CAPITAL COMMUNITY COLLEGE

CONNECTICUT STATE COLLEGE & UNIVERSITY SYSTEM

CAPITAL COMMUNITY COLLEGE

MASTER PLAN UPDATE

APRIL 2020







G3 ARCHITECTURE INTERIORS PLANNING

CAPITAL COMMUNITY COLLEGE

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EXECUTIVE SUMMARY

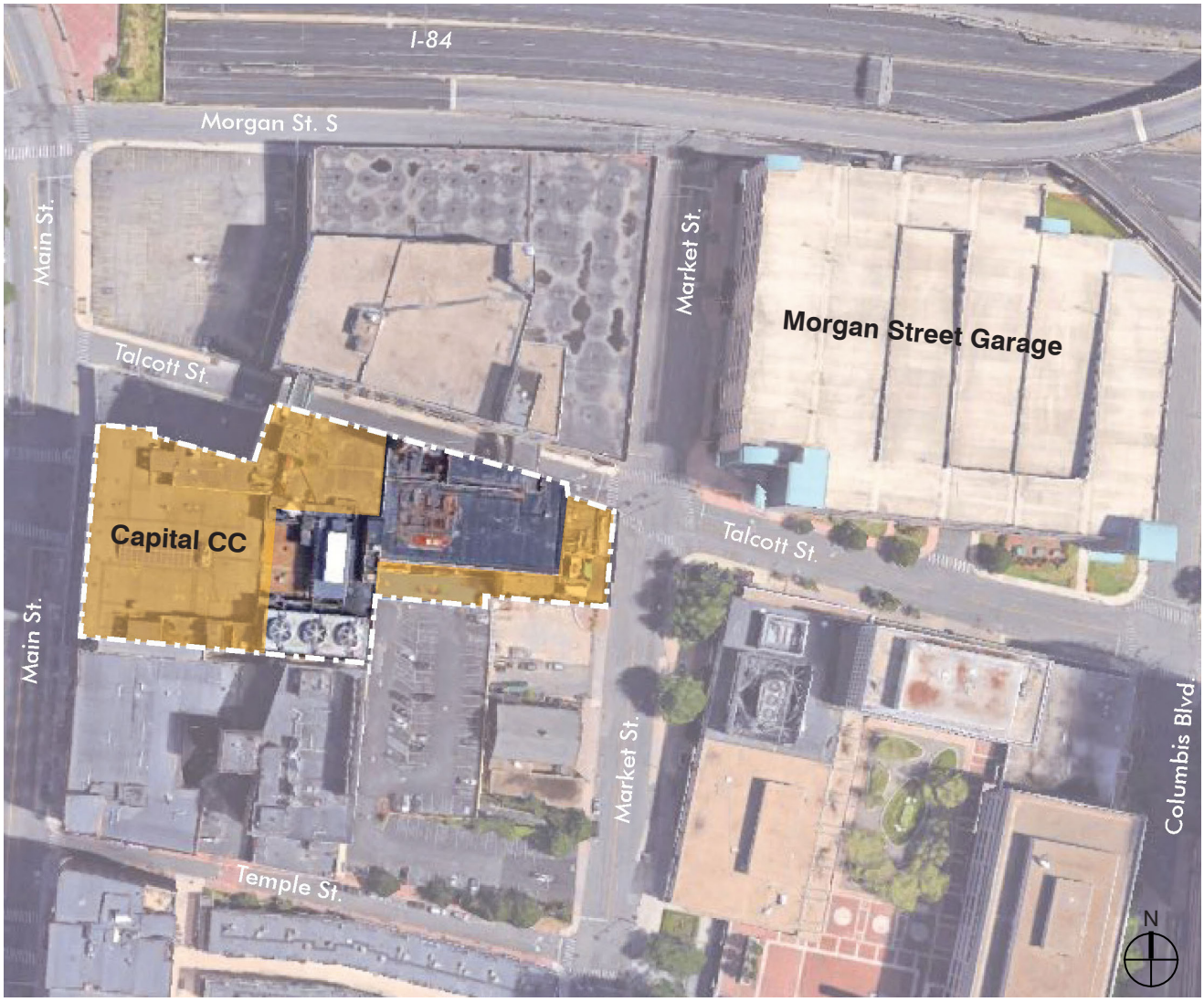
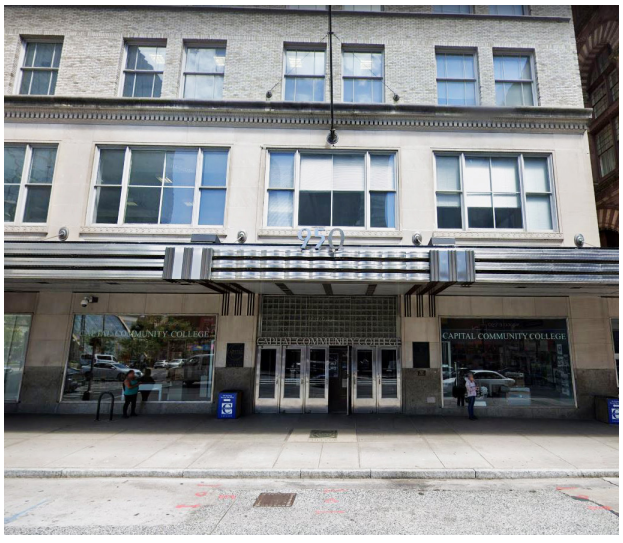


FIGURE 01.1 The Campus Today



View of Capital's Main St. Entrance



View of Capital's Main Lobby

EXECUTIVE SUMMARY

The Master Plan Update for Capital Community College reflects a collaborative, interdisciplinary process that engaged leadership and stakeholders across the College and CSCU over six months. A core goal of the Plan was optimizing the use of existing facilities, a cost-effective, sustainable renovations that address CCC's most important needs.

Capital is unique in the CSCU system in several respects. It occupies a single, multistory building – in effect a vertical campus. It leases space within a larger building, rather than owning its facilities. It reflects an adaptive reuse of a historic department store, the former G. Fox Building.

The planning team's approach reflected and responded to these unique conditions. Similar to each other CSCU Master Plan, this update addressed the larger context, access, exterior and interior circulation, space utilization, building condition and infrastructure.

Key Facts

- Campus: 1 Building, 14 Floors
- Capital shares space in overall, larger building
- Fall 2019 Enrollment: 3,292 HC / 1,646 FTE
- Fall 2028 Enrollment: 3,665 HC / 1,857 FTE projected
- Parking: 800 leased spaces
- Transit: served by multiple lines
- No off-site leased satellite facilities

EXISTING CONDITIONS

Capital Community College is located in the north end of Hartford's downtown core. The site provides excellent access from Interstates 84, 91 and multiple bus lines. The College occupies the former G. Fox Department store, a 12-story structure that spans the entire block between Main and Market Streets. The building is shared with other tenants, with their own separate entrances and elevators. While CCC occupies the entire Main Street frontage of the building above the ground floor, the College's identity is not clear given the lack of signage. A recent banner at the top of the building facing I-84 has been a first step to improve this condition.

The College has not had a master plan update or any major renovations since it opened in 2002. This combined with a new Strategic Plan makes it a very opportune time to assess how Capital's facilities can better support its mission, students, and academic programs.

Unlike many urban colleges, Capital has high-occupancy spaces spread throughout the building rather than mostly on lower floors. This combined with a modest number of elevators and course scheduling factors result in chronic congestion in the main elevator lobby at peak times. Insufficient vertical transportation is not only frustrating and inefficient, but also has the potential to discourage prospective students, faculty and staff.

Key Findings: Existing Conditions

- Capital is the only CSCU community college in leased facilities
- Capital is the only CSCU vertical campus, in a single building
- Vertical transportation is not sufficient for peak loads
- Potential expansion space is available in the building if needed
- It is not clear on Main Street that Capital occupies the building
- Capital has multiple community partnerships and off-site activity
- Capital purchases steam for heating and chilled water for cooling from others

ENROLLMENT

The College provided the CSCU with credit enrollment projections through Fall 2028. Those projections, provided in student headcount, were supplied by related program majors. The projections for Fall 2028 is 3,665, an 11% increase over Fall 2019. Those projections were translated into student FTEs. The assumption is that the credit load –the number of credits taken by each student and currently at 7.74 (the lowest in the System)—will remain relatively constant over this time frame, resulting in a projected student FTE growth roughly equal to the projected student headcount enrollment. The student FTE projection for Fall 2028 is 1,857.08, a 13% increase over Fall 2019.

	EXISTING FALL 2019	PROJECTED FALL 2028
Headcount	3,282.18	3,665.29
Full Time Equivalent Credit	1,646.00	1,857.08

TABLE 01.1 Campus Core Today

SPACE NEEDS

The Space Needs Assessment for Capital factored enrollment, existing space use, academic and non-credit programs, and new initiatives, to derive its 10-year projection. This space assessment was completed for academic and support space, and each category analyzed in detail. Currently, the College has 111 assignable square feet (ASF) per student FTE. 41 ASF per student FTE is devoted to Academic Space—classrooms, computer labs, teaching labs, and faculty offices. The remainder—67 ASF—is dedicated to the Support Space on campus, including the Library, Assembly & Exhibition space, and Student Activities. The 111 ASF currently places CCC at the highest level for its peer group.

The Space Needs Assessment anticipates that the current building is adequate to house the College through 2029. At 111 ASF per FTE, Capital Community has almost twice the space of Middlesex Community College and 40% more space than Three Rivers Community College. These two community colleges are the closest to Capital as far as enrollment. But within the allocated space, though, there exist several shortfalls that need to be addressed. The majority of these shortfalls are academic, requiring that space be redistributed from Support Space to Academic Space.

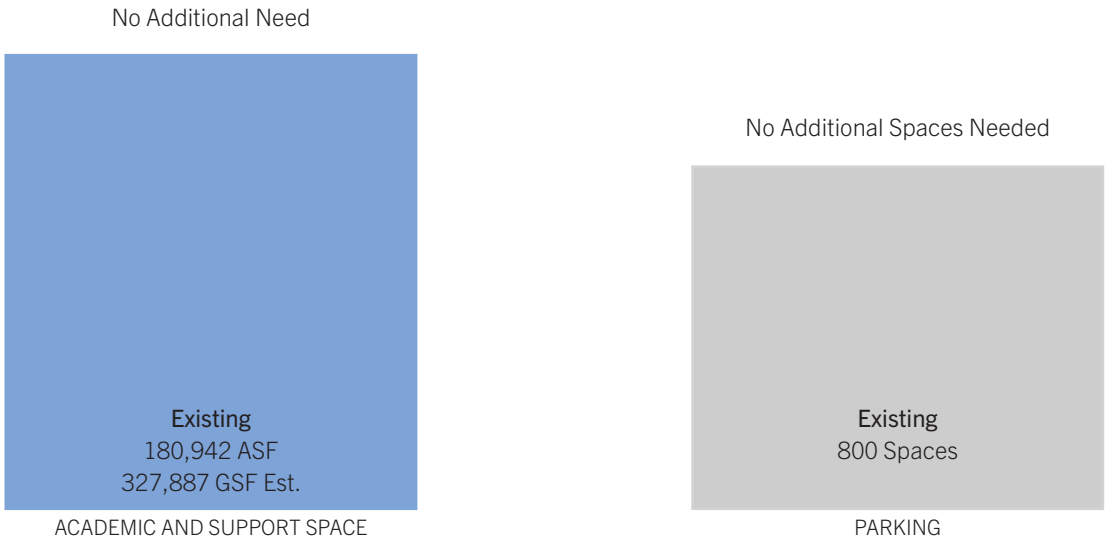


FIGURE 01.2 Space Needs Summary

PARKING

Capital leases spaces in the nearby Morgan Street Garage for parking. The structure is shared by several state agencies and other groups. The multi-story garage has approximately 2,300 spaces. Capital's lease is for about 800 spaces. This amount is sufficient. There is no unmet parking need.

TRANSIT

Capital is served by multiple bus lines, with several stops nearby or directly in front of the College on Main Street. While there are no ridership studies, it is clear from discussions with students that many do use public transportation to access Capital.

MASTER PLAN RECOMMENDATIONS

The 2020 Master Plan Update encompasses a wide range of interior renovations to make the most effective use of available space. Expansion is not required given how much space Capital has today relative to their current and projected enrollment. The goal is to activate underused space to make it more effective and address unmet needs. The emphasis is on increasing quality rather than quantity and upgrading exterior identity, internal connectivity and infrastructure.

Since encapsulating all the scope in one site plan is challenging for a vertical campus, the concept diagram at right illustrates the main project elements. The floor plans in the Recommendations chapter illustrate how these concepts are realized.

Key recommendations include:

Vertical Transportation and Lobby Enhancements

In the near term, the College will explore upgrading the current 5 elevators with more efficient destination dispatch controls. The Plan recommends adding escalators from the main lobby to the second and third floors to reduce elevator congestion. Open stairs in select areas on upper floors can improve vertical connectivity.

Classrooms

The Plan recommends moving more classrooms lower in the building in reach of escalators to ease elevator load, in keeping with best practices for stacking urban education facilities. Classrooms would be a shared resource for credit and non-credit programs, equipped with new technology and furnishings.





Student Services and Amenities
To strengthen recruitment and retention, student service spaces are improved on the second, fourth and other floors. Lounges will be located more in the flow, so they are actively used. The dining area will be redone to be more open, welcoming and flexible for multiple uses. The bookstore will relocate to the third floor and its vacated area converted into a multipurpose wellness space on the seventh floor.

The Atrium and Faculty Offices
An "acoustic skylight" at the eighth floor level of the atrium will block disruptive noise from rising to floors with faculty offices above. The plan provides expanded faculty office space and areas for adjuncts.

Nursing Lecture and Facility Needs
The Plan includes two options for a second large lecture space for the Nursing program, to supplement Room 1126. One option is a new, flat-floored lecture space rented in adjacent space on the 11th floor. The other option is outfitting the Auditorium with multiple projection screens and improved power, sound, and furniture. Nursing obtains full use of most of the eighth floor.

Health Careers Spaces
Departments in Health Careers move to the 10th floor, to have new labs for Medical Assisting and EMT Training.

Exterior Identity
The Plan proposes new banners, signage and street level treatments along Main Street so the College has proper presence and a clear identity, while respecting the historic fabric of the G. Fox Building.

Implementation
The Master Plan Update was prepared to be flexible in implementation. While some space reallocations are linked, other projects can be done independently. The consultant team prepared an itemized cost estimate, itemized by floor and for infrastructure projects. The renovations will be done in phases based on available funding. When funding for each phase is better defined, the scope of work can be defined, based on CCC's priorities and construction factors. A key goal for implementation will be minimizing disruption and required swing space. Implementation for some recommendations, such as a new EMT Training Lab on the 10th floor, improved exterior lighting, and more efficient elevator controls are already in progress.



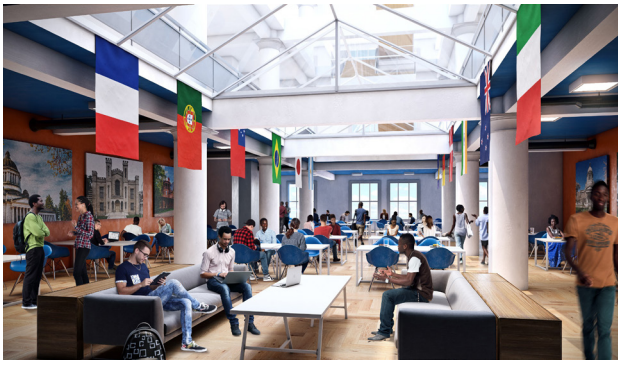
View of Existing Exterior



Rendering of Proposed Exterior Enhancements



View of the Existing 7th Floor Internet Cafe & Dining Area



Rendering of Proposed 7th Floor Dining Area & Acoustic Skylight



FIGURE 01.3 Summary of Master Plan Elements


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1 INTRODUCTION

CSCU SYSTEM CONTEXT

The Master Plan for Capital Community College responds to the vision and mission of the Connecticut State Colleges & Universities (CSCU), as well as CCC's Mission Statement. As one of the twelve community colleges, Capital is the tenth to update its Master Plan.

OUR VISION FOR CSCU

The Connecticut State Colleges & Universities will continually increase the number of students completing personally and professionally rewarding academic programs.

CSCU'S MISSION STATEMENT

The Connecticut State Colleges & Universities contribute to the creation of knowledge and the economic growth of the state of Connecticut by providing affordable, innovative, and rigorous programs. Our learning environments transform students and facilitate an ever increasing number of individuals to achieve their personal and career goals.

CONNECTICUT COMMUNITY COLLEGES MISSION STATEMENT

As part of the CSCU system, the twelve Connecticut Community Colleges share a mission to make excellent higher education and lifelong learning affordable and accessible. Through unique and comprehensive degree and certificate programs, non-credit life-long learning opportunities and job skills training programs, they advance student aspirations to earn career-oriented degrees and certificates and to pursue their further education. The Colleges nurture student learning and success to transform students and equip them to contribute to the economic, intellectual, civic, cultural and social well-being of their communities. In doing so, the Colleges support the state, its businesses and other enterprises and its citizens with a skilled, well-trained and educated workforce.

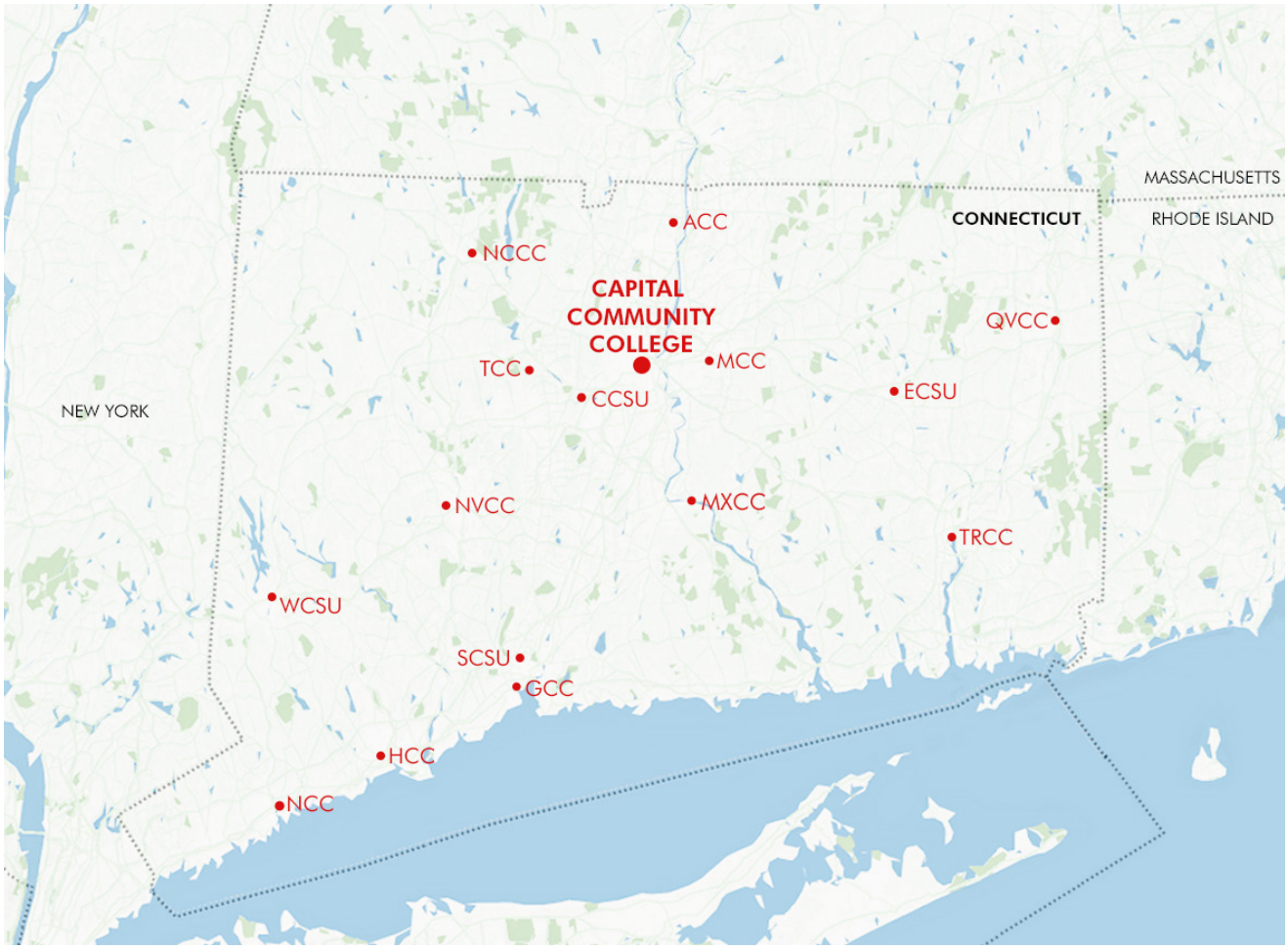


FIGURE 01.4 CSCU Colleges and Universities

CCC MISSION STATEMENT

The Mission of Capital Community College is to provide access to higher education to the diverse residents of the greater Hartford region. The College, an integral part of Hartford's cultural and economic district, does this by:

- Preparing individuals for transfer education and careers through associate and certificate programs in academic and technical disciplines and workforce training;
- Maintaining programs and support services that enable students to develop academic and professional skills that equip them for ongoing challenges and opportunities;
- Fostering a student-centered environment committed to learning and teaching, the collegial process, cultural enrichment, and the respectful and vigorous dialogue which nourishes active participation and service to the community.

Vision Statement

Instilling life-changing knowledge in a community of learners from multicultural backgrounds in a vital urban setting where business, culture and government converge.

Core Values

- Teaching Excellence
- Student Support
- Access
- Multiculturalism
- Community / Cultural Engagement Capital
- Partnership for Workforce Development

Strategic Planning

The 2019-2022 Strategic Plan focused on three high-priority, strategic goals:

1. Promote Student Success
At Capital, student success means academic success, retention and graduation. Capital strives to promote academic excellence for all students by creating a learner-centered educational environment that values diversity and inclusiveness, cultivates scholarship, affirms students' prior knowledge and experience, eliminates barriers to academic achievement, and encourages student engagement in personally meaningful and transformational scholarly pursuits.

2. Engage the Community
The city is our campus! Capital is invested in developing and supporting innovative and dynamic learning opportunities that connect learners to the vital industries and organizations in the city and beyond. Through the strengthening and creation of partnerships in the Greater Hartford region, Capital will solidify its place as an integral component to the immediate and long-term success and vitality of the city of Harford.

3. Increase Institutional Effectiveness
Capital is committed to the principles of continuous improvement and accountability. To meet current and future demands of our community, the entire campus will be cognizant of strategic initiatives and engaged in strategic efforts. This includes meaningfully and accurately analyzing systems and processes, ensuring systems and processes are in accord with strategic goals and objectives, and applying data-driven decision making to improve systems, processes, and practices.







GOALS AND OBJECTIVES

INTENT

The Master Plan Updates for the Connecticut State University System will derive capital needs based from space utilization, academic and student life program projections and facility conditions projected over the next 10-year period. The Master Plan Updates for each college and university will reflect system-wide goals and projected demographics.

GOALS

Through a collaborative effort between university stakeholders, CSCU and the consultant team, the Master Plan Update will integrate a system-wide Strategic Plan and college mission into a comprehensive vision that promotes the advancement of higher education through state-of-the-art planning projections over a 10-year period. Concepts will reinforce and institute current and new long-term strategies that guide college decision making for capital investment.

OBJECTIVES

The following objectives will guide the Connecticut State Colleges and Universities Master Plan Updates at each CSCU Institution of higher education.

- The Master Plan will respond to the institution's mission, demographics and projected future enrollment.
- Program space needs will reflect best practice standards and address emerging higher education goals.
- Land planning will balance guidance and flexibility, long-term development capacity and stewardship.
- The Master Plan will optimize the use of existing facilities in the utilization of space, the location of functions, and the renewal of buildings to meet future needs.
- Proposed new buildings will reflect realistic program need and will be used to the greatest extent feasible to enable needed renovations to maximize investment benefit.
- Site access and circulation will be addressed in a comprehensive manner to support a safe, efficient and welcoming campus.
- Future development will strengthen the architectural and landscape character of the campus to foster a cohesive, attractive setting.
- The Master Plan will integrate sustainability throughout and identify strategies for energy conservation.
- Major campus infrastructure needs will be addressed to support university operations.
- The resulting Master Plan Update will be a comprehensive vision comprised a series of capital projects, with associated institutional priorities and phasing strategies.

PLANNING PROCESS

PROJECT TIMELINE

The Master Plan Update was organized in three main tasks.

Task 1. Initiation	September 2019
Task 2. Assessment	October to November 2019
Task 3. Recommendations	November 2019 - February 2020

PROJECT OBJECTIVES

Task 1. Initiation

- Establish the Advisory Committee, confirm project objectives and communications protocol.
- Collect data on the College today.
- Establish the project schedule and milestones.

Task 2. Assessment

- Understand the history, mission and academic objectives of the University.
- Analyze buildings and grounds to understand space use, physical conditions, constraints and opportunities for campus development.
- Undertake a needs analysis and project 10-year space needs based on CSCU approved enrollment projections, benchmarking, and academic goals.

Task 3. Recommendations

- Develop guiding design principles strategy.
- Assess pros and cons of potential development alternatives and assist the Advisory Committee in selecting the preferred approach.
- Refine the master plan elements for buildings, landscape and infrastructure.
- Prepare cost and phasing information.
- Document and present final recommendations to the College.



CAMPUS ENGAGEMENT

The Master Plan was a collaborative process, informed and guided by significant input from College stakeholders.

COLLEGE MASTER PLAN ADVISORY COMMITTEE

The consultant team met five times with the CMPAC, a group which included Chief Executive Officer Duncan Harris, other senior administrators, faculty and staff. As a broad cross section of the College, the Committee provided invaluable insights into programmatic, functional and aesthetic aspects of the Plan. The student representatives also contributed important insights for how College facilities could be further strengthened to support student success.

PROJECT STEERING COMMITTEE

The consultant team conferred regularly with John Boudreau, Director of Facilities, Jessica Beniash, Executive Assistant to the Chief Executive Officer of CCC and Keith Epstein and Armen Beermann of CSCU to review the progress of the work and provide timely input to advance the work and maintain the project schedule.

PROGRAM INTERVIEWS

The consultant team conducted 16 program interviews with a broad range of college stakeholders, including students, faculty, staff, industry partners and senior administration. The input informed the space need projections and the functional needs assessment.

STUDENT ENGAGEMENT

The planning team reached out for student input in several ways. They hosted a Master Plan session with Capital's Student Government Association. Input from SGA President Michaela Appah was especially insightful. The team also held a "tabling session" in the Seventh Floor Dining Area, inviting input on the College facilities from students. This input was also very helpful, both providing some new insights, but also confirming many facility needs already noted by faculty, staff and administration on the Master Plan Steering Committee.

Capital's Construction Management class, led by Professor Bascia Dellaripa, engaged with the Master Plan for an assignment during part of their semester. The focus was on how to improve Capital's exterior identity. The students developed design and specification concepts not only for the exterior, but also for the lobby, the atrium and other areas. Bill MacIntosh of G3 was a guest instructor. The concepts were very engaging. Some ideas were included in the final recommendations.



CMPAC Meeting



CCC Student Work Session


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2 EXISTING CONDITIONS

THE INSTITUTION

- CCC ACADEMIC DEPARTMENTS
- HISTORY OF THE PHYSICAL CAMPUS

THE CAMPUS

- THE SITE
- IDENTITY
- SITE PLAN
- CONTEXT
- FLOODING CONSIDERATIONS
- ZONING
- ENTRIES AND STREET DIRECTION
- PUBLIC TRANSPORTATION
- PARKING AND ACCESS

THE BUILDING

- ARCHITECTURAL CHARACTER
- CIRCULATION AND ACCESS
- VERTICAL CIRCULATION
- SECURITY
- STRUCTURAL GRID
- ATRIUM ACOUSTICS
- BUILDING CONDITION
- CODE CONSIDERATIONS
- CLASSROOM UTILIZATION

ENERGY AND INFRASTRUCTURE

- HVAC SYSTEMS, CENTRAL PLANT & AIR DISTRIBUTION UTILITIES
- UTILITIES
- AIR DISTRIBUTION
- FIRE PROTECTION SYSTEMS OVERVIEW
- PLUMBING SYSTEMS OVERVIEW
- ELECTRICAL SYSTEMS OVERVIEW
- MAIN OBSERVATIONAL ISSUES
- CENTRAL HEATING
- CENTRAL COOLING

STUDENT ENGAGEMENT

- WORKSHOP TAKEAWAYS

OPPORTUNITY AREAS


CT TRANSIT

THE INSTITUTION

CCC ACADEMIC DEPARTMENTS

BUSINESS & TECHNOLOGY

The Business & Technology Department offers programs in Accounting, Architectural Engineering, Computer & Information Systems, Computer Networking, Computer Support Services, Construction Management, Insurance and Financial Services, and Management. A number of these courses are offered through our Distance Learning Program.

HEALTH CAREERS & PUBLIC SAFETY

The Health Careers Department conducts programs in Emergency Management Response, Emergency Medical Technology, Medical Assisting, Health Information Management, Pre-Nursing and Radiological Technology.

HUMANITIES

The Humanities Department is comprised of Art, English, Languages, Music, and Philosophy. The department educates students to reflect critically on the role of the humanities; to connect students to the rich cultural mosaic of Hartford, the region, and the world; and to foster a vibrant environment of artistic and scholarly activities.

NURSING

The Connecticut Community College Nursing Program (CT-CCNP) at Capital is an innovative associate degree program of study that serves a diverse population of students, offers excellent clinical sites, and has a thirty plus year record of proven success.

SCIENCE & MATHEMATICS

The Science and Mathematics Department offers engaging learning opportunities in science and mathematics for students with a diverse range of academic and career interests. These learning opportunities emphasize the acquisition of knowledge as well as the development of quantitative and scientific reasoning skills.

SOCIAL & BEHAVIORAL SCIENCES

The Social & Behavioral Science department offers courses in Sociology, History, Political Science, Psychology, Education, Early Childhood Education, and Criminal Justice.

ACADEMIC MEDIA TECHNOLOGY

The Academic Media Technology Department is a creative production and teaching center that focuses on the effective application of technology and the media arts to the teaching-learning process at the College. The department offers a wide range support programs and degree & certificate programs in Communication media.

ACADEMIC SUCCESS CENTER

A wide range of academic support services are available to all students, including tutoring, academic coaching, placement test preparation, and specialized workshops. ASC staff work with students to achieve their learning goals, promote organization, and improve study methods and test-taking skills.

LIBRARY

The Arthur C. Banks, Jr. Library provides a broad range of services and resources to students, faculty, and staff. The library's collection includes over 45,000 print volumes and many research databases which can be accessed both on and off-campus.

HISTORY OF THE PHYSICAL CAMPUS

Capital Community College is the result of the 1992 merger of Greater Hartford Community College (founded in 1967) and Hartford State Technical College (founded in 1946).

Capital traces its early roots to the Connecticut Engineering Institute. It graduated its first class of 23 students in June, 1948. In 1960, the institute left its Washington Street facility and moved to a new campus at Flatbush Avenue.

In 1967, Greater Hartford Community College opened in a two-story brick building on Sequassen Street on the edge of historic Colt Park. The college grew at this "temporary" campus for seven years.

In September of 1974, Greater Hartford Community College moved into a six-story building at 61 Woodland Street. This former home of Phoenix Insurance Company enabled the College to grow to 2,446 students by the fall of 1974.

Located only four miles apart, Hartford State and Greater Hartford finally merged their missions and resources in 1992 in a state mandated consolidation. The unified institution was named Capital Community-Technical College. In 2000, the college was re-named Capital Community College.

At the end of 1999, the former G. Fox Department Store on Main Street was selected as the site for a new campus. The new campus, a key to downtown Hartford's revitalization, included a $70 million top-to-bottom renovation of 300,000 square feet of space in the former retail building, a downtown landmark where generations of residents shopped and worked.





Historical Images of G.Fox Building.

The new campus opened in 2002. The College occupies the original section of the 1918 building. From its central location downtown, the City of Hartford itself serves as an extended campus for Capital, given the multiple off-site activities with community partners.

(source: CCC website)

1940s

1946 - The Connecticut Engineering Institute opens in Hartford, CT.

1950 - The school's name is changed to Hartford State Techincal Institute.

1960s

1960 - Hartford State Technical Institute opens a new campus at 401 Flatbush Ave.



1967 - Greater Hartford Community College (GHCC) is founded.

1970s

1974 - GHCC relocates to former Phoenix Insurance Company building at 61 Woodland St.



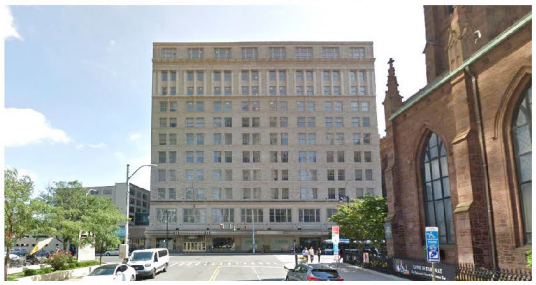
1990s

1992 - GHCC merges with Hartford State Technical College and renamed to Capital Community Technical College.

1999 - The former G.Fox Department Store on 950 Main St. was selected as the site for a new campus.

2000s

2000 - Capital Community Technical College becomes Capital Community College.



2010+

2002 - The College moves to the new campus at 950 Main St.

FIGURE 02.1 Historic Timeline

THE CAMPUS

THE SITE

Capital is unique among the CSCU community colleges in occupying a vertical campus in a single structure, the former G. Fox Building. Its site in downtown Hartford is a central location with good transportation access, near major interstates, with sufficient nearby parking and served by multiple bus lines. The lack of a green campus setting is more than offset by the opportunities to engage with a range of cultural and business community partners. Capital's location in the center of one of the largest population concentrations is especially advantageous for potential recruitment.

Capital is also the only CSCU campus which is leased rather than owned. The College occupies a portion of the overall building, which extends the width of a city block. The leased arrangement has worked well.

Likewise for parking, rather than owning, Capital leases. The College is one of several State agencies that lease space in the large Morgan Street Garage across Market Street.

IDENTITY

The former G. Fox Building has a strong identity on Main Street. In scale and character, the building generally is well suited for its adapted use as a College. Capital's identity is not clearly visible however.

Capital is one of several tenants in the building, however, using one of the two entrances facing Main Street. Today there is very little signage on the building to convey that it is the home of Capital Community College. A banner which the College mounted on the top of the north façade facing Interstate 84 has begun to address this condition. More enhancements are needed, consistent with historic preservation, to elevate Capital's identity and make its presence less anonymous when passing down Main Street.



View of Capital CC's Building from Church St.



FIGURE 02.2 Site Plan

CONTEXT

Regional Context

Capital's location near the intersection of Interstates 84 and 91 place it in the core of the Capital region. The map below illustrates CCC's regional context and proximity to other CSCU Community Colleges, including Manchester (6 miles approx.), Tunxis in Farmington (13 miles approx.), Asnuntuck in Enfield (17 miles approx.) and Northwestern Connecticut in Winsted (25 miles approx.).

Setting in the City

Capital is one of CSCU's urban colleges, located in a vibrant city setting. The College is on the north side of Hartford's downtown central business district. The map below illustrates its relationship both to the natural landmark of the Connecticut River and the political landmark of the State Capitol and its grounds. The original State Capitol Building is only 2 blocks south of the College on Main Street.

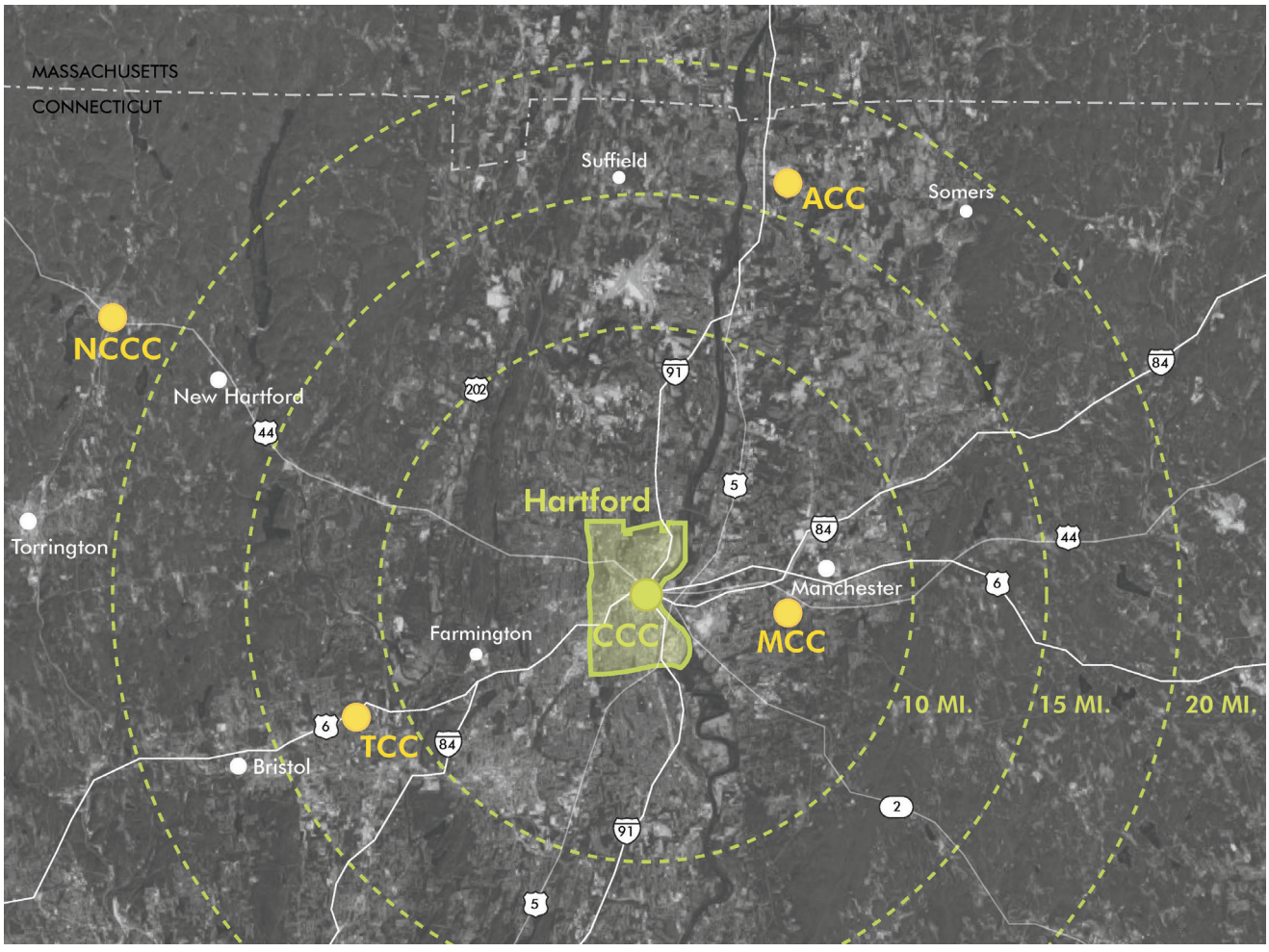


FIGURE 02.3 Regional Context



Aerial view of Hartford's downtown central business area

KEY

CCC Campus | Water | Government Buildings | Other Buildings | Main Highways

Open Space | Parking Lots | Parking Garages | Train Station



FIGURE 02.4 CCC and Hartford Context

Downtown Mixed-Use Context

Unlike some of its sister colleges, surrounded by woods and residential neighborhoods, Capital is embedded in a dynamic, mixed-use area. Its neighbors include commercial, cultural, religious, government, residential and other educational uses. Nearby higher education facilities include branches of University of Connecticut, Trinity College, Rensselaer Polytechnic Institute and University of Saint Joseph.

Hartford Community Partners

Capital has significant partnerships in the greater Hartford area with business, healthcare and other partners, as illustrated to the right. In each of these partnerships, the College has part time shared use of off-site facilities. While the Master Plan Update focuses on improvements to Capital's main facility, it is significant to understand the range of off-site facilities used today. The College aims to strengthen and continue these partnerships to serve even more as a key member of the Hartford civic community.

KEY

- Schools
- Civic / Cultural
- Commercial / Office
- Government Buildings
- Parking Garages
- Residential
- Mixed Commercial / Residential



FIGURE 02.5 Mixed-Use Context Map

Capital Community College Partners in Hartford

ALLIED HEALTH CLINICAL SITES

- A — Hartford HealthCare
- B — Connecticut Children's
- C — Trinity Health Of New England, Saint Francis Hospital and Medical Center

SIGNIFICANT INTERN SITES

- D — TRAVELERS
- E — THE HARTFORD
- F — aetna™
- G — UnitedHealthcare

OFF-SITE INSTRUCTIONAL SITES

- H — WADSWORTH ATHENEUM
- I — HARTFORD STAGE
- J — THEATER WORKS HARTFORD
- K — SEA TEA COMEDY THEATER
- L — The Mark Twain House & Museum
- M — THE BUSHNELL
- N — Old State House

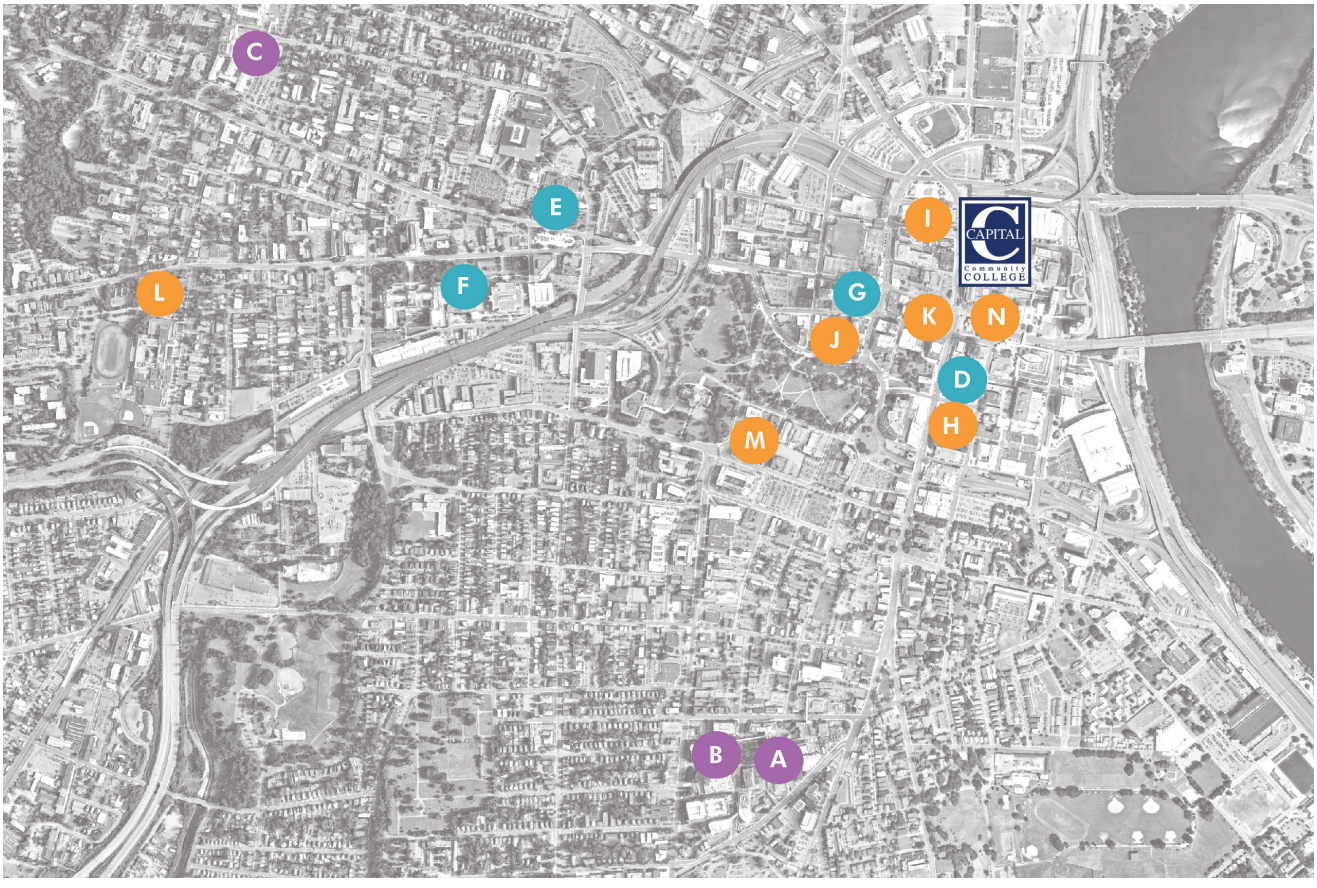


FIGURE 02.6 Hartford Community Partners Diagram

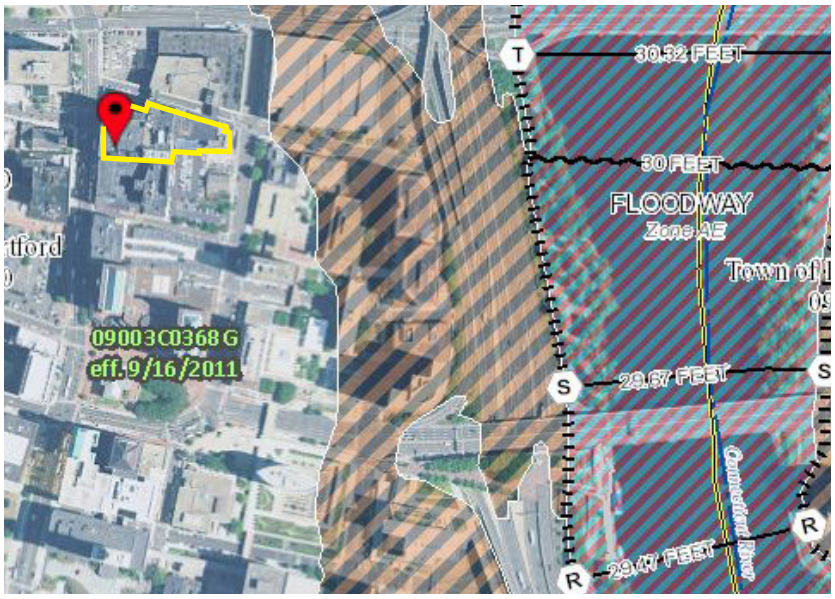
FLOODING CONSIDERATIONS

Capital occupies an upland site west of the Connecticut River. Since there is a flood wall and since Capital is on higher ground, the College is in an area of minimal flood hazard, as illustrated in the FEMA map below. The Morgan Street Garage occupies an area with reduced flood risk due to levee.

ZONING

The property leased by CSCU for the College is zoned in Downtown Districts DT-1 & DT-2 by the city of Hartford zoning law. DT-1 is the highest density downtown district. Areas surrounding the campus are a mixture of DT, DT-1 & DT-3 Downtown Districts.

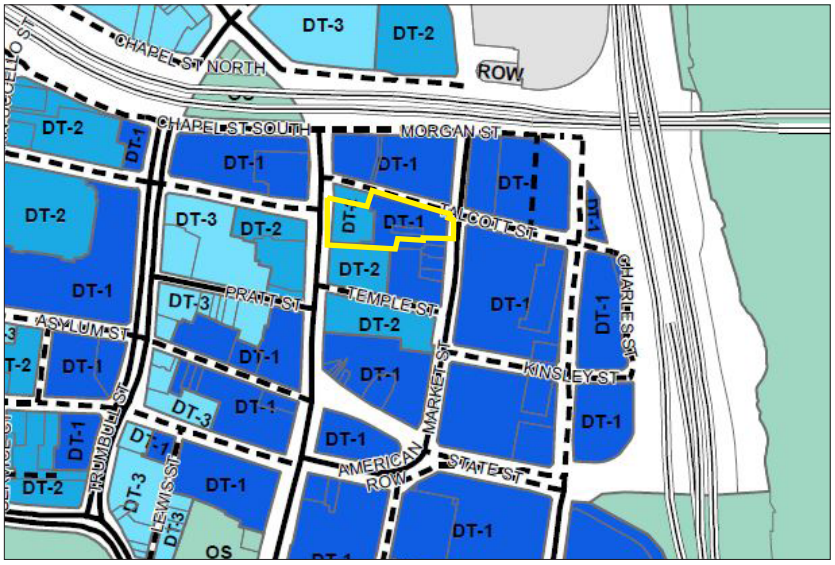
CSCU as a State entity, is exempt from zoning. The focus of the Master Plan, as well, was interior space upgrades which is not applicable to zoning.



KEY

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Area with Reduced Flood Risk due to Levee
- Regulatory Floodway
- Levee, Dike or Floodwall
- Capital CC

FIGURE 02.7 Flood Hazard Areas (taken from the FEMA website)



KEY

Downtown Districts

- DT-1
- DT-2
- DT-3

Right of Way

- ROW

Open Space District

- OS

- Primary Street
- Secondary Street
- Capital CC

FIGURE 02.8 Zoning Map



View of Market St. Entrance

ENTRIES AND STREET DIRECTION

Capital has two main exterior entries. 950 Main Street is one of a pair of entrances into the former G. Fox Building, the other being the 960 Main Street doors closer to Talcott Street. Capital's Main Street entry is its formal "front door". Like in many houses, however, the "back door" is used more. For Capital, this is the Market Street entry which faces the Morgan Street garage on the opposite side of Market Street, where most people arrive. The entry sequence from the Morgan Street garage is multifaceted – first from the garage into the 960 Building, then up escalators from the shared lobby to the Main Street concourse level, and finally into Capital's lobby.

The downtown Hartford street network in the vicinity is a mix of major north / south arteries with two-way traffic (Main and Market Streets) and minor east / west streets with one-way traffic (Morgan, Talcott and Temple Streets).

KEY

Main Campus Entrances
Other Building Entrances
One Way Street
Two Way Street
Highways
S Service/ Loading
CCC Campus

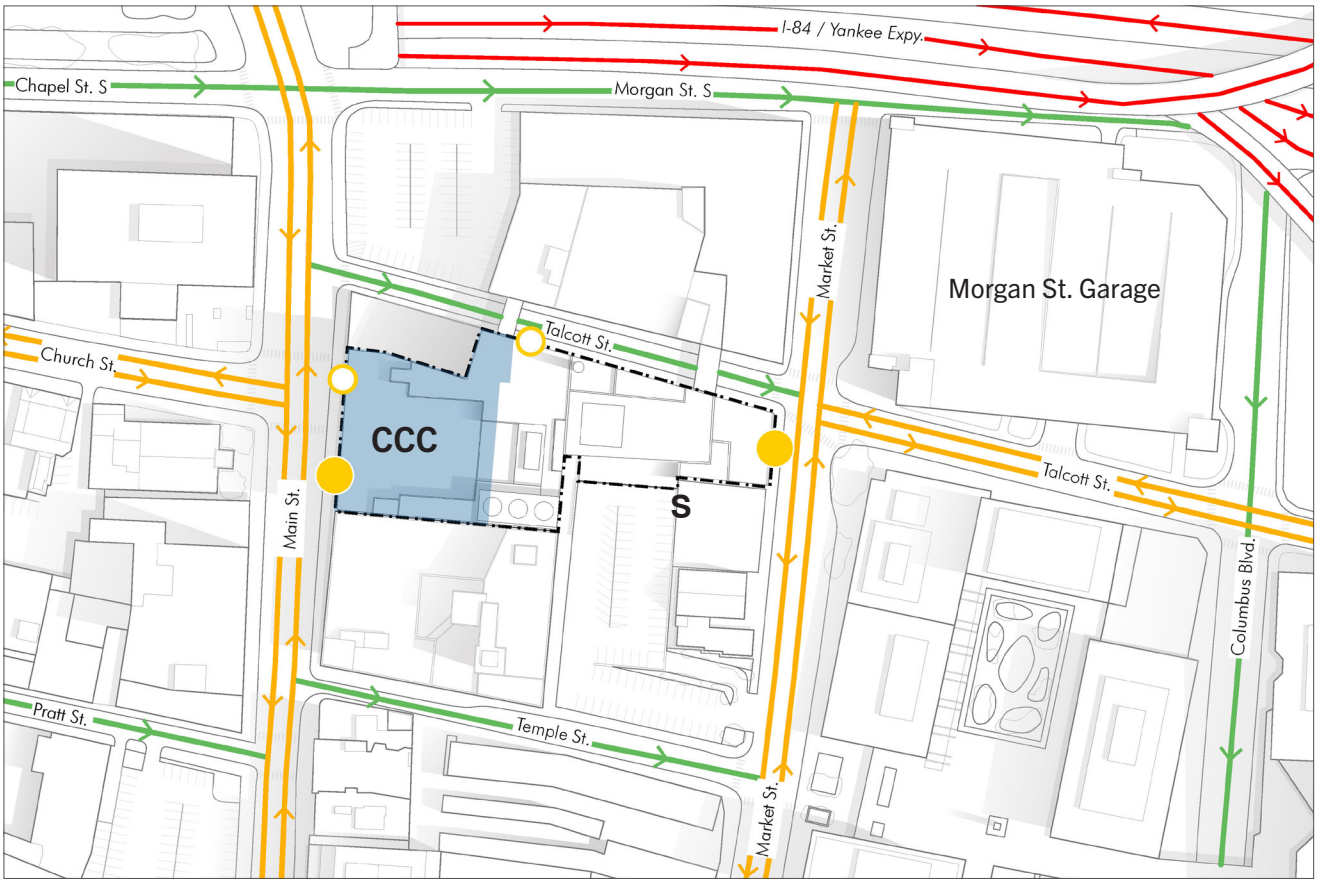


FIGURE 02.9 Entry Points and Street Direction

PUBLIC TRANSPORTATION

Capital is served by more bus lines than any other CSCU community college. The figure below illustrate the number of bus stops nearby and the number of different bus lines serving these stops. Since access is a fundamental goal, Capital's robust transit access is a strong advantage. While ridership data is not available, several students interviewed said many students do take transit rather than driving.

CT Transit moved one of its bus stops to be directly in front of the Capital's Main Street entrance. It is used by many people not affiliated with the College. These riders wait in front of the College and, in inclement weather, try to use the College lobby as a waiting area. This congestion is not a positive for Capital. Discussions on possibly relocating the stop to be clear of Capitals' entrance area have not been successful, given transit stop location criteria and site constraints.

Hartford Union Station is about half a mile from campus down Church Street. It is served by both Amtrak and CTtransit. Amtrak reportedly has plans to relocate the station, however. Once done, it will likely no longer be in walking distance of Capital. College rail ridership data is not known.



CT Transit Bus outside of Capital's Main St. Entrance

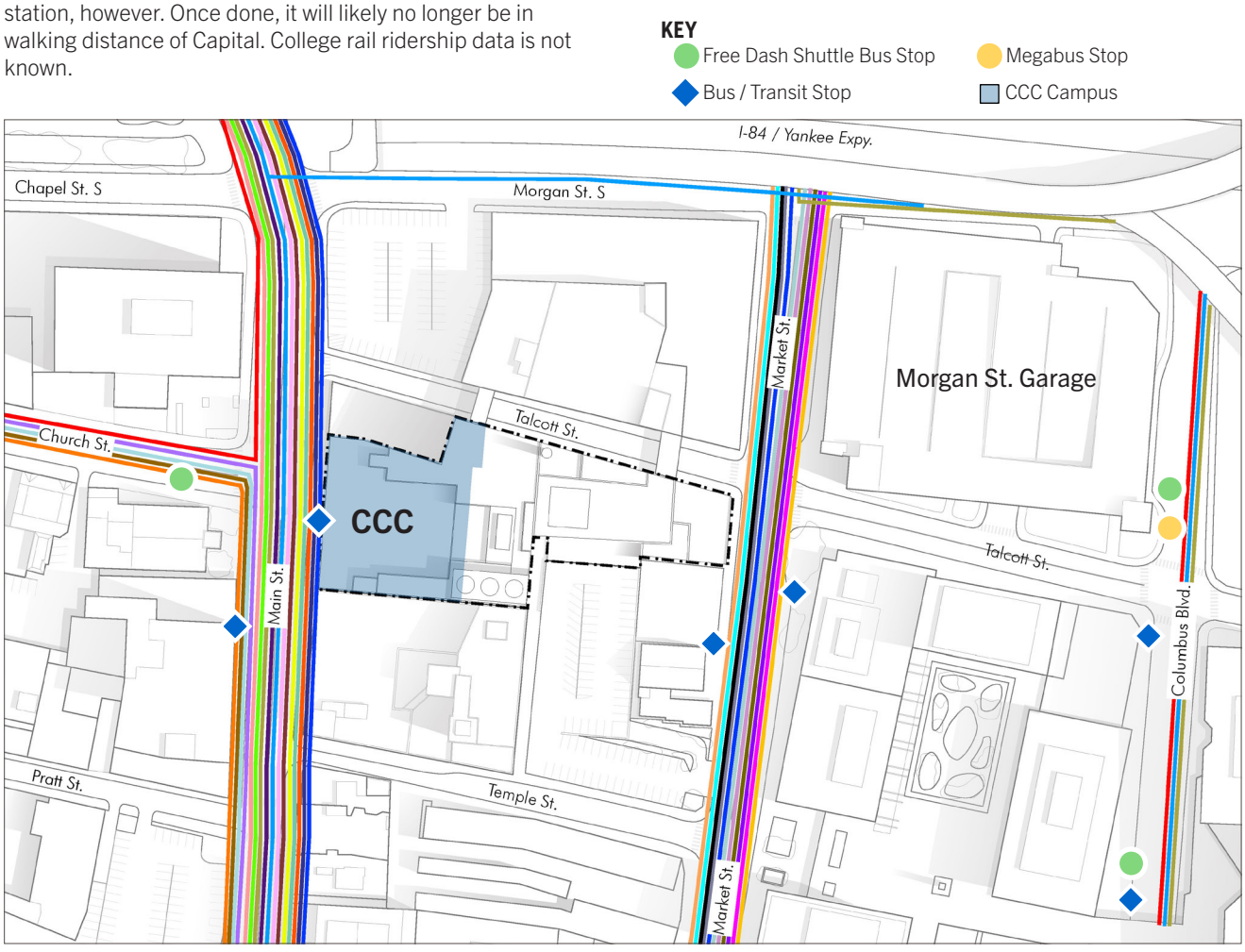


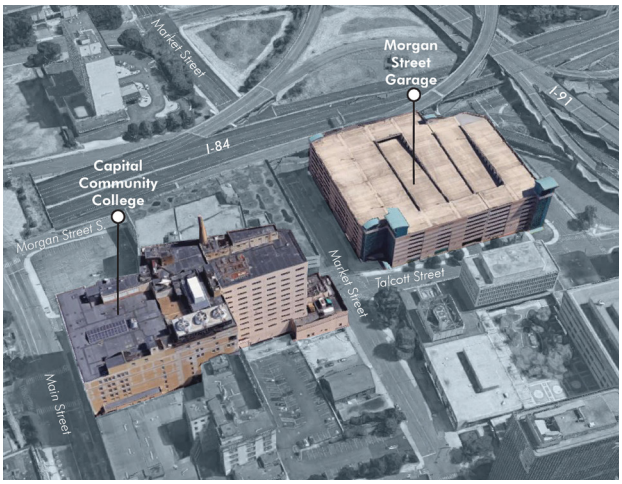
FIGURE 02.10 Bus Stops & Public Transportation Lines

PARKING AND ACCESS

The majority of students, faculty and staff drive to Capital and park. Fortunately, the College has ample parking. The Morgan Street Garage is a large, 7 story facility occupying a full city block. Capital has a lease arrangement for about 850 spaces. Other users include other State agencies, including the Division of Administrative Services, located on Columbus Boulevard.

The College typically uses about 600 spaces and reportedly never fully utilizes the full amount. At peak times, such as Monday to Thursday around 11:00 AM, however, the garage is nearly full, with only vacant spaces on the upper levels.

For first time visitors who are not familiar with the Morgan Street Garage, the vacant surface lot at Talcott and Main Streets may appear to be associated with the College, however it is not. Likewise, the former G. Fox garage north of Talcott Street and connected to the 960 Building by a bridge may seem like it serves the College, but does not. This garage is vacant.



Aerial View of College and Morgan St. Garage



View of Garage Entrance, Corner of Morgan and Talcott Streets

KEY

CCC Space | Vertical Circulation | Walkability Path | Garage Entrance | Building Entrance

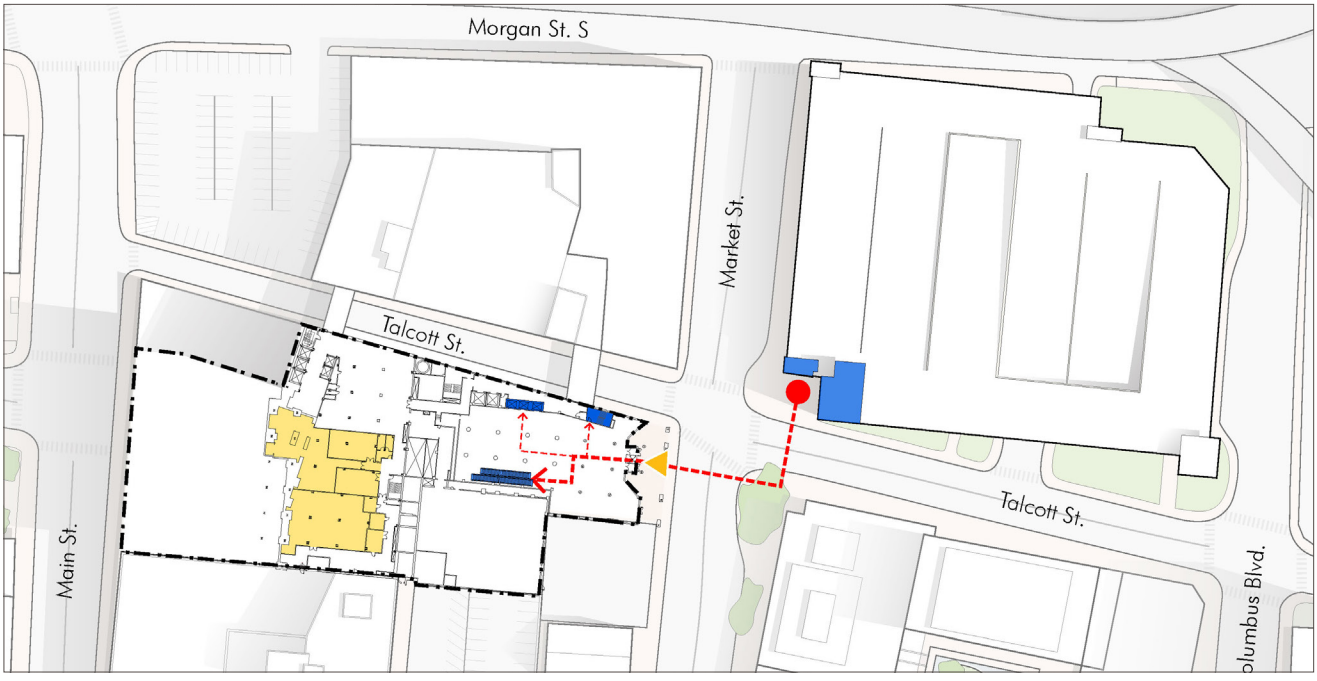


FIGURE 02.11 Access & Walkability from Parking Garage

THE BUILDING

Capital occupies the full Main Street Frontage on the west side of the building complex. It leases space on every floor of the building, a total of 14 levels plus a small mezzanine. Of the 837,000 total estimated gross square feet in the complex, Capital leases about 324,000 GSF. Of this, 180,942 is assignable square feet, as noted in the table at right.

As noted in the next chapter, Space Needs Assessment, the total area reflects a robust space per student metric compared to Capital's sister institutions.

While a typical campus can best be understood in a map or site plan, the most effective way to understand Capital's organization, being a vertical campus, is in a vertical stacking diagram. The figure on the adjacent page on the right summarizes the main uses on each floor today (but by no means all uses). The floor plans in the following pages summarize the main program functions today on each floor.

Floor	CCC ASF	CCC GSF
Floor 12	2,393	11,911
Floor 11	18,693	34,697
Floor 10	14,714	26,810
Floor 9	13,831	26,810
Floor 8	13,763	26,810
Floor 7	17,797	27,800
Floor 6	17,329	27,800
Floor 5	20,249	27,800
Floor 4	16,192	27,800
Floor 3	16,283	27,800
Floor 2	15,763	27,800
Mezzanine	541	1,304
Floor 1 / Main Lobby	2,540	9,382
Lower Level / Talcott St.	5,741	7,548
Basement	5,113	12,082
Total	**180,942**	**324,154**

TABLE 02.1 Existing Space by Floor

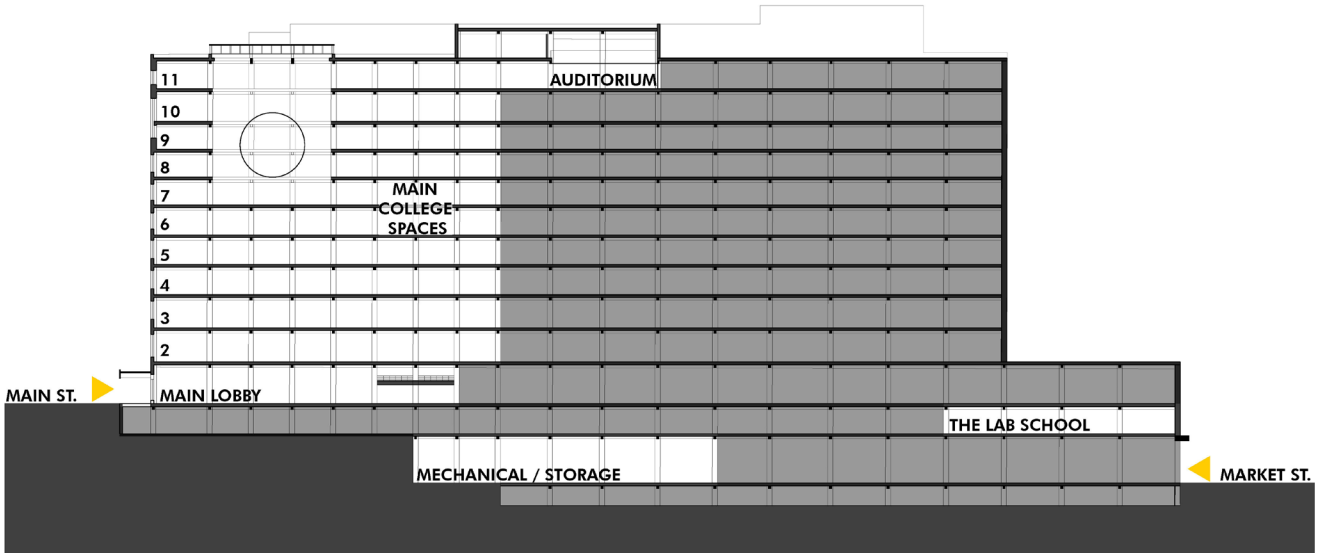


FIGURE 02.12 Existing Building Section



Exterior View of Capital's Building



Capital's Main St. Entrance

11	**AUDITORIUM, LECTURE, ART, MUSIC, ADMIN.** FACULTY OFFICES	
10	**CLASSROOMS, VIDEO PRODUCTION, PHOTO** FACULTY/ADJUNCT OFFICES	
9	**SCIENCE LABS** FACULTY OFFICES	
8	**NURSING, ALLIED HEALTH LABS, OFFICES** CLASSROOMS	
7	**CAFETERIA, STUDENT ACTIVITIES, BOOKSTORE** LECTURE, MAINTENANCE / FACILITIES	
6	**CIS, COMPUTER LABS** CLASSROOMS	
5	**LIBRARY**	
4	**ESL, TUTORING, MATH, WRITING CENTERS** CLASSROOMS	
3	**CONTINUING EDUCATION, L.E.A.D CENTER** CLASSROOMS, RAD. TECH	
2	**STUDENT SERVICES, "INTAKE"** COMMUNITY ROOM, CAREER DEVELOPMENT	
1	**MAIN LOBBY** SECURITY OFFICES, ART GALLERIES, LOUNGE	STORAGE
TS	**THE LABORATORY SCHOOL**	
MS	**MECHANICAL, CAMPUS SERVICES**	

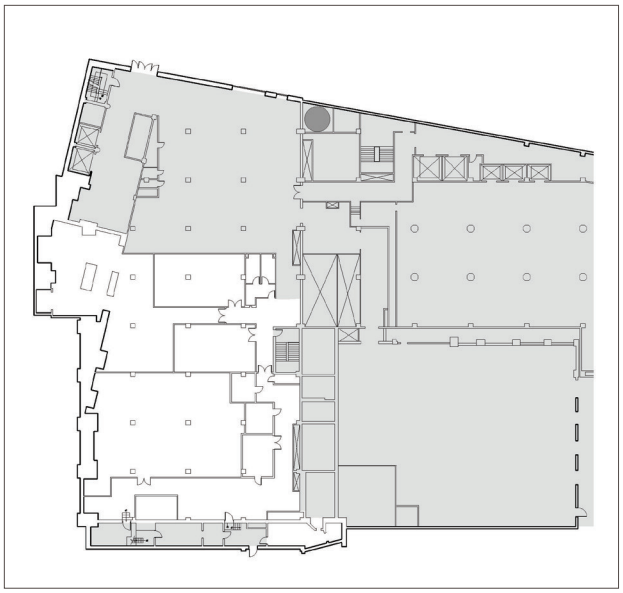
FIGURE 02.13 Existing Stacking / Vertical Organization



Building Entrance from Market St.

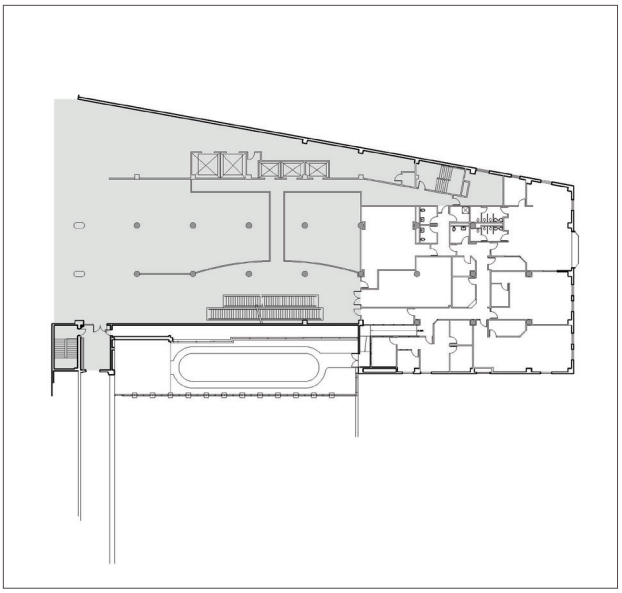


Capital's Lobby Entrance coming from Market St.



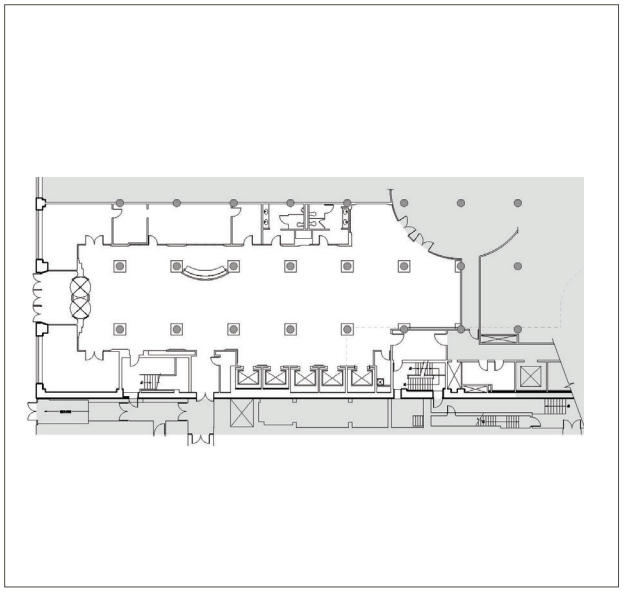
Basement / Market St. Floor

- Mechanical
- Storage
- Market St. Shared Lobby
- Mailroom, Shipping & Receiving



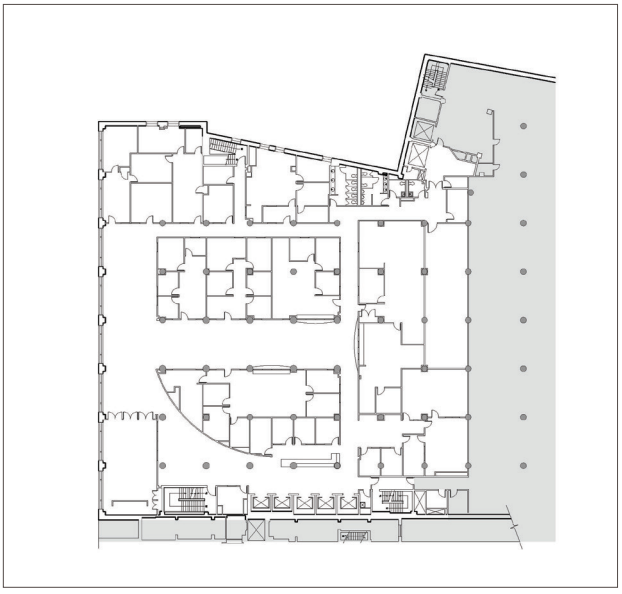
Lower Level / Talcott St. Floor

- Early Childhood Center
- Playground



Main St. - 1st Floor

- Main Lobby
- Exhibit Space (Vacant)
- Security Desk / Offices



2nd Floor

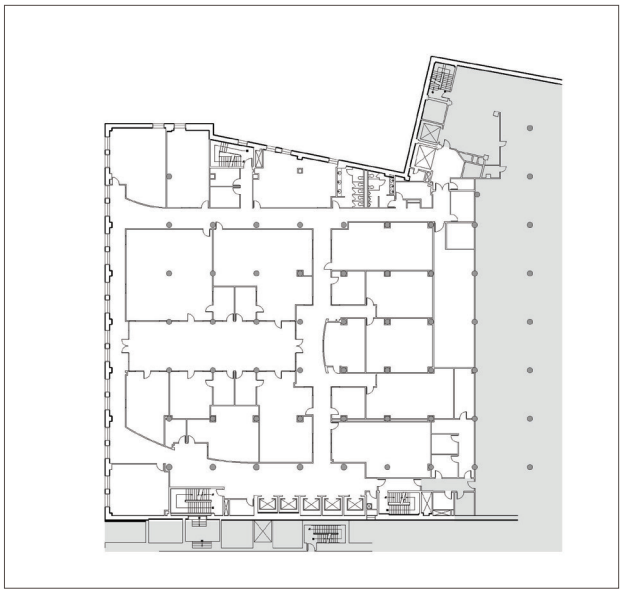
- Financial Aid
- Finance & Administration
- Welcome Center
- Enrollment Services
- Human Resources
- Community Room

KEY ☐ Non-College Space



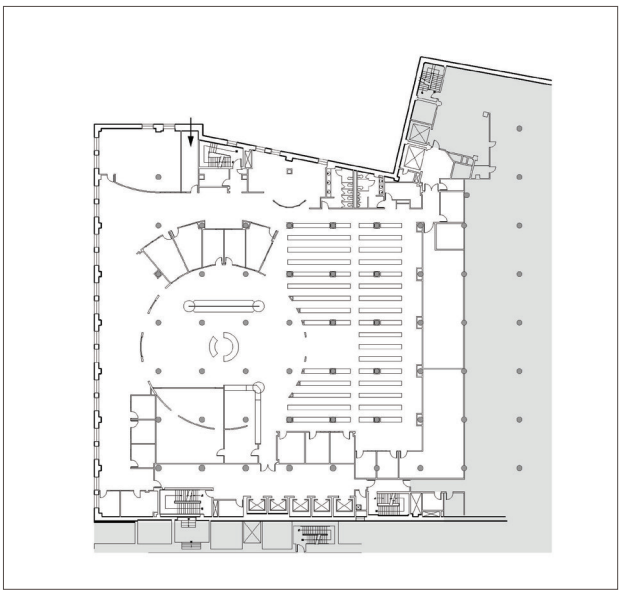
3rd Floor

- L.E.A.D Center / Workforce & Continuing Education areas
- Equity, Diversity & Inclusion Center
- Classrooms



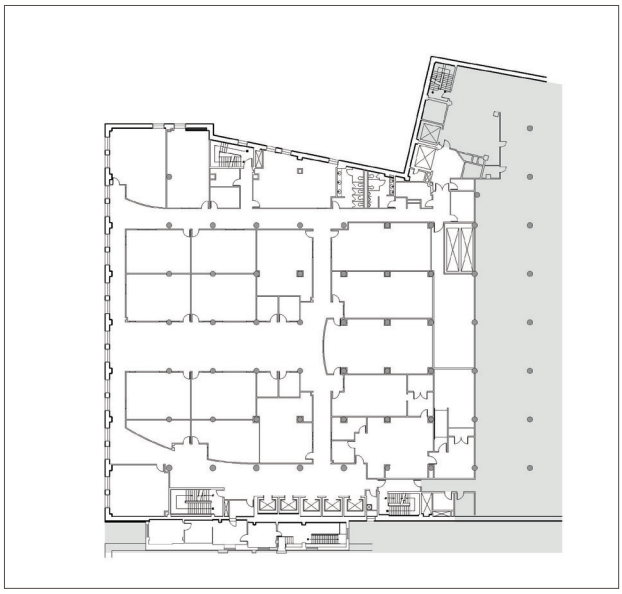
4th Floor

- ESL
- Classrooms
- Academic Success Center
- Veterans Oasis



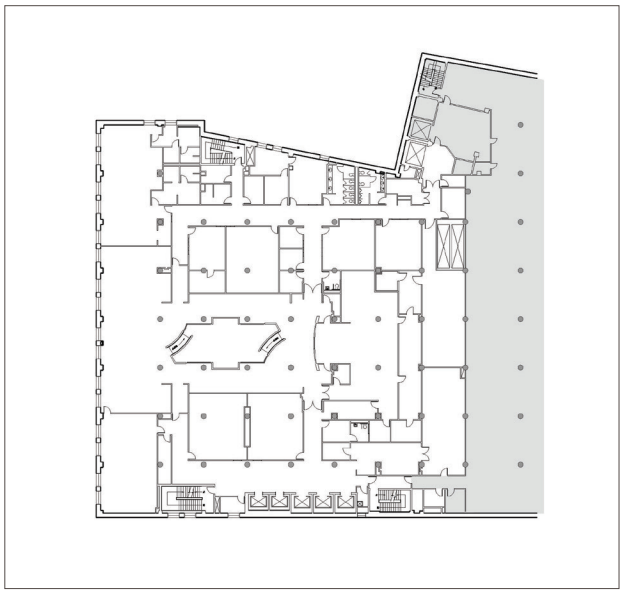
5th Floor

- Library



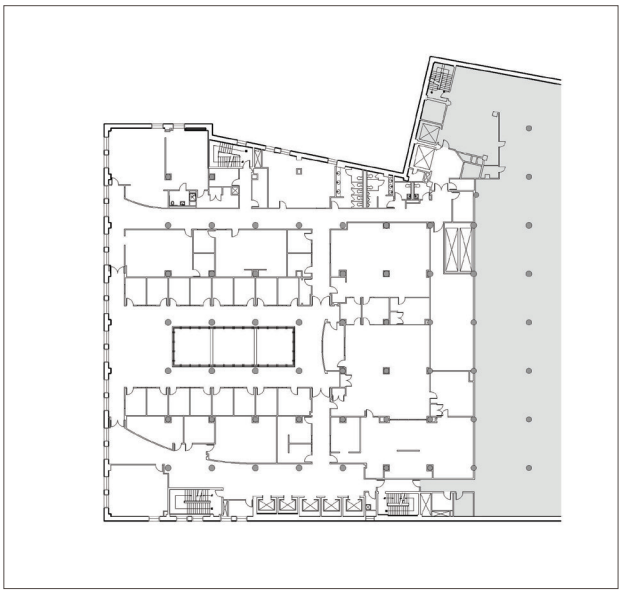
6th Floor

- Information Technology
- General Computer Labs
- Continuing Ed. Computer Labs
- Architecture Labs



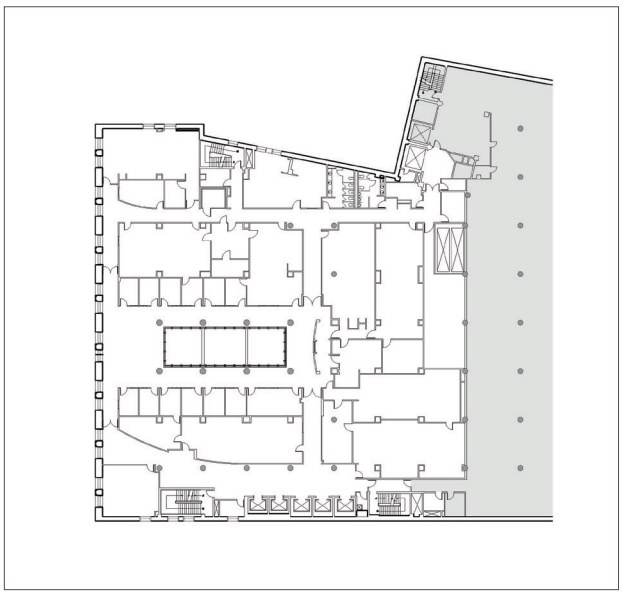
7th Floor

- Cafeteria / Food Service / Pantry
- Student Activities / Services / SGA
- Bookstore
- Mailroom
- Maintenance Shop



8th Floor

- Nursing
- Allied Health
- Radiology
- Classrooms



9th Floor

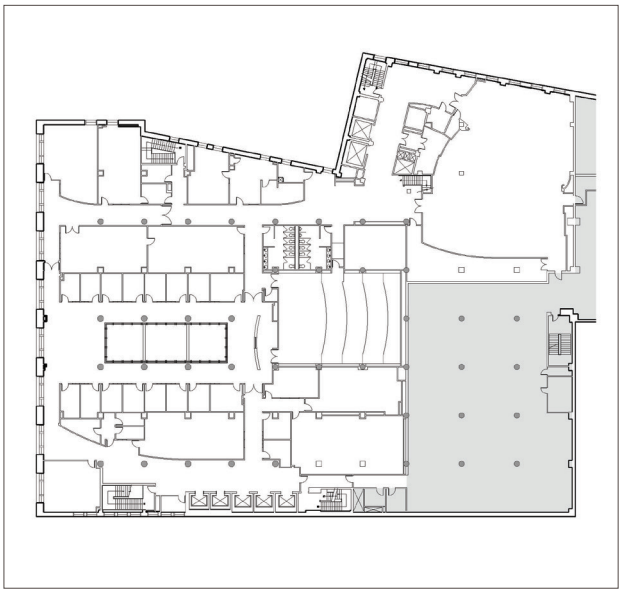
- Anatomy & Physiology
- Lab Storage
- Physics
- Biology / Microbiology
- Chemistry
- Mathematics



10th Floor

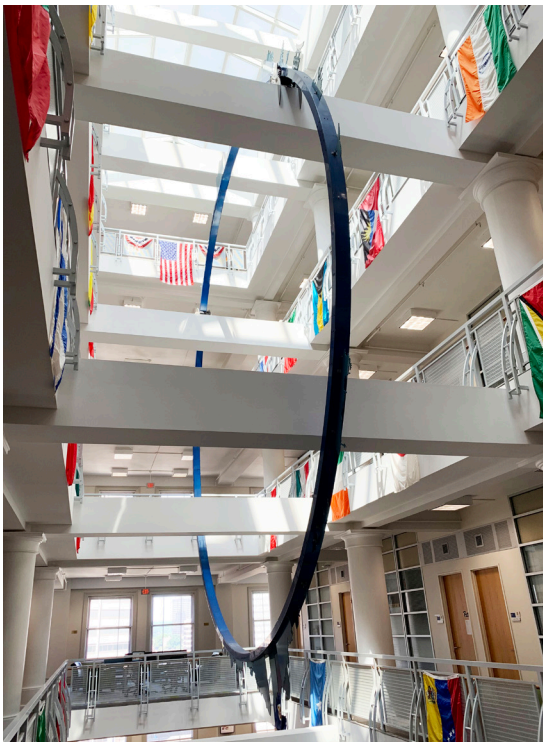
- Communication Media
- Copy Center
- Information & Media Tech
- Media Studio
- Academic Dean

KEY ☐ Non-College Space

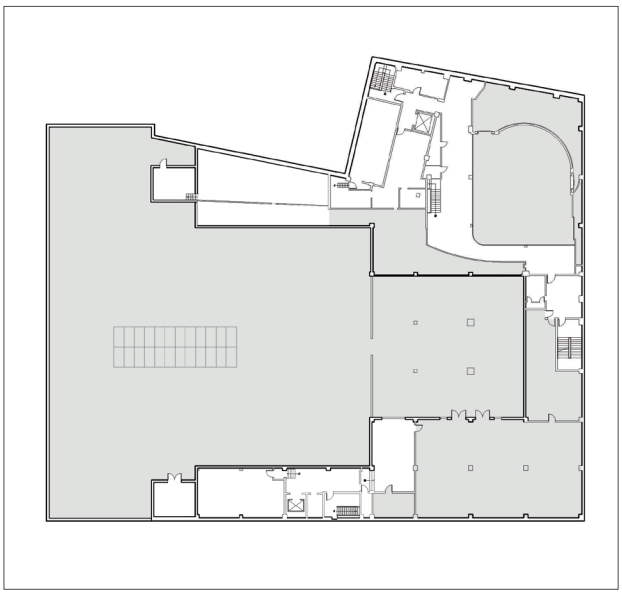


11th Floor

- Art
- Music
- Lecture Hall
- Auditorium
- CEO Offices



View of Art Sculpture / Clock in Atrium



12th Floor

- Auditorium Mezzanine
- Storage
- Mechanical



Centinel Hill Hall - Auditorium

N

ARCHITECTURAL CHARACTER

The College's architectural character can be understood as two-part: its renovated interior spaces adapted for educational use and the remaining original historic exterior and interior fabric of the former G. Fox Building.

The original elements of the building that can be considered historic include the Main Street exterior, including the façade, and art-deco canopy and storefront, and select interior spaces. Capital's main lobby off Main Street is a mix of some original art deco detailing remaining from the department store and new finishes introduced when the space was adapted for the College. Capital's auditorium on the 11th floor.

The design character of the 2002 renovation is contemporary and clean. The white walls, columns and ceilings and gray carpet are a unifying color palette throughout, offset by the warm oak of the doors. The design reveals and celebrates the handsome concrete columns of the original building.



View of the main lobby from Main St. Entrance



Capital's Address # on the canopy



960 Main St. Entrance Signage + Canopy



Centinel Hill Hall - Auditorium on 11th Fl.



View of Capital's Main St. Frontage

CIRCULATION AND ACCESS

The typical circulation pattern on upper floors has a clear pattern and is reasonably efficient. Two corridors usually extend north from the main elevator bank on each floor. These connect to a central east / west space area in the core of the building that acts as a unifying element. On lower floors this is a lounge / waiting / service area. On the seventh floor, it is the Internet Café / dining area. On floors 8 through 11, this is the atrium with surrounding corridors and offices. The corridor along the north side of each floor connects to restrooms and the north core and acts as a common reference spine.

On some floors, corridors run along the windows facing Main Street. Since a basic design goal is to give natural light to occupied spaces whenever possible, this represents a lost opportunity. While traffic noise on Main Street sometimes can be a nuisance, nevertheless making best use of available natural light is recommended.

The circulation from the Market Street entrance to the College lobby is somewhat circuitous. One must follow signs through the shared lower lobby, go up two escalators, down a shared concourse and across a lobby to the Capital interior entrance. This condition works, however, since signage is sufficient. It is a small trade-off for being one tenant in a building with multiple tenants.



View of Escalators coming from Market St. Level



Example of existing corridor running along windows

KEY

- Horizontal Circulation
- Vertical Circulation
- Entrances
- Path to Market St. Entrance

Main Lobby

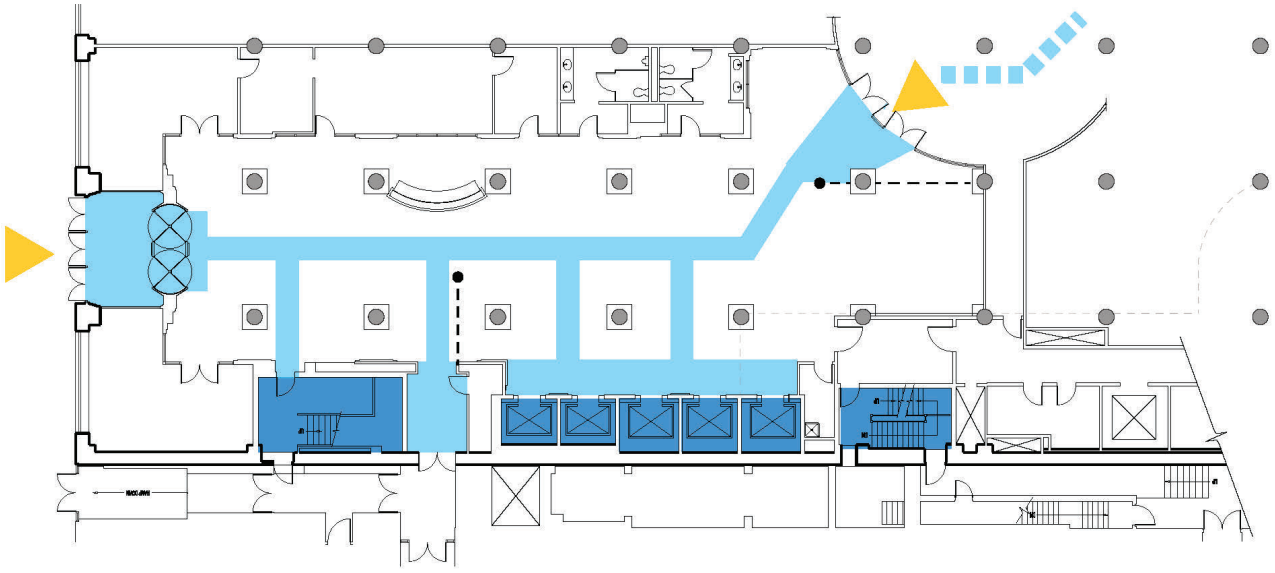


FIGURE 02.14 Interior Circulation and Entry Points

2nd Floor



8th Floor

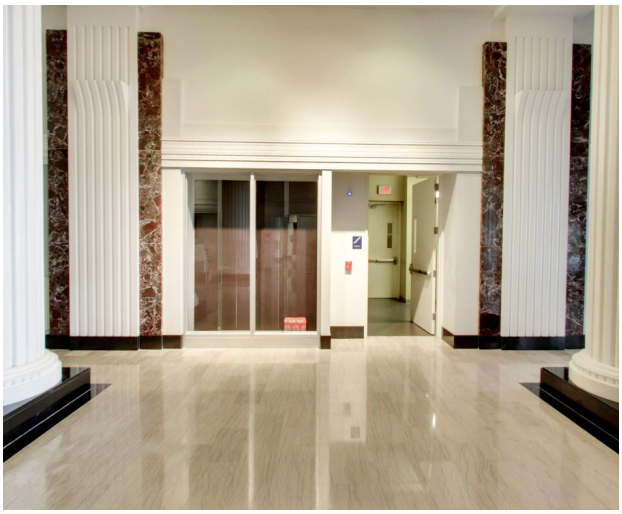


FIGURE 02.15 Typical Interior Circulationon upper floors

KEY Horizontal Circulation Vertical Circulation

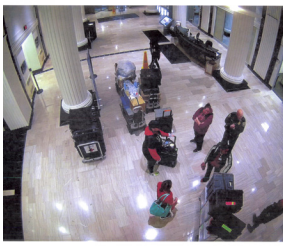


View of Main Lobby Elevators



View of Stair D-1 Entrance









Security camera footage showing elevator congestion

VERTICAL CIRCULATION

Proper vertical circulation is key to the success of any vertical campus. The combination of elevators, stairs and possibly escalators should be able to support peak traffic flows in the building without long wait times.

The original G. Fox Building had multiple elevator banks as well as escalators. When a portion of the building was converted for College use in 2002, one elevator bank with 5 shafts was removed and filled in with floor space. The escalators likewise were removed and filled in with floor space on lower floors and the atrium on upper floors.

Capital today has 5 elevators and access to one freight elevator at its northeast corner. The College also has access to two stairs, which can be used to go from floor to floor and permit re-entry. Together these are not adequate to serve Capital's vertical transportation needs. At peak times, such as 10:00 AM and 5:00 PM, there are long wait times going up. The congestion and delay cause significant frustration for students, faculty, staff and visitors at times. More importantly, first-hand experience or reports of elevator congestion may discourage prospective students from applying, when other community colleges in driving distance do not have this issue.

Solving a vertical transportation problem takes a multifaceted approach – addressing not only equipment but also stacking and scheduling. High occupancy spaces like general classrooms, typically should be lower in the building. Whenever possible, scheduling should aim to distribute peak demand. Providing alternatives to waiting at ground floor elevators – whether by stairs and/or escalators – can be a way to break a bottleneck. Several options were explored in the plan, as described later in this report.

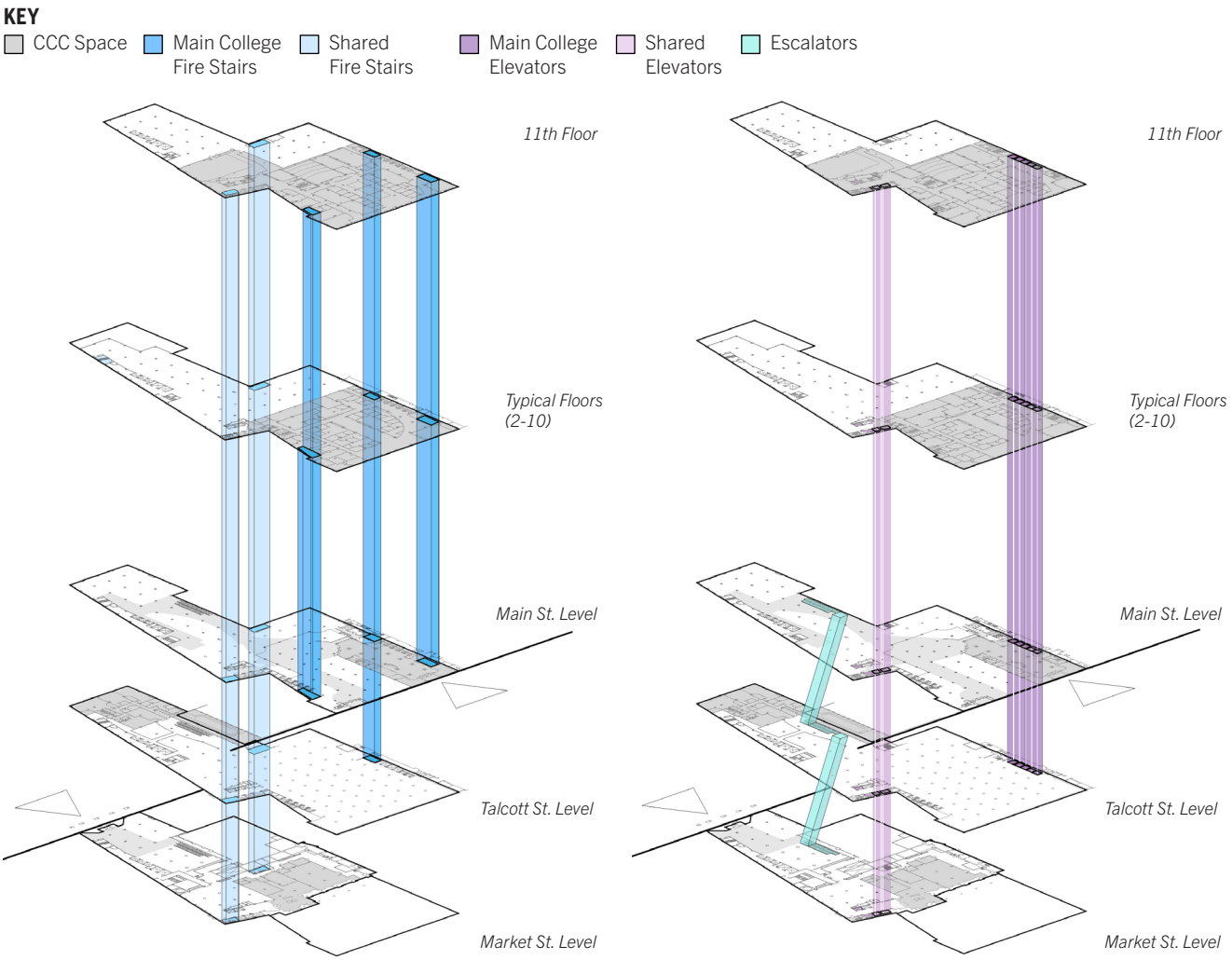


FIGURE 02.16 Existing CCC Stairs

FIGURE 02.17 Existing CCC Elevators

SECURITY

As a College in a downtown setting, security is an important aspect of the facilities planning. While the Public Safety department has a strong presence in the main lobby, they identified multiple needs related to security. A primary need is key card access for entry into the building and to access locked spaces. Today, people entering the main lobby pass a security guard or student volunteer at two checkpoints. Access is open, with no barrier. Providing a turnstile with card swipe access would enhance security. Switching keys for key cards for all doors now requiring locks is also needed to maintain secure operations.

The Public Safety department needs its own public address system, activated from the security console. Today, personnel must vacate their post to use the building's centrally located fire control system annunciator. Other improvements are also needed for the blue light system, to install a red light exterior system and to enhance security at select points such as the loading dock and third floor Continuing Education window.



Security Desk in Main Lobby



Security Checkpoint at CCC's entrance coming from Market St.

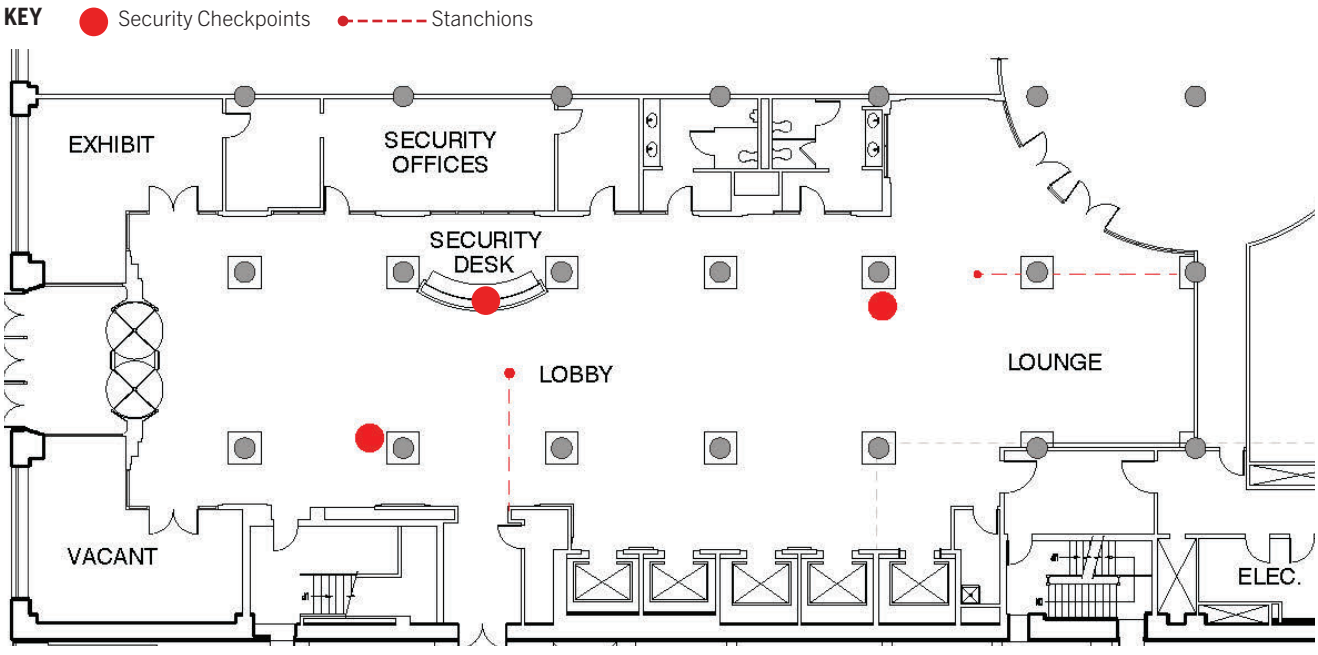


FIGURE 02.18 Main Lobby Security Checkpoints

STRUCTURAL GRID

The original column grid from the G. Fox Building is generally 21' – 8" by 19' – 6" feet. The bay facing Main Street is somewhat wider at 27' – 2". This inherited structural grid represents a minor constraint. While higher education facilities typically have a structural bay or 30 feet or more in areas with labs, at Capital most uses fit into the grid without functional compromise Larger bays exist on the top floor which are used by the College for its larger spaces like the Auditorium and Lecture Hall 1126 and the TV Studio.

The diagram below compares Capital to a relatively new H-Wing at Norwalk Community College designed for science and allied health labs. The mix of larger bays for labs and smaller bays for offices represents the purpose-built ideal. In contrast, some of Capital's science labs are configured in longer, thinner spaces. Given the major MEP infrastructure serving Capital's science labs, the master plan did not propose relocating these.



View of the column grid from corridor

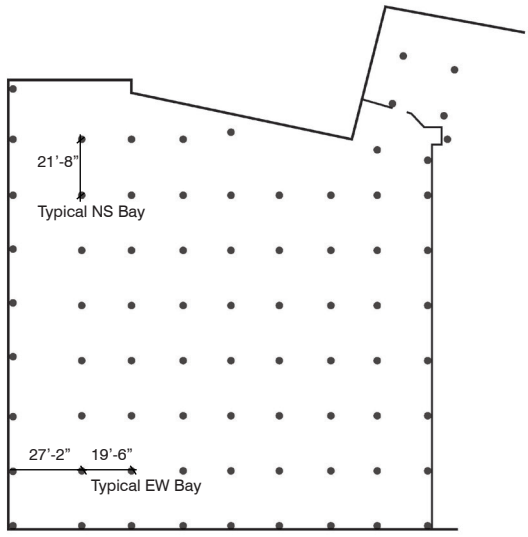


Column in the middle of Food Pantry



Column in the middle of ASC Math Center

Capital CC



Norwalk CC

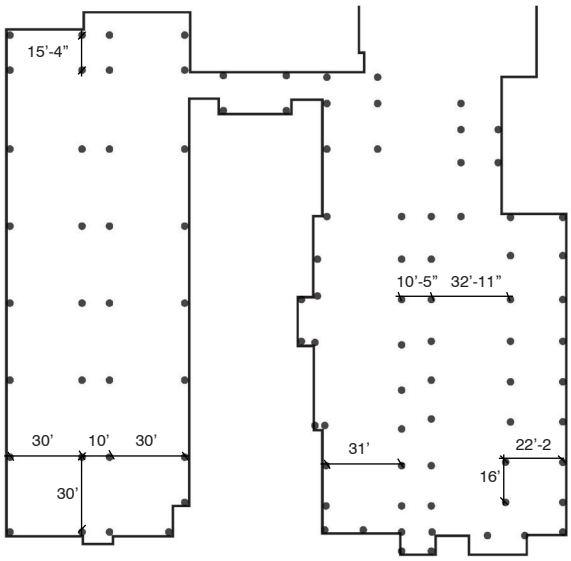


FIGURE 02.19 Column Grid Comparison Diagram

ATRIUM ACOUSTICS

Capital's atrium that extends from the seventh floor to the roof, is an attractive design feature and an important unifying element. One significant downside of this space since it has opened, however, is nuisance noise from the dining level disturbing office occupants on floors above.

CSCU commissioned a study in 2016 to assess conditions and proposed options to solve the problem. An architect, an acoustician and MEP engineer conducted the study. The report proposed five conceptual design options to consider. No option was selected, nor subsequently implemented.

One option entailed enclosing part of the 7th floor in glass as quiet study space under the atrium. Another proposed enclosing the upper openings into the atrium with glass to prevent noise getting to offices. A third option proposed covering the atrium at the 8th floor level with glass to stop noise rising. (Refer to Master Plan Recommendations, Floor 7 for information on the proposed approach).

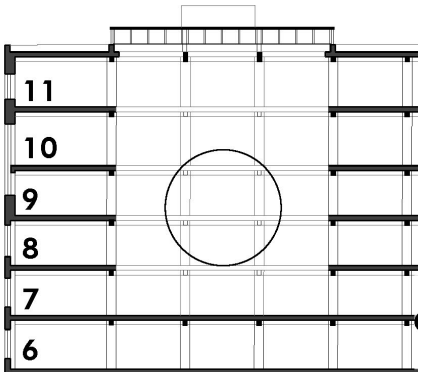
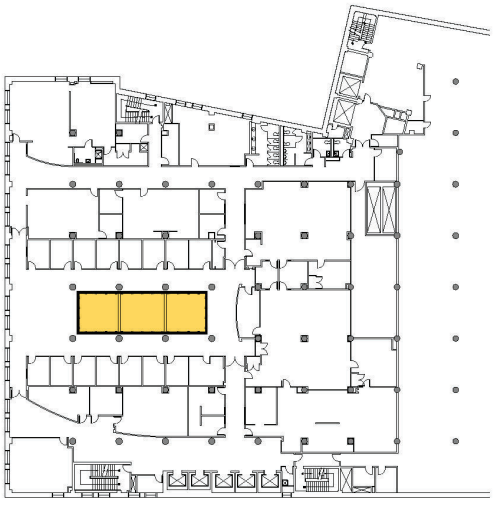
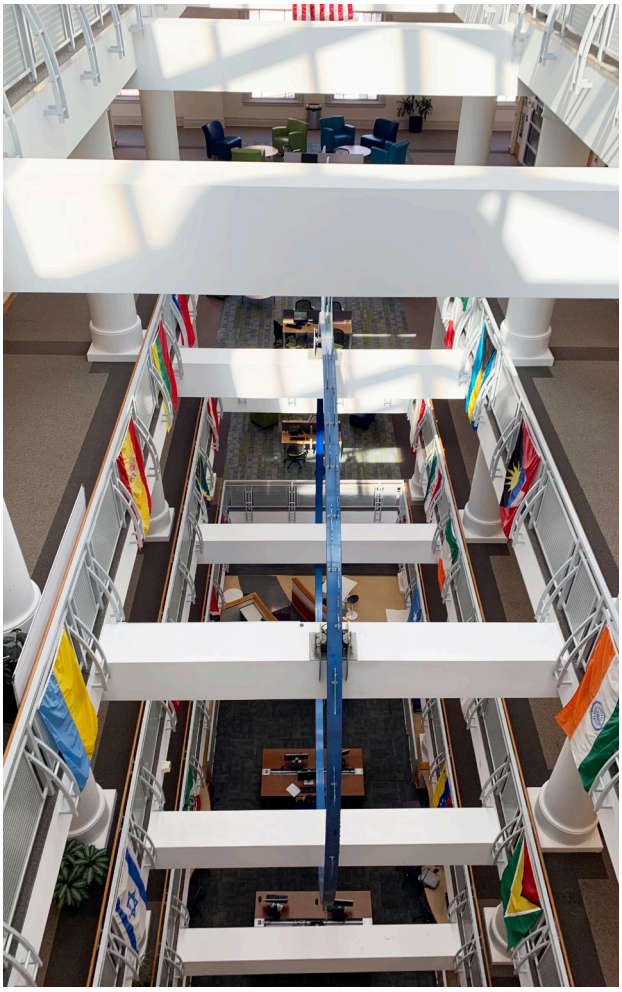


FIGURE 02.20 Atrium Section Today

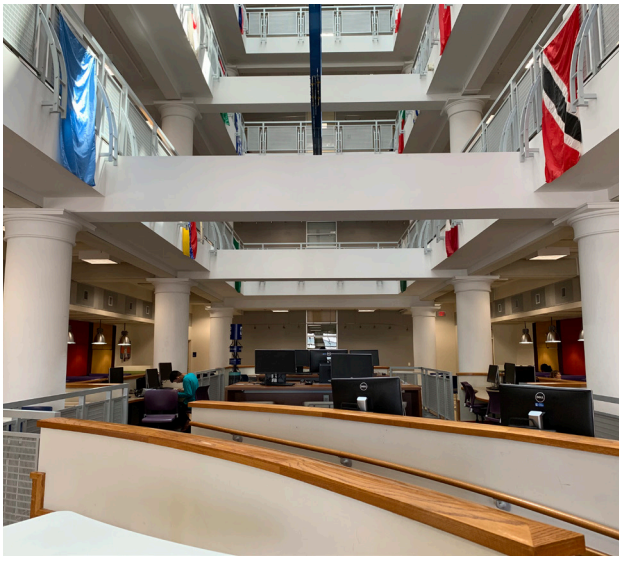


KEY Atrium

FIGURE 02.21 Atrium Plan Today



View down the Atrium from 11th floor



View up the atrium from the 7th floor

BUILDING CONDITION

While the College opened in 2002, the former department store structure was renovated to provide new building finishes, systems and layouts. Some original building elements such as the façade and windows were retained. Almost two decades have passed, however, since this renovation.

Capital's facility staff assessed the condition of the College's building systems for this master plan update. Overall, the condition of Capital's building is fair. The color-coded matrix below represents the condition of the various building elements. Some of these condition issues are being addressed in the near term already.

CODE CONSIDERATIONS

Capital's renovation was designed well after the Americans with Disabilities Act was passed. The facilities department reports the building complies with accessibility requirements.

Likewise, the facilities department believes that College facilities comply with applicable building codes. One exception, at the Main Street exterior doors, is in the process of being addressed with new replacement doors.

Regarding fire exit capacity for this vertical campus, each typical floor is served by 3 dedicated exit stairs and another exit stair shared with other tenants in the building. Based on field measurements of the 3 College stairs, they provide a total exit capacity of 540 people on each of floors 2 through 10. (Stair A: 165 / Stair D: 165 / Stair D1: 210). This capacity is supplemented by Stairs B (amount to be determined based on other occupancy load). The egress capacity is largest on the 11th Floor, where the Auditorium is located, since a fourth egress stair is accessible.

To determine if existing egress capacity is a constraint on planned reallocation of functions per floor would require a detailed occupancy analysis of the entire building, including tenants other than Capital (not in the Master Plan scope).

KEY

- 1- Excellent / New or Very Good Condition
- 2- Good / Needs Investment in 10+ years
- 3- Fair Condition / Needs Investment in 10+ years
- 4- Poor or Critical Condition / Needs Investment in 5-10 years
- U- Condition Unknown / Unclear

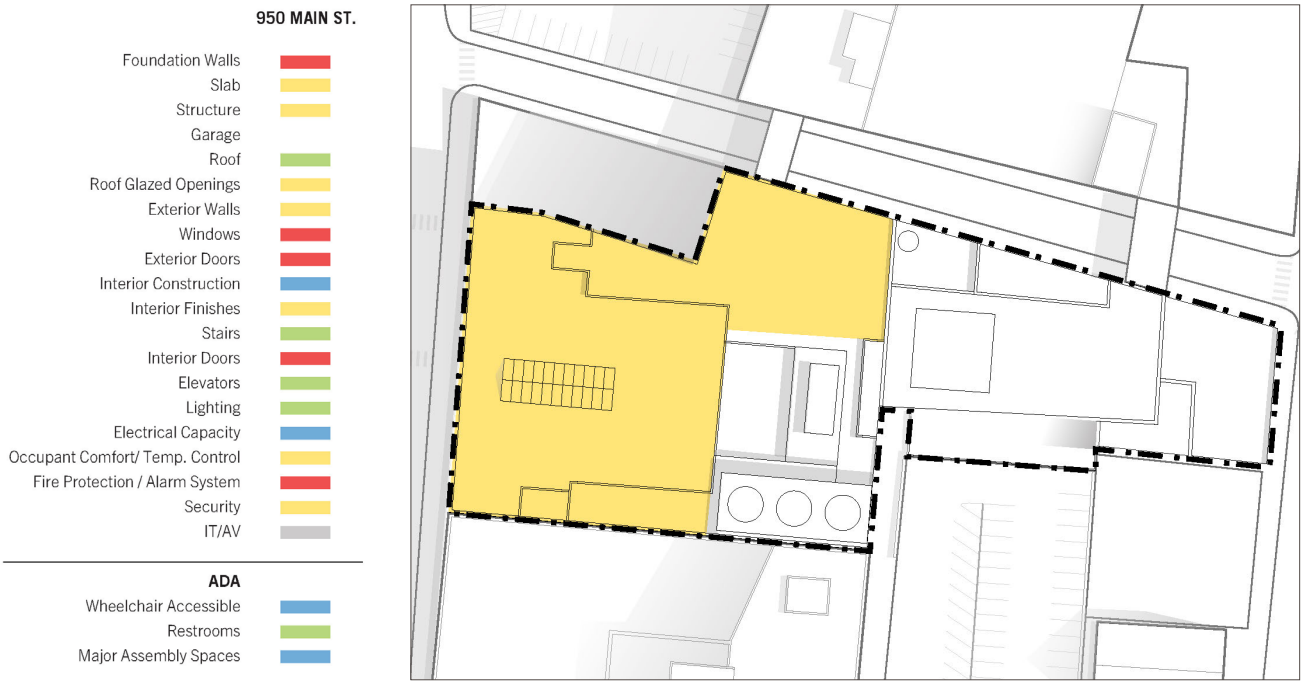


FIGURE 02.22 Existing Building Conditions

CLASSROOM UTILIZATION

Capital today has 23 general classrooms and two large lecture halls, 1126 and the Auditorium, which are used for both lectures and events. There are 8 additional dedicated Continuing Education classrooms on the 3rd floor. While many classrooms are on the 3rd and 4th floors, there is a large number on upper floors as well.

The scatter chart to the right reflects Capital's scheduled credit and non-credit courses "in the grid". The X-axis represents average hours per week of schedule use. The Y-axis reflects average fill rate in % seats occupied. Blue dots are general-purpose classrooms and orange dots continuing education classrooms. Two things are notable. The general-purpose classrooms have a good fill rate, better mostly than the 60% average goal, but lower utilization – well less than the recommended 30-hour per week goal. Secondly, the 5 of 8 continuing education classrooms that are scheduled have a low seat fill rate, ranging from 25 to 40%. Given the unique nature of the large lecture spaces - 1126 and the auditorium – their utilization was not calculated.

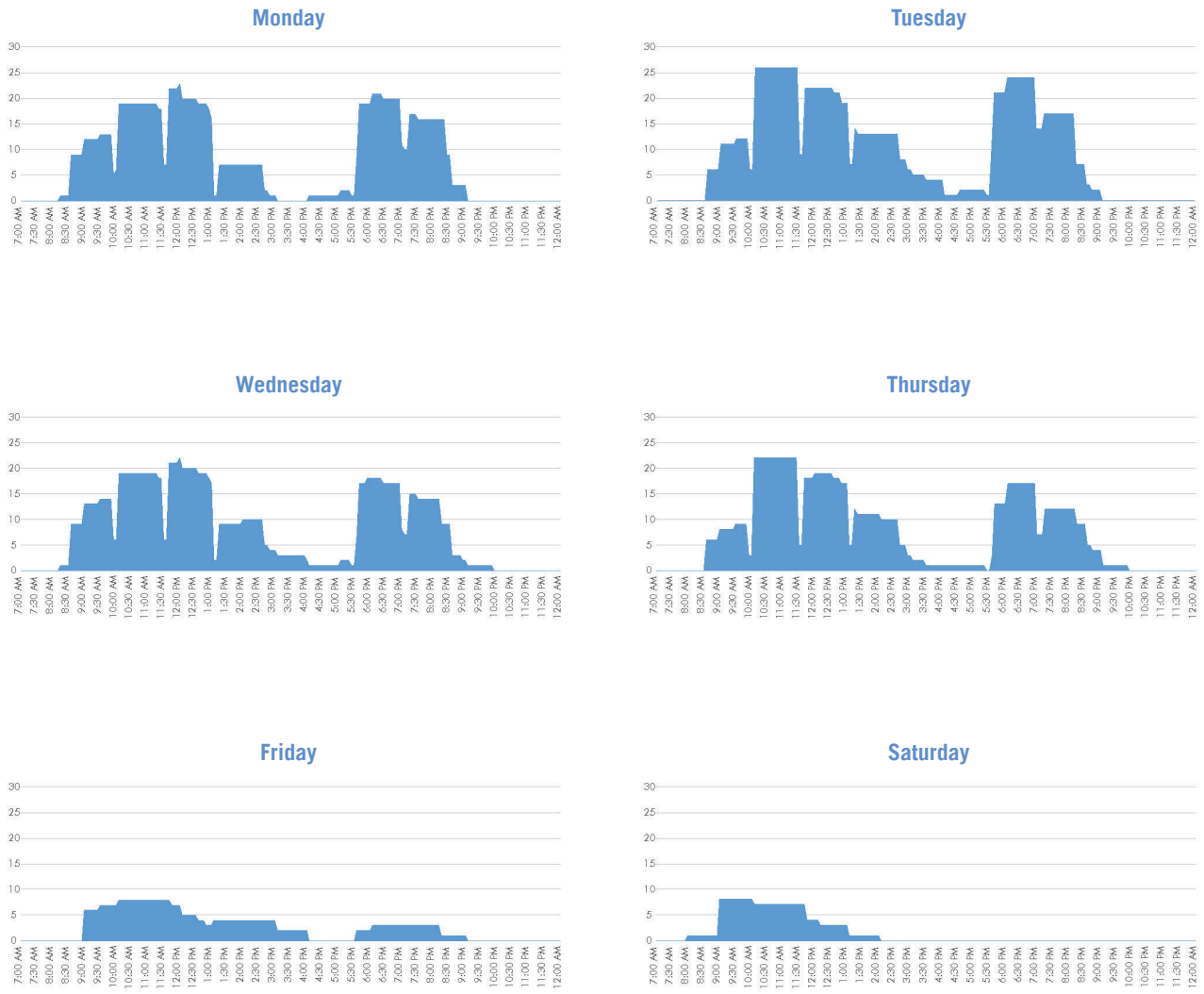


FIGURE 02.23 Classroom Utilization Summary: Rooms in Use by Day and Time

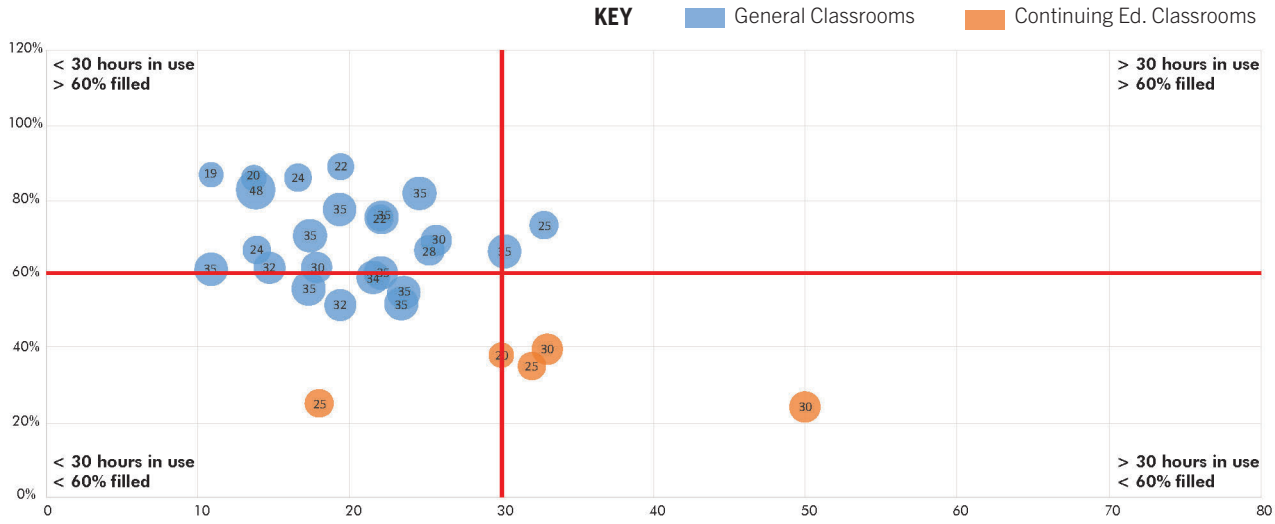
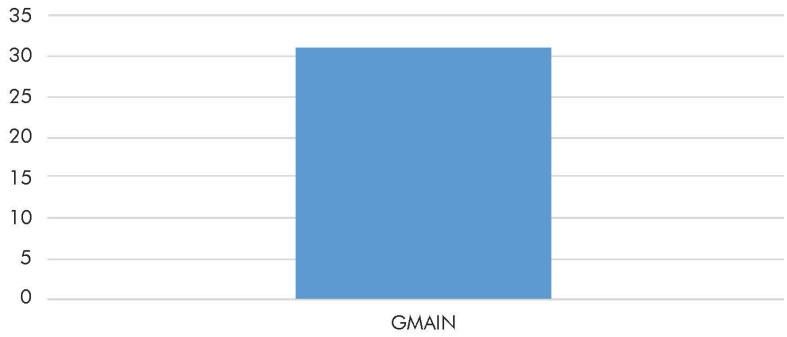


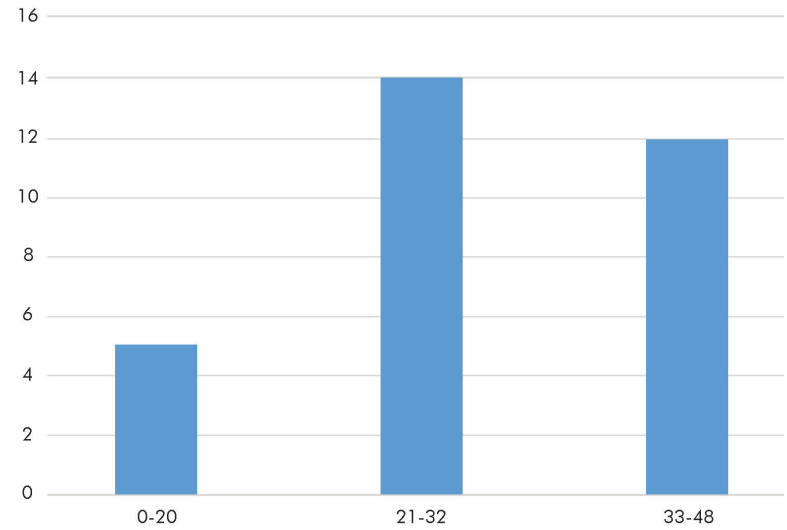
FIGURE 02.24 Utilization Hours in Use Versus Rate by Room

NUMBER OF CLASSROOMS BY BUILDING



Row Labels	#of Rooms
GMAIN	31
Grand Total	31

NUMBER OF CLASSROOMS BY SIZE



Row Labels	#of Rooms
0-20	5
21-32	14
33-48	12
Grand Total	31

FIGURE 02.25 Classrooms by the Numbers

CLASSROOM UTILIZATION

Classroom Utilization by Building

Row Labels	#of Rooms	Total ASF	Total Seats	Average ASF per Station	Average Seat Capacity per Room	Total Weekly Hours of Courses	Average Weekly Hours per Room	Average Fill Rate Per Room	Total Weekly Student Contact Hours
GMAIN	31	21,121	870	22	28	739	24	58%	7,348
Grand Total	31	21,121	870	22	28	739	24	58%	7,348

Classroom Utilization by Size Tier

Row Labels	#of Rooms	Total ASF	Total Seats	Average ASF per Station	Average Seat Capacity per Room	Total Weekly Hours of Courses	Average Weekly Hours per Room	Average Fill Rate Per Room	Total Weekly Student Contact Hours
0-20	5	2,807	59	17	12	62	12	42%	407
21-32	14	9,138	379	24	27	425	30	58%	3,246
33-48	12	9,176	432	21	36	252	21	66%	3,695
Grand Total	31	21,121	870	22	28	739	24	58%	7,348

FIGURE 02.26 Classroom Utilization

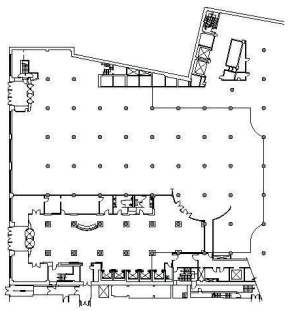
Note: Seat capacity numbers for each classroom are estimated based on the course schedule. At the time of this draft, seat counts were not available for each classroom and the floor plans provided do not show furniture. This study will be updated after classroom seat counts are verified.



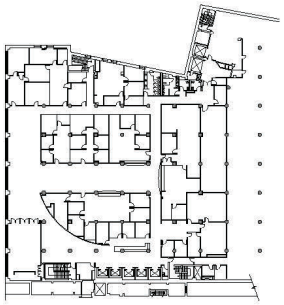
KEY

General Classrooms

Continuing Ed. Classrooms



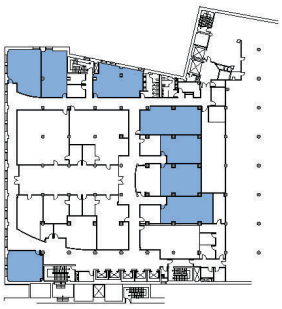
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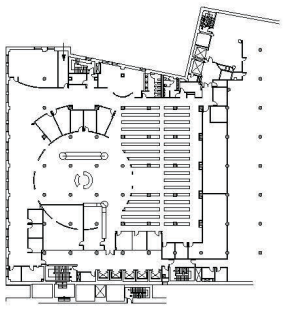
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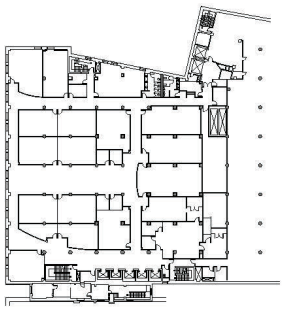
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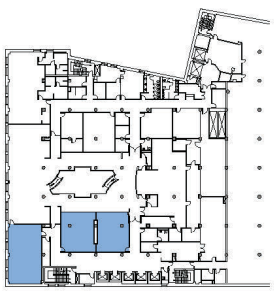
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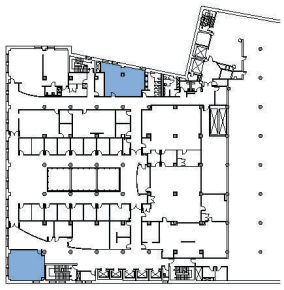
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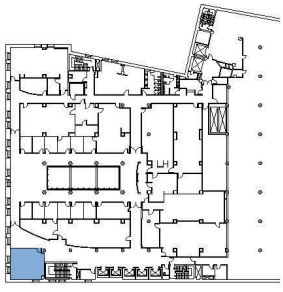
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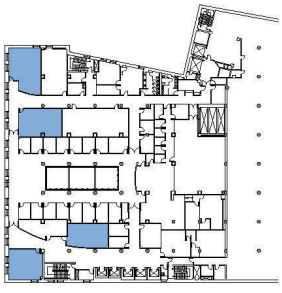
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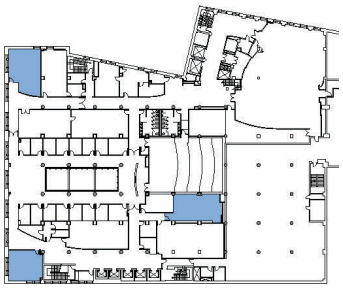
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9



10



11

FIGURE 02.27 Classroom Distribution by Floor

ENERGY AND INFRASTRUCTURE

The mechanical, electrical, plumbing engineer on the master plan consultant team, AKF Group, toured the building, met with Facilities and reviewed available energy use data, including the Capital chapter of the 2015 CSCU Energy Master Plan. Following is a summary of their findings on existing conditions for the central plant, HVAC, plumbing, fire protection and electrical.

HEATING, VENTILATION & AIR CONDITIONING, CENTRAL PLANT & AIR DISTRIBUTION UTILITIES

Utilities

- CCC purchases steam and chilled water from the City of Hartford utility
- Steam is converted to hot water for circulation throughout the building

Air Distribution

- One air handling unit per floor with steam preheat and chilled water heating

Fire Protection Systems Overview

- The fire protection water service is equipped with a backflow preventer.
- The building is provided throughout with sprinkler protection and fire standpipe system with 2½" fire hose valves.
- Fire pumps are provided for high and low zone system to serve the entire building. The building fire protection system is shared by the College.

Plumbing Systems Overview

- Domestic Water service is circulated by triplex booster pumps dedicated to the College.
- The buildings domestic water, sanitary and storm drain sewers are served by the local municipality.
- College is provided with dedicated metered natural gas service from the local utility.
- Natural gas is provided for the Cafeteria and Sciences classroom.
- Multiple electric water heaters located throughout the College serve the plumbing fixtures. A steam heat exchange provide hot water for the Cafeteria.



Steam PRV Station



Fire Service Backflow Preventer



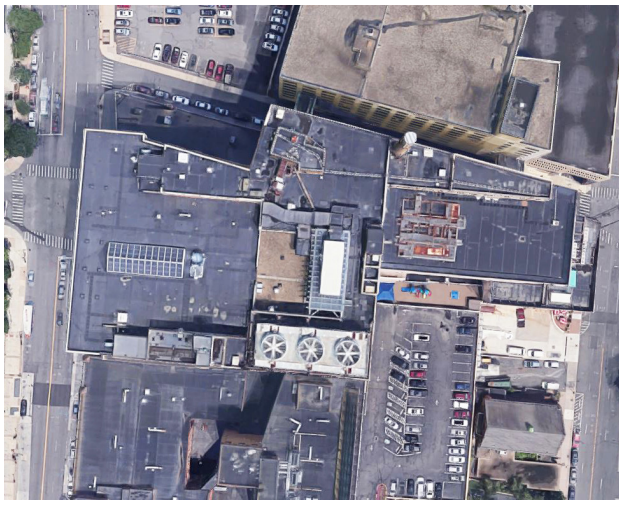
College Domestic Water Booster Pumps

Electrical Systems Overview

- Electrical Service
  - 3000 Amp, 480/277V, 3 Phase Service
- Emergency Power from 450 KW Generator on Roof
  - Lighting has mostly been upgraded to LED as part of recent utility rebate program
- Building Electrical System needs to undergo an NFPA 70E (Short Circuit and Arc Flash) study.
- Fire Alarm needs to be upgraded eventually due to manufacturer phase out of the current system



Main Switchgear



Building Roof View

Major Observational Issues Identified by Facilities or Observed by Consultant

- Air Handling Units are reaching end of life and showing signs of failure
- Fire Alarm panels need to be upgraded to ensure maintenance can be continued after product phase out
- The main electrical room does not currently meet code (missing a second means of egress)
- Campus does not have service contracts for preventive maintenance similar to colleges in the state
- Building Automation system is also being phased out by manufacturer and will need to upgraded
- Outside air intake is too close to the kitchen exhaust, causing kitchen smells to be circulated throughout the building

Central Heating

Today Capital purchases steam from the City of Hartford. As a result, the College does not have a heating plant per se. The annual cost for steam is significant. The contract expires in 2020.

CSCU is considering the feasibility of converting from purchased steam to an on-site heating plant. The Master Plan included a high-level, preliminary assessment of how Capital might install high-efficiency gas boilers in the basement / Market Street Level (Refer to the Recommendations chapter for additional information).

Central Cooling

Similarly, Capital purchases chilled water from the local utility. CSCU also expressed interest exploring the feasibility of converting from purchased chilled water to an on-site chiller plant. The Master Plan included a high-level, preliminary assessment of how Capital might install high-efficiency absorption chillers in the basement / Market Street Level, linked by piping to rooftop cooling tower (Refer to the Recommendations chapter for additional information).

STUDENT ENGAGEMENT

To get a better understanding of campus opportunities and constraints from students' perspective, the planning team hosted a workshop with the president from the SGA, Michaela Appah and a tabling session with other Capital students. After a general overview presentation of the Master Plan goals and objectives by the planning team, the students were allowed to have an open discussion to voice their opinions and concerns. The students shared their thoughts about the environment of the college and their overall experiences while at Capital.

After the discussion, the planning team engaged the students in a few mapping exercises. Students were asked to place different colored dots in response to a series of questions about how they perceive and use the campus and its facilities.

The results from these exercises confirmed much of what the planning team had uncovered through earlier conversations and analysis with the Master Plan Committee. The results from the student workshop are summarized below.

WORKSHOP EXERCISE TAKEAWAYS

Places that Need Improvement:

Exterior Identity:
- There is no art, and the building looks very boring which makes it unattractive to prospective students.
- The exterior appearance doesn't suggest a secure, welcoming place.
- Doors are inconvenient.

Lobby:
- The immediate feeling you get when entering the lobby is frustration.

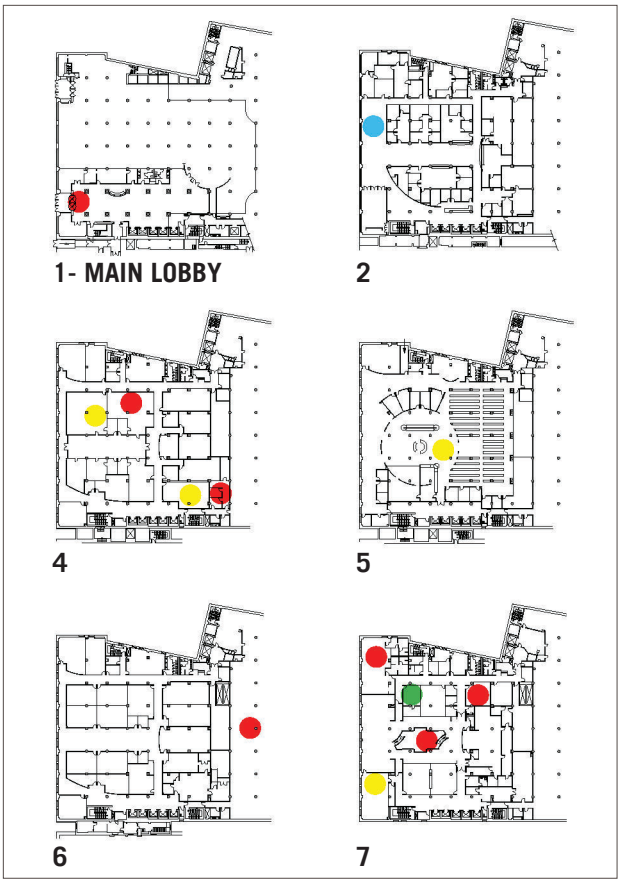
Academic Success Center:
- The function and flow of the space needs to be improved because it is currently chaotic and noisy.

Bookstore:
- Needs improvement, currently too congested and small

Elevators:
- Current elevators are too slow and noisy.
- Some people have to wait 5-10 minutes just to get on an elevator.

Internet Cafe + Dining:
- The space isn't being used efficiently.
- The internet cafe computers are useful but could be better if they were against the wall.

TV/ Game room:
- Too small and is overcrowded at times.



KEY

Places that need improvement
Favorite social spaces
Favorite Classroom/ Lab Space
Favorite study spaces

Favorite Study Spaces:

2nd Floor Lounge:
- Students like to study there because it is quiet and calm
- It might need better furniture.

Favorite Social Spaces:

SGA Office:
- Students like to gather there, very welcoming but can use some updating with storage & shelves.

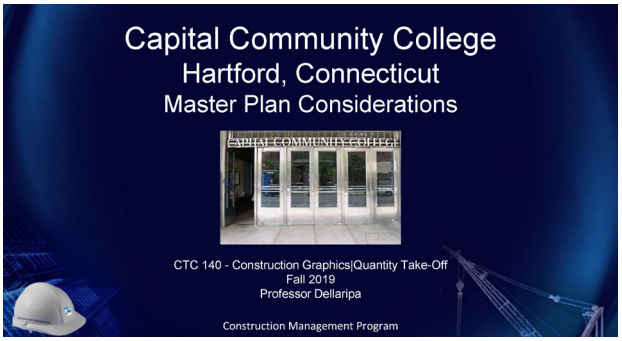
Favorite Classroom/Lab Spaces:

Library:
- The space is good and well organized in terms of operations.
- It is never too full nor too empty.

OPPORTUNITY AREAS

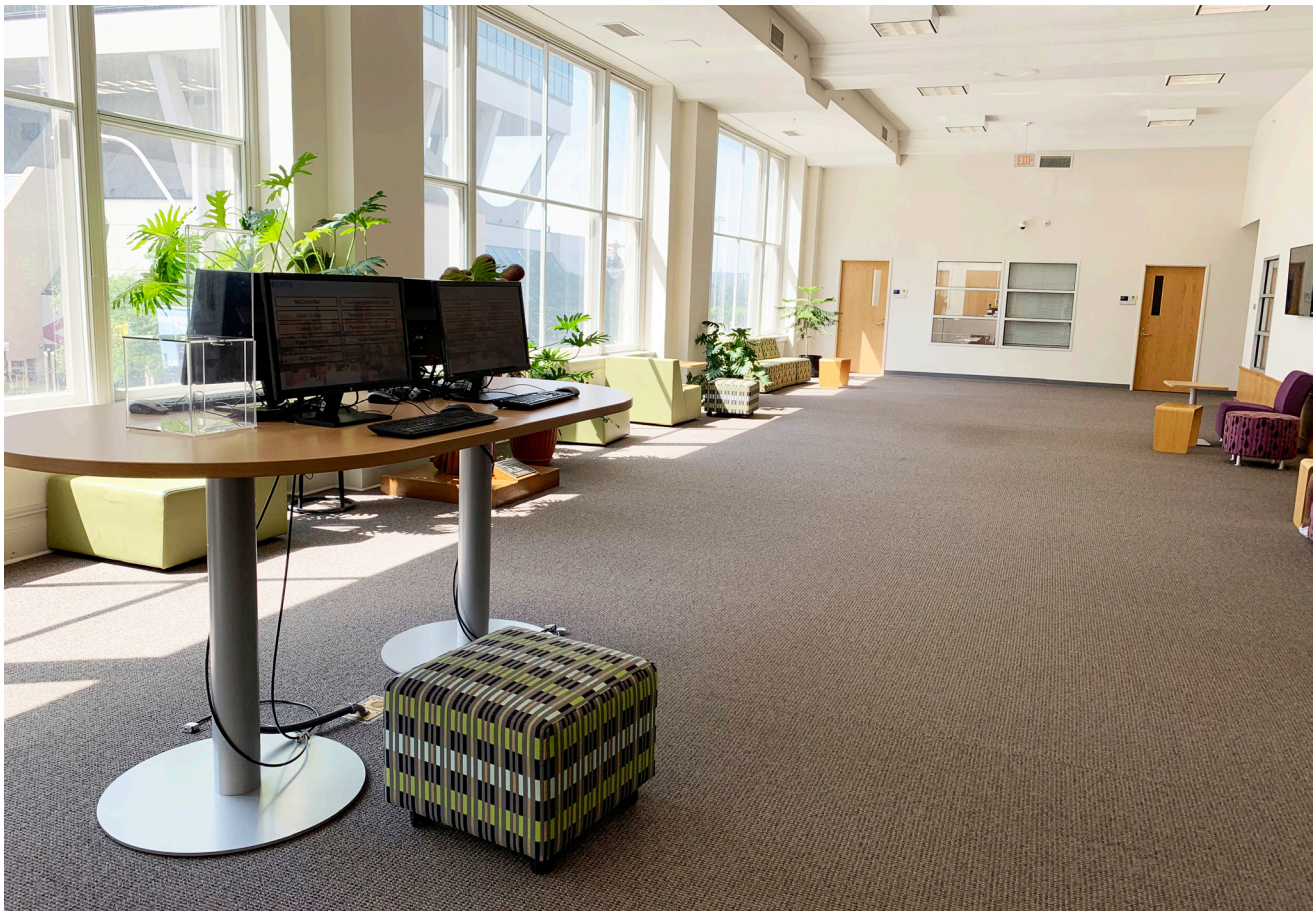
The Master Plan team also got strong student input from Professor Bascia Dellaripa's Construction Management class, which was given an assignment related to the master plan's goal of enhancing Capital's Main Street frontage.

Bill MacIntosh of G3 was a guest instructor for a session where the students presented a wide range of design concepts, for the Main Street area as well as the lobby and atrium. Some of the concepts were included in the Master Plan Recommendations.



The College today has some spaces that are not highly utilized. The floor area per student benchmarking data confirmed this at a macro scale (see the following chapter for additional information). These less-used spaces represent opportunity areas. Repurposing underused space to meet needs was a key master plan objective. The space needs analysis and interview process identified the individual opportunity areas. The Plan proposes to renovate and repurpose these areas to optimize the effectiveness of the current facility.

Capital occupies only part of each floor in the larger building. If the College needed expansion space in future, there are adjacent areas on each floor to consider. While some areas have tenants, others like the 11th floor are vacant. Improving vertical circulation is a significant need and an opportunity. A variety of strategies were explored including locations for additional stairs, elevators and escalators. Partially restacking the building to move more "high traffic" uses to lower floors served by stairs or escalators was another strategy studied.



Underutilized Lounge on Second Floor


CAPITAL
CAPITAL
COMMUNITY COLLEGE



3 SPACE NEEDS

INTRODUCTION

ASSESSMENT METHODOLOGY

- STANDARDS
- CLASSROOM ANALYSIS

ENROLLMENT PROJECTIONS

- CONVERSION TO STUDENT FTE PROJECTIONS
- SPACE DISTRIBUTION BY COMPONENT

OVERALL ASSESSMENT

ACADEMIC SPACE ASSESSMENT

- CLASSROOMS
- COMPUTER LABS
- BUSINESS & TECHNOLOGIES
- HEALTH CAREERS & PUBLIC SAFETY
- HUMANITIES
- NURSING
- SCIENCE & MATHEMATICS
- SOCIAL & BEHAVIORAL SCIENCES

SUPPORT SPACE ASSESSMENT

- ACADEMIC SUPPORT
- ADMINISTRATIVE SERVICES
- ASSEMBLY & EXHIBITION
- CAMPUS SERVICES
- CHILDCARE CENTER
- LIBRARY
- STUDENT ACTIVITIES
- STUDENT SERVICES
- TECHNOLOGY
- WORKFORCE DEVELOPMENT & CONTINUING EDUCATION

PARKING NEEDS

SUMMARY

CONCLUSIONS

INTRODUCTION

This section covers the space need assessment (SNA) for the Capital Community College Master Plan Update. The assessment seeks to determine both the current and projected need of the College, based on enrollment projections for both credit and non-credit enrollment. The assessment is broken into Academic Space and Support Space. The Academic Space includes classrooms, class labs or teaching labs, and faculty offices. The Support Space includes the elements necessary to run a functional campus such as student services, technology, and campus services, and elements necessary to create campus ambiance such as student activities and library. The SNA covers all of these elements. Last, the SNA is in assignable square feet –the space that is actually useable or programmable—unless otherwise noted.

Currently, Capital Community College occupies slightly more than 180,841 Assignable Square Feet (ASF), representing approximately 300,000 Gross Square Feet (GSF) across fourteen floors in one building.



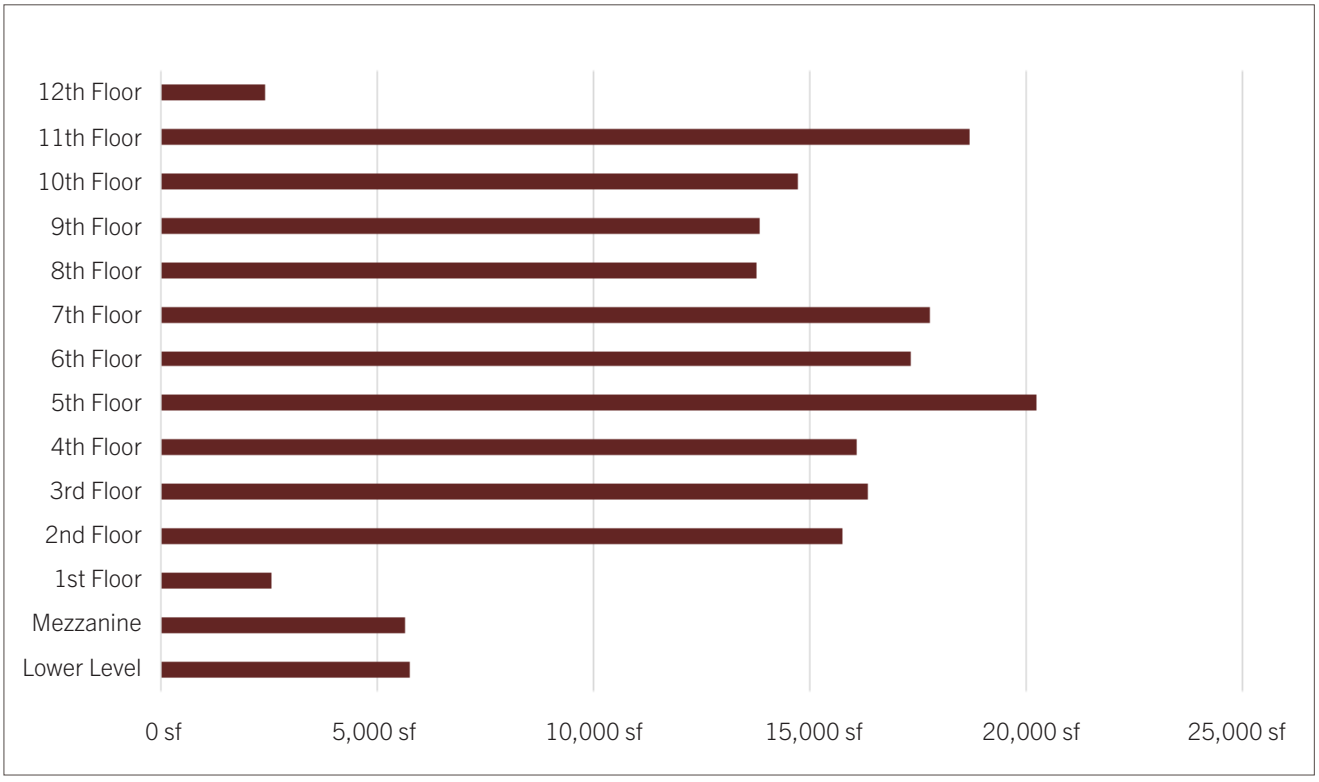


FIGURE 03.1 Existing Assignable Square Feet by Floor

ASSESSMENT METHODOLOGY

While most space assessments function much as a "square footage cost estimate" does, the assessment for Capital Community College intends to provide a higher level of analysis closer to a quantitative takeoff estimate that a cost estimator might provide for either the design development or construction documentation phases of a building project. Square footage estimates or approximations are useful in the early stages for setting gross area but are inadequate for the comprehensive management of scope in the later stages of a project's development. The goal of this assessment is to establish sufficient specificity to enable the assemblage and execution of projects going forward.

The strategy is to focus on time utilization and design standards rather than individual instructional space factors. By developing the assessment at the departmental level, including faculty and staff lines, the assessment is closer to a design program. Also, the goal is to make the assessment more accessible.

To that purpose, the assessment utilizes extensively weekly student contact hours (WSCH). The consultant utilized 24 WSCH per station for all lecture hall and classroom and 19.2 WSCH per station for all teaching lab and studio analysis. Space factors play a much more diminished role in providing corroborating evidence rather than being the primary driver of space. While much of the detailed analysis in the assessment will not be utilized, the Master Plan Team does not know which elements will be pivotal in their development of options.

STANDARDS

While there are various standards, including CEFPI, most standards work with FTE space factors. This type of analysis is something the Master Plan Team is trying to avoid. Both the standards and research studies of the Post-Secondary Education Commission of California and the Texas Coordinating Board, both oversight agencies for the allocation of capital in their respective states, inform the consultant's approach to the assessment.

CLASSROOM ANALYSIS

In 2004 the California Post-Secondary Education Commission (CPEC) commissioned a study addressing CPEC's concern about the "tight" scheduling imposed by their state legislature. The tables in that study make references to classroom hours and occupancy rates related to a 40 hour per week utilization target. However, there are no references as to how that was derived. The Master Plan Team considers this appropriate because the original 40 hours is both irrelevant and confusing to utilize.

So, when one looks for a consistent "frame" such as 40 hours, it does not really exist. The CPEC study disregards it in favor of setting an hour per classroom, avoiding the "frame" altogether. Now there are systems such as Maryland that calculate based on daytime and nighttime FTEs. The assumption is that a College build for the day and the nighttime enrollment is "free," at least from a space standpoint.

The Master Plan Team sees a daytime and evening WSCH target per seat, and it is up to the institution to utilize that resource effectively. Noted for its small sections, CCC has only one section that exceeds 40 students, with Nursing running a TBL section at 81 students. The assessment assumes that the classroom inventory should be designed for both a daytime traditional student population and a part-time evening enrollment. To that purpose, the average classroom station size has been set at 22 ASF.





ENROLLMENT PROJECTIONS

The College provided the System with credit enrollment projections through Fall 2028. Those projections, provided in student headcount, were supplied by related program majors. The projection for Fall 2028 is 3,665, an 11% increase over Fall 2019.

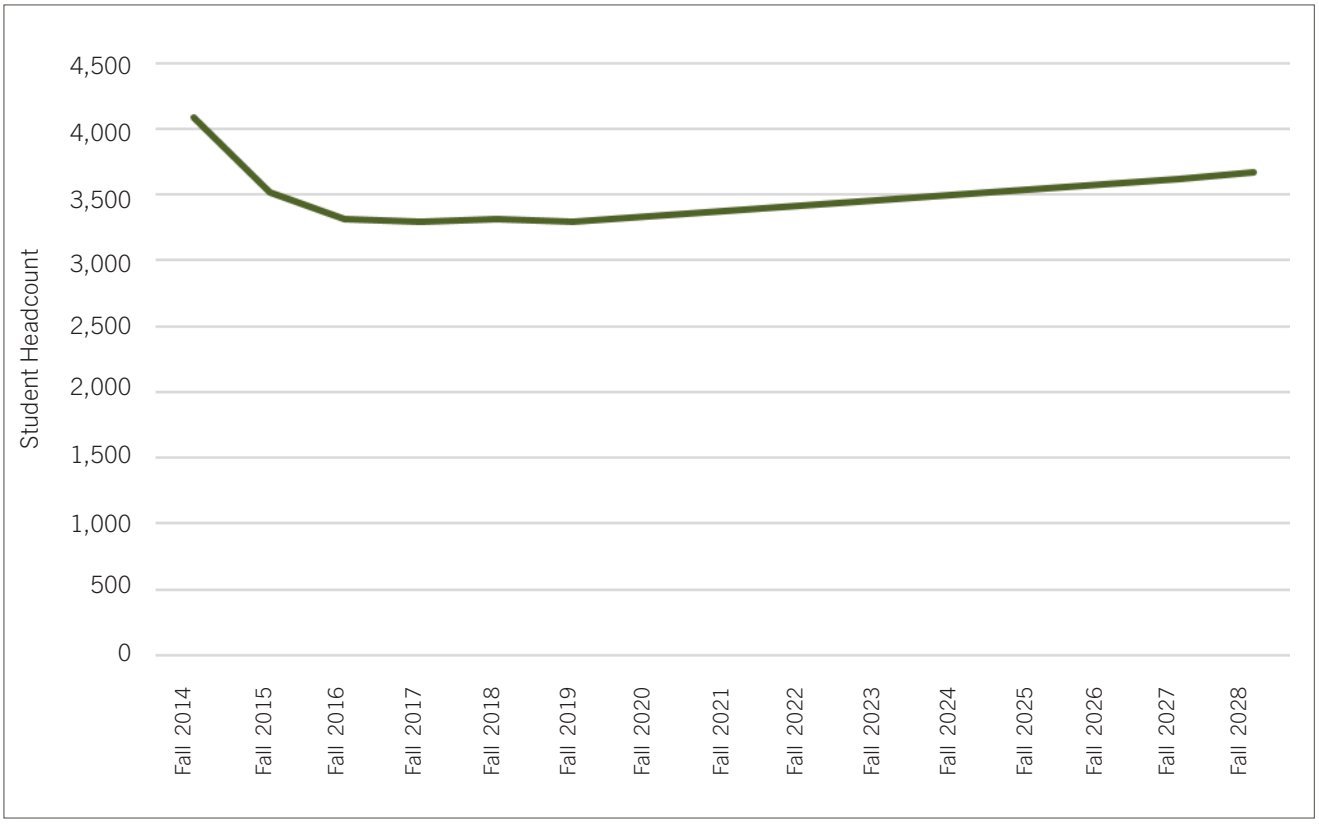


FIGURE 03.2 CCC Credit Headcount Projections





Those projections were translated into student FTEs. The assumption is that the credit load –the number of credits taken by each student and currently at 7.74 (the lowest in the system)—will remain relatively constant over this time frame, resulting in a projected student FTE growth equal to the projected student headcount enrollment. The student FTE projection for Fall 2028 is 1,857.08, an 13% increase over Fall 2019.

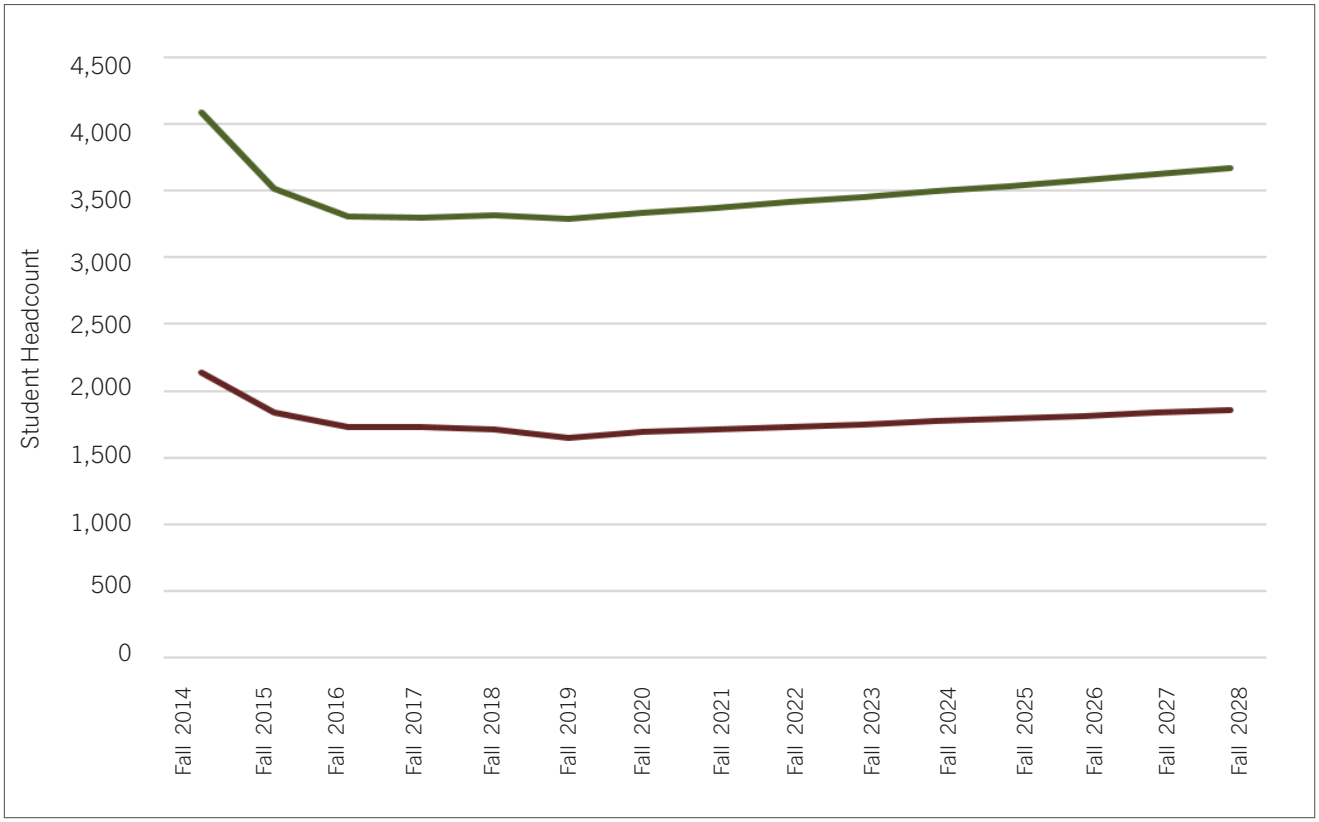


FIGURE 03.3 CCC Credit Headcount & FTEs





CONVERSION TO STUDENT FTE PROJECTIONS

The College's projections—based on headcount by major—required conversion to student FTEs by discipline. The conversion is necessary to establish the demand by the individual department. The next chart illustrates the existing FTE enrollment by subject.

Sorted by student FTEs by subject, with the largest discipline, Biology, at the bottom. Twelve subjects, Biology, Nursing, English, Mathematics, Psychology, ESL, Chemistry, Sociology, History, Computer Systems Technology, College Success, and Art, represent 75% of all credit instruction at the College. The remaining 34 disciplines not individually identified represent the remaining 25%.

Capital Community College is quite unique. Almost all the other community colleges' largest subject areas by FTEs are either English or Mathematics. The presence of Biology and Nursing reflects the fact that the Nursing Program at CCC is one of the largest RN programs in the Northeast, which has an outsized impact on a college of CCC's size.



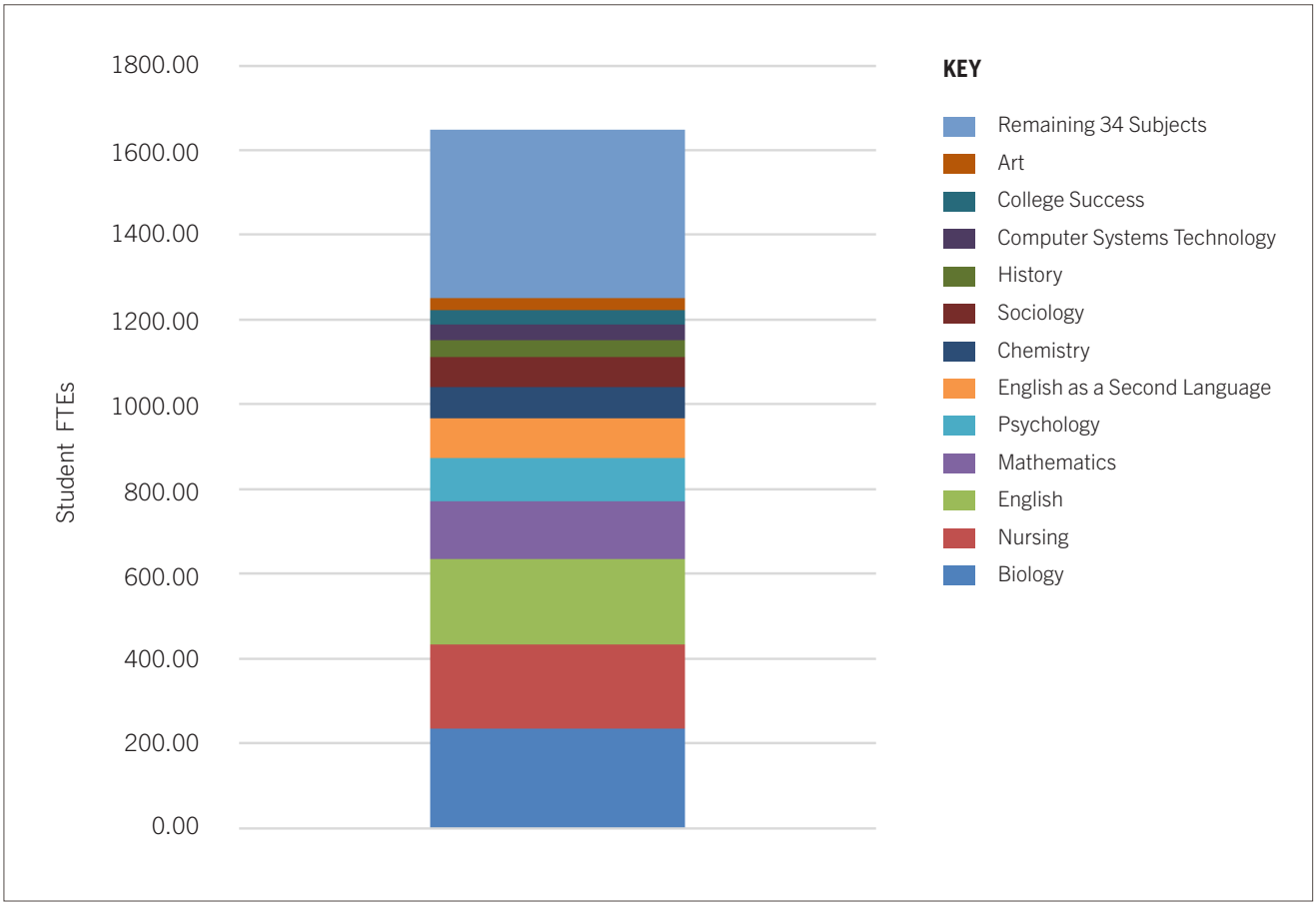


FIGURE 03.4 Fall 2019 Student FTEs by Subject

SPACE DISTRIBUTION BY COMPONENT

The following chart represents the current distribution of space by type across the campus. The chart moving clockwise begins with the academic space, the classrooms, and computer labs, faculty offices, and teaching laboratories. The four largest components in the inventory are the Classrooms, the Instructional Laboratories, the Library, and the Student Activities.



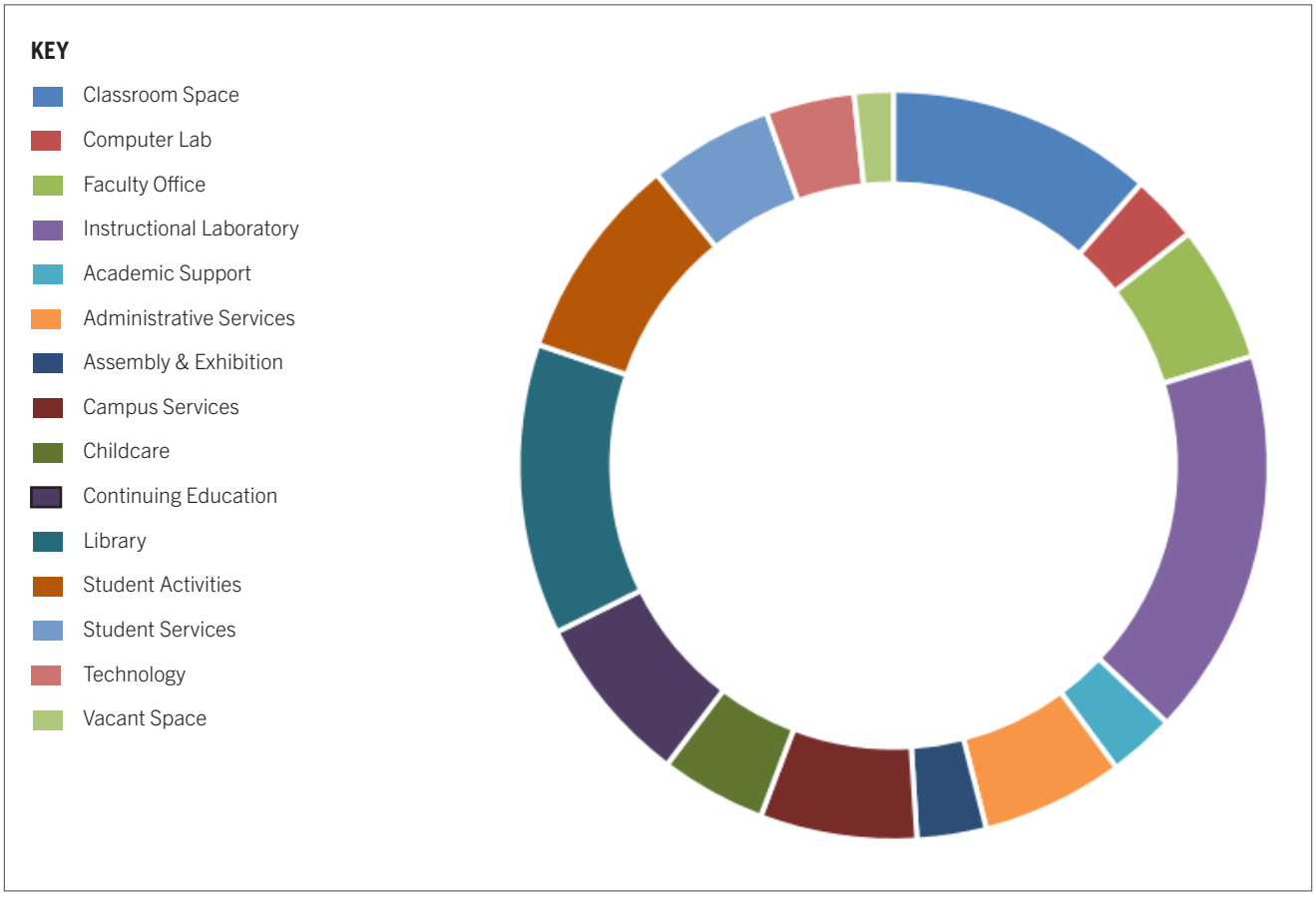


FIGURE 03.5 Assignable Square Feet Distributed by Category

OVERALL ASSESSMENT

Currently, the College has 111 assignable square feet (ASF) per student FTE. 41 ASF per student FTE is devoted to Academic Space—classrooms, computer labs, teaching labs, and faculty offices. The remainder—67 ASF—is devoted to the Support Space on campus, including the Library, Assembly & Exhibition space, and Student Activities. The 111 ASF currently places CCC at the highest level for its peer group. The chart below illustrates the assignable square feet per student FTE, across the Connecticut community colleges.



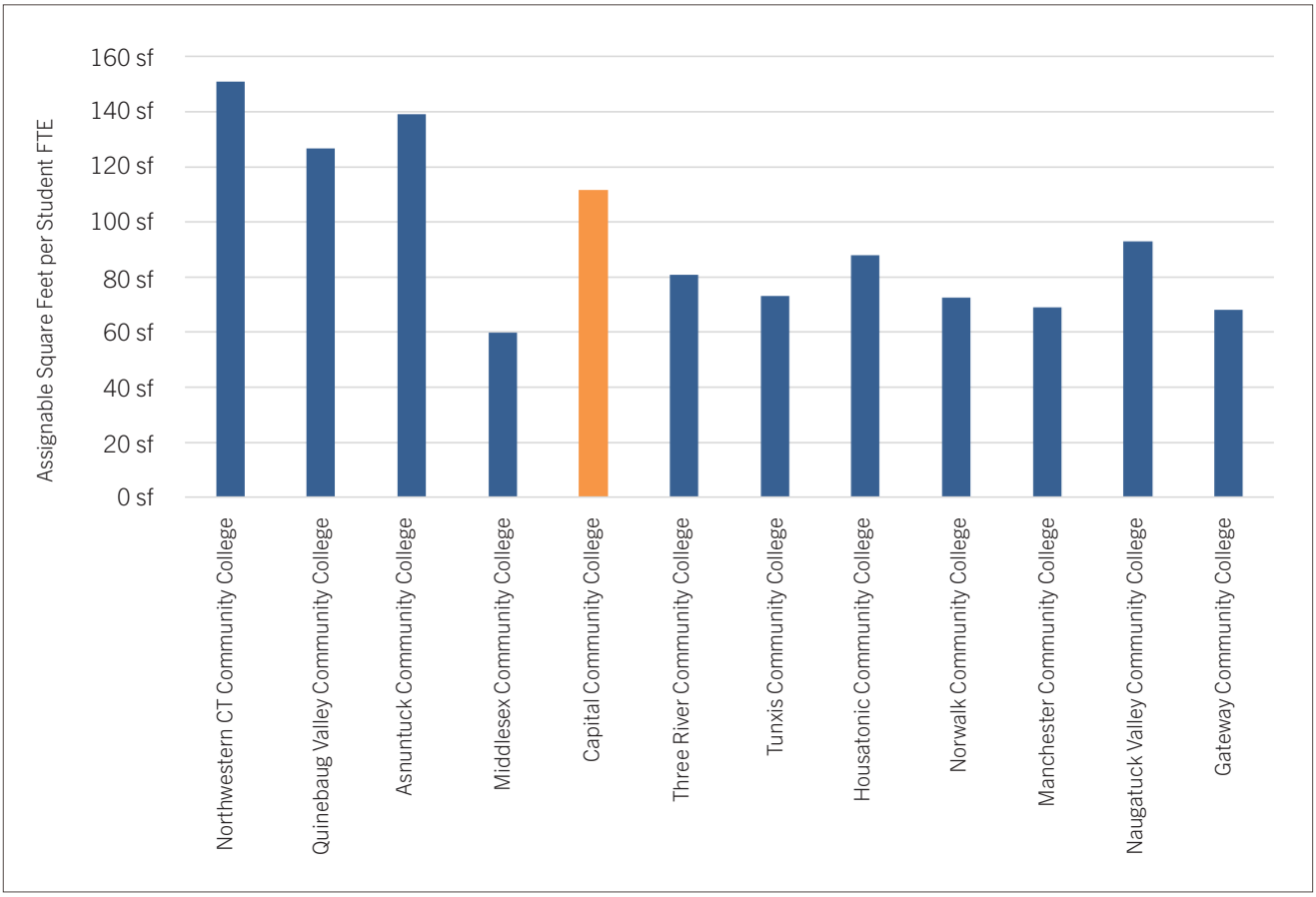


FIGURE 03.6 Benchmarking Across the Connecticut System

Capital Community College with roughly 1,650 student FTEs, falls into the lower midrange of the Connecticut community colleges. In general, smaller community colleges –based on their enrollment—require more space per student FTE. Several elements of any community college are appropriate for both 1,000 student FTEs as well as 4,000 FTEs. As a result, CCC's space allocation should be higher than Three Rivers Community College's, though less than Asnuntuck's. The following chart shows the Fall 2018 and Fall 2019 student credit enrollment across the twelve community colleges.



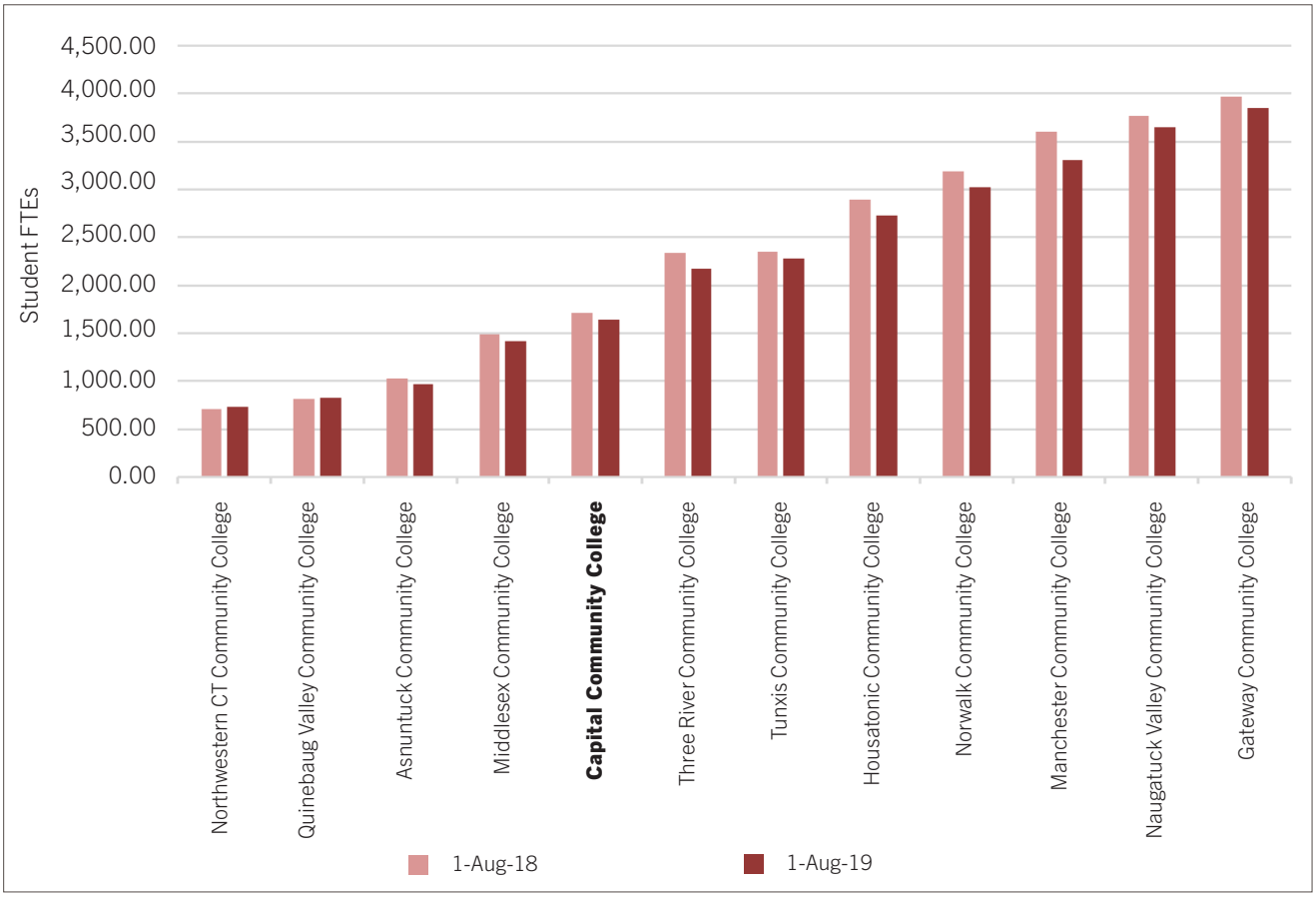


FIGURE 03.7 System Year Over Year Enrollment

ACADEMIC SPACE ASSESSMENT

The following chart shows the assessment for Academic Space at Capital Community College. Almost all departments and components require a modest amount of additional space with the notable exceptions of the Computer Lab space, the ESL Department, and the Sciences. For Computer Labs, a shared element of the academic space, the College has a surplus.

Classrooms
There is a modest surplus both currently and projected for Classroom Space at the College. The main issue is distribution of sections across the week and day. With modest adjustments in the course schedule, the classrooms will be adequate.

Computer Labs
The computer labs are currently underutilized. While part of this underutilization will be resolved by enrollment growth, there will remain a modest surplus in 2029.

Business & Technologies
Business & Technologies is distributed primarily on the Sixth and Tenth Floors. While the most of the space is adequate, programs such as Architectural Technology require expansion.

Health Careers & Public Safety
Health Careers & Public Safety, located primarily on the Eighth Floor, has the largest projected need among the academic departments. The need is to essentially double the assignable square feet with a focus on increasing the size of the individual laboratories. Added laboratories are also required for the Paramedic Program and Criminal Justice.

Humanities
The majority of the Humanities Department is located on the Tenth and Eleventh Floors and expansion of faculty office is needed along with lab space supporting the arts. A key area for expansion is space to support the Music Industry Program.

Nursing
Nursing Department is located on the Eighth Floor. The facilities are adequate to support both the current and anticipated enrollment with the exception of simulation. Currently the department has a modest SIM Center, substantially less than many much smaller RN programs. The proposal is to add a larger SIM Center, utilizing the current center for other ancillary function.

Science & Mathematics
Located on the Eighth Floor, the Science & Mathematics Department requires the addition of one more science lab. Additional expansion is required for faculty offices.

Social & Behavioral Sciences
The Social & Behavioral Sciences is distributed from the Lower Level to the Eleventh Floor. A modest expansion to faculty office space is required.

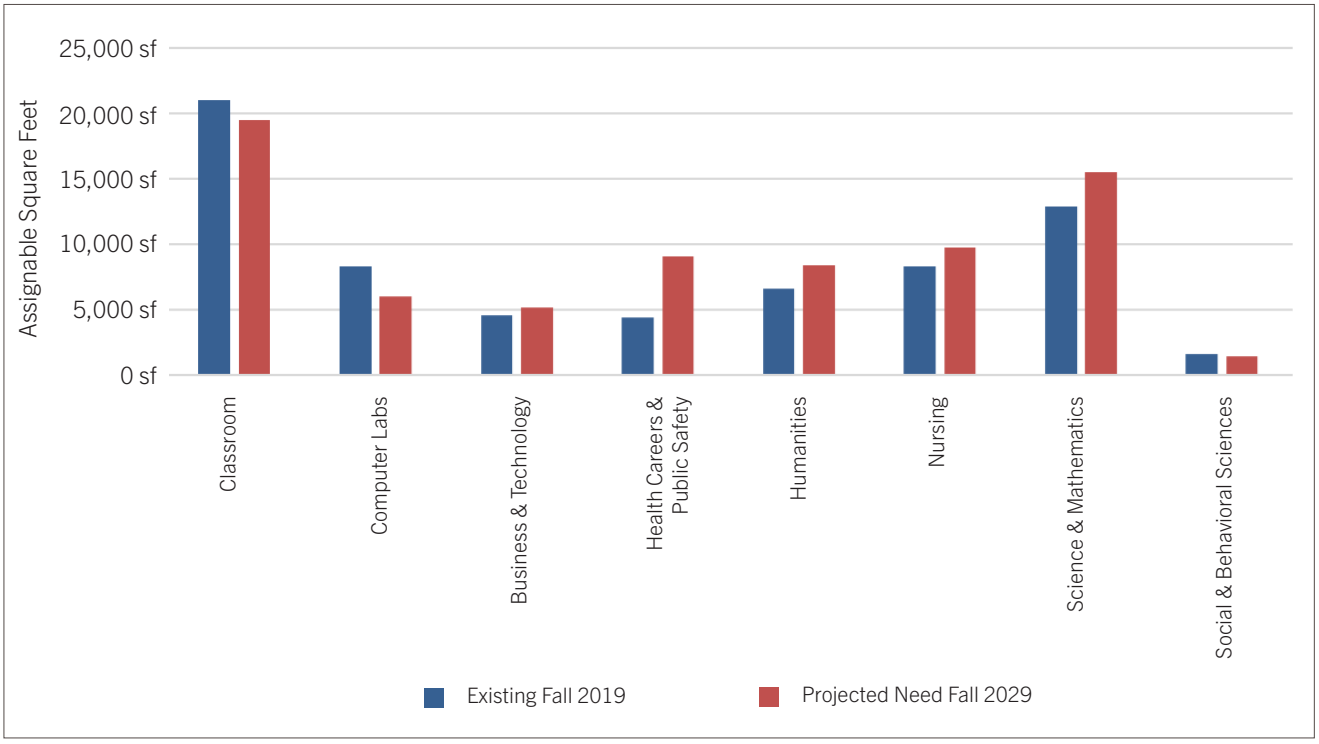


FIGURE 03.8 Academic Space: Existing & Projected

SUPPORT SPACE ASSESSMENT

The Support Space is divided into ten sub-categories: Academic Support, Administrative Services, Assembly & Exhibition, Campus Services, Child Care Center, Continuing Education, Library, Student Activities, Student Services, and Technology. For convenience, Vacant Space, space currently not occupied is added to this section. As stated in a previous section, this is where the majority of the current and projected space shortfall exists. The following chart represents the current and long-term space requirements by each sub-category. Critical shortfalls are Academic Support, Assembly & Exhibition, Campus Services, Library, Student Activities, and Student Services.

Academic Support

The Academic Support programs at the College, including the Academic Success Center and the ESL Center, are located on the Fourth Floor. These functions are currently adequate for the enrollment of the College.

Administrative Services

In aggregate, a very modest additional space is required in Administrative Services.

Assembly & Exhibition

Currently, the assembly facilities at the College are limited to the Auditorium, two small gallery spaces off the lobby, and the Walter Markiewicz Community Room. Expansion is required for the Galley, additional Meeting Rooms and the addition of a modest Black Box. In total, this subcategory of Support Space needs to be expanded substantively.

Campus Services

Campus Services is currently distributed across most of the floors of the building, including a substantive amount of storage space at the Mezzanine Level. While the centralized storage can be reduced, most of the components need expansion.

Childcare Center

The Child Care Center, integrated with Early Childhood Education, is oversized. The proposed need is based on utilizing part of the current surplus to create a drop-in center for adolescents during the late afternoon and evening.

Library

Currently, the Library occupies over 20,300 ASF on the Fifth Floor. The projected need driven by student space and not collection space is approximately 18,000 ASF. This total does not include integrating the Academic Success Center or related functions into the Library. The Academic Success Center is located on the Fourth Floor.

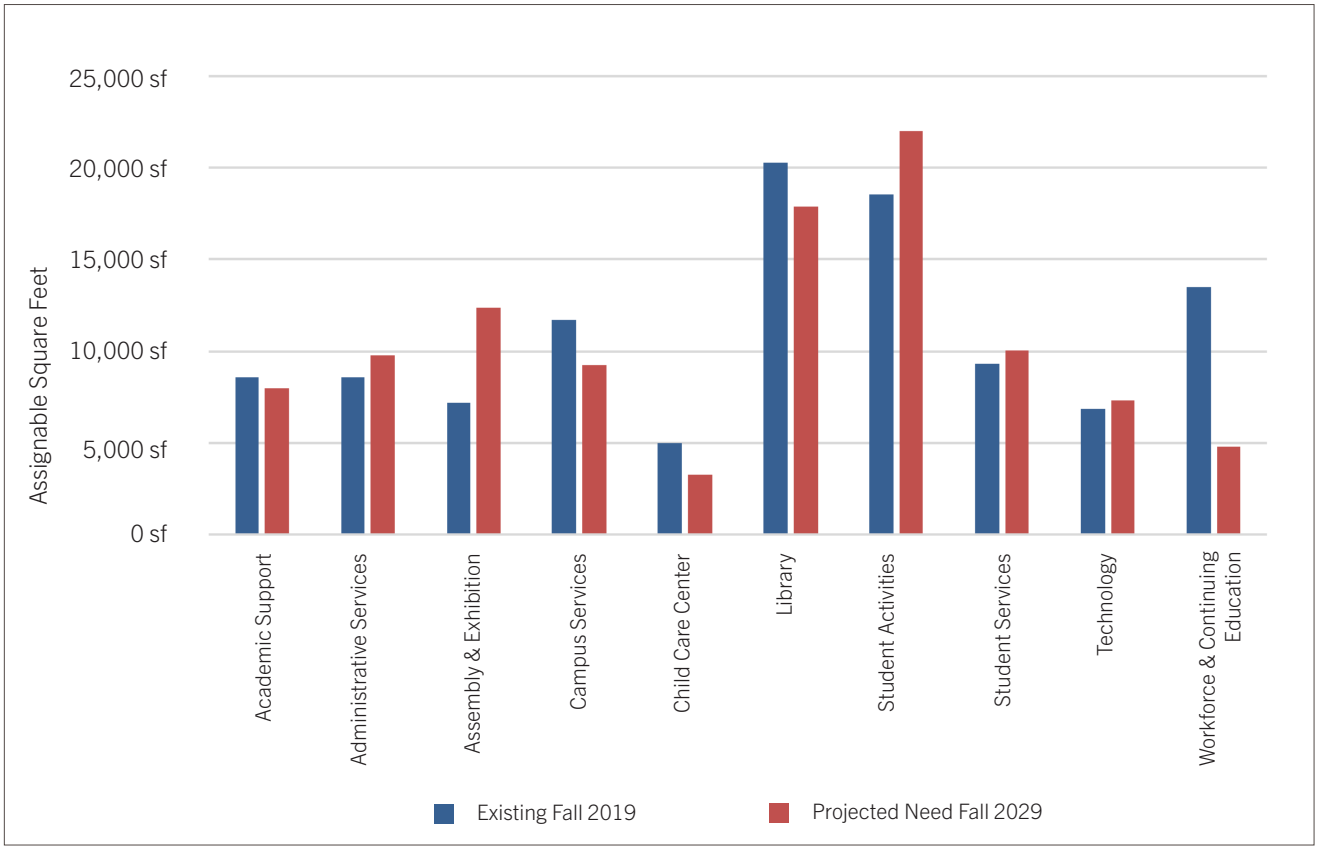


FIGURE 03.9 Support Space: Existing & Projected

PARKING NEEDS

Student Activities
The Student Activities Space at the College is distributed across nine of the fourteen floors of the College. The Seventh Floor houses the majority of the space, with slightly over 13,000 ASF or 71%. The projected need increases the space by roughly 20%, with the expansion for distributed lounge space on the academic and academic support floors.

Student Services
Student Services are currently consolidated on the Second Floor of the College's Building. Modest adjustments are required.

Technology
The Information Technology Services is located on the Sixth and Tenth Floors. The Sixth Floor facilities are integrated with academic functions, which should be resolved. Overall the Department needs a modest amount of expansion.

Work Force Development & Continuing Education
Work Force Development & Continuing Education, located on the Third Floor, currently has allocated classroom and computer lab space significantly above what is warranted by the current offering. The SNA reduces these components, with a higher reliance on the overall classroom inventory.

Capital's current parking arrangement of 800 leased spaces is sufficient to meet current and anticipated 10-year needs. No additional parking is needed.



SUMMARY

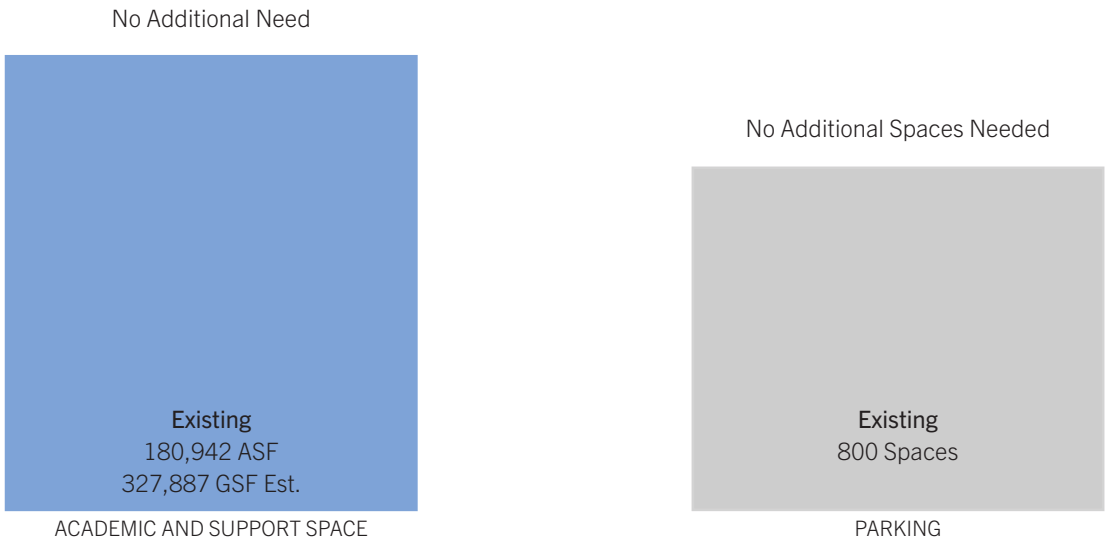


FIGURE 01.2 Space Needs Summary

CONCLUSIONS

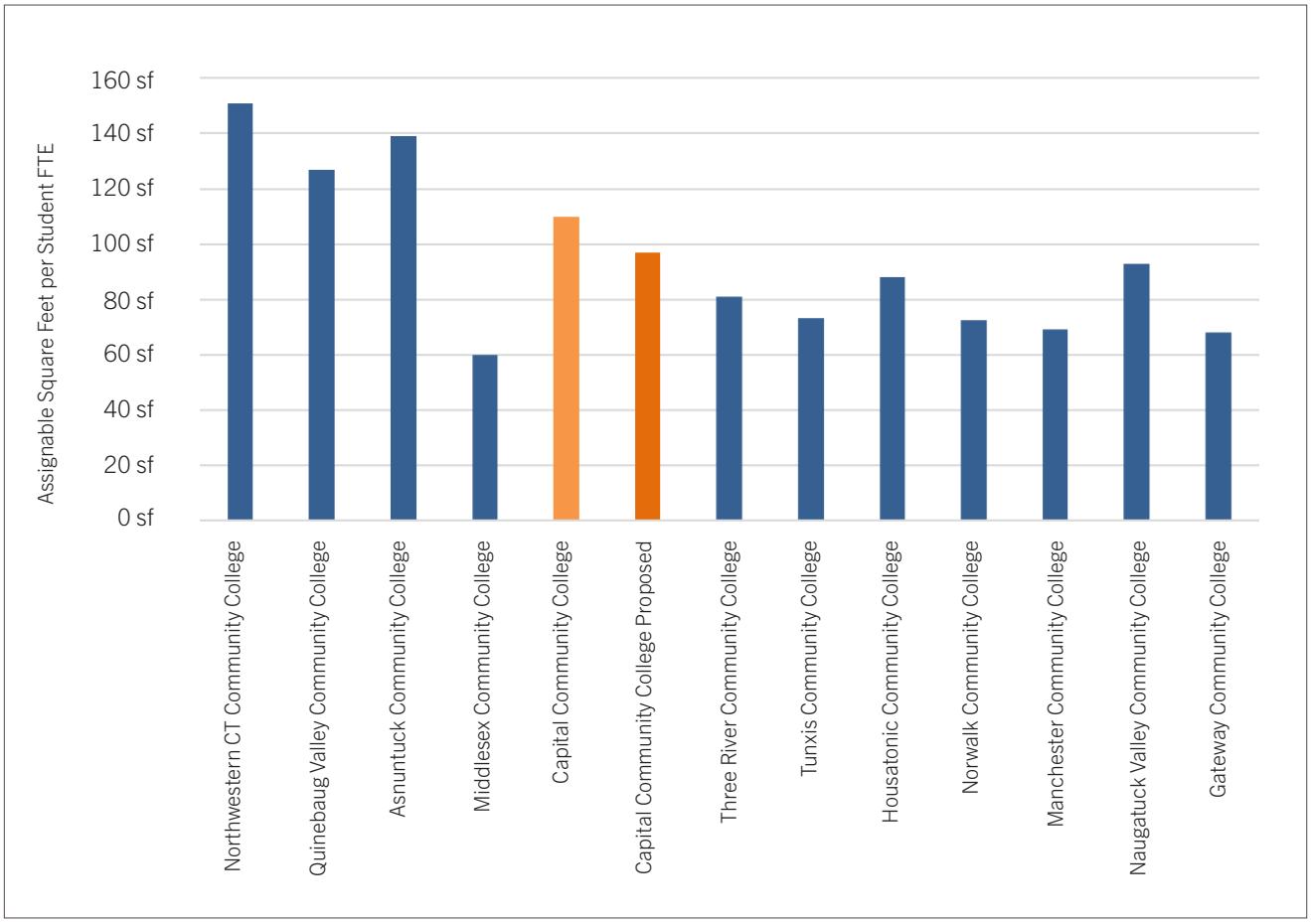
The Space Needs Assessment anticipates that the current building is adequate to house the College though 2029. At 111 ASF per FTE, Capital Community has almost twice the space of Middlesex Community College and 40% more space than Three Rivers Community College. These two community colleges are the closest to Capital as far as enrollment.

Within the allocated space, though, several shortfalls need to be address. The majority of these shortfalls are academic, requiring that space be redistributed from Support Space to Academic Space.



REVISED BENCHMARKING

The following chart illustrates both the current and proposed Capital Community College benchmarked against the system.



The following table represents the current and projected need of Capital Community College.

Category	Existing Fall 2019	Current Need Fall 2019	Projected Need Fall 2024	Projected Need Fall 2029
Academic Space				
Classroom	21,019 sf	17,283 sf	18,591 sf	19,499 sf
Computer Labs	8,261 sf	5,350 sf	5,754 sf	6,036 sf
Business & Technology	4,541 sf	5,137 sf	5,137 sf	5,137 sf
Health Careers & Public Safety	4,378 sf	8,696 sf	9,047 sf	9,047 sf
Humanities	6,581 sf	8,367 sf	8,367 sf	8,367 sf
Nursing	8,267 sf	8,267 sf	9,761 sf	9,761 sf
Science & Mathematics	12,901 sf	15,440 sf	15,440 sf	15,515 sf
Social & Behavioral Sciences	1,590 sf	1,390 sf	1,390 sf	1,390 sf
Total Academic Space	**67,538 sf**	**69,930 sf**	**73,487 sf**	**74,752 sf**
ASF per Student FTE	*41.0 sf*	*42.5 sf*	*41.5 sf*	*40.3 sf*
Support Space				
Academic Support	8,567 sf	8,006 sf	8,006 sf	8,006 sf
Administrative Services	8,573 sf	9,571 sf	9,571 sf	9,571 sf
Assembly & Exhibition	7,183 sf	10,279 sf	12,379 sf	12,379 sf
Campus Services	11,736 sf	9,269 sf	9,269 sf	9,269 sf
Child Care Center	4,986 sf	2,200 sf	2,200 sf	3,245 sf
Library	20,249 sf	16,778 sf	17,234 sf	17,896 sf
Student Activities	18,536 sf	22,000 sf	22,000 sf	22,000 sf
Student Services	9,344 sf	10,038 sf	10,038 sf	10,038 sf
Technology	6,880 sf	6,502 sf	6,994 sf	7,335 sf
Workforce & Continuing Education	13,481 sf	4,789 sf	4,789 sf	4,789 sf
Total Support Space	**109,535 sf**	**99,612 sf**	**102,660 sf**	**104,708 sf**
ASF per Student FTE	*66.5 sf*	*60.5 sf*	*58.0 sf*	*56.4 sf*
Vacant Space	3,768 sf	0 sf	0 sf	0 sf
Total Assignable Square Feet	**180,841 sf**	**169,541 sf**	**176,147 sf**	**176,460 sf**
ASF per Student FTE	*110 sf*	*103 sf*	*99 sf*	*97 sf*
Student FTEs	*1,646.00*	*1,646.00*	*1,770.55*	*1857.08*

TABLE 03.1 Summary Space Table


CAPITAL
COMMUNITY COLLEGE
CAPITAL COMMUNITY
MARQUEE EVENTS
MARQUEE EVENTS



4 RECOMMENDATIONS

INTRODUCTION

PLANNING PRINCIPLES + STRATEGY

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- MASTER PLAN RECOMMENDATIONS

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- EXTERIOR IDENTITY
- ACCESS
- VERTICAL CONNECTIVITY
- FIRST FLOOR - LOBBY RENOVATIONS
- SECOND FLOOR RENOVATIONS
- THIRD FLOOR RENOVATIONS
- FOURTH FLOOR RENOVATIONS
- FIFTH FLOOR RENOVATIONS
- SIXTH FLOOR RENOVATIONS
- SEVENTH FLOOR RENOVATIONS
- EIGHTH FLOOR RENOVATIONS
- NINTH FLOOR RENOVATIONS
- TENTH FLOOR RENOVATIONS
- ELEVENTH FLOOR RENOVATIONS - OPTION 1: NEW LECTURE HALL
- ELEVENTH FLOOR RENOVATIONS - OPTION 2: ENHANCED AUDITORIUM
- TALCOTT ST. LEVEL RENOVATIONS
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- ENERGY MASTER PLAN
- MASTER PLAN MEP RECOMMENDATIONS

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- ARCHITECTURAL CHARACTER
- SUSTAINABILITY

IMPLEMENTATION AND COST
- PROJECT PRIORITIES
- PHASING
- PROJECT DEVELOPMENT
- COST ESTIMATES

CONCLUSION

MASTER PLAN TEAM

INTRODUCTION

Two decades after the design for Capital's at 960 Main Street, it is time for a fresh look at the College's facility needs. The 2020 Master Plan Update reflects a comprehensive analysis of the College's current conditions and space requirements. The Plan envisions transformative renovations to improve "fit to function" and make the most of under-used space. By improving quality of space, relocating select functions and enhancing circulation, the Plan is able to address Capitals's needs within the available rented floor area.

While the Master Plan concepts shown appear to have granular detail, many with room-by-room layouts, it is important to note that they are just that- concepts. Development of the final space program and design will follow the Master Plan when it is implemented. Additional study, analysis and consultation are needed before the floor plans are finalized.



PLANNING PRINCIPLES + STRATEGY

The Master Plan Team synthesized the following Planning Principles from analysis of the College and input from the CMPAC and other stakeholders.

The Plan Strategy emerged over the course of the project, responding to priorities, projected resources and a singular opportunity. Together, these frame the nature and approach of the Master Plan recommended projects.

Plan Strategy

1. Optimize the use of existing facilities to support Capital's mission, through transformative renovations and relocations of select functions. Expansion is not required.

2. Create a flexible plan that can be implemented over time to meet highest priority needs as funding becomes available.

Planning Principles

- Strengthen community by enhancing spaces and internal connectivity
- Improve vertical transportation to create a more efficient, welcoming facility
- Reorganize functions vertically to reduce circulation demands on the building
- Optimize available space to meet the College's needs by repurposing underused areas
- Make best use of natural light with rooms rather than circulation along Main St. side
- Frame the plan to be flexible and phaseable
- Enhance the College's exterior identity, while respecting the historic fabric on the Main St. facade and main lobby
- Create welcoming spaces to engage Hartford community partners



Classroom Strategy

General purpose classrooms, distinct from specialized instructional space, are an important resource for any college since they are key to delivery of much of the curriculum. The 2020 Master Plan Update for Capital has a two-part strategy for making the most effective use of classrooms, both to reduce stress on vertical transportation and to optimize the use of available space in the building.

1. Restack for more classrooms on lower floors

Best practice for vertical campuses is locating the higher capacity spaces which generate the most traffic on lower floors, in reach of stairs and escalators. This reduces the congestion on elevators and the frustration this entails. Today, many of Capital's classrooms are located on upper floors, and the building does not have escalators. As a result, the College's vertical transportation system is insufficient.

One element of fixing this vexing problem is restacking certain functions. While unique spaces like the Auditorium and Lecture Room 1126 must remain on the 11th floor, it is possible to relocate more general purpose classrooms to lower floors. These can be reached by stair and by the proposed new escalators. This strategy in turn allows vacated classroom space on upper floors to be repurposed for other needs. This is especially valuable where the new/ expanded functions must be in proximity to existing ones.

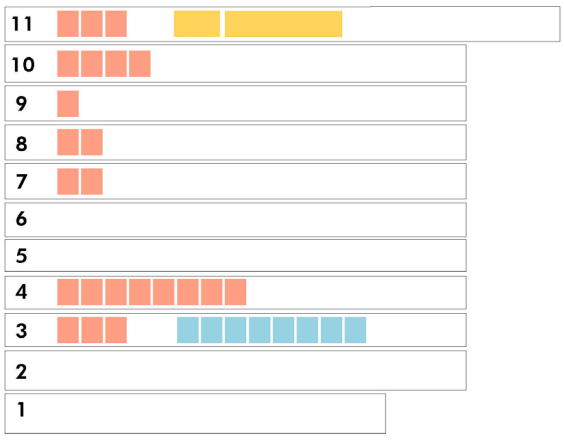
2. Redefine classrooms as a share resource

Today, Capital has a two sets of classrooms – one dedicated for credit courses and a second dedicated for non-credit, Continuing Education courses. The set of credit classrooms is underutilized (based on the Registrar Banner schedule of classes) relative to a typical target of 30 hours per week average use. Only a portion of the non-credit classrooms are scheduled by the Registrar. For these, the average class size is well below the classroom capacity.

As part of an overall strategy to optimize space in the building, the Master Plan recommends redefining all general classrooms to be a shared resource, available for scheduling by both credit and non-credit courses.

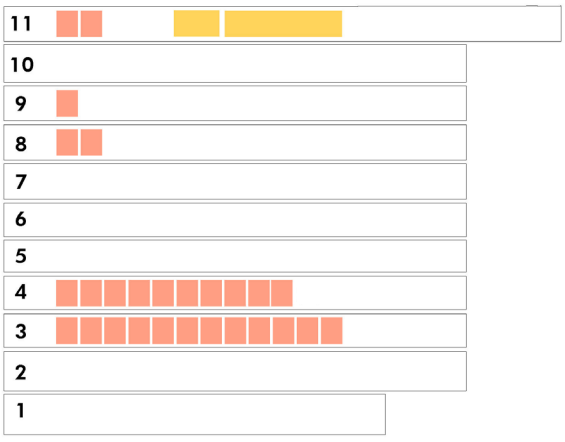
The diagrams below illustrate the existing and proposed stacking and designation of general purpose classrooms and lecture halls in the building. While there is a modest decrease in the overall number of classrooms, by eliminating the credit and non-credit designations, the net effect is improved classroom access.

Existing Classroom Stack



	Credit	Non Credit	Total
Total	23	8	31

Proposed Classroom Stack



	Shared
Total	27

KEY

General Classrooms Con Ed. Classrooms Large Lecture

FIGURE 04.1 Existing + Proposed Classroom Stacking Diagram

MASTER PLAN SUMMARY

MASTER PLAN RECOMMENDATIONS

The scope of the recommended Master Plan projects is broken down by floors, as shown below. Each project is described in more detail in the following sections.

Eleventh Floor	New nursing lecture hall, Music studio & control room, Theater workroom, Auditorium upgrades, New atrium stair access
Tenth Floor	New Health Careers labs, Physics lab, Faculty offices, Black Box Theater & TV Studio, New atrium stair access
Ninth Floor	New atrium stair access, Dedicated biology labs
Eighth Floor	New nursing simulation lab & control room, New atrium stair access, New acousic skylight
Seventh Floor	Remove Internet Cafe, Update open dining area, Expanded TV / Game room, Security Office, New faculty staff lounge, New meditation room, Expanded Veterans Oasis, New fitness / yoga / multipurpose room (lockers & showers), L.E.A.D. Center
Sixth Floor	Convert underused computer repair lab to second cyber security lab, move architecture labs to larger spaces
Fifth Floor	Library main wall to be glass with lounge / display area, Reduce stack collection, Add more quiet study & group study space, New gallery / multipurpose room, New learning commons, New faculty offices & adjunct space outside of Library
Fourth Floor	New open stair to third floor, Added classrooms, New layout of spaces along Main St. side of the building (retaining Academic Success Center, ASC Math Center, ASC Reading / Writing Center, computer lab and ESL)
Third Floor	New escalators & open stair access, Increase number of classrooms, relocate L.E.A.D center to seventh floor, New art gallery, New bookstore / C-store, New vending area, New lounge area, Continuing Education Department offices to remain
Second Floor	New escalators access, Repurpose under-used lounge along Main St. windows for displaced programs (Placement testing, Equity-Diversity-Inclusion Center)
First Floor / Main Lobby	Replace Main St. entrance doors with functional replica doors, New key card system with stanchions / turnstiles, New escalators to upper floors (open stair alternate), New virtual bank, LED window signage
Talcott St. Level	New after school program space, Reduced storage area, New wall mounted retractable awnings for playground area
Market St. Level / Basement	New space for contract cleaners, New boiler room

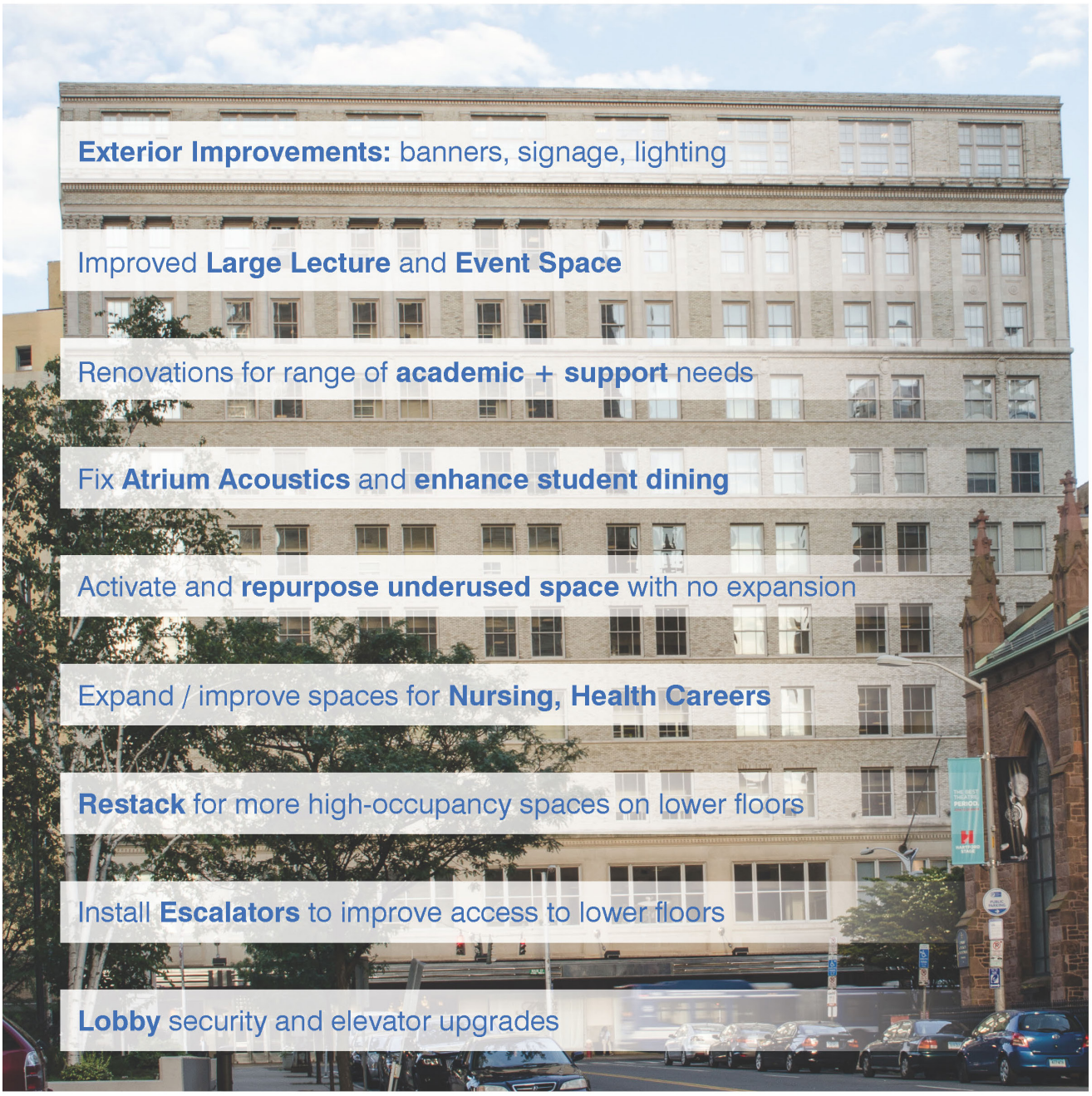


FIGURE 04.2 Summary of Master Plan Elements

BUILDING PROJECTS

EXTERIOR IDENTITY

While Capital occupies the entire Main Street frontage above the first floor, its presence in the building is not currently visible on the exterior. At a city scale, the College has moved to address this issue by installing a banner on the top of the building facing north. It is visible from I-84, but not from the west or south. At the street scale, likewise there is little to indicate Capital is in the building, other than a sign under the canopy and over the entry doors. At the pedestrian scale, looking down the sidewalk, there is no visible sign of Capital's entry.

The Master Plan proposed a range of enhancements to elevate and celebrate Capital's identity. These build on currently planned lighting upgrades and door replacements. First, several wall-mounted banners are recommended to provide presence and color. This type of banner has been used successfully at other institutions, including the New School in New York City. Second, a sign is recommended along the edge of the continuous canopy over Capital's entrance, at 960 Main Street. Finally, a pendant sign under the canopy is recommended to be seen by pedestrians and to mark the entry doors. Other enhancements can include providing special concrete treatment in the sidewalk in front of Capital's entrance doors - a concept from Capital's Construction Management class assignment. It could also be beneficial for improved security and aesthetics to have a series of custom planters in front of the College. These could add much needed greenery and could be shaped in an art deco pattern to compliment the original building aesthetic (another contribution from Capitals's CM class). Together, these measures should create a clear and welcoming identity for Capital in its vibrant downtown setting.



FIGURE 04.3 Main St. Entrance Pendant Sign Concept



Existing Exterior View



Proposed Exterior Render View

ACCESS

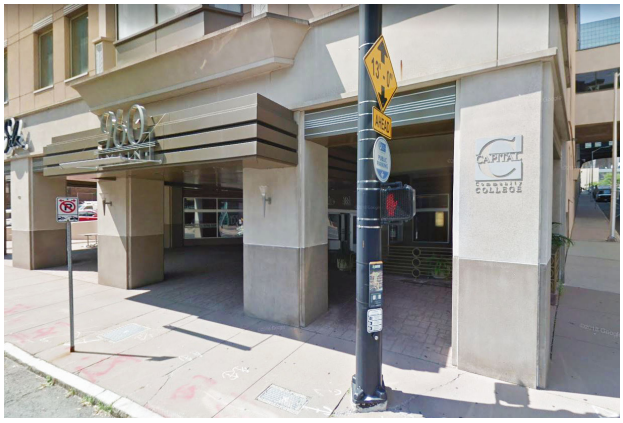
The Main Street and Market Street entries will remain the access points to the College and the building complex. The signage improvements will make access from Main Street more welcoming and recognizable. Planned replacement doors, to match the historic G. Fox doors, but with new hardware, will resolve condition issues with the older doors.

The public bus stop immediately in front of Capital's Main Street entrance is not ideal for the College. People waiting for the bus create congestion by the front doors and sometimes wait in Capital's lobby. From the College's perspective, it would be preferable to relocate the bus stop. Transportation authority guidelines and other factors, however, indicate that its relocation may not be feasible.

Most people accessing the College enter the Market Street entry coming from the Morgan Street Garage. While the College has minimal signage here, it is sufficient. Since the property is not owned or leased by CSCU, the Master Plan does not propose signage upgrades for the Market Street entry.



View of Main St. Entrance



View of Market St. Entrance

VERTICAL CONNECTIVITY

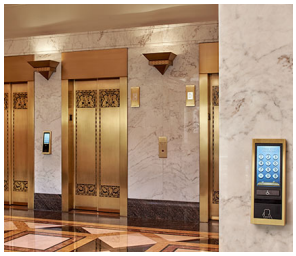
The consultant team explored a range of ways to ease the congestion at the main lobby elevators and improve vertical flow in the 12-story building. Adding elevators was not considered feasible. While there were more elevators along the north side of the building when it was G. Fox Department Store, restoring these would be very costly, reduce valuable program space and discharge on the first floor in space not controlled by the College. A more surgical addition of a pair of elevators in the atrium was not considered practical or effective. This would only improve connectivity between floors 7 and 11. Extending this down to the second floor would disrupt and reduce valuable floor area.

After careful study, the Master Plan recommended the following measures as the most effective menu of improvements to improve vertical connectivity:

Elevator Control Upgrades
The five current elevators have standard "up down" lobby controls. The CSCU and Capital are investigating the feasibility of upgrading these elevators to destination dispatch type controls. These have buttons that record the desired floor and sort the runs by passenger destination. The resulting effect can be far greater efficiency with the same number of elevators.

PRECEDENTS





Destination Dispatch Elevator System

Escalators, Main Lobby to Third Floor
While increase elevator efficiency would be a plus, vertical college buildings very often employ escalators because of their greater capacity and continuous operation. An example is Hunter College's classroom building in New York City, which has both elevators and escalators. The Master Plan recommends installing a pair of escalators to connect the Main Lobby to the second and third floors. This will require creating floor openings as shown in the section study on the next page. One structural beam will need to be removed. Passengers will go from the first floor to a landing on the second floor. They can then either turn to go up a second pair of escalators to the third floor, or proceed onto the second floor. Fire rated glazing and doors will ensure that only two floors are connected, to avoid costly smoke purge equipment required for an atrium condition.

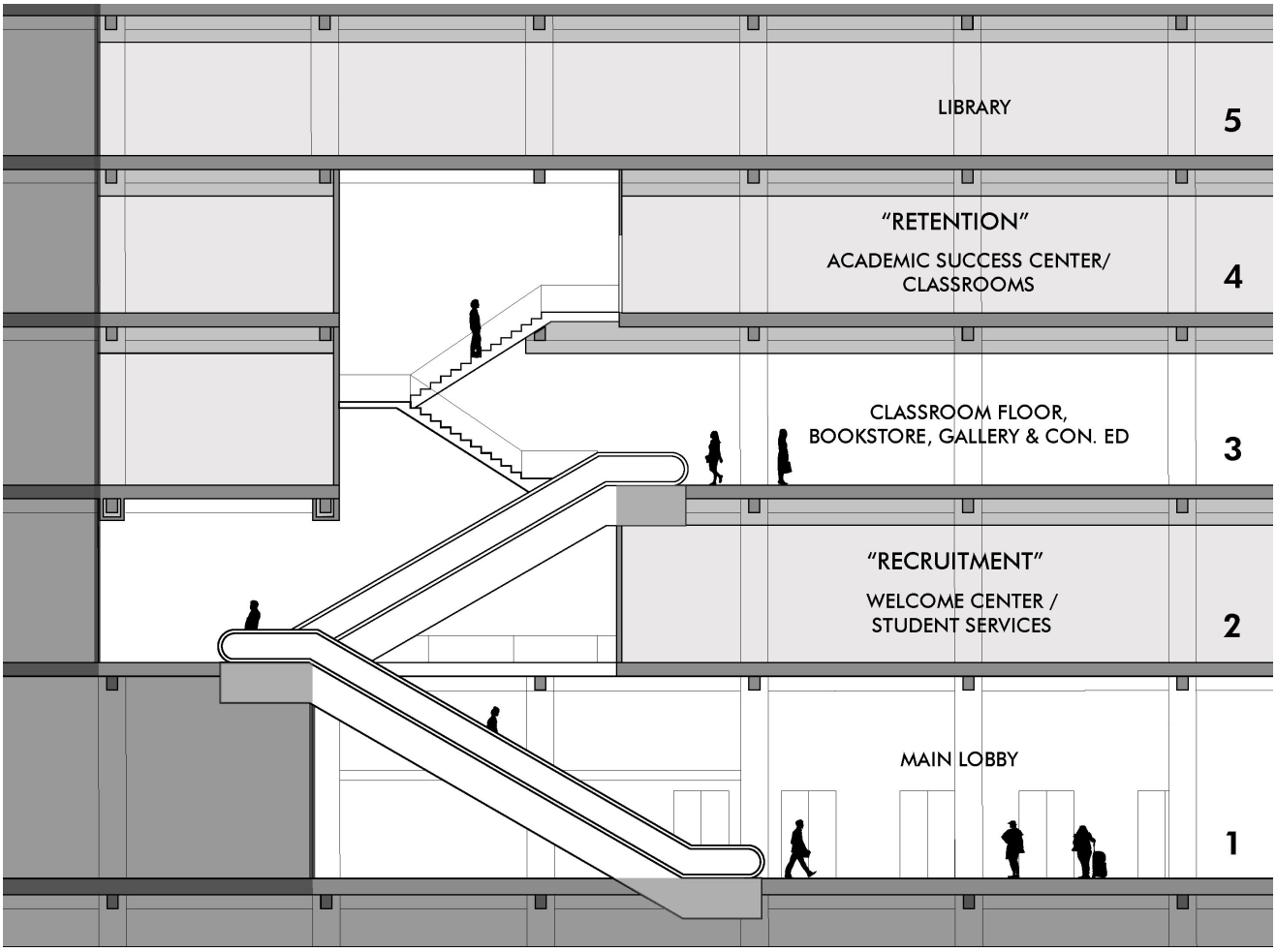


FIGURE 04.4 Proposed Vertical Circulation from Lobby to 4th Floor

The new double-height space on the first floor at the escalators will transform the appearance of the Main Lobby. Where today the lobby is a single floor, with no sense of the College's activity above, the proposed Plan will be more open, welcoming and dynamic.

Lobby Stair Alternative
In the event that the elevator control upgrades proved very effective in the near term and adding escalators was no longer considered necessary, the Plan includes an alternate scheme for open stairs instead of escalators (a deduct alternate in the cost estimate). The open stairs would connect the main lobby to the second and third floors. This would still introduce a more open feeling into the lobby and provide a healthy choice for those willing and able to take the stairs rather than the elevators.

More Communicating Stairs
To connect the third and fourth floors above the escalators, the Plan recommends an open stair, as illustrated on the section drawing and the floor plans on following pages. To create more sense of community on upper floors the Plan recommends adding an open stair into the atrium to connect the eighth, ninth, tenth and eleventh floors. Refer to those plans for location and precedent images of similar types of open stairs in atriums.

Fire Stairs / Code Considerations
The existing two fire stairs used exclusively by the College and the two share by the College with other tenants will remain. Prior to implementation, the floor occupancy load for both Capital and the adjacent tenants should be checked against these stairs to confirm total egress capacity. An egress analysis is not possible for the proposed Master Plan layout without a building-wide, detailed occupancy / code analysis (not in the project scope).



Existing Lobby View



Proposed Lobby Escalator Rendering

FIRST FLOOR - LOBBY RENOVATIONS

The Main Lobby is transformed to be more welcoming and secure, while preserving the remaining Art Deco elements of the historic G. Fox interior. The current stone floors, stone veneer walls, and coffered ceiling will remain. The Main Street entry doors will be replaced with better functioning replicas of the original doors. The entry from the building interior will remain unchanged.

A new key card access system is installed in the Main Lobby to secure access to the overall facility with card-activated turnstiles and stanchions. This way, everyone entering the inner lobby, next to the elevators and the new escalators, will be screened. Visitors without a card can get a guest pass from Campus Safety.

Two security layout options are possible for the new Main Lobby. In one option, people can pass through the center of the Main Lobby if they have a key card or guest pass. People not affiliated with Capital would no longer be able to use the Main Lobby as a short cut. In the second option, the key card readers are moved to the side to control only access to the elevators and escalators. Anyone can walk through the lobby. Access to the fire stair is restricted in both options since this will be locked from the lobby side.

KEY

Comprehensive Renovations

New Escalators

Stanchions / Turnstiles

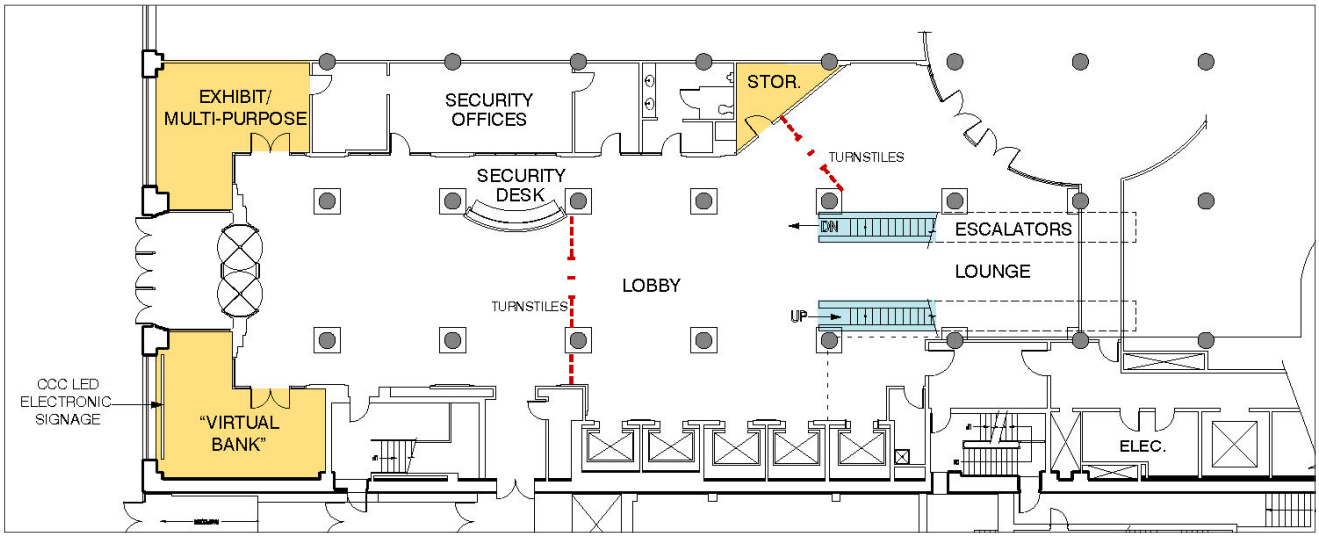


FIGURE 04.5 Proposed Main Lobby - Security Option 1

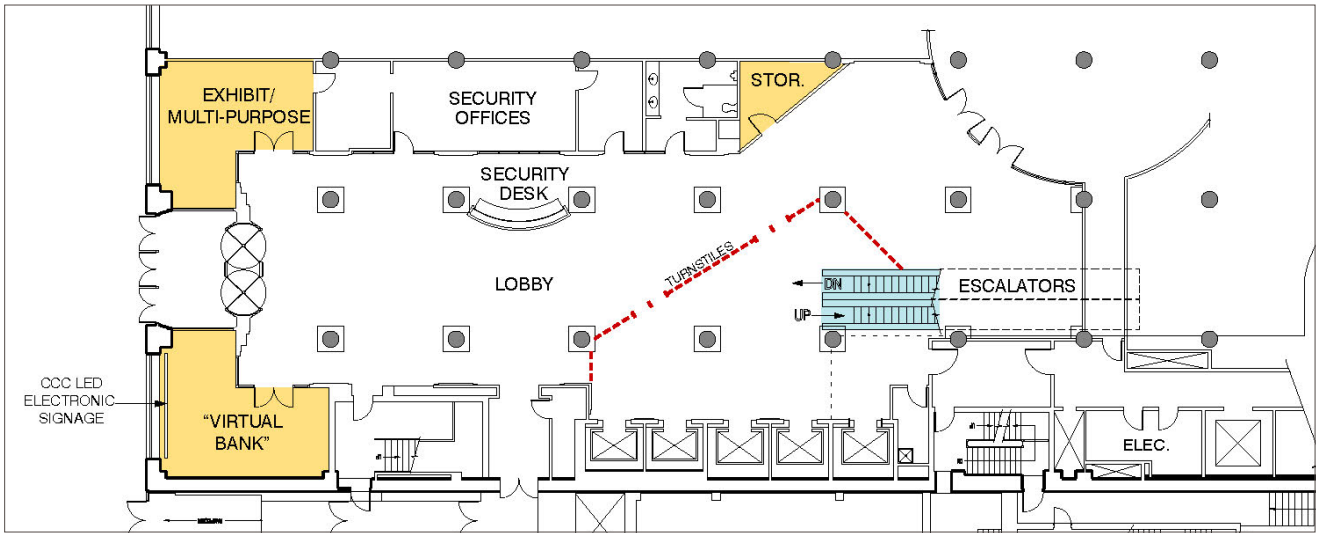
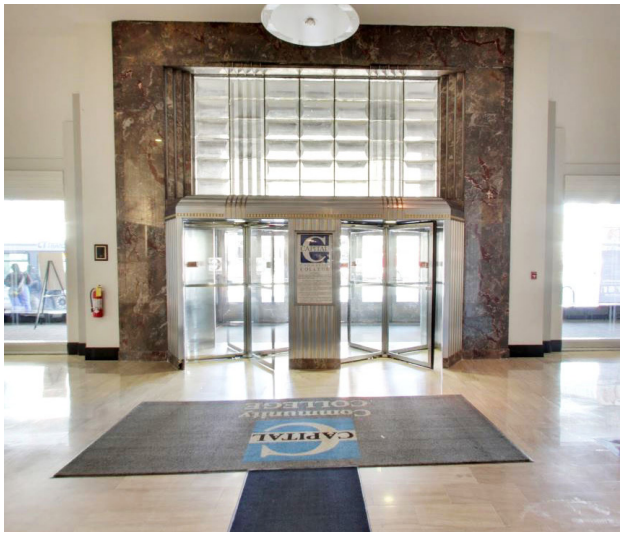


FIGURE 04.6 Proposed Main Lobby - Security Option 2

The storefront spaces facing Main Street will be activated for more effective use and better visibility for the College. Negotiations were on-going during the planning process to convert the vacant space south of the entry doors into a bank to serve the College. This branch outlet would not have cash or a teller, but rather be a "virtual bank", similar to one at Central. Since Capital has very minimal street presence, the Master Plan recommends this picture window have a large scale LED screen to project College programming, rather than bank signage. The other space, north of the entry doors can continue to function as a multipurpose space for small exhibits or other functions. Its doors would remain to prevent unauthorized access after hours.

Today, the lobby feels contained and cut off from the activity above. The opening in the lobby ceiling for the new escalators will create a sense of openness and visual invitation to College areas above. As a vertical campus, the double-height space will create more of a sense of a community and connectivity. This will be true with either the open stair or the escalators.



View of Existing Doors at Main St. Entrance

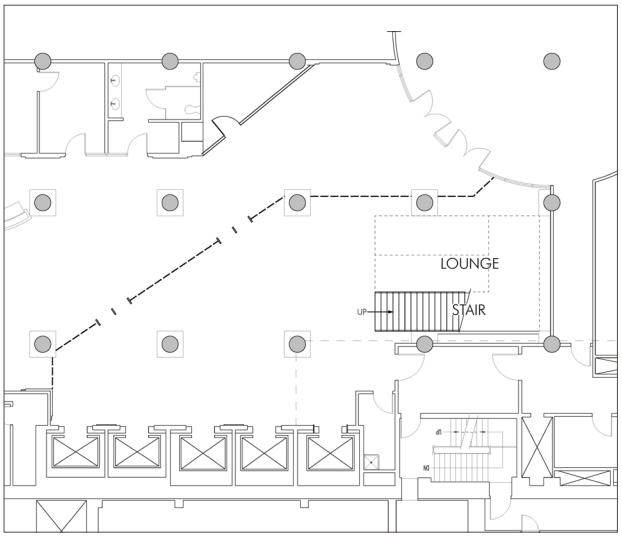
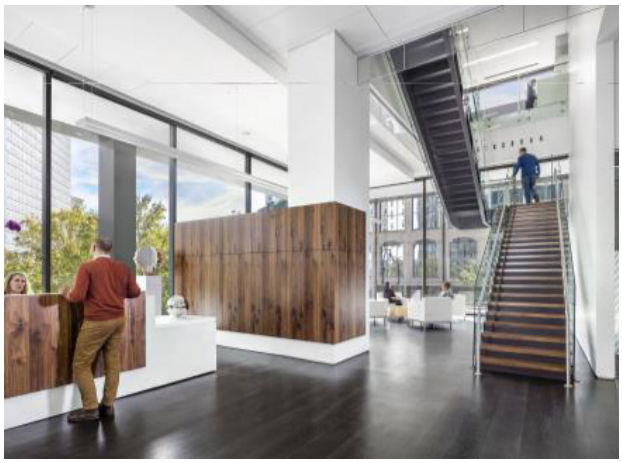


FIGURE 04.7 Lobby Stair Alternative

PRECEDENTS: OPEN STAIRS





SECOND FLOOR RENOVATIONS

In the Master Plan, the second floor retains its main role for recruitment – as the symbolic front door to the College for prospective students. Proximity to the main entrance is key for this function. With the new escalators, this level will be even more directly linked to the main lobby.

The renovations accommodate the new escalators and repurpose the under-used lounge along the Main Street windows to be usable program space, while keeping the current departments- Enrollment Services, Financial Aid, Bursar, the Welcome and Advising Center, Human Resources and the Deans of Administration and Students.

Testing areas displaced by the new escalators are relocated to the wall facing Main Street. Since it is best located near these functions, the Equity Diversity and Inclusion offices are relocated to the second floor, with access to nearby shared conference room space.

The Community Room remains in its current location, but with its doors relocated to face the elevator lobby. The lobby and center area can be used as prefunction space.



View of Existing Welcome Center Reception Area



Existing Community Room



View of Existing Lounge/ Corridor Space



Existing Placement Testing



KEY

Comprehensive Renovations New Escalators

FIGURE 04.8 Proposed 2nd Floor Layout

THIRD FLOOR RENOVATIONS

Making optimal use of this floor is key to reducing the demand on the elevators and improving vertical transportation for the College as a whole. The Master Plan recommends increasing the number of classrooms on the third floor, and re-designating all these as shared for credit and non-credit courses. These are major trip generators for the elevators today. By locating more classrooms lower in the building, off the new escalators, the main lobby elevator congestion should be greatly alleviated.

Workforce & Continuing Education offices, including the Dean's office, remain on the floor in a new configuration. The L.E.A.D. Center relocates to the seventh floor directly off the elevator lobby for visibility by the greatest number of students. Workforce & Continuing Education will have access to all classrooms in the building, through the registrar.

The Plan recommends locating an Art Gallery on the third floor, directly off the escalators and elevator lobby for good access and visibility. The Plan also relocates the Bookstore from the seventh floor in the back to the third floor in front near the elevator lobby and a new student lounge. The Bookstore has an adjacent stock room / storage area. The Bookstore could sell more prepackaged food and drinks- a "C-store" concept to support evening students when the food service facilities on 7 are closed. Together with the proposed lounge and possible vending space, the amenities can support this as a mixed-use classroom floor, along with Continuing Education and the Art Gallery.



View of an existing general classroom



View of existing bookstore on the 7th Floor

PRECEDENTS: COLLEGE ART GALLERIES



Manchester Community College: Dehn Gallery



Coastline Community College: Art Gallery



KEY

Comprehensive Renovations | New Escalators | New Stairs

FIGURE 04.9 Proposed 3rd Floor Layout

FOURTH FLOOR RENOVATIONS

The Plan recommends an open stair from the third to fourth floors, rather than another set of escalators, to reduce costs and minimize structural intervention. These inviting stairs will provide another alternative to taking the elevators. The stairs would be enclosed in fire-rated glazing to avoid costly HVAC measures for interconnected floors (atrium condition) but provide open sight lines.

The fourth floor will retain its primary current function as the Academic Success Center, with the associated Math Center, Reading and Writing Center, Computer Lab, ESL lab and ESL Resource Center. There will also be a significant number of retained and added classrooms, in keeping with the stacking strategy of more high-occupancy spaces lower in the building.

In order to make better use of natural light, the new layout lines the Main Street wall with usable spaces rather than an under-used hallway.



View of the existing L.E.A.D. Center from elevators



View of existing ASC Math Center



View of existing cooridor along Main St. side.



View of an existing general classroom



KEY

Comprehensive Renovations New Stairs

FIGURE 04.10 Proposed 4th Floor Layout

FIFTH FLOOR RENOVATIONS

The Library remains the main function on this level, with improvements to align the facility more with current needs. From the elevator lobby, the Plan recommends a glass wall in place of the solid wall, so the Library inside is visible and inviting. A lounge area and/or display space inside the lobby could activate this entry area and provide a place for changing exhibits.

In keeping with trends on most academic libraries, the Plan recommends that Capital assess, vet and reduce its print collection to eliminate materials that have little to no circulation. This will allow space to be repurposed for more quiet study and group study space. A variety of enclosed group study spaces are shown, plus a large, glass-enclosed quiet study space. The central space can be reframed as a Learning Commons, with a mix of study, technology and collaboration areas.

Outside the Library perimeter, accessible from the elevator lobby, the plan recommends faculty offices and a shared adjunct space.

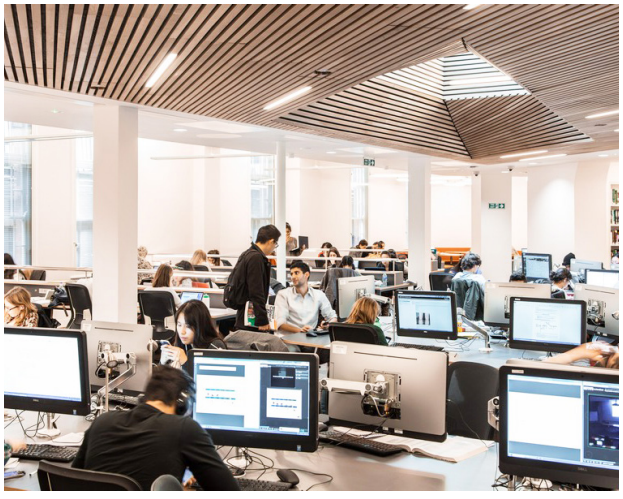


Existing Circulation Desk

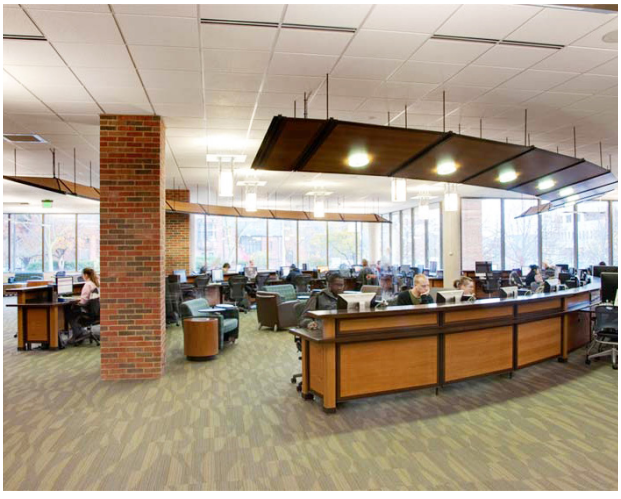


Existing stacks and quiet study carrells

PRECEDENTS: LEARNING COMMONS



University College London: Cruciform Hub



University of Wisconsin: Learning Commons



KEY

Comprehensive Renovations Room Function Change

FIGURE 04.11 Proposed 5th Floor Layout

SIXTH FLOOR RENOVATIONS

There is minimal renovation work recommended on the sixth floor. It remains as a computer / technology floor. An under-used computer repair lab is converted to a second cyber security computer lab, to address this growing program. The Architectural programs, which now are in under-sized labs, move to larges spaces as shown. One of these is an Architectural computer lab and the other a mixed Architectural Lab with both computer and manual drafting stations. Continuing Education retains two dedicated computer labs.



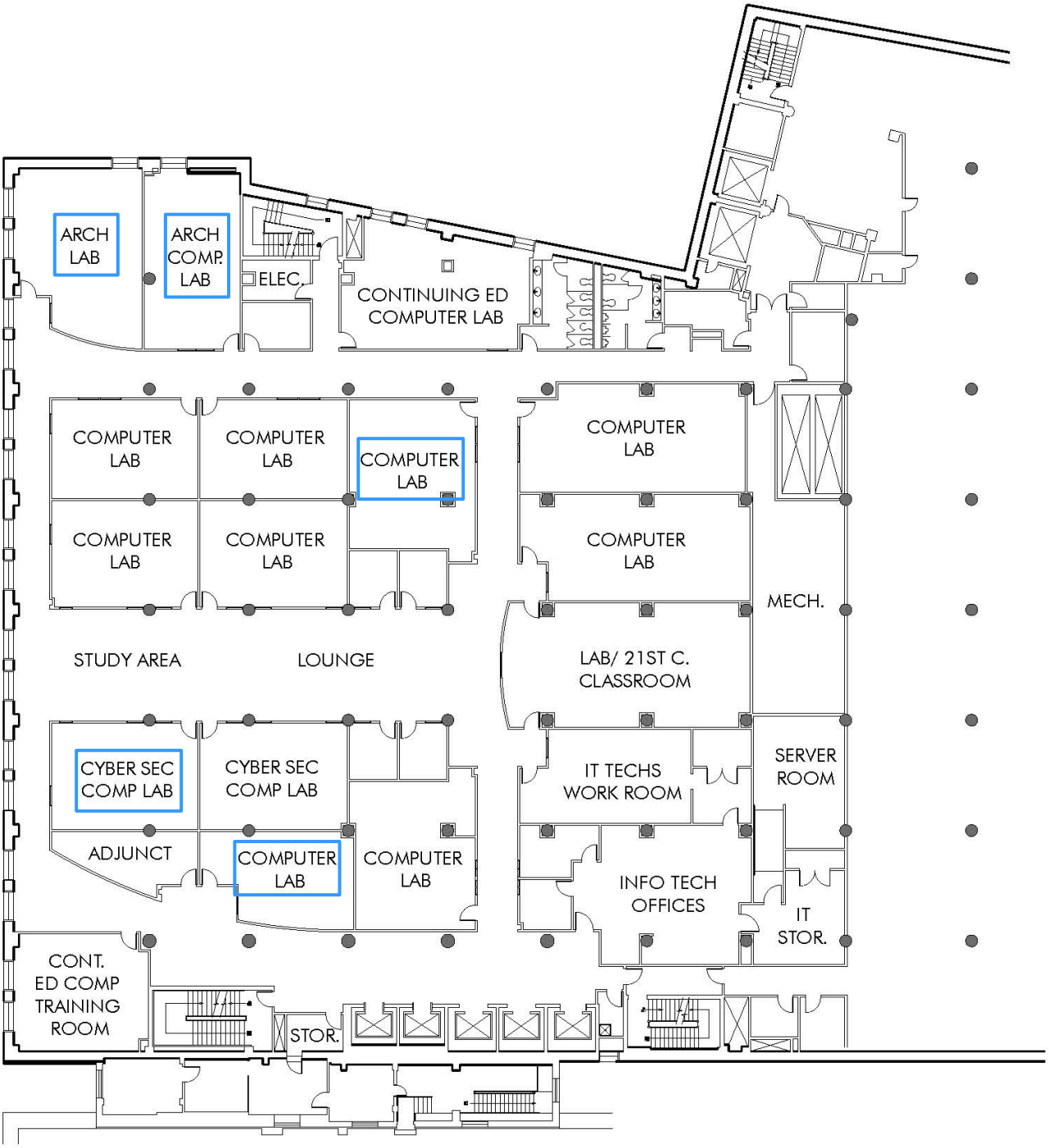
Existing computer lab



View of 6th floor study area and lounge



Existing computer lab



KEY

Room Function Change

FIGURE 04.12 Proposed 6th Floor Layout

SEVENTH FLOOR RENOVATIONS

The Master Plan recommends a robust renovation of the seventh floor to make this a more vibrant hub for students, faculty and staff and to address a variety of needs. Seven remains the main level for food service and student activities, plus select other functions.

Dining continues to occupy the center of the floor. During the planning process, CSCU and the College were about to implement needed kitchen and back-of-house upgrades. Building on these improvements, the Plan proposes replacing the outdated Internet Café under the atrium and booth seating with a new, open dining area with a range of seating options. The effect will be a more open, welcoming space, suitable for eating, gathering, study and socializing, as envisioned in the conceptual rendering on the following pages.

To solve Capital's chronic atrium noise problem, while keeping much of the openness of the original design, the Master Plan recommends installing an "acoustic skylight" in the atrium directly above the seventh floor. This should block noise from the dining area emanating to upper floors and disrupting faculty in their offices. The skylight will need to be done in three sections, to fit between the structural beams in the three bays. The skylight can be attached on the fascia below the 8th floor railing attachments, to avoid cost redoing these supports. The double glazing will need to be laminated and have a 1-hour fire rating in order to avoid the need for vent panels to allow smoke purge from the seventh floor.

The Plan recommends locating the L.E.A.D. Center directly off the elevator lobby to elevate its visibility on this busy floor and increase its effectiveness. In a high-traffic location, students will have a regular reminder of career services that Capital provides. In this high traffic location, students will be regularly reminded of all the services the L.E.A.D. Center provides, including Workforce & Continuing Education, Business & Community Outreach, Career & Talent Development, F.I.R.S.T/Financial Opportunity, and Grants & Sponsored Programs.

The Plan recommends expanding and relocating the TV/ Game Room so it is more accessible, off the elevator lobby. The vacated space will be used as a meditation room and faculty/staff lounge.

Finally, the space vacated when the Bookstore moved to the third floor is repurposed for a multipurpose fitness space, in tandem with adjacent lockers and showers. Some vacated space is also used for a new, expanded Veteran's Oasis – a better configuration and location than the current windowless space.



View of Existing Internet Cafe

PRECEDENTS: SKYLIGHTS



AE Design Group LLC: Noice Control Study at Atrium



University of Connecticut: Dining Area



KEY

Comprehensive Renovations

FIGURE 04.13 Proposed 7th Floor Layout



Concept Rendering of Proposed Student Dining / Lounge Area & New Acoustic Skylight



EIGHTH FLOOR RENOVATIONS

To accommodate the space demand for the Nursing Program, Health Careers largely vacates the eighth floor. Their lab spaces are converted to be a Nursing Simulation Lab and adjacent Control Room. The recently renovated Radiology Lab remains. The CNA lab remains for use by both credit and non-credit.

To create better vertical connectivity on the upper floors, the Master Plan recommends installing a new open stair above the new acoustic skylight in the atrium between floors 8 and 11. This should activate the atrium and foster more sense of community by making it easier to go between floors.

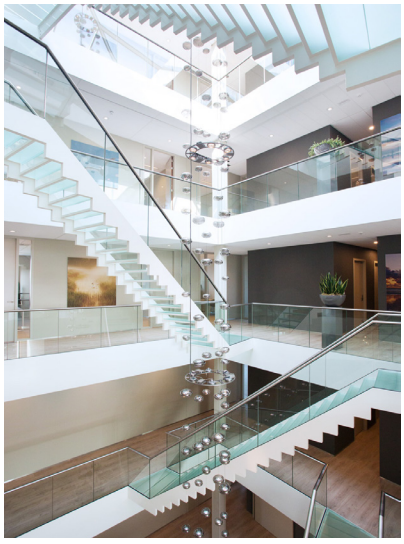


Nursing Lab

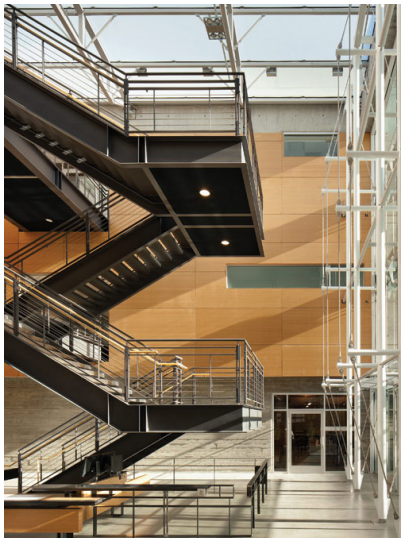


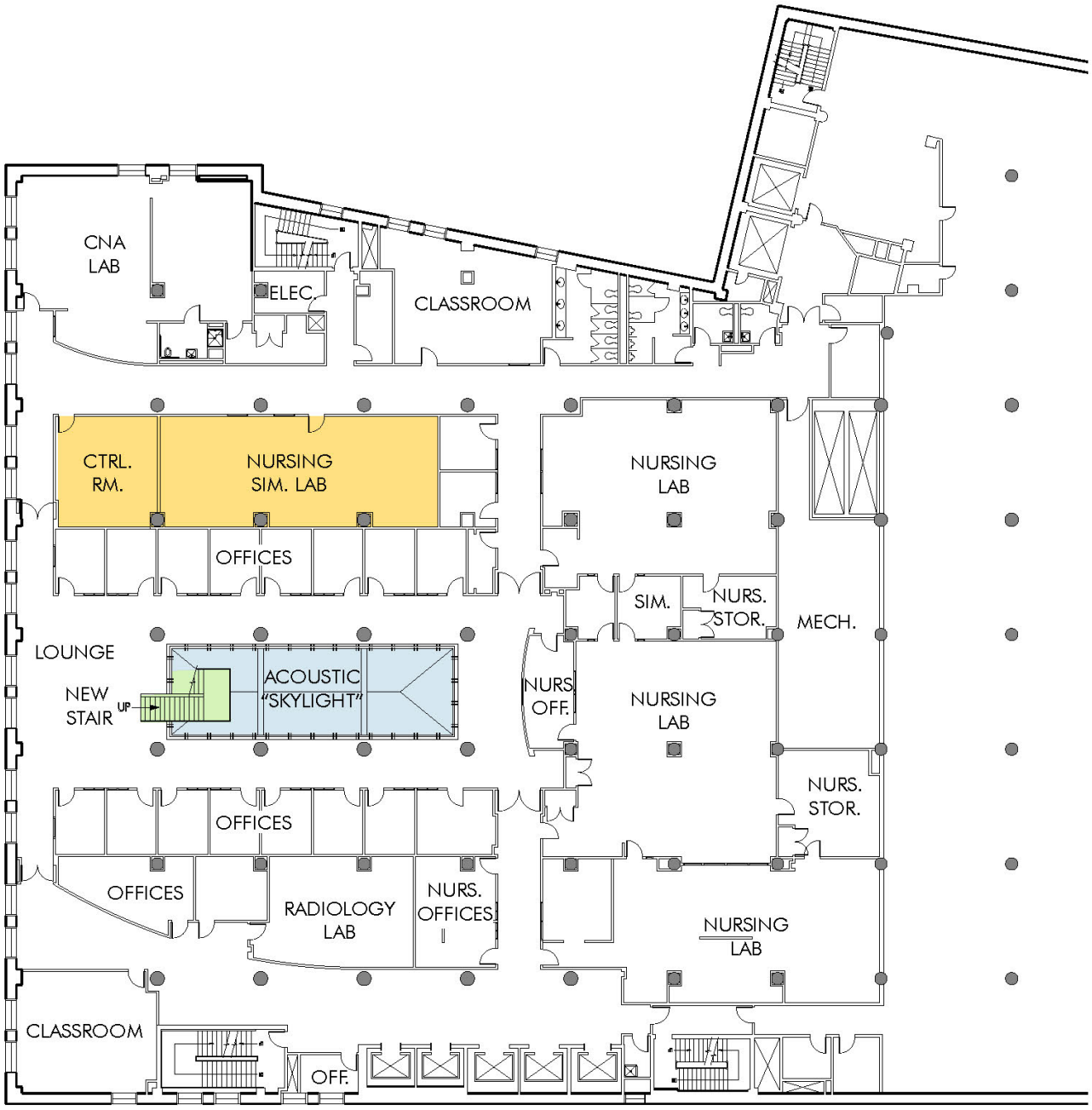
General Classroom

PRECEDENTS: OPEN ATRIUM STAIRS









KEY

Comprehensive Renovations | Acoustic Skylight | New Stairs

FIGURE 04.14 Proposed 8th Floor Layout

NINTH FLOOR RENOVATIONS

The Ninth Floor remains the primary level for science labs. Minimal renovation work is needed in select labs. The lab adjacent to the elevators will transition from being a shared Physics and Biology Lab to a dedicated Biology Lab, when Physics moves to the 10th floor. The Microbiology Lab 920 and Biology Lab 919 now have 22 stations. In order to regularize section sizes and maintain 24 stations in all labs, the Plan recommends adding casework for two more seats in both of these labs. Space appears available to do this. The open stair is installed in the atrium to allow easy access in the center of the building to upper and lower floors.



Group session in a Biology Lab



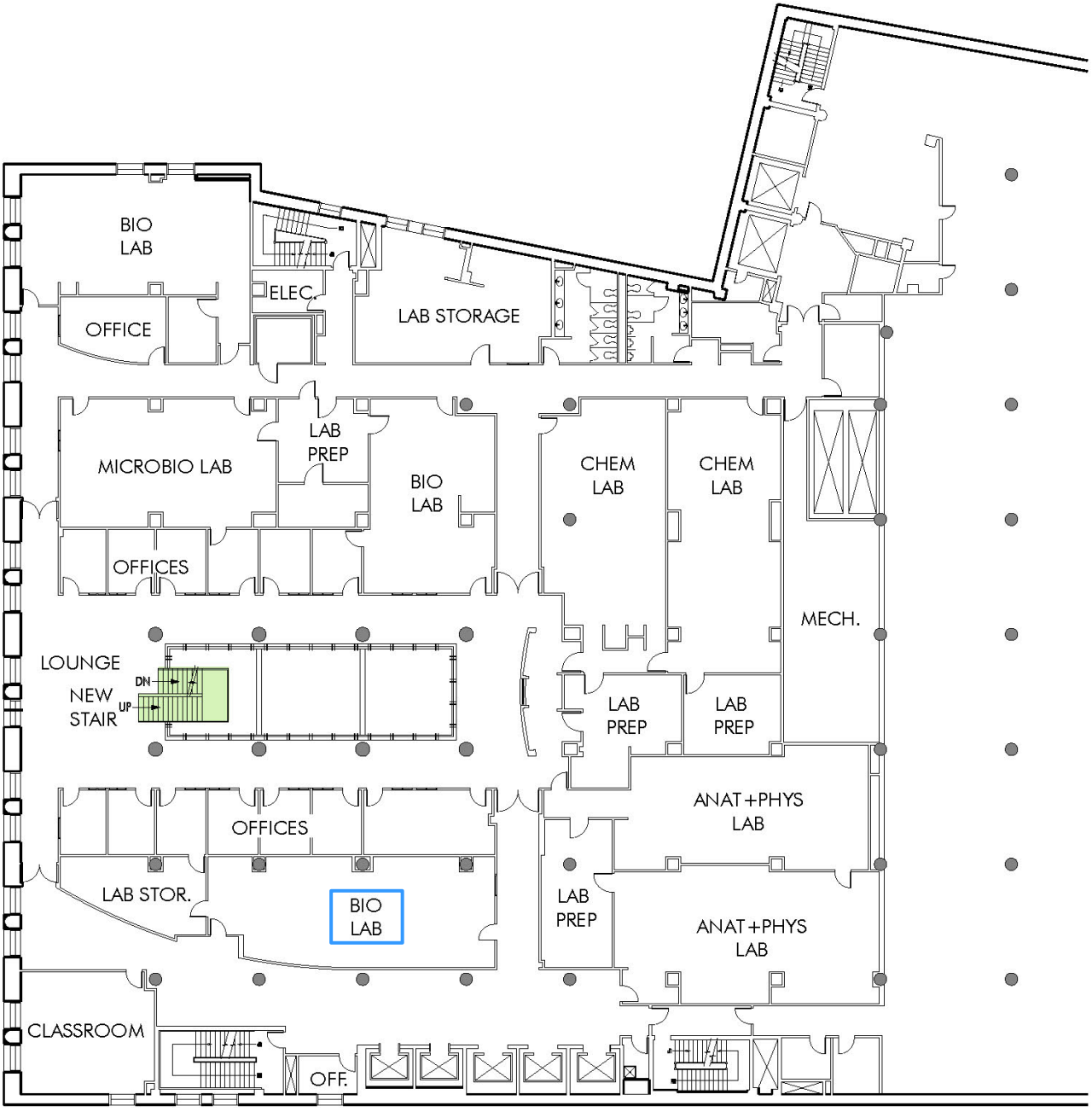
Anatomy & Physiology Lab



Anatomy + Physiology Lab Prep



Chemistry Lab



KEY

Room Function Change

New Stairs

FIGURE 04.15 Proposed 9th Floor Layout

TENTH FLOOR RENOVATIONS

Part of the strategy to optimize space and the goal to restack classrooms so more are lower in the building, the Plan recommends converting several classrooms that will be vacated on this floor to be specialized spaces to support Health Careers and the Sciences. The renovations also propose shared use of a key space to support the Drama program.

Classrooms across the hall from the Academic Dean's office are converted to serve as two Paramedic Training Labs. The south west corner is reconfigured to provide a Medical Assistant Lab, facing the elevator lobby. Faculty offices are added near the elevator lobby as well. These moves effectively relocate Health Careers so it can have sufficient space and so Nursing can have sufficient space on eight.

To meet the modest needs for the Sciences, a classroom at the northwest corner is converted to a new Physics Lab. This gives Physics its own dedicated lab for the first time, freeing up Biology 903.

The large TV Studio is a valuable space, given the lack of column-free space in the building. Today, this facility has been shared at times with the Drama program as a performance space. The Master Plan includes renovation scope to facilitate, formalize and continue this shared use as a TV Studio and a "black box" theater. The cost estimate includes funding for upgrading the TV Studio with enhanced digital controls.

The Information and Media Technology Offices are reconfigured so that through access is possible to the TV studio / theater when this is needed without disrupting IMT staff. When visitors do not need to access the studio space, the hallway can be opened up to connect the IMT staff areas on either side. The work rooms could be reprogrammed and reconfigured if needed to make better use of these areas.

PRECEDENT: EMT TRAINING LAB



Macomb Community College - EMT Training Lab



Existing TV Studio Set up



KEY

Comprehensive Renovations New Stairs

FIGURE 04.16 Proposed 10th Floor Layout

ELEVENTH FLOOR RENOVATIONS
OPTION 1: NEW LECTURE HALL

The Master Plan includes two options for a key need on this floor – a second large lecture space for the Nursing Program. Today Nursing uses two large lecture spaces simultaneously – 1126 and the Auditorium. Lacking proper power, AV, acoustics and furnishings, the Auditorium is not a sufficient lecture space for instruction.

Option 1 recommends renting additional vacant space on this floor and renovating it for a new large lecture hall, as shown on the plan at right. The flat floor space would have a capacity of 164 students. To work within the constraint of the columns, there is a central teaching station for the lecturer, with overhead monitors facing in several directions. This is a similar approach to a lecture hall at University of St. Joseph. Students would access the space from a hall leading from the main elevator lobby. A rear fire stair would meet emergency egress needs. In this option, the Auditorium would be refurnished and have a new stage for events, but it would be renovated to serve for large academic lectures.

Other renovations on the Eleventh Floor include the new stair at the atrium and renovations for the arts. The Art Studio receives proper ventilation / exhaust. The current music room is converted to a new workroom and storage area for the Drama Program. The classroom (former ceramics area) opposite the CEO offices will be converted into a Music Technology Lab with adjacent control room. These spaces will be fully sound insulated so noise will not disrupt users nearby.



Existing Auditorium Lecture Set Up



Existing General Lecture Room 1126

PRECEDENT: FLAT FLOOR LARGE LECTURE

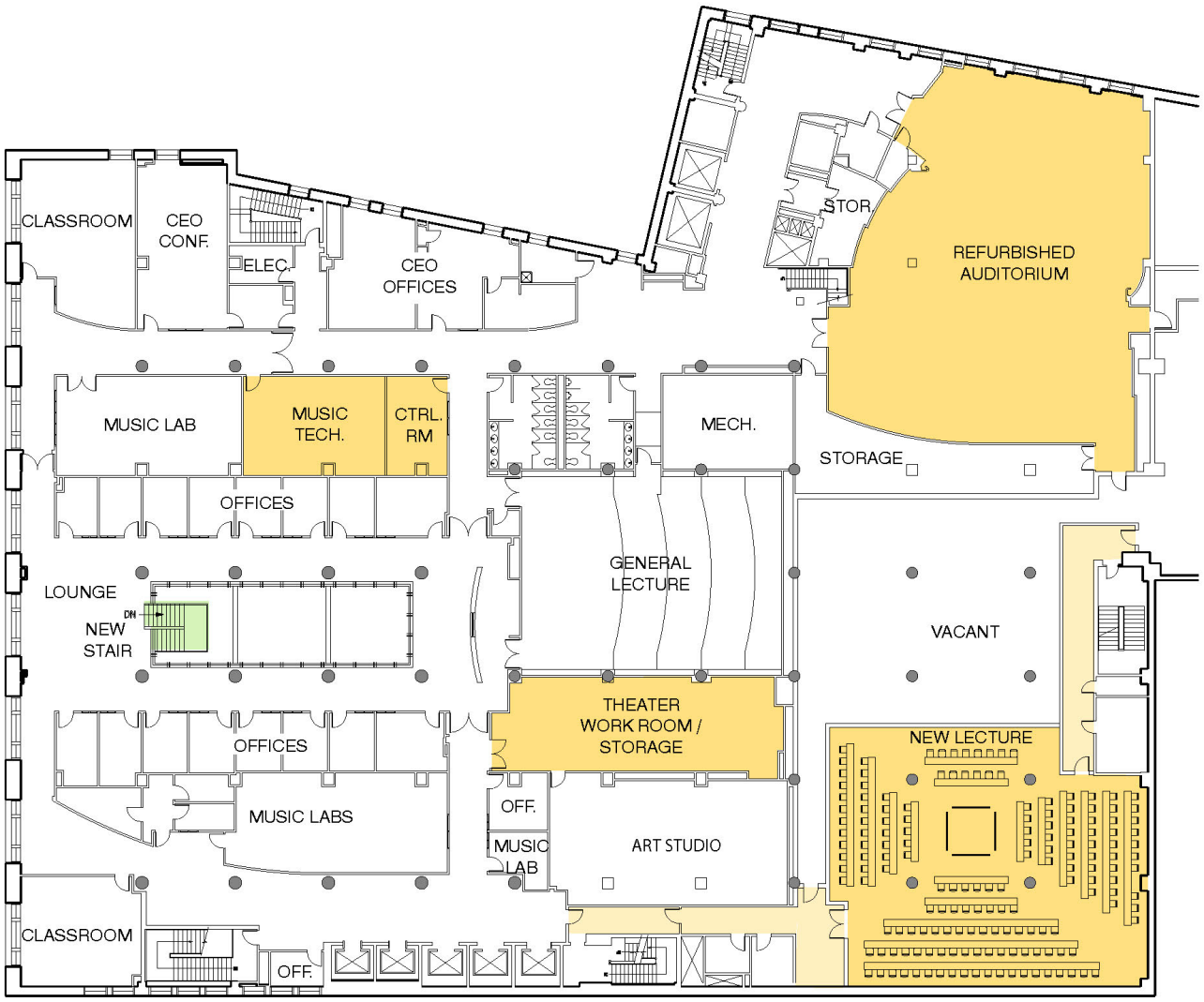


University of St. Joseph's Flat Floor Lecture Hall

OPPORTUNITY AREA



Existing Vacant 11th Fl. Space in the building



KEY

Comprehensive Renovations New Stairs

FIGURE 04.17 Proposed 11th Floor Layout - Option 1

ELEVENTH FLOOR RENOVATIONS
OPTION 2: ENHANCED AUDITORIUM

Option 2 represents a more robust renovation of the Auditorium instead of renting more space and building out a new lecture hall.

The upgrades address the key deficiencies of the Centinel Hill Hall today as a space for lectures. Three projection screens are mounted around the space so students are never far from the content. In addition to the screen over the new stage, there is sufficient space in the side walls for 2 more screens, mounted in a manner that is compatible with the historic detail.

The sound system is upgraded, and floor outlets added so students have ample access to power. New furniture is provided that is flexible and easy to move in and out of the space. The tables and chairs will have sufficient space for a laptop, book and drinks. Finally, the finishes will be upgraded with new carpet, paint and lighting.

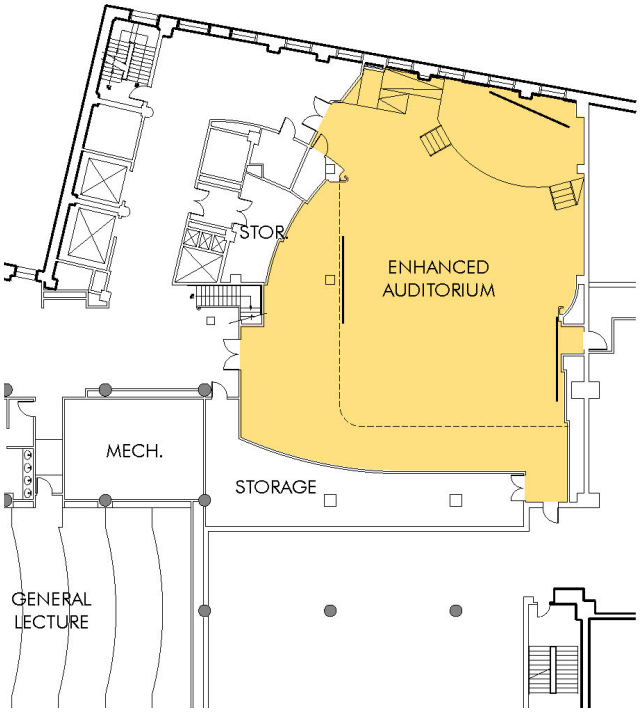


FIGURE 04.18 Proposed 11th Floor Layout - Option 2

PRECEDENTS: FLEXIBLE FURNITURE





Steelcase: Verb Classroom Collection

PRECEDENT: LARGE HEALTHCARE TEACHING SPACE





UVA School of Medicine "Learning Studio" - Large Scale Med Ed Teaching Space

TALCOTT ST. LEVEL RENOVATIONS

This area is occupied by the CCC's Laboratory School and is the only space on the east side of the block, facing Market Street. It is one level above the Market Street entrance. The Lab School currently is licensed for 20 students but has significantly more space than necessary. At the same time, the College has been looking to provide an After School Program for supporting students with young children who need childcare. The Plan proposes to convert one under-used classroom and to resize a large storage room in order to provide space for the After School Program. This area would have its own secured entrance off the 920 Main public corridors, near the escalator, and separate from the Lab School entrance.

The Lab School outdoor play terrace today is not protected from the south sun. Some shade is needed. The Master Plan recommends two wall-mounted retractable awnings to address this.



View of Existing Playground

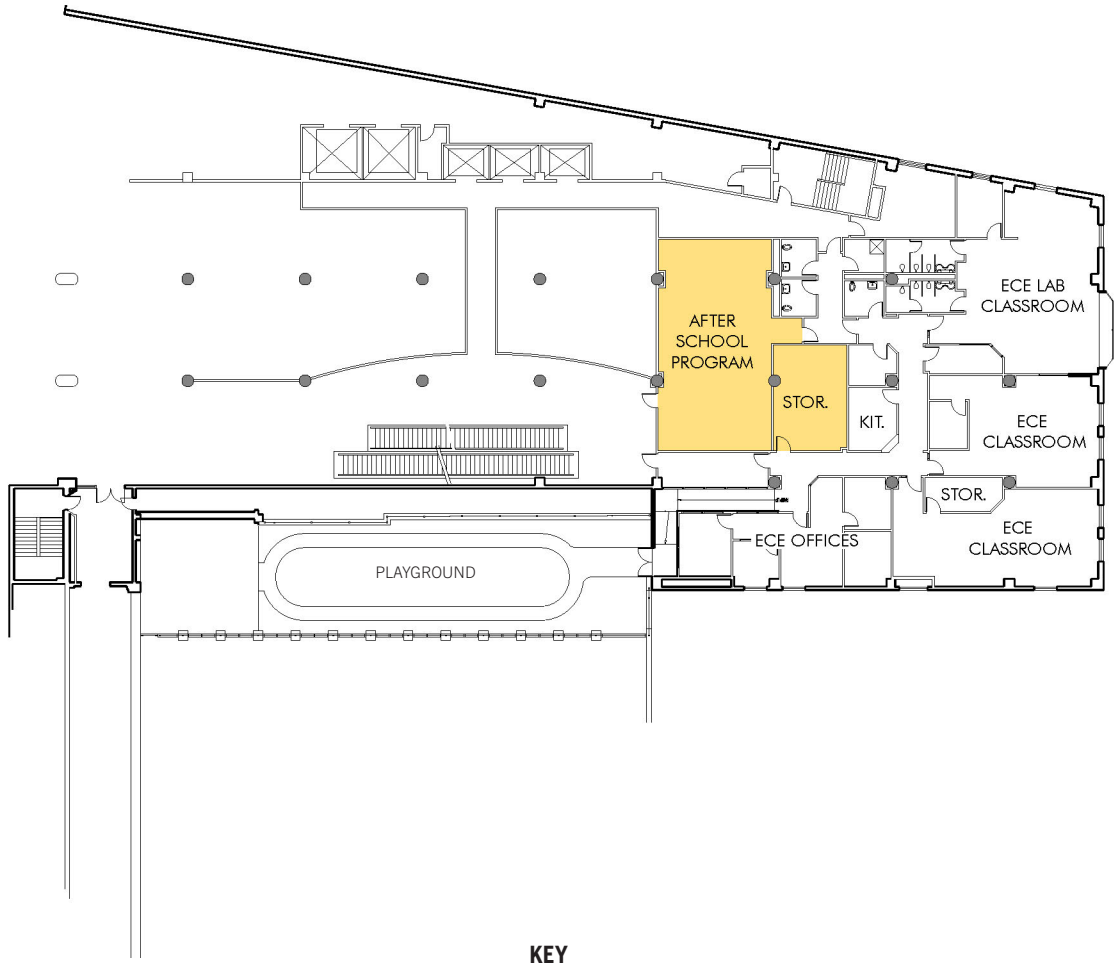
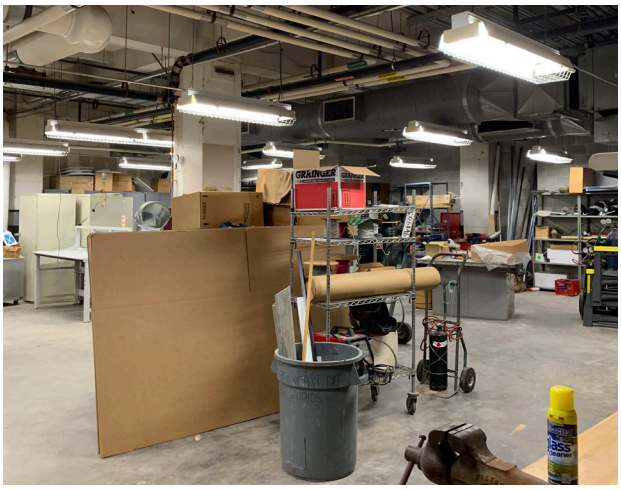


FIGURE 04.19 Proposed Talcott St. Level

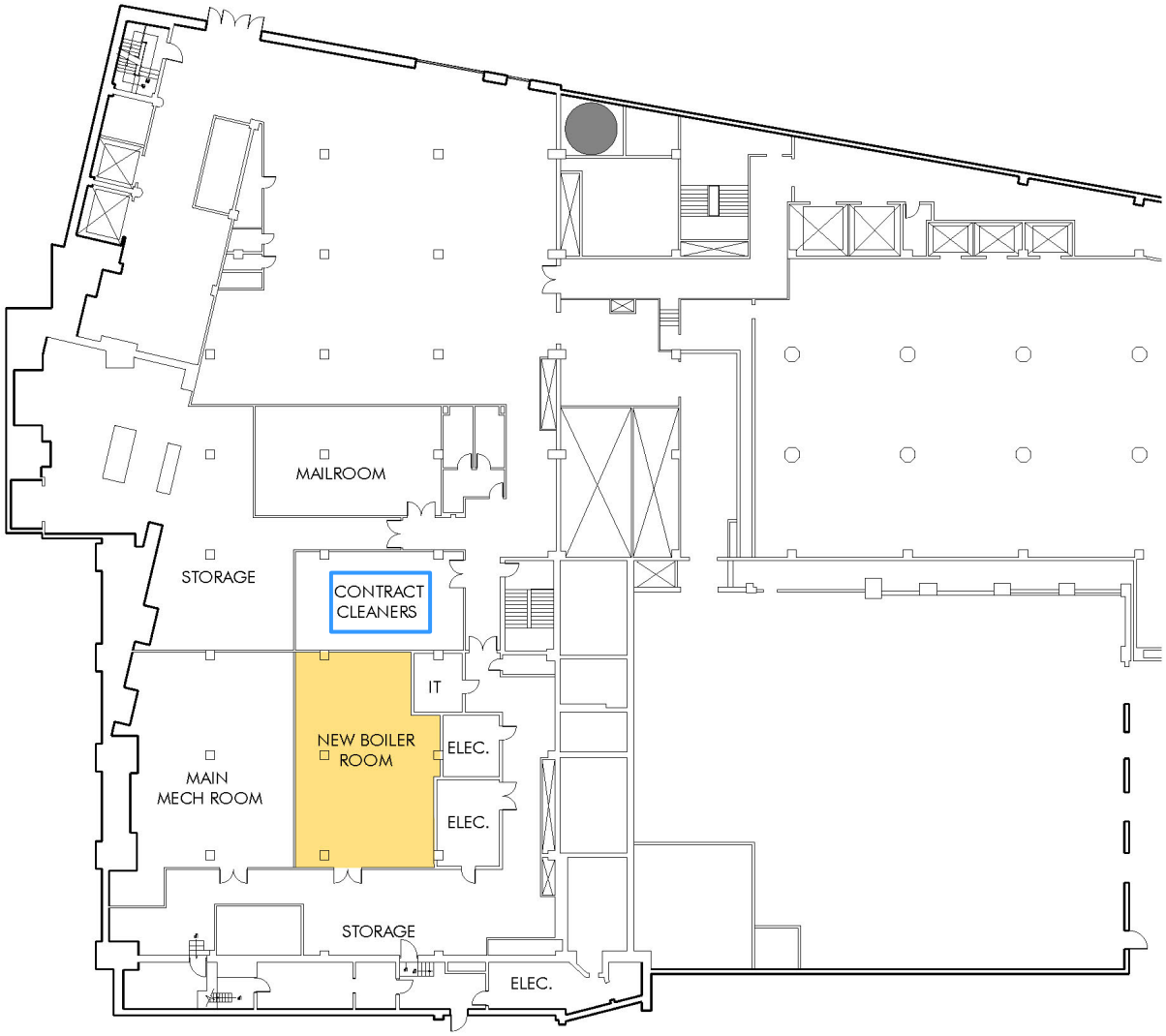
MARKET ST. LEVEL RENOVATIONS

The proposed renovations on this basement level are very modest. This level is not accessible to students, faculty, visitors or most staff and is dedicated to mechanicals, storage and service functions. The base scope is limited to converting an existing storage room into a changing room with lockers (no showers) for the College's contract cleaners.

If CSCU elects to transition from using City steam to generating its own hot water for heating (see following section) then code requires it be in a separate enclosed Boiler Room. Fortunately, the Mechanical Equipment Room is large enough to be subdivided as shown on the plan below in order to provide this room.



Existing storage area



KEY

Comprehensive Renovations Room Name Change

FIGURE 04.20 Proposed Market St. Level

SECURITY

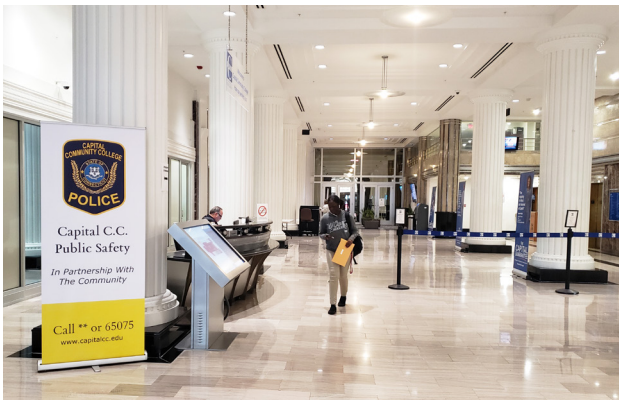
As a college in a downtown urban setting, the College is committed to providing a safe setting for students, faculty, staff and visitors. Capital has better control of its entrances than many community colleges, which have multiple doors into multiple buildings. Nonetheless, there are areas where security can be further improved. Capital's Police Master Sergeant James Griffin provided valuable input to Master Plan in this regard.

Access is a key issue. Today the College does not employ key card access. People entering the ground floor lobby pass by security positions, which are typically staffed, but not always. In keeping with current best practice at many urban universities, including CUNY, the Master Plan recommends that Capital employ key card access for all people entering the building at the main lobby. Turnstiles would be key card activated, as shown on the two layout alternatives earlier in the chapter. Key Card locks would replace keyed locks throughout the building, making it much easier to control access without having to rekey doors. Access through the building's shared loading dock is somewhat challenging for maintaining a totally controlled environment. Continued use of CCTV and intercom can assist monitoring this service entrance.

Campus Safety has concerns about the elevator lobby congestion. These should be addressed in the Plan's vertical transportation upgrades once these are completed. Ideally the front doors could be equipped with an instant lock-down system in the case of an incident that required securing the building

Today, Campus Safety personnel must leave their post in the room off the main lobby and travel to the central fire command station in order to use the building-wide fire annunciator system. This wastes valuable time in an emergency and removes staff from their post. A dedicated College public address system is needed, operated from the security control room off the main lobby.

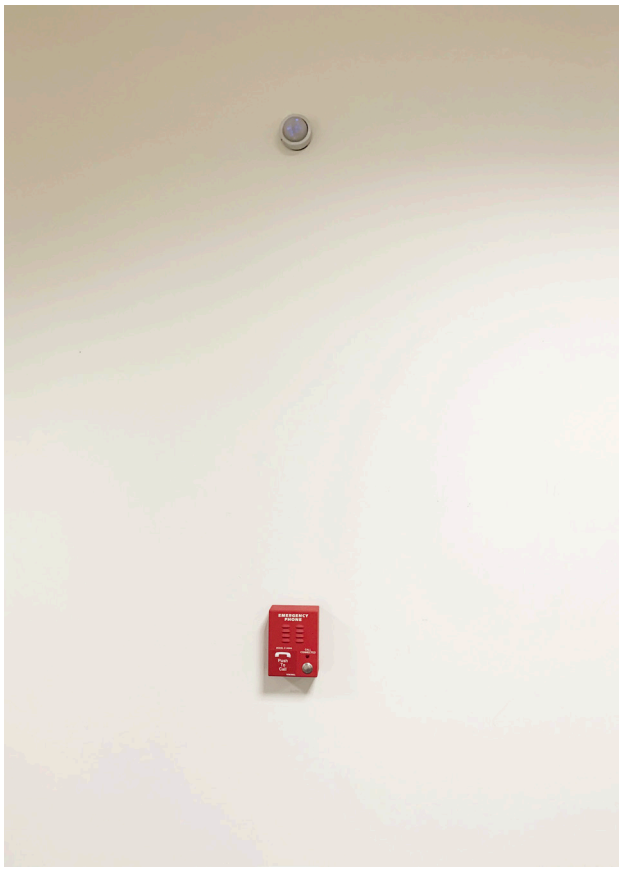
Finally, some security equipment is needed: an improved blue light system on the various floors, an exterior light to notify emergency responders, and an exterior lock box for keys in the event after-hours access is needed by police or fire personnel to respond to an incident when the College is closed.



Security Stanchions & Desk in Main Lobby



Security Checkpoint



Current Blue Light System

MEP INFRASTRUCTURE PROJECTS

ENERGY MASTER PLAN

An Energy Master Plan was conducted for Capital in 2016. The EMP includes both system-wide and site-specific recommendations for energy conservation measures (ECMs), procurement, renewable energy and policies. The Energy Master Plan chapter for Capital with its detailed findings and recommendations is included in the Technical Appendix. It includes nine ECM recommendations.

Capital's Energy Use Intensity (EUI) at it site was 66 kbtu/sf. This is significantly lower than the Northeast median for colleges and universities, 104 kbtu/sf. Capital was the second best energy performing campus at CSCU from an energy perspective. This can be attributed to the campus' high density and relatively modern campus since the original building's renovation in 2002, including effective use of a BMS system.

Capital's energy cost per square foot was $2.62/SF, however, was slightly greater than the $2.49/SF CSCU average in 2016. This is likely in part because Capital purchases its steam and chilled water from the Hartford Steam Company. These rates may appear not to be as competitive as those obtained by other CSCU campuses.



Existing storage area on Market St. Level



Existing corridor area on Market St. Level

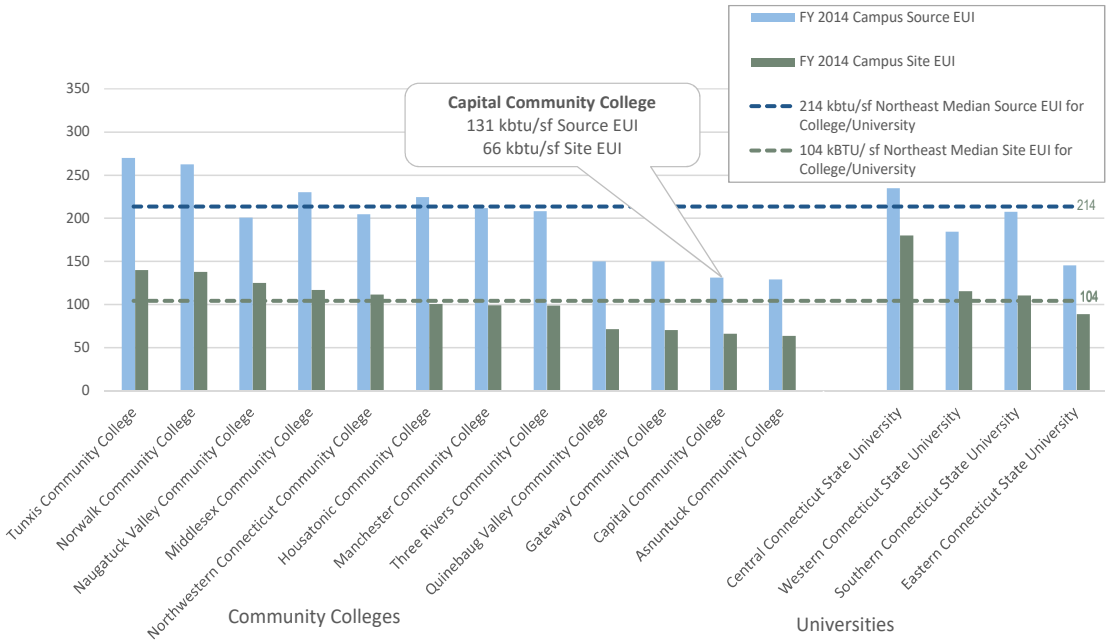


FIGURE 04.21 Site and Source EUI by Campus

MASTER PLAN MEP RECOMMENDATIONS

The scope for HVAC, electrical, plumbing and fire protection can be understood in three parts. The first is changes to distribution to coordinate with planned renovations that reconfigure layouts. The second is infrastructure upgrades. The third part is an add alternate for on-site heating and cooling in place of purchasing steam and chilled water.

For renovation work on the various floors, the MEP/FP scope includes rezoning the HVAC system as necessary with new variable air volume boxes (VAV) and thermostats, relocating existing LED lighting, providing new receptacles and fire alarm appliances, new sprinkler branch piping and heads. Plumbing modifications are few since most restrooms remain in place. The new escalator is provided with new electrical service (new breaker at the main distribution switchboard, wiring to motors, transformer, etc. New ventilation is provided at the 11th floor Art Studio.

The Master Plan includes infrastructure projects to support building-wide operations. A new Building Automation (BAS) system is required in the next 10 years. The existing Siemens system is being phased out and will need to be upgraded eventually to ensure continuous support. Similarly, the fire alarm system requires upgrading. The existing Siemens fire alarm system is also out dated and needs to be replaced. Nine of the College's air handling units (AHUs) should be replaced. At almost 20 years old, these will be at the end of their useful life in the term of this 10-year Master Plan.

For the scope "add alternate" for the new central plant, there are two potential projects – a new boiler plant and new chillers / cooling tower. For the new boiler plant, the large basement mechanical equipment room is subdivided to provide a dedicated boiler room as required by code. Two new 3,000 MBH steam boilers and 270 GPM pumps with VFDs are provided. A new gas meter and gas piping is required for the boilers and new fire protection and fire alarm. Electrical panel requires reconfiguration to support this project as well.

For the new chiller plant, equipment is needed both in the basement and on the rooftop. In the basement (Market Street Level), the following are provided: two new 800-Ton centrifugal chillers based on Trane model CVHF; two new 1700 GPM chilled water pumps with variable frequency drives (VFD) and two new 2400 GPM condenser water pumps with VFD's. On the roof, a new 800-ton cooling tower is provided on existing dunnage. CCC Facilities staff believe the original G Fox structure has ample capacity, however a structural engineer should confirm. New 10" condenser water piping must connect from the roof to the basement. Existing chases may have available space. To be confirmed prior to implementation. Finally, a refrigerant monitoring system and purge fan for 2000 CFM are needed if CSCU elects to take this approach and provide on-site cooling generation.



Aerial of 950-960 Main St. Roof top

GUIDELINES

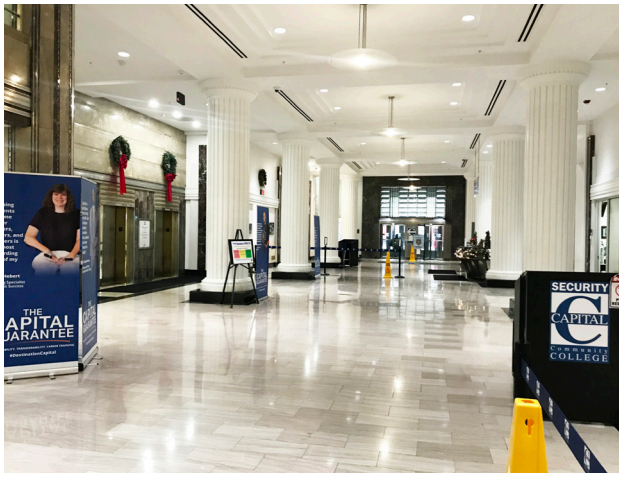
ARCHITECTURAL CHARACTER

The exterior architectural character of the former G. Fox Building will remain and be respected. The proposed wall-mounted banners and canopy-mounted signage would be done in a manner that does not degrade the historic fabric of the building. These could be removed at a later date if there were a need to restore the original look of the façade.

The use of LED screens or signage in Capital's storefront windows likewise can be changed out later if needed. The original department store use changed window displays often and used these to attract interest, just as Capital would use them.

The remaining historic interior detail in the lobby and in the Auditorium (Centinel Hill Hall) would be preserved. Many of the original finishes in the main lobby have already been replaced during the earlier renovation.

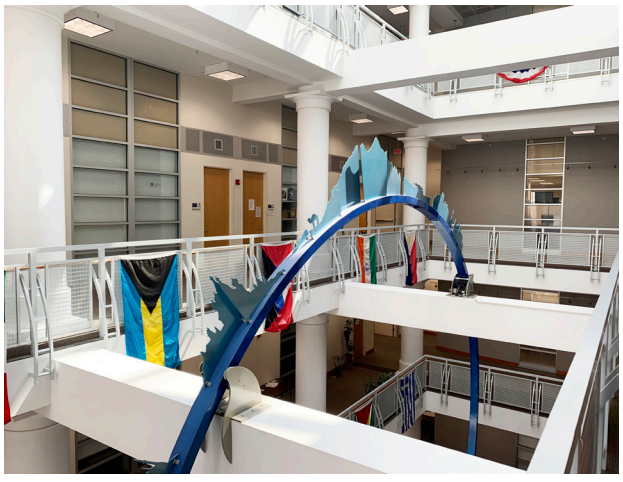
On upper floors, the character of interior renovations should harmonize with the existing finishes and color schemes, since much of this will remain. The white color on the columns and typical walls and ceilings provides a unifying effect and brightens the spaces, many of which are far from natural light. While special function spaces (such as the Yoga/Fitness/Multipurpose Space) may require difference finishes and may benefit from color accents, it is important not to have too much variation in materials in order for maintenance staff to be able to stock replacement materials.



Existing Main Lobby



Historic ceiling in Centinel Hill Hall Auditorium



Updated Atrium



Existing lounge area by atrium

SUSTAINABILITY

Adapting an older structure to serve new needs embodies the ethos of sustainability. This was the case when CSCU repurposed the former G. Fox Department Store building to serve as Capital Community College's new home almost 20 years ago. The 2020 Master Plan Update similarly aims to renovate in a sustainable manner, rather than expand. The renovations should conserve energy by making better use of natural light, more efficient elevator operations, continuing the move toward LED light fixtures.

Capital's downtown location facilitates a green approach. The urban site is well served by public transit. Renovating the building is a high efficiency use of land and avoids the potential sprawl and environmental disruption of new construction.

In the event CSCU and Capital elect to move to on-site steam generation for heating, this presumably would allow for more high-efficiency heat generation than the current steam supplied by the City of Hartford. Likewise, if Capital produced its own chilled water, it could employ high-efficiency absorption chillers and more state-of-the-art equipment.



Building:
Required - CT High Performance Building Standards
Reuse of existing building
Increase spaces using natural light



Land:
Retain existing footprint
No sprawl



Stormwater:
Not Applicable



Landscape:
Not Applicable



Transportation:
Encourage bus access
Multiple bus lines and rail nearby



Energy:
Continue to implement CSCU Energy Master Plan recommendations
Possible high efficiency gas-fired boilers
Possible high efficiency absorption chillers

IMPLEMENTATION AND COST

PROJECT PRIORITIES

The College Master Plan Advisory Committee assessed project priorities. The final list is shown below and was affirmed by the Chief Executive Officer.

Priority 1

- Improve Vertical Transportation
- Enhanced Main St. Identity, Lobby and Security
- Nursing Lecture Facilities
- Restack for more classrooms lower in the building
- Expand and reorganize spaces for Nursing, Health Careers, Sciences
- Enhance student-centered space
- Fix atrium acoustics / quiet dining & study space
- Determine feasibility / cost benefit of on-site heating and cooling generation

Priority 2

- Library Renovation
- Childcare After School Program
- Blackbox Theater

PHASING

The Master Plan did not define phases to implement the work; the floor plans below merely illustrate the total scope of the renovations across all the floors. Once CSCU defines the available project funding for each phase, it can then determine the associated construction budget and, with the College, select the most impactful scope of work from the range of renovations in the Master Plan. Factoring the staging and scheduling of the work will be key. If large areas are renovated, swing space may be required. Implementation of some early projects, such as finish, door and equipment upgrades, improved exterior lighting, and destination dispatch elevator controls, is already in planning.

PROJECT DEVELOPMENT

While the floor plan recommendations have defined layouts, it is important to recognize that they are still concepts. When projects are implemented, the detailed space needs should be confirmed in a final program. The resulting final design layout may vary from the Master Plan concept layout.



FIGURE 04.22 Scope of Work Matrix

COST ESTIMATES

The Planning Team prepared order-of-magnitude cost estimates for the Master Plan recommended projects. The estimates were based on the space program and conceptual site, building and renovation projects noted above. The basis of the estimate reflects the following approach/assumptions at right. Given the broad, preliminary scope of Master Plan projects, and the fact that needs, conditions, and priorities can change over time, it is important to review and refine program and budget assumptions prior to implementation.

Assumptions

- Project Cost
  - 45% : New Construction and Renovations
  - 30% : Roads / Parking / Open Space
  - 30% : Infrastructure
- Labor costs included at local union rates
- Long lead items can be purchased to meet schedule requirements
- Figures reflect 2020 Bid Date
- Once project bid date known, budget figures to be escalated to reflect inflation

Markups

General Conditions, General Requirements, Insurance & Bond, Permits	15%
Construction Manager Fee	4%
Construction Contingency	Excluded
Escalation	Excluded
Project Cost markup on Construction Cost	45% (per CSCU Guidelines)
FFE, Technology and Equipment	5-15% (Included in Project Cost Markup)

COST ESTIMATE

Renovation Projects	GSF	Construction Cost	Project Cost
Install Escalators Floors 1 - 3, Stair to 4th Floor	NA	$1,965,000	$2,849,250
Market Street Level Renovations	785	$72,720	$105,444
Talcott Street Level Renovations / Early Childhood Drop Off Center	1,445	$410,915	$595,827
First Floor / Main Lobby Renovations (balance after escalator)	NA	$39,750	$57,638
Second Floor Renovations (balance after escalator)	5,400	$905,300	$1,312,685
Third Floor Renovations (balance after escalator)	19,600	$3,357,835	$4,868,861
Fourth Floor Renovations s (balance after open stair)	14,500	$2,707,000	$3,925,150
Fifth Floor Renovations	6,940	$1,206,190	$1,748,976
Sixth Floor Renovations	3,305	$784,290	$1,137,221
Seventh Floor Renovations	8,145	$1,430,195	$2,073,783
Eighth Floor Renovations	1,550	$448,700	$650,615
Ninth Floor Renovation	23,000	$184,000	$266,800
Tenth Floor Renovations	7,175	$1,811,585	$2,626,798
Eleventh Floor Renovations	8,890	$1,750,590	$2,538,356
Swing Space Fit Out to Enable Renovations (capital cost only)	20,000	$2,700,000	$3,915,000
New Atrium Open Stair, Floors 8-11	NA	$275,000	$398,750
Banners and Signage, Main Street Façade	NA	$174,400	$252,880
Subtotal: Renovation Projects		$20,223,470	$29,324,032
Infrastructure Projects			
Key Card System Security System at Entries and Replacing Key Locks	NA	$1,351,250	$1,756,625
Public Address System and Improved BlueLight System	NA	$126,500	$164,450
Air Handling Unit Replacement (9 units)	NA	$315,000	$409,500
Building Automation System (BAS) and Fire Alarm Upgrade	NA	$1,100,000	$1,430,000
Subtotal: Infrastructure Upgrades		$2,892,750	$3,760,575
Total / 10-Year Projects		**$23,116,220**	**$33,084,607**
Alternates			
Add Stair Floors 1 - 4 (instead of escalators)	NA	-$1,782,500	-$2,584,625
Additional Space for Second Lecture Hall for Nursing	3,400	$717,400	$1,040,230
New high efficiency gas fired boiler plant (instead of purchasing city steam)	NA	$2,300,000	$3,335,000
New high efficiency chiller plant (instead of purchasing city chilled water)	NA	$ 1,875,000	$2,718,750

CONCLUSION

The Master Plan renovations are comprehensive and transformative. Together, they will support Capital's mission by strengthening recruitment and retention, and improving the student experience in multiple ways. Better vertical transportation will improve "quality of life". Enhanced spaces for learning, gathering and working will further energize the College. Upgrading Capital's Main Street exterior will elevate the College's identity downtown and beyond.

The Plan combines vision and pragmatism. It reimagines how the former G. Fox Building can best host an urban college as a vibrant, vertical campus under one roof. It recognizes financial constraints. The Plan has the necessary flexibility to be realized in phases as funding permits. Most importantly, the 2020-2030 Master Plan Update provides CSCU and the College with a road map for capital investment over the next decade, so Capital continues its upward trajectory as a vital resource for its Hartford Community and for the region.

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