

Howard Community College Facilities Master Plan 2025



Howard Community College

Facilities Master Plan

February 2025 Revised: April 2025

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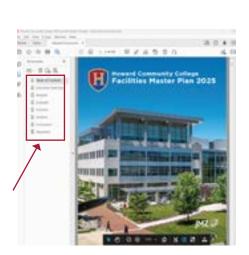


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Executive Summary

Introduction

The 2025 Facilities Master Plan for Howard Community College (HCC) provides a strategic framework for the College's future development, addressing critical needs in infrastructure, space optimization, and campus community building. This plan builds on the 2015 Facilities Master Plan (FMP), which prioritized the elimination of pedestrian-vehicle conflict areas, creating campus gateways, enhancing north-south connections between campus zones, and building new facilities for mathematics, continuing education, and athletics.

Howard Community College implemented the 2015 FMP recommendations, adapting them to align with funding realities. The East Parking Garage was expanded to help reduce pedestrian-vehicle conflicts, the new Kahlert Foundation Complex (KC) was recently opened, a Workforce Development and Trades Center (WDTC) is underway, and an Outdoor Sports Complex is in the design stage.

This 2025 Plan includes completion of the north-south connection; essential facilities and building systems upgrades; continued pedestrian, wayfinding, and accessibility improvements; and a second stage of development for Workforce Development and Trades facilities. The plan includes recommendations to improve space utilization, including increasing hourly instructional space use, adjusting non-faculty office space allocations, and restoring efficiency to underperforming buildings.











Planning Process

In early 2024, Howard Community College engaged JMZ Architects and Planners, P. C. (JMZ) to conduct a comprehensive Facilities Master Plan to guide campus improvements through 2035. JMZ teamed with HCC's trusted architectural and engineering advisors, Whitman, Requardt and Associates, LLP (WRA), in Baltimore, MD.

Development of the 2025 Facilities Master Plan (FMP) began in April 2024 with an on-campus kick-off meeting that included the Steering Committee, President Daria Willis, and members of her leadership team. The planning team met with academic and administrative representatives to discuss plans for new initiatives and academic programs and to assess space needs. Data analysis included detailed examination of course scheduling in fall 2023 and spring 2024, programming documents for recently-completed renovations, space inventory documentation, staffing data, enrollment data, and space programs for the KC and WDTC.

Howard Community College Mission, Vision, and Values

Mission

Providing pathways to success

Vision

A place to discover greatness in yourself and others

Values

Innovation

Nurturing

Service and Sustainability

Partnerships

Integrity

Respect

Excellence

Diversity, Equity, and Inclusion

Master Plan Theme

HCC is a dynamic institution, responsive to regional workforce needs and dedicated to student achievement. The College was in the process of updating its strategic plan while this FMP was underway, yet its 2021-2025 goals served as guides for the FMP process:

- Student success, completion, and lifelong learning
- Organizational excellence
- Building and sustaining partnerships

The planning team proposed a theme of "Moving Together, Moving Forward" to guide recommendations (shown below). Actions were associated with this theme.

The theme builds on HCC's culture of innovation and its actions emphasize strategic utilization of existing structures.

MASTER PLAN THEME

Moving together.

interdisciplinary inclusive family community engaging

Moving forward.

innovative creative resourceful prepared

ACTIONS

Integrate community education in the heart of campus.

Enhance campus connections.

Expand capacity for expanding and new programs.

Modernize aging structures.

Priority Projects

With new academic, athletic, workforce development, and trades facilities underway, additional space will not be required at HCC before 2035. The first years of FMP implementation prioritize facilities renewal, accessibility, wayfinding, and landscape projects. By 2035 new programs are projected to have full cohorts, which would prompt a need for additional specialized instructional space in the future.

On the following pages, projects are grouped by independent projects which may not require capital funding and projects requiring capital funding.

Independent Projects

The pictures at right are inspirational images used during the design process to show potential results. Elements like these could be incorporated in proposed projects.

Accessibility, Wayfinding, and Landscape Projects

Exterior and Interior Signage Allowance: \$1,340,000

Elective Landscape Project Allowance: \$600,000

(A) Recalling recommendations from the 2015 Facilities Master Plan, this FMP recommends creating a strong connection between the north and south ends of HCC's campus. Components such as broad, accessible pathways; bright, engaging signage; landscape art; and family destinations will welcome visitors and encourage members of the public to visit HCC.

Interior Renovations

Allowance: \$1,650,000 for distributed improvements

- (B) Creating vibrant, welcoming family spaces throughout HCC buildings is a priority of this plan.
- © Distributed interdisciplinary hubs will welcome instruction in multiple disciplines, allowing faculty to plan innovative lessons.
- D Certain office suites could be customized to accommodate employees who routinely work from home. Hoteling refers to the practice of reserving a workspace when needed and forgoing traditional, assigned offices. This office sharing model allows space for amenities like kitchens, soft seating areas, quiet rooms, and private meeting rooms.

Cost Estimate assumptions:

- Includes one year of escalation at 4%. Projects beyond 2025 should have current and historical escalation rates applied.
- Includes general contractor overhead and profit.
- Includes 20% design contingency.
- Assumes design-bid-build project delivery.

























Capital Projects

This page and the following pages contain brief descriptions and conceptual cost information for projects that would require capital funding. The date range indicates the recommended project start year.

Cost Estimate assumptions:

- Includes one year of escalation at 4%. Projects beyond 2025 should have current and historical escalation rates applied.
- Includes general contractor overhead and profit.
- Includes 20% design contingency.
- Assumes design-bid-build project delivery.

Outdoor Sports Complex, Accessibility

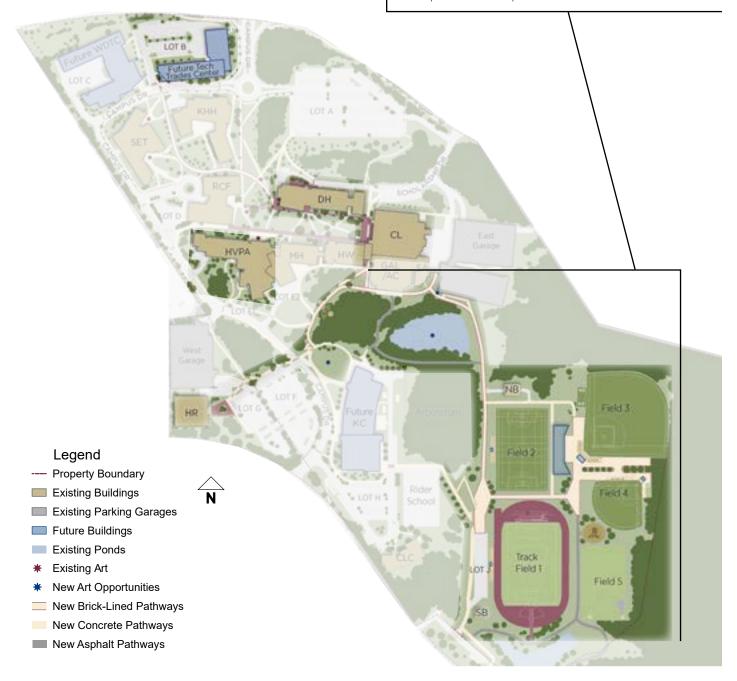
Improvements, and Landscape Improvements

2028-2030

\$16,400,000

The comprehensive renovation of HCC's outdoor athletics facilities will create a welcoming gateway at the southern edge of campus. The new facilities will include competition fields that meet standards for the National Junior College Athletic Association.

Improvements to the path northward toward the academic core will improve access to HCC's woodlands and pond and will create an inviting route for the public to explore the campus.



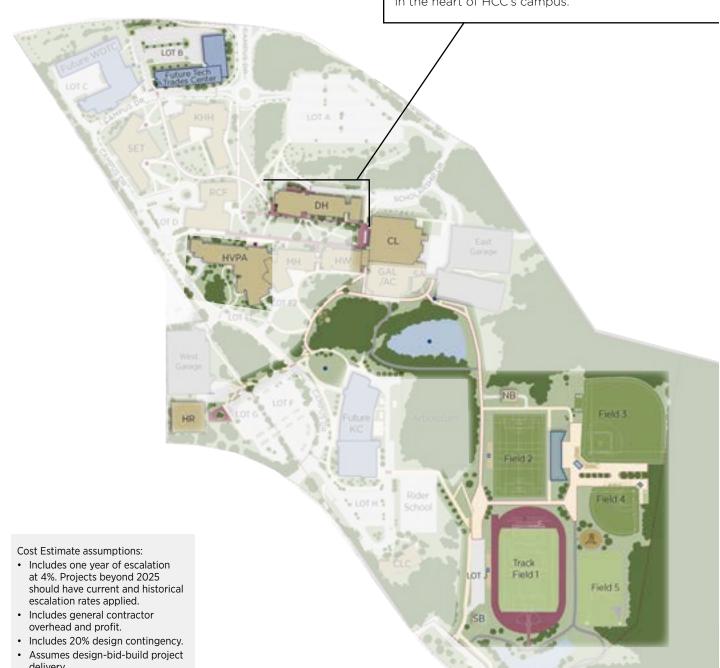
Duncan Hall Renovation

2029-2031

\$43,770,000

Duncan Hall, constructed in 2003, holds 45 classrooms and instructional labs, totaling 16 percent of HCC's net instructional space. Its layout is suitable for instruction, yet its systems, finishes, and instructional space layouts require updates. A comprehensive renovation, including energy efficiency upgrades and conversion to fully-electric building systems, is recommended.

Reconfiguration on the first floor will create a home for the English Language Center and Community Education in the heart of HCC's campus.



Hickory Ridge

2032 - 2033:

Comprehensive Renovation

\$24,860,000

Pedestrian Safety, Accessibility Improvements

\$2,404,000

In the short term, the Hickory Ridge Building will function as swing space to support renovations of other campus buildings. Afterwards, Hickory Ridge could be dedicated to Middle College, accommodating high school students for on-campus daytime instruction. Building condition prompts comprehensive renovation to prolong the building's service to the College and Howard County.

Clark Library Renovation

2032-2034 \$26,800,000

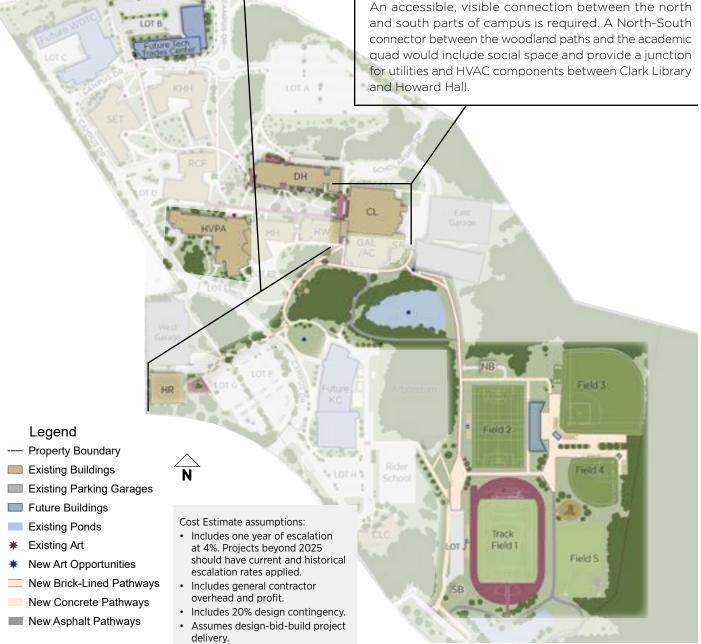
Clark Library is very well suited to its purpose and is in fundamentally good condition. In 2030, the building will be 60 years old. Though it has had regular upgrades, the Library will be due for a comprehensive renovation in the 2030s. Its mechanical system serves nearby buildings; upgrading Clark Library and its mechanical systems will be a big step forward in the College's efforts to become an all-electric campus.

North-South Connector

2032-2034

\$4,590,000

An accessible, visible connection between the north

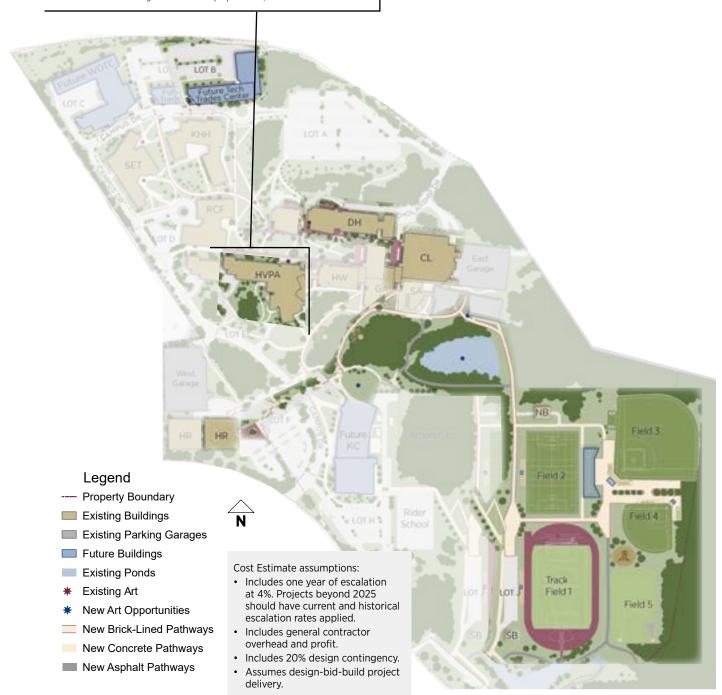


Horowitz Visual and Performing Arts Center Building Systems Upgrades

2034-2035

\$17,060,000

The Horowitz Visual and Performing Arts Center (HVPA) was constructed in 2006 and is home to HCC's art. music, and theater instruction as well as performing arts venues. Its spaces are functional and in good condition, though limited upgrades to finishes and lighting are recommended. Its building systems are approaching 20 years of service. A replacement of HVAC systems, with conversion to fully-electric equipment, is recommended.



New Technology Trades Center

2035+

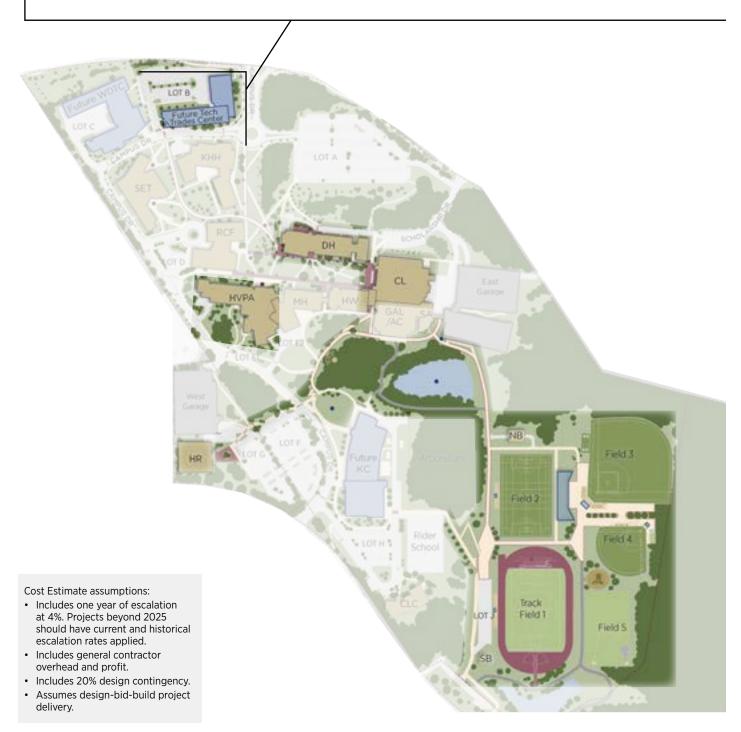
\$27,300,000

If enrollment projections are met, new and expanding academic programs will require additional instructional space.

The proposed Technology Trades Center will house new programs in AI and Cloud Operations and Electric Vehicle Technology, as well as public-facing programs like Dental Hygiene and Cosmetology.

Katherine Hetherington Hall (KHH), the existing building for Health Sciences, is near-capacity in the high-demand programs of Nursing, Dental Hygiene, and Cardiovascular Technology.

Creating a new Dental Hygiene Clinic and instructional space in the new Technology Trades Center would place the Clinic in a highly visible location that is easily accessed by the public. The vacated space in KHH will allow Nursing and other growing Health Sciences programs to expand.





	Outdoor Sports Complex Accessibility	Duncan Hall Renovation	Hickory Ridge Renovation Pedestrian Safety
	Improvements Landscape Improvements		Improvements Accessibility Improvements
	2028-2030	2029-2031	2032-2033
	\$16,400,000	\$43,770,000	\$27,264,000
Benefits of Implementation	Expands competitive sports offerings, improving student athlete recruitment and retention. Enables HCC to host NJCAA competitions, increasing regional recognition and spectator engagement (currently, the women's softball team practices and competes offcampus). Enhances accessibility with bike friendly paths connecting HCC's southern edge to the campus center.	Modernizes aging building systems and increases energy efficiency. Supports Maryland's climate goals by converting to all electric systems. Establishes a home for the English Language Center in the heart of campus. Provides facilities for interdisciplinary programs, including Community and Continuing Education, in a central campus location.	Modernizes the 1980sera building, enhancing energy efficiency and improving the work and learning environment. Supports Maryland's climate goals by transitioning to all electric systems. Provides a long term home for HCC's Middle College program while serving as swing space for Clark Library and Horowitz Center renovations in the short term. Improves pedestrian safety and site accessibility, strengthening connections to the heart of campus.
Effects of Non- Implementation	Women's softball team continues without oncampus facilities. HCC lacks NJCAA-compliant track and field facilities, requiring teams to compete off-campus. HCC remains unable to establish a men's baseball team. Visitors attending athletic events lack a clear gateway or connection to the main campus. Northsouth paths remain unimproved, limiting accessibility.	Systems modernization and major facilities maintenance projects could be deferred. Longterm, this increases the risk of system failures in the building. If Duncan Hall were taken offline unexpectedly due to a system failure, the College may struggle to accommodate affected users in other oncampus structures. The English Language Center would remain in the Hickory Ridge Building, which is of inferior quality compared to HCC's other structures and is physically disconnected from the academic core. This isolation limits student and faculty engagement with the broader campus community.	The building will remain an inefficient, unattractive, and underutilized structure with limited pedestrian connectivity to the campus core. North-south pathways will remain unimproved, restricting accessibility. Pedestrian safety concerns will persist without a raised crosswalk and additional signage to slow traffic at the Campus Drive crossing.

Clark Library Renovation	North-South Connector	Horowitz Visual and Performing Arts Center Building Systems Upgrades	New Technology Trades Center
2032-2034	2032-2034	2034-2035	2035+
\$26,800,000	\$4,590,000	\$17,060,000	\$27,300,000
Modernizes aging building systems and enhances energy efficiency. Supports Maryland's climate goals by transitioning to all electric systems. Enables space reallocation within the library, creating additional social and group study areas while allowing flexibility to meet future program needs identified in the 2030 FMP Update.	Completes the accessible route connecting the south and north portions of campus. Enables fully accessible, traffic-free pedestrian travel across the entire campus. Enhances first impressions of Clark Library and the Academic Commons with a new entrance.	Modernizes aging building systems and enhances energy efficiency. Supports Maryland's climate goals by transitioning to all electric systems. Improves the teaching, learning, and performance environment.	Establishes specialized laboratories for computer technologies and electric vehicles. Frames the HCC northern entrance, creating a well defined campus gateway. Provides a centralized, recognizable location for HCC's clinical programs, improving public access. Frees up space for Health Sciences programs, allowing them to expand and add needed labs elsewhere on campus.
Clark Library houses HVAC distribution for two adjacent buildings. If its aging systems fail unexpectedly, the Library, Academic Commons, and Howard Hall would lose heating, ventilation, and air conditioning. Library finishes and interior layout would remain outdated, potentially impacting student attraction and retention.	HCC's north and south zones would remain physically disconnected, with no clear pathway linking the Athletics/ Hickory Ridge area to the academic core.	Systems modernization and major facilities maintenance projects may be deferred. Longterm, this increases the risk of system failures in the building. If the Horowitz Center experiences an unexpected system failure, the College may be unable to accommodate its users in other oncampus facilities.	Howard County students may seek education elsewhere to gain skills and credentials in AI related fields and electric vehicle technology. Health Sciences programs will face growth constraints, potentially splitting staff and resources across multiple locations and duplicating space and equipment.





Analyze

Facility Condition Summary

A full Facility Condition Assessment (FCA), including building-by-building analysis, is included in the appendix of this report. The FCA identifies current and anticipated facilities maintenance needs, offering a snapshot of 2024 conditions of each building on campus, excluding the Kahlert Foundation Complex (recently completed), the Children's Learning Center, the West Parking Garage, and the East Parking Garage. For history and context, condition assessment reports completed in 2015 and 2019 informed the development of this updated FCA.

Overall, the exterior envelope/roof, interior finish, mechanical, electrical, plumbing, fire protection systems, and equipment are well maintained and generally in good condition, with the exception of Hickory Ridge which has several building system components rated in poor condition. There are several buildings where the mechanical plant or HVAC distribution system is nearing the end of its expected life and consideration should be given to replacement or refurbishment. However, there are no buildings where equipment condition precludes successful HVAC, electrical, or plumbing system operation. The campus is undergoing a control system upgrade to replace Siemens terminal equipment controllers that have reached the end of their useful life.

Starting in 2030, the Maryland Climate Solutions Now Act will cap fossil fuel emissions for buildings exceeding 35,000 square feet, except for primary or secondary schools, industrial facilities, or certain historic structures. Emissions exceeding the cap will be assessed increasing financial penalties starting in 2030, with the cap reduced over time until it reaches zero in 2040.

In response to the Act, new buildings and major renovations should pursue all-electric mechanical and plumbing systems. Air to water heat pumps, packaged heat pumps, and geothermal heat pumps should be considered as the primary alternatives to condition buildings to minimize energy consumption within the limits of an all-electric system. Buildings with aging HVAC systems and high fossil fuel consumption should be prioritized for renovations. The College should factor state-imposed penalties for fossil fuel emissions into building life cycle cost analyses.

Key Findings

The following pages summarize the FCA's most critical facilities, site, and infrastructure needs.

Buildings not included in the excerpts were found to be in good condition and recommended work would not prompt initiation of the capital funding process.

Clark Library (CL)

Academic/Administrative

• Year Built: 1970

Year Renovated: 2009/2019
 Area (GSF): 75,294 sf
 Floors: 2 + Partial

Campus Location



The Clark Library is a concrete building that has benefited from consistent upgrades since opening in 1970. A comprehensive renovation is recommended for 2031, when the building becomes eligible for capital funding. The scope should include:

- Mechanical, electrical, and plumbing component replacement, including conversion to all-electric systems
- Replacement of lighting and finishes
- Minor-to-moderate reconfiguration of interior spaces
- Exterior envelope upgrades and maintenance, including roof replacement



Well maintained building exterior requires upgrades for energy efficiency and to address roof leaks.



Functional, suitable spaces within the library require updates to lighting, furnishings, and finishes.

Duncan Hall (DH)

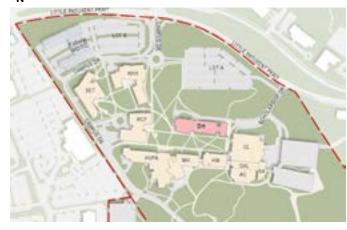
Academic/Administrative

• Year Built: 2003

• Year Renovated: Partial Renovations in 2019

Area (GSF): 105,035 sfFloors: 3 + Partial

Campus Location



The mechanical, electrical, and plumbing systems in Duncan Hall are original to its 2003 construction. Although functional, the systems will pose challenges for HCC under the Maryland Climate Solutions Now Act, which begins assessing penalties in 2030. Additionally, instructional spaces require updates to support active learning, replacing heavy, immobile computer desks with flexible, modern furnishings. Recommendations include:

- Mechanical, electrical, and plumbing component replacement, including conversion to all-electric systems
- Replacement of lighting and finishes
- Minor-to-moderate reconfiguration of interior spaces
- Exterior envelope energy efficiency and aesthetic upgrades



Well maintained building exterior requires upgrades for energy efficiency.





The boiler (left) and domestic water heat exchanger (right) remain condition. However, HVAC equipment exceeding 20 years of age is nearing the end of its useful life, despite regular maintenance,

Hickory Ridge (HR)

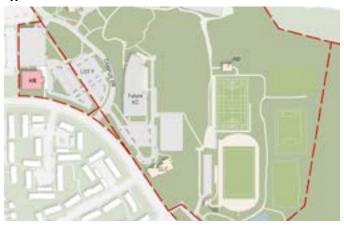
Academic/Administrative

Year Built: 1982Year Renovated: 1995

• Area (GSF): 60,000 sf

• Floors: 3

Campus Location



Hickory Ridge was constructed in 1982 as an office building. Its conversion to instructional space created inflexible classrooms and labs that are not suitable for active learning and are not sized to accommodate the College's current and planned class sections. The mechanical and electrical systems remain functional, however several components have exceeded their expected lifespan and require replacement. The building envelope is in fair-to-poor condition.

In the short-term, replace HVAC system components, antiquated electrical switchboards and panels, and fluorescent lighting to improve user comfort and maintain smooth building operations. In the long-term, a comprehensive renovation and spatial reconfiguration will be necessary for Hickory Ridge to remain a regularly-occupied space at HCC.



The aging exterior requires maintenance and energy efficiency upgrades.





Top: Salt and weather exposure have caused deterioration in exterior elements.

Bottom left: An aging air handler that has reached the end of its expected service life.

Bottom right: Interior finishes and fixtures show wear and tear.

Horowitz Visual and Performing Arts Center (HVPA)

2 + Lower

Academic/Administrative

Year Built: 2006Year Renovated: 2019Area (GSF): 78,090 SF

• Floors:



Overall, the HVPA is in good condition and does not require comprehensive renovation within the next decade. However, its mechanical system components are nearing the end of their expected useful life.

Replacement of boilers, chillers, air handling units, cooling towers, and VAV boxes is recommended to improve user comfort, increase efficiency, and advance HCC's compliance with the Maryland Climate Solutions Now Act.



The Horowitz Center exterior is in good condition and its main entrances have attractive, accessible approaches.





The boiler (left) and chiller (right) are operational but are approaching the end of their expected service life.

Site and Infrastructure Summary

- 125 Acres
- 15 Buildings; nearly 1,000,000 gross square feet
- 2,978 parking spaces

Howard Community College's campus in Columbia, MD spans 125 acres with 15 buildings totaling nearly one million gross square feet and 2,978 parking spaces.

The Site Conditions Assessment updates the conditions documentation, considerations, and recommendations contained in the 2015 Facilities Master Plan. The entire report is included in the appendix. Key points of the analysis are included here.

Forests on campus consist of oaks, hickory, red maple, cherry, beech, black gum, tulip poplar and sassafras. The forested areas are, for the most part, protected in Forest Conservation Areas of different sizes scattered throughout the campus totaling 21.25 acres. Development is restricted in Forest Conservation Areas, limiting HCC's options for new construction.

The understories of many forest edges contain invasive species including multi-flora rose, poison ivy, and honeysuckle. Selective cutting and pulling of invasives as suggested by the 2015 Facilities Master Plan has begun to allow some natural regeneration of the forest floor. Additionally, some replanting of native species has begun in selected areas.

Site and infrastructure challenges include:

- Vehicular/pedestrian conflict areas exist, particularly on the south end of Campus.
- There is no continuous accessible pathway between the north and south parts of Campus. There are additional breaks in pathways that cross Campus Drive to Lot F.
- Pedestrians and maintenance vehicles share narrow paths.
- Exterior wayfinding is difficult due to limited signage.
 From the south, there are few visible landmarks to guide pedestrians.
- The onsite water service has capacity limitations that may limit future development areas or necessitate alternative water supply outside the on-campus system.
- Campuswide electrical service may require capacity upgrades and modernization to support the transition to all-electric building systems. A capacity study is required
- Campuswide, buildings lack arc flash labeling, which is required by code.



Existing woods are an attractive, but underutilized, asset.





On the north side of campus, walks are wide and accessible.



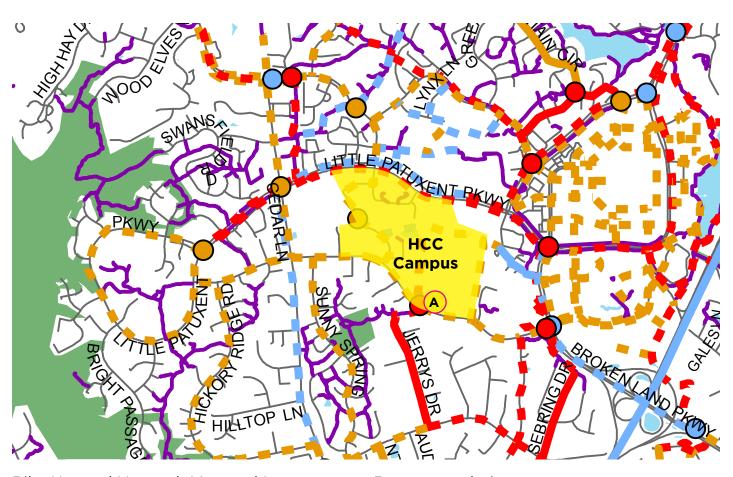
Typical asphalt paths on the south side of campus are not accessible. There is no clear pedestrian route connecting these buildings to the academic quad and other campus areas.



Stormwater management features on the north side of Campus include Environmental Site Design elements consistent with Maryland stormwater regulations.



Pedestrians crossing Campus Drive at Lots F and G lack visual cues for navigation, with the most direct paths to buildings leading through parking lots.



Bike Howard Network Map and Improvement Recommendations

Existing Path

Short-Term

Proposed Improvement

 Spot Improvement Mid-Term
Existing Path

-- Proposed Improvement

Spot Improvement

Lo h =

Long-TermExisting PathProposed Improvement

Spot Improvement

- MARC Station
- Further Study
- Existing Pathways and Trails (HC, CA, and Others)

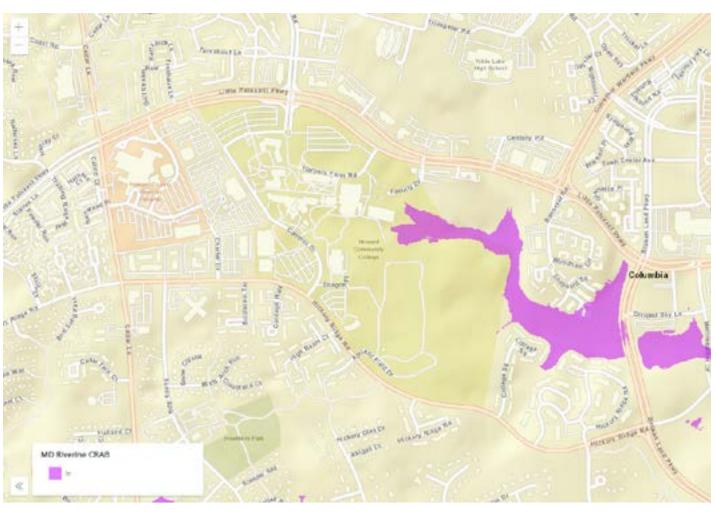
Existing trails on the HCC Campus are recognized as part of Columbia's public trail network. Enhancing trails oncampus could encourage bicycle commuting by creating cross-campus routes that are separated from the vehicular traffic. The proposed FMP pathway upgrades align with the improvements recommended by the Howard County Bicycle Master Plan, shown on the map above.

Proposed Master Plan projects include:

- Improved on-campus paths and walks to enhance accessibility between the north and south entrances.
- Raised-table crosswalks to slow traffic along key pedestrian routes.
- Additional amenities, such as playgrounds, art, benches, and nature walks, to encourage the public to enjoy HCC's offerings.



A protected crossing connects HCC to the public trail network.

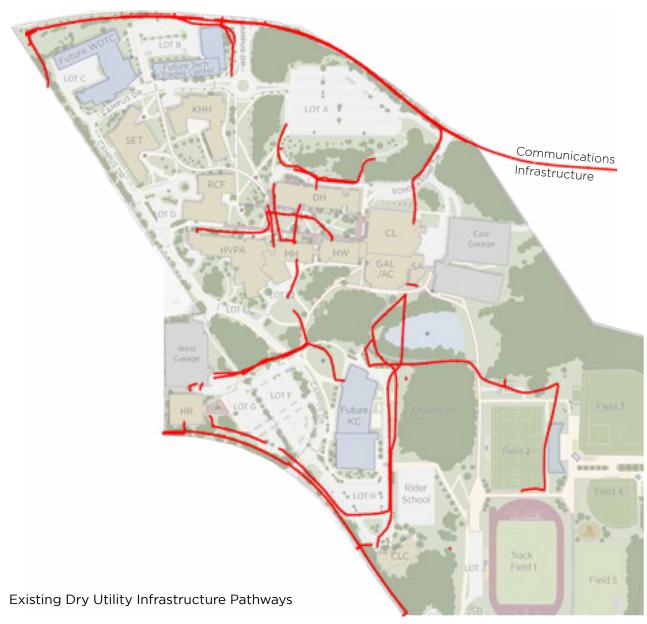


Maryland Department of Planning Growth and Conservation; Local and State Targeted Growth and Conservation Areas

Three designations are applied to the Howard Community College site on the Maryland Department of Planning Growth and Conservation Map:

- Established Community: The site is part of a developed suburban area with fully built-out infrastructure.
 Maryland Department of Planning guidelines for projects in this zone include:
- Provide diverse, stable places in which residents and businesses continue to live, work and play and support the stability of property values.
- Maintain the quality of life, and social and economic function, and protect the character of existing residential and commercial neighborhoods.
- Maintain public facilities and services.
- Support the infrastructure and service needs of the community, addressing existing deficiencies, without expanding public facilities and service capacities that encourage significant new growth.
- Promote sustainability enhancements where possible.

- Septic Growth Tier 1: The property is served by public sewer systems. No new development using septic systems is permitted.
- Portions of the site are within the non-tidal Climate Ready Action Boundary (CRAB), an advisory designation indicating elevated flood risk along rivers and streams. No structures are built on this part of the site



Telecommunications Infrastructure Plan

The information provided by HCC's Information Technology division and collected/observed during the site survey indicates the current information and communications technology (ICT) infrastructure is in good condition and well maintained. This infrastructure supports multiple systems and networks which include the HCC network, Alertus Notification System, Facilities network, Electronic Security System, VoIP Phone System, Blue Phone System, and Internet of Things (IOT) network.

A wireless improvement project was completed over the past decade to address coverage, density and power levels of the wireless local area network (WLAN). More than 100 new wireless access points (WAP's) were installed to provide additional throughput with a focus on instructional spaces,

to replace legacy equipment and to provide enhanced coverage in the College Quad and other exterior campus areas

New buildings constructed on campus over the past decade integrated data connections into the existing campus network and included building spaces to support equipment and distribution infrastructure. These improvements were designed and installed in accordance with HCC standards and requirements including infrastructure for underground pathways, telecom rooms and internal building pathway distribution systems. HCC should periodically review and update their ICT Standards for campus.

The new Workforce Development and Trade Center building, under design during development of the master plan, will

connect into the campus ICT infrastructure and systems via a new underground pathway from the Lot C building site, south down Campus Drive to the SET building. This infrastructure will support the connections required to integrate with the HCC network, Alertus Notification System, Facilities network, Electronic Security System, VoIP Phone System, Blue Phone System, and Internet of Things (IOT) network. In addition, a separate underground pathway will be provided at the northeast side of the building for connection to the local CATV service provider (Comcast) that comes into the area via Little Patuxent Parkway.

There are two future building projects that will require new and/or upgraded connection to the campus ICT infrastructure and systems over the next decade. These include a new Outdoor Sports Complex (Diagram A) and the Future Technology Trades Center (Diagram B). The Outdoor Sports Complex, located in the southeast part of the campus, has included planning for a new underground communications pathway to connect into the existing campus ICT infrastructure at the Kahlert Foundation Complex as part of the detailed program study completed. The Future Technology Trades Center to be located on Lot B and will also need to create an underground pathway from the building site along Campus Drive to connect into the new pathway installed with the Workforce Development and Trades Center project. See maps below with proposed future telecom pathway for each project.

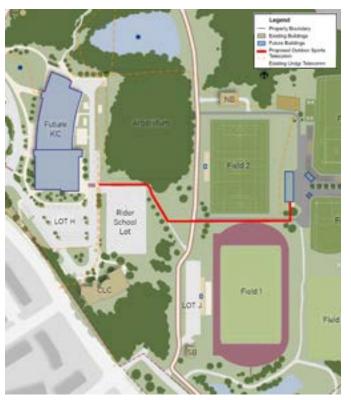


Diagram A Outdoor Sports Complex



Diagram B Workforce Development and Trades Center, Future Technology Trades Center

Instructional Space Utilization Summary

The efficient use of instructional space allows higher education institutions to maximize their return on investment in built resources. At times when demand is low, institutions can shift instruction to enable improvements to campus facilities. When instructional demand and enrollment are high, increasing hours and seat fill in strategic locations can help institutions absorb growth.

Data Set

The study relied on the following data sources:

- Fall 2023 and spring 2024 registrar course schedules
- Fall 2023 and spring 2024 continuing education course schedules
- Fall 2023 Events schedule
- Ad Astra instructional space list
- Historical physical space inventories
- Space programs for recently renovated buildings and projects in planning and construction phases

Peak Week

The study evaluates the peak week of instruction, during which the most instructional demand occurred.

- Peak fall 2023: October 9 through October 13
- Peak week spring 2024: March 11 through March 15

More weekly student contact hours (WSCH) occurred in fall 2023 than in spring 2024. Therefore, fall 2023 was used as the primary semester for analysis. Daytime hours include courses that started before 5:00 PM.

Enrollment Overview

Between 2013 and 2022, Maryland's two-year public colleges experienced a 31 percent decline in fall headcount enrollment. Howard Community College (HCC) performed better than the system as a whole, losing 19 percent fall headcount between 2013 and 2021, then gaining 450 students between fall 2021 and fall 2023 (below left). Despite that gain, HCC had 1,395 fewer students in fall 2023 than it had in fall 2013.

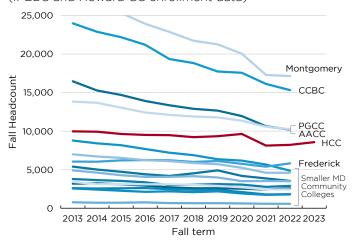
Maryland Utilization Standards

The Maryland Higher Education Commission (MHEC) expects instructional spaces to meet standard daytime utilization rates. The standards are less demanding for colleges with 3,000 FTE or fewer. Larger colleges, like Howard Community College, have higher hourly targets. Classrooms and lecture halls should be in use 20-27 hours per week. Class laboratories should be in use 15-18 hours per week, minimum. Classroom seat occupancy should be 60 to 67 percent when class is in session. Class lab seats should be 60 percent occupied.

Daytime instruction is assumed to be between 8:00 AM and 5:00 PM, Monday through Friday, for a total of 45 available hours per week. Evening hours were established based on HCC's fall 2023 instructional patterns: Monday through Thursday, 6:00 PM through 10:00 PM. Daytime demand exceeded evening demand, therefore the detailed utilization analysis to follow includes daytime use only.

Enrollment History

(IPEDS and Howard CC enrollment data)



Maryland Utilization Standards

		Day I	Hours	Evening Hours		
	Seat Fill	Low	High	Low	High	
Classrooms & Lecture Halls	60% to	20	27	9	12	
Class Laboratories	67%	15	18	6.5	8	

Scheduling Patterns

Examining meeting patterns by time of day helps identify opportunities to improve utilization. Classroom, lecture hall, and class laboratory scheduling patterns are shown below. The x-axis of each chart is divided into half-hour increments. The y-axis tracks how many course meetings (registrar scheduled and continuing education) took place in every half hour increment.

Classrooms and Lecture Halls

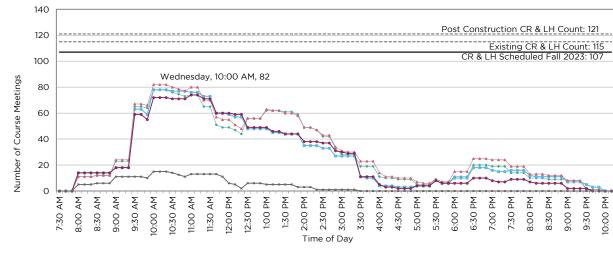
Minimal lecture instruction took place before 9:30 AM. Peak utilization took place on Wednesday at 10:00 AM, when 82 classrooms and lecture halls were in use. Over the course of the peak week, 107 classrooms and lecture halls were scheduled, leaving eight rooms unscheduled.

Class Laboratories

Peak class laboratory utilization occurred between 2:00 PM and 2:30 PM on Wednesday when 25 labs were in use. At that time, 25 of HCC's scheduled labs were not in use, and an additional 18 were not scheduled in peak week, fall 2023.

Meetings by Time of Day, Day of Week

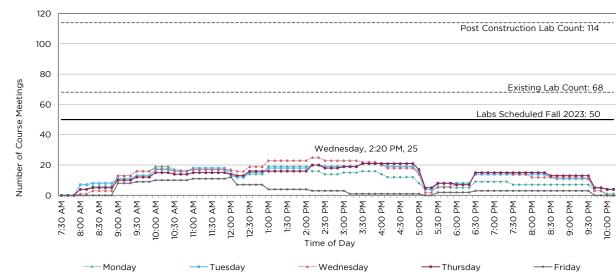
Classrooms and Lecture Halls



Class Laboratories

Howard Community College

Facilities Master Plan



Average Weekly Utilization Rates

The chart on the facing page illustrates fall 2023 average hourly use and seat fill rates. Dark gray arcs represent registrar-scheduled class time, blue arcs indicated continuing education use, and orange arcs reflect event hours, which are excluded from Maryland utilization goals. Light gray arcs complete the inner circles of the charts, indicating unused capacity.

The outer ring of the charts shows the Maryland utilization standard range. The small college goal and the large college goal are used as high and low utilization thresholds.

Registrar-scheduled courses achieved higher average seat fill than continuing education, thus only registrar-scheduled seat fill is indicated in these charts.

Daytime Average Utilization

Maryland's hourly utilization standard for classrooms and lecture halls is 20 hours/week for colleges with up to 3,000 full-time day equivalent students (FTDE) and 27 hours/week for colleges with more than 3,000 FTDE. Howard had 2,341 FTDE in fall 2024, but enrollment projections suggest the College will have 3,036 FTDE by fall 2035. A range of 20 to 27 hours is shown as the classroom and lecture hall target. Credit and non-credit daytime courses resulted in 16 hours per classroom, on average. Lecture Halls saw less hourly utilization, reaching 14 hours per week, per room, on average.

Class laboratories have lower hourly utilization goals due to time required to set up and take down experiments and time required for students' out-of-class work. Maryland guidelines recommend 15 hours to 18 hours of average daytime laboratory use per week. HCC's labs achieved 13 hours per lab in fall 2023.

There was unused daytime hourly capacity in HCC instructional spaces. Additional course meetings could be accommodated.

Seat fill refers to the number of available seats that are occupied when class is in session. HCC classrooms exceeded the Maryland seat fill standard, on average. Nationwide, many institutions aim for 80 percent seat fill in classrooms. HCC should continue its practice of exceeding Maryland seat fill standards in classrooms.

Lecture Halls could have accommodated larger section sizes. Only 22 percent of lecture hall seats were used, on average, when classes were in-session.

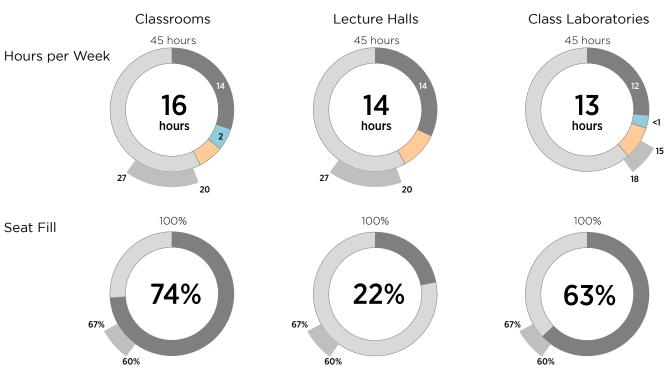
Class laboratories had average seat fill within the target range of 60 percent to 67 percent. A nationwide standard of 80 percent is recommended to get the best utilization of labs, which are some of an institution's most expensive spaces to build and maintain.

Evening laboratory utilization was high, with 17 out of 20 available hours were scheduled for credit and non-credit instruction. The SET building had 141 hours per week of evening lab instruction. McCuan, Horowitz, and Duncan had 16 hours per week of evening lab instruction, combined.

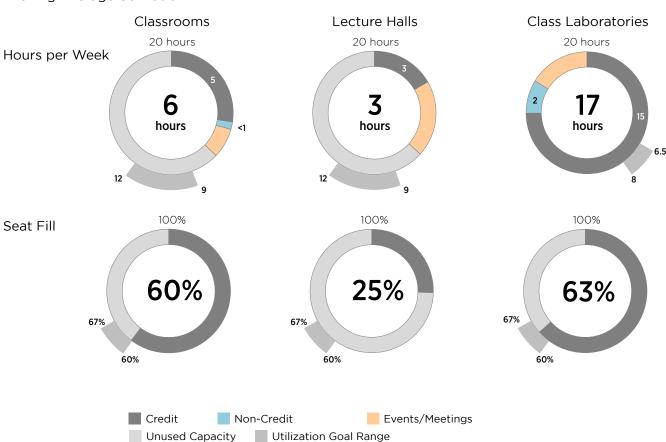
Utilization Recommendations

- Standardize course start times to enable more efficient room use and help students build workable weekly schedules. Course end times were relatively consistent.
- Maintain average seat fill in classrooms. Increase seat fill to 80 percent in labs.
- Anticipate increasing laboratory hourly utilization to 24 hours per week, on average, in the following labs to accommodate existing and future demand: HVPA 115, a dance studio, and SET 353, a Chemistry Lab. All other labs should aim to achieve 18 hours per week, on average.
- There is a campuswide surplus of classrooms in the 21 to 30 seat range. Where possible, resize these to create 41- to 60-seat classrooms.
- The following disciplines offered lecture courses with caps of 40 to 48 students. Strategically aim for 80 percent to 90 percent seat fill when scheduling these courses to avoid the need for additional large classrooms or lecture halls.
- Biology, Chemistry, and Math lectures have the most course caps in this range.
- Languages offered multiple courses with caps in this range.

Daytime Average Utilization



Evening Average Utilization



JMZ Architects and Planners

Howard Community College
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Facilities Master Plan

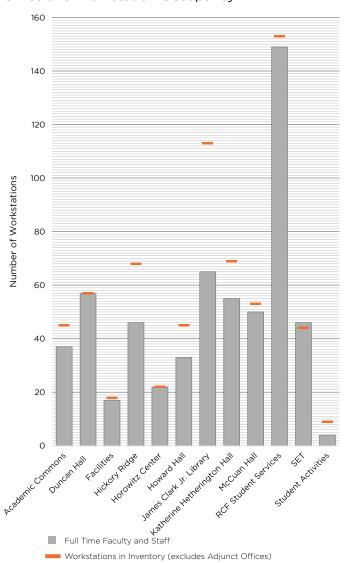
Office Occupancy

MHEC recommends 166 NASF of office space per full-time community college staff and faculty member. The 166 NASF includes the employee's workstation or office plus a share of break rooms, file rooms, work rooms, conference rooms, and other office support spaces. In 2024, HCC full-time faculty and staff were allocated an average of 148 NASF per individual.

By comparing the staff directory to the physical space inventory (right), office stations in Duncan Hall, the Facilities Building, the Horowitz Center, RCF Student Services Center, and SET Building were at- or near- capacity. Hickory Ridge, Howard Hall, Clark Library, and Katherine Hetherington Hall appear to have vacancies, based on reported data.

Howard Community College reported many non-faculty employees work from home at least one day per week. Interviewees were receptive to the idea of creating a suite of hoteling offices, where individuals can reserve an office space when they come to campus instead of having an assigned private office or workstation. Hoteling offices typically contain more social spaces, meeting areas, and amenities than a typical office suite.

Office and Workstation Occupancy





JHU-MICA Film Centre offices include some private offices, some open office areas, and shared amenities.

Space Needs Interviews

JMZ and WRA conducted space needs interviews with various stakeholder groups between April 2024 and September 2024.

- Academic Deans
- Auxiliary Services
- Continuing Education and Workforce Development
- Facilities
- Information Technology
- Library
- Planning, Research and Organizational Development
- President Daria Willis
- Provost Shantay Grays
- Public Safety
- Sustainability

Common threads emerged throughout the discussions.

- Continue efforts to provide standard technology packages in all instructional spaces.
- Upgrades to Duncan Hall classrooms were requested.
- Address facilities maintenance needs.
- Clark Library roof leak
- HVAC challenges reported in Hickory Ridge and Horowitz Center
- A centralized IT support desk, potentially in the Library, was requested.
- Provide additional power and WiFi capacity for individual laptop users in instructional spaces.
- Additional study rooms and quiet spaces were requested.
- Some Health Sciences programs have plans for growth, but there is reportedly limited space to do so.
- Continue to enhance wayfinding and improve accessibility.
- Anticipate growing demand for trades and technology programs.
- Create family-friendly spaces to help parents study oncampus with their kids.
- Explore a hoteling-style model for some non-faculty office suites.

Analysis Key Conclusions

- There is capacity to accommodate instructional demand through the next decade based on the fall 2024 and spring 2025 course schedule. Specialized space will be required for new and growing academic and workforce development programs.
- The campus is in fundamentally good condition, but substantial building systems upgrades will be needed in the next decades.
- To comply with the Maryland Climate Solutions Now Act, HCC is likely to require additional electrical capacity. Many buildings will need upgrades to accommodate new electrical equipment. An electrical capacity and demand study is recommended.
- Maryland's instructional space utilization target range should be relatively easy for HCC to meet and exceed.
- Increase classroom hourly use from 16 hours per week, average, to at least 20 hours per week.
- Seat fill in classrooms exceeded the Maryland goal.
 The 74% seat fill average should be maintained or exceeded.
- Class laboratories were in use 13 hours per week, on average. HCC should strive to meet, then exceed, the 15 hour-per-week Maryland lab hourly use target. HCC should aim for 24 hours per week in dance and chemistry labs to help HCC maximize use of existing space before expanding facilities.
- Hickory Ridge and the Clark Library have vacant office space, according to reported data. In the near term, these offices can be utilized as swing space to accommodate renovations. Long term, renovations may repurpose underutilized offices.





Evaluate

Enrollment, Faculty, and Staff Projections

Headcount (on-campus, online, and off-campus) is projected to increase by 11.6% between 2024 and 2035.

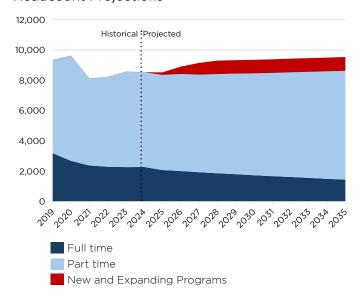
Enrollment in most existing for-credit programs is expected to remain steady, with potential for very modest growth.

Existing Nursing, Dental Hygiene, and Cardiovascular Technology programs plan to expand by adding new cohorts.

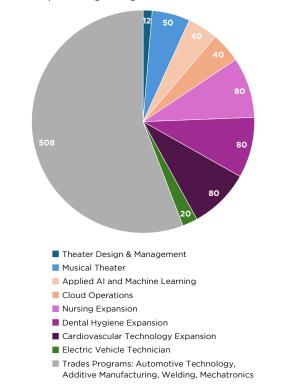
New academic programs are planned, which will attract new students.

- Electric Vehicle Technician (1 year certificate)
- Applied Artificial Intelligence and Machine Learning (Degree program)
- Cloud Operations
- Cosmetology (Potential future program)

Headcount Projections



Projected Headcount Growth, 2024 through 2035, New and Expanding Programs



Online and On-Campus Instruction

The College plans to reduce online instruction from 46% of student credit hours (SCH) in 2024 to 38% by 2035.

This shift, paired with the new and expanding academic programs, is expected to drive increased demand for oncampus instruction.

Student: Faculty Ratio

MHEC calculations for faculty and staff growth exceed HCC's projected new hires. The College's 2024 full-time equivalent student per full-time faculty was 22. MHEC's guidelines would maintain this student: faculty ratio through 2035.

However, HCC seeks to regain the staffing efficiency that was lost when enrollment dropped after the COVID-19 pandemic. Only nine net additional employees are expected to support new workforce and trades programs:

- One dean
- Five faculty
- One technology trades lab assistant
- One administrative assistant
- One additional maintenance staff person

By limiting new hires, the College intends to increase the student: faculty ratio to 25 by 2035.

Enrollment Projection Tables

Two factors, FTDE and weekly student contact hours (WSCH), determine the calculated space needs on a Maryland community college campus. A weekly student contact hour equals one student in one station for one hour. Tables on the facing page show new and expanding programs in red and reflect the recent shift to four academic divisions from seven divisions.

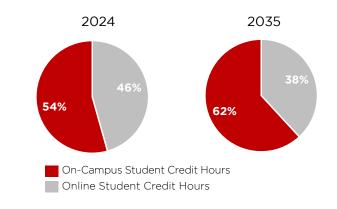
Student Credit Hours

Projected increases in student credit hours by division were established by conferring with deans and the Provost. Working with the Planning, Research, and Organizational Development department, JMZ calculated the additional SCH that would result if each new program and expanding program filled cohorts according to HCC's projections. Total student credit hours are projected to increase by 16 percent over the next 11 years.

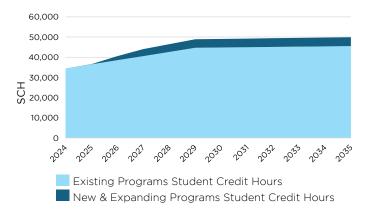
Full Time Daytime Equivalent Students

JMZ applied historical ratios for online, evening, and offcampus FTE to estimate a starting point for daytime oncampus instruction. In collaboration with deans and the Provost, adjustments were made to account for all new programs being fully on-campus and the HCC goal to reduce the percentage of online instruction to 38 percent. The result is an 11-year FTDE increase of 32.3 percent.

Student Credit Hours



Projected On-Campus Student Credit Hours



Student: Faculty Ratio



Weekly Student Contact Hours

JMZ analyzed the number of WSCH completed by full-time equivalent students in each academic program and applied this ratio to projected FTDE figures. This analysis indicated a 23.5 percent increase in WSCH over 11 years.

Total SCH by Division and New Programs

Arts & Humanities Business/Computer Fnglish/World Lang Health Sciences Mathematics Social Sciences/Education Science & Technology Division of Foundational Learning Division of Liberal Studies Division of Liberal Studies (Tech Gen Ed SCH) Division of Liberal Studies (New Theater Design & Management Program) Division of Liberal Studies (New Music Theater Program) Division of Health, Science, and Technology Division of Health & Science - Expanded Nursing Program Division of Health & Science - Expanded Dental Hygiene Program Division of Health & Science - Expanded Cardiovascular Technology Program Division of Business and Technology - Electric Vehicle Technician (1 Year Certificate) Division of Business and Technology - Applied Artificial Intelligence and Machine Lng Division of Business and Technology - Cloud Operations Division of Liberal Arts (Expanded Programs Division of Health & Science (Expanded Programs)

		Projected	Projected				
Fall '19	Fall '20	Fall '21	Fall '22	Fall '23	Fall '24	Fall '29	Fall '35
81,242	79,348	69,211	68,590	71,241	70,569	80,306	81,862
10,562	10,315	8,997	8,917				
9,749	9,522	8,305	8,231				
13,811	13,489	11,766	11,660				
6,499	6,348	5,537	5,487				
13,811	13,489	11,766	11,660				
12,186	11,902	10,382	10,289				
14,624	14,283	12,458	12,346				
				28,719	28,323	28,011	28,628
				18,053	18,211	18,011	18,407
						1,628	1,628
						30	50
						9	12
				24,307	23,904	23,641	24,161
						620	620
						640	640
						760	760
						840	840
						220	220
						120	120
						360	360
						1,160	1,160
						640	640
				162	131	131	131
						3,485	3,485

5-YEAR % 11-YEAR %

On-Campus FTDE by Division*

Division of Learning Experience
Division of Business and Technology (Tech)

Arts & Humanities Business/Compute Fnglish/World Lang Health Sciences Mathematics Social Sciences/Education Science & Technology
Division of Foundational Learning Division of Liberal Studies Division of Liberal Studies (Tech Gen Ed SCH) Division of Liberal Studies (New Theater Design & Management Program) Division of Liberal Studies (New Music Theater Program) Division of Health, Science, and Technology Division of Health & Science (Tech Gen Ed Science SCH) Division of Health & Science - Expanded Nursing Program Division of Health & Science - Expanded Dental Hygiene Program Division of Health & Science - Expanded Cardiovascular Technology Program Division of Business and Technology - Electric Vehicle Technician (1 Year Certificate) Division of Business and Technology - Applied Artificial Intelligence and Machine Lng Division of Business and Technology - Cloud Operations Division of Liberal Arts (Expanded Programs) Division of Learning Experience Division of Business and Technology (Tech)

۰	Excludes	evening,	off-campus,	and	online	instruction	

					CHANGE: 27.9%	CHANGE: 32.3%
	Ac	tual			Projected	Projected
0	Fall '21	Fall '22	Fall '23	Fall '24	Fall '29	Fall '35
9	3,414.3	3,383.8	2,148.7	2,295.1	2,978.8	3,035.9

3,882.9	3,882.9	3,414.3	3,383.8	2,148.7	2,295.1	2,978.8	3,035.9
504.8	504.8	443.9	439.9				
465.9	465.9	409.7	406.1				
660.1	660.1	580.5	575.3				
310.7	310.7	273.1	270.7				
660.1	660.1	580.4	575.3				
582.5	582.5	614.6	507.5				
698.9	698.9	512.1	609.1				
				941.5	1,012.5	1,150.2	1,173.3
				462.9	496.6	556.2	567.3
						55.3	55.3
						0.5	0.7
						2.0	3.3
				734.3	786.0	880.3	897.9
						21.1	24.8
						21.3	21.3
						25.3	25.3
						28.0	28.0
						14.7	14.7
						8.0	8.0
						24.0	24.0
						49.3	49.3
						21.3	21.3
				9.9	0.0	0.0	0.0
						121.3	121.3

On-Campus Day Total Credit WSCH

Arts & Humanities English/World Lang Health Sciences Mathematics Social Sciences/Education Science & Technology Division of Foundational Learning Division of Liberal Studies Division of Liberal Studies (Trades Gen Ed) Division of Liberal Studies (New Theater Design & Management Program) Division of Liberal Studies (New Music Theater Program) Division of Health, Science, and Technology Division of Health and Science (Trades Gen Ed)
Division of Health & Science - Expanded Nursing Program Division of Health & Science - Expanded Dental Hygiene Program Division of Health & Science - Expanded Cardiovascular Technology Program

Division of Business and Technology - Electric Vehicle Technician (1 Year Certificate) Division of Business and Technology - Applied Artificial Intelligence and Machine Lng ivision of Business and Technology - Cloud Operations

Division of Learning Experience

Facilities Master Plan

Division of Business and Technology (Trades)

Howard Community College

Dunington	Dunington
20.7%	23.5%
CHANGE:	CHANGE:
5-YEAR %	11-YEAR %

69,785	69,785	55,902	56,755	35,534	42,436	51,225	52,411
8,784	8,784	7,037	7,144				
8,659	8,659	6,936	7,042				
11,630	11,630	9,316	9,459				
5,866	5,866	4,699	4,770				
11,569	11,569	9,267	9,409				
10,786	10,786	8,640	8,772				
12,492	12,492	10,007	10,159				
				14,391	15,491	15,321	15,661
				7,332	7,866	7,779	7,953
						1,391	1,391
						99	132
						345	570
				13,649	18,842	18,635	19,049
						305	305
						860	860
						970	970
						1,240	1,240
						320	320
						240	240
						680	680
				162	237		
						3,040	3,040
						3,040	3,040

Space Need Projections

The planning team reviewed past HCC reports to MHEC, comparing the College's net assignable square feet (NASF) inventory, the MHEC-calculated space need in NASF, and the reported on-campus full-time equivalent daytime students (FTDE).

Below, the NASF changes are plotted in blue, with the scale marked on the left-side y-axis. FTDE changes are shown in red, with the scale shown on the right-side y-axis. Years from 2010 through 2024 are shown on the x-axis, with a projection through 2035.

The light blue line (MHEC-recommended NASF) and the red line (FTDE) rise and fall in relatively the same proportion over time. The dark blue line represents the actual NASF on campus. In 2010, HCC had a substantial calculated deficit in NASF compared to MHEC recommendations.

Enrollment surged in 2012, prompting the College to build additional academic facilities. The new construction is reflected in the increase along the dark blue line.

By 2017 FTDE had decreased back to its 2010 level. As a result, the MHEC-calculated NASF need decreased proportionally. In 2024, the light blue line and dark blue line meet

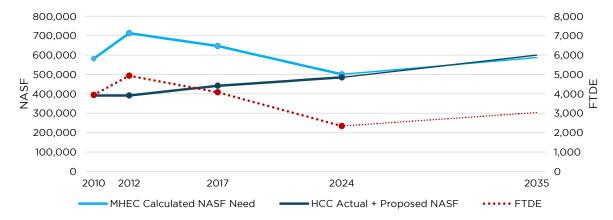
In 2024, the combination of new construction and decreased demand for on-campus instruction resulted in perfect alignment of HCC's existing facilities and the MHEC-calculated space need.

Looking ahead, the planning team projects a period of consistency during which on-campus daytime enrollment gradually increases, facilities in planning/construction stages open, and proposed new facilities are added to the inventory. In the lower chart, the square foot allocation per student is shown as NASF per FTDE.

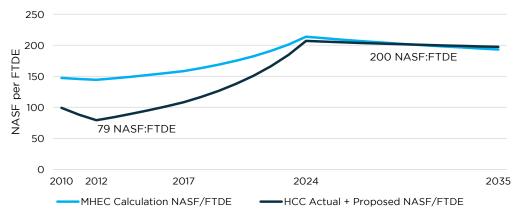
During the enrollment surge of 2012, more students were at HCC, yet the amount of space in NASF did not increase. The College operated at 79 NASF per FTDE that year.

Between 2024 and 2035, projections suggest HCC will maintain around 200 NASF per FTDE.

Comparison: MHEC Calculated Space Need, HCC Projected Space Need, and FTDE



Comparison: MHEC Calculated Assignable Space (NASF) per FTDE and HCC Projected Assignable Space per FTDE



Space Changes by Space Type

Additional space will be required by 2035 if new and expanding academic programs meet their enrollment goals. The steps to meet space needs are described in the Achieve section of this report. The following summary describes the factors that contribute to the final space recommendation.

- Space programming for the Kahlert Foundation Complex (KC) and the Workforce Development and Trades Center (WDTC) has been incorporated into the space projections.
- Underutilized spaces and spaces that will not be required when new facilities open are recommended to be repurposed or coded as inactive in the inventory.
- Space needs for new academic programs are accounted for.
- A deficit in classrooms with 41 to 60 seats is accounted for.
- Future space needs were calculated using Maryland standards, as published in the Code of Maryland Regulations, Title 13B, Subtitle 7, Chapter 13B.07.05, which outlines Community College Space Allocation Guidelines.

Classrooms and Lecture Halls

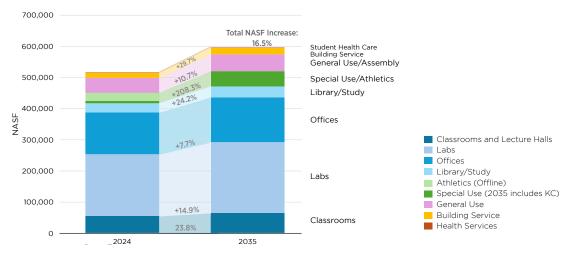
The KC and WDTC provide 19,659 NASF of general use classrooms and computer classrooms. Strategic reductions in underutilized classrooms elsewhere on campus are recommended. The FMP recommends new classrooms totaling 5,672 NASF to accommodate a shortage of classrooms with 51 to 60 seats and add classrooms at potential new buildings. Net new classroom space - including the KC and WDTC, reduction of underutilized classrooms, and creation of new classrooms - is projected to total 12.773 NASF in 2035.

Class Laboratories and Open Laboratories

Additional instructional labs will be required to serve new and growing academic and workforce development programs. In addition, the planned return to more in-person instruction will prompt increased lab demand.

If programs grow as expected, 14,400 NASF of lab space will need to be dedicated to new programs and to accommodate enrollment growth. The surplus of existing lab inventory exceeds this amount, yet specialized labs will be required

2024 to 2035 Projected Space Allocation Changes



Inventory Changes (NASF)	2024 Inventory	Kahlert Foundation Complex	WDTC	Potential Changes	Recommended Additions	2035 Resulting Inventory	Net Change 2024 to 2035	Percent Change
Classrooms	53,653	16,859	2,800	(12,558)	5,672	66,426	12,773	23.8%
Laboratories	198,002	8,358	22,084	(15,425)	14,400	227,419	29,417	14.9%
Offices	134,140	17,317	3,885	(14,611)	3,774	144,505	10,365	7.7%
Library/Study	29,375	4,771		490	1,840	36,476	7,101	24.2%
Special Use/Athletics	7,408	41,783				49,191	15,430	208.3%
(Former Athletic Center, Replaced)	26,353							
General Use/Assembly/Lounge	48,079	3,194		1,259	700	53,232	5,153	10.7%
Building Services	16,171	1,803	1,150	(544)	2,400	20,980	4,809	29.7%
Student Health Care	1,551					1,551		0.0%
Total	514,732	94,085	29,919	(41,389)	28,786	599,780	85,048	16.5%

for certain programs. To reduce the projected lab surplus, it is proposed that 15,425 NASF of labs in Hickory Ridge be recoded as inactive. When the additional 30,442 NASF of lab inventory from the KC and WDTC is included, there would be a net 29,417 NASF of added lab space by 2035.

Offices

The KC and WDTC will add 21,202 NASF of office space to HCC's inventory. This will enable approximately 14,611 NASF of office space to be potentially repurposed or removed from the inventory. Though few net new faculty are expected by 2035, some new offices will be required to preserve essential adjacencies between faculty and labs in their discipline. 3,774 NASF of offices are recommended to be created/relocated when future labs are built. Net additional office space is projected to be 10,365 NASF.

Library and Study Space

A total of 7,101 NASF of new, distributed study space is projected by 2035. This includes study spaces in the Kahlert Complex and other planned facilities.

Special Use/Athletics

The KC adds 41,783 NASF of athletics space. This replaces the old Athletic Center and provides additional space to create facilities suitable for NJCAA competitions. If the area of the former athletics center is considered as the baseline, the net new special use space is 15,430 NASF.

General Use/Lounge/Meeting/Assembly

Lounge, meeting, and informal recreation spaces are programmed throughout the renovations and potential new buildings. The KC and WDTC add 3,194 NASF of general use space. The College's Howard Hub project in the Rouse Company Foundation Student Services Center will add 1,000 NASF and a proposed Family Study Center would add 561 NASF. Additional lounge/meeting space is recommended campuswide and in proposed new construction, for a net change of 5,153 NASF additional general use area.

Building Service

4,809 NASF additional building services space will be needed to maintain proposed new space.

Student Health Care

No changes are projected in this space use category.

JMZ Architects and Planners

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Howard Community College
Facilities Master Plan





Envision

Concepts in Brief

The planning team prepared three concepts, all of which apply the planning actions in different ways.

Concept 1, Create Connections prioritized making functional adjustments to HCC's existing built resources, modernizing aging structures, and enhancing campus connections. Concept 1 accounts for low- or no-growth in on-campus instructional demand.

- Make a home for the English Language Center in Duncan Hall, creating a language and cultural crossroads.
- Optimize Hickory Ridge for non-credit instruction.
- Connect and enhance HCC's landscape destinations.

Concept 2, Reimagine Hickory Ridge focused on enhancing HCC's southern gateway and creating a community of learners in the Hickory Ridge Building. Concept 2 assumes moderate growth in on-campus instructional demand.

 Make the southern part of Campus an inviting destination for academics, athletics, community enrichment, and non-credit instruction.

- Renovate and expand Hickory Ridge to house noncredit instruction and serve as an incubator for developing new academic and workforce training programs.
- Strengthen pedestrian connections throughout Campus so the northern and southern zones are accessible and contiguous.

Concept 3, Community in the Campus relocated community education to the heart of Campus, shifting uses away from the Hickory Ridge Building and increasing activity along the academic quad. Concept 3 accommodates the most growth in instructional demand, assuming all new and expanding programs meeting their enrollment goals.

- Renovate Duncan Hall to create a home for the English Language Center, continuing education, and community enrichment
- Dedicate Hickory Ridge to Middle College and utilize excess offices and classrooms as swing space to enable renovations elsewhere on campus.

All concepts include the Outdoor Athletics Complex, a project that is currently in the design phase.

THEMES

Moving together.

interdisciplinary inclusive family community engaging

Moving forward.

innovative creative resourceful prepared

ACTIONS

Integrate community education in the heart of campus.

Enhance campus connections.

Expand capacity for expanding and new programs.

Modernize aging structures.

Howard Community College Facilities Master Plan JMZ Architects and Planners

Page 43

CreateConnections

Build a Language and Cultural Crossroads in

Duncan Hall. Create a home for the English Language Center.

Optimize Hickory Ridge for continuing education and Middle College.

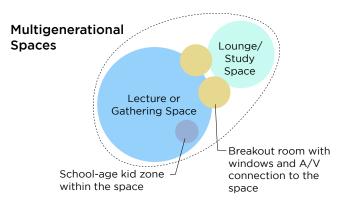
Create a chain of **landscape destinations** between the athletic fields and the WDTC.

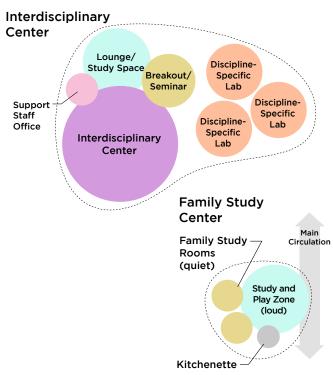
Thoughtful, strategic renovations, vibrant signage, and landscape modernization are the key elements of this concept. The site diagram on the facing page reflects building needs as:

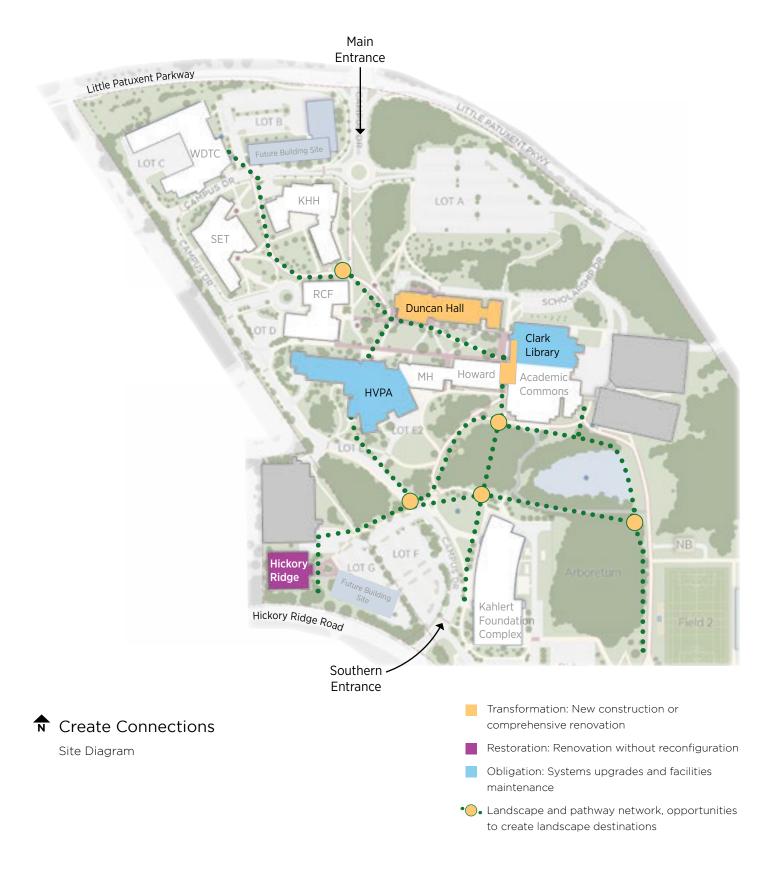
- Transformations (comprehensive renovation or new construction).
- Restorations (renovations without reconfiguration), and
- Obligations (systems upgrades).

Buildings with no color do not need capital-level investment at this time. Landscape opportunities are shown as connections and nodes, illustrating the essential pathways that connect the Campus.

A set of diagrams were prepared to guide development of community spaces within HCC's existing structures. These elements could be created in all three potential concepts. Below, the diagrams illustrate proposed multigenerational spaces, a Family Study Center, and an Interdisciplinary Center.







Create Connections

Renovate Duncan Hall

Renovate Hickory Ridge Enhance Landscape Connections



Duncan Hall Exterior

Renovate Duncan Hall

With its spacious classrooms, labs, and lobby, Duncan Hall could be easily upgraded to create modern classrooms, labs, and social space. The floor plan diagram at right illustrates how the first floor could be modified to create a Language and Cultural Crossroads, bringing the English Language Center into the heart of campus.

Key components of the Duncan Hall renovation are described below and on the following pages. Many of these components are repeated in all three concepts.

Interdisciplinary Center

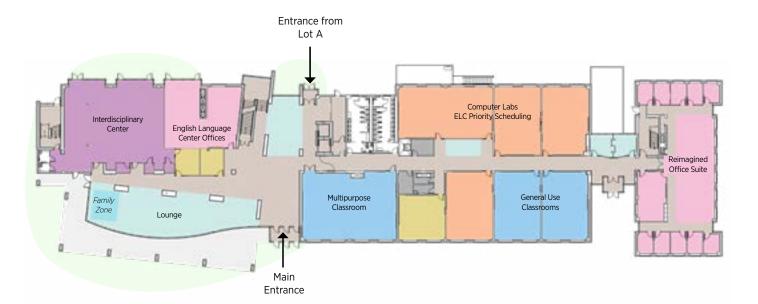
The purpose of the Interdisciplinary Center is to provide a flexible, spacious, classroom that is available for all disciplines. Ideally, the Center would be scheduled by the registrar for regularly-held classes. Instructors whose lesson plans include multimedia instruction and potentially team-teaching with other disciplines would get priority scheduling of this space. Examples of ways the Center could be scheduled include:

- Innovative courses, such as a Greek Art/Mythology course that includes reading, writing, and art history could schedule weekly meetings in the Center.
 The course could have guest lecturers from other departments, such as Geometry and World History.
- A nascent academic or workforce development program could use the Center in its starting semester(s) to build its cohort size and fine-tune its space needs. Generous storage would make it possible for new programs to launch in the Center while regular instruction continues.
- Community enrichment classes, community meetings, and college events could use the space in evenings.
- The Center would still be available for typical lecture instruction if it is not fully scheduled for collaborative, interdisciplinary courses.

English Language Center

Relocating the English Language Center (ELC) from Hickory Ridge to Duncan Hall will make the ELC a more welcoming, vibrant place to learn. The ELC's current home is remote from the heart of Campus, separating its students and instructors from HCC activities and culture. Instructional spaces on Duncan Hall's first floor would have priority scheduling for ELC classes, and then would be available for other HCC instruction.

A variety of room capacities would be available, from small breakout rooms seating up to 10 individuals, mid-sized classrooms and computer labs seating 30 students, or large classrooms seating 40 students or more. Additional classrooms on Duncan Hall's upper levels could be utilized during times when ELC instruction is in high demand.













Example family space in a lounge

Reimagined Office Suite

Many institutions have seen employees continue to work from home since the Covid-19 pandemic of the early 2020s. Colleges and universities are adapting to this new norm with flexible working policies and changes to space allocation. Individuals who work on-campus only a few days per week may not have a private office, unless their position requires it.

Multiple workstation types could be part of a reimagined office suite.

- Traditional private offices, for individuals whose jobs involve confidential materials and conversations
- Shared private offices, for two individuals
- Dedicated workstations, like what would be found in a typical open office environment
- Reservable workstations, for employees who need to spread out materials for hours at a time
- · Reservable private pods, for workers who need quiet space for the day
- Open work tables, for employees with variable schedules who prefer to pop-in as needed

The suite would include soft seating, a kitchenette, and informal gathering/working spaces. Depending on a group's preferences, activities such as study groups or tutoring could occur in the common spaces.

Upper Levels

Classrooms, offices, and computer labs on Duncan Hall's second and third floors will be renovated with minimal reconfiguration. Instructional equipment will be updated.

Building Systems

HVAC and electrical distribution equipment will be replaced. New heating equipment will be all-electric to comply with Maryland's greenhouse gas reduction requirements.

Lighting will be upgraded to LED fixtures.

Building Envelope

Repairs to existing masonry and replacement of damaged windows and doors will occur. New shading elements and building cladding are proposed for the south facade to increase user comfort and reduce energy demand.



Example reimagined office suite



Example exterior shading



Example engaging outdoor seating and plantings

<u>Landscape Improvements</u>

Although serviceable, the exterior hardscape/landscape on the south, west, and north sides of Duncan Hall is starting to show its age. Plans for interior renovations and the development of an Interdisciplinary Center on the ground floor provide an opportunity to upgrade and refresh the surrounding landscape.

On the quad side of the building, both south and west, new hardscape materials and landscaping would be used to create a series of coordinated outdoor social spaces for students, faculty and staff. A variety of outdoor spaces and seating types would be accented with new landscape planting to add definition, depth, and color.

On the north side of the building upgraded hardscape materials would be introduced at entrances and plazas. Existing asphalt pathways would be converted to concrete, informal seating areas would be introduced, and new landscape planting would be used to add definition, depth and color.

Reinforcing the visual connection from surface parking to Duncan Hall, through the building, and onward to the quad would help individuals feel connected to the Campus as a whole. This could be achieved by coordinating building renovations with landscape upgrades.



Example outdoor seating



Example new seating/activity area adjacent to existing walk



- New/Upgraded Walkways, Outdoor Seating, Landscape, Lighting, Signage and Crosswalks
- New Outdoor Seating with Shade
- * Existing Art

Create Connections

Renovate Duncan Hall

Renovate Hickory Ridge Enhance Landscape Connections



Hickory Ridge Exterior

Light Renovations at Hickory Ridge

Hickory Ridge is a 60,000 gross square foot building that was originally constructed in 1982 as an office building for use by Howard County. It has since been repurposed as an instructional building to support Continuing Education and Workforce Development, the English Language Center, and HCC's Math department.

Hickory Ridge is physically remote from the academic core of campus. For this reason, it is not ideal for departments with face-to-face student contact. When the new Kahlert Foundation Complex opens, Mathematics instruction and faculty offices will move there. The proposal includes relocating the English Language Center to Duncan Hall, bringing it closer to the campus core.

In this concept, offices and instructional space for Continuing Education and Workforce Development would remain in Hickory Ridge. Space vacated by Math and the English Language Center could be dedicated to Middle College, a program in which high school students attend college courses on-campus.

The building spaces are sized and configured to support general education in lecture and lab format, yet improvements are required to modernize instructional spaces.

The HVAC and electrical systems at Hickory Ridge are aging and were originally designed for office use rather than modern classrooms. While operational, many components, are in fair to poor condition.

Long-term, Hickory Ridge will require comprehensive renovation if it is to be regularly occupied by HCC.

Enhance Landscape Connections

The pedestrian route from the heart of campus to the southern edge traverses steep slopes, a busy road crossing, and a walk through a parking lot. The pathway to the Hickory Ridge Building and the new Kahlert Foundation Complex is difficult to locate and isn't easily identifiable as being part of the HCC pedestrian network.

An improved pathway is proposed between Hickory Ridge and the academic core. The current Hickory Ridge entrance is directly adjacent to head-in vehicle parking. It links to a concrete walk that continues along the edge of the building, crosses the parking garage access drive, traverses a parking lot, and leads to a busy crossing of Campus Drive. A welcoming entrance plaza and protected pedestrian path are proposed. A raised crosswalk should be placed where the path crosses Campus Drive.

These improvements will increase accessibility and reduce risk of pedestrian-vehicle conflicts.

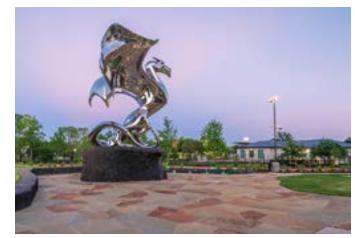


Proposed improved walkways and crosswalks along the pedestrian route



Once across Campus Drive, the walkway would connect to the existing pedestrian network linking north and south campuses. Currently, this network consists of narrow asphalt pathways that are not well defined, are poorly lit, and lack signage. In addition, many of these pathways exceed ADA slope requirements, leaving the campus without a fully accessible route that connects all buildings at HCC. North of Campus Drive, walkways need upgrades to meet ADA compliance, including stairs and ramps, lighting, and wayfinding signage.

New signage should reflect HCC's heritage and natural history to enhance campus identity. If funding permits, art and seating areas should be placed along the pathways. Residents in nearby neighborhoods could come to Campus to enjoy the woodlands, get exercise on the paths, use play amenities, and appreciate the art.



Example, a dragon sculpture would be an appropriate landmark to announce arrival at the KC (bradoldham.com/fury)



Example of destination signage that incorporates elements of local history and culture



Nature-inspired play areas could augment the pathway network



Example of vibrant, recognizable wayfinding signage

North-South Connector

An essential component of the Howard Community College pedestrian network is creation of an accessible, visible North-South Connector through the junction of Howard Hall, the Clark Library, and the Academic Commons. Today, as one approaches these buildings from the south, there is no clear way to reach the academic quad. A bright, welcoming circulation space between the buildings would serve as a beacon, showing the way through.

The new structure would be a fresh, modern entrance for Clark Library and the Academic Commons. Clark Library's mechanical plant serves Howard Hall and the Academic Commons. The connecting circulation space would allow for passage of piping and utilities.

The North-South Connector could be all interior space, all exterior space, or a combination of the two.



A schematic illustration of how a new circulation space could be constructed between the Academic Commons, Clark Library, and Howard Hall. The project would include an accessible plaza approaching from the south.



Example of an all interior option



Example of an all exterior option

Create Connections

Other Projects

Family Study Center and Clark Library improvements

Horowitz Visual and Performing Arts Center

Outdoor Sports Complex (in design phase, 2025)

Family Study Center and Clark Library Improvements

Attending college while managing work and family is challenging, and sometimes a student needs to bring a child to campus. HCC prioritized creating a family friendly atmosphere by requesting the FMP include amenities to make earning a degree easier for parents.

There are sufficient classrooms on-campus to repurpose two in the Clark Library to create a Family Study Center. The proposed space would include a quiet room for study and naps, a noisy room for play and dining, a kitchenette, and two restrooms. An area of the galleria could serve as a "front porch" to the Family Study Center.

In addition, Clark Library would receive limited renovations to improve first impressions. Pressing facilities maintenance needs, like roof repair, would be completed.

Horowitz Visual and Performing Arts Center

The Horowitz Center, built in 2006, is a landmark of the Howard Community College Campus and is home to instructional spaces and performance space. The building is in good condition for its age, yet its mechanical, electrical, and plumbing systems require upgrades for energy efficiency and to prolong the useful life of the building.

While no reconfiguration is expected in this project, the scope of systems upgrades could require the building to be partially shut down as phased work is completed. Scope of the proposed project includes:

Mechanical Systems

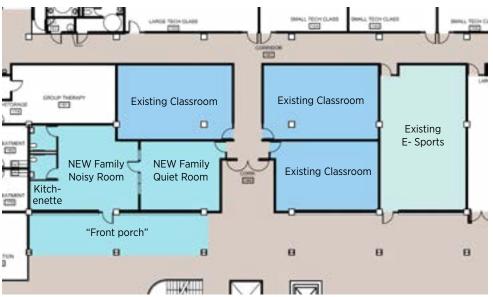
- Replace existing dual-fuel gas/oil boilers with all-electric heating equipment.
- Replace existing chiller and cooling tower with energy efficient cooling equipment.
- Upgrade supplemental HVAC equipment.
- Replace air handling units.
- Replace variable air volume control boxes.
- Integrate with campuswide building automation system.
- Provide occupancy sensors.

Electrical Systems

Replace switchboard, high voltage panels, and transformer. Coordinate with campuswide conversion to all-electric heating systems.

Allowance for Elective Finishes Upgrades

The Horowitz Center finishes and lighting are in good condition and are not in need of immediate replacement. HCC could self-perform upgrades to replace fluorescent lighting with LED fixtures and refresh finishes that are showing their age. If HCC wishes to fold this work into the renovation, an additional \$1,500,000 should be budgeted.



Clark Library First Floor Family Study Center



Kitchenette example



Potential features of a welcoming "front porch" in the Galleria



Spaces designed for activity and for study



Outdoor Sports Complex

Howard Community College aims to host National Junior College Athletic Association (NJCAA) competitions in mens' and womens' sports, increase participation in competitive sports, and draw the public to campus to attend athletic events. Upgrading and expanding athletic fields, adding spectator and team support facilities, creating accessible facilities and pathways, and improving lighting and infrastructure will allow HCC to advance these goals.

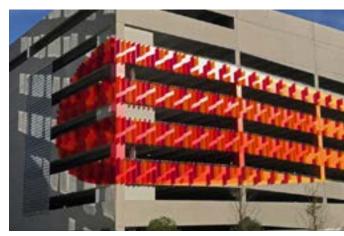
The existing outdoor athletic fields are located in the southeast corner of campus, adjacent to the new Kahlert Foundation Complex (indoor athletic facilities). The South Campus has historically been less developed and feels physically separated from the Academic Core and parking in the North Campus. Steep slopes, surface water, and woodland contribute to the separation.

- Create NJCAA-compliant softball facilities to allow the women's softball team, which currently competes and practices off-campus, to have a home on-campus.
- Create NJCAA-compliant baseball facilities to enable HCC to start a men's baseball team.
- Replace the existing track and field facilities, which are at the end of their useful life and do not meet NJCAA requirements for competition.
- Enhance the outdoor athletic facilities with spectator seating, dugouts, bullpens, press box, team rooms, lighting, a scoreboard and fencing.
- Utilize existing steep slopes in the design of the concessions/restroom building and bleachers to help reduce the visual intrusion of bleachers on the landscape.
- Incorporate a play area, community garden, and connecting pathways to encourage residents of the adjacent Hickory Ridge neighborhood to utilize HCC's community amenities.
- Improve the physical connections to HCC's academic core by building accessible pathways; providing new lighting and signage; adding art and landscape destinations; making shaded areas for rest; and connecting to natural assets.

This project is anticipated to be completed as a stand-alone capital project via a mix of county and state funding. The project is a high priority for the campus and was in the design phase as this report was written.



Example: Turf field for athletics



Example: Art opportunity at East Garage



Example: Athletics building and bleachers set into hillside (Alvernia University)

- 1. New/Upgraded Walkways, Outdoor Seating, Landscape, Lighting, Signage, and Crosswalks
- 2. New Art Opportunities
- 3. New Baseball and Softball Complex with Team Rooms, Concessions, and Restrooms
- 4. New Playground
- 5. Upgraded Track and Field Complex





Example: Art opportunity, landscape destination



Existing HCC **primary pathway** with accent pavers and lighting. These features would be provided on the north-south walk between the Outdoor Sports Complex and the Academic Commons



Existing HCC **secondary pathway**, lighting consistent with other campus paths. These features would be provided within the Outdoor Sports Complex.



Asphalt **nature trail**, no lighting. This type of trail would be provided south of the pond and would connect to the Hickory Ridge walk.



Example: Raised crosswalk

Reimagine Hickory Ridge

Make the southern part of Campus a **welcoming gateway.** Athletics, community events, continuing education, English Language Center, and middle college will invite the public onto Campus.

Modernize Duncan Hall

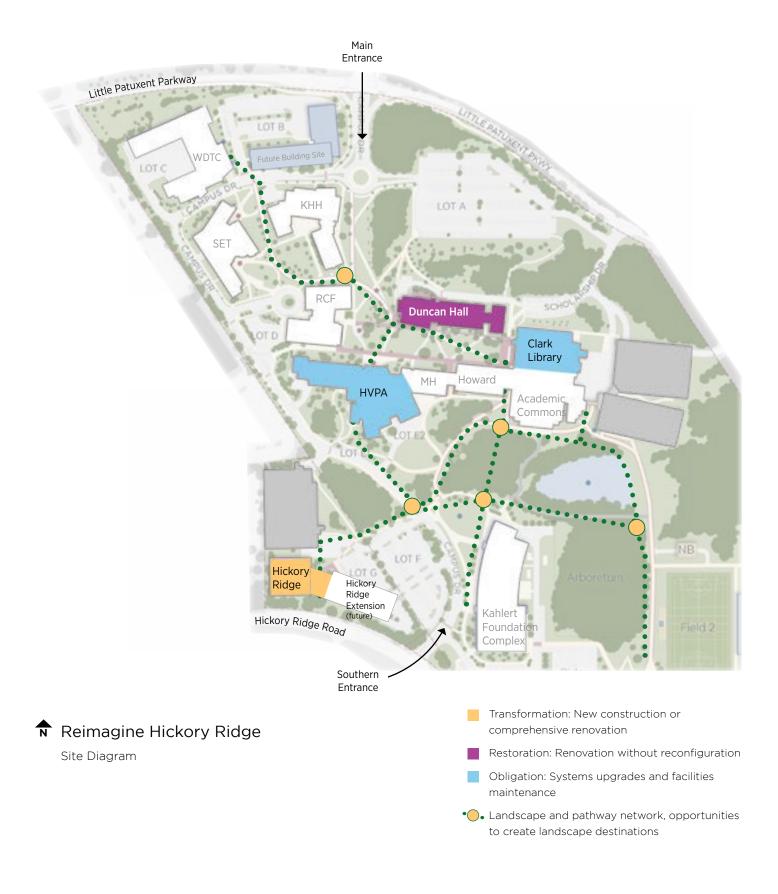
to continue serving as an instructional hub.

The Reimagine Hickory Ridge concept focuses investment in the southern portion of HCC's campus. A comprehensive renovation of the Hickory Ridge Building would include an addition to house additional community education programs. Long-term, the Hickory Ridge addition could be extended to include additional academic space.

Duncan Hall would undergo less extensive renovations compared to Concept 1, including modernized HVAC systems and in-kind interior upgrades.

The following elements from the Create Connections concept would be repeated in Reimagine Hickory Ridge:

- Duncan Hall
- reimagined office suite
- interior renovation
- modernized building systems
- Enhanced landscape connections, including art and signage
- Clark Library
- Family Study Center
- Limited interior upgrades
- Pressing facilities maintenance
- Replacement of building systems in the Horowitz
 Visual and Performing Arts Center, with limited interior
 renovations



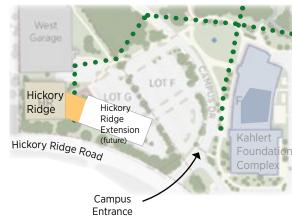
Reimagine Hickory Ridge

Renovate Hickory Ridge Building

Modernize Duncan Hall



HIckory Ridge Building



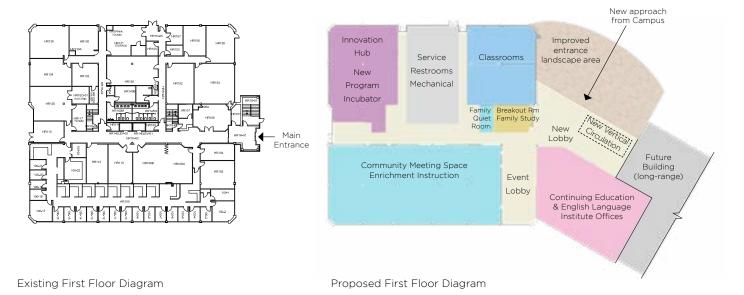
Site Context

Hickory Ridge was constructed in the 1980s as an office building. Classrooms, computer labs, and offices were created when HCC took over the building from Howard County. In this concept, Hickory Ridge would receive a comprehensive renovation and small addition. Long-term, a future addition would house instructional space.

The existing entrance does not make a good impression. English Language Center students may never see other parts of the HCC campus, and their first impression of Hickory Ridge is of a crowded parking lot, a bland lobby, and winding corridors. A three-story addition is proposed to create an inviting entrance and welcoming offices for the ELC on the first floor with instructional space on the second and third floors.

Upper levels of Hickory Ridge would be renovated to modernize its classrooms and computer labs. The second floor would be customized to serve the English Language Institute. The third floor could potentially become home to Middle College, renovated with general use classrooms and a multipurpose science lab.

Landscape improvements, described with concept one (Create Connections), would be required to make a renovated Hickory Ridge feel like part of HCC.





Example updated classroom



Example group work area/classroom



Potential office reconfiguration



Example lobby modernization

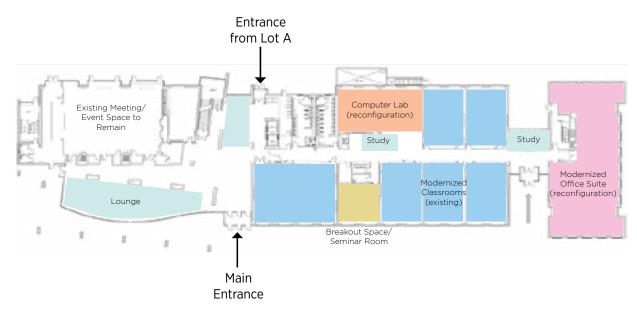
Reimagine Hickory Ridge

Renovate Hickory Ridge Building

Modernize Duncan Hall

Compared to Concept 1 (Create Connections), Duncan Hall would get a simpler renovation in Concept 2. Minor reconfiguration would occur on each floor to modernize instructional spaces and office suites.

The building envelope would be repaired, but no additional shading or cladding would be added. Minor landscape improvements would occur, such as updated lighting and seating. The HVAC and electrical scope would remain the same as in Concept 1: all systems would be upgraded and converted to all-electric operation.



Proposed Duncan Hall First Floor Diagram



View of Duncan Hall from the west

Landscape improvements would include cutting back vegetation that has grown to touch the building and block views of entrances.

Community in the Campus

Fully integrate community education in the heart of campus. Make Duncan Hall a welcoming destination for the English Language Center, continuing education, and community enrichment (in addition to modernizing its classrooms and offices).

Utilize Hickory Ridge as swing space classrooms and offices as needed. Longterm, dedicate it to Middle College. Of the three proposed concepts, Community in the Campus is the only one that includes substantial new construction before 2035. As HCC was completing enrollment projections in late 2024, JMZ prepared a preliminary building program based on a scenario in which new and growing programs fill cohorts and HCC's planned future academic and trades programs are approved.

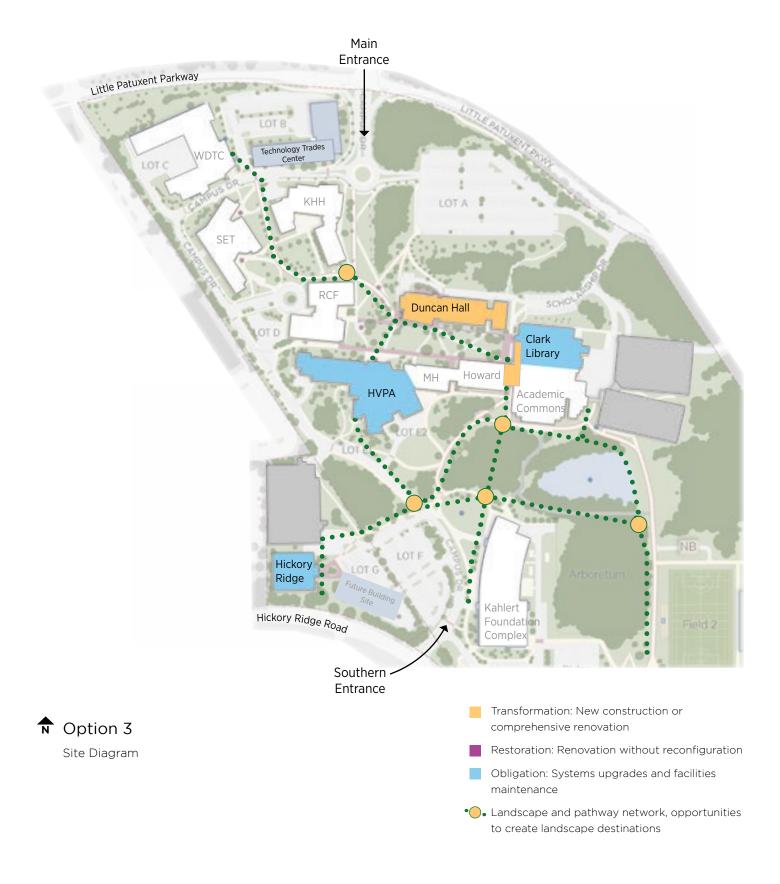
Community in the Campus would ultimately remove all HCC instructional activities from Hickory Ridge and locate the entirety of Workforce, Career, and Community Education in the heart of campus.

Hickory Ridge would receive required facilities maintenance to ensure continued operation. The building would serve Middle College and potentially house offices for HCC departments without student-facing roles. Long-term, Hickory Ridge could be renovated and paired with an addition, as described in Concept Two, but this would not be required before 2035.

Concept Three includes an expansion on the Workforce Development and Trades Center site. A Technology Trades Center would be constructed on the existing parking lot B, allowing for continued growth of Trades programs. A project description for the proposed Technology Trades Center is included on upcoming pages.

The following elements from Concept One and Concept Two would be repeated in Concept Three:

- Duncan Hall comprehensive renovation, as described in Concept One
- Enhanced landscape connections, including art and signage
- Clark Library
- Family Study Center
- Limited interior upgrades
- Pressing facilities maintenance
- North-South Connector between Howard Hall and Clark Library, to enhance accessibility and create a destination between North Campus and South Campus.
- Replacement of building systems in the Horowitz Visual and Performing Arts Center, with limited interior renovations



Community in the Campus

Build a new **Technology Trades Center** to house new programs and complete the Workforce Development Zone.

A 38,590 gross square foot, two-story Technology Trades Center is proposed to be constructed adjacent to the WDTC. Developing parking lot B will complete the northern edge of campus and define the HCC entrance sequence.

Electric Vehicle Technician

The existing Automotive Technology labs in the WDTC lack the equipment and capacity to support an Electric Vehicle Technician program.

Applied Artificial Intelligence and Machine Learning, Cloud Operations

These proposed new programs have synergy with Computer Science (in Duncan Hall) and Mechatronics/Robotics (in WDTC). A new Technology Trades Center would include facilities to house the proposed new programs.

Relocate Computer Science Instruction from Duncan Hall

Computer Science instruction is split between the Science, Engineering, and Technology Building (SET) and Duncan Hall. Shifting Computer Science instruction from Duncan Hall to the new Technology Trades Center would give the program customized, purpose-built instructional space that is adjacent to SET and the WDTC, where collaborative, complementary academic and trades programs are housed. In Concept Three, Duncan Hall will serve as the community



Proposed location and potential design features of a new Technology Trades Center

education hub as well as HCC's main classroom building. With Computer Science instruction relocated, the additional capacity in Duncan Hall will enable HCC to further deepen its community connections and expand offerings in languages and other lecture-based courses.

<u>Clinic-based Programs and Growing Health Sciences</u> Demand

Interviewess stated that they intend to add cohorts in Nursing, Dental Hygiene, and Cardiovascular Technology. There is not sufficient space in Katherine Hetherington Hall (KHH) to accommodate growth in all three programs.

- Cardiovascular Technology will have capacity to grow online and in its existing skills lab.
- Nursing will require additional space to accommodate skills practice and more sections of Anatomy & Physiology.
- Adding cohorts in the Dental Hygiene program will stress existing facilities in KHH. Creating a new Dental Hygiene Clinic, offices, and instructional spaces in the new Technology Trades Center will locate the clinic in a publicly-visible space that is convenient to the Campus entrance from Little Patuxent Parkway. Vacated space in KHH will allow Nursing to add labs to accommodate new students.

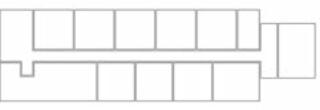
HCC has proposed starting a cosmetology program in response to community demand. Locating the program in the new Technology Trades Center would allow the public easy access to the salon and create a real-world learning environment for students.

Site Development

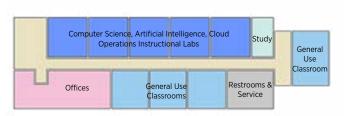
Development of Lot B as a Technology Trades Center will accomplish several building, site, and landscape objectives. This site, with the Workforce Development and Trades Center (WDTC), will create a northern gateway to campus and define the northern terminus of campus pathways.

The development will enhance the arrival experience of drivers and pedestrians. The pair of buildings should have complementary finishes and features so they act as a unified landmark announcing arrival at Howard Community College. Setbacks from Campus Drive should align to create a consistent streetscape.

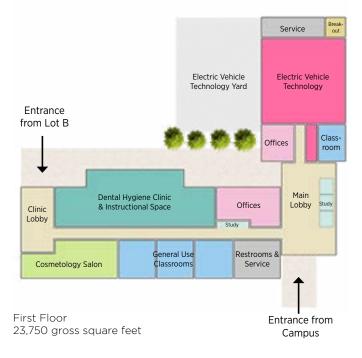
The Technology Trades Center design should include signage, landscape features, and pedestrian safety features to complete a seamless pathway from Little Patuxent Parkway through campus to Hickory Ridge Road.



Potential Third Floor 14,840 gross square feet



Second Floor 14,840 gross square feet





À la Carte Projects

If funds become available, small projects could be completed without capital funding.

Library: Phased Improvements before Comprehensive Renovation

The Clark Library will not be eligible for comprehensive renovation funding until 2031 Meanwhile, the College could upgrade finishes and fixtures, replace furnishings, and create additional study rooms to improve the student experience.

Interdisciplinary Center Outposts

Similar to the Concept One Interdisciplinary Center, Interdisciplinary Classrooms could be created campuswide. The purpose would be to create "destination classrooms" with enhanced A/V equipment, project tables, and potentially links to other institutions.

Family Areas throughout Campus

The primary Family Study Center will be created in Clark Library, yet additional family-friendly areas could be made campuswide. Using finishes, furnishings, and art these areas would be recognizable as places kids can play.

Modernize Classrooms as needed (finishes, furnishings, equipment)

Some classrooms would benefit from upgrades to create more up-to-date learning environments. Room-by-room improvements would be an option for Hickory Ridge if the College does not pursue comprehensive renovation of the building.

Reimagine Office Suites throughout Campus

Many staff and some faculty are working from home multiple days per week. If this trend persists, some office suites could be converted to include a mix of private offices, shared offices, reservable workstations, and open work tables.

Additional landscape destinations

The new Athletic Fields will draw members of the public onto campus. Creating landscape destinations along the College's pedestrian network will invite individuals to explore HCC and, perhaps, become more engaged with the College.









































3 + Selected Concept

Fully integrate community education in the heart of campus.

Dedicate Hickory Ridge to Middle College.

Construct a **Technology Trades Center** to
accommodate new
programs.

Concept Three, Community in the Campus, resonated strongly with the HCC steering committee and leadership. The concept combines community enrichment, continuing education, and for-credit instruction in the heart of the campus. The concept increases efficiency of aging buildings, modernizes instructional spaces, and provides for anticipated enrollment changes.

- From Concept One, the landscape improvements and new signage projects are prioritized.
- From Concept Two, the proposed renovation to Hickory Ridge was incorporated into the selected concept, but the addition and potential future building are not a part of the FMP recommendation.

HCC selected à la carte projects to be constructed when funding permits. Family spaces, reimagined office suites, and landscape destinations will be included throughout campus. Upgrades to Clark Library finishes and fixtures can improve student experience and first impressions in the short term, with a comprehensive Library renovation planned to start in 2032.

THEMES

Moving together.

interdisciplinary inclusive family community engaging

Moving forward.

innovative creative resourceful prepared

ACTIONS

Integrate community education in the heart of campus.

Duncan Hall Comprehensive Renovation

Enhance campus connections.

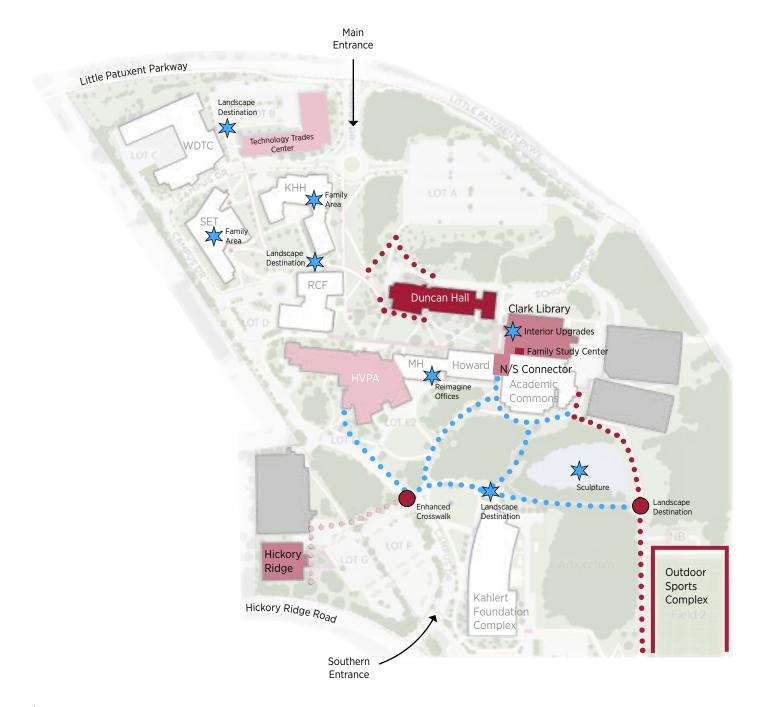
Outdoor Sports Complex
Family Spaces
Reimagine Offices
Landscape Improvements
North-South Connector & Campuswide Pathways

Expand capacity.

Technology Trades Center

Modernize aging structures.

Horowitz Visual and Performing Arts Center Clark Library Hickory Ridge



Selected Concept - Community in the Campus

Site Diagram, Project Start Year

2026 though 2029
2030 through 2032
2033 through 2035, plus long-range
Independent projects
À la carte projects

ESTIMATE OF PROBABLE COST AND IMPLEMENTATION PLAN

Recommended Projects	Start Year	Capital Projects	Campus-Funded or Elective Projects
Campuswide Signage/Identity	2026		\$1,340,000
A la Carte Part 1: Raised Crosswalk	2026		\$135,000
A la Carte Part 1: Family Study Center in Clark Library	2026		\$600,000
A la Carte Part 1: Additional Landscape Amenities	2026		\$65,000
A la Carte Part 2: Interior Elective Project	2027		\$525,000
A la Carte Part 2: Pedestrian Safety and Landscape Accessibility Projects	2027		\$200,000
A la Carte Part 3: Interior Elective Project	2028		\$525,000
A la Carte Part 2: Pedestrian Safety and Landscape Accessibility Projects	2028		\$200,000
Outdoor Sports Complex and North-South Landscape Connection	2028	\$16,400,000	
Duncan Hall Comprehensive Renovation	2029	\$43,770,000	
Hickory Ridge Comprehensive Renovation	2032	\$24,860,000	
Hickory Ridge Pedestrian Safety and Landscape Improvements	2033	\$2,404,000	
Clark Library Comprehensive Renovation	2032	\$26,800,000	
North-South Connector: Accessibility and Community Space Addition	2032	\$4,590,000	
HVPA Systems Upgrades	2034	\$17,060,000	
New Construction: Technology Trades Center	2035	\$27,300,000	

		\$163,184,000	\$3,590,000
		\$166,774	,000
Alternates & Facilities Master Plan Update			
Facilities Master Plan Update	2030		\$125,000
Technology Trades Center Alternate: Include a third floor	2035	\$5,040,000	
HVPA Alternate: Interior finishes upgrade allowance	2034		\$1,500,000
		\$168,224,000	\$5,215,000
		\$173.439	.000

Cost Estimate assumptions:

- Includes one year of escalation at 4%. Projects beyond 2025 should have current and historical escalation rates applied.
- Includes general contractor overhead and profit.
- Includes 20% design contingency.
- Assumes design-bid-build project delivery.

	2025	0007	2222	2022	2072	0071	2072	0077	0074	0075
	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Signage	\$1,340,000									
Crosswalk	\$135,000									
Family Center	\$600,000									
Landscape	\$65,000									
Interior Upgrades		\$525,000								
Pedestrian Safety		\$200,000								
Interior Upgrades			\$525,000							
Pedestrian Safety			\$200,000							
Outdoor Sports			\$8,200,000	\$8,200,000						
Duncan Hall				\$14,590,000	\$14,590,000	\$14,590,000				
Hickory Ridge							\$12,430,000	\$12,430,000		
Pedestrian Safety							Ī	\$2,404,000		
Clark Library							\$8,933,333	\$8,933,333	\$8,933,333	
Accessibility							\$1,530,000	\$1,530,000	\$1,530,000	
HVPA									\$8,530,000	\$8,530,000
Tech Trades										\$9,100,000
	\$2,140,000	\$725,000	\$8,925,000	\$22,790,000	\$14,590,000	\$14,590,000	\$22,893,333	\$25,297,333	\$18,993,333	\$17,630,000
		\$34,58	30,000			\$52,073,333			\$61,920,667	7
					\$62,500	\$62,500				
										\$1,680,000
									\$750,000	\$750,000
	\$2,140,000	\$725,000	\$8,925,000	\$22,790,000	\$14,652,500	\$14,652,500	\$22,893,333	\$25,297,333	\$19,743,333	\$20,060,000
		\$34,58	30,000			\$52,198,333			\$65,100,667	7

Estimates of probable cost, based on 2024 dollars, total \$148,574,000 between 2026 and 2035. When alternates and the recommended Facilities Master Plan Update are included, plan implementation could total \$151,879,000 in 2024 dollars. The proposed Technology Trades Center would be completed after 2035; one-third of its estimated cost is included in this implementation timeline.

Few projects are sequence-dependent. The black line follows the order of the sequenced projects:

- Hickory Ridge would be used for swing space during Duncan Hall renovation. Hickory Ridge renovation would begin once Duncan Hall is reoccupied.
- As Middle College cohorts grow, the first and second floors of Hickory Ridge will serve as swing space for the Clark Library and Horowitz Center renovations.
- The Clark Library will likely require phased implementation. A possible sequence could follow this order:
- Renovate the ground floor to house the collection in compact shelving, a small room, the main circulation desk, and library staff offices.
- Relocate the collection to the ground floor. Utilize the Galleria as study space during renovations.
- Renovate the main floor to house study space, a portion of the collection, and a library service desk.

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Conclusion

Consistency and Flexibility

are essential for the successful implementation of the Facilities Master Plan Howard Community College's history of consistent facilities maintenance, timely technology upgrades, and strategic new construction paved the way for this relatively conservative 2025 Facilities Master Plan.

The first years of the 2025 FMP implementation focus on facilities renewal; safety and accessibility in the landscape; and creating community destinations. In the final years of implementation HCC must remain flexible because space needs can be affected by multiple factors over time:

- Changes in enrollment (greater or lesser than anticipated)
- Maryland budget changes
- A change in projected online instruction
- Shifts in on-campus full-time on-campus employment
- Events impacting a building's ability to meet HCC needs
- New regional economic initiatives, which could prompt academic program changes



Howard Community College will launch its 2025-2035 decade with exciting new facilities and academic programs. Implementation of the 2025 FMP will demonstrate HCC's **INSPIRED** values of...

Innovation, by encouraging hands-on, interdisciplinary instruction in a new generation of instructional spaces.

Nurturing, by creating family-friendly spaces to help parents complete their degrees.

Service and Sustainability, with strategic renovations of existing buildings, striving to meet Maryland's carbon reduction goal.

Partnerships, with facilities designed to meet regional industry needs.

Integrity, evident in HCC's good stewardship of Maryland's capital funds.

Respect, by creating spaces of equal quality across campus and prioritizing accessibility, indoors and out.

Excellence in academics and facilities, which will draw the community to HCC.

Diversity, Equity, and Inclusion, celebrated in art and welcoming spaces, campuswide.

JMZ Architects and Planners; Whitman, Requardt, and Associates; and the Forella Group are excited to support HCC's growth and success through 2035!

Howard Community College Facilities Master Plan JMZ Architects and Planners

APPENDIX

Facility Condition Assessment
Site and Infrastructure Condition Assessment
Instructional Space Utilization



Facility Condition Assessment

The objective of this Facility Condition Assessment (FCA) and report is to identify current and potential facilities maintenance needs and provide a snapshot of current conditions of each building on campus, excluding the Kahlert Foundation Complex (recently completed), the Children's Learning Center, the West Parking Garage and the East Parking Garage. For history and context previous condition assessment reports completed in 2015 and 2019 were reviewed and used as a resource in developing this updated FCA.

Only exterior and interior building systems that were accessible were assessed via visual observation to determine the current conditions. Inspection methods requiring scaffolding, high-reach equipment, and/or destructive testing were not employed.

This report is a professional opinion, based on the areas of the buildings that were accessed and observed. The report is not intended to provide a design analysis in any detail needed to prepare construction documents. Wherever possible, the assessors visually reviewed the conditions, function of existing envelope systems, barrier-free access immediately adjacent to entrances and estimated remaining functional life of building systems and equipment based on age and condition.

It should be understood that there are limitations to such an assessment. Consequently, no guarantee or warranty can be offered or implied based on the content of this report.

Overview

Overall, the exterior envelope/roof, interior finish, mechanical, electrical, plumbing, and fire protection systems and equipment of and housed in buildings on campus are well maintained and generally in good condition, with the exception of Hickory Ridge which has several building system components rated as in poor condition. There are several buildings where the mechanical plant or HVAC distribution system is nearing the end of its expected life and consideration should be given to replacement or refurbishment. However, there are no buildings where equipment condition precludes successful HVAC, electrical or plumbing system operation. There is an ongoing controls system upgrade in process to replace Siemens terminal equipment controllers throughout the campus due to equipment end of life.

For each building a condition assessment and scorecard has been completed following the approach outlined in the introduction. In addition to documenting building use, history, functional analysis and overall condition, assessment observations and recommendations have been made for the major building systems and equipment.

Future Considerations

Heating water for many of the buildings on campus is provided through dual fired natural gas boilers with either propane or fuel oil as the secondary fuel. The recently passed Maryland Climate Solutions Now Act has mandated that all buildings phase out direct on-site emissions from fossil fuels by 2040.

Starting in 2030, a cap on fossil fuel emissions will be applied to buildings within the state larger than 35,000 square feet unless they are primary or secondary schools, industrial facilities, or some historic structures. Emissions exceeding the cap will be assessed increasing financial penalties starting in 2030, with the cap reduced over time until it reaches zero in 2040.

In response to this legislation, new buildings and major renovations should pursue all electric mechanical and plumbing systems. Air to water heat pumps, packaged heat pumps, and geothermal heat pumps should be considered as the primary alternatives to condition buildings to minimize energy consumption within the limits of an all-electric system. Buildings with high fossil fuel consumption should be prioritized for renovations, with the penalties for fossil fuel emissions incorporated into life cycle cost analysis estimates.

One significant impact from decarbonization will be an increase in electrical demand, especially in the winter, from conversion of heating systems from natural gas and oil to electric. While most cooling systems are already electric, most heating systems on the HCC campus are natural gas or oil. Converting to electric will significantly increase electrical demand throughout the winter.

A study of the campus electrical grid, feeders, building services, transformers, and associated electrical equipment to determine the available capacity to support additional demand from electrical heating systems and the potential costs and feasibility to upgrade systems should be completed. Renewable solar power, building renovations, and heating system technologies such as heat pump chillers should be evaluated on a campus wide basis in conjunction with electrical grid analysis to determine the most cost effective and sustainable approach to supporting the transition away from fossil fuel sources.

Academic Commons and Galleria (AC/GAL)

Academic

Year Built: 1987
 Year Renovated: 2019
 Area (GSF): 67,997 sf
 Floors: 2 + Lower

Building History and Use

The building was constructed in 1987 and last renovated in 2019. The Academic Commons houses administrative offices, collaborative spaces for students, classrooms and academic areas including social sciences/teacher education classrooms/labs; hospitality management and culinary management labs; the Dwight A. Burrill Galleria; student life; teaching and learning services; and the facilities department.

Functional Analysis

The Academic Commons functions well as an administrative office and classroom building. Room sizes and locations are generally suitable and meet users' needs.

Building Condition

Renovations have recently been completed in the building. Overall the building is in good condition and shouldn't require replacement or upgrade of any major building systems or equipment in the ten-year planning period.

The bar graph below summarizes the building scorecard rating results by major system. The detailed building scorecard follows at the end of this section.

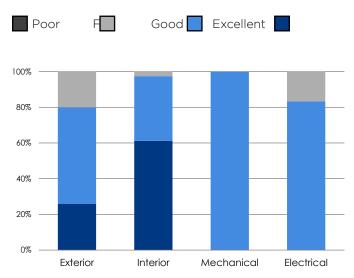


Figure 1 - Building Condition Graph

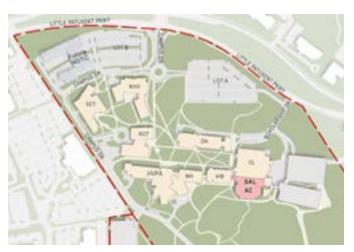


Figure 2 - Campus Location



Figure 3 - Building Exterior

Exterior

Most of the exterior envelope of the building consists of architectural Concrete Masonry Units (CMU). The building exterior ranges from being in mostly good condition with some areas in fair condition.

Some CMU walls had areas where the grout has started to deteriorate. Other areas showed signs of rusting or minor staining from mildew and moisture.

The window system for the building consists of aluminum frame double pane units. The window units are in good condition. The exterior sealants located around the windows are in good condition and reportedly replaced in 2019.

The roof of the building appears to be in good condition.

Recommendations include repair or replacement of deteriorating grout where needed and cleaning of rust or mildew stains.

Howard Community College

Facilities Master Plan

<u>Interior</u>

Generally, the interior finishes remain in good condition since its last renovation in 2019. There are some areas of damaged finishes that are cosmetic in nature. Examples include broken and water stained ceiling tiles, backsplash sealant cracking in bathrooms, areas in need or repainting or touch up and minor areas of drywall damage.

Recommendations include addressing cosmetic interior finish repairs.



Figure 4 - Damaged Ceiling Tile



Figure 5 - Peeling Paint



Figure 6 - Corrosion and Peeling Paint



Figure 7 - Damaged Drywall

Mechanical Systems

Central plant boilers and chillers in Clark Library provide heating and chilled water to Air Handling Units (AHU) in the Academic Commons Building. Supplemental DX split systems provide additional cooling to selected areas.

AHUs are primarily located on the roof as are condensing units. The building was renovated in 2019 and HVAC equipment, distribution piping and ductwork systems are in good condition.



Figure 8 - AHUs



Figure 9 - AHUs

Howard Community College Facilities Master Plan

A-3



Figure 11 - Rooftop Condensing Units



Figure 10 - Utility Set Fan

Plumbing/Fire Protection

Domestic water piping is copper. Sanitary piping is cast iron. Plumbing piping, equipment and fixtures are in good condition. The building is fully sprinklered with a wet pipe fire protection system. No problems were reported for or observed with the plumbing or fire protection systems.

No recommendations at this time.

Electrical Systems

The electrical power and distribution systems and equipment are in good condition. The building is served by a 1000A Square D distribution switchgear and is backed up by a 150kW Cummins generator that serves life safety and standby loads in the Academic Commons. Additional system components that are in good condition include a mixture of fluorescent and LED lights, wall pack emergency lights, horizontal data cabling and a Siemens PMI-3 Fire Alarm Control Panel.

Currently there is no Arc Flash Labeling of equipment in the building.

Recommendations include addressing the Arc Flash labeling of equipment as soon as practical and replacing/upgrading fluorescent light fixtures with LED fixtures as funding permits.

Building Code/Accessibility

No code violations have been noted in this building. The walkways throughout the building and exterior pedestrian walkways are compliant with accessibility requirements. The drinking fountains and accessible stalls are also compliant with the current code.

Consideration should be given to lowering the sprinkler heads in the room where the acoustical ceiling was fully removed in order to meet the fire prevention code if ceiling panels are ever re-installed.

Recommendations include, installing vertical grab bars in accessible toilet stalls to address ICC/ANSI A117.1 Section 604.5.1.2. In addition, the spacing of urinals in the men's bathroom are at 24 inches on center and should be retrofitted in the future to meet the minimum 30 inch spacing required in IBC 2021 Section 2903.1.5.

Facilities Master Plan Update

Building Name: Academic Commons & Galleria

Building Component	(Condit	ion (%)	Building Component		Cond	lition (%)
Component	Е	G	F	Р	Component	Е	G	F	Р
Exterior					Electrical				
Foundations		80	20		Fire Alarm System		100		
Exterior Walls		40	60		Emergency Power/Lighting Syster	ns	100		
Building Framing		100			Lighting Systems			100	
Windows/Louvers	75	25			Electrical Distribution		100		
Doors/Frames/Hardware	20	50	30		Power Wiring		100		
Roof	60	30	10		Tel/Data Systems		100		
Interior					Specialty Systems (PV Array)				
Floors	60	40					Con	nplianc	
Walls	15	75	10		Building Component		Con	ipiiaiic	æ
Ceilings	90		10			С	PC	NC	
Doors/Frames/Hardware	60	40			IBC/ADA				
Built-In Furnishings	75	25			Exterior Doors	Х			
Stairs	90	10			Interior Doors	Х			
Elevators/Escalators	100				Horizontal Circulation (Corridors)	Х			
Specialty Systems		100			Horizontal Circulation (Ramps)				
Mechanical					Vertical Circulation (Stairs)	Х			
HVAC Distribution & Controls		100			Vertical Circulation (Elevators)	Х			
AHU/Fans		100			Toilet Rooms		Х		
Cooling System (Chiller/CT)					Locker Rooms				
Heating System (Boilers/Steams)					Drinking Fountains	Х			
Pumps/Motors/Compressors		100			Signage	Х			
Fire Sprinkler/Standpipe Systems		100			Assembly Areas	Х			
Plumbing Systems/Fixtures		100			Sales and Service Areas				
Specialty Systems					Dining Areas				

Not applicable

Howard Community College

Facilities Master Plan

E - Excellent Conditions generally at a "like new" level. Exemplary Maintenance and appropriate funding

required to maintain this level.

G - Good Conditions generally at an acceptable level. Routine maintenance and appropriate funding

required to maintain this level.

F - Fair Conditions at a minimally acceptable level. Improvements, involving greater than routine

maintenance and additional funding required.

P - Poor Conditions below minimally acceptable levels. Conditions require substantial funding and/or considerable maintenance effort to be improved.

onsiderable maintenance enort to be improved

C - Compliant Conforms with the currently adopted version of the International Building Code (IBC) and the

Maryland Accessibility Code.

PC - Partially Compliant Partially conforms with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code due to modifications of the building component/space.

NC - Non-Compliant Does not conform with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code.

Clark Library (CL)

Academic/Administrative

 Year Built: · Year Renovated: 2009/2019 Area (GSF): 75,294 sf 2 + Partial • Floors:

Building History and Use

Clark Library was the first campus building and was opened in 1970. The building was fully renovated in 2009 and followed up with partial renovations in 2019.

The building sits at the end of the main outdoor campus quad. It houses classrooms, the Kaiser Permanente Wellness Center, the international education office, the information and technology (IT) department, the Howard County Center of African American Cultural Research Library, and the faculty development center.

Functional Analysis

The building functions adequately as the central library, and is conveniently located adjacent to the East Garage where students, faculty, staff and visitors can park. Spaces in the building are functional and highly used. The spaces are suitable in size and adjacencies, but require updating of interior finishes, lighting, etc. and some space reconfiguring to reflect a modern collegiate learning support environment.

Building Condition

While most building systems, components and equipment are in good to fair condition some HVAC components and equipment are likely to need replacement or refurbishing during the ten-year planning period.

The bar graph summarizes the building scorecard rating results by major system. The detailed building scorecard follows at the end of this section.

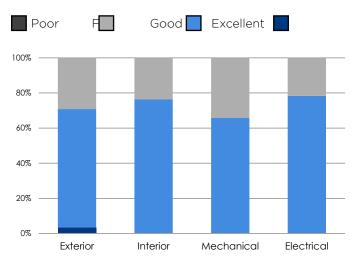


Figure 12 - Building Condition Graph

JMZ Architects and Planners

A-6

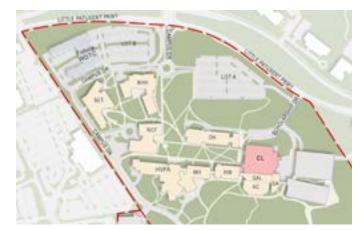


Figure 13 - Campus Location



Figure 14 - Building Exterior

Exterior

The exterior envelope is in fair to good condition. Some areas of concrete wall curb cracking and delamination of the wood trim around windows facing the East Garage were observed.

Recommendations include patching of the cracked concrete curb elements, and repair of window trim in areas that are beginning to loosen.



Figure 15 - Building Exterior



Figure 16 - Loose Window Trim

Interior

Most of the interior finishes are in good or fair condition. Some areas of flooring are not wearing well. For example, in the foyer area on the second floor there is an air pocket underneath the bamboo floor. Likely this is where the adhesive has come loose. The adhesive also appears to be coming through between the bamboo flooring.

Recommendations include repair of bamboo flooring



Figure 17 - Bamboo Flooring



Figure 18 - Examples of Interior Repair Areas

and installation of lighting upgrades and some space reconfiguring to achieve a modern collegiate learning support environment.

Mechanical Systems

The central chiller and boiler plant in the Clark Library main utility room also serves the Academic Commons, Howard Hall, and McCuan Hall buildings. The plant consists of two dual fuel gas/oil boilers, four Lochinvar modular gas fired boilers, two chillers, and two cooling towers located on grade adjacent to the building. Central plant equipment was installed in 2012 and is in good condition, except the four Lochinvar boilers that were installed over 20 years ago, which are in fair condition. AHUs and split systems are located on the roof and throughout the building and are approximately 20 to 25 years old. While well maintained, they are approaching the end of their expected life and replacement, or refurbishment should be considered. The distribution system consists of ducted supply to VAV boxes

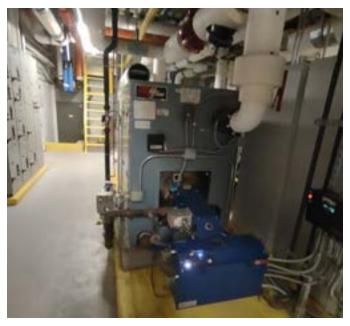


Figure 19 - Dual Fuel Boiler



Figure 20 - Lochinvar Gas Fired Boilers

Facilities Master Plan

Facilities Master Plan



Figure 21 - Water Cooled Chiller



Figure 22 - AHUs

and return air plenums. The distribution system is in good condition, although the VAV boxes are approaching the end of their expected life.

Recommendations include monitoring the condition and performance of the AHUs, split systems and VAV boxes in the building as they approach the end of their expected life. Based on monitoring, determine if and when these components need to be replaced or refurbished during the ten-year planning period.

Plumbing/Fire Protection

Domestic water piping is copper. Sanitary piping is cast iron. Domestic heating water is generated through a gas fired water heater. Plumbing piping, equipment and fixtures are in good condition. Building is fully sprinklered with wet pipe fire protection system. No problems were reported for the plumbing or fire protection systems.

No recommendations at this time.



Figure 23 - Cooling Towers

Electrical Systems

The electrical power and distribution systems are in good condition. Additional system components that are in good condition include a mixture of fluorescent and LED lights, wall pack emergency lights, horizontal data cabling and a Siemens PMI-3 Fire Alarm Control Panel.

Clark is served by a 2500A GE distribution switchboard. The building life safety and standby loads are served by a 230kW Cummins generator.

Currently, there is no Arc Flash Labeling of equipment in the building.

Recommendations include addressing the Arc Flash labeling of equipment as soon as practical and replacing/upgrading fluorescent light fixtures with LED fixtures as funding permits. In addition, items being stored in dedicated electrical spaces should be removed to eliminate clearance violations.

Building Code/Accessibility

The building and exterior pedestrian walkways are compliant with accessibility requirements. The restrooms require a vertical grab bar to be added to the ADA stall as required in ICC/ANSI A117.1 Section 604.5.1.2..

Sink pipes are exposed underneath the countertop. These should be insulated, enclosed, or configured to prevent contact and avoid injury or burns per ADA Guidelines Section 606.5. Fire stopping should be added to the pipe penetration in the stairwell per IBC Section 714.4.1.

Recommendations include, installing vertical grab bars in accessible toilet stalls and addressing the exposed sink pipes to avoid injury to be in accord with ADA Guidelines. In addition, fire stopping should be added to the pipe penetration in the stairwell to bring into compliance with IBC requirements.

Building Condition Assessment

Facilities Master Plan Update

Building Name: Clark Library

Building Component		Condit	ion (%)		Building Component		Condi	tion (%)	
Component	Е	G	F	Р	Component	Е	G	F	Р
Exterior					Electrical				
Foundations		70	30		Fire Alarm System		100		
Exterior Walls		40	60		Emergency Power/Lighting Systems		20	80	
Building Framing		50	50		Lighting Systems		50	50	
Windows/Louvers		75	25		Electrical Distribution		100		
Doors/Frames/Hardware		100			Power Wiring		100		
Roof	20	70	10		Tel/Data Systems		100		
Interior					Specialty Systems (PV Array)				
Floors		80	20		D 4 h		Come	liance	
Walls		75	25		Building Component		Comp	mance	
Ceilings		75	25		Compension	С	PC	NC	
Doors/Frames/Hardware		80	20		IBC/ADA				
Built-In Furnishings		50	50		Exterior Doors	Х			
Stairs		50	50		Interior Doors	Х			
Elevators/Escalators		100			Horizontal Circulation (Corridors)	Х			
Specialty Systems		100			Horizontal Circulation (Ramps)				
Mechanical					Vertical Circulation (Stairs)		х		
HVAC Distribution & Controls		75	25		Vertical Circulation (Elevators)	Х			
AHU/Fans		50	50		Toilet Rooms		х		
Cooling System (Chiller/CT)		100			Locker Rooms				
Heating System (Boilers/Steams)		35	65		Drinking Fountains		х		
Pumps/Motors/Compressors			100		Signage	Х			
Fire Sprinkler/Standpipe Systems		100			Assembly Areas	Х			
Plumbing Systems/Fixtures		100			Sales and Service Areas				
Specialty Systems					Dining Areas				

Not applicable

E - Excellent Conditions generally at a "like new" level. Exemplary Maintenance and appropriate funding

required to maintain this level.

G - Good Conditions generally at an acceptable level. Routine maintenance and appropriate funding

required to maintain this level.

F - Fair Conditions at a minimally acceptable level. Improvements, involving greater than routine

maintenance and additional funding required.

P - Poor Conditions below minimally acceptable levels. Conditions require substantial funding and/or

considerable maintenance effort to be improved.

C - Compliant Conforms with the currently adopted version of the International Building Code (IBC) and the

Maryland Accessibility Code.

PC - Partially Compliant Partially conforms with the currently adopted version of the International Building Code (IBC) and the Maryland Accessibility Code due to modifications of the building component/space.

NC - Non-Compliant Does not conform with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code.

Duncan Hall (DH)

Academic/Administrative

• Year Built: 2003

• Year Renovated: Partial Renovations in 2019

Area (GSF): 105,035 sfFloors: 3 + Partial

Building History and Use

Duncan Hall, constructed in 2003 serves as the home for English and World Languages as well as Business and Computer Systems and houses the Center for Entrepreneurial and Business Excellence, the office technology lab, the 3D printing hub, and an open computer study lab for students. The building also houses over 1,000 computer stations and numerous classrooms and labs. It features a three-story atrium, which opens into a large, open study area and an adjacent 250 seat multi-purpose room on the first floor.

Functional Analysis

The building is dated, but functional, and serves its purpose as an academic instructional facility. However, further study of the match of room capacities to section sizes may suggest reconfiguration is needed to better align room sizes with scheduled class cohorts.

Building Condition

While most building systems, components and equipment are in good to fair condition the HVAC equipment is over 20 years old, and while well maintained is likely to need refurbishment or replacement over the ten-year planning period.

The bar graph on this page summarizes the building scorecard rating results by major system. The detailed building scorecard follows at the end of this section.

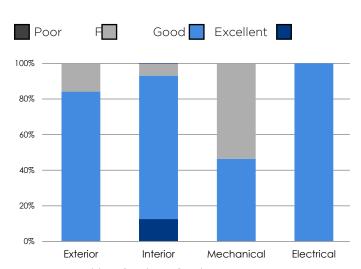


Figure 24 - Building Condition Graph

Figure 25 - Campus Location



Figure 26 - Building Exterior

Exterior

Most of the exterior envelope is in good condition. Some exterior areas require repairs or replacement. These areas include damage to sealant and mullion cover at the front entrance, minor corrosion to and ponding underneath mechanical platforms, fogging of several windows and an exterior doorway is missing its threshold underneath the door.

Recommendations include cutting back the vegetation by the FDC to create better visibility and access. Replacing the damaged mullion at the storefront entrance and repairing the sealant at areas where cracking is visible. Areas of ponding at the roof should also be addressed and remediated as practical.

Howard Community College

Facilities Master Plan

Interior

The majority of the interior finishes are in good condition; however, wear and tear is noticeable in some areas. Areas of concern include: the wall at the basement stairwell has been damaged from the gate door swinging out and a few floor and ceiling tiles were observed to be cracked or chipped.

Recommendations include installing a rubber stopper on the basement stair gate and repair of damaged ceiling and floor tiles.

Mechanical Systems

The building is served by a central plant HVAC system including two dual fuel gas/oil boilers, two chillers, two cooling towers, and supplemental split systems serving limited areas of the building. AHUs are located on the roof and throughout the building. HVAC equipment is over 20 years old, and while well maintained, it is approaching the end of its expected life. Piping and ductwork distribution systems are in good condition.

Replacement or refurbishment of boilers, chillers, AHUs, cooling towers, and VAV boxes should be considered. Piping and ductwork distribution systems are in good condition.

Recommendations include refurbishing or replacement of boilers, chillers, AHUs, cooling towers, and VAV boxes during the ten-year planning period.

Plumbing/Fire Protection

Domestic water piping is copper. Sanitary piping is cast iron. Domestic heating water is generated through a plate and frame heat exchanger installed in 2019. Plumbing piping, equipment and fixtures are in good condition. Building is fully sprinklered with wet pipe fire protection system. Dry pipe valves are provided to sprinkler protection located in exterior soffits at west entrance areas. No problems were reported for the plumbing or fire protection systems.

No recommendations at this time.



Figure 27 - Mullion Cover Missing

Electrical Systems

The electrical power and distribution systems are in good condition. Additional system components that are in good condition include a mixture of fluorescent and LED lights, wall pack and integral emergency lights, horizontal data cabling and a Siemens PMI-3 Fire Alarm Control Panel.

A 3200A Siemens distribution Switchgear along with a 200kW Cummins generator for life safety and standby loads.

Currently, there is no Arc Flash Labeling of equipment in the building and some working clearance violations were observed in electric rooms.

Recommendations include addressing the Arc Flash labeling of equipment as soon as practical and replacing/upgrading fluorescent light fixtures with LED fixtures as funding permits. In addition, items being stored in dedicated electrical spaces should be removed to eliminate clearance violations.



Figure 28 - Fogged Window



Figure 29 - Metal Gate Swing



Figure 31 - FDC Covered by Vegetation



Figure 32 - Cracking Sealant at Skylight





Figure 33 - Boiler (Left) Figure 34 - Domestic Water Heat Exchanger (Right)



Figure 35 - Cooling Tower

Building Code/Accessibility

The building and exterior pedestrian walkways are compliant with accessibility requirements. All restrooms, except for the recently renovated gender-neutral restrooms on the third floor, have no vertical grab bar. Vertical grab bars are required in ICC/ ANSI A117.1 604.5.1.2.

Recommendations include installing vertical grab bars in accessible toilet stalls.



Figure 30 - Missing Vertical Grab Bar

Building Condition Assessment

Facilities Master Plan Update

Building Name: Duncan Hall

Building		Condit	tion (%)		Building Component		Condit	ion (%)	
Component	Е	G	F	Р	Component	Е	G	F	
terior					Electrical				
Foundations		100			Fire Alarm System		100		
Exterior Walls		100			Emergency Power/Lighting Systems		100		
Building Framing		100			Lighting Systems		100		
Windows/Louvers		50	50		Electrical Distribution		100		
Doors/Frames/Hardware		75	25		Power Wiring		100		
Roof		80	20		Tel/Data Systems		100		
erior	<u> </u>				Specialty Systems (PV Array)		100		
Floors		100					C	l:	
Walls	50	50			Building Component		Comp	liance	
Ceilings	50	30	20		Component	С	PC	NC	
Doors/Frames/Hardware		90	10		IBC/ADA				
Built-In Furnishings		100			Exterior Doors	Х			
Stairs		75	25		Interior Doors	Х			
Elevators/Escalators		100			Horizontal Circulation (Corridors)	Х			
Specialty Systems		100			Horizontal Circulation (Ramps)				
chanical					Vertical Circulation (Stairs)	х			
HVAC Distribution & Controls		75	25		Vertical Circulation (Elevators)	Х			
AHU/Fans		50	50		Toilet Rooms		х		
Cooling System (Chiller/CT)			100		Locker Rooms				
Heating System (Boilers/Steams)			100		Drinking Fountains	х			
Pumps/Motors/Compressors			100		Signage	х			
Fire Sprinkler/Standpipe Systems		100			Assembly Areas	х			
Plumbing Systems/Fixtures		100			Sales and Service Areas				
Specialty Systems					Dining Areas				Г

Not applicable

E - Excellent Conditions generally at a "like new" level. Exemplary Maintenance and appropriate funding

required to maintain this level.

G - Good Conditions generally at an acceptable level. Routine maintenance and appropriate funding

required to maintain this level.

F - Fair Conditions at a minimally acceptable level. Improvements, involving greater than routine maintenance and additional funding required.

P - Poor Conditions below minimally acceptable levels. Conditions require substantial funding and/or

considerable maintenance effort to be improved.

C - Compliant Conforms with the currently adopted version of the International Building Code (IBC) and the

Maryland Accessibility Code.

Partially conforms with the currently adopted version of the International Building Code (IBC) PC - Partially Compliant

and the Maryland Accessibility Code due to modifications of the building component/space.

NC - Non-Compliant Does not conform with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code.

A-13

Kate Hetherington Hall (KHH)

Academic/Administrative

Year Built: 2013Year Renovated: N/A

Area (GSF): 112,692 sf Floors: 3 + Partial

Building History and Use

Formerly known as the Health Sciences Building, KHH is home to the Health Sciences department labs, classrooms, and offices. It contains a large, tiered lecture hall as well as conference rooms.

The building houses a wide variety of innovative programs focusing on nursing, cardiovascular technology, emergency medical services, exercise science, life fitness, health care, health education, human services, nutrition, radiologic technology, and public health. Modern simulation labs allow faculty to teach new courses, expand teaching methods and give students opportunities for active hands-on learning.

The facility contains 14 labs, nine instructional classrooms, a large lecture hall, simulation rooms, offices for full-time professors, student study spaces, an instrument sterilization room, and even a full-size ambulance simulator built into a classroom.

Functional Analysis

Although more than a decade old now, the spaces allocated for each program are well designed and purpose-built and effectively support their intended function.

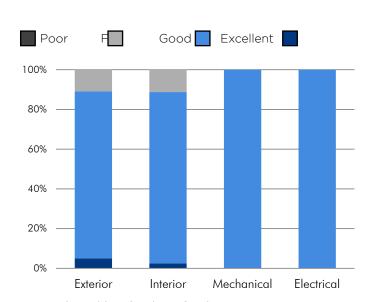


Figure 36 - Building Condition Graph

JMZ Architects and Planners



Figure 37 - Campus Location



Figure 38 - Building Exterior

Building Condition

Most building systems, components and equipment in the building are in good condition.

The bar graph on this page summarizes the building scorecard rating results by major system. The detailed building scorecard follows at the end of this section.



Howard Community College

Facilities Master Plan

Figure 39 - Chipped Paver

Exterior

The exterior envelope remains in good condition. Some areas require minor repairs to address warping of roof coping, cracking and peeling of parapet sealant, cracked pavers on the patio.

Recommendations include new sealant and caulking of the roof parapet and replacement of cracked/ chipped pavers at the exterior patio area.



Figure 40 - Cracking Sealant Figure 41 - Water Damaged Ceiling

<u>Interior</u>

While most spaces in the building still appear fresh, after 10 years some finishes and surfaces show considerable wear and tear as a result of intensive daily use. Examples of wear and tear include damaged areas of drywall from furniture impacts in the classroom spaces and peeling plastic laminate on the particleboard countertops in lab spaces.

Recommendations include drywall repair and paint touch up and/or refreshing classrooms and corridors. Replace damaged or stained ceiling panels when possible. Countertops should be repaired or replaced in areas where the adhesive is failing and delamination has occurred.



Figure 42 - Countertop Adhesive Failure



Figure 43 - Cracked Concrete





Figure 44 - (Left) Cracked Tiles Figure 45 - (Right) Cracked Concrete

Mechanical Systems

The building is served by a central plant on the lower level consisting of two water cooled chillers, two gas fired boilers, associated pumps, and a cooling tower located on the roof. Rooftop AHUs with ducted supply to VAV terminal units provide cooling and heating supply air to building. Equipment is 10 years old and is in good condition with significant remaining expected life.

No recommendations at this time.



Figure 46 - Boilers

Howard Community College Facilities Master Plan



Figure 47 - Chiller



Figure 48 - Condenser Water Pumps



Figure 49 - Cooling Tower

Plumbing/Fire Protection

Domestic water piping is copper and sanitary piping is cast iron. Water heaters and fixtures are 10 years old and are in good condition. Building is fully sprinklered and fire protection system is in good condition.

No recommendations at this time.

Electrical Systems

The electrical power and distribution systems are in good condition. Additional system components that are in good condition include a mixture of fluorescent and LED lights, wall pack emergency lights, horizontal data cabling and a Siemens PMI-3 Fire Alarm Control Panel.

A 2500A GE Unit Substation serves the building along with a 150kW Cummins generator for life safety and standby loads.

Currently, there is no Arc Flash Labeling of equipment in the building and some working clearance violations were observed in electric rooms.

Recommendations include addressing the Arc Flash labeling of equipment as soon as practical and replacing/ upgrading fluorescent light fixtures with LED fixtures as funding permits. In addition, items being stored in dedicated electrical spaces should be removed to eliminate clearance violations.





Figure 50 - (Left) Emergency Generator Figure 51 - (Right) Electrical Substation

Building Code/Accessibility

No code violations have been noted in this building. The walkways throughout the building and exterior pedestrian walkways are compliant with accessibility requirements. The drinking fountains and accessible stalls are also compliant with the current code.

No recommendations at this time.

Building Condition Assessment

Facilities Master Plan Update

Building Name: Kathleen Hetherington Hall

Building Component		Condit	ion (%)		Building Component		Condit	ion (%)	
Component	Е	G	F	Р	Component	Е	G	F	Р
Exterior					Electrical				
Foundations		60	40		Fire Alarm System		100		
Exterior Walls	20	80			Emergency Power/Lighting Systems		100		
Building Framing		100			Lighting Systems		100		
Windows/Louvers		100			Electrical Distribution		100		
Doors/Frames/Hardware	10	90			Power Wiring		100		
Roof		75	25		Tel/Data Systems		100		
Interior					Specialty Systems (PV Array)				
Floors	10	80	10		D. d. l.		Comm	liance	
Walls		90	10		Building Component		Comp	munice	
Ceilings		80	20		Compensiii	С	PC	NC	
Doors/Frames/Hardware	10	90			IBC/ADA				
Built-In Furnishings		50	50		Exterior Doors	Х			
Stairs		100			Interior Doors	Х			
Elevators/Escalators		100			Horizontal Circulation (Corridors)	Х			
Specialty Systems		100			Horizontal Circulation (Ramps)				
Mechanical					Vertical Circulation (Stairs)	Х			
HVAC Distribution & Controls		100			Vertical Circulation (Elevators)	Х			
AHU/Fans		100			Toilet Rooms	Х			
Cooling System (Chiller/CT)					Locker Rooms				
Heating System (Boilers/Steams)		100			Drinking Fountains	Х			
Pumps/Motors/Compressors		100			Signage	Х			
Fire Sprinkler/Standpipe Systems		100			Assembly Areas	Х			
Plumbing Systems/Fixtures		100	_		Sales and Service Areas				
Specialty Systems					Dining Areas				

Not applicable

E - Excellent Conditions generally at a "like new" level. Exemplary Maintenance and appropriate funding

required to maintain this level.

G - Good Conditions generally at an acceptable level. Routine maintenance and appropriate funding

required to maintain this level.

F - Fair Conditions at a minimally acceptable level. Improvements, involving greater than routine

maintenance and additional funding required.

P - Poor Conditions below minimally acceptable levels. Conditions require substantial funding and/or

considerable maintenance effort to be improved.

C - Compliant Conforms with the currently adopted version of the International Building Code (IBC) and the

Maryland Accessibility Code.

Partially conforms with the currently adopted version of the International Building Code (IBC) PC - Partially Compliant

and the Maryland Accessibility Code due to modifications of the building component/space.

NC - Non-Compliant Does not conform with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code.

Hickory Ridge (HR)

Academic/Administrative

Year Built: 1982
 Year Renovated: 1995

• Area (GSF): 60,000 sf

• Floors: 3

Building History and Use

Hickory Ridge was originally constructed in 1982 as an office building for use by Howard County. It has since been repurposed as an instructional building to support the Continuing Education and Workforce Development Division, English Language Center, and the Math Division of HCC. Also housed in Hickory Ridge is the English Language Center, which offers English language education for personal growth, employment, or as a starting point for further education at the college or elsewhere.

Functional Analysis

The building spaces are sized and configured to support most of the general educational program requirements in the facility. However, the building does not meet the specialized instruction and laboratory needs of many of the programs housed in the building. The quality of the teaching and learning environment in the building is below the level found in instructional spaces across campus.

Building Condition

This building features a mix of conditions, with some elements in good shape but the majority in fair or poor condition. It requires significantly more maintenance to remain operational compared to other, more modern academic buildings on campus. If retained, the building will need a comprehensive renovation or could be repurposed as swing space. Alternatively, previous master plans have proposed demolishing the building and redeveloping the site with a modern, purpose-built facility.

The bar graph on this page summarizes the building scorecard rating results by major system. The detailed building scorecard follows at the end of this section.

Exterior

The exterior envelope is aging, with components in need of repair or replacement, such as damaged bollard covers at the front entry, deteriorating and cracked brick and mortar, and dented spandrel panels near the glazing. Recommended repairs include replacing the bollard covers, repointing and patching the brick and mortar, and cleaning visible efflorescence on the façade to restore the building's integrity and appearance.



Figure 52 - Campus Location



Figure 53 - Building Exterior

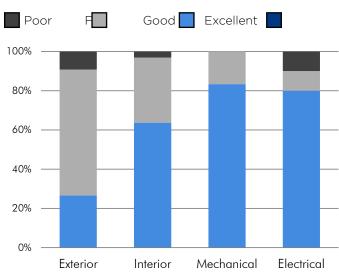


Figure 54 - Building Condition Graph



Figure 55 - (Left) Cracked Brick and Mortar
Figure 56 - (Right) Worn and Split Caulking at Foundation and

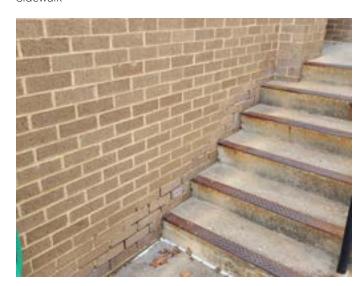


Figure 57 - Mortar Erosion



Figure 58 - Damaged Bollard Covers

<u>Interior</u>

Most of the interior finishes are in fair condition and serviceable. Some areas were observed to have cosmetic damage issues including walls and floors in high traffic areas that are scuffed and scraped, areas of drywall damage from impact of desks and chairs against the walls and some broken and damaged ceiling tiles. The thresholds at vestibule doors are deteriorated and building users report the interior lighting is dim and that offices do not have adequate acoustic isolation.

Recommendations include drywall repair and repainting of damaged walls in corridors and classrooms, replacement of damaged ceiling tiles and vestibule threshold doors, and assess options for improving lighting in the building.





Figure 59 - (Left) Damaged Door Figure 60 - (Right) Cut/Peeling Wallpaper

Mechanical Systems

The building is conditioned by three package rooftop units reported to be installed in 2016. Distribution system includes a ducted supply and plenum return serving VAV boxes. While it has been maintained well, the distribution system is older and has reached its expected life.

Recommendations include replacing or refurbishing the HVAC distribution system in the ten-year planning period.





Figure 61 - Domestic Water Heater (Left) Figure 62 - Exhaust Fan (Right)

Plumbing/Fire Protection

Building is served by wet pipe fire protection system. Domestic water heaters located on each floor in the building are less than 10 years old. Water piping is copper and sanitary piping is cast iron. No plumbing or fire protection issues were reported.

No recommendations at this time.

Electrical Systems

The majority of electrical systems are in good condition with the exception of antiquated Federal Pacific equipment installed throughout the building. Additional system components that are in good condition include a mixture of fluorescent and LED lights, wall packed emergency lights, horizontal data cabling and a Siemens PMI-3 Fire Alarm Control Panel. A 2000A Federal Pacific distribution switchboard serves the building as well as 80kW Cummins generator for life and safety standby loads.

Currently, there is no Arc Flash Labeling of equipment in the building.

Recommendations include replacing the federal pacific equipment, addressing the Arc Flash labeling of equipment as soon as practical and replacing/upgrading fluorescent light fixtures with LED fixtures as funding permits.

Building Code/Accessibility

Interior building hallways and exterior pedestrian walkways are compliant with accessibility requirements. While the majority of spaces are code compliant, there were areas of concern observed. The roof hatch opening does not have the required guard railing and this should be added as required by OSHA 1910.28 (b) (1) (i) and also as indicated in IBC 1015.7. ADA stalls in the bathroom need to be retrofitted with a vertical grab bar per ICC/ANSI A117.1 604.5.1.2. Drinking fountains in the corridor are not recessed and project more than 4" into the circulation path, which does not comply with government ADA Accessibility Standards. The handrail height at the grand stair was at 32" AFF which does not meet IBC 1014.2.

Recommendations include addressing these areas of concern as funding permits or as part of a future capital building renovation project.



Figure 63 - Packaged RTU





Figure 64 - (Left) RTU Figure 65 - (Right) AHU



Figure 66 - Roof Access Hatch Without Safety Railings



Figure 67 - Drinking Fountains not ADA Compliant

Building Condition Assessment

Facilities Master Plan Update

Building Name: Hickory Ridge

Building Component		Condit	tion (%)		Building Component		Condi	ion (%)	
Component	E	G	F	Р	Component	Е	G	F	Р
Exterior					Electrical				
Foundations		10	80	10	Fire Alarm System		100		
Exterior Walls			80	20	Emergency Power/Lighting Systems		40		60
Building Framing		75	25		Lighting Systems		40	60	
Windows/Louvers		25	75		Electrical Distribution		100		
Doors/Frames/Hardware		25	75		Power Wiring		100		
Roof		25	50	25	Tel/Data Systems		100		
Interior					Specialty Systems (PV Array)				
Floors		80	20		5 44		Come	liance	
Walls		50	50		Building Component		Comp	illarice	
Ceilings		75	25		Component	С	PC	NC	
Doors/Frames/Hardware		50	25	25	IBC/ADA				
Built-In Furnishings			100		Exterior Doors	Х			
Stairs		80	20		Interior Doors			х	
Elevators/Escalators		100			Horizontal Circulation (Corridors)		х		
Specialty Systems		75	25		Horizontal Circulation (Ramps)			х	
Mechanical					Vertical Circulation (Stairs)		х		
HVAC Distribution & Controls			100		Vertical Circulation (Elevators)	Х			
AHU/Fans		100			Toilet Rooms	Х			
Cooling System (Chiller/CT)					Locker Rooms				
Heating System (Boilers/Steams)		100			Drinking Fountains			Х	
Pumps/Motors/Compressors		100			Signage	х			
Fire Sprinkler/Standpipe Systems		100			Assembly Areas	х			
Plumbing Systems/Fixtures		100			Sales and Service Areas				
Specialty Systems					Dining Areas				

Not applicable

Howard Community College

Facilities Master Plan

E - Excellent Conditions generally at a "like new" level. Exemplary Maintenance and appropriate funding

required to maintain this level.

G - Good Conditions generally at an acceptable level. Routine maintenance and appropriate funding

required to maintain this level.

F - Fair Conditions at a minimally acceptable level. Improvements, involving greater than routine

maintenance and additional funding required.

P - Poor Conditions below minimally acceptable levels. Conditions require substantial funding and/or

considerable maintenance effort to be improved.

C - Compliant Conforms with the currently adopted version of the International Building Code (IBC) and the Maryland Accessibility Code.

PC - Partially Compliant Partially conforms with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code due to modifications of the building component/space.

NC - Non-Compliant Does not conform with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code.

Horowitz Visual and Performing Arts Center (HVPA)

Academic/Administrative

Year Built: 2006Year Renovated: 2019Area (GSF): 78,090 SF

• Floors: 2 + Lower

Building History and Use

The Horowitz Visual and Performing Arts is home to specialized instructional spaces for the Arts and Humanities Division as well as theater and performance spaces frequented often by visitors to campus. Featuring state-of-the-art instructional facilities for the Liberal Studies Division students studying visual and performing arts. Home to three performance venues and two art galleries, the building annually welcomes more than 30,000 patrons to performances and exhibits.

Functional Analysis

Located centrally on the main campus quad, performance and gallery destinations within the facility are easily accessible to students, faculty, staff and visitors from the West Garage. The building spaces were purpose-built to support the visual and performing arts academic programs and are adequately sized and configured for the intended uses and functions.

Building Condition

Overall, the building is in good to fair condition. There are some systems and components that may require refurbishment or replacement in the ten-year planning period.

The bar graph on this page summarizes the building scorecard rating results by major system. The detailed building scorecard follows at the end of this section.

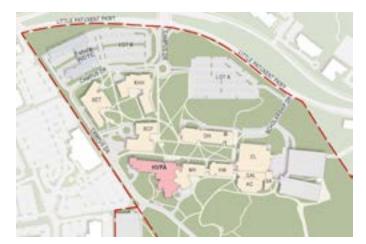
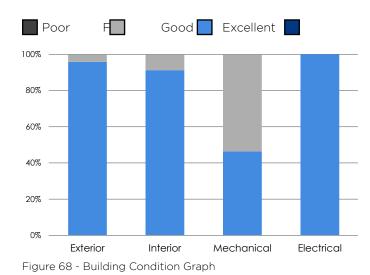


Figure 69 - Campus Location



Figure 70 - Building Exterior



Exterior

The exterior envelope is generally in good condition. The roof had visible ponding underneath mechanical platforms.

Recommendations include an analysis of the roof areas where ponding was visible to determine appropriate repairs to avoid future water damage.



Figure 71 - Ponding on Roof

<u>Interior</u>

Most of the interior finishes are in good condition. Some areas were observed to have minor cosmetic damage issues including chipped or damaged ceiling tiles and a crack that has formed in the concrete floor along the column line on the second floor.

Recommendations include repairing the crack in the floor to avoid further deterioration.



Figure 72 - Crack on Column Line



Figure 73 - Ceiling Tile Water Spots

Mechanical Systems

The building is served by a central plant HVAC system including two dual fuel gas/oil boilers, one chiller, a cooling tower, and supplemental split systems serving limited areas of the building. AHUs are located on the roof and in the basement of the building. HVAC equipment is approaching 20 years old, and while maintained well, is approaching the end of its expected life. Piping and ductwork distribution systems are in good condition.

Recommendations include monitoring the condition and performance of the boilers, chillers, AHUs, cooling towers, and VAV boxes. Based on monitoring, determine if and when these components need to be replaced or refurbished during the ten-year planning period.



Figure 74 - Boiler



Figure 75 - Chiller



Figure 76 - Rooftop AHU

JMZ Architects and Planners

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Howard Community College
Facilities Master Plan

Howard Community College Facilities Master Plan



Figure 77 - Cooling Tower



Figure 78 - RTU Interior

Plumbing/Fire Protection

Domestic water piping is copper. Sanitary piping is cast iron. Domestic heating water is generated through a plate and frame heat exchanger installed in 2019. Plumbing piping, equipment and fixtures are in good condition. Building is fully sprinklered with wet pipe fire protection system. No problems were reported for the plumbing or fire protection systems.

No recommendations at this time.

Electrical Systems

The electrical power and distribution systems are in good condition. Additional system components that are in good condition include a mixture of fluorescent and LED lights, wall pack emergency lights, horizontal data cabling and a Siemens PMI-3 Fire Alarm Control Panel.

A 600A Square D distribution panelboard serves the building along with a 200kW Cummins generator for life safety and standby loads.

Currently, there is no Arc Flash Labeling of equipment in the building and some working clearance violations were observed in electric rooms.

Recommendations include addressing the Arc Flash labeling of equipment as soon as practical and replacing/upgrading fluorescent light fixtures with LED fixtures as funding permits. In addition, items being stored in dedicated electrical spaces should be removed to eliminate clearance violations.

Building Code/Accessibility

The walkways throughout the building and exterior pedestrian walkways are compliant with accessibility requirements. The drinking fountains are also compliant with the current code.

All of the accessible stalls in bathrooms are missing the vertical grab bar as required by ICC/ANSI A117.1 604.5.1.2.

Recommendations include adding vertical grab bars in accessible stalls.



Figure 79 - Missing Vertical Grab Bars

Building Condition Assessment

Facilities Master Plan Update

Building Name: Horowitz Visual and Performing Arts Center

Building Component		Condit	ion (%)		Building Component		Condi	tion (%)	
Component	Е	G	F	Р	Component	Е	G	F	Р
Exterior					Electrical				
Foundations		90	10		Fire Alarm System		100		
Exterior Walls		100			Emergency Power/Lighting Systems		100		
Building Framing		100			Lighting Systems		100		
Windows/Louvers		95	5		Electrical Distribution		100		
Doors/Frames/Hardware		90	10		Power Wiring		100		
Roof		100			Tel/Data Systems		100		
Interior					Specialty Systems (PV Array)				
Floors		90	10		D. d. le		Comr	liance	
Walls		90	10		Building Component		Comp	mance	
Ceilings		75	25		gepe.i.e.iii	С	PC	NC	
Doors/Frames/Hardware		100			IBC/ADA				
Built-In Furnishings		75	25		Exterior Doors	Х			
Stairs		100			Interior Doors	Х			
Elevators/Escalators		100			Horizontal Circulation (Corridors)	Х			
Specialty Systems		100			Horizontal Circulation (Ramps)	Х			
Mechanical					Vertical Circulation (Stairs)	Х			
HVAC Distribution & Controls		75	25		Vertical Circulation (Elevators)	Х			
AHU/Fans		50	50		Toilet Rooms	Х			
Cooling System (Chiller/CT)			100		Locker Rooms				
Heating System (Boilers/Steams)			100		Drinking Fountains	Х			
Pumps/Motors/Compressors			100		Signage	Х			
Fire Sprinkler/Standpipe Systems		100			Assembly Areas	Х			
Plumbing Systems/Fixtures		100			Sales and Service Areas				
Specialty Systems					Dining Areas				

Not applicable

E - Excellent Conditions generally at a "like new" level. Exemplary Maintenance and appropriate funding

required to maintain this level.

G - Good Conditions generally at an acceptable level. Routine maintenance and appropriate funding

required to maintain this level.

F - Fair Conditions at a minimally acceptable level. Improvements, involving greater than routine

maintenance and additional funding required.

P - Poor Conditions below minimally acceptable levels. Conditions require substantial funding and/or

considerable maintenance effort to be improved.

C - Compliant Conforms with the currently adopted version of the International Building Code (IBC) and the

Maryland Accessibility Code.

PC - Partially Compliant Partially conforms with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code due to modifications of the building component/space.

NC - Non-Compliant Does not conform with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code.

Howard Hall (HW)

Academic/Administrative

Year Built: 1976
 Year Renovated: 2019
 Area (GSF): 33,097 SF
 Floors: 2 + Partial

Building History and Use

Howard Hall was built in 1976 and fully renovated in 2019. The facility houses a few classrooms and various college departments and is attached to McCuan Hall, Clark Library, and the Academic Commons. Audio Visual, Human Resources, the Office of Public Relations and Marketing, the Honors Commons and offices, the offices of Silas Craft Collegians, and a health care education suite for noncredit programs are also located in the building.

Functional Analysis

This mixed use academic and administration services building is centrally located on the main quad of campus. The building spaces are generally sized and configured to adequately support the myriad of programs, offices and functions housed in the facility.

Building Condition

Howard Hall is the second oldest building on campus. The systems and equipment serving the building are in good to fair condition.

The bar graph on this page summarizes the building scorecard rating results by major system. The detailed building scorecard follows at the end of this section.

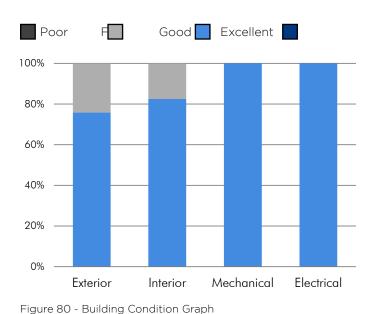




Figure 81 - Campus Location



Figure 82 - Building Exterior

Exterior

The exterior envelope of the building is starting to show its age with visible weathering of the cast concrete. Exterior windows and façade materials appear to be in good condition. Some areas of ponding on the roof were visible.

Recommendations include an analysis of the roof areas where ponding was visible to determine appropriate repairs to avoid future water damage.

<u>Interior</u>

Interior finishes were upgraded in 2019. There is some damage to the drywall in corridor and behind doors. The floor finishes in high traffic areas are scuffed and scraped.

Recommendations include repairing drywall and paint touch up in high traffic areas.

Mechanical Systems

The building is served by the central boiler and chiller plant located in Clark Hall. AHUs are located throughout the building. Building was fully renovated in 2019 and equipment and distribution systems are in good condition.

No recommendations at this time.

Plumbing/Fire Protection

Domestic water piping is copper. Sanitary piping is cast iron. Plumbing piping, equipment and fixtures are in good condition. Building is fully sprinklered with wet pipe fire protection system. No problems were reported for the plumbing or fire protection systems.

No recommendations at this time.



Figure 83 - Chipped Paint



Figure 84 - Absence of Fire Stopping in Stairwell

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Electrical Systems

The electrical power and distribution systems are in good condition. Additional system components that are in good condition include mixture of fluorescent and LED lights, wall pack emergency lights, horizontal data cabling and a Siemens PMI-3 Fire Alarm Control Panel.

A 1600A GE unit Substation serves the building along with a 150kW Cummins generator for life safety and standby loads.

Currently, there is no Arc Flash labeling of equipment in the building and some working clearance violations were observed in electric rooms.

Recommendations include addressing the Arc Flash labeling of equipment as soon as practical and replacing/ upgrading fluorescent light fixtures with LED fixtures as funding permits. In addition, items being stored in dedicated electrical spaces should be removed to eliminate clearance violations.

Building Code/Accessibility

The walkways throughout the building and exterior pedestrian walkways are compliant with accessibility requirements. The drinking fountains and bathroom stalls are also compliant with the current code. The penetrations at the stairs were missing firestopping.

Recommendations include fire stopping in the stairwell to meet IBC 2021 Section 714.4.1.



Figure 85 - Electrical Switch

Building Condition Assessment

Facilities Master Plan Update

Building Name: Howard Hall

Building Component		Condit	ion (%)		Building Component		Condit	ion (%)	
Component	E	G	F	Р	Component	Е	G	F	Р
Exterior					Electrical				
Foundations		75	25		Fire Alarm System		100		
Exterior Walls		50	50		Emergency Power/Lighting Systems		100		
Building Framing		75	25		Lighting Systems		100		
Windows/Louvers		100			Electrical Distribution		100		
Doors/Frames/Hardware		80	20		Power Wiring		100		
Roof		75	25		Tel/Data Systems		100		
Interior					Specialty Systems (PV Array)				
Floors		100			D 414				
Walls		75	25		Building Component				
Ceilings		75	25		Compension				
Doors/Frames/Hardware		80	20		IBC/ADA				
Built-In Furnishings		80	20		Exterior Doors	Х			
Stairs		50	50		Interior Doors	Х			
Elevators/Escalators		100			Horizontal Circulation (Corridors)	Х			
Specialty Systems		100			Horizontal Circulation (Ramps)				
Mechanical					Vertical Circulation (Stairs)	Х			
HVAC Distribution & Controls		100			Vertical Circulation (Elevators)	Х			
AHU/Fans		100			Toilet Rooms		Х		
Cooling System (Chiller/CT)					Locker Rooms				
Heating System (Boilers/Steams)					Drinking Fountains	Х			
Pumps/Motors/Compressors		100			Signage	Х			
Fire Sprinkler/Standpipe Systems		100			Assembly Areas				
Plumbing Systems/Fixtures		100			Sales and Service Areas				
Specialty Systems					Dining Areas				

Not applicable

E - Excellent Conditions generally at a "like new" level. Exemplary Maintenance and appropriate funding

required to maintain this level.

G - Good Conditions generally at an acceptable level. Routine maintenance and appropriate funding

required to maintain this level.

F - Fair Conditions at a minimally acceptable level. Improvements, involving greater than routine

maintenance and additional funding required.

P - Poor Conditions below minimally acceptable levels. Conditions require substantial funding and/or

considerable maintenance effort to be improved.

C - Compliant Conforms with the currently adopted version of the International Building Code (IBC) and the

Maryland Accessibility Code.

Howard Community College

Facilities Master Plan

Partially conforms with the currently adopted version of the International Building Code (IBC) PC - Partially Compliant and the Maryland Accessibility Code due to modifications of the building component/space.

NC - Non-Compliant Does not conform with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code.

McCuan Hall (MH)

Academic/Administrative

Year Built: 1978Year Renovated: 2019

Area (GSF): 49,860 SF Floors: 2 + Lower

Building History and Use

McCuan Hall is home to the president's office as well as other key administrative staff offices. This facility also features attractions such as the Richard B. Talkin Family Art Gallery, a companion to The Rouse Company Foundation Art Gallery found in the Horowitz Center. On the ground floor, you will find HCC's department of television and radio, where many of the college's media production classes are taught, and Dragon Digital Media which produces a television and radio channel. McCuan Hall is located on the south side of the Quad, and connects with the Horowitz Center on one side, with Howard Hall on the other.

Functional Analysis

This mixed use building is centrally located on the main quad of campus. The building spaces are sized and configured to adequately support the myriad of programs and functions housed in the facility.

Building Condition

The building systems and equipment are in good to fair condition. A lot of the interior furnishings and rooms are a bit outdated and may benefit from modernization upgrades.

The bar graph below summarizes the building scorecard rating results by major system. The detailed building scorecard follows at the end of this section.

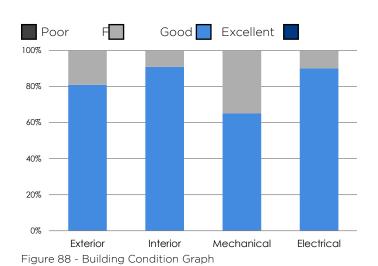




Figure 86 - Campus Location



Figure 87 - Building Exterior

Exterio

The exterior envelope of the building is starting to show its age with minor visible weathering of the cast concrete. There were also signs of ponding on the roof.

Recommendations include repair of the superficial cracks in concrete and masonry to prevent further deterioration and an analysis of the roof areas where ponding was visible to determine appropriate repairs to avoid future water damage.



Figure 89 - Building Exterior

<u>Interior</u>

The interior finishes are generally in good condition. Some walls and floors in high traffic areas are scuffed and scraped. There were areas of glazing where the window gasketing was visibly missing or damaged. The vinyl base at the bottom of the stairs was beginning to peel and should be re-attached.

Recommendations include the replacement of gasketing at windows where damage is noticeable at the Lower Level entry and replacement of the vinyl base at areas where it is visibly detached.

Mechanical Systems

Central plant boilers and chillers in Clark Library serve AHUs in McCuan Hall. Supplemental DX split systems provide additional cooling to selected areas. AHUs are primarily located in the basement with condensing units on the roof. The AHUs and VAV terminal boxes are over 20 years old and have reached their expected life and replacement or refurbishment should be considered. HVAC distribution systems are in good condition, although VAV terminal boxes have reached their expected life.

Recommendations include monitoring the condition and performance of the VAV boxes. Based on monitoring, determine if and when these components need to be replaced or refurbished during the ten-year planning period.



Figure 90 - Classroom







Figure 93 - Peeling Vinyl Baseboard



Figure 94 - Building AHU



Figure 95 - Circulating Pump



Figure 96 - Variable Frequency Drives

Plumbing/Fire Protection

Domestic water piping is copper. Sanitary piping is cast iron. Domestic heating water is generated by an electric water heater. Plumbing piping, equipment and fixtures are in good condition. Building is fully sprinklered with wet pipe fire protection system. No problems were reported for plumbing or fire protection system.

No recommendations at this time.

Electrical Systems

The electrical power and distribution systems are in good condition. Additional system components that are in good condition include a mixture of fluorescent and LED lights, wall pack emergency lights, horizontal data cabling and a Siemens PMI-3 Fire Alarm Control Panel.

A 1600A GE Switchboard serves the building along with a 150kW Cummins generator for life safety and standby loads.

Currently, there is no Arc Flash labeling of equipment in the building and some working clearance violations were observed in electric rooms.

Recommendations include addressing the Arc Flash labeling of equipment as soon as practical and replacing/upgrading fluorescent light fixtures with LED fixtures as funding permits. In addition, items being stored in dedicated electrical spaces should be removed to eliminate clearance violations.





Figure 97 - (Left) Switchboard Figure 98 - (Right) Fire Alarm Panel

Building Code/Accessibility

The walkways throughout the building and exterior pedestrian walkways are compliant with accessibility requirements. The drinking fountains are also compliant with the latest codes.

The accessible stalls were missing the vertical grab bars required by ICC/ANSI A117.1 Section 604.5.1.2. The urinals in the men's bathroom were also spaced at 24 inches on center, which does not meet the minimum 30 inch spacing indicated in IBC 2021 Section 2903.1.5.

Recommendations include adding vertical grab bars in accessible stalls.



Figure 99 - Tight Urinal Spacing

Building Condition Assessment

Facilities Master Plan Update

Building Name: McCuan Hall

Building Component		Condit	ion (%)		Building Component	Condition (%)					
Component	Е	G	F	Р	Component	Е	G	F	Р		
kterior					Electrical						
Foundations		100			Fire Alarm System		100				
Exterior Walls		50	50		Emergency Power/Lighting Systems		100				
Building Framing		100			Lighting Systems		40	60			
Windows/Louvers		60	40		Electrical Distribution		100				
Doors/Frames/Hardware		75	25		Power Wiring		100				
Roof		100			Tel/Data Systems		100				
erior					Specialty Systems (PV Array)						
Floors		100					<u></u>	l:			
Walls		100			Building Component		Comp	liance			
Ceilings		90	10		Component	С	PC	NC			
Doors/Frames/Hardware		75	25		IBC/ADA						
Built-In Furnishings					Exterior Doors	Х					
Stairs		80	20		Interior Doors	Х					
Elevators/Escalators		100			Horizontal Circulation (Corridors)	Х					
Specialty Systems					Horizontal Circulation (Ramps)						
chanical					Vertical Circulation (Stairs)	Х					
HVAC Distribution & Controls		75	25		Vertical Circulation (Elevators)	Х					
AHU/Fans		25	75		Toilet Rooms		х				
Cooling System (Chiller/CT)					Locker Rooms						
Heating System (Boilers/Steams)					Drinking Fountains	х					
Pumps/Motors/Compressors		25	75		Signage	Х					
Fire Sprinkler/Standpipe Systems		100			Assembly Areas	Х					
Plumbing Systems/Fixtures		100			Sales and Service Areas						
Specialty Systems					Dining Areas						

Not applicable

E - Excellent Conditions generally at a "like new" level. Exemplary Maintenance and appropriate funding

required to maintain this level.

G - Good Conditions generally at an acceptable level. Routine maintenance and appropriate funding

required to maintain this level.

F - Fair Conditions at a minimally acceptable level. Improvements, involving greater than routine

maintenance and additional funding required.

P - Poor Conditions below minimally acceptable levels. Conditions require substantial funding and/or

considerable maintenance effort to be improved.

C - Compliant Conforms with the currently adopted version of the International Building Code (IBC) and the

Maryland Accessibility Code.

PC - Partially Compliant Partially conforms with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code due to modifications of the building component/space.

NC - Non-Compliant Does not conform with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code.

North Building (NB)

Storage/Maintenance

 Year Built: 2020 • Year Renovated: N/A • Area (GSF): 2.100 SF

• Floors:

Building History and Use

The building was built in 2020 on the north side of the athletic fields. This building is used to store maintenance and athletics equipment.

Functional Analysis

This building functions effectively for its intended purpose as a storage facility. The building has ventilation fans controlled by a central thermostat to regulate the temperature inside of the building, providing added protection to equipment stored in it.

Building Condition

The building is in good condition.

The bar graph below summarizes the building scorecard rating results by major system. The detailed building scorecard follows at the end of this section.

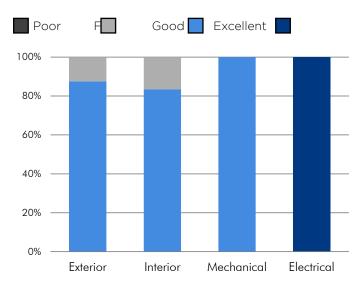


Figure 100 - Building Condition Graph



Figure 101 - Campus Location



Figure 102 - Building Exterior



Figure 103 - Interior

Exterior

The building envelope has minor corrosion on some of the exterior elements. Overall, it is in good condition.

No recommendations at this time.

<u>Interior</u>

The interior finishes of the building are in good condition. No recommendations at this time.

Mechanical Systems

The building has ventilation fans controlled by wall mounted thermostats. The system is in good condition.

No recommendations at this time.

Plumbing/Fire Protection

Building does not have a plumbing or fire protection system.

Electrical Systems

The electrical power and distribution systems are in excellent condition. Additional system components that are in good condition include LED lighting and horizontal data cabling. There is no fire alarm in the building.

A 100A GE panelboard serves the building and is fed from panel HP in the East Garage.

Currently, there is no Arc Flash labeling of equipment in the building.

Recommendations include addressing the Arc Flash labeling of equipment as soon as practical.

Building Code/Accessibility

No code violations have been noted in this building. The walkways throughout the building and exterior pedestrian walkways are compliant with accessibility requirements

No recommendations at this time.



Figure 104 - Corrosion/Rust on Grill Figure 105 - LED Light Fixture



Figure 106 - Ventilation Ductwork



Figure 107 - (Left) Thermostat Figure 108 - (Right) Aire Filters







Building Condition Assessment

Facilities Master Plan Update

Building Name: North Building

Building Component		Condit	ion (%)		Building Component		Condi	tion (%)	
Component	Е	G	F	Р	Component	Е	G	F	Р
exterior					Electrical				
Foundations		75	25		Fire Alarm System				
Exterior Walls		90	10		Emergency Power/Lighting Systems				
Building Framing		80	20		Lighting Systems	100			
Windows/Louvers		100			Electrical Distribution	100			
Doors/Frames/Hardware		80	20		Power Wiring	100			
Roof		100			Tel/Data Systems	100			
nterior					Specialty Systems (PV Array)				
Floors					D. d. li		Comr	oliance	
Walls		75	25		Building Component		Comp	marice	
Ceilings		100			Component	С	PC	NC	
Doors/Frames/Hardware		75	25		IBC/ADA				
Built-In Furnishings					Exterior Doors	Х			
Stairs					Interior Doors	Х			
Elevators/Escalators					Horizontal Circulation (Corridors)	Х			
Specialty Systems					Horizontal Circulation (Ramps)				
echanical					Vertical Circulation (Stairs)				
HVAC Distribution & Controls		100			Vertical Circulation (Elevators)				
AHU/Fans		100			Toilet Rooms				
Cooling System (Chiller/CT)					Locker Rooms				
Heating System (Boilers/Steams)					Drinking Fountains				
Pumps/Motors/Compressors					Signage				
Fire Sprinkler/Standpipe Systems					Assembly Areas				
Plumbing Systems/Fixtures					Sales and Service Areas				
Specialty Systems					Dining Areas				

Not applicable E - Excellent Conditions generally at a "like new" level. Exemplary Maintenance and appropriate funding required to maintain this level. Conditions generally at an acceptable level. Routine maintenance and appropriate funding G - Good required to maintain this level. F - Fair Conditions at a minimally acceptable level. Improvements, involving greater than routine maintenance and additional funding required. P - Poor Conditions below minimally acceptable levels. Conditions require substantial funding and/or considerable maintenance effort to be improved. Conforms with the currently adopted version of the International Building Code (IBC) and the C - Compliant Maryland Accessibility Code. Partially conforms with the currently adopted version of the International Building Code (IBC) and the Maryland Accessibility Code due to modifications of the building component/space. PC - Partially Compliant NC - Non-Compliant Does not conform with the currently adopted version of the International Building Code (IBC) and the Maryland Accessibility Code.

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South Building (SB)

Storage/Maintenance

Year Built: 2005Year Renovated: N/AArea (GSF): 1,839 SF

• Floors:

Building History and Use

The building was built on the southwest side of the athletic fields. This building is used to store maintenance and athletics equipment.

Functional Analysis

The building is a storage building that adequately serves its purpose.

Building Condition

The building is in good to fair condition with no major concerns.

The bar graph below summarizes the building scorecard rating results by major system. The detailed building scorecard follows at the end of this section.

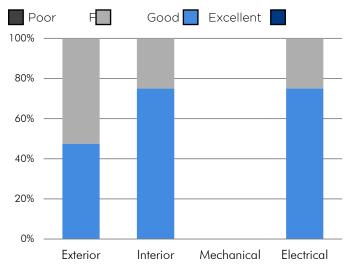


Figure 111 - Building Condition Graph



Figure 112 - Campus Location.



Figure 113 - Building Exterior

Exterior

The building is clad in metal siding and is in good to fair condition.

No recommendations at this time.

<u>Interior</u>

The interior finishes are good or fair condition. Athletics equipment is scattered and limits circulation within the space

No recommendations at this time.

Mechanical Systems

There are no mechanical systems in this building.

Plumbing/Fire Protection

The building does not have plumbing or fire protection systems.

Electrical Systems

The electrical power and distribution systems are in good condition. Additional system components that are in good condition include fluorescent lighting and horizontal data cabling. There is no fire alarm in the building.

A 30A Square D panelboard serves the pole barn and is fed from panel HV2 in the Child Learning Center.

No recommendations at this time.

Building Code/Accessibility

Athletics equipment stored infringes on the required clear working space required for electrical equipment.

Recommendations include moving athletics equipment out of the required clear working space for electrical equipment.

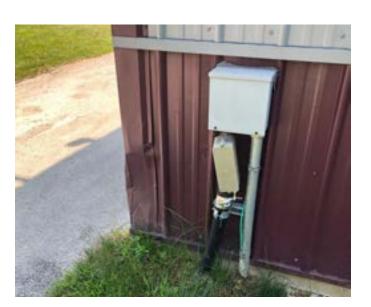


Figure 117 - Dented siding and Damaged Electrical Raceway

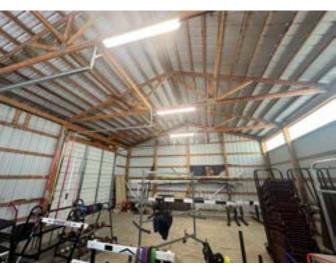


Figure 116 - Interior



Figure 114 - Roof Structure



Figure 115 - Electrical Equipment with Working Clearance Violations

Building Condition Assessment

Facilities Master Plan Update

Building Name: South Building

Building Component		Condit	tion (%)		Building Component	Condition (%)				
Сотронет	E G F P		Component	Е	G	F	Р			
Exterior					Electrical					
Foundations		50	50		Fire Alarm System					
Exterior Walls		50	50		Emergency Power/Lighting Systems					
Building Framing		35	65		Lighting Systems			100		
Windows/Louvers			100		Electrical Distribution		100			
Doors/Frames/Hardware		75	25		Power Wiring		100			
Roof		75	25		Tel/Data Systems		100			
Interior					Specialty Systems (PV Array)					
Floors		60	40		- d.t.	6 1:		l:		
Walls		90	10		Building Component	Compliance				
Ceilings					Component	С	PC	NC		
Doors/Frames/Hardware					IBC/ADA					
Built-In Furnishings					Exterior Doors	Х				
Stairs					Interior Doors					
Elevators/Escalators					Horizontal Circulation (Corridors)	Х				
Specialty Systems					Horizontal Circulation (Ramps)					
Mechanical					Vertical Circulation (Stairs)					
HVAC Distribution & Controls					Vertical Circulation (Elevators)					
AHU/Fans					Toilet Rooms					
Cooling System (Chiller/CT)					Locker Rooms					
Heating System (Boilers/Steams)					Drinking Fountains					
Pumps/Motors/Compressors					Signage		х			
Fire Sprinkler/Standpipe Systems					Assembly Areas					
Plumbing Systems/Fixtures					Sales and Service Areas					
Specialty Systems					Dining Areas					

Not applicable E - Excellent Conditions generally at a "like new" level. Exemplary Maintenance and appropriate funding required to maintain this level. Conditions generally at an acceptable level. Routine maintenance and appropriate funding G - Good required to maintain this level. Conditions at a minimally acceptable level. Improvements, involving greater than routine maintenance and additional funding required. F - Fair P - Poor Conditions below minimally acceptable levels. Conditions require substantial funding and/or considerable maintenance effort to be improved. Conforms with the currently adopted version of the International Building Code (IBC) and the C - Compliant Maryland Accessibility Code. PC - Partially Compliant Partially conforms with the currently adopted version of the International Building Code (IBC) and the Maryland Accessibility Code due to modifications of the building component/space. NC - Non-Compliant Does not conform with the currently adopted version of the International Building Code (IBC) and the Maryland Accessibility Code.

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Rouse Company Foundation Student Services Hall (RCF)

Academic/Administrative

Year Built: 2007
 Year Renovated: 2024
 Area (GSF): 103,770 SF
 Floors: 3 + Partial

Building History and Use

Built in 2007, the Rouse Company Foundation Building is home to student services and student support offices. The building also contains the bookstore and dining facilities.

The building offers students access to essential services all under one roof including: Admissions, Registration, Financial Aid, Academic Counseling, Testing, and Campus Security. The building also includes a welcome desk, a student lounge, the campus bookstore, a 200-seat dining room on the ground floor, and large meeting rooms with stunning views of the campus quad below.

Functional Analysis

The building's central location on the main quad is ideal and its spaces are sized and configured to adequately support the variety of student services housed in the building. The café' and bookstore on the ground level serve as student amenities and provide liveliness and energy to the building. To better serve the students a renovation project on the second floor has been planned to create a "First Stop" Howard Hub, a purpose-built environment where core services are brought to the students and their families to optimize their time and user experience.

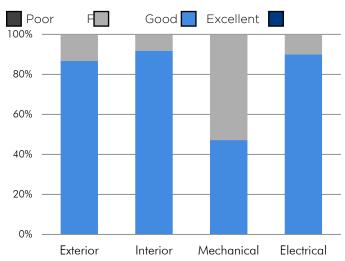


Figure 120 - Building Condition Graph



Figure 118 - Campus Location.



Figure 119 - Building Exterior

Building Condition

Overall the building is in good condition. Major HVAC system equipment will likely require refurbishment or replacement in the ten-year planning period.

The bar graph on this page summarizes the building scorecard rating results by major system. The detailed building scorecard follows at the end of this section.

Exterior

The exterior envelope is good condition. The parapet flashing sealant on the roof is beginning to crack and open up, and the waterproof coating over the CMU on the parapets is starting to deteriorate and chip off.

Recommendations include application of a new sealant layer on the parapet CMU.



Figure 121 - Chipped CMU Barrier Sealant

<u>Interior</u>

Interior finishes are generally in good condition. Renovations of the Book Store space on the first floor was underway during the survey of the building. The Book Store was temporarily moved to the fourth floor. Some areas of concern that were observed included fogging of several windows, drop ceiling tiles are damaged or worn, caulking around some windows is showing signs of cracking and the vinyl baseboard was peeling on cafeteria counters.

Recommendations include repair or replacement of fogging windows, damaged ceiling tiles and caulking around windows should be removed and re-applied.

Mechanical Systems

The building is served by a central plant with supplemental heating and cooling equipment. The plant includes two dual fuel gas/oil boilers, one chiller and cooling tower, and supplemental split systems for selected areas. Equipment is approximately 20 years old and is nearing its expected life. While well maintained, boilers, chillers, and cooling towers are in fair condition and may need to be refurbished or replaced in the ten-year planning period.

Air handling units range from fair to good condition, with a mix of indoor units and rooftop units serving the building. HVAC distribution systems includes steel and copper heating and chilled water piping, ducted supply to VAV boxes and plenum return, Distribution systems are in good condition, except VAV boxes are nearing expected life and are in fair condition.

Recommendations include monitoring the condition and performance of the boilers, chillers, VAV boxes and cooling towers. Based on monitoring, determine if and when these components need to be replaced or refurbished during the ten-year planning period.



Figure 123 - Window Fog



Figure 124 - (Left) Window Frame Caulking Cracking Figure 125 - (Right) Ceiling Tile Damage



Figure 122 - Cracking Sealant at Parapet Flashing



Figure 126 - Vinyl Baseboard Peeling

Howard Community College

Facilities Master Plan

Plumbing/Fire Protection

Domestic water piping is copper. Sanitary piping is cast iron. Domestic heating water is generated through a gas fired water heater. Plumbing piping, equipment and fixtures are in good condition. Building is fully sprinklered with wet pipe fire protection system. No problems were reported for the plumbing or fire protection systems.

No recommendations at this time.

Electrical Systems

The electrical power and distribution systems are in good condition. Additional system components that are in good condition include a mixture of fluorescent and LED lights, wall pack emergency lights, horizontal data cabling and a Siemens PMI-3 Fire Alarm Control Panel.

A 3000A Square D Unit Substation serves the building along with a 200kW Cummins generator for life safety and standby loads.

The Sensor Switch in the electrical room does not comply with code.

Currently, there is no Arc Flash labeling of equipment in the building and some working clearance violations were observed in electric rooms.

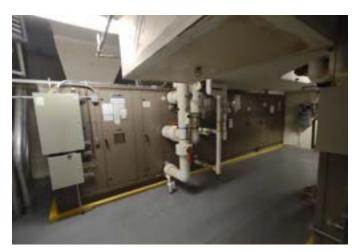


Figure 127 - AHUs



Figure 128 - Chiller

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Figure 129 - (Left) Condensing and Chilled Water Pumps Figure 130 - (Right) Utility Set Exhaust Fans

Recommendations include addressing the Arc Flash labeling of equipment as soon practical as and replacing/upgrading fluorescent light fixtures with LED fixtures as funding permits and the sensor switch in the electrical room to comply with code. In addition, items being stored in dedicated electrical spaces should be removed to eliminate clearance violations.

Building Code/Accessibility

The walkways throughout the building and exterior pedestrian walkways are compliant with accessibility requirements. The drinking fountains are compliant but the accessible stalls are missing the vertical grab bars as specified in ICC/ANSI A117.1 604.5.1.2.

Recommendations include adding vertical grab bars in accessible stalls.



Figure 131 - Vertical Grab Bars Missing

Howard Community College Facilities Master Plan

Building Condition Assessment

Facilities Master Plan Update

Building Name: Rouse Company Foundation Student Services Hall

Building Component		Condition (%)			Building Component	Condition (%)				
Component	Е	G	F	Р	Component	Е	G	F	Р	
xterior					Electrical					
Foundations		100			Fire Alarm System		100			
Exterior Walls		100			Emergency Power/Lighting Systems		100			
Building Framing		100			Lighting Systems		40	60		
Windows/Louvers		90	10		Electrical Distribution		100			
Doors/Frames/Hardware		80	20		Power Wiring		100			
Roof		50	50		Tel/Data Systems		100			
erior					Specialty Systems (PV Array)					
Floors		100					C	1:		
Walls		90	10		Building Component	Compl		nance		
Ceilings		80	20		Component	С	PC	NC		
Doors/Frames/Hardware		100			IBC/ADA					
Built-In Furnishings		95	5		Exterior Doors	Х				
Stairs		100			Interior Doors	Х				
Elevators/Escalators		100			Horizontal Circulation (Corridors)	Х				
Specialty Systems		70	30		Horizontal Circulation (Ramps)					
echanical					Vertical Circulation (Stairs)	Х				
HVAC Distribution & Controls		80	20		Vertical Circulation (Elevators)	Х				
AHU/Fans		50	50		Toilet Rooms		х			
Cooling System (Chiller/CT)			100		Locker Rooms					
Heating System (Boilers/Steams)			100		Drinking Fountains x					
Pumps/Motors/Compressors			100		Signage	Х				
Fire Sprinkler/Standpipe Systems		100			Assembly Areas		Х			
Plumbing Systems/Fixtures		100			Sales and Service Areas					
Specialty Systems					Dining Areas					

Not applicable

E - Excellent Conditions generally at a "like new" level. Exemplary Maintenance and appropriate funding

required to maintain this level.

G - Good Conditions generally at an acceptable level. Routine maintenance and appropriate funding

required to maintain this level.

F - Fair Conditions at a minimally acceptable level. Improvements, involving greater than routine maintenance and additional funding required.

Conditions below minimally acceptable levels. Conditions require substantial funding and/or

considerable maintenance effort to be improved.

onsiderable manifemance errore to be improved.

C - Compliant Conforms with the currently adopted version of the International Building Code (IBC) and the

Maryland Accessibility Code.

PC - Partially Compliant Partially conforms with the currently adopted version of the International Building Code (IBC) and the Maryland Accessibility Code due to modifications of the building component/space.

NC - Non-Compliant Does not conform with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code.

Howard Community College Facilities Master Plan

P - Poor

Student Activities (SA)

Academic/Administrative

Year Built: 1989Year Renovated: 2019Area (GSF): 14,508

• Floors: Part of Academic Commons

Building History and Use

An extension of Academic Commons, the Student Activities building contains a student activities center, a game room, the loading dock, and physical plant offices. The building has had regular maintenance over the last five years and should continue with this level of care. The building will be undergoing renovation in the next two years.

Functional Analysis

The building spaces are sized and configured to adequately support the variety of student activities programmed in the building along with providing environments for student gaming, socializing and lounging in between classes.

Building Condition

The building is in good to fair condition. No major system refurbishment or replacement is anticipated in the tenyear planning period.

The bar graph below summarizes the building scorecard rating results by major system. The detailed building scorecard follows at the end of this section.

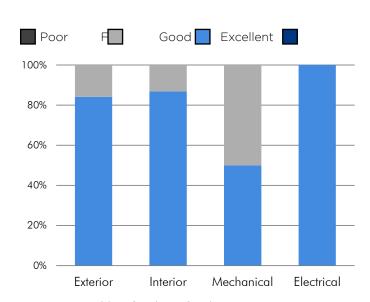


Figure 132 - Building Condition Graph



Figure 133 - Campus Location.



Figure 134 - Student Life Patio/Greenroof

Exterior

The exterior building envelope is in good condition.

No recommendations at this time.

<u>Interior</u>

The building was renovated in 2019, concurrently with Academic Commons, and the interior finishes are in good condition.

No recommendations at this time.



Figure 135 - Marked Up Ceiling Tiles.



Figure 136 - Interior, Student Game Room

Mechanical Systems

Central plant boilers and chillers in Clark Library provide heating and chilled water to AHUs in the Student Activities Building. Supplemental DX split systems provide additional cooling to selected areas. The main AHU is primarily located on the roof. The HVAC systems are in fair condition.

No recommendations are made at this time.

Plumbing/Fire Protection

Domestic water piping is copper. Sanitary piping is cast iron. Domestic heating water is generated by a heat exchanger installed in 2019. Plumbing piping, equipment and fixtures are in good condition. Building is fully sprinklered with wet pipe fire protection system. No problems were reported for plumbing or fire protection system.

Electrical Systems

The electrical power and distribution systems are in good condition. Additional system components that are in good condition include a mixture of fluorescent and LED lights, wall pack emergency lights, horizontal data cabling and a Siemens PMI-3 Fire Alarm Control Panel.

A 1000A Square D distribution switchgear serves the building along with a 150kW Cummins generator for life safety and standby loads.

Currently, there is no Arc Flash labeling of equipment in the building.

Recommendations include addressing the Arc Flash labeling of equipment as soon as practical and replacing/upgrading fluorescent light fixtures with LED fixtures as funding permits.



Figure 137 - Rooftop AHU

Building Code/Accessibility

No code violations have been noted in this building. The walkways throughout the building and exterior pedestrian walkways are compliant with accessibility requirements. There were no bathrooms or drinking fountains as these are located in the Academic Commons.

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No recommendations are made at this time.

Building Condition Assessment

Facilities Master Plan Update

Building Name: Student Activities

Building Component		Condition (%)			Building Component	Condition (%)				
Componen	Е				Component	Е	G	F	Р	
Exterior					Electrical					
Foundations		80	20		Fire Alarm System		100			
Exterior Walls		100			Emergency Power/Lighting Systems		100			
Building Framing		100			Lighting Systems		100			
Windows/Louvers		100			Electrical Distribution		100			
Doors/Frames/Hardware		100			Power Wiring		100			
Roof		25	75		Tel/Data Systems		100			
Interior					Specialty Systems (PV Array)					
Floors		90	10			Compliance				
Walls		100			Building Component	Compilance				
Ceilings		70	30		Component	С	PC	NC		
Doors/Frames/Hardware		100			IBC/ADA					
Built-In Furnishings		75	25		Exterior Doors	х				
Stairs		60	40		Interior Doors	х				
Elevators/Escalators		100			Horizontal Circulation (Corridors)	х				
Specialty Systems		100			Horizontal Circulation (Ramps)					
Mechanical					Vertical Circulation (Stairs)	х				
HVAC Distribution & Controls		50	50		Vertical Circulation (Elevators)	х				
AHU/Fans			100		Toilet Rooms	х				
Cooling System (Chiller/CT)					Locker Rooms					
Heating System (Boilers/Steams)					Drinking Fountains	Х				
Pumps/Motors/Compressors			100		Signage	Х				
Fire Sprinkler/Standpipe Systems		100			Assembly Areas	Х				
Plumbing Systems/Fixtures		100			Sales and Service Areas					
Specialty Systems					Dining Areas					

Not applicable

E - Excellent

Conditions generally at a "like new" level. Exemplary Maintenance and appropriate funding required to maintain this level.

G - Good

Conditions generally at an acceptable level. Routine maintenance and appropriate funding required to maintain this level.

F - Fair

Conditions at a minimally acceptable level. Improvements, involving greater than routine maintenance and additional funding required.

P - Poor

Conditions below minimally acceptable levels. Conditions require substantial funding and/or considerable maintenance effort to be improved.

Conforms with the currently adopted version of the International Building Code (IBC) and the

C - Compliant Conforms with the currently adoption Maryland Accessibility Code.

Partially conforms with the currently adopted version of the International Building Code (IBC) and the Maryland Accessibility Code due to modifications of the building component/space.

NC - Non-Compliant Does not conform with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code.

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PC - Partially Compliant

Howard Community College Facilities Master Plan

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490				

Science, Engineering, and Technology Building (SET)

Academic

Year Built: 2017
Year Renovated: N/A
Area (GSF): 145,657
Floors: 4

Building History and Use

Constructed in 2017, the Science, Engineering and Technology Building contains instructional space and faculty and staff offices. This facility houses a variety of programs in science, engineering, engineering technology, and cybersecurity. The building includes state-of-the-art learning spaces such as dedicated science labs with research-grade instruments; a cybersecurity lab; greenhouse; a rooftop telescope observation area; digital fabrication lab with professional-grade manufacturing equipment; outdoor yard space for large student projects; flexible classrooms and study spaces; and multi-capacity communal areas, that serve as a launch pad for student careers and entry into the Science, Technology, Engineering and Mathematics (STEM) workforce.

Functional Analysis

The building functions well as the home to the science, engineering and technology programs at HCC. Spaces allocated for each program are well designed and purposebuilt and effectively support their intended function.

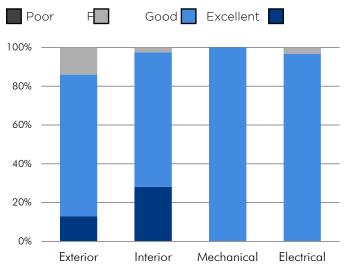


Figure 138 - Building Condition Graph

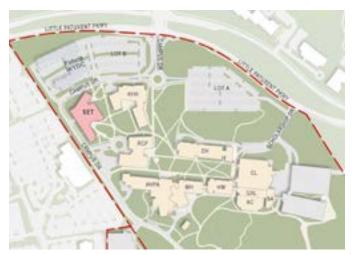


Figure 139 - Campus Location



Figure 140 - Building Exterior

Building Condition

Overall the building is excellent to good condition.

The bar graph on this page summarizes the building scorecard rating results by major system. The detailed building scorecard follows at the end of this section.

Exterior

The exterior envelope is generally in good condition. Some areas of concern include areas of minor ponding on the roof and condensation under rooftop mechanical units was observed.

<u>Interior</u>

Most of the interior finishes are in excellent to good condition. Some areas were observed to have minor cosmetic issues such as paint peeling and some drywall damage. There are some large cracks in the concrete slab floor likely caused when the building settled after construction.

Recommendations include repair and repaint damaged drywall and peeling paint.



Figure 141 - Water Damage and Peeling Paint



Figure 142 - Example of Scuffed Paint

Mechanical Systems

Mechanical systems are less than 10 years old and are reported to be in good condition. Building is served by a water-cooled chilled water plant with chillers located in main utility room and multi-cell cooling tower located on roof. Dual propane and natural gas fired MACH boilers generate heating water for the building. Central air handling units are located on the roof and in the basement of the building. The variable air volume units supply air to terminal boxes throughout the building for cooling and heating. Laboratory exhaust fans on the roof provide dedicated lab exhaust to various spaces within the building.

No recommendations at this time.



Figure 143 - Example of Floor Crack



Figure 144 - Boilers

Plumbing/Fire Protection

Plumbing systems, including water and natural gas piping, gas fired domestic water heaters, and toilet room fixtures, are in good condition. Fire protection systems, including fire pump, wet and dry sprinkler distribution system are in good condition.

No recommendations are made at this time.



Figure 145 - Chillers



Figure 146 - Vacuum System



Figure 147 - RTUs



Figure 148 - Electrical Substation

Electrical Systems

The electrical power and distribution systems are in good condition. Additional system components that are in good condition include a mixture of fluorescent and LED lights, wall pack emergency lights, horizontal data cabling and a Siemens PMI-3 Fire Alarm Control Panel.

A 3000A Eaton distribution switchgear serves the building, along with a 1500kW Kohler generator for life safety and standby loads.

Currently, there is no Arc Flash labeling of equipment in the building.

Recommendations include addressing the Arc Flash labeling of equipment as soon as practical and replacing/ upgrading fluorescent light fixtures with LED fixtures as funding permits.

Building Code/Accessibility

The building and exterior pedestrian walkways are compliant with accessibility requirements. The drinking fountains and accessible stalls are also compliant with the current code. Penetrations into the rated walls at the stairwell were missing firestopping; they are required to be sealed by code.

Recommendations include adding firestopping in the stairwell where required by code.

Howard Community College

Facilities Master Plan

Building Condition Assessment

Facilities Master Plan Update

Building Name: Science, Engineering and Technology Building

Building Component		Condit	ion (%)	Building Component	Condition (%)			
Сотролет	E G F P		Е	G	F	Р		
xterior				Electrical				
Foundations		80	20	Fire Alarm System		100		
Exterior Walls	25	75		Emergency Power/Lighting Systems		100		
Building Framing				Lighting Systems		80	20	
Windows/Louvers	40	60		Electrical Distribution		100		
Doors/Frames/Hardware		100		Power Wiring		100		
Roof		50	50	Tel/Data Systems		100		
nterior				Specialty Systems (PV Array)				
Floors	25	75				C	1:	
Walls		80	20	Building Component	Compliance			
Ceilings	50	50		Component	С	PC	NC	
Doors/Frames/Hardware	50	50		IBC/ADA				
Built-In Furnishings		100		Exterior Doors	Х			
Stairs		100		Interior Doors	Х			
Elevators/Escalators	100			Horizontal Circulation (Corridors)	Х			
Specialty Systems		100		Horizontal Circulation (Ramps)				
echanical				Vertical Circulation (Stairs)	Х			
HVAC Distribution & Controls		100		Vertical Circulation (Elevators)	Х			
AHU/Fans		100		Toilet Rooms	Х			
Cooling System (Chiller/CT)		100		Locker Rooms				
Heating System (Boilers/Steams)		100		Drinking Fountains	Х			
Pumps/Motors/Compressors		100		Signage	Х			
Fire Sprinkler/Standpipe Systems		100		Assembly Areas	Х			
Plumbing Systems/Fixtures		100		Sales and Service Areas				
Specialty Systems		100		Dining Areas				

Not applicable

E - Excellent Conditions generally at a "like new" level. Exemplary Maintenance and appropriate funding

required to maintain this level.

G - Good Conditions generally at an acceptable level. Routine maintenance and appropriate funding

required to maintain this level.

F - Fair Conditions at a minimally acceptable level. Improvements, involving greater than routine

maintenance and additional funding required.

P - Poor Conditions below minimally acceptable levels. Conditions require substantial funding and/or

considerable maintenance effort to be improved.

Conforms with the currently adopted version of the International Building Code (IBC) and the C - Compliant

Maryland Accessibility Code.

PC - Partially Compliant Partially conforms with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code due to modifications of the building component/space.

NC - Non-Compliant Does not conform with the currently adopted version of the International Building Code (IBC)

and the Maryland Accessibility Code.

Site and Infrastructure Condition Assessment

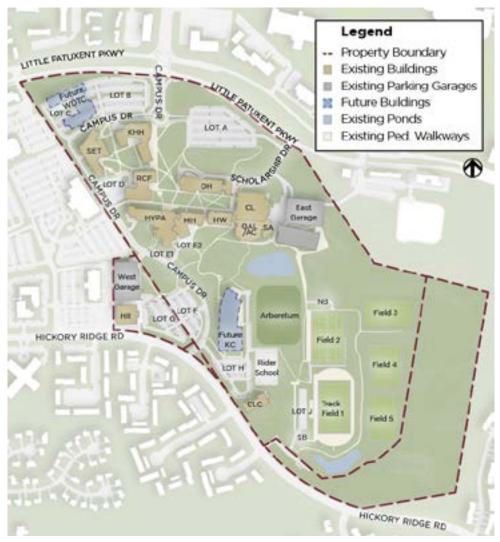


Figure 149 - Campus Base Map

Introduction

The Howard Community College (HCC) campus consists of 125 acres and is located in the heart of Columbia. The campus is currently improved with fifteen buildings and totals nearly one million gross square feet of space and 2,978 parking spaces. As a central component of the city, the campus embodies many of the tenets that guided development of the larger community: preservation of environmentally sensitive areas and integration of the built and natural environments. The campus is land locked with collector roads on the north and south sides, the hospital complex to the west, and stream valley, utility infrastructure, and dense residential development to the east.

This Site Conditions and Assessment section provides an update to the conditions documentation, considerations, and recommendations contained in the 2015 Facilities Master Plan for HCC. It addresses: forests, surface waters, floodplains, steep slopes, zoning, land use, vehicular and pedestrian circulation, utilities, stormwater management and signage. Existing campus site improvements are depicted in the base map.



Figure 150 - Forests and Vegetation

Forests and Vegetation

Existing Conditions

Several significant areas of forest exist on the campus. The largest of these is located on the southern part of campus, most notably east of the athletic fields. Forests on campus consist of oaks, hickory, red maple, cherry, beech, black gum, tulip poplar and sassafras. The forested areas are, for the most part, protected in Forest Conservation Areas of different sizes scattered throughout the campus totaling 21.25 acres.

A 7.5-acre wooded area in the southeast corner of campus is composed largely of mature forest but is zoned and therefore ineligible to be designated as a Forest Conservation Area. There is a large spoil pile from previous grading operations within this area which otherwise contains mature woods, streams, wetlands and their associated buffers.

The understories of many forest edges contain invasive species including multi-flora rose, poison ivy, and honeysuckle. Selective cutting and pulling of invasive species as suggested by the 2015 Facilities Master Plan has begun to allow some natural regeneration of the forest floor. Additionally, some replanting of native species has begun in selected areas.

The Forest Conservation Areas have been developed with the purpose of protecting and preserving the forest ecosystem. Activities allowed within them are greatly limited in the interest of protecting the forest, which results in limitations on the amount and location of buildable land on the campus.



Figure 151 - Existing Woods

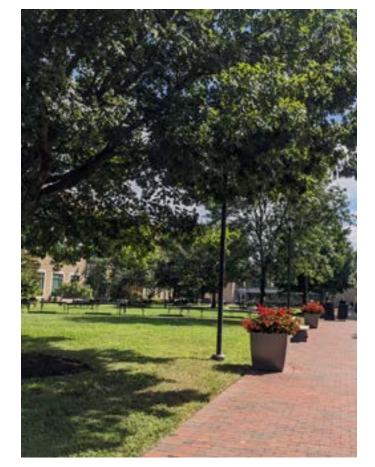


Figure 152 - Campus Quad



Figure 153 - Invasive Species in Understories



Figure 154 - Mowed Lawn Area

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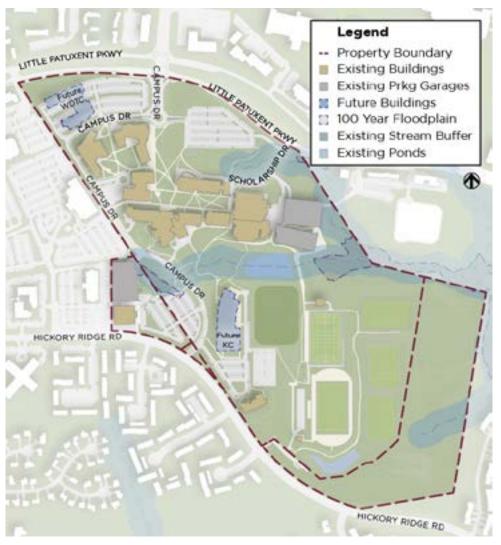


Figure 155 - Surface Waters and Floodplains

Surface Waters and Floodplains

Existing Conditions

The headwaters of the Little Patuxent River originate on campus and several branches run through or along the east side of campus and traverse portions of the campus. A small part of the 100-yr floodplain is located on campus property just southeast of the East Garage. Several delineated wetlands and numerous seeps are located in the stream buffer areas. In addition, a stormwater pond is located just southwest of the East Garage.

Currently, Howard County has established a 50' Stream Buffer and a 25' buffer upslope of wetland boundaries.

Floodplains on campus were identified using FEMA Map Panels 24027C0135D and 24027C0155D, dated November 6, 2013. These maps show a 100-yr floodplain associated with the stream along the eastern campus boundary east of the athletic fields. The floodplain turns and reaches west into the campus up to the outfall pipe from the campus pond. Development is prohibited in the 100-year floodplain except road crossings and necessary utilities, which require acquisition of Army Corps of Engineers permits.

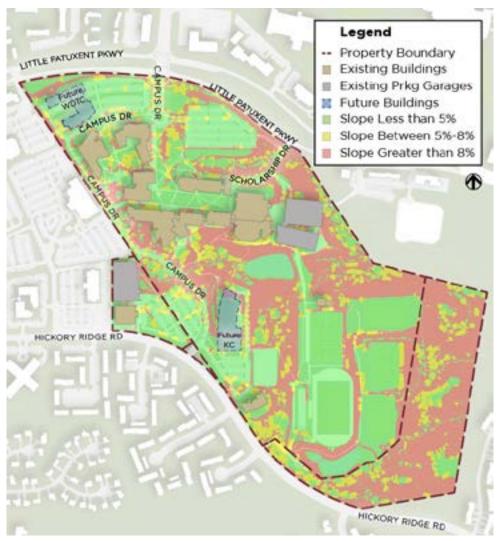


Figure 156 - Slopes

Steep Slopes

Existing Conditions

Approximately 6.9 acres or 5.6% of the 125 acre campus is composed of 25% or greater slopes occurring throughout the campus with the largest contiguous areas adjacent to the central pond and stream valleys. In general, Howard County does not permit development of naturally occurring slopes greater than 25%. In addition, sites containing steeper slopes are generally more challenging to develop for access and typically incur greater cost.

Steep slopes and the associated stream valley and stormwater management pond that bisects the middle of campus create conditions that make ADA accessibility from the north to the south parts of campus a challenge.



Figure 157 - Steep Slope Near Lot C

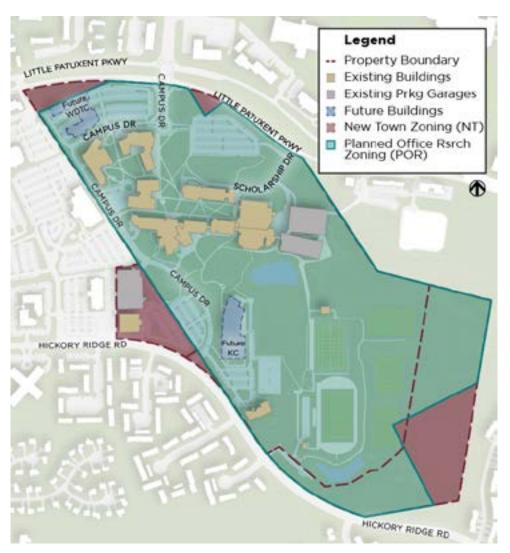


Figure 158 - Zoning Districts

Zoning

Existing Conditions

The campus is overlain by two Howard County zoning districts that include:

POR - Planned Office Research District

- Max. building height: 50'
- Structure with an additional 1 ft. in height for every 2 ft. of setback above the minimum: 80' max. height
- Min. structure or use setbacks
- From residential districts or uses: 75'
- From age-restricted housing (R-SA-8 or R-A-15 Districts): 50'
- From restaurants: 75'
- From any other district: O'
- Except adjoining open space: 10'

• From public street right-of-way: 30'

NT - New Town District

- Governed by terms of Final Development Plan FDP-
- Except for portion of NT Zone containing Hickory Ridge Building and the West Garage, campus NT Zone areas are designated SFLD (Single Family Low Density) in the FDP, but allocated as Open Space and restricted from all further development of residential uses
- Athletic fields added to FDP as a permitted use
- Afforestation and reforestation planting is permitted, but preservation of existing forest cannot count toward required Forest Conservation area

It should be noted that development within the NT District involves additional public notice and hearing and permitting requirements.

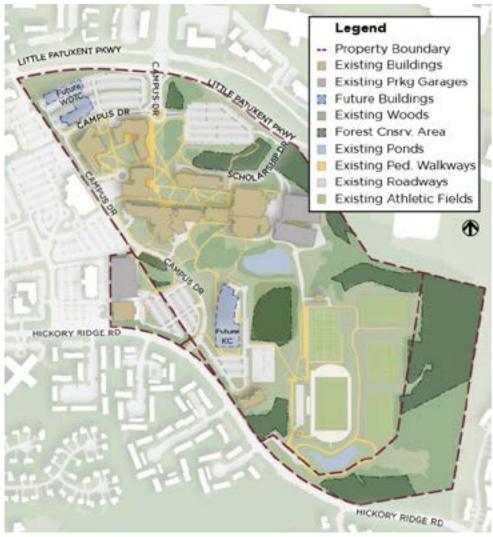


Figure 159 - Land Use/Cover

Land Use/Cover

Existing Conditions

The developed portions of campus are characterized by a mosaic of campus buildings and paved pathways interspersed with open lawns and smaller, vegetated landscaping beds. Aside from the roadway system connecting Little Patuxent Parkway to Hickory Ridge Road and the main parking areas on campus, vehicular circulation is mostly absent within the core campus. While the west side of the campus is situated adjacent to the intensely developed Howard County General Hospital and associated medical office buildings, the east side of campus is characterized by a large contiguous block of forested area that extends to adjoining properties at the north and south ends of the HCC property.

Concerns related to the land use of the campus include:

- Existing roads break up pedestrian circulation to Hickory Ridge Building and the Children's Learning Center
- ADA accessibility from the north to the south parts of campus is a large challenge because of the stream valley that bisects campus
- Many of the walks around campus are utilized as maintenance vehicle access roads (gators, golf carts, and small trucks). Consideration should be given when creating walkways to making the paths wide enough that a person and a maintenance vehicle can pass one another without going off the path.

- Pedestrian access to the athletic fields is, for the most part, limited to one path that traverses the hill west of Field 1 and Field 2. Even then it is too steep for ADA accessibility. Consideration might be given to creating an arrival feature that celebrates the entrance to the Kahlert Foundation Complex, takes advantage of the hill to provide spectator seating, and creates multiple access ways (ADA accessible and shorter conventional stairways) down to the fields.
- Consideration should also be given to creating other connections from the athletic fields to the northern campus core. The current access path from Field 1 to the East Garage is utilized by many maintenance vehicles and there are maintenance laydown areas along the pathway. This does not lead to a distinctive and inviting connection between the North Campus and the Athletic Fields.
- The area around the bus stop along Hickory Ridge is heavily worn. Consideration should be given to creating a mini transit plaza to accommodate riders with paving, benches, and trash receptacles.
- There is a general lack of continuity of pedestrian paths on the east side of Campus Drive.
- There has been an increase in events taking place on the Quad that require vehicular access for food trucks and equipment.



Figure 160 - Typical North Campus Walkway



Figure 161 - Campus Quad



Figure 162 - Maintenance Vehicle Path



Figure 163 - Typical East Campus Walkway

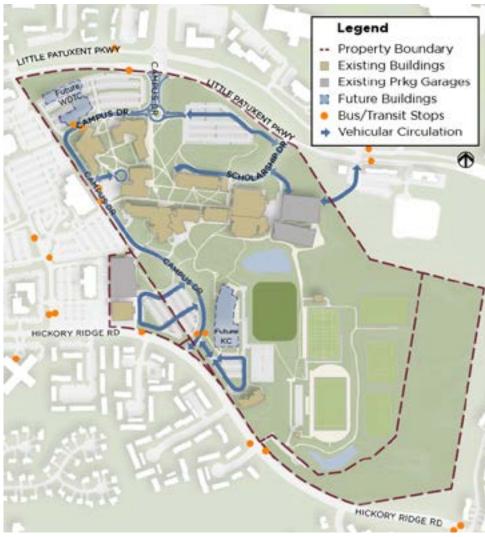


Figure 164 - Vehicle Circulation

Vehicular Circulation

Existing Conditions

The main vehicular access for the entire campus is through Campus Drive, with one entrance located along Little Patuxent Parkway and one entrance located off Hickory Ridge Road. A signalized intersection at the Hickory Ridge Road entrance to Campus Drive was installed after the 2015 Facilities Master Plan and the traffic light has improved the safety of the Hickory Ridge Road entrance. Relocation of Campus Drive west as contemplated by the 2010 Facilities Master Plan would be an expensive and challenging project due to twin 48" culverts flowing beneath the West Garage entrance road that will need to be extended. Additionally, a portion of a Forest Conservation easement south of the parking garage entrance will need to be extinguished (and replaced elsewhere) to make way for the road and its supporting fill slopes.

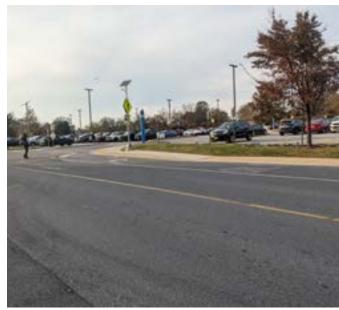


Figure 165 - Campus Drive by Lots B and C

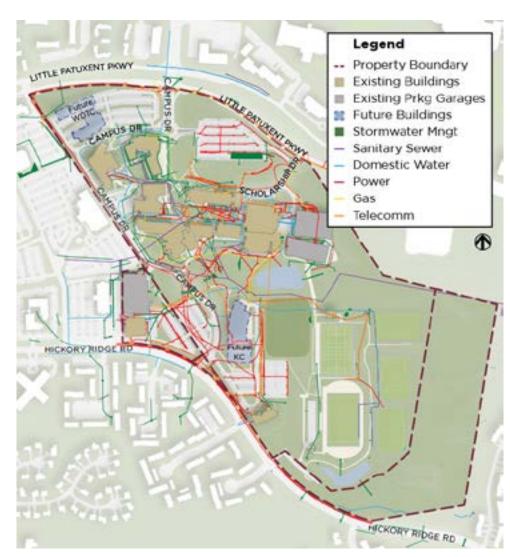


Figure 166 - Utilities

Utilities

There are a myriad of underground utilities that traverse campus that include electric, natural gas, irrigation, sanitary sewer, storm drain, telecommunications and domestic water.

Sanitary

- A 10" public line flowing east through campus serves the hospital complex to the west. Most of this line is within an easement except where the line goes around the south side of the central pond.
- A 6" and 8" private lines flowing to a 10" public main connects all campus buildings.
- There are no known existing capacity limitations for sanitary sewer on campus.

Water

- An 8" line from Little Patuxent Parkway on west side of the main entrance feeds a large loop that serves the campus quad buildings.
- A branch from the loop serves the new Kahlert Foundation Complex and athletic fields.
- The Hickory Ridge Building and Children's Learning Center are each served by independent connections to the public main in the Hickory Ridge Road.
- A branch from the campus loop, that serves the Kahlert Foundation Complex and athletic fields, runs on the east side of Campus Drive to a fire hydrant near Parking Lot J.
- The onsite water service has capacity limitations that may impact future development areas or necessitate alternative water supply tapping outside the oncampus system.

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Flectric

HCC is served by two underground medium voltage, 13.2kV, BGE Service feeders. Feeder #7604 and feeder #7607 provide power to an outdoor medium voltage (MV) switchgear lineup positioned just north of the East Parking Garage. The Medium voltage switchgear lineup is rated at 13.2kV, 600A, 25kAIC, with 19 sections. There are future provisions in the form of conduit stub ups for two additional sections on each end of the gear, if these sections are added the gear would be a total of 23 sections.

The switchgear is arranged in a Main-Tie-Main configuration with redundant utility feeders and automatic transfer capabilities. The existing switchgear has redundant feeder switches on both sides of the switchgear to provide MV loop distribution system so that each loop can be fed by either MV feeder in the event that there is an outage in one of the MV feeders or isolate a section of the MV loop. Each loop is fed from both sides of the switchgear via 3-way loop switches installed at each transformer. Each feeder switch in the switchgear is installed with a 125E Current limiting fuse which limits the loop capacity to approximately 2283kVA. There are four loops serving the campus including:

- Loop 1 (Feeders E-1 & W-2): DH, 2500kVA; KHH Building, 2000kVA; HVPA Building, 2000kVA; and RCF Building; 1500kVA for a total of 8000kVA connected
- Loop 2 (Feeders E-2 & W-3): KHH Building, 1500kVA; and the SET Building 2500kVA for a total of 4000kVA connected
- Loop 3 (Feeders E-3 & W-1): East Garage, 1500kVA; KC, 2000kVA; CLC, 225kVA; and HR Building, 750kVA for a total of 4975kVA connected
- Loop 4 (Feeders E-4 & W-4): CL Building, 1500kVA

Electrical Load	Summa	iry	
	Connected Load (KVA)	Max Load (125E Fuse) (KVA)	Estimated Load
Loop 1 (Feeders E-1 & W-2)	8000	2283	2283
Loop 2 (Feeders E-2 & W-3)	4000	2283	2283
Loop 3 (Feeders E-3 & W-1)	4975	2283	2283
Loop 4 (Feeders E-4 & W-4)	1500	2283	1200
Loop 5 (spare)	0	- 4	
Loop 6 (spare)	0		
Total	18475	9132	8049
Max Capacity on 600A Switchgear (@ 80%)		11000	11 000
Spare Capacity - Max Fuse Size		1868	2951
Spare Capacity on Loop 4 (Assumes 80% Loading on EX XFMR)		1063	-
Total Spare Capacity	3+1	2951	2961

Figure 167 - Electrical Load Summary

The 600A Switchgear rated at 13.2kV has a total Full Load capacity of 11MVA at 80% rated. Since the connected load on Loops 1, 2, and 3 is well beyond the overload protection provided by the 125E fuse serving each of the feeders. These loops will be considered maxed out at the 2,283kVA. Loop 4 only has a single 1,500KVA transformer Connected load so the assumption will be that transformer was designed to be loaded to 80% thus the 4th loops contribution will be 1,200kVA. With 3 loops drawing a maximum of 2,283kVa and one loop drawing 1,200kVA assuming the 1,500kVA transformer on that loop is loaded to 80%. the total power draw on the switchgear is 8,049kVA, which leaves approximately 2,951kVA of spare capacity.

Additionally, if each of the existing feeders are metered the exact demand load can be determined and a more accurate available capacity for the switchgear can be determined.



Figure 168 - Campus Electrical Distribution Equipment

Stormwater Management

The following is a summary documentation and analysis of stormwater management on campus.

- Having been designed prior to the significant changes to Maryland Stormwater Management Regulations in 2007, many of the existing stormwater systems are "macro" in scale and treat large drainage areas. These primarily consist of piped storm drains flowing to a large bioretention basin south of and underground quantity storage chamber beneath Parking Lot A, a wet pond in the central campus, a dry basin on east side of West Garage, and a wet pond south of the athletic fields.
- The problem of erosion and degradation of the central stream area identified previously has been addressed with a restoration project to correct stream bank erosion and establish a more natural, stable, and sustainable geometry.
- As identified in 2010 Master Plan, the stream channel downstream (east) of Faculty Drive continues to be deeply incised and the outfall of 42" culvert beneath the road is undermined. The stream channel degradation is caused by surges of runoff from upstream being forced through the channel at high velocity. This area collects runoff in part from Parking Lot F which is the single largest expanse of impervious surface on campus. Runoff from this parking lot is somewhat disconnected, i.e. it doesn't flow directly to storm drain inlets, but an opportunity may exist to reduce the overall quantity of runoff that eventually makes it the degraded stream. The long grass islands in the middle of Parking Lot F are graded as depressions and could rather easily be converted to micro-bioretention facilities rather than simple grass "channels."

Improvements to the drainage within the Quad area are needed to prevent ponding.

Several "experimental" or demonstration infiltration systems have been installed in older areas of campus.

Kate Hetherington Hall, the Science Engineering Technology Building and the Kahlert Foundation Complex have multiple small Environmental Site Design (ESD) features spread around the respective buildings and represent a prototype of the method required by current Maryland stormwater regulations.

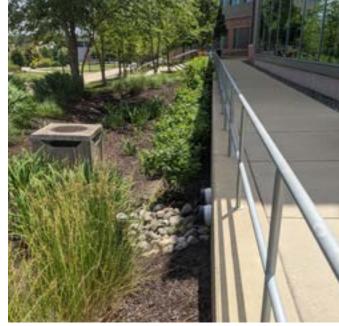


Figure 169 - SWM Facility 1

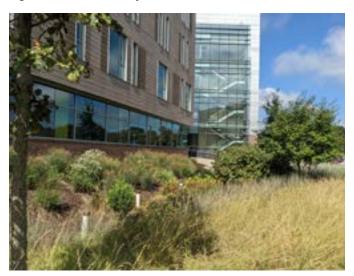


Figure 170 - SWM Facility 2

Site Development Considerations and Recommendations

Following is a list of planning factors to be considered in the formulation of campus development options and the facilities master plan recommendations.

- Continue development on the South Campus to make accessible and convenient physical connections with the North Campus to establish a more integrated and holistic campus experience. Additional development in this part of campus provides the opportunity to overcome the psychological divide between North and South campus and create an improved connection with the athletic fields.
- Continue development on the North Campus along Little Patuxent Parkway to provide a distinctive and inviting "front entrance" to the campus that will create a more visible profile for the College that engages the greater community.
- Plan new development away from the New Town Zoning District, as practical, to avoid additional permitting requirements. If not avoidable, additional time should be included in the project development schedule to accommodate the additional requirements.
- Improve access to the Quad for larger vehicles, along with drainage infrastructure upgrades, to facilitate larger events in support and engagement of students, faculty and staff, and the greater community.
- Preserve existing natural features and sensitive areas (i.e., floodplains, wetlands, etc.) to maintain a unified campus.
- Create better separation of pedestrian and vehicular circulation - currently roads interrupt pedestrian flow around the Hickory Ridge Building.
- Address the lack of pedestrian path continuity on east side of Campus Drive.
- Increase and improve pedestrian access points to the athletic fields.
- Reconsider the entrance and approach from Hickory Ridge road in keeping with the vision of HCC to create a second "main entrance."
- Review possibilities for transportation plazas at bus stops.
- Implement, strategically, stormwater treatment facilities within existing campus infrastructure. Example: grass strips in middle and south side of Parking Lot F.

- Develop a study of the campus electrical grid, feeders, building services, transformers, and associated electrical equipment to determine the available capacity to support additional demand from the future conversion of heating systems from natural gas and oil to electric to support decarbonization initiatives. The study should include the potential costs and feasibility to upgrade systems. Renewable solar power, building renovations, and heating system technologies such as heat pump chillers should be evaluated on a campus wide basis in conjunction with electrical grid analysis to determine the most cost effective and sustainable approach to supporting the transition from carbon based fuel sources.
- Complete load flow, coordination, and arc flash studies. The load flow will provide better information relating to the available capacity of the switchgear and generally is completed as part of an arc flash study. The arc flash study is required to provide arc flash labeling per NEC 110.16(A)



Figure 171 - Natural Area to be Preserved

Instructional Space Utilization

The efficient use of instructional space allows higher education institutions to maximize their return on investment in built resources. At times when demand is low, institutions can shift instruction to enable renovations and upgrades to campus facilities. When instructional demand and enrollment are high, increasing hours and seat fill in strategic locations can help institutions absorb growth.

Enrollment Overview

Maryland two-year public colleges lost 31 percent of their fall headcount enrollment between 2013 and 2022. Howard Community College (HCC) fared better than the system as a whole, losing 19 percent fall headcount between 2013 and 2021, then gaining 450 students between fall 2021 and fall 2023 (top right). Despite that gain, HCC had 1,395 fewer students in fall 2023 than it had in fall 2013.

Inventory Comparison

HCC has renovated and added to existing structures in the past decade. Two new buildings are in planning and construction phases: the Kahlert Foundation Complex, which will house academics and athletics; and, a new Workforce Development and Trades Center, A total of 52 new classrooms and labs will be added to the instructional inventory.

Data Set

These sources informed the study:

- Fall 2023 and spring 2024 registrar course schedules
- Fall 2023 and spring 2024 continuing education course schedules
- Fall 2023 Events schedule

Howard Community College

Facilities Master Plan

- Ad Astra instructional space list
- Historical physical space inventories
- Space programs for recently renovated buildings and projects in planning and construction phases

Peak Week

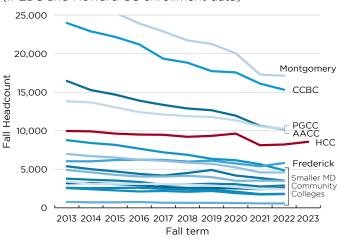
The study evaluates the peak week of instruction, during which the most instructional demand occurred.

- Peak fall 2023: October 9 through October 13
- Peak week spring 2024: March 11 through March 15

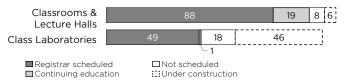
More weekly student contact hours (WSCH) occurred in fall 2023 than in spring 2024. Therefore, fall 2023 was used as the primary semester for analysis. Daytime hours include courses that started before 5:00 PM.

Enrollment History

(IPEDS and Howard CC enrollment data)



Fall 2023 Scheduled Instructional Spaces



Fall 2023 Scheduled Spaces

Classrooms and Lecture Halls

Of the recorded 115 classrooms and lecture halls at HCC, 88 were scheduled by the registrar and 19 were scheduled exclusively by continuing education in fall 2023 (above). Eight were not scheduled, and an additional six will come into service when new buildings are opened.

Class Laboratories

There were 69 class laboratories available for instruction in fall 2023. The registrar scheduled 49 labs; continuing education scheduled one. When new buildings are opened, 46 additional labs will be added to the inventory. New labs will house primarily workforce development and mathematics instruction.

Day of Week Patterns

The Meetings per Day chart illustrates the number of daytime course meetings by day of week. In classrooms, the registrar-scheduled courses met most on Mondays and Wednesdays. Fewest meetings took place on Fridays, which is typical at most institutions. Class Laboratory meetings were relatively evenly distributed Monday through Thursday, with few meetings on Fridays.

Continuing education scheduled evenly in classrooms from Monday through Thursday. Only two continuing education meetings took place in laboratories.

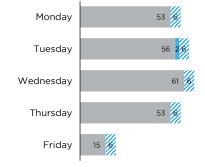
More events were held on Fridays than on any other day of the week. Classrooms held 25 Friday events. Class Labs held six events on Friday. Non-class events are not counted toward instructional space utilization performance.

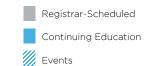
Meetings per Day





Class Laboratories





Day of Week, Time of Day

Examining meeting patterns by time of day helps identify opportunities to improve utilization. Classroom, Lecture Hall, and Class Laboratory scheduling patterns are shown below. The x-axis of each chart is divided into half-hour increments. The y-axis tracks how many course meetings (registrar scheduled and continuing education) took place in every half hour increment.

Classrooms and Lecture Halls

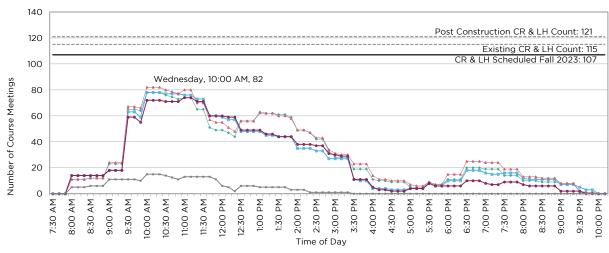
Little lecture instruction took place before 9:30 AM. Peak utilization took place on Wednesday at 10:00 AM, when 82 classrooms and lecture halls were in use. Over the course of the peak week, 107 classrooms and lecture halls were scheduled, leaving eight rooms unscheduled.

Class Laboratories

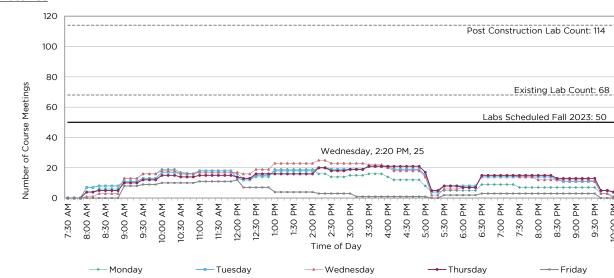
Peak class laboratory utilization occurred between 2:00 PM and 2:30 PM on Wednesday when 25 labs were in use. At that time, 25 of HCC's scheduled labs were not in use, and an additional 18 were not scheduled in peak week, fall 2023.

Meetings by Time of Day, Day of Week

Classrooms and Lecture Halls



Class Laboratories



Maryland Utilization Standards

The Maryland Higher Education Commission (MHEC) expects instructional spaces to meet standard daytime utilization rates. The standards are less demanding for colleges with 3,000 FTE or fewer. Larger colleges, like Howard Community College, have higher hourly targets. Classrooms and lecture halls should be in use 20-27 hours per week. Class Laboratories should be in use 15-18 hours per week, minimum. Classroom seat occupancy should be 60 to 67 percent when class is in session. Class lab seats should be 60 percent occupied.

Daytime instruction is assumed to be between 8:00 AM and 5:00 PM, Monday through Friday, for a total of 45 available hours per week. Evening hours were established based on HCC's fall 2023 instructional patterns: Monday through Thursday, 6:00 PM through 10:00 PM. Daytime demand exceeded evening demand, therefore the detailed utilization analysis to follow includes daytime use only.

Utilization Standards

		Day Hours		Evening	g Hours
	Seat Fill	Low	High	Low	High
Classrooms & Lecture Halls	60% to 67%	20	27	9	12
Class Laboratories		15	18	6.5	8

Average Weekly Utilization Rates

On the facing page, fall 2023 average hourly use and seat fill rates are shown. Dark gray arcs show the registrar-scheduled use. Blue arcs show continuing education hourly use. Orange arcs indicate event hours, which are not counted toward the Maryland utilization goals. Light gray arcs complete the inner circles of the charts, indicating unused capacity.

The outer ring of the charts shows the Maryland utilization standard range. The small college goal and the large college goal are used as high and low utilization thresholds.

Registrar-scheduled courses achieved higher average seat fill than continuing education, thus registrar-scheduled seat fill is indicated in these charts. Not all non-class events reported attendees, therefore seat fill for events was excluded.

Classrooms

 On average, all scheduled classrooms would have been in use 14 daytime hours per week of registrarscheduled instruction plus two daytime hours per week of continuing education. On average, an

- additional three hours per week, per classroom, were reported for scheduled events.
- Registrar-scheduled courses achieved the best seat fill, therefore their 74 percent seat fill is charted here.
 Continuing education courses reached 36 percent seat fill in classrooms (not shown in chart).
- With six hours per week, average, scheduled for evening classes, 14 hours of available capacity remained to add evening sections before reaching the standard
- Evening seat fill was lower, on average, than daytime, at 60 percent.

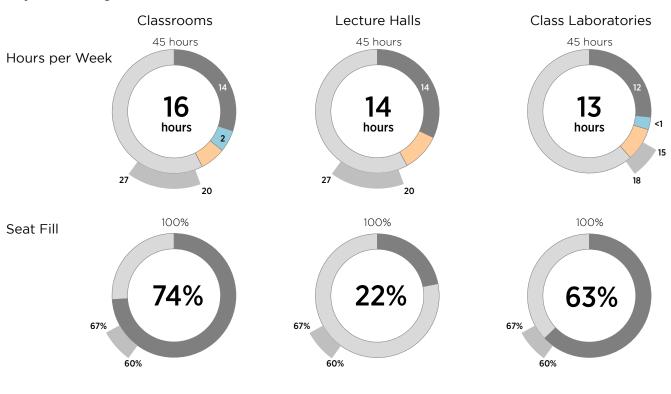
Lecture Halls

- Lecture halls were utilized for 14 daytime hours per week, on average, of registrar-scheduled use. No continuing education was reported in lecture halls. An additional 8.5 hours per week of events were reported.
- Lecture halls were filled 22 percent when registrarscheduled classes were in session. Larger sections could be accommodated.
- Lecture halls got little evening use for instruction (three hours per week) yet were scheduled four hours per week for events.

Class Laboratories

- Registrar-scheduled class laboratory use totaled 12 hours per week, with less than one hour per week scheduled for continuing education.
- Seat fill in registrar-scheduled lab sections reached 63 percent, which exceeded the Maryland standard.
- Evening hourly use in class labs was 15.0 hours per week of registrar-scheduled courses. Continuing education use of class labs totaled 1.8 hours per week, per lab, on average.
- Hickory Ridge held most of the evening events in class laboratories. If spread campus-wide, events would have utilized 5.1 hours per week, per lab. In Hickory Ridge, three English Language Center labs were heavily scheduled for evening events.
- Evening laboratory seat fill was 63.4 percent, which exceeded the Maryland standard.

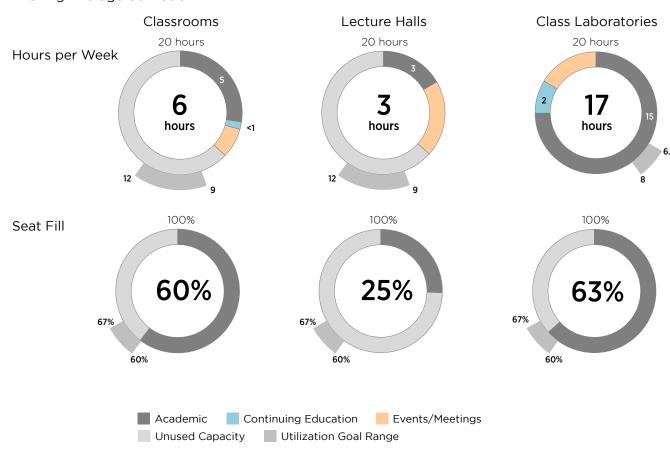
Daytime Average Utilization



Evening Average Utilization

Howard Community College

Facilities Master Plan



JMZ Architects and Planners

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Howard Community College
Facilities Master Plan

Room-by-room Utilization

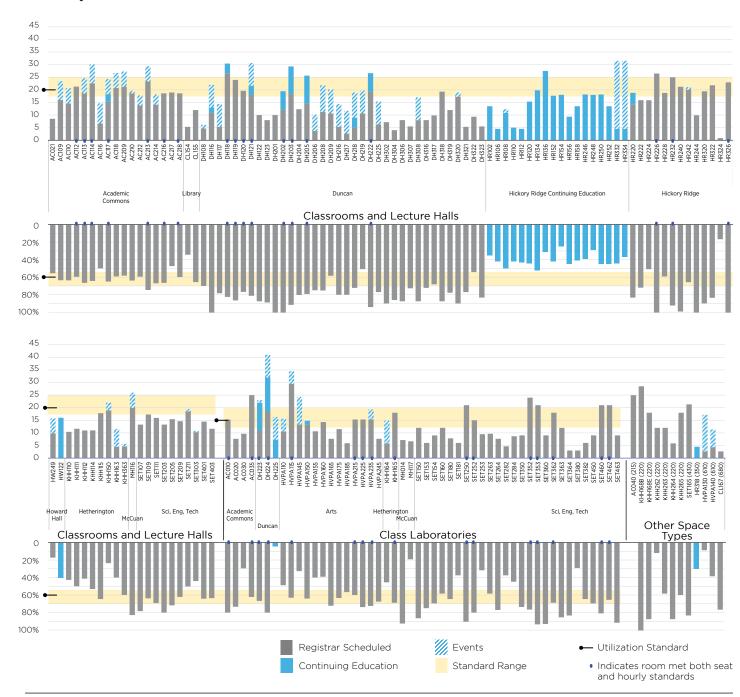
Peak week daytime hourly use and seat fill for rooms scheduled in fall 2023 are illustrated below.

Solid gray and blue columns represent registrar-scheduled and continuing education instruction. Dashed columns show events. Demand incurred by events does not contribute to a room reaching its goal utilization.

Duncan Hall 224 is the only room in which events and scheduled instruction during peak week exceeded 40 hours. The Modern Foreign Languages Association Conference used the room from 8:00 AM to 7:00 PM on Friday during peak week. Registrar-scheduled courses in the room were languages, algebra, and calculus. Continuing Education scheduled uses in Duncan 224 were languages and information literacy.

Thirty-four out of 157 scheduled instructional spaces met both seat fill and hourly standards.

Room-by-room Utilization



Lecture Capacity and Demand

The charts below illustrate how daytime lecture demand could be distributed throughout HCC's classroom and lecture hall inventory. The x-axis is divided to show a range of classroom seating capacities. The y-axis records the number of rooms in each seating capacity range. Red marks show how many rooms were in the inventory. The height of the gray and blue columns shows how many rooms would be required to accommodate course caps at a given seat fill and hourly use.

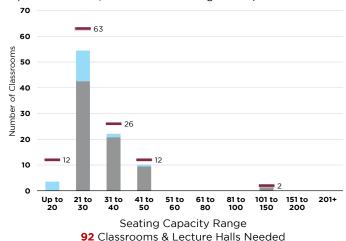
On the left, instruction as-delivered in fall 2023 occupied classrooms in every seating capacity range. Spreading instruction to most rooms on campus, regardless of hourly demand, resulted in a low overall hourly utilization rate but helped all parts of the campus feel active. At fall 2023 utilization rates, 92 classrooms would be required to accommodate daytime demand.

If the Maryland standard 27 hour per week hourly utilization rate were applied, 55 classrooms could be needed to deliver fall 2023 instruction. In this scenario, each meeting was assumed to meet in a room that best matches its course cap with 67 percent seat fill. This results in a surplus of 21 to 30 seat classrooms and deficits in the 41 to 50, 51 to 60, and the 61 to 80 seat ranges. Surplus 21- to 30-seat classrooms could be reconfigured to create higher capacity lecture spaces.

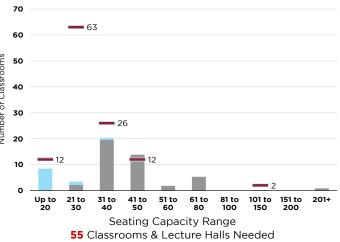
Applying an adapted seat fill standard, like the 74 percent achieved in fall 2023, can shift demand to lower-capacity lecture spaces than the Maryland standard. Applying an adapted hourly standard would allow HCC to gradually increase utilization to meet the 27-hour Maryland target. 67 classrooms would be needed in this scenario. Shift some demand from 31- to 40-seat classrooms into 41- to 50-seat classrooms. Reconfigure surplus 21- to 30-seat classrooms to create higher capacity lecture spaces.

Lecture Space Utilization Scenarios

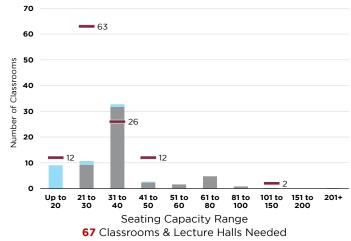
Instructional Distribution as Delivered (16 hours/week, 74 percent seat fill, recorded room assignments)



Capacity at **Maryland Standard Utilization Rates** (27 hours/week, 67 percent seat fill, optimized room assignments)



Capacity at **Adapted Utilization Rates** (23.5 hours/week, 74 percent seat fill, optimized room assignments)



Registrar Scheduled
Continuing Education

Classrooms and Lecture
Halls in inventory

Class Laboratory Capacity and Demand

A weekly student contact hour (WSCH) is a measure of one student occupying one instructional seat for one hour. A room's WSCH capacity is a factor of its seat count and its institution's utilization standards. When Maryland standards are applied (column A, below), 14 labs would have exceeded their calculated WSCH capacity in fall 2023. Within Maryland standards, it would be challenging for HCC to increase the number of course meetings or section enrollment for disciplines that utilize these labs.

If an adapted seat fill rate was applied (15 hours/week, 70 percent seat fill), the same 14 labs would have exceeded the adapted weekly student contact hour capacity in fall 2023 (column B).

Nationally, 80 percent seat fill and 24 hours per week are expected in class laboratories (column C). At this standard, only two labs would have exceeded WSCH capacity in fall 2023: HVPA 115 (dance) and SET 353 (general chemistry).

If HCC wishes to minimize demand for additional laboratories the College should aim for hourly utilization of 24 hours per week in instructional labs.

Class Laboratory Capacity

			F	all 2023 Demar	nd
Meeting Room	Stations	Courses	A 60% seat fill 18 hours/wk	B 70% seat fill 15 hours/wk	C 80% seat fill 24 hours/wk
AC 010	15	Kitchen Apps and Mgmt			
AC 035	15	A la Carte Food Prod & Serv Mgmt Garde' Manger			
DH 224	24	Fdnl Spanish I Fdnl Spanish II Int Spanish I Int Spanish II			
HVPA 115	20	Con Mod Danc Tech:High Int II Con Mod Danc Tech:High Int IV Cont Mod Dance Tech: Int IV Dance Composition High Inter Ballet Technique IV Hip-Hop Dance Inter Ballet Technique IV Music Concepts for Dance			
HVPA 225	20	Painting Studio: Chinese Brush Two-Dimensional Art and Design			
HVPA 235	20	3-D Art & Design Drawing I: Observation/Invent			
KHH 165	16	Clinical Correlations for Pt Clinical Kinesiology Clinical Neuroscience Fundamentals of Practice I Orthopedic Dysfunctions II Therapeutic Modalities			
SET 250	24	Fund of Microbiology Lab			
SET 252	24	Fund of Microbiology Lab Microbiology Lab			
SET 352 SET 353	24 24	Gen Inorganic Chem Lab Chem. and Soc. Lab Fund of General Chem Lab			
SET 362	24	Biol for Allied Health Lab			
SET 460	24	Ant & Phy II Lab			
SET 462	24	Anatomy and Physiology I Lab			

Fall 2023 WSCH exceeded capacity at applied utilization standards

Station Sizes

In the past decade, instructional methods have shifted from traditional lectures to active learning. Station sizes in classrooms and laboratories should allow individuals to move through the room, work in groups, and do hands-on projects. The following station size guidelines are suggested for new or renovated instructional spaces at HCC.

- Classrooms: 20 square feet (SF) per station minimum, preferably between 22 and 28 SF per station
- Lecture Halls: Existing to remain, with any new lecture hall seating between 18 and 20 SF per station
- Class Laboratories: 50 to 115 SF per station

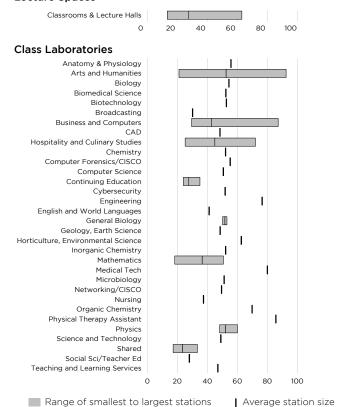
Howard Community College classroom stations fall within the ideal size range, on average. Only ten classrooms had station sizes smaller than 20 SF:

DH 208
CL 155
CL 154
DH 208
HR 324
CL 154
DH 108
CL 155
CL 155

Most laboratory disciplines had average station sizes between 40 SF and 60 SF, yet Broadcasting, Continuing Education, Mathematics, Nursing, and Social Sciences/Teacher Education had average station sizes between 20 SF and 40 SF.

Station Sizes

Lecture Spaces



Utilization Recommendations

Howard Community College's strategy of maintaining seat fill (as much as possible) while utilizing many rooms campuswide helps the College environment feel vibrant. In times of low or rebounding on-campus enrollment, such practices preserve campus culture. Looking ahead, HCC can strategically shift utilization to enable renovations to buildings that require modernization.

- Regularize course start times to enable more efficient room use and help students build workable weekly schedules. Course end times were relatively consistent.
- Maintain average seat fill in classrooms. Increase seat fill to 80 percent in labs.
- Increase laboratory hourly utilization to 24 hours per week, on average.
- Reconfigure surplus classrooms in the 21 to 30 seat range to create 41- to 60-seat classrooms.
- The following disciplines offered courses with caps of 40 to 48 students. Strategically aim for 80 percent to 90 percent seat fill when scheduling these courses to avoid the need for additional large classrooms or lecture halls.
- Biology, Chemistry, and Math lectures have the most course caps in this range.
- Languages offered multiple courses with caps in this range.

Howard Community College

Facilities Master Plan

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