lights
Different exit lights are used at exit locations. All exit signs include normal battery backup.

Existing Receptacles
Existing power receptacles are a combination of recessed, floor box and surface mounted receptacles in various areas of the building. Surface mounted receptacles were found in some areas which were added later on as needed.

Condition of the receptacles is fair. Wiring needs to be tested for insulation and conductivity

Existing Fire Alarm System

- Fire Alarm Control Panel is mounted on the wall. FACP is from NORTHON and is in good condition.
- Fire Alarm Annunciator Panel is wall-mounted type and installed next to the main building entrance area. Existing FAAP is in good condition.
- Fire Alarm Initiation Devices are in good condition.
- Fire Alarm Notification Devices are by Simplex and in good condition.

Existing Tel/Data System

Incoming Tel/Data Service(s) & MDF room
The building has a server room with data racks and data/tel equipment. All data related racks are floor mounted. The room and related equipment were installed in recent years and they are in good working condition. UPS system is installed in the data room to provide backup power for data equipment. Power for all data equipment and related receptacles is provided via dedicated panelboard also located in data room.

Tel/Data Outlets
Like power outlets, tel/data outlets are a combination of recessed and surface mounted. Surface mounted data outlets were noticed in ticket office, back rooms, etc. with raceway going to the suspended ceiling. Since the building is not that old, the outlets have to be checked individually. Otherwise, they are in fair condition.

Figures 53, 54 & 55 Existing data room, data equipment racks and Existing UPS system

Electrical System Issues & Recommendations for Immediate Attention

Life Sciences Building

Power distribution system:

- All branch panelboards located in different corridors of the building are old and door locks on one of them is damaged. Recommend breakers inside panels to be verified/tested and replaced if necessary. Door locks to be repaired
- All existing power wiring in the building is old. Recommend conductivity and insulation test to be performed on all wiring related to panel feeders and large equipment. Replacement of damaged wires as necessary.
- Regarding the age of the existing stand-by generator unit No 2, related ATS, emergency panel and other related components; we recommend the entire system to be completely tested, serviced/maintained by a generator service company to ensure the emergency power system in the building will work properly.

Emergency Lighting

- As mentioned in the report, existing fixtures for emergency egress pathways are old and there are locations that may not be covered by existing fixture layout. Recommend the location/layout of the existing emergency fixtures be verified, additional fixtures be installed in egress pathways which do not have full coverage. Existing emergency fixtures to be tested, re-lamped and cleaned, and also related batteries to be replaced (if necessary).

- Recommend to verify location of all existing exit lights and provide additional exit lights as necessary. Also recommend all existing exit lights be tested, re-lamped, cleaned and related batteries to be replaced as required.

Interior Lighting System

- Existing light fixtures in the building are generally ceiling mounted fluorescent type with prismatic lens. Light fixtures in each location are controlled by wall mounted toggle switches. Recommend all fixtures be tested, cleaned and re-lamped. If complete fixture or part of the fixture such as lens, ballast is damaged, the damaged part to be replaced.

- Recommend light control devices in each location be tested and related wiring be verified for proper performance. If a light control switch in any location is damaged, replace with a new device.

Fire Alarm System

- Existing fire alarm system panel FACP is located in electrical room. Recommend complete existing fire alarm system including FACP, FAAP, initiating and notification devices and related wiring to be carefully tested by a company specialist in servicing fire alarm systems to make sure the existing system in the building operates correctly. Replace any device/component which is damaged or not functioning properly.

Project Name:
Life Science Building - LSB
Sheet Name:
First Floor
Sheet
A-1
Scale
NTS
Date
12-22-14
Drawn by:
A.CHICA
Firm Name and Address
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Phone: 410-462-8330 Fax: 410-462-8329
BALTIMORE CITY COMMUNITY COLLEGE
LOBBY 112 1,457s.f.
9'-4" High
DENTAL LAB 102 781 S.F.
DENTAL CLINIC 1,218s.f.
WAITING AREA 110 273s.f.
CORRIDOR
STUD. LOUNGE 116 166s.f.
WOMENS LOCKERS 183s.f.
MEN 185s.f.
WOMEN 185s.f.
ELEV.
ELEVATOR ROOM 115 80s.f.
MECHANICAL ROOM 114A 143s.f.
ELECTRICAL ROOM 113A 237s.f.
TELEPHONE ROOM 201s.f.
IDF ROOM 113B
LOCKERS 76s.f.
RECEP. 138s.f.
CLOSET 44s.f.
DARK RM 110s.f.
REHABILITATION
STAIR #1
STAIR #2
V. MACHINES
HVAC
RAMP
119 CITS MAIN FRAME 660s.f.
TIERED CLASSROOM 120 1,259s.f.
COMM. ROOM 117A 132s.f.
STORAGE 225s.f.
CONFER. RM. 118B 132s.f.
LOUNGE 118 81s.f.
OFFICE 78s.f.
349s.f.
216s.f.
WORKSTATION
WAITING AREA 166s.f.
STORAGE 98s.f.
DARK RM. 111s.f.
OFFICE 122 130s.f.
X-RAY 123 90s.f.
X-RAY 124 83s.f.
X-RAY 125 81s.f.
X-RAY 126 80s.f.
X-RAY 127 70s.f.
X-RAY 128 70s.f.
PARKING
127 RECEIVING 166s.f.
128A 89s.f.
129A 49s.f.
127A 437s.f.
ELEV. #2 STAIR #3
0' 2' 5' 10' 20FT
Graphic Scale
CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT

CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
Graphic Scale
HOUSEKEEPING
MATH PC LAB DEVELOPMENTAL 250 1,133s.f.
MATH PC LAB DEVELOPMENTAL 244 896s.f.
MATH PC LAB DEVELOPMENTAL 245 773s.f.
MATH PC LAB DEVELOPMENTAL 246 1,059s.f.
MATH PC LAB DEVELOPMENTAL 243 1,031s.f.
MATH PC LAB DEVELOPMENTAL 240 686s.f.
CLASSROOM 255 595s.f.
CLASSROOM 256 383s.f.
CLASSROOM 260 667s.f.
CLASSROOM 252 406s.f.
CLASSROOM 253 373s.f.
CLASSROOM 261 383s.f.
CLASSROOM 263 352s.f.
LECTURE 241 1,220s.f.
239 2104 S.F.
259 369 S.F.
228 710s.f.
8'-11" High
Data: 55 L.F.
STAIR #1
Sheet Name:
Second Floor
Project Name:
Life Science Building - LSB
Scale
NTS
Sheet
A-2
Date
12 22 14
Drawn by:
A.CHICA
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
BALTIMORE CITY COMMUNITY COLLEGE

CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
Graphic Scale
20FT
10'
5'
0'
N
ROOFDECK
STAIR #
IN 400
CHEMISTRY LAB 401 1,200s.f.
CHEMISTRY PREP 403 565s.f.
423 859s.f.
PHYSICS LAB 402 1,204s.f.
PHYSICS PREP 404 536s.f.
CHEMISTRY LAB 405 1,227s.f.
WEN 406 202s.f.
ELEV.
DN
LOBBY 408 613s.f.
8'-11" High
MEN 407 185s.f.
ELECTRICAL 422A 92s.f.
40s.f.
411 TELECOMM. 189s.f.
Data: SIZE: 55 C.F.
ELEVATOR 408A
A&P LAB 414 1,181s.f.
422 1,632s.f.
A&P PREP 416 568s.f.
ROBOTICS LAB 418 1,181s.f.
420a 33s.f.
HOUSEKEEPING
420 240s.f.
421 219s.f.
A&P LAB 419 1,158s.f.
BOX
A&P PREP 417 579s.f.
A&P LAB 415 1,153s.f.
MICRO-BIOLOGY LAB 413 1,160s.f.
MICRO PREP. ROOM 410 554s.f.
A & T BIOLOGY LAB 409 1,213 S.F.
Firm Name and Address
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Phone: 410-462-8530 Fax: 410-462-8539
No. Revision/Issue Date
BALTIMORE CITY COMMUNITY COLLEGE
BCCC Project No.
Scale NTS
Date 12-22-14
Sheet A-4
Drawn by: A.CHICA
Project Name:
Life Science Building - LSB
Sheet Name:
Four Floor

4.6 Harper Hall

Building Designation:	HH
Number of Floors:	2
Net Assignable Square Feet (NASF):	15,755
Gross Building Area (GSF):	23,034
Net-to-Gross Efficiency:	68.4%
Year Constructed:	2001
Renovations:	none
Contains:	Child Development Center (Day Care), Computer Information and Technology Offices, Media Services
General Condition:	Fair
Adequacy of Space:	Planned to be progressively vacated
Sprinkler Systems:	None
Asbestos / Hazardous Materials:	None

Architectural – General

Harper Hall is a modular structure, built to house functions displaced by renovation. The two-story building was put in place in 2001. The building has reached the end of its life and should be removed. Programs accommodated in Harper Hall should be moved to Main Hall or to the South Pavilion.

This building is a two-story temporary structure. The building was erected to serve as surge space, in order to facilitate the College's Main Building renovation. Harper Hall is programed for demolition with the commencement of the campus loop road project.

Figure 4-56 – Harper Hall

Figure 4-57 – Play area at Harper Hall

Mechanical, Electrical and Plumbing

The Harper Hall assessment is combined with the Facilities assessment in the next section.

Facilities Building

Building Designation:	Facilities
Number of Floors:	1
Net Assignable Square Feet (NASF):	4,302
Gross Building Area (GSF):	5,594
Net-to-Gross Efficiency:	
Year Constructed:	2006
Renovations:	none
Contains:	Facilities Offices

Figure 4-58 – Facilities building

Architectural – General

The Facilities Building is a modular structure. Intended to be temporary during renovation projects, it continues to house the facilities offices due to an absence of space elsewhere on campus. It lacks space for workshop and warehouse functions.

Mechanical

This facility is temporary. No deficiencies reported.

Mechanical Analysis
None.

Electrical
This facility is temporary. No deficiencies reported.

Electrical Analysis
None.

Facilities and Harper Hall:
HVAC System: The two buildings each use ducted outdoor package terminal air conditioning (PTAC) systems with electric heat. Each PTAC is ducted to a zone which is controlled by a single zone thermostat. The PTAC units handle ventilation as well. The units are the only source of HVAC in the building.

Figure 4-59 - Typical PTAC units

Condition: The PTAC units are all in serviceable condition. No long range planning is needed for such a system. The individual units can be replaced as required. These units are very common for prefabricated temporary structures as these appear to be.

CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
GRAPHIC SCALE
109D 113sf
109C 75sf
109B 94sf
MEDIA SERVICES
103B 93sf
103A 94sf
HOUSEKEEPING 107A 146sf
DUPLICATING 102 483sf
HALL 185 S.F. 154sf
109E 86sf
109A 151sf
109 267sf
103
HALL 456sf
ERP 105 406sf
MAIL ROOM 102A 293sf
109F 91sf
CLOSET 31sf
MECH. 36sf
ITS EQUIPMENT 101 206sf
ITS EQUIPMENT 101A 279sf
OFFICE 110B 162sf
RECEPTION 110 166sf
104 S.F.
ELEVATOR
OFFICE 110A 106sf
MEN ROOM 108 176sf
WOMEN ROOM 106 225sf
JAN 107 42sf
18sf
ELEC 13sf
111B 149sf
BREAKROOM 111A 107sf
81sf
SUPPLY 111 107sf
STUDENT SUPPORT AND WELLNESS SERVICES 114 360sf
OFFICE A 137sf
WAITING LOBBY 115A 187sf
115
DISTANCE LEARNING LAB. 112 490sf
B TOILET 60sf
STAFF 115T 88sf
115B 62sf
115R
E EXAM 71sf
D EXAM 70sf
OFFICE C 110sf
STORAGE 115C 48sf
KITCHEN 115F 64sf
Child Develop. Center 115C
115D 150sf
HALL 115S 484sf
RAMP
AFTER SCHOOL (10) CLASSROOM 115P 383sf
OBSERV BOOTH 115N 62sf
PRESCHOOL (18) CLASSROOM 115L 653sf
OBSERV BOOTH 115K 64sf
TWO YEARS (12) CLASSROOM 115H 415sf
CONFERENCE R. 115E 150sf
115M TOILET 88sf
115J TOILET 61sf
Sheet Name:
First Floor
Project Name:
Harper Hall - HH
Firm Name and Address
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Phone: 410-462-8530 Fax: 410-462-8529
BALTIMORE CITY COMMUNITY COLLEGE
BCCC Project No.
Date 12-22-14
Drawn by: A.CHICA
Scale NTS
Sheet A-1
No. Revision/Issue Date

CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
GRAPHIC SCALE
Project Name:
Harper Hall - HH
Sheet Name:
Second Floor
Scale
NTS
Sheet:
A-2
Date
12-22-14
Drawn by:
A.CHICA
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights Ave.
Baltimore, MD 21215
BALTIMORE CITY COMMUNITY COLLEGE
ITS STORAGE 207 395sf
ITS - PC TECH 206 435sf
ITS Network 208 451sf
ERP Director 209 A 306sf
ITS 210 322sf
ITS 211 105sf
ITS 212 110sf
ITS 212A 121sf
ITS 213 168sf
ITS 200Z 132sf
FILE CABINETS 200Y 134sf
AUDIOVISUAL EQUIPMENT 200L 173sf
203 SF
ITS CONFERENCE ROOM 200H 350sf
ITS 200M 147sf
I.T.S STAFF OFFICES
TELECOM/ DATA 200 AA 190sf
ITS 200G 184sf
FILE CABINETS 200D
WORKROOM 200F 72sf
KITCHEN 200E 63sf
ITS LOBBY 200 290sf
WAITING
ITS 200C 152sf
ITS DIRECTOR 200B 241sf
200A RECEPT.
ELEVATOR
STORAGE 90sf
PRESIDENT'S SUITE 204
FOYER 353sf
RECEPTION 204C 132sf
PRESIDENT'S OFFICE 204 292sf
ASST TO PRESIDENT 204B 140sf
WORKROOM & SUPPLY 204D 115sf
CONFERENCE ROOM 204F 284sf
ASST TO PRESIDENT OFFICE 204E 157sf
CHIEF OF STAFF OFFICE 204G 210s.f.
CHIEF INTERNAL AUDITOR 205C 175sf
BREAKROOM 206E 106sf
206D 145sf
206A 91sf
206B 93sf
206C 90sf
206F 153sf
HALL 778sf H=8'-6"
HALL 253sf
205 321sf
File Room 205 C1
LEGISLATIVE DIRECTOR 205D 106sf
ASST ATTORNEY GENERAL 205E 106sf
70s.f.

4.7 North Campus

West Pavilion	3100 Towanda Avenue
Building Designation:	WP
Number of Floors:	4+ 2 basement levels + penthouse
Net Assignable Square Feet (NASF):	
Gross Building Area (GSF):	69,456 sf
Net-to-Gross Efficiency:	
Year Constructed:	1965
Renovations:	Office alterations in 2011
Additions:	None
Contains:	Offices
General Condition:	Fair
Adequacy of Space:	Unsuitable for use on upper levels, satisfactory on the ground floor for offices
Sprinkler Systems:	Fully sprinklered
Asbestos / Hazardous Materials:	None in occupied areas

Figure 4-60 – The West Pavilion from downhill, from the old hospital footprint

Architectural – General

The West Pavilion was built as the service wing and nursing dormitory for the now-demolished Provident Hospital in 1965. The present building represents the west wing of a larger 282-bed facility that was torn down in the late 1990s. It received a minimal renovation to accommodate BCCC offices in 2011. Its systems are obsolete and unsuitable for further use. The 4-story brick structure's upper floors are subdivided into small dormitory spaces, which cannot easily be adapted for flexible use or instructional space. The first floor is primarily used by the college's HR and procurement departments. It includes a 2300 square foot multi-use space that can be configured as an auditorium, but which is presently out of use.

Figure 4-61 - West Pavilion entrance

A great deal of the building's footprint and peripheral spaces are devoted to infrastructure associated with its former use, serving the now-vanished hospital. The West Pavilion is recommended for demolition once it is no longer needed for float space during renovations.

In the short run, a large proportion of the building's ground floor is occupied by the now-vanished hospital's central mechanical and electrical systems. Selective

demolition could yield a substantial area of utility space for facilities shops and warehouses, and there is some materials salvage value to offset part of the costs.

Figure 4-62 – Office space in former dormitory space

Figure 4-63 – Former dormitory room repurposed for office

Much of the upper West Pavilion remains configured as a dormitory, with small bathrooms between bedrooms. The rooms are now used for office space, much of which is presently vacant.

West Pavilion

Central Plant

Heating Water Plant: There is an old electric boiler in the basement mechanical room with a constant volume pumping system. The boiler was sized for a much larger load than it is currently serving. It is assumed that it used to provide heating for the building that was torn down.

Figure 4-64 - Electric Boiler

There is no central cooling plant. There is an air cooled chiller on the roof which serves limited parts of the building and an abandoned chiller on a lower roof that serves some abandoned air handling units. Most of the building is served by through the wall heat pumps with a ventilation unit providing ventilation.

Figure 4-65 - Existing Air Cooled Chiller

Air Handling

Two active air handlers were observed, one in the penthouse that provides tempered makeup air to all of the rooms with packaged heat pumps and another constant volume unit that serves a limited area on the first floor. There are several abandoned air handlers in the basement mechanical room left over from the part of the pavilion that

was demolished. The existing air handlers are constant volume, four pipe units. They appear to be the only users of the chilled water produced from the roof top chiller. There were many abandon air handlers in the basement mechanical room

Figure 4-66 - Abandoned AHU in Basement Mechanical Room

Terminal Units
Most of the building is air-cooled though the wall units with unit mounted controls. Ventilation is provided by the makeup air unit in the penthouse.

Controls
Air handler actuators were all pneumatic. No sign of any digital monitoring. Heat pump controls were unit packaged.

Condition
The condition of the equipment is decrepit. Several of the heat pump units could not be activated. Abandoned equipment looks to be in very poor condition. The existing chiller that is operational looks old and the installation violates code for proximity to the roof's edge and would not pass inspection. Very small parts of the first floor are actually occupied. Most of the building is vacant. Complete HVAC reconstruction is needed before the building can be fully occupied.

Plumbing / Fire Protection System
The conditions for the existing Plumbing / Fire Protection System focus on below items.

Domestic Water Service
This building was a hospital. The 10-inch domestic water and fire protection combined water service is from 20-inch city main at Liberty Height Avenue. A water meter pit is located at the 10-inch main water service on the side of the road. 8-inch domestic water service and 8" fire service are distributed by this 10-inch service and enter the building.

Domestic Hot Water System
Domestic hot water is generated by a domestic hot water boiler. Recirculation pump has been provided. This boiler is a 1970 product which is old and oversize for a new office building.

Plumbing Fixtures
This building is almost abandoned. All the plumbing fixtures shall be demolished.

Suppression System
The building is served by a wet-pipe sprinkler system. The sprinkler system is fed by an 8-inch fire service and boost with a fire pump.

Figure 4-67 - Fire Department Connection for sprinkler system.

BALTIMORE CITY COMMUNITY COLLEGE	Firm Name and Address: FACILITIES PLANNING & OPERATIONS, 2901 Liberty Heights, Baltimore, MD 21215, Phone: 410-462-8530 Fax: 410-462-8529	Project Name: West Pavilion, 3100 Towanda Avenue	Sheet Name: Basement-1 Mechanical Room	BCCC Project No. / Date: 12-22-14 / Drawn by: A.CHICA	Scale: NTS / Sheet: A-B1

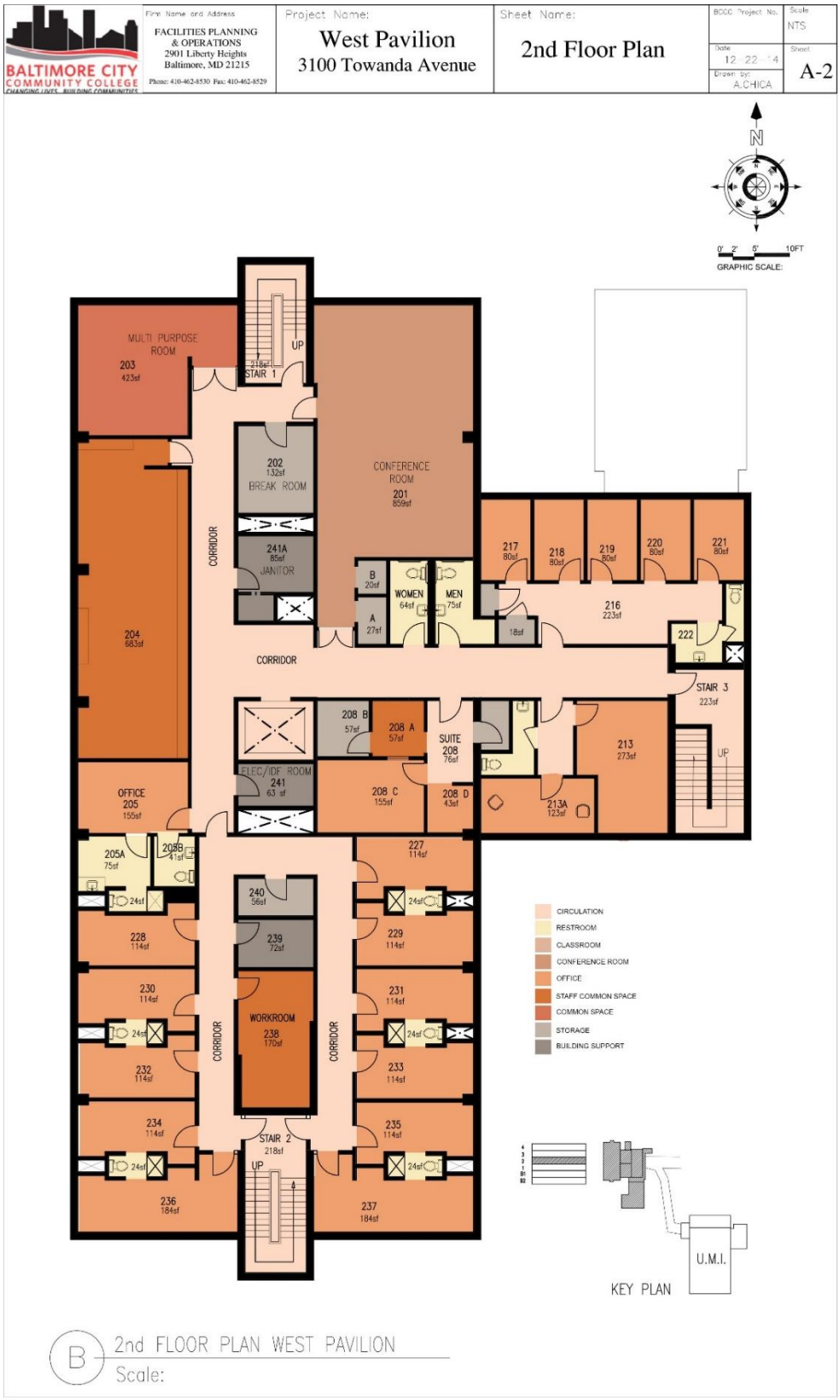
E BASEMENT-1 PLAN WEST BUILDING
Scale:

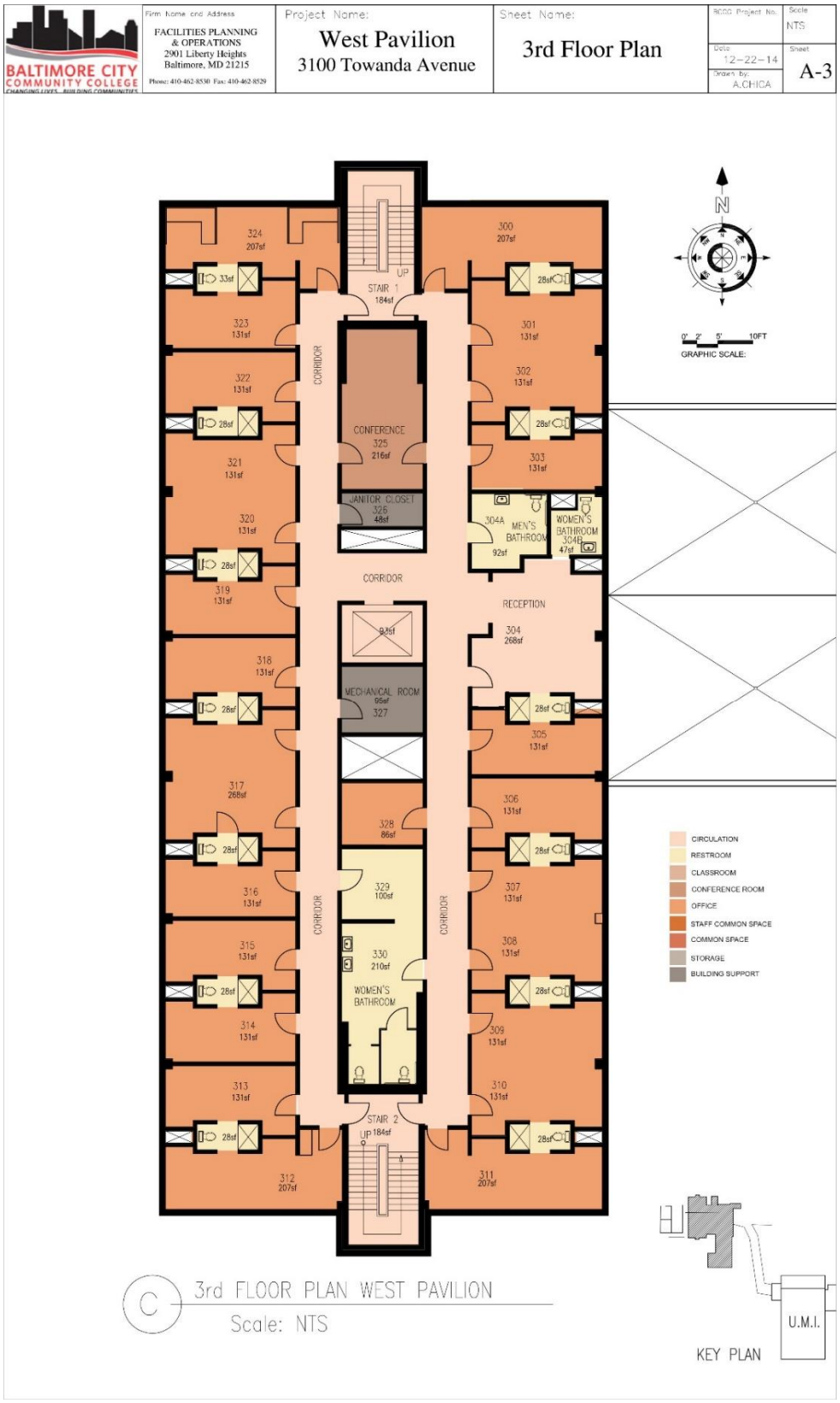
Area: 10,156 SF

0' 2' 5' 10FT
GRAPHIC SCALE:

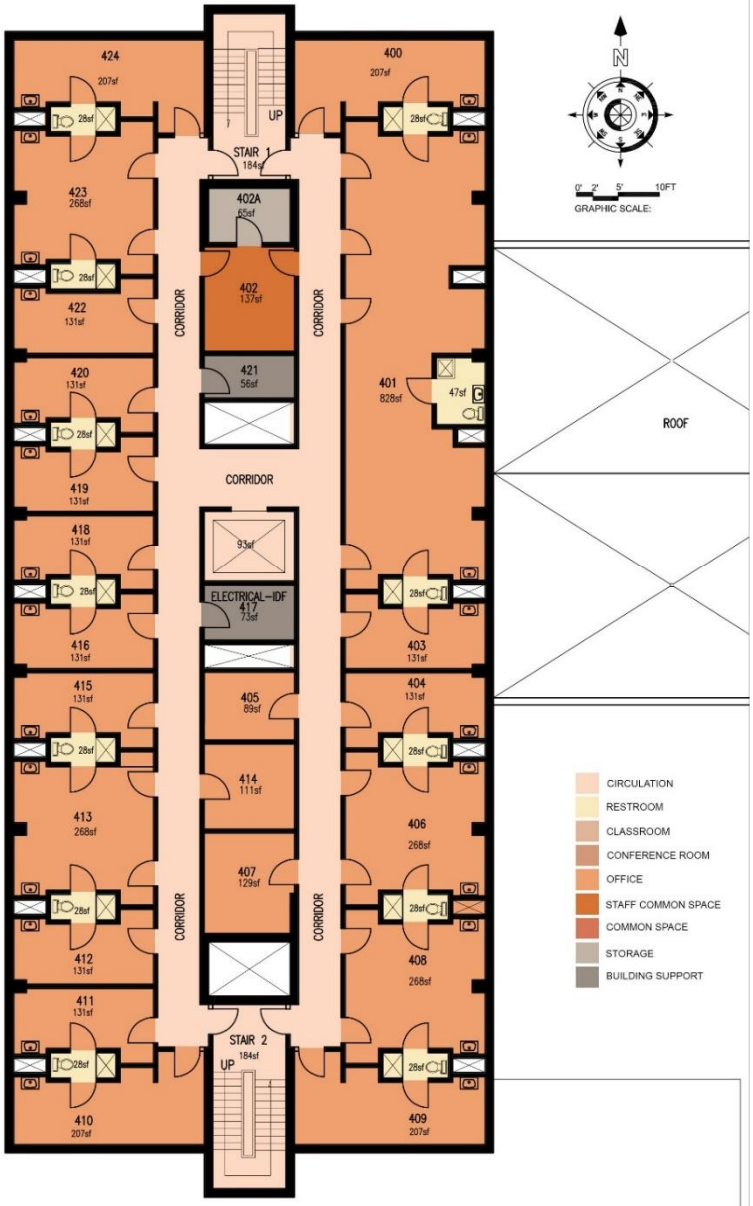
BALTIMORE CITY COMMUNITY COLLEGE
Firm Name and Address
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Phone: 410-462-8530 Fax: 410-462-8529
Project Name:
West Pavilion
3100 Towanda Avenue
Sheet Name:
Basement-2
Mechanical Room
BCCC Project No.
Scale
NTS
Date
12-22-14
Drawn by:
A.CHICA
Sheet
A-B2
N
NORTH EAST ANNEX STAIR
STORAGE 1
640 SF
STORAGE 2
B101
800 SF
STORAGE 4
240 SF
STORAGE 3
B102
380 SF
B104
B103
TOILET
B103A
B108
B107
B106
B105
B110
B112
B113
B111
VAULT
B109
B114
B115
B117
B119
B125
B123
B121
B127
B129
SOUTH EAST ANNEX STAIR
CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
WALL LEGEND
WALL TO BE DEMOLISH
EXISTING WALL
NEW WALL
EXISTING FRAME ONLY
LEGEND
ABC
CO2
U.M.L.
KEY PLAN
0' 2' 5' 10FT
GRAPHIC SCALE:
F
BASEMENT-2 PLAN WEST PAVILION
Scale:
Area: 9,913F

BALTIMORE CITY COMMUNITY COLLEGE
Firm Name and Address
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Project Name:
West Pavilion
3100 Towanda Avenue
Sheet Name:
1st Floor Plan
(Full Floor)
Scale
NTS
Date
12-22-14
Drawn by:
A.CHOA
Sheet
A-1
CANOPY
MAIN LOBBY
SECURITY DESK
MECHANICAL ROOM
LOBBY
AUDITORIUM
STAGE
PUBLIC SAFETY
PROCUREMENT DEPT.
CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
A WEST PAVILION – FIRST FLOOR PLAN
Scale: NTS
AREAWAY
MAIN ELECTRICAL ROOM
EMERGENCY GENERATOR ROOM
GARAGE
STORAGE
KEY PLAN
U.M.I.


BALTIMORE CITY COMMUNITY COLLEGE
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Project Name:
West Pavilion
3100 Towanda Avenue
Sheet Name:
2nd Floor Plan
A-2
N
GRAPHIC SCALE:
MULTI PURPOSE ROOM
203
423sf
STAIR 1
UP
202
132sf
BREAK ROOM
CONFERENCE ROOM
201
859sf
CORRIDOR
241A
85sf
JANITOR
WOMEN
64sf
MEN
75sf
204
683sf
216
223sf
222
STAIR 3
223sf
208 B
57sf
208 A
57sf
SUITE
208
76sf
213
273sf
ELEC/IDF ROOM
241
63 sf
OFFICE
205
155sf
208 C
155sf
208 D
43sf
213A
123sf
227
114sf
240
56sf
239
72sf
WORKROOM
238
170sf
STAIR 2
218sf
CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
U.M.I.
KEY PLAN
B
2nd FLOOR PLAN WEST PAVILION
Scale:


BALTIMORE CITY COMMUNITY COLLEGE
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Project Name:
West Pavilion
3100 Towanda Avenue
Sheet Name:
3rd Floor Plan
Scale
NTS
Date
12-22-14
Drawn by:
A.CHICA
Sheet
A-3
N
GRAPHIC SCALE:
STAIR 1
184sf
CONFERENCE
325
216sf
JANITOR CLOSET
326
48sf
MECHANICAL ROOM
95sf
327
CORRIDOR
RECEPTION
304
268sf
304A
MEN'S BATHROOM
92sf
WOMEN'S BATHROOM
304B
47sf
328
86sf
329
100sf
330
210sf
WOMEN'S BATHROOM
STAIR 2
184sf
CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
U.M.I.
KEY PLAN
3rd FLOOR PLAN WEST PAVILION
Scale: NTS

BALTIMORE CITY COMMUNITY COLLEGE	Firm Name and Address	Project Name:	Sheet Name:	BCCC Project No.	Scale
	FACILITIES PLANNING & OPERATIONS 2901 Liberty Heights Baltimore, MD 21215 Phone: 410-462-8530 Fax: 410-462-8529	West Pavilion 3100 Towanda Avenue	4th Floor Plan Vacant	Date 12-22-14 Drawn by: A.CHICA	NTS Sheet A-4



D 4th FLOOR PLAN WEST PAVILION
Scale:

4.8 South Pavilion	2600 Liberty Avenue
Building Designation:	SP
Number of Floors:	3
Net Assignable Square Feet (NASF):	
Gross Building Area (GSF):	38,850 sf
Net-to-Gross Efficiency:	
Year Constructed:	1995
Renovations:	Minor layout changes
Additions:	None
Contains:	Offices and instructional space, primarily for workforce education
General Condition:	Good
Adequacy of Space:	Adequate
Sprinkler Systems:	Fully sprinklered
Asbestos / Hazardous Materials:	None

Architectural - General

The South Pavilion was built in 1995 as part of the Bon Secours campus, adjoining the former Liberty Medical Center. It was constructed as a community health center when the old Provident Hospital/Liberty Medical Center was demolished in the late 1990s. The building is in good material condition.

Figure 4-68 – South Pavilion exterior

The South Pavilion was constructed to commercial standards to serve as a health pavilion. It is primarily an office building in layout and function. The layout is therefore flexible and adaptable to a number of uses. However, as a commercial building, it was not specified with long-wearing exterior and interior finishes or systems, and requires a mid-life update.

The South Pavilion contains a number of separate functions, including offices and leased space for off-campus organizations. The South Pavilion represents valuable float space for academic functions in spaces that are under renovation. It is the most visible and accessible of the North Campus buildings, and possesses a large parking lot, suitable for expansion.

Figure 4-69 – South Pavilion lobby

Figure 4-70 – Workforce development lobby

Figure 4-71 – Lobby from the second level

Figure 4-72 – Hospital memorial garden with the West Pavilion in the distance

The site surrounding the South Pavilion was cleaned up after the demolition of the hospital, but a depression remains in the hillside at the old footprint, with a memorial garden in the center.

South Pavilion

Central Plant

Central heating plant consists of two cast iron-direct vented condensing boilers located on an upper floor with two constant volume duty standby pumps circulating heating water.

Figure 4-73 – Central Pumps

There is no central cooling plant. Each floor has a D/X air handling unit as the primary source of cooling and ventilation. Other than a few split systems there is no other source of cooling.

Figure 4-74 - Rooftop Condensers, One Per AHU.

Air Handling

Each floor has a single zone constant volume air handler with D/X cooling and hydronic heat. Each unit serves the entire floor and appears to respond to return air temperature to handle cooling loads. The air handling room is configured as a plenum to mix return air and ventilation air. The relief air appears to be barometric going through a duct on the roof. Ventilation air is also ducted to each mechanical room from the roof.

Terminal Units
The only terminal units observed were hydronic perimeter heating units. Each space had a thermostat but it is assumed that the only space temperature control is for the perimeter heat.

Controls
All observed controls are pneumatic. There did not appear to be any sign of centralized control.

Condition
The boilers and pumps appear to be in excellent condition. Everything in the boiler room appears to be installed recently and the condensing boilers are capable of much higher efficiency than any other boilers observed on campus. The main air handler units did not appear well maintained as filters are missing on some of the units, however, neither the AHU nor the rooftop condensers are in really bad condition. The configuration was not good because it did not allow space control of cooling. The system could be fitted with bypass terminal units to provide some control of cooling and with a makeup air unit very easily. If the budget allows, the air conditioning system should be replaced as bypass VAV is not even a baseline system for energy models.

South Pavilion

Plumbing / Fire Protection System
The conditions for the existing Plumbing / Fire Protection System focus on below items.

Domestic Water Service
Domestic water service is from city main on the street. 1 1/2-inch water service enters first floor Meter Room with backflow preventer and utility meter.

Domestic Hot Water System
Domestic hot water is generated by an electric water heater with a storage tank on the first floor.

Natural Gas System
Gas is supplied to mechanical room to serve HVAC equipment.

Plumbing Fixtures
The observed plumbing fixtures are in fair condition. Electric water cooler is not provided.

Fire Suppression System
The building is served by a wet-pipe sprinkler system.

CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
GRAPHIC SCALE
KEY PLAN
U.M.I.
WEST
Bridge Above
LOBBY 150 1,085 sf
LOBBY 149 625 sf
VESTIBULE 180 sf
WORKSTATIONS 115 581 sf
WORKSTATIONS 100 1,058sf
MULTIPURPOSE ROOM 126 905 sf
MEETING ROOM 129 626 sf
MEETING ROOM 131 626 sf
MEETING ROOM 133 626 sf
LOBBY 114 940 sf
ROOM 138 272 sf
ROOM 135 611 sf
LAB 101 182 sf
Sheet Name:
1st Floor Plan
Project Name:
South Pavilion
2600 Liberty Heights Avenue
Firm Name and Address
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Phone: 410-462-8430 Fax: 410-462-8429
BALTIMORE CITY COMMUNITY COLLEGE
Scale
NTS
Sheet
A-1
BCCC Project No.
Date
12 22 14
Drawn by:
A.C-HCA

CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
GRAPHIC SCALE:
KEY PLAN
U.M.I.
WEST
ROOF
BRIDGE
OPEN BELOW
ROOF
FACILITIES 218 325sf
ELECTRICAL 216 100sf
WORKSTATIONS 208 258 sf
OFFICE 214 278sf
OFFICE 215 70 sf
CLASSROOM 207 190 sf
CLASSROOM 206 161 sf
CLASSROOM 202 161 sf
OFFICE 201C 100 sf
OFFICE 201B 100 sf
CONFERENCE 201A 206 sf
OFFICE 201 168 sf
LOUNGE 245 307 sf
LOBBY 256 385 sf
WEDI/ELEC 244 210 sf
STAIR #1
STAIR #2
ELEV #1
ELEV #2
ELECT 247 45 sf
IT 246 57 sf
ROOM 248 50 sf
ROOM 249 50 sf
ROOM 257 86 sf
ROOM 229 83 sf
MEN 221 110 sf
WOMEN 220 110 sf
JAN 219 37 sf
88 sf
112 sf
WORKSTATIONS 222 1,055sf
WORKSTATIONS 227 636sf
125sf
ROOM 225 50sf
TOILET 226 45sf
ROOM 224 35sf
TOILET 223 35sf
OFFICE 230 302sf
OFFICE 232 148sf
OFFICE 233 95 sf
OFFICE 234 95 sf
OFFICE 235 95 sf
OFFICE 236 95 sf
OFFICE 237 95 sf
OFFICE 238 95 sf
OFFICE 239 95 sf
OFFICE 240 95 sf
OFFICE 241 95 sf
OFFICE 242 95 sf
COMMUNITY CENTER 243 325 sf
ROOM 231 35sf
TOILET 229 46sf
TOILET 201D
ROOM 201E 35 sf
UP
BCCC Project No.
Scale NTS
Date 12-22-14
Sheet A-2
Drawn by A.CHICA
Sheet Name: 2nd Floor Plan
Project Name: South Pavilion 2600 Liberty Heights Avenue
Firm Name and Address
FACILITIES PLANNING & OPERATIONS 2901 Liberty Heights Baltimore, MD 21215
Phone: 410-462-8830 Fax: 410-462-8829
No. Revision/Issue Date
BALTIMORE CITY COMMUNITY COLLEGE

3rd Floor Plan
South Pavilion
2600 Liberty Heights Avenue
A-3
12-22-14
A.CHICA
NTS
BCCC Project No.
Sheet Name:
Project Name:
Date
Drawn by:
Scale
Sheet
Revision/Issue
Date
No.
FACILITIES PLANNING & OPERATIONS
2901 Liberty Heights
Baltimore, MD 21215
Phone: 410-462-8539 Fax: 410-462-8629
BALTIMORE CITY COMMUNITY COLLEGE
CIRCULATION
RESTROOM
CLASSROOM
CONFERENCE ROOM
OFFICE
STAFF COMMON SPACE
COMMON SPACE
STORAGE
BUILDING SUPPORT
GRAPHIC SCALE:
KEY PLAN
U.M.I.
WEST
ROOF
ROOF
ROOF
BOILER ROOM 338 361sf
KITCHEN 326 351sf
OFFICE 327 145sf
OFFICE 328 180sf
OFFICE 319 102sf
TOILET 324
STORAGE 325 70 sf
STAIR #2
ROOM 336 36sf
TOILET 337 34sf
OFFICE 329 227sf
CLASSROOM 312 545sf
JAN 320 37 sf
MEN 322 110 sf
WOMEN 321 110 sf
88 sf
YEAR UP 335 582sf
OFFICE 331 105 sf
OFFICE 332 105 sf
CONFERENCE ROOM 315 345 sf
18 sf
LOBBY 345 417 sf
125 sf
CLASSROOM 313 345 sf
30 sf
20 sf
ELEV #1
ELEV #2
ELECT 343 51 sf
IT 346 51 sf
840 sf
681 sf
WOMEN 333 111 sf
MEN 334 98 sf
51 sf
117 sf
117 sf
48 sf
31 sf
31 sf
31 sf
31 sf
45 sf
50 sf
32 sf
STORAGE 335 72 sf
23 sf
CLASSROOM 311 345 sf
GYM 342 191 sf
MECH/ELEC 341 212 sf
CLASSROOM 309 345 sf
30 sf
OFFICE 304 100 sf
ROOM 305 28 sf
TOILET 306
ROOM 307 35 sf
STAIR #1
HALL 300 223 sf
LOUNGE 339 307 sf
10 sf
MULTIPURPOSE ROOM 340 1,295 sf
OFFICE 303 100 sf
OFFICE 302 137 sf
WORKSTATION 301 130 sf

4.9 North Pavilion	3101 Towanda Avenue
Building Designation:	NP
Number of Floors:	2
Net Assignable Square Feet (NASF):	
Gross Building Area (GSF):	24,906 sf
Net-to-Gross Efficiency:	
Year Constructed:	1996
Renovations:	None
Additions:	None
Contains:	Unused, contains office and assembly space
General Condition:	Poor
Adequacy of Space:	
Sprinkler Systems:	Fully sprinklered
Asbestos / Hazardous Materials:	None, mold present

Figure 4-75 – North Pavilion exterior

Architectural – General

The North Pavilion was built in the late 1990s as part of the former Provident Hospital medical campus, as a community mental health center. It was later used as a drug treatment center, and is currently unused. It has experienced environmental control problem and flooding, and mold is a continuing problem. Finishes are damaged and many ceilings have fallen out.

The building is highly specialized for its original use, and is not easily or efficiently adaptable to a new use. Construction standards are those of the 1990s, so the building envelope is substantially less efficient than current practice. Retrofit would be complex given the high ratio of envelope to floor area and the complex floor plan and elevations.

Figure 4-76 – Building entrance

The building is not presently accessible to the handicapped – the main entrance is a long, uninterrupted ramp sloping from the street to the door, and will require substantial modification to become accessible. With the tight internal arrangement and number of bearing walls, modification to current ADA standards would be complex.

Figure 4-77 – Interior damage

The building is at the farthest corner of the North Campus, abutting residential areas and a wooded lot owned by the college. It is difficult to secure and has been an object of attention from homeless people. It is distant from both the West and South Pavilions and lacks any kind of perimeter fence or site access control.

The roof has failed and requires complete replacement and possibly substantial decking repair. The built-up roof is mossy and eroded. Rooftop HVAC units are long overdue for replacement and are physically deteriorating and only partly functional.

Figure 4-78 – The small half-court activity space

Figure 4-79 – Roof and courtyard

Nearby areas of the North Campus are recommended for parking. If a comprehensive parking plan is developed, the land occupied by the North Pavilion and the adjoining lot could be used as satellite parking.

Figure 4-80 – View of the South Pavilion from the North Pavilion

Because of its isolated location, specialized design and antiquated systems, the North Pavilion is recommended for demolition.

North Pavilion

North pavilion - Mechanical
HVAC
All heating, cooling and ventilation is provided by three rooftop units located on top of the building. The rooftop units are gas fired and accomplish all ventilation, heating and cooling. The bathrooms have dedicated exhaust fans. The corridors and vestibules have electric heaters. There are no individual thermostats. The spaces served by the rooftop units are not capable of individual room control. It is assumed the entire zone is controlled by a single thermostat.

Figure 4-81 - Rooftop Unit and Exhaust Fan

Figure 4-82 - Rooftop Units

Condition
The condition of the existing system is poor. No date was found on the equipment label. The units are very old and the lack of individual room control would make them undesirable if the current room configuration was going to be maintained. The general decrepit condition of the building would indicate that a large renovation would be required to make it useable. It would be recommended to completely replace the mechanical system if the building was to be renovated.

Plumbing / Fire Protection Systems
The conditions for the existing Plumbing / Fire Protection System focus on below items.

Domestic Water and Fire Service
This building was a community mental health center and is not currently being used. Both Domestic water service and fire service enter the mechanical room to serve the building.

Plumbing Fixtures
This building is almost abandoned. All the plumbing fixtures shall be demolished.

Fire Suppression System
The building is fully served by a wet-pipe sprinkler system. The sprinkler system is fed by a 4-inch fire service with sprinkler control valve and flow switch to serve this two-story building as one sprinkler zone.
North Pavilion Electrical

Scope of Work
According to the instructions we received at the beginning of the study, North Pavilion was not part of our scope. Based on a new request, we included the assessment of this building into the report. The existing conditions assessment provided here is based on the existing drawing and pictures from the building. It's necessary to mention that because of COVID-19 Pandemic, it was not possible to perform the necessary survey in the building.

Codes and Standards
- 2014 International Building Code
- 2014 International Energy Conservation Code (IECC)
- 2014 NFPA 70, National Electrical Code (NEC)
- ANSI/ASME Elevators and Escalators Safety Code A17.1
- National Electrical Manufacturers Association (NEMA)
- Illuminating Engineering Society of North America (IESNA)
- State and County Codes & regulations
- Requirements specified in the county ED specification

Existing Conditions Assessment

Existing Electrical Service
Existing service for the building is 208Y/120V, 3PH, 4w. Power for this building is provided from another nearby building. The main service feeder is connected to the main distribution panel (MDP) in the electrical room at the basement. Other panels, equipment/loads either connected directed to MDP directly or to a wire-through fed from MDP.

Existing Power Distribution System

Main Power Distribution Panel
Main distribution panel (MDP) is 208Y/120V, 3PH installed in electrical room of the building. Based on our survey, the existing MDP is in fair condition.

Branch Panelboards
Branch Panelboards are located in electrical room of the building. These panels feed all equipment/loads in the building.

All existing panels are usable, and their conditions seem fair.

Wires & Conduits
Although, wires & conduits are embedded in the walls, the installation date is the same as when the panels were installed. We recommend conductivity and insulation tests to be performed for all wires

Existing Interior Lighting System

Light Fixtures
Existing Lighting Fixtures – Almost all existing light fixtures in the building are ceiling fixtures with T8 fluorescent lamps. They are in poor condition and efficiency. We recommend fixtures with higher energy efficiency with LED light source to be provided.

Existing Lighting Conditions

Exterior
Wall-mounted Flood light & wall packs with metal halide light sources. All existing exterior fixtures are in poor condition. It is recommended that all light fixtures be replaced with high efficiency/performance fixtures with LED light sources.

Lighting Controls
To control lighting in all location wall mounted toggle switches are used. We recommend in each location wall mounted dual technology occupancy sensor switches or ceiling mounted occupancy sensors with power pack and wall switches to be provided. These devices will be very efficient in energy savings and high performance of the lighting system in the building.

Existing Receptacles
Existing power receptacles are combination of recessed and surface mounted receptacles in various areas of the building. Recessed type receptacles are located mainly in different spaces in the floor. Surface mounted receptacles were found in the basement in utility spaces such as electrical room, mechanical/plumbing spaces.

We recommend quantity and location of existing receptacles in all spaces to be evaluated and additional devices to be added as required. Existing wiring and branch circuit related to receptacles verified and modified/extended as needed and all wiring to be tested for insulation and conductivity.

Existing Fire Alarm System

Fire Alarm Control Panel
Existing Fire Alarm Control panel (FACP) by Simplex & related power supply/battery back-up are located inside electrical room. The existing FACP and related components seem to be in fair condition. However, we recommend this system be cleaned and tested for required performance.

Fire Alarm Initiation & Notification Devices
Initiation devices & notification appliances are provided throughout the building. These devices are from Simplex and appear to be in fair condition.

Existing Tel/Data System

Incoming Tel/Data Services
Existing Tel/Data incoming services/cables are connected to several terminals located on the plywood board on the wall inside electrical room. The condition of wiring/cabling and also terminal blocks are poor. Appropriate wiring/cabling management require to arrange wires/cables properly.

Tel/Data Rack
A vertical data rack installed inside electrical room near the FACP. The existing data rack holds all data related equipment and devices. Fig 6 above shows the existing vertical rack and its position inside the building electrical room. We recommend the entire Tel/Data system including equipment, components, outlet devices and wiring/cabling to be tested and repaired as needed.

Sustainability and Code Compliance
All DGS projects must comply with the *State of Maryland Department of General Services Procedure Manual for Professional Services 2019*.

Smart Growth and Neighborhood Conservation – Smart Growth Areas: All land use shall comply with the principles and practices outlined in Smart Growth legislation identified as Acts of 1997, Chapter 759, Article - State Finance and Procurement, Section 5-7B-01 through Section 5-7B-10, subtitled *Priority Funding Areas*.

Green Building Program: All facilities shall comply with Chapter 124, Acts of the General Assembly of the Maryland Green Building Council:
State Finance & Procurement Article 4-809
Maryland High Performance Building Act:
State Finance & Procurement Article 3-602.1
2012 International Green Construction Code (IgCC):
Maryland Green Building Council Supplement (November 2014)
Maryland Green Building Requirements High Performance Green Building Program (October 2017)

Building Codes

Building Code
International Building Code- 2018
International Existing Building Code - 2018

Fire Code
National Fire Protection Association (NFPA) –
101*(Life Safety Code) - 2018*
NFPA -1 (Fire Code) - 2018
NFPA -13 (Sprinkler Code) - 2019

Mechanical Code
International Mechanical Code (IMC) - 2018

Plumbing Code
National Standard Plumbing Code - 2018

Electric Code
National Electrical Code, or NFPA 70 (NEC) - 2020

Energy Standard
ASHRAE 90.1 (Latest Edition)

Elevator and Escalator Safety Code
ANSI/ASME A17.1 2019

Accessibility Code

Maryland Accessibility Code (COMAR 05.02.02 & 2010 ADA Standards)

Energy Conservation Code

International Energy Conservation Code – 2018 (IECC)

Building plumbing systems also must comply with the requirements of COMAR Title 09, Department of Licensing and Regulation, Subtitle 20, Board of Commissioners of Practical Plumbing (the State Plumbing Code).

Heating Systems utilizing boiler supplied hot water must comply with the requirements of COMAR Title 09, Subtitle 12 Division of Labor and Industry, 35 Chapter 01 Board of Boiler Rules (the State Boiler Code).

Boiler & Pressure Vessel

Safety Act & Regulations (Article 48, Section 167-180A, Annotated Code of MD.)

Compliance with all 36 regulations and requirements of local and service district utility companies (electric, water, sewerage) where work is to be located is required

Flood Plain: Management Regulations & Permits, Maryland State Department of Natural Resources (COMAR 26.17.04).

Food Preparation: Maryland State Department of Health Regulations for Eating and Drinking Establishments (COMAR 10.15). This applies whenever food preparation or serving areas are included in the project. These regulations are interpreted by the Maryland Department of Health & Mental Hygiene

Forest Conservation: Maryland State Department of Natural Resources regulations for development of Forest Stand Delineation and Forest Conservation Plan in accordance with Forest Conservation Act (COMAR 08.19.04).

Handicapped Accessibility: Regulations Governing Construction of Facilities for the Handicapped by the State of Maryland (COMAR 05.02.02), the Fair Housing Amendments Act (1988) and the Americans with Disabilities Act (1990) or other Federal regulations, where applicable, will supersede COMAR requirements (See Note 1 under "Enforcing Agencies", below). The Maryland Accessibility Code (COMAR 05.02.02) with the adoption of ADAAG 1994 shall apply.

Hazardous Waste: Maryland State Department of the Environment for disposal of controlled hazardous substances. These regulations establish standards for generators of hazardous waste (COMAR 26.13.03)

Highways: Regulations of the Maryland Department of Transportation, State Highway Administration, for any construction affecting a State highway route or right-of-way. Comply with the requirements of local departments of transportation for alterations within their rights of way.

Historic Lands and Structures: In accordance with Article 83B paragraphs 5-617 and 5-618 of the Annotated Code of Maryland, the Maryland Historical Trust must review capital projects affecting historic properties. These regulations can be obtained from the Maryland State Department of Housing and Community Development

Diaper Changing Stations: Pursuant to Senate Bill 330 (signed, Chapter 523), A diaper changing facility shall be provided in at least one men's restroom and one women's rest room (if the restrooms in the building are divided by gender) in each public facility constructed after October 1, 2019, and in existing buildings substantially renovated ($30,000 & up) on or after October 1, 2019. Changing stations shall be the wall-mounted, horizontal, foldaway type, able to support 200 lb. with minimal deflection, and with a minimum size of 35"x22," with antimicrobial finish on bed surface, and shall include child safety straps and two (2) bag hooks; universal graphic, and multi-lingual safety warnings. Changing station shall be constructed of a minimum of 16% recycled materials, ASTM compliant, LEED certified, and meeting or exceeding ADA requirements.

Lactation Rooms: Per Section 4207 of the ACA, amending the Section 7 of the Fair Labor Standards Act (FLSA), employers are required to provide employees a private space (minimum dimensions 4' x 5'), that is free from intrusion and shielded from view but accessible, to express breast milk at intervals throughout the workday. Lactation rooms shall not be in or accessed through bathrooms, locker rooms or similar facilities, but should be distinct rooms designed for their intended purpose. Lactation rooms may be located near lobbies or main corridors, in proximity to breakrooms, bathrooms and other core building functions. Lactation rooms should be easy to find and identified as part of the facility's signage system. Each room shall be equipped with a lockable door (accessible by emergency personnel), table(s) or counter, comfortable ergonomic chair(s) with adjustable armrest, footstool, trash can, paper towels, sanitizer for spills, adequate lighting, two electrical outlets, a mirror, and a clock or clock/radio. A sink with hot and cold water is required to be nearby, but is highly preferred to be within the actual lactation room.

Hospitals and Infirmaries: Maryland State Department of Health regulations for hospitals, care and treatment facilities as appropriate (COMAR 10.07). These regulations will be obtained from the Maryland State Department of Health.

Lead Exposure: Maryland Department of Occupational Safety and Health Standards for Occupational exposure to lead in construction work. These regulations apply to occupational exposure to lead in every employee in construction work (COMAR 09.12.32).

Mechanical, Gas, Electrical and Energy
(See Building Codes)

Plumbing Code
(See Building Codes)

Sediment and Erosion Control and Stormwater
Regulations of the Maryland State Department of the Environment (MDE), Sediment & Stormwater Administration, 1800 Washington Boulevard, Baltimore, Maryland 21230 (MDE Article Sections 4-101 through 4-116 Annotated Code of MD. and COMAR 26.17.01 and 26.17.02) (See Note 5 under "Enforcing Agencies", below).

a. Chesapeake Bay Critical Area Criteria (COMAR 27)
b. Non- tidal Wetlands (COMAR 26.23)
c. Wetlands (COMAR 26.24)

Safety Glazing: applies to fixed glass panels immediately adjacent to exit/entrance doors and specific hazardous locations (COMAR 05.02.06).

Water and Wastewater Treatment: Maryland State Department of the Environment Regulations for Construction of all Water and Wastewater Treatment Plants and for all connections exceeding four hundred feet (COMAR 26).

Water Appropriation: When the project requires the withdrawal of either ground water or surface water, the A/E shall be responsible for complying with all permitting requirements and shall comply with COMAR 26.17.06, “Water Appropriation or Use”.

Water Distribution, Waster Collection, On-site Water Supply and On-site Wastewater, Disposal: Health Department of Local Jurisdiction.

Water Resources: Other water resources, rules and regulations of procedure as issued by the Maryland State Department of the Environment (COMAR 26.08).

Baltimore City Community College
Facilities Master Plan
Liberty Heights Campus

Maryland Department of General Services
Project Number: CC-000-190-003

Chapter 5

Site, infrastructure and Campus Development

Chapter 5

5.1 Site

The Baltimore City Community College Liberty Heights campus is located on a prominent hill in northwest Baltimore, with a view of the central city to the east. The college shares the hilltop with Baltimore City parks and the city waterworks. It is bounded to the south and west by a CSX rail line, by Liberty Heights Avenue to the north, and a residential neighborhood to the east. On all sides but the main campus entrance at Liberty Heights Avenue and Druid Park Avenue, the campus is surrounded by steep embankments, isolating the campus from its surroundings.

The campus's sole vehicular access is at the intersection of Liberty Heights Avenue and Druid Park Avenue. A small stairway behind the physical education facility leads to Liberty Heights Avenue, and is the only other means of access.

Liberty Heights Avenue is a broad boulevard, cut into the hillside where it passes the campus. The Baltimore City Waterworks is directly across the street from the campus. The Baltimore Metro is tunneled under the avenue at this location, limiting options for structures connecting the main campus to the north campus.

The north campus property is offset to the east from the main campus, with little exposure directly opposite the main campus. It occupies the east side of the waterworks hill, with a substantial slope from west to east. The north campus was the site of the former Provident Hospital, built in 1965 at the same time as the college, and closed in 1995. The North and South Pavilions were built to accommodate the hospital's community health programs before the hospital closed. The West Pavilion comprises the remainder of the original hospital, whose clinical component was demolished in the late 1990s, leaving a large depression in the hillside. The West Pavilion housed the hospital's physical plant, which still exists, occupying a large and unusable area of the building, and the former nurse's dormitory, which has been partially renovated for administrative space.

The isolation of the north campus leaves the area poorly suited for uses that interact with the main campus. Any substantial re-use of the land would require a major investment in a substantial project that could function on its own. Its present best use is for parking, to allow space presently devoted to parking on the main campus to be used for academic programs, and to reduce the college's dependence on leased parking at the Palladium. A shuttle system would be required to assure access to the main campus and safety.

Earlier studies proposed a bridge spanning Liberty Heights Avenue at an angle between the northeast corner of the main campus and the southwest corner of the north campus. Because no structures can be placed on the Metro tunnel, such a bridge must span the entire width of Liberty Heights Avenue, its median and the sidewalks, with a skew. A clear span of at least 120 feet would be required, leading to

significant costs. Conceptual pricing for such a structure yielded a potential $12 million budget for a pedestrian bridge. Since capital funding is needed for academic buildings, a bridge was rejected as a priority for funding.

Figure 5-1 – Existing Campus Buildings

BALTIMORE CITY COMMUNITY COLLEGE
LIBERTY HEIGHTS CAMPUS
2901 LIBERTY HEIGHTS AVE. BALTIMORE, MD
LEARNING COMMONS
FACILITIES MASTER PLAN
NOELKER AND HULL ARCHITECTS

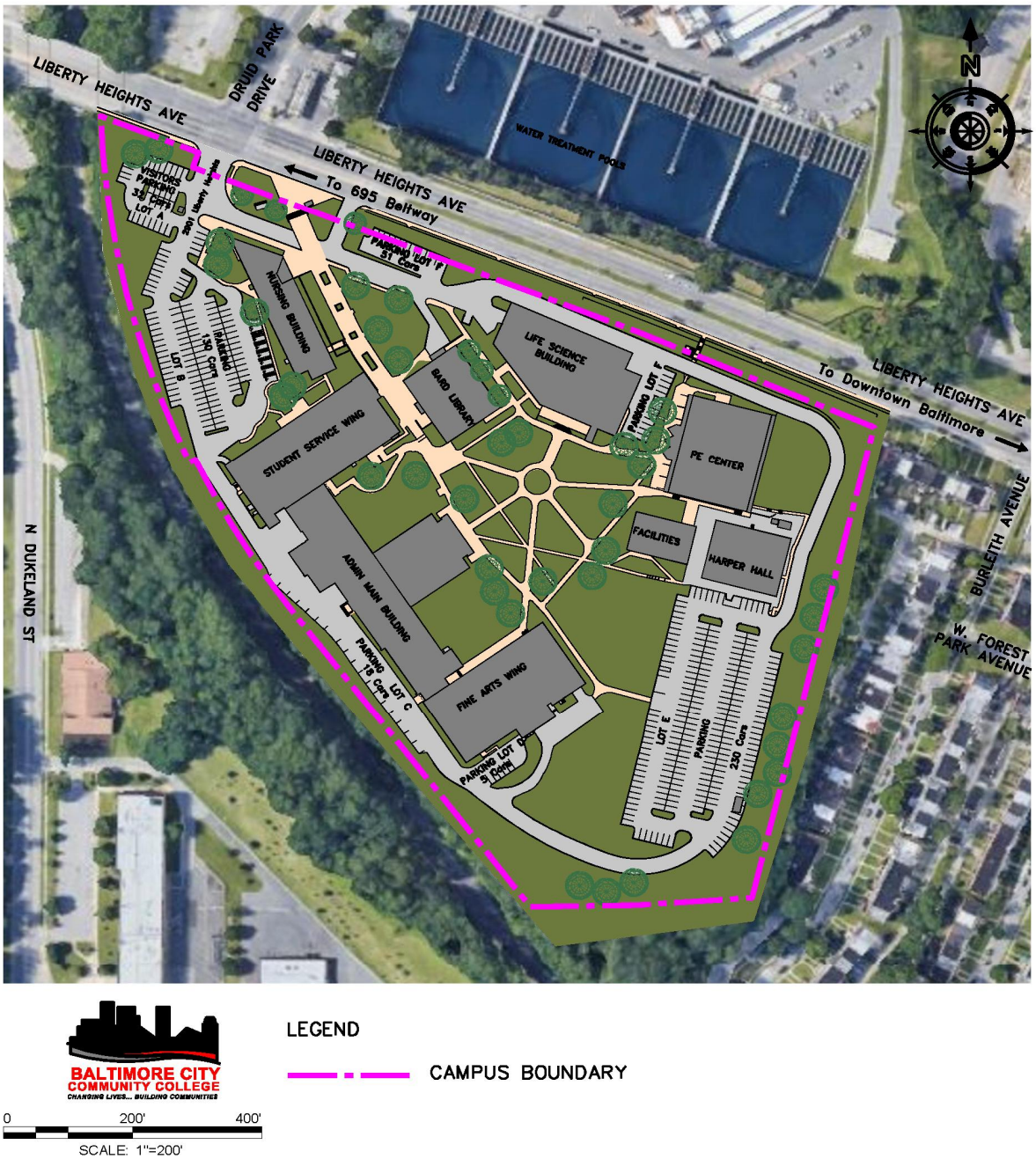
EXISTING PLAN

LEGEND:
EXISTING
RENOVATED
NEW

BALTIMORE CITY COMMUNITY COLLEGE
CHANGING LIVES...BUILDING COMMUNITIES

NOELKER AND HULL ASSOCIATES, INC. ARCHITECTS

Figure 5-2 – Campus Boundaries



BALTIMORE CITY COMMUNITY COLLEGE
CHANGING LIVES... BUILDING COMMUNITIES

0 200' 400'
SCALE: 1"=200'

LEGEND

CAMPUS BOUNDARY

Campus Access

The Liberty Height campus is served by public transportation. There is a bus stop for the LM, 22 and 38 bus routes at the campus entrance, which connects to the Mondawmin heavy rail transit station, as well as other bus routes. The Mondawmin station is about 2000 feet from the main entrance along Liberty Heights Avenue. Given the distance and the campus location at the top of a hill, walking is not an attractive option for campus visitors arriving at Mondawmin. The West Cold Spring rail station is about 3500 feet to the northeast, and lacks bus connections and a walkable path to Liberty Heights.

The LM Citylink bus service runs frequent service from Randallstown down Liberty Heights Avenue to Mondawmin, with reduced service eastward to Harbor East, bypassing downtown to the north. The LM terminates several blocks to the east of the BCCC downtown program areas.

The 38 bus line runs from the Edmondston Village area in west Baltimore to Poly High School in north Baltimore. The 22 bus runs from Mondawmin across the north side of the city, past Johns Hopkins University, City College High School, Catholic High School and over to the east side of the city, ending at the Johns Hopkins Bayview medical campus. There is no direct mass transit connection to nearby Coppin State University.

From the Mondawmin station, the downtown program areas may be reached by Metro to the Shot Tower Station, which is within four blocks of the downtown property.

Campus Analysis

The main campus occupies a relatively isolated site, with steep embankments and property restrictions on nearly all sides. The main campus is accessible only at the intersection of Liberty Heights Avenue and Druid Park Avenue.

The main Liberty Heights campus is located at the crest of the Liberty Heights hill in northwest Baltimore, at 2901 Liberty Heights Avenue, to the south of the street. The college's environs are a mixture of low and medium density residential districts, parks and commercial areas.

Immediately to the west of the campus is Hanlon Park, which is presently undergoing renovation, and three Baltimore City schools. The Ashburton neighborhood to the northwest is primarily a single-family residential district. To the north, sharing Liberty Heights, are Baltimore City waterworks facilities and a light industrial zone. Less than a mile to the east are Druid Hill Park and Mondawmin Mall. About 2500 feet to the southeast, across Gwynns Falls Parkway, is Coppin State University. No direct route connects Coppin with BCCC.

The prominent hilltop location allows for impressive views of downtown Baltimore.

Site Analysis – Campus Development

The main pedestrian circulation axis is aimed directly at the city skyline. Careful attention to emphasis in the development of the axis, judicious planting and removal, and appropriate siting of new buildings at the east end of campus will reinforce the alignment. The present use of the southeast corner of the site for parking is a less than optimal use of valuable real estate and diminishes the impact of the downtown alignment.

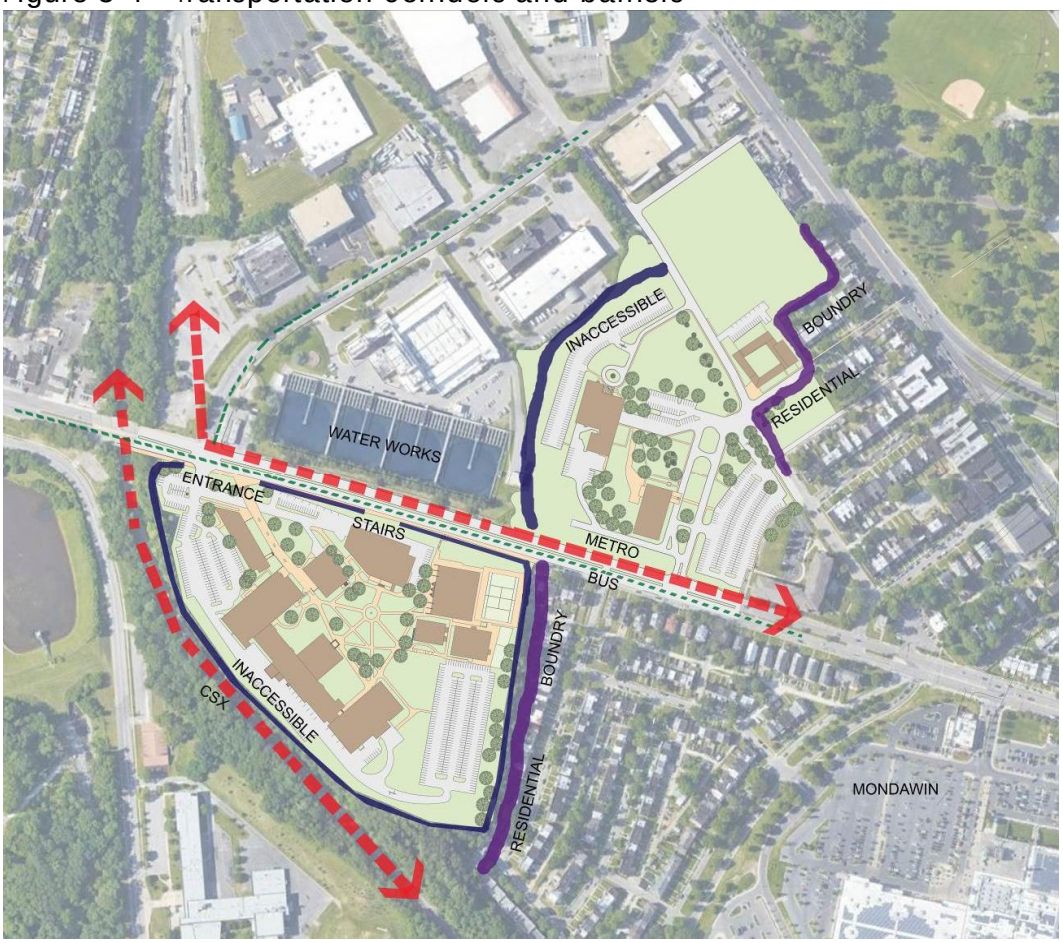
The campus is near public parks and about ½ mile from Mondawmin Mall. There is little retail development in the immediate area. Surrounding areas are largely residential, parkland, or waterworks. The North campus property is underutilized and surrounded by residential neighborhoods.

Figure 5-3 - Campus Site Sketch

The hilltop campus is bordered by steep embankments. The elevated site provides good potential views of downtown Baltimore.

Site Analysis – Transportation

Figure 5-4 – Transportation corridors and barriers



Main Campus Engineering Narrative

The Baltimore City Community College Campus is located in Baltimore City, Maryland; specifically, Northwest of the City Center and Southwest of Druid Hill Park in the Burleith-Leighton Neighborhood of Baltimore City. The campus is immediately bounded by Liberty Heights Avenue to the North, the CSX Rail Line to the West and South and Residential to the East. The site occupies approximately 18.68 acres of land. There are a number of existing and planned conditions which will influence the development of this master plan.

In addition, Baltimore City Community College has acquired the parcel off of the northwest corner of the Liberty Campus, the former Bon Secours Liberty Village Campus. Located across Liberty Heights Avenue from the main campus, the Bon Secours property provides an exciting and important new opportunity for the master planning efforts of the College. An additional narrative examining this parcel has been included in a later section of this report. Note that the analysis below assumes that all of the Loop Road Improvements project has been constructed.

Parking Resources

On the main Liberty Campus, Baltimore City Community College has 6 parking lots that vary in size with a current counted total of 466 usable spaces, of which 32 are handicap parking. Overall parking is at a premium on site and presents conflicts with pedestrian and vehicular circulation.

As expansion or improvements to existing parking are made, orientation and landscaping of the parking lots should be considered. Correcting issues with the orientation of the parking aisles and landscaping can help to minimize potential conflicts between cars and pedestrians. In addition, the introduction of landscaping to the parking lots can serve to both reduce the heat island effect of the impervious asphalt and the landscaped islands and medians can serve as part of the campus storm water management system and lessen dependence on a single detention/retention pond or underground storm water systems.

As expansion of the campus is considered, it will be important to include in the discussions the transfer of existing surface parking to structure or under building parking facilities as a means of expanding the campus capacity. As laid out, the current site is seemingly utilizing all space available for the purpose of parking.

428 spaces are available on the North Campus. However, access to the main campus is not optimal in the absence of a traffic-free street crossing. Leased space at the Palladium lot directly across the street from the main entrance is the most-used parking strategy for students. There are 240 spaces at the Palladium lot.

Table 5-1 - Main campus parking

Parking Lots	Lot Locations	Student Only	Students & Faculty	F & Staff	HC Only	Visitor Only	Main Campus Totals
Lot A	Entrance/Guard Booth					32	32
Lot B	Nursing/MNB	116			14		130
Lot C	West (behind) MNB	9		9			18
Lot D	South Fine Arts			5			5
Lot E	South of MNB/Harper Hall			212	18		230
Lot F	West of and under LSB		51				51
Totals	Main Campus	125	51	226	32	32	466

Source: Baltimore City Community College Facilities Planning and Operations

The totals shown above are those anticipated at the completion of the loop road project.

Table 5-2 - North campus parking

Parking Lots	Lot Locations	Students Only	Students & Faculty	Faculty & Staff	HC Only	Visitor Only	Main Campus Totals
Lot G	East of South Pavilion	212			8		220
Lot H	East of West Pavilion	45					45
Lot K	West of West Pavilion	125			5		130
Lot	North Pavilion	23					23
Svc lot	South of West Pavilion			10			10
Totals	North Campus	405	0	10	13	0	428

Source: Baltimore City Community College Facilities Planning and Operations

Parking Lots	Students Only	Students & Faculty	Faculty & Staff	Handicapped Only	Visitors Only	Campus Totals
Totals	533	51	233	45	32	894

Source: Baltimore City Community College Facilities Planning and Operations

The Palladium lot provides an additional 240 spaces for student use.

5.2 Site Infrastructure – Liberty Height Campus

A visual review and cursory assessment of the BCCC Liberty Campus site infrastructure was completed during the fall of 2019 by Matthew Ernest, P.E. and Matthew Taylor, P.E. Several campus visits were made during which we observed existing conditions and reviewed previously identified problem areas. We also researched utilities with Baltimore City Department of Public Works ("DPW") and private suppliers such as BGE, Comcast and Verizon.

The Liberty Heights campus is zoned for C-2, Educational Campus Zoning.

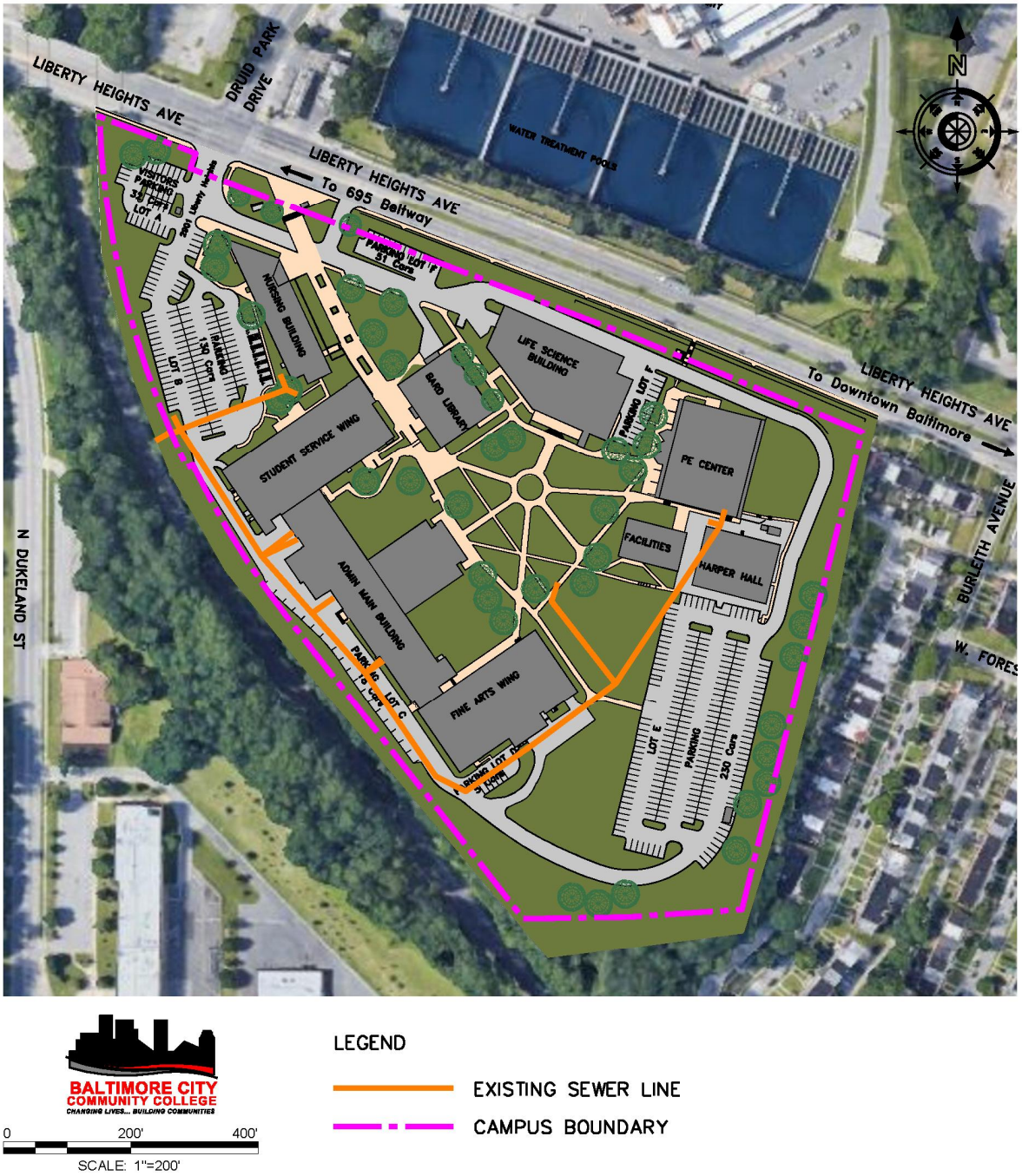
The campus is shaped like a triangle with the railroad right-of-way comprising the two sides, and Liberty Heights Avenue representing the hypotenuse. The campus exists at Baltimore City designated Ward 15, Section 19, Block 3262, Lot 1. According to the City Block Plat, the total area of the Lot 1 represents 18.667-acres. This area agrees with the Maryland Department of Assessments and Taxation record. The topography of the academic core area is a plateau, which slopes downward to Liberty Heights Avenue, to the surrounding residential neighborhood and to the railroad right-of-way property. Steep slopes of 10 to 30 feet drop in elevation exist on all sides of the property.

Overall, the condition of the visual portions of the site infrastructure on the Liberty Campus was found to be in fair to good condition. While specific areas of deferred maintenance existed, such as settled sections of sidewalk and areas of failed pavement, we observed the campus to be well maintained with planning efforts instituted to maintain the campus' condition. A list of individual recommendations for repairs or upgrades to site infrastructure appear later in this chapter.

Sanitary Sewer

The campus discharges sanitary sewage through one 8" main that leaves the campus in a western direction, goes underneath the railroad right-of-way, and then discharges flow into the Lower Gywnns Run Interceptor. The LGR Interceptor was upgraded in 2006/2007 from a 24" to a 30" sanitary main that runs down North Dukeland Street. According to Mr. Wazir Qadri of Baltimore City DPW Utility Engineering, Baltimore City must review and approve all increases of sanitary flow into the 30" main. The LGR interceptor should have sufficient reserves because of the recent upgrade project; however construction of a major BCCC facility may require an upgrade to the existing campus discharge line from 8" to 12". See enclosed exhibits for on-site sanitary locations. No available information is known for the sanitary connections to Bard Library and the Life Science Building.

Figure 5-5 - Liberty Main Campus Sewer Lines



BALTIMORE CITY COMMUNITY COLLEGE
CHANGING LIVES... BUILDING COMMUNITIES

0 200' 400'
SCALE: 1"=200'

LEGEND

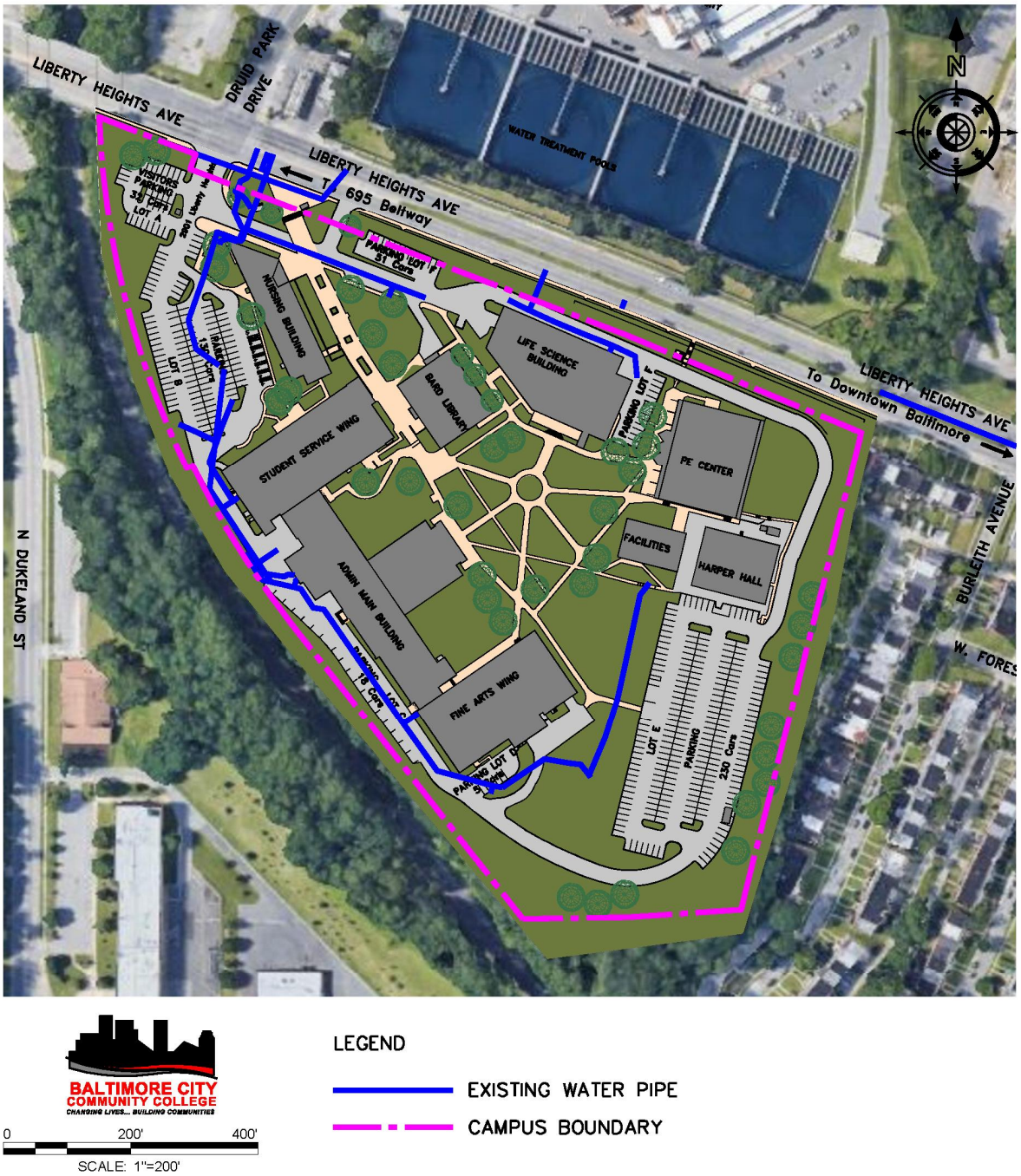
EXISTING SEWER LINE

CAMPUS BOUNDARY

Water System

Baltimore City records indicate that a 20” water main on Liberty Heights supplies water service to the campus through two water meters. An 8” water and fire service originates at the existing water meter near the Liberty Heights and Druid Park intersection. This water and fire service serves the entire campus except for the Life Sciences Building. A second water meter exists along Liberty Heights and supplies the Life Sciences Building with a 6” water service line. The 20” main along Liberty Heights is supplied with water from the Lake Ashburton Pumping Station several hundred yards away, and as such, should always contain a high-level of flow and pressure. See enclosed exhibits for on-site water locations. No available information is known for the water connections to Bard Library, PE Center, and Harper Hall.

Figure 5-6 – Liberty Main Campus Water System



BALTIMORE CITY COMMUNITY COLLEGE
CHANGING LIVES... BUILDING COMMUNITIES

0 200' 400'
SCALE: 1"=200'

LEGEND

EXISTING WATER PIPE

CAMPUS BOUNDARY

Storm Drains

Liberty Campus is located on the Flood Insurance Rate Map #240087 0009 E. According to the FIRM plan, the campus is not located within the floodplain. Existing storm drainage is collected throughout the campus by a network of inlet catch basins and storm drain pipes that drain surface runoff from the north and east sections of the campus to west and south. The western and southern most storm drain lines then discharge into a Baltimore City 30" underground storm drain line near the southwest corner of the campus. See enclosed exhibits for on-site storm drain locations.

Storm water sheet flows across Lot E to six curb openings, which discharge into two grass swales areas. The two grass swales feed, along with underground storm drain lines draining adjacent impervious areas, into two separate grass bio-retention areas. The swales and bio-retention treats rainwater naturally before running into an existing pretreatment chamber. Construction of a major facility would require BCCC to upgrade the campus-wide storm drain system including installation of a water quality device before discharging into the City 30" storm drain system. The main storm drain trunk line has had recent heavy cleaning performed to clear the system of any debris. A portion of this segment of storm drain has also been recently upgraded to handle large storm events and alleviate ponding around inlets.

Figure 5-7 – Liberty Main Campus Storm Water

BALTIMORE CITY COMMUNITY COLLEGE
CHANGING LIVES... BUILDING COMMUNITIES

0 200' 400'
SCALE: 1"=200'

LEGEND

EXISTING STORM DRAIN LINE

EXISTING STORM WATER FACILITY

CAMPUS BOUNDARY

Site/Parking Lot Lighting
A portion of streetlights along the exterior part of campus have been recently replaced with LED streetlights to adequately light the road segment. Additional photometric analysis is recommended to quantify lighting needs throughout the entirety of campus. Lighting of parking lots and pedestrian circulation is inconsistent and generally insufficient.

Private Utilities
Several private utilities supply services to the campus including Baltimore Gas & Electric, Comcast and Verizon. BGE supplies natural gas to the Liberty Campus through two 6" service lines from Liberty Heights. One line enters the campus north of the entrance road, then travels behind Parking Lot C to the Main Building. The other gas line services the Life Sciences Building and Gymnasium. There is no report of insufficient service.

Steam is generated in numerous boiler rooms around campus. BGE supplies electricity through three lines. According to BGE Electric Primary & Transmission Map, an overhead line from Forest Park Avenue connects to three campus transformers. Two underground lines connect to the Main Building and one to the Gymnasium. Verizon serves the campus through the same conduit lines as with electric service.

Recreational Fields
No outdoor recreational fields exist with the main campus boundary. A gymnasium is located in the northeast corner of the main campus.

Miscellaneous site notes
The brick stair retaining walls at front entrance of campus should be replaced. The precast concrete walls along Liberty Heights Avenue should be repaired or replaced to correct a lean. Site perimeter fencing should be replaced on the south and east sides where it is damaged.

Soil
Fill/re-grade ponding areas around campus, especially in front of Harper Hall and behind Facilities Modular.

Inspect/evaluate south stone retaining wall adjacent to homes – minor cracking and wet spots were observed after rainfall.

Circulation and Parking
The circulation system for Baltimore City Community College is comprised of the regional road network, internal campus road network, parking areas and internal pedestrian system.

One entrance roadway controls vehicle traffic to the campus at the Liberty Heights Avenue and Druid Park Drive intersection. This intersection contains a traffic signal controlled by imbedded loop detectors. A new additional right-turn only exit located

east of the Liberty Heights Avenue intersection provides relief to main entrance for vehicles exiting campus. Vehicles using this exit must turn right going east on Liberty Heights Avenue. Vehicle must adhere to a stop sign and pedestrian crosswalk prior to turning onto Liberty Heights Avenue.

The main entrance roadway at Liberty Heights Avenue connects directly into Parking Lots A, B and C. The entrance continues as a 2-way traffic circulation road around the entirety of campus. The circulation road portion of the roadway becomes narrow along Parking Lot C to allow for parallel parking spots. New construction related to Main Building has caused the roadway to become even narrower at several locations. Parking Lot D is located directly off the Loop Road prior to entering Parking Lot E. After exiting Parking Lot E and wrapping around the gymnasium the Loop Road connects into Parking Lot F and the exit only access drive.

The existing pavement around the campus was found to be in fair to good conditions. . The vast majority of asphalt paving within the campus has been recently redone with either mill-and-overlay or entirely new full depth paving sections. Some areas of bituminous pavement deterioration exist in the parking lots located off of the loop road and parking lots. All large areas of cracking and "alligatoring" require complete resurfacing including base repairs. For the long term, it is highly recommended that older sections of bituminous pavement be milled 2" and then an overlay of surface course be applied. A tar sealer should be applied to large cracking areas to prevent further deterioration.

A potentially dangerous pedestrian crossing exists at the MTA Bus Stops on Liberty Heights Avenue. Individuals step off the bus, approximately one hundred feet south of the Liberty Heights & Druid Park intersection and cross the 66-foot-wide Liberty Heights. There is narrow median where students wait for traffic to clear.

Public Roadway Network

The Liberty campus is served by a single public road, Liberty Heights Avenue, MD Rt. 26, which can be accessed from, remotely, I-83 and I-695. During non-peak hours, access through Liberty Heights Avenue is adequate; during peak commuting hours, Liberty Heights Avenue is very busy.

Internal Roadway Network

Internally, the Liberty Campus is served by a two-way road system that circulates around the entire campus footprint. This road also serves as an aisle for the parking lots and as pedestrian access from the parking lots. Along this Loop Road the parking is located to either side of the road with the majority of the parking located in the parking lot on the Eastern side of the campus. This current layout minimizes the possibility of expansion of the parking capacity without the introduction of structured parking in place of the surface lots.

Removable bollards are located along the campus walkway entrance from the bus stop on Liberty Heights Avenue to allow emergency vehicle access to the center of campus.

Pedestrian Circulation and Accessibility

Major pedestrian walkways from the parking lots to the classroom building "plaza" area are too steep to provide proper access. Improvements to the reserved handicap parking spaces (lack of access aisles and proper signage), curb ramps and building ramps should be completed. It appears that the campus contains an adequate number of reserved handicap parking spaces; however, most are non-compliant since they lack proper signage, access aisles, curb ramps, detectable warning devices and exceed the maximum allowable slopes.

Handicap accessibility throughout campus should be upgraded. Curb ramps, extended handrails, parking space access aisles, signage and other accessibility measures should be improved.

Pedestrian Network

The campus core is well-served by an extensive system of pedestrian pathways linking buildings, open spaces and parking areas. While an extensive pedestrian system exists, additional improvements should focus on maintenance and grading to eliminate pooling of water, providing better gathering spaces for larger groups in between classes, and providing better connections across parking bays where pedestrians have to now squeeze between parked cars and cross the main vehicular circulation road. See above regarding re-orienting the parking and landscaping of parking lots. In regards to pedestrian and vehicular conflicts, the campus has done an adequate job to minimize these issues which needs to be carried forward as the campus expands. However, major pedestrian/ vehicular conflicts exist behind the Main Building and from the visitor parking by the campus entrance. These areas should be addressed by any further development on campus.

Figure 5-8 – Liberty Main Campus Pedestrian Paths

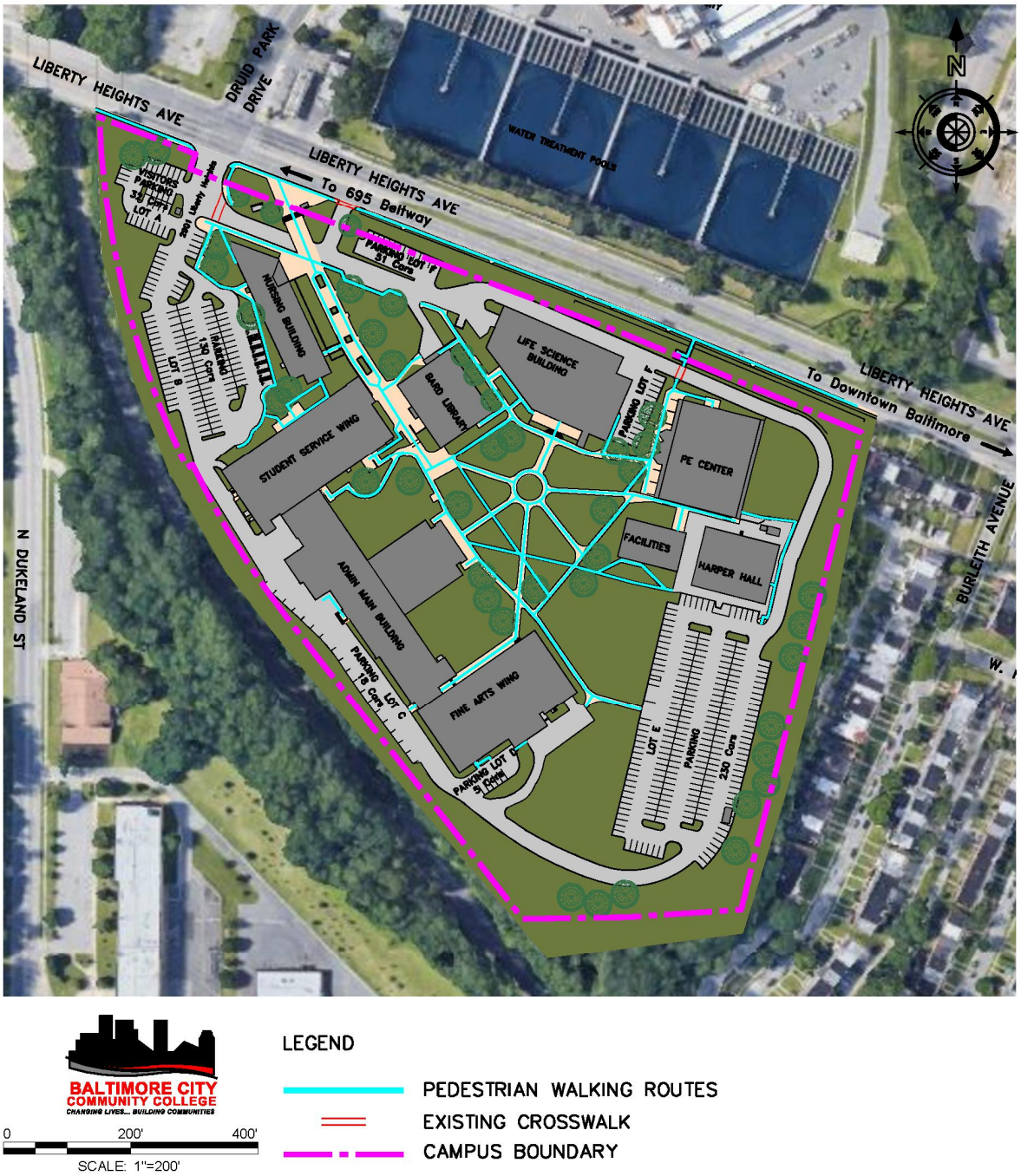
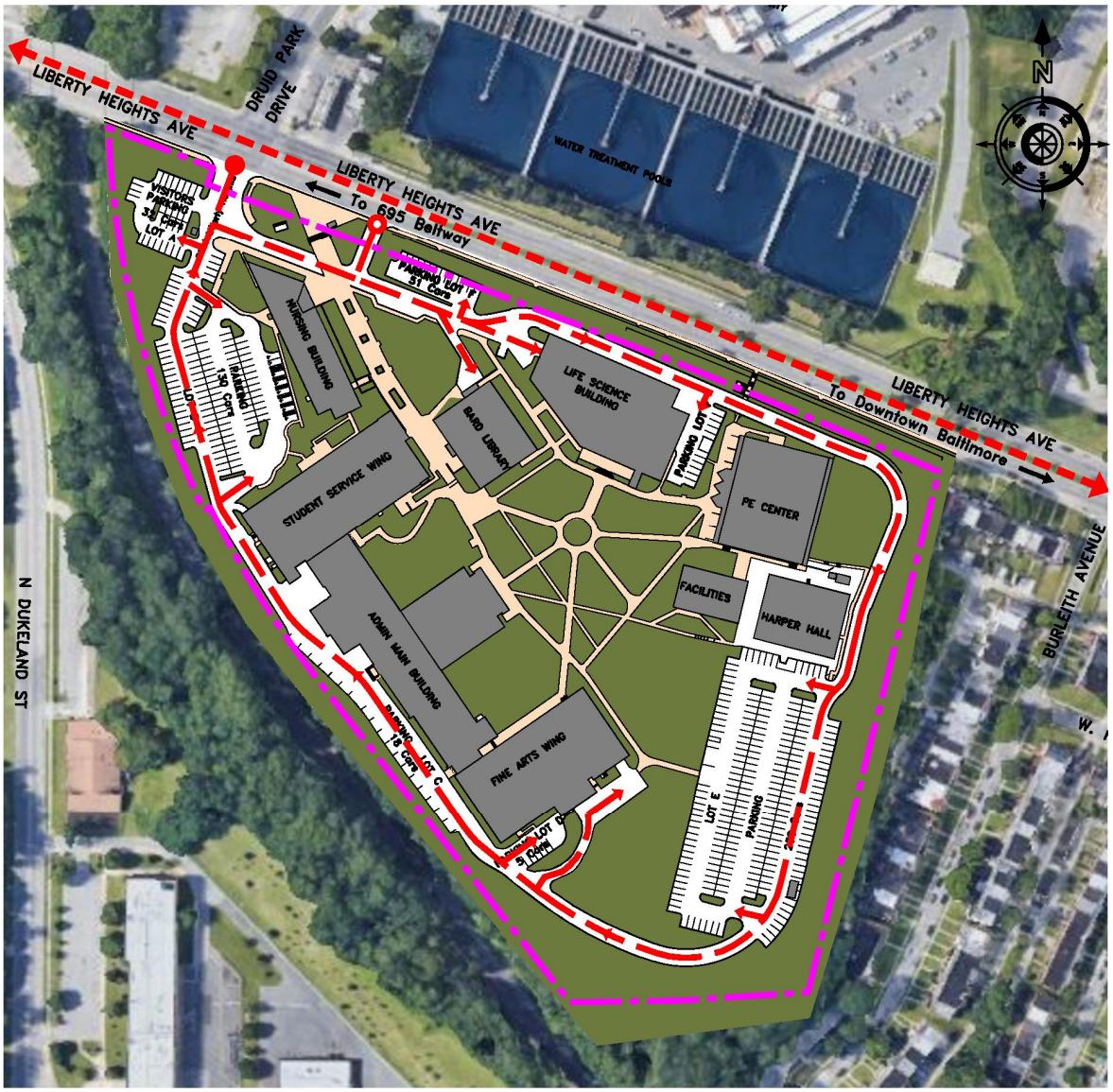


Figure 5-9 – Liberty Main Campus Vehicular Circulation



BALTIMORE CITY COMMUNITY COLLEGE
CHANGING LIVES... BUILDING COMMUNITIES

0 200' 400'
SCALE: 1"=200'

LEGEND

- CAMPUS BOUNDARY
- CAMPUS ROADWAY
- 3 LANES EACH DIRECTION
- CAMPUS ENTRANCE/EXIT
- CAMPUS EXIT

Adjacent Land Use

One of the most appealing attributes to Baltimore City Community College is its access to the city, its residential population, and its urban setting. As Baltimore City and the surrounding area are experiencing a rebirth in both the housing and jobs markets, there are still issues with adjacent uses forming barriers to both users and growth. The neighboring issues that impact the campus are the CSX rail line to the West and South, Liberty Heights Ave with the Ashburton Treatment Plant to the North and East and Residential to the East and South. The entire site with the exception of the entrance is surrounded by steep slopes.

Open Spaces and Recreation

The Liberty Campus is fortunate to have a significant amount of passive open space for the size of the campus, as described below. Currently open space is limited to the central quad for all outdoor activities. Active recreation space is limited to the space provided by the outdoor tennis court and the space in the Physical Education building. The outdoor tennis court is planned to be removed as part of the separate BCCC Loop Road Improvements project.

Quadrangles

There remains a significant amount of open space within the core of Baltimore City Community College; however, this remains as the only area developed as a traditional campus quadrangle. This area serves the functions of a gathering space for students between classes, an outdoor class space, and a sheltered area for passive recreation. Quadrangles serve an important function to building the campus family as they are a place to meet friends and colleagues, meet new people, collaborate on classroom material, and relax on campus. It is important that as the campus continues to change and grow that this space is preserved and enhanced through improved landscaping and drainage, along with the development of more intimate areas for gathering between classes.

Sacred Spaces

“Sacred spaces” are those areas of the campus that serve an important function in the daily social interaction on a campus, represent historical aspects of the campus and/or are important components of a campus image. These should be preserved and enhanced as part of the master plan. The quad described above would fall into the category of “sacred spaces”. This area provides a valuable asset to the school and the community, requiring special attention within the master planning process.

Gathering Areas

Gathering areas are those areas where students and faculty congregate because they are pleasant spaces, they are associated with a particular interior use or they are located at particular junctions. As with sacred spaces, the master plan should strive to preserve and reinforce these spaces. On the Liberty Campus, the gathering space is the Quadrangle. Currently the campus is very limited in established gathering areas, which can result in a more transient population. Well-designed gathering areas on a

campus can foster increased educational collaboration beyond that of the classroom, serve as classroom space, foster a connection to the space and identification with the campus, and encourage increased interaction among students, faculty and staff creating an enriching and positive environment.

Image Open Space

Some open space areas are not used for activities but are nonetheless important in terms of overall campus image. In particular, the open space associated with the main entrance drive and the drop-off circle is particularly important. Currently, as stated by many stakeholders, it is seen as unattractive when it could be a positive image for the college. This area should be carefully planned and designed so as to foster the image the campus. The other image space is the Quad which, with the additions being made to the main building, has the future ability to become the image space of the campus with the right planning and landscaping.

Storm Water Management

On all sites storm water management is an extremely important issue. If treated properly it can provide an amenity to the site as well as environmental and life quality. On the Liberty Campus site, three existing stormwater management facilities are located within the main campus footprint. Two existing bioretention facilities located at the southern entrance of Lot E have been recently retrofitted to meet current Maryland Department of the Environment regulations. These two facilities collect and treat surface runoff from the Lot E parking lot. An additional micro-bioretention facility is located east of the gymnasium and collects surface runoff from the Loop Road. Any new site work will require additional stormwater management treatment. Due to the site constraints where space is at a premium, underground stormwater management treatment would be beneficial in using the available open space most efficiently. This also presents a great opportunity for the campus to reevaluate the storm water system and implement low impact development (LID) practices to increase the capacity of the system, increase the resulting water quality, provide an amenity, and improve the overall campus image. LID practices include but are not limited to Bio-swales, rain gardens, infiltration tanks and perforated piping, and green roofs and landscaping.

Campus Planning – Miscellaneous Site Improvements:

- Update and improvements to planting to increase tree cover and define spaces. Native plant material should be used to minimize water requirements and improve and increase urban wildlife habitat.
- Utilize and locate planting beds to serve as rain gardens to improve on site storm water management.
- Conduct a light level study to determine lighting needs for campus safety and full cut-off fixture need to be installed to improve dark sky compliance. Solar power and energy efficient lighting should be implemented when possible.
- Incorporate landscape improvements into the slope along Liberty Heights and the Campus entrance to improve Campus recognition, appearance and control erosion, and provide safety.

- Increase outdoor seating to encourage and provide gathering study spaces for students in between classes and promote an improved campus atmosphere and connection to the campus.
- Coordinate site furnishings to promote a uniform campus image. This would include but not be limited to benches, lights, bollards, trash receptacles, and signage.
- Upgrade site hardscapes, paving, sidewalks etc., to improve drainage, handicapped accessibility, site comfort, and campus image. When possible pervious surfaces should be used to lessen the impact of storm water on the site, improve water quality and ground water recharge.
- Incorporate Low Impact Development practices to improve storm water management which is a great concern with this site.
- Include green roofs to improve building performance, campus environment, and storm water management.

Site Infrastructure - Pavilion Site (North Campus)
The Baltimore City Community College Pavilion site is located in Baltimore City, Maryland; specifically, Northwest of the City Center and Southwest of Druid Hill Park in the Burleith-Leighton Neighborhood of Baltimore City. The site is immediately bounded by Liberty Heights Avenue to the South, the Ashburton Treatment Plant to the West, and Residential to the North and East. The site is split with Towanda Avenue splitting the site between a northern and southern section. The site is comprised of 5 parcels totaling approximately 18.93 acres of land. There are a number of existing and planned conditions which will influence the development of this master plan.

Site Infrastructure
The Pavilion site is located at 3100 Towanda Avenue in northwestern Baltimore City. The site is bounded by Liberty Heights Avenue along the south property lines, residential neighborhood to the north and east and the Ashburton Treatment Plant to the west. The properties are zoned for EC-2, Educational Campus Zoning.

The site exists at Baltimore City designated Ward 15, Section 30, Blocks 3252, 3254 and 3257. According to the Maryland Department of Assessments and Taxation record, the total area of the 5 lots represents 18.929-acres. The topography of the property slopes from west to east, and the frontage along Liberty Heights Avenue slopes toward the road. Steep slopes of 10 to 30 feet drop in elevation exist sporadically over the site.

Overall, the condition of the visual portions of the site infrastructure on the Liberty Campus was found to be in fair to good condition. While specific areas of deferred maintenance existed, such as settled sections of sidewalk and areas of failed pavement, damaged curb and gutter, and portions of sidewalk failure. A list of individual recommendations for repairs or upgrades to site infrastructure appear later in this chapter.

Figure 5-10 – North Campus Boundaries

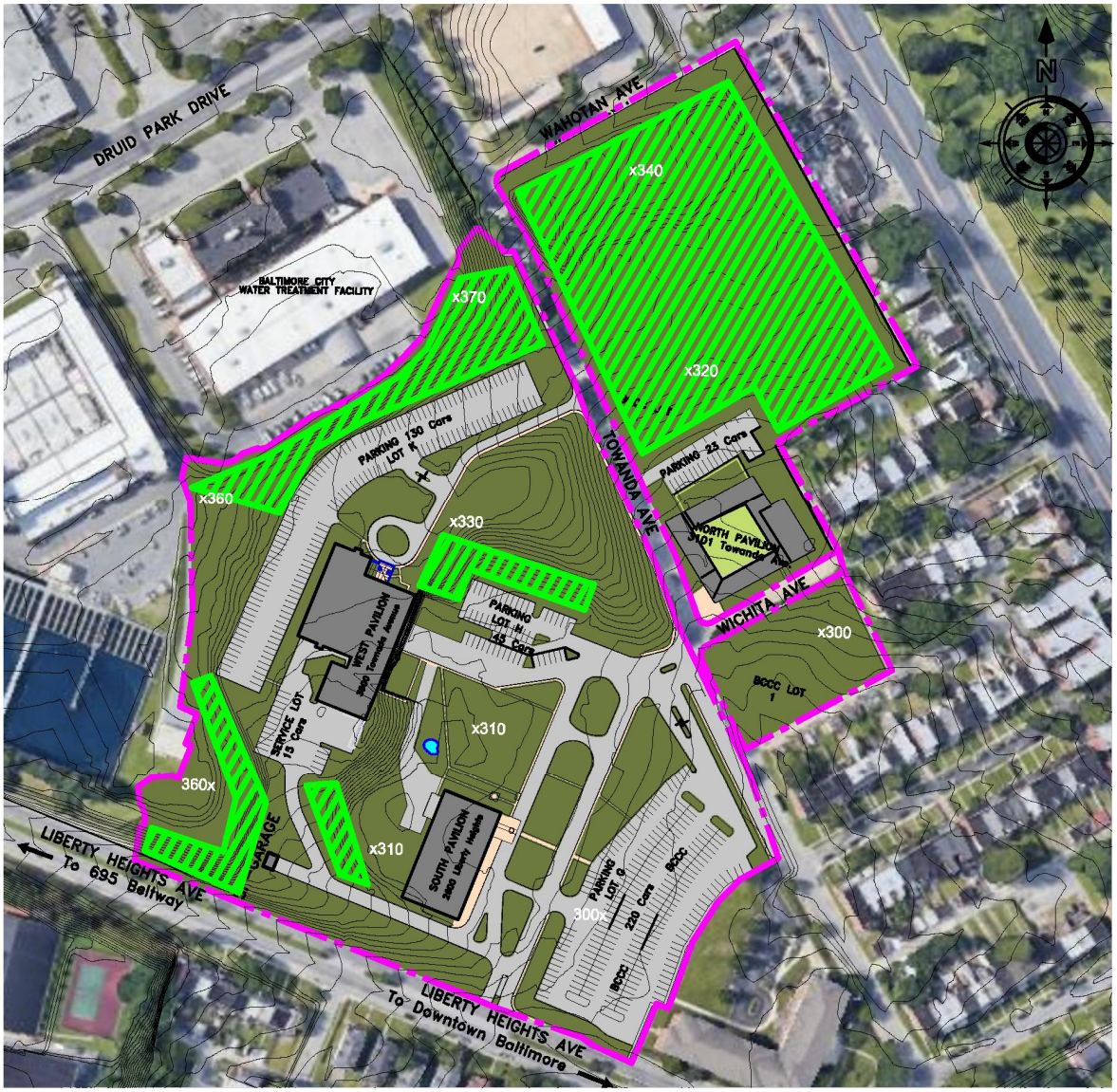
BALTIMORE CITY COMMUNITY COLLEGE
CHANGING LIVES... BUILDING COMMUNITIES

0 200' 400'
SCALE: 1"=200'

LEGEND

CAMPUS BOUNDARY

Figure 5-11 – North Campus Forested Areas



BALTIMORE CITY COMMUNITY COLLEGE
CHANGING LIVES... BUILDING COMMUNITIES

0 200' 400'
SCALE: 1"=200'

LEGEND

CAMPUS BOUNDARY

FORESTED AREA

Sanitary Sewer

The site currently discharges sanitary sewage through two locations. An 8” main that discharges to Towanda Avenue along the western site boundary and a 10” main that discharges to Towanda Avenue along the southeastern boundary. The undeveloped lots at the northern portion of the site currently do not have a sewer connection. Future connections are available in Towanda Avenue and Chowan Avenue. See enclosed exhibits for on-site sanitary locations. No available information is known for the sanitary connection to West Pavilion.

Figure 5-12 – North Campus Sewer

BALTIMORE CITY COMMUNITY COLLEGE
CHANGING LIVES... BUILDING COMMUNITIES

0 200' 400'
SCALE: 1"=200'

LEGEND

EXISTING SEWER LINE

CAMPUS BOUNDARY

Water System

Baltimore City records indicate that a 20" water main on Liberty Heights supplies water service to the campus through two water meters. An 8" water and fire service originates at the existing water meter near the Liberty Heights property entrance. This water and fire service serves the entire southern portion of the site. An additional water is located along Towanda Avenue that serves the North Pavilion building. The undeveloped northern portion of the site does not currently have a water connection. A future connection is available in Towanda Avenue. The 20" main along Liberty Heights is supplied with water from the Lake Ashburton Pumping Station several hundred yards away, and as such, should always contain a high-level of flow and pressure. No record information is available for the existing on-site water system.

Storm Drains & Storm Water Management

This site is located on the Flood Insurance Rate Map #240087 0009 E. According to the FIRM plan, the campus is not located within the floodplain. Existing storm drainage is collected throughout the site by a network of inlet catch basins and storm drainpipes that drain surface runoff from the west to the east. The entirety of the site discharges into a Baltimore City 27" underground storm drain line near the southeast corner of the parcel. No record information is available for existing storm drain.

Figure 5-13 – North Campus Storm Drainage

BALTIMORE CITY COMMUNITY COLLEGE
CHANGING LIVES... BUILDING COMMUNITIES

0 200' 400'
SCALE: 1"=200'

LEGEND

EXISTING STORM DRAIN LINE

CAMPUS BOUNDARY

NOTE: NO RECORD INFORMATION AVAILABLE FOR EXISTING STORM DRAIN

Site/Parking Lot Lighting
Improvements are needed – additional fixtures and replacement of underground cabling.

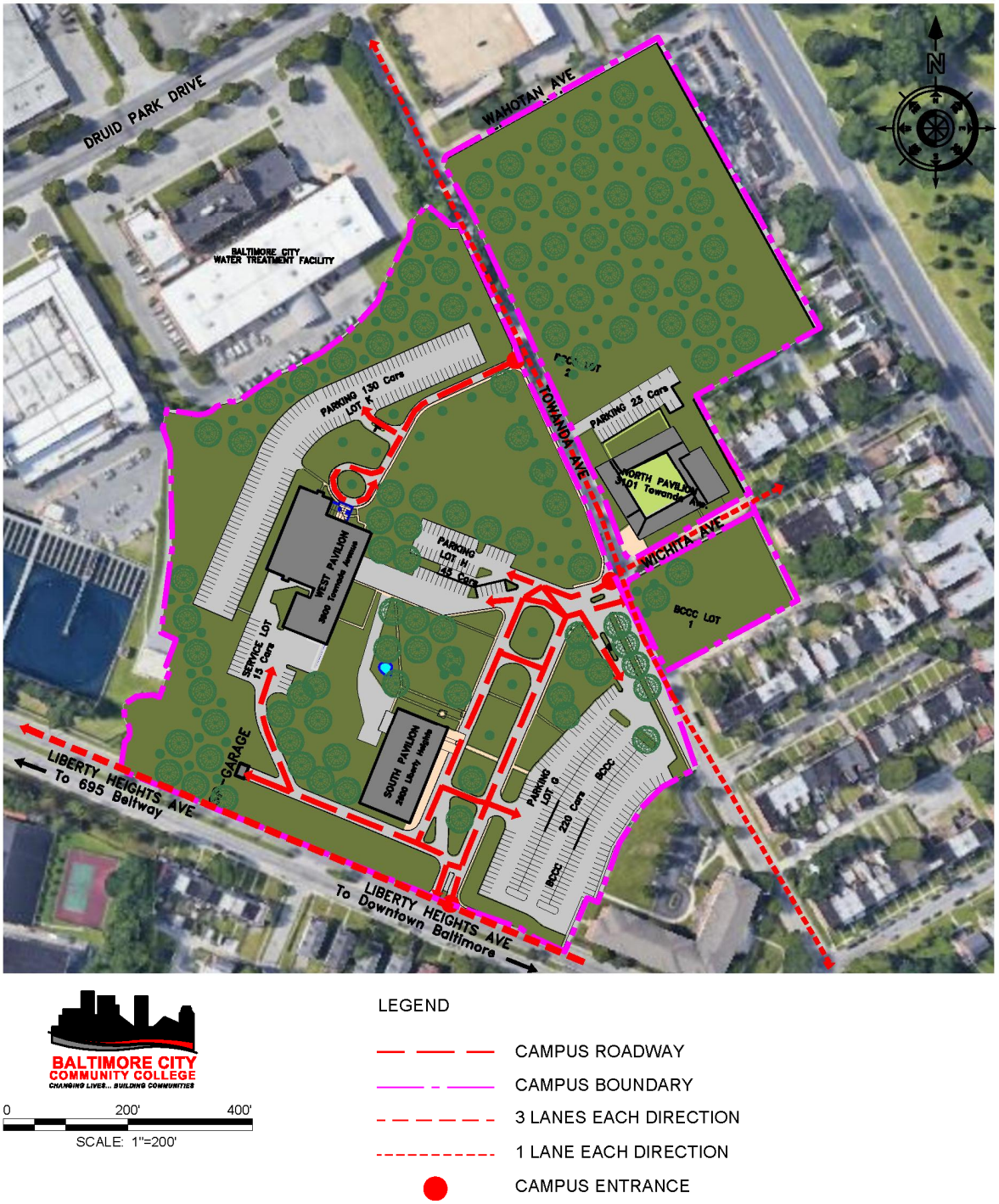
Private Utilities
Private utility services and locations are unknown at this time.

Handicap Accessibility
Major pedestrian walkways from the parking lots to the pavilion buildings area are too steep to provide proper access. Improvements to the reserved handicap parking spaces (lack of access aisles and proper signage), curb ramps and building ramps should be completed. Most reserved handicap parking spaces appear to lack proper signage, access aisles, curb ramps, detectable warning devices and exceed the maximum allowable slopes.

Recreational Fields
No recreational fields exist onsite.

Circulation and Parking
The circulation system for the Pavilion site is comprised of the regional road network, internal campus road network, parking areas and internal pedestrian system.

Figure 5-14 – North Campus Vehicular Circulation



BALTIMORE CITY COMMUNITY COLLEGE
CHANGING LIVES... BUILDING COMMUNITIES

0 200' 400'
SCALE: 1"=200'

LEGEND

- CAMPUS ROADWAY
- CAMPUS BOUNDARY
- 3 LANES EACH DIRECTION
- 1 LANE EACH DIRECTION
- CAMPUS ENTRANCE

Public Roadway Network

The Liberty campus is served by a single public road, Liberty Heights Avenue, MD Rt. 26, which can be accessed from, remotely, I-83 and I-695. During non-peak hours, access through Liberty Heights Avenue is adequate; during peak commuting hours, Liberty Heights Avenue is very busy.

The southern portion of the site has 3 entrances that control vehicle traffic to and from the site. The main entrance is located on Liberty Heights Avenue and the other entrances are along Towanda Avenue. Liberty Heights Avenue at the entrance has a left turn lane, making the site accessible for vehicles going either direction. The main entrance roadway connects directly into Parking Lot G and the South Pavilion Building. The entrance continues as a 2-way traffic circulation until it reaches the Towanda Avenue entrance. As the site is developed, consideration will need to be made on circulation between the southern and northern portions of the site and how Towanda Avenue intersects. The North Pavilion building has one entrance on Towanda Avenue that leads directly to the buildings parking lot.

Internal Roadway Network

Internally, the Pavilion site is served by a two-way road system that extends from the Liberty Heights Avenue entrance to the Towanda Avenue entrance. Off the main access road are Parking Lots G, H, and K. Drop-off aisles are available for South Pavilion and West Pavilion buildings. This current layout minimizes the possibility of expansion of the parking capacity without the introduction of structured parking in place of the surface lots or additional surface parking lots located on the undeveloped northern portion of the site.

The existing pavement around the site was found to be in fair to poor conditions. Several areas of bituminous pavement deterioration exist in the loop road and parking lots. All large areas of cracking and “alligatoring” require complete resurfacing including base repairs. New stripping for Parking Lots G, H, and K is recommended. For the long term, it is highly recommended that older sections of bituminous pavement be milled 2" and then an overlay of surface course be applied. A tar sealer should be applied to large cracking areas to prevent further deterioration.

Parking Resources

On the Pavilion site, Baltimore City Community College has 5 parking lots that vary in size with a current counted total of 428 usable spaces, of which 13 are handicap parking. There is currently excess parking for the buildings on the Pavilion site, this excess is currently used for overflow parking from the main campus.

As expansion or improvements to existing parking are made the introduction of landscaping to the parking lots can serve to both reduce the heat island effect of the impervious asphalt and the landscaped islands and medians can serve as part of the campus storm water management system and lessen dependence on a single detention/retention pond or underground storm water systems.

Pedestrian Network

The campus core is well-served by an extensive system of pedestrian pathways linking buildings, open spaces and parking areas. While an extensive pedestrian system exists, additional improvements should focus on maintenance and grading to eliminate pooling of water, providing better gathering spaces for larger groups in between classes, and providing better connections across parking bays where pedestrians have to now squeeze between parked cars and cross the main vehicular circulation road. In regards to pedestrian and vehicular conflicts, the campus has done an adequate job to minimize these issues which needs to be carried forward as the campus expands.

Handicap accessibility should be upgraded throughout campus. Curb ramps, handrails, parking space access aisles and signage should be improved.

Figure 5-15 – North Campus Pedestrian Paths

BALTIMORE CITY COMMUNITY COLLEGE
CHANGING LIVES... BUILDING COMMUNITIES

0 200' 400'
SCALE: 1"=200'

LEGEND

PEDESTRIAN WALKING ROUTES
EXISTING CROSSWALK
CAMPUS BOUNDARY

Adjacent Land Use

One of the most appealing attributes to Baltimore City Community College is its access to the city, its residential population, and its urban setting. As Baltimore City and the surrounding area are experiencing a rebirth in both the housing and jobs markets, there are still issues with adjacent uses forming barriers to both users and growth. The neighboring issues that impact the campus are Liberty Heights Ave to the South, the Ashburton Treatment Plant to the West, and Residential to the North and East.

Open Spaces and Recreation

The Pavilion site currently has a significant amount of passive open space for the size of the campus. Currently the space is underutilized for activity and outdoor space. There is limited open space used to create social gatherings and interactions throughout the site.

Storm Water Management

No known stormwater management facilities exist on the Pavilion Campus site.

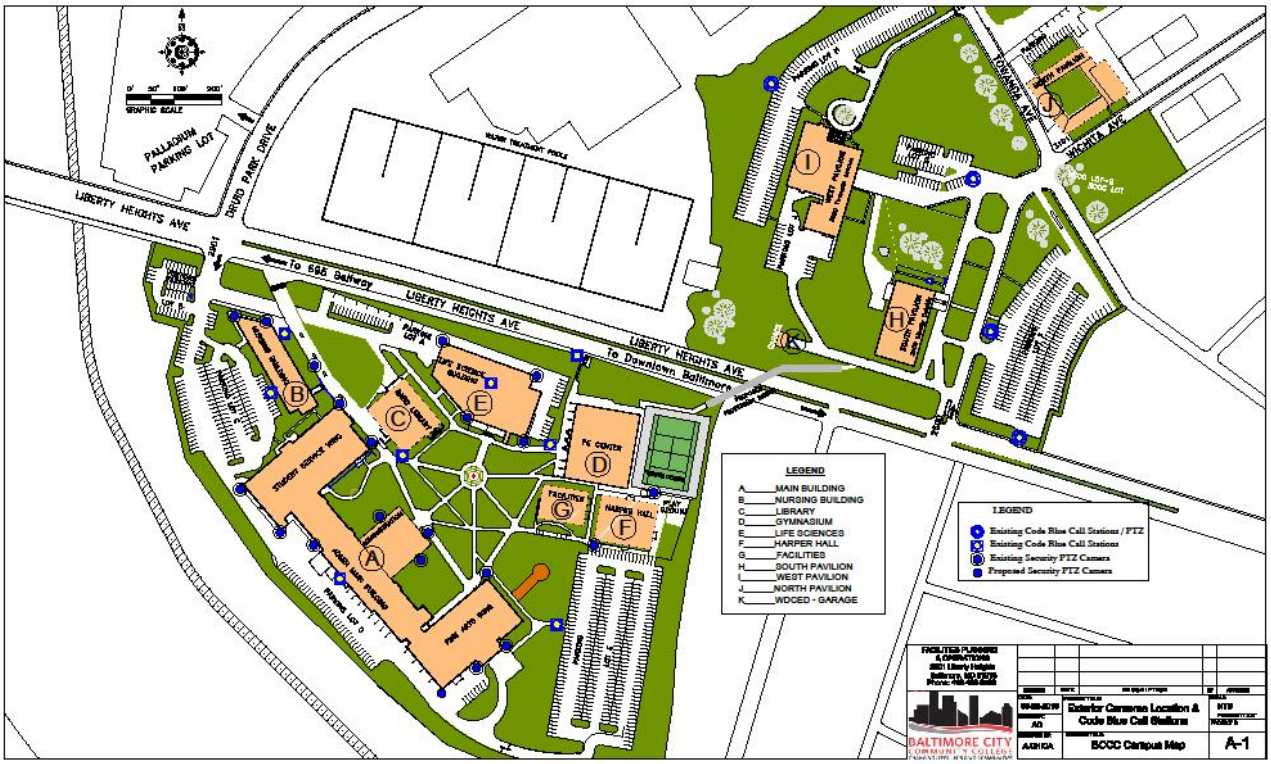
Any development on the Pavilion Campus site that exceeds 5,000 square feet of land disturbance will require stormwater management treatment in accordance with the Maryland Department of the Environment regulations and standards.

Campus Safety Call Locations

Both campuses have a network of "Code Blue" call stations. A mixture of freestanding site stations and building lobby stations is available.

A network of surveillance cameras is also present. The camera system uses an analog network and is obsolete, with many cameras non-functional. Both cameras and the data network are proposed for replacement with a digital system with upgraded storage and review capability.

Figure 5-16 – Security Call Station Network



5.3 Ten-year concept

The ten-year conceptual site plan shows the planned expansions of the nursing and library buildings, along with footprints for a future renovation or replacement of the Fine Arts center, renovation and expansion of the Physical Education Center, and a new building location to the southeast of the Fine Arts Center for facilities use.

The primary campus axis running through the campus from the entrance southeastwards is to be upgraded with framing construction at the library and nursing building. Both of these buildings are recommended to frame the entrance to the campus. The Learning Commons is proposed to function as a community anchor for the campus, converted from an introverted building separate from the life of the campus to an outward-facing beacon, used as a primary point of contact for students with each other. As a campus learning commons, it should re-oriented to be outward-facing and welcoming. The campus commons project is projected to add 17,000 square feet of space to a fully renovated library building, incorporating study space, group meeting rooms, a central campus information center, media and printed material access and archives, and a limited-service coffee and snack shop.

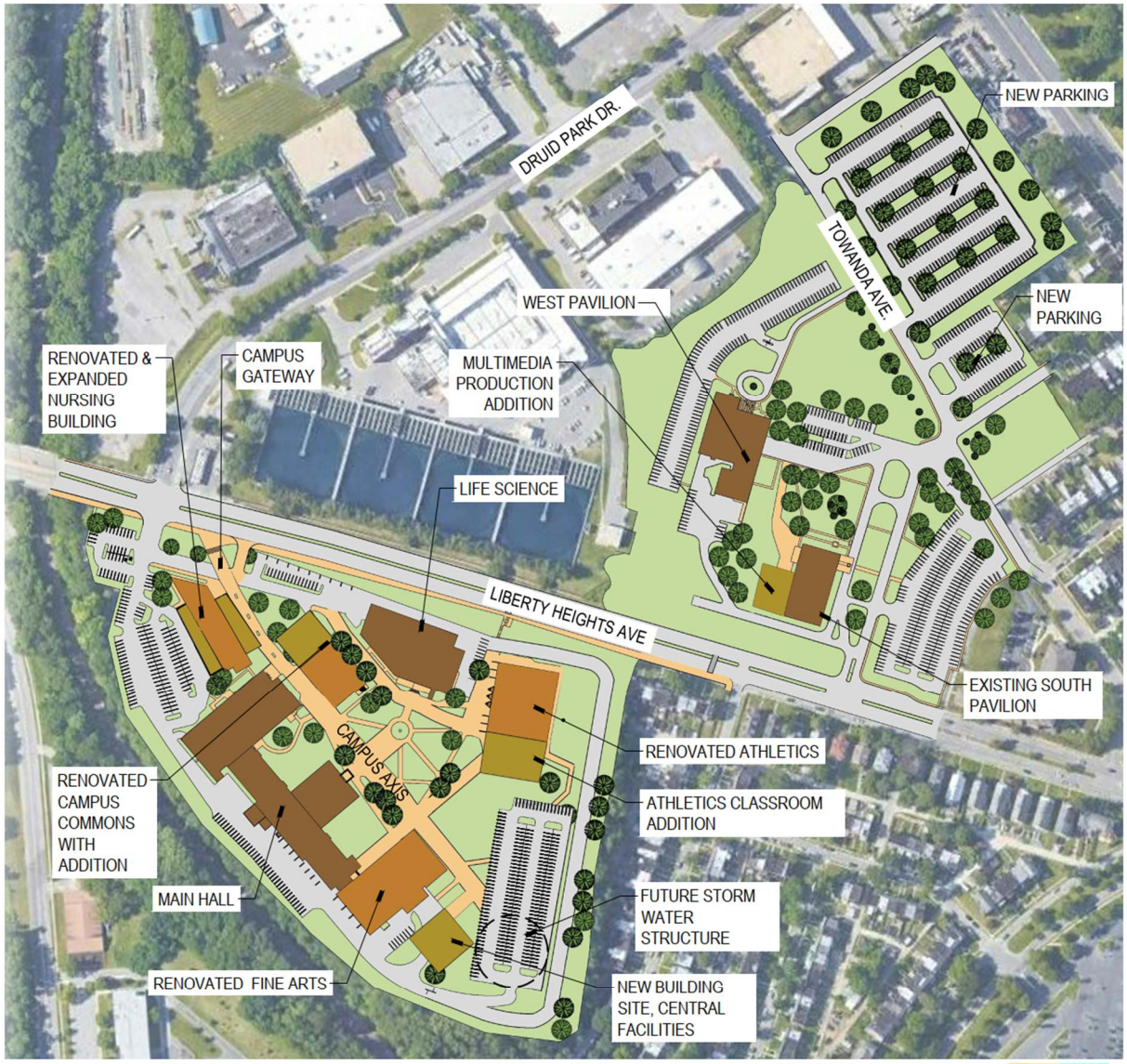
The renovated, expanded nursing building project will address the renovation of the 1970s nursing building, expanding it to provide space for up-to-date nursing simulation labs, upgraded classrooms and faculty space. Since nursing and allied health curricula are central to the BCC mission, the renovation and expansion of the Nursing Building are critical to the continued mission of the college, and will allow additional specialized curricula to be established.

The replacement of the Fine Arts Wing of Main Hall is proposed as a later priority, to address the building's increasing unsuitability for instructional programs and its aging systems. With its central location on a campus with limited opportunities for new development, this project is proposed as a multistory structure to maximize the use of the building's footprint. Renovation work in the Physical Education Center is recommended to address functional and material deficiencies, with potential expansion for enhanced fitness center activities. The modular Facilities Building is proposed for replacement with a permanent facilities building, with offices and workshop space. Stormwater treatment resulting from new development may require structures under existing parking due to limited open space on the main campus.

The plan illustrates limited work on the north campus, primarily meant to increase parking capacity. The North Pavilion is proposed for demolition in the near term, while the West Pavilion is retained for potential float space or for a K-12 partnership. Parking would be provided at the former North Pavilion. The extreme northern section of the north campus, presently wooded, can be developed for additional parking. An addition is proposed to the South Pavilion to provide multimedia production space, along with renovation of the South Pavilion.

Figure 5-17 – 10 Year Campus Plan

BALTIMORE CITY COMMUNITY COLLEGE
LIBERTY HEIGHTS CAMPUS
2901 LIBERTY HEIGHTS AVE. BALTIMORE, MD
LEARNING COMMONS
FACILITIES MASTER PLAN
NOELKER AND HULL ARCHITECTS



10 YEAR PLAN

LEGEND:

EXISTING

RENOVATED

NEW

BALTIMORE CITY COMMUNITY COLLEGE
CHANGING LIVES...BUILDING COMMUNITIES

NOELKER AND HULL ASSOCIATES, INC. ARCHITECTS

Baltimore City Community College
Facilities Master Plan
Liberty Heights Campus

Maryland Department of General Services
Project Number: CC-000-190-003

Chapter 6

Capital Project Recommendations

Chapter 6

6.1 Capital projects

Baltimore City Community College has seen significant underinvestment in physical facilities, resulting in a significant backlog of systems and functional renovation projects. Changing programs and program focus require realignment of facilities to match the expected needs, and to ensure that facilities live up to student expectations for current instructional programs. The college must aggressively pursue updated facilities to meet these demands.

The next major capital project will be the campus loop road, which is completing design. This will provide continuous vehicular access to the entire perimeter of the main campus. The loop configuration will prevent an incident at any point on the existing dead-end road from blocking the road beyond. Similarly, the second entrance, though still very close to the existing entrance, will prevent an incident at the intersection of Liberty Heights Avenue and Druid Park Drive from blocking access to the campus.

Several projects are proposed for the West Pavilion, which should be evaluated against the need to use the West Pavilion as swing space while renovation projects are going on elsewhere. The West Pavilion is recommended for demolition in the long term once its usefulness for other purposes is over.

Space needs projections and building condition assessments point to a need for renovation and expansion of the Library as a learning commons, and renovation and expansion of the Nursing Building to accommodate current and future programs. Additional long-term projects are the renovation of the Fine Arts Wing, replacement of the Facilities Office, and construction of a centralized maintenance facility, along with the eventual renovation or replacement for the Physical Education Facility. Space needs also point to a requirements for a downtown campus space, leased or negotiated as the Bard Building site is redeveloped.

Proposed Projects

A multi-year capital campaign is proposed to address major systems replacements. Initial projects will deal with backlogged items, such as:

1. Roof replacements for Facilities, Fine Arts, Life Sciences and the South Pavilion
2. Chillers for Fine Arts and Physical Education
3. Boilers for Life Sciences and Physical Education
4. Locker room upgrades for Physical Education
5. Controls for Physical Education
6. Replacement of the campus video surveillance system DVR and cameras

The backlog of major projects is calculated at $5.6 million to the end of 2020.
Some of the work programmed for future years includes:

1. Elevator replacements in Life Sciences
2. Boiler replacements in Main Hall
3. Hot water lines from Main Hall to Nursing and the Library
4. Fire alarm upgrades, panelboard and switchgear replacement in the South Pavilion
5. Domestic hot water boilers in Main Hall
6. Generator for Main Hall
7. Campus Loop Road –Complete the roadway around the campus and add a second entrance
8. Address systems replacement backlog, roofing, paving, chillers, boilers, elevators
9. Bard Library – Renovate and expand as a campus learning commons
10. Nursing Building – Renovate and expand to accommodate current needs and new programs
11. Coincident with the library and nursing renovations, update the central campus axis and open space
12. Parking – Develop parking on the north campus property
13. Raze the North Pavilion
14. Renovate or replace the Fine Arts Wing
15. Remove the Facilities Building and accommodate elsewhere on campus, possibly as part of future development of centralized infrastructure
16. Renovate the gymnasium or redevelop with additional classroom space
17. Future buildings on the main campus to fully utilize the site and complete the campus axis
18. Development on the North Campus, replacement of the South Pavilion
19. Structured parking to replace parking lost to campus development.

6.2 Project Summaries

1. Deferred investment – address systems replacements, controls, switchgear, fire alarms, roofing, elevators and other systems that have not received sufficient funding in past years, and which will result in a loss of building function and additional emergency repair costs if they fail. (Reference #: 4-16, 18, 20, 20-27, 29-40, 42, 44, 47 and 48)
2. Campus safety – the campus camera and DVR recording system is proposed for replacement to replace obsolete and unserviceable equipment. The safety of the students and security of the campus is critical to the success of the college. Currently the College's cameras report back to the Main Building in the Command Center. Only 55/238 of cameras on campus are functional, 80% are analog, and the software is not able to run on modern operating systems. Many are also outdated types and require replacement for post processing viewing. There is a need for approximately 60 additional cameras. Video recorders are also non-functional and are not able to meet the 30 day standard for video storage in an educational setting. The new system will replace all existing cameras on a closed stand-alone network using a fiber network with a dedicated application server in the LSB displaying all views in the Command Center in the Main Building. Each officer post will also have a viewing workstation for the specific building/location. The College intends to submit a Part 1 program in the next few months. (Reference #: 1)
3. Bard Library – Renovate and expand as a campus learning commons, addressing substantial deficiencies in study space. The space allocations will be reconfigured for this building, and all systems and the building envelope will be replaced. The project will include light dining/coffee shop options and media production facilities. The project will provide up-to-date life safety systems and will address deficiencies in accessibility and quality of service. (Reference #: 2)
4. Nursing Building – Renovate and expand to accommodate current needs and new programs. Like the library/learning commons project, this project will completely renovate the Nursing Building to bring it up to current instructional standards and will address life safety and accessibility issues. The Nursing project will allow new programs to be instituted and will provide new nursing and therapeutic simulation labs. (Reference #: 3)
5. As the nursing and library projects are developed, the central campus axis will be enhanced to coordinate with these projects.
6. Parking – The vacant land on the North Campus will be developed to free the college from current leased parking arrangements. (Reference #: 47)
7. North Pavilion – The North Pavilion is recommended for demolition. (Reference #: 17
8. Fine Arts Wing – replace the facility. Like the Nursing and Library buildings, the Fine Arts Building requires extensive work to address functional and systems deficiencies and to accommodate the requirements of current curricula. (Reference #: 28)

9. Facilities Building – replace the existing modular facilities building with a permanent building. Like Harper Hall, the Facilities Building is not meant as a permanent structure and will need to be replaced in about ten years. A permanent facility with shop space and possibly with central utility space is needed. (Reference #: 41)
10. The West Pavilion is useful as float space or as partnership space in the near term. In the longer term it should be replaced once its usefulness is at an end. (Reference #: 27, 32, 37, 38)
11. The Physical Education Center requires renovation of the lower level. Renovation and expansion is desirable on the upper level to improve fitness center functionality and to upgrade the spaces surrounding the gymnasium. (Reference #: 19 and d45)
12. The South Pavilion will require a major renovation within ten years. (Reference #: 43 and 10, 11, 24, 29, 30)

6.3 Facilities Master Plan List of Projects

Table 6-1

Ref #	Project	Projects estimated in 2020 dollars Estimated Cost	FY Design Start	FY Construction Start
1	**Liberty Campus - Campus Safety Upgrades** Proposed plan to replace obsolete and unserviceable equipment and update the Command Center.	$500,000	FY 23	FY 23
2	**Liberty Campus - Learning Commons Renovation and Addition** Design and Construct a 17,000 GSF Addition and Renovate the 30,134 GSF 1965 Library Building	$23,202,000	FY 22	FY 23
3	**Liberty Campus - Nursing Building Renovation and Addition** Design and Construct a 17,500 GSF Addition and Renovate the 36,582 GSF 1977 Nursing Building	$29,060,000	FY 22	FY 23
4	**Deferred Maintenance: Liberty Campus - Fine Arts Building Chiller** Replace chiller for Fine Arts wing and split system for IT equipment	$925,000	FY 22	FY 22
5	**Deferred Maintenance: Liberty Campus - Life Science Building Controls** Upgrade pneumatic controls to digital controls on the HVAC system of the Life Science Building	$50,000	FY 22	FY 22
6	**Deferred Maintenance: Liberty Campus - Life Science Building Boiler** Replace domestic hot water boiler in the 1996 Life Science Building	$180,000	FY 22	FY 22
7	**Deferred Maintenance: Liberty Campus - Physical Education Chiller** Replace the package unit chillers in the 1965 Physical Education	$88,000	FY 22	FY 22
8	**Deferred Maintenance: Liberty Campus - Physical Education Boiler** Replace hot water boiler and hot water storage in the 1965 Physical Education Building	$134,000	FY 22	FY 22
9	**Deferred Maintenance: North Campus - South Pavilion Roof** Replace low and high slope roof	$250,000	FY 22	FY 22
10	**Deferred Maintenance: North Campus - South Pavilion Fire Alarm** Replace Fire Alarm panel	$85,000	FY 22	FY 22
11	**Deferred Maintenance: Campus Infrastructure - Electrical Distribution** Replace Campus underground electrical distribution	$100,000	FY 22	FY 22
12	**Deferred Maintenance: Campus Infrastructure - Plumbing Distribution** Replace campus water supply lines and sanitary drain lines	$300,000	FY 22	FY 22
13	**Deferred Maintenance: Liberty Campus - Life Science Building Elevators** Replace both elevators in the Life Science Building	$250,000	FY 22	FY 22
14	**Deferred Maintenance: Liberty Campus - Life Science Building Heating** Replace two heating boilers in the 1996 Life Science Building	$250,000	FY 22	FY 22

15	**Deferred Maintenance: Campus Infrastructure - Hot water lines** Replace hot water supply lines to Library and Nursing - to occur simultaneoulsy with the Nursing and Learning Commons projects	$200,000	FY 22	FY 23
16	**Deferred Maintenance: Campus Infrastructure - Replace Boilers** Downsize and replace three heating boilers serving the Main Building, Nursing Building, and Library Building - to occur simultaneously with the Nursing and Learning Commons projects	$1,500,000	FY 22	FY 23
17	**Parking** Design and deconstruct the North Pavilion Building and adjacent forest to create a parking lot	$1,300,000	FY 23	FY 24
18	**Deferred Maintenance: Liberty Campus - Facilities Building Roof** Replace Facilities Building roof with Single-Ply EDM Roof	$61,000	FY 23	FY 23
19	**Liberty Campus - Physical Education Building Locker Room Renovation** Renovate Bathrooms, Locker Rooms, and Classrooms in the Physical Education Building	$6,400,000	FY 23	FY 24
20	**Deferred Maintenance: Liberty Campus - Fine Arts Building Roof** Replace entire roof on the Fine Arts Building with built-up membrane *(not required pending reference project #28)*	$180,000	FY 23	FY 23
21	**Deferred Maintenance: Liberty Campus - Life Science Building Exterior** Replace exterior doors on the Life Science Building	$280,000	FY 23	FY 23
22	**Deferred Maintenance: Liberty Campus - Physical Education Exterior** Replace exterior doors on the Physical Education Building	$120,000	FY 23	FY 23
23	**Deferred Maintenance: Liberty Campus - Physical Education Roof** Replace entire roof on the Physical Education Building with built-up	$334,000	FY 23	FY 23
24	**Deferred Maintenance: North Campus - South Pavilion Switchgear** Replace and upgrade capacity on the South Pavilion main electrical panels and switchgear	$45,000	FY 23	FY 23
25	**Deferred Maintenance: North Campus - South Pavilion Fire Alarm** Replace fire alarm detection system in the South Pavilion	$389,000	FY 23	FY 23
26	**Deferred Maintenance: Liberty Campus - Main Building Replace hot** Replace domestic hot water boilers in the Main Building	$407,000	FY 23	FY 23
27	**Deferred Maintenance: North Campus - West Pavilion Fire Alarm System** Replace fire alarm panel and system in the West Pavilion	$432,000	FY 23	FY 23
28	**Liberty Campus - Replace Fine Arts Building on the Liberty Campus** Design and Construct a new Fine Arts Building with Auditorium, Exhibition space, conference room, arts programming, and Culinary	$103,400,000	FY 24	FY 25
29	**Deferred Maintenance: North Campus - South and West Pavilion** Renovate bathrooms in South and West Pavilion Buildings	$304,000	FY 24	FY 24
30	**Deferred Maintenance: North Campus - South Pavilion Elevator** Replace Elevator in West Pavilion *(not required pending reference project #43)*	$150,000	FY 24	FY 25

31	**Deferred Maintenance: Liberty Campus - Main Building Replace large** Replace large windows in the Main Building	$240,000	FY 24	FY 24
32	**Deferred Maintenance: North Campus - West Pavilion - Replace large** Replace large windows in the West Pavilion Building *(pending the College's retention of this building)*	$256,000	FY 24	FY 24
33	**Deferred Maintenance: North Campus - South Pavilion - Electrical** Replace distribution panels and circuit breaker panels on the electrical system *(not required pending reference project #43)*	$54,000	FY 24	FY 24
34	**Deferred Maintenance: Liberty Campus - Fine Arts Building - Electrical** Replace distribution panels and circuit breaker panels on the electrical *(not required pending reference project #28)*	$12,000	FY 24	FY 24
35	**Deferred Maintenance: Liberty Campus - Fine Arts Building - Hot Water** Replace domestic hot water boilers in the Fine Arts Building *(not required pending reference project #28)*	$204,000	FY 24	FY 24
36	**Deferred Maintenance: Liberty Campus - Main Building - Replace** Replace electric back-up generator for the Main Building on the	$350,000	FY 24	FY 24
37	**Deferred Maintenance: North Campus - West Pavilion - HVAC** Replace air handlers at the West Pavilion *(pending the College's retention of this building)*	$252,000	FY 24	FY 24
38	**Deferred Maintenance: North Campus - West Pavilion - Hot Water Boiler** Replace hot water boiler at the West Pavilion *(pending the College's retention of this building)*	$148,000	FY 24	FY 24
39	**Deferred Maintenance: North Campus - South Pavilion - Replace Chiller** Replace rooftop chiller and air handlers on the South Pavilion *(not required pending reference project #43)*	$143,000	FY 24	FY 24
40	**Deferred Maintenance: Liberty Campus - Fine Arts Building - Replace** Replace domestic hot water boilers in the Fine Arts Building *(not required pending reference project #28)*	$66,000	FY 24	FY 24
41	**Liberty Campus - Facilities Building Replacement** Replace Facilities trailer with offices and expanded shop space	$6,100,000	FY 25	FY 26
42	**Deferred Maintenance: TBD** Allocate funding for asset preservation, system replacements, and	$4,000,000	FY 25	FY 25
43	**Addition** Renovate south Pavilion for Workforce Development with an addition for media production studios (music, video, set building, studios)	$19,500,000	FY 26	FY 27
44	**Deferred Maintenance: TBD** Allocate funding for asset preservation, system replacements, and	$4,000,000	FY 26	FY 26
45	**Liberty Campus - Physical Education Renovation and Addition** Renovation of fitness center with addition for Physical Therapy	$10,400,000	FY 27	FY 28
46	**Deferred Maintenance: TBD** Allocate funding for asset preservation, system replacements, and	$4,000,000	FY 27	FY 27
47	**Campus Infrastructure: Site Improvements for Open Space** Improve open space, pedestrian circulation, creating gathering spaces, campus entrance and other site improvements	$6,000,000	FY 28	FY 29
48	**Deferred Maintenance: TBD** Allocate funding for asset preservation, system replacements, and	$4,000,000	FY 28	FY 28