CONNECTICUT STATE COLLEGE & UNIVERSITY SYSTEM

NORWALK COMMUNITY COLLEGE

MASTER PLAN UPDATE

AUGUST 2019







G3 ARCHITECTURE INTERIORS PLANNING

CONNECTICUT STATE COLLEGE & UNIVERSITY SYSTEM

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ACKNOWLEDGEMENTS

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MASTER PLANNING TEAM

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NCC
William H. Schwab
Center for Information Technology
20



EXECUTIVE SUMMARY



FIGURE 01.1 The Campus Today

EXECUTIVE SUMMARY

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

The Master Plan team comprehensively assessed NCC's existing campus – its context, access, land use, buildings, space utilization, circulation, landscape and infrastructure. The team also used the current and projected enrollment figures, multiple interviews, and academic plans as the basis for projecting future space and facility needs. The resulting Recommendations reflect concept-level capital projects to fulfill these needs over the next decade, and beyond.

The Plan incorporated two projects that were already designed and awaiting construction funding, and provided confirmation and program guidance for a third pending project, the B Wing renovation, about to go into design. A long-standing goal to connect NCC's two campuses with a pedestrian bridge, was also a key recommendation. A Stamford satellite facility was also recommended for further study and follow up.

EXISTING CONDITIONS

Norwalk Community College is located in West Norwalk, CT at the intersection of Richards Avenue and West Cedar Street, near Route 1 in an affluent residential neighborhood. The College evolved from two separate institutions on either side of the avenue to become one institution. The campus building complexes on the east and west are well integrated, but students must walk across Richards Avenue to go between campuses, on a daily basis. The condition of buildings varies from poor to good, with some buildings decades old and others constructed more recently. NCC has ample land, however there are few outdoor areas that are suitable for student use. Views of front yard parking lots are one of the first impressions when arriving at Norwalk Community College.

Key Facts:

- Main Campus: 30 acres
- Enrollment Fall 2018: 5,503 HC / 3,303 FTE
- Enrollment Fall 2028: 6,176 HC / 3,707 FTE projected
- Development: 8 buildings / wings; 362,216 GSF*
- Parking: 1,490 spaces
- Transit: Local Bus service, with link to MetroNorth Rail

Key Findings:

- NCC has a reputation for academic excellence and strong community partnerships
- The East and West Campus buildings need to have an enclosed link
- NCC campus needs more defined green spaces for gathering
- The College has modest space per student compared to its peers
- Student services for recruitment are on the east and for retention on the west
- Parking is sufficient, but congestion can occur at times.
- Prospective students in the Stamford area reportedly cannot reach NCC.

**excluding Master Plan Phase 3 projects, designed and pending construction.*

ENROLLMENT

The College provided the System with credit enrollment projections through Fall 2028. Those projections, provided in student headcount, were supplied by related program clusters, rather than individual or departmental majors. Those projections were translated into student FTEs.

Norwalk has experienced a drop in enrollment in recent years. The College projects a modest increase of 12% in enrollment to 2028, comparable enrollment in 2014.

ENROLLMENT (CREDIT)	EXISTING FALL 2018	PROJECTED FALL 2028
Headcount	5,503	6,176
FTE	3,303	3,707
Total	8,806	9,883

TABLE 01.1 Enrollment Summary

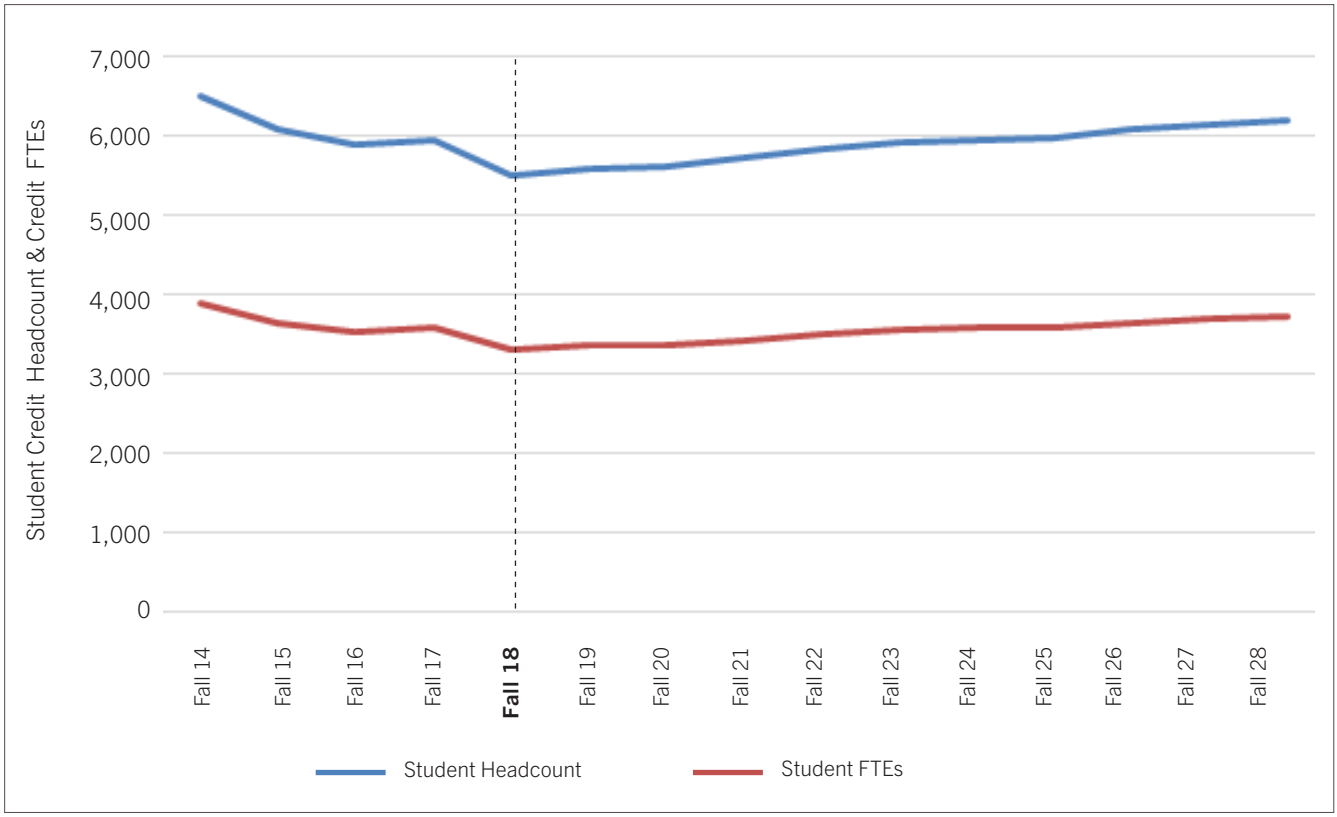
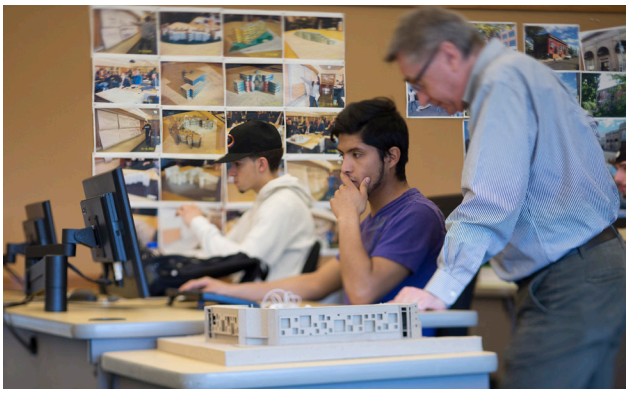


FIGURE 01.2 Credit Enrollment Projections in Student Headcount and Credit FTEs





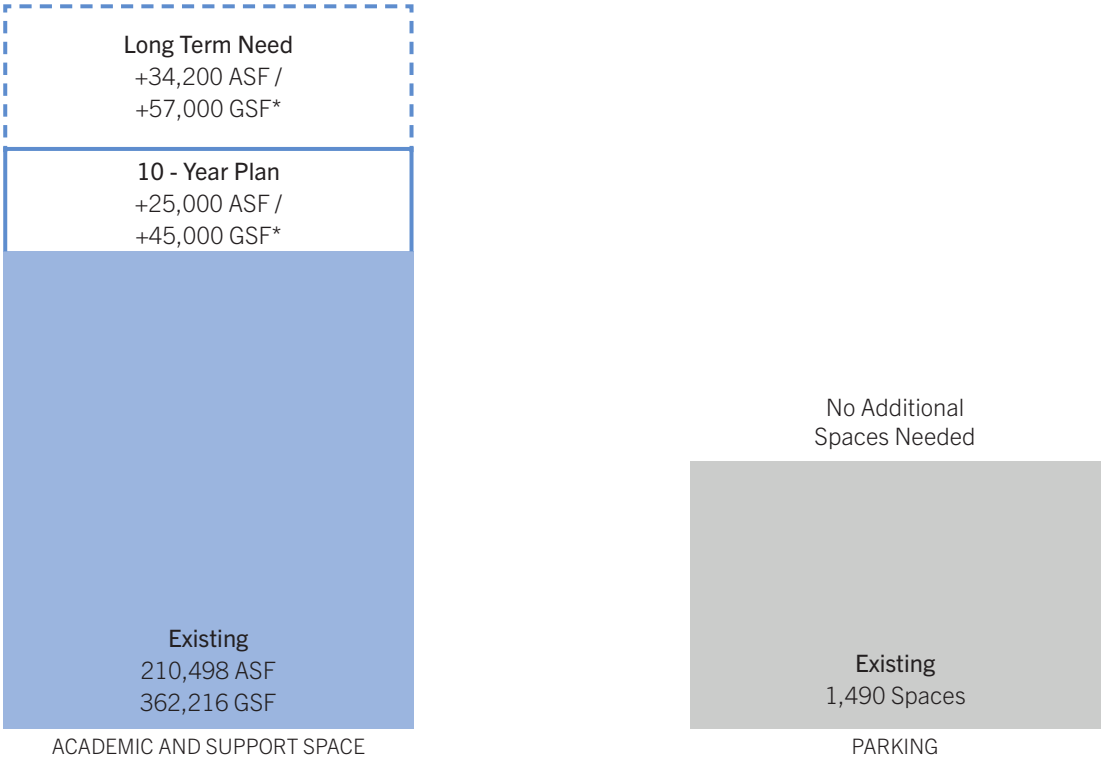
SPACE NEEDS

The Space Need Assessment (SNA) for the Master Plan Update identifies 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. Last, the SNA is in assignable square feet –the space that is useable or programmable—unless otherwise noted. Currently, Norwalk Community College occupies slightly more than 217,155 Assignable Square Feet (ASF), representing approximately 345,000 Gross Square Feet (GSF) across two campuses and eight buildings. Raising Norwalk Community College to relative parity with the midsized Connecticut Community Colleges will require a substantive increase of space at the College. Total new construction space required is 59,200 ASF or 102,000 GSF.

Recognizing that fiscal conditions may not support construction of all this expansion in the next decade, the Master Plan Recommendations reflect the highest priority elements of the need totaling approximately 45,000 GSF in additional space, including the pending Student Center and Theater Additions. The balance of the expansion need is framed as long term development.

PARKING

NCC has sufficient parking for the current and projected population. Lots are never full at peak times, the start of fall semester. Parking which may be lost to development projects, however, should be replaced to avoid a parking deficit. The College should continue to encourage use of the U-Pass CT program and bus transit to access campus.



**Including expansion for MP Phase 3 Student Center Addition (5,400 GSF) and Theater Addition (5,300 GSF)*

FIGURE 01.3 Space Needs Summary

MASTER PLAN RECOMMENDATIONS

Strategy
The Master Plan reflects a three-part strategy, based on a comprehensive and collaborative planning process with the College and CSCU:

1. Optimize the use of existing facilities and unify the campus through focused renovations, additions and infrastructure upgrades.
2. Expand facilities on the main campus responsibly and incrementally over the next decade to meet highest priority needs in a constrained funding climate. Further expansion to be long term.
3. Explore a NCC Extension Site in Stamford to expand NCC's effective service area and revenue.

Master Plan Phase 3 Projects
These include the Student Center and Theater Additions which have already been designed and bid. At the time of this Master Plan update, they are awaiting funding. This space needs assessment confirmed the programmatic need for these projects.

B Wing Renovation
As the oldest building on campus and one which houses both key student services and a large number of classrooms, it is essential to carry forward a planned comprehensive renovation of the B Wing. The building needs its envelope and MEP systems replaced, and its interior spaces fully redone to address decades of obsolescence and new functional needs. The Plan recommends changing the circulation on the ground floor to create more favorable footprints for student service departments.

Pedestrian Bridge and Library Renovation
The Plan recommends a pedestrian bridge over Richards Avenue to unify the campus buildings with an enclosed link between the second floor of the Library and the second floor of the CIT Building. Since this will significantly reduce needed library space on the second floor, an integral part of this project is a small addition to provide replacement area to renovate the library to meet current needs.

New Academic Wing and Quadrangle
To provide needed expansion for academic and support space, the Plan includes a recommendation for a new 2-story, 28,400 GSF wing, linked to the CIT wing and B wing on the West Campus. This project also frames a new grass quadrangle, created by reducing the size of the front parking lot, to create a more appropriate collegiate setting with a signature open space facing the Richards Avenue frontage.

Access and Parking Reconfiguration
To make up for parking lost to the new wing and quad facing Richards Avenue, the Plan adds parking on the rear areas of the West and East Campuses by reconfiguring and extending current lots to be more efficient. The entry drive to the West Campus front lot is shifted to be opposite the East Campus entry, with Richards restriped to create left turn lanes to maintain smooth traffic flow.

Select Renovations to Improve Access and Operations
The Plan includes three smaller, but needed projects on the West Campus. One provides wheelchair access to the D wing mezzanine and expand this underutilized area. The second links the third floor of the D and H wings for better connectivity and more reliable access by elevator. The third project is an addition for maintenance vehicles in part of the service yard, permitting expansion of campus service spaces.

Infrastructure Upgrades
The Plan identifies several upgrades needed to HVAC, Electrical, Plumbing and Fire Control systems. A key need is replacing the air handling units which serve the entire East Campus and which are near the end of their useful life and expanding their undersized mechanical equipment rooms to permit safe access and adequate servicing.

Stamford Satellite Facility
The Plan recommends study of an Extension Site model for a leased Stamford satellite facility for NCC. The goal is to serve potential students who the College believes today cannot reach NCC's main campus. The JM Wright Technical High School is a candidate shared host facility for exploring this potential key initiative.



Before: View of Existing Parking Lot



After: Rendering of Proposed Quadrangle + Pedestrian Bridge

Implementation

The consultant team and Master Plan Advisory Committee assessed project priorities, ranking projects by first and second priority. The Student Center Addition, Theater Addition, and B Wing Renovation are expected to be implemented first. Other projects will be implemented as funding becomes available, starting with Priority 1 category recommendations.

Long-term Opportunities

The Plan illustrates location options for adding more capacity to the campus to meet the full space need beyond the 10-year horizon of this Update. The proposed expansion sites link to the existing complex and aim to integrate well with the campus setting and neighborhood context.

KEY

- **A** Stamford Extension Site
- **B** B Wing Renovation
- **C** B Wing Maintenance Addition
- **D** D Wing Mezzanine Renovation
- **E** D + H Wing Connecting Bridge
- **F** Campus Bridge
- **G** Library Addition + Renovation
- **H** West Campus Addition
- **I** Reconfigured W1 Parking Lot
- **J** New Quad
- **K** D + H Wing Courtyard Fence
- **L** New Parking (Wood Chip Lot)
- **M** MP Phase 3: Student Center Addition
- **N** MP Phase 3: Theater Addition
- **O** Expanded W2 Parking Lot
- **P** Reconfigured E2 + E3 Parking Lots
- **Q** Outdoor Rec. Area + Riverwalk



FIGURE 01.4 Master Plan Recommendations


NCC



1 INTRODUCTION

CSCU SYSTEM CONTEXT

The Master Plan for Norwalk Community College responds to the vision and mission of the Connecticut State Colleges & Universities (CSCU), as well as NCC's Mission Statement. As one of the twelve community colleges, Norwalk is the ninth 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 01.5 CSCU Colleges and Universities

NORWALK COMMUNITY COLLEGE

Mission Statement

Norwalk Community College is a leader and partner in the academic, economic, cultural and social well-being of Southwestern Connecticut. We are an educational community, which embraces diversity and inspires excellence among our students, faculty and staff.

- We provide affordable education leading to degree completion, transfer, professional certifications, employment and lifelong learning;
- We promote student learning and success through high quality instruction, support services and co-curricular activities;
- We support workforce development through partnerships with labor, business, industry, government and our communities;
- We cultivate vibrant community partnerships through the sponsorship of intellectual, cultural, social and recreational events and activities;
- We prepare our students to be active and responsible contributors to the global society.

Vision Statement

Norwalk Community College aspires to create a culture of inclusion and excellence through intellectual inquiry, open dialogue, multicultural awareness and lifelong learning. By embracing the diverse needs of our students, faculty, staff and community, the college will strive to provide an environment in which individuals are empowered to achieve their highest potential.

Strategic Plan, 2017-2022

NCC's five-year strategic plan encompasses four institutional priorities that are overarching assurances made by our community of administrators, faculty, and staff. They will serve as a beacon to guide and shape decision-making at NCC. The success of the strategic plan rests upon our institutional commitment to these priorities and they are reflected in the plan's goals and objectives.

Institutional Priorities

- We commit to shared and transparent governance.
- We commit to provide fiscal stability and appropriate stewardship of resources.
- We commit to ensure sound decision-making and infrastructure, facilities and sustainability.
- We commit to a consistent and responsive planning and evaluation process.

Strategic Goals and Objectives

1. Advance student learning and success as a student centered institution committed to academic excellence.
2. Develop a new system of advising for NCC that incorporates state-of-the-art practice and technologies.
3. Expand professional development for faculty and staff to ensure the success of NCC's strategic goals.
4. Expand the use of technology to support student success.
5. Strengthen internal systems of accountability to ensure transparency and continuous improvement.
6. Direct planning and resources towards ensuring fiscal stability in order to mitigate the effects of budget reductions and declining enrollments.
7. Cultivate and maintain vibrant community relationships.

Civic Action Plan

Norwalk is the only CSCU Community College to have a Civic Action Plan. The focus areas of the Plan are Equity, Inclusive Excellence, Civic Learning, and Democratic Engagement. NCC's Civic Action Plan affirms the centrality of the public purposes of higher education as part of our institutional mission, core values and vision.

As a leader and partner in the academic, economic, cultural, and social well-being of Southwestern, Connecticut, we are an educational community that embraces diversity and inspires excellence among our students, faculty, and staff.

Our mission emanates from five core values:

1. Student Centered Focus
2. Excellence in Teaching
3. Student Success
4. Community Engagement
5. Civility and Respect

Our vision is to create a culture of inclusion and excellence through intellectual inquiry, open dialogue, multicultural awareness, and lifelong learning. By embracing the diverse needs of our students, faculty, staff, and community, the College will provide an environment in which individuals are empowered to achieve their highest potential.

In the fall of 2016, representatives from NCC attended the Southern New England Civic Action Planning Institute to discuss the Campus Compact 30th Anniversary Action Statement signed by university and college presidents to reaffirm their public commitment to develop Civic Action Plans for their respective institutions.



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	January to March 2019
Task 2. Assessment	March to April 2019
Task 3. Recommendations	April to July 2019

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 four times with the CMPAC, a group which included President David L. Levinson, Chief Operating Officer, Cheryl DeVonish, 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 with President Levinson, Cheryl DeVonish, Chief Operating Officer, Craig Carlson, Joseph Dervil, 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 team held an interactive work session with Student Government Association members on the Master Plan on May 7, 2019. The information gathered provided important insights on where students meet, study, eat and collaborate. The input was also valuable in helping the planning team identify areas that could be improved to enhance student experience and the campus environment.





NCC Student Work Sessions


NCC



2 EXISTING CONDITIONS

THE INSTITUTION

- NCC ACADEMIC DEPARTMENTS
- HISTORY OF THE PHYSICAL CAMPUS

THE CAMPUS

- THE SITE
- CAMPUS MAP TODAY
- CONTEXT
- CAMPUS STRUCTURE AND SCALE
- CAMPUS LAND USE
- LANDSCAPE CHARACTER
- WETLAND AND FLOODING CONSIDERATIONS
- CIRCULATION AND ACCESS
- PARKING
- PUBLIC TRANSPORTATION

THE BUILDINGS

- CAMPUS EXISTING FLOOR PLANS
- CIRCULATION AND ACCESS
- ARCHITECTURAL CHARACTER
- BUILDING CONDITION
- CODE CONSIDERATIONS
- CLASSROOM UTILIZATION

ENERGY AND INFRASTRUCTURE

- HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS
  - HEATING
  - AIR CONDITIONING
  - VENTILATION
- ELECTRICAL SYSTEMS OVERVIEW
- PLUMBING SYSTEMS OVERVIEW
- FIRE PROTECTION SYSTEMS OVERVIEW
- KEY CONSIDERATIONS

STUDENT ENGAGEMENT

OPPORTUNITY SITES


SYRACUSE

THE INSTITUTION

NCC ACADEMIC DEPARTMENTS

Norwalk Community College is organized into eleven academic departments, as illustrated below. The College also has an Honors Program and a CSCU Transfer Articulation program. NCC offers a total of 26 Associates of Science degrees, 28 Associate of Arts degrees, 6 Associate of Applied Science degrees, 20 Certificates and an Associate Credential in Early Childhood.

NCC's Continuing Education and Workforce Development supports the community with enrichment and training courses from kids to seniors, in the Lifelong Learners Institute.



Academic Enrichment + First Year Experience



Art, Architecture + Design



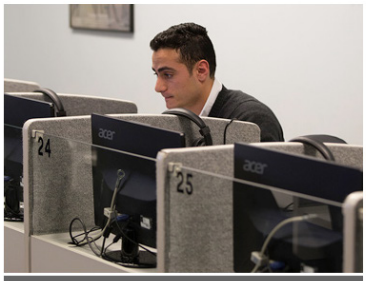
Business



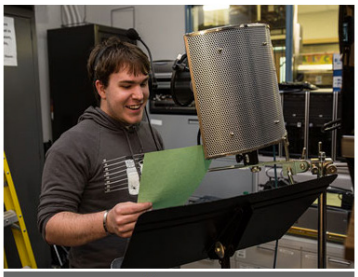
Computer Science



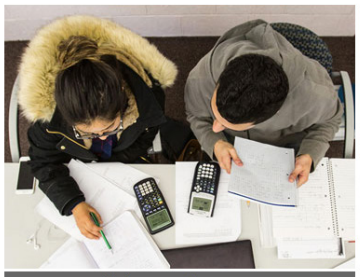
English



English as a Second Language



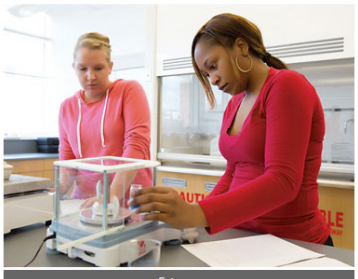
Humanities



Mathematics + Engineering



Nursing and Allied-Health



Science



Social and Behavioral Sciences

Source: NCC Website

HISTORY OF THE PHYSICAL CAMPUS

Norwalk's two-campus site reflects its history as two institutions which then merged into one. In this sense, the history of the site is present in East and West Campuses and a useful starting point for understanding future opportunities. NCC's history is perhaps the best documented of all of CSCU's community colleges. Linda Lerman, NCC Director of Libraries, is writing "Fifty Years of Education and Community: Norwalk Community College", a book nearing publication. The following synopsis is taken from her preview publication of the College's early years, and from NCC's web site.

Dr. Harry Becker, a Yale graduate, was the driving force behind the founding of Norwalk Community College. He planned and lobbied for NCC for years, recognizing the need for a community college in the area in the mid-1950's. His efforts resulted in a vote overwhelmingly in favor of the Enabling Act to found the College in 1960. NCC was granted its license in 1961 as a municipal college. Accreditation and building the curriculum and faculty followed. NCC's first home, Brien McMahon High School in Norwalk, was intended as an interim solution.

In 1966, control of the college passed from the City of Norwalk to the State of Connecticut. The college moved to a site on Wilson Avenue in Norwalk and became a member of the Connecticut system of higher education.

In June 1989, groundbreaking officially took place for a new, permanent campus, what is now the East Campus. The new facility on the east side of Richards Avenue was completed in time for Fall semester classes in 1991. Norwalk Technical High School occupied the opposite side of the Avenue. The current West Campus B Wing was NTHS's building originally.

On July 1, 1992, NCC and NSTC merged to become a comprehensive, public two-year college known as Norwalk Community-Technical College.

In 2000, Norwalk Community-Technical College was renamed Norwalk Community College to better reflect the institution's role as a community resource and partner in the prosperity of Fairfield County.

In 1999, the NCC west campus was expanded to include the William H. Schwab Center for Information Technology. In 2010, the college broke ground on another expansion project, the Center for Science, Health and Wellness. This 55,000 square foot facility opened in 2011. It provides a home to the growing Nursing and Allied Health Division program and state-of-the-art laboratories and classrooms for the science program. The center also includes faculty offices, a Health and Wellness center, studios and simulated hospital patient care rooms. More than 170,000 students have attended NCC since it opened in 1961. More Fairfield County students attend NCC than any other college in Connecticut.

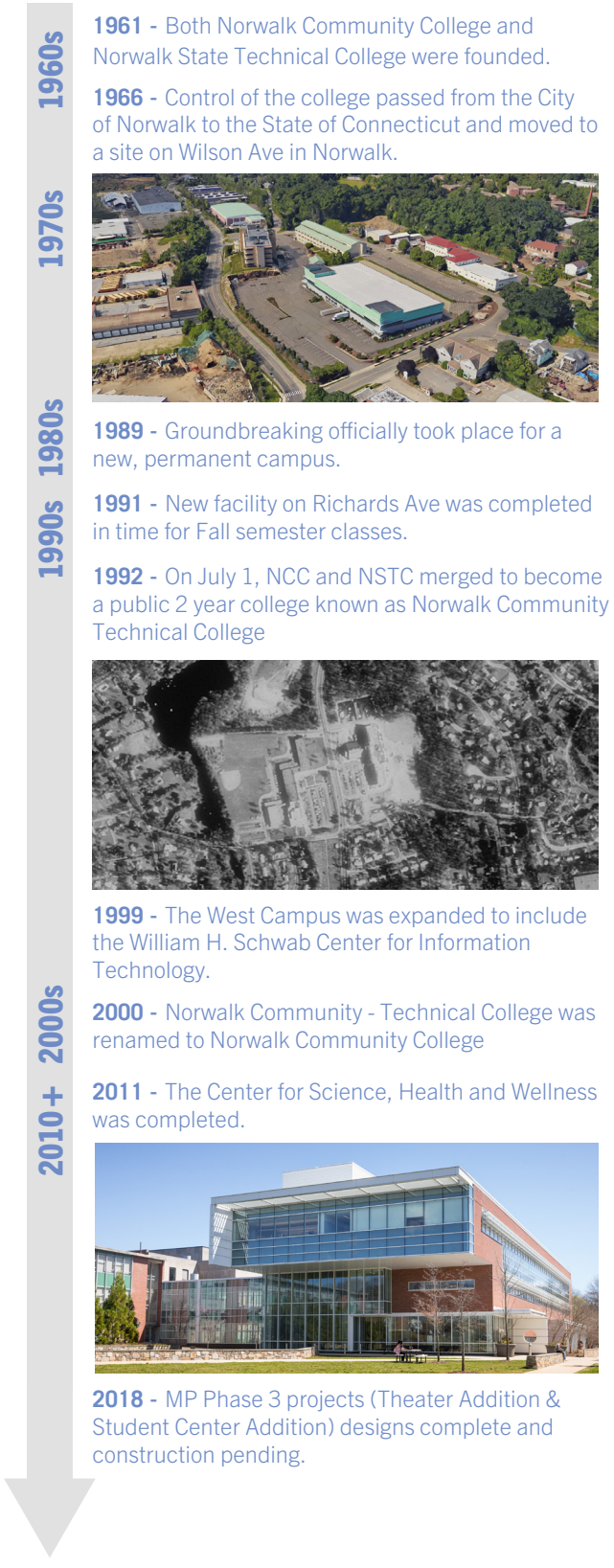


FIGURE 02.1 Historic Timeline

THE CAMPUS

THE SITE

Norwalk's campus is expansive and open, in a suburban setting. Its most distinctive feature is being divided by a public road into two parts – the East Campus and the West Campus, a legacy of the College's historical evolution. The East Campus is approximately 13 acres and the West Campus is approximately 17 acres, for a total of 30 acres.

The map on the opposite page illustrates the main features of the campus' buildings and grounds. The East Campus building complex consists of three interconnected wings, built at the same time. The West Campus complex comprises six wings, including one original to the former technical college (the B Wing) and more recent, purpose-built collegiate buildings such as the CIT and Allied Health (H) Wings.

Two building addition projects that have been designed, bid and are awaiting funding at the time of this Master Plan Update are included in the site plan as existing projects. These are the so called Master Plan Phase 3 projects for the Student Center Addition (R) and the Theater Addition (S).

Additional information on campus context, access, parking, building uses and other characteristics follows.



FIGURE 02.2 Existing Campus Aerial

CAMPUS MAP TODAY

KEY

A CIT Building
B A Wing (West)
C B Wing (West)
D D Wing
E H Wing
F W1 Lot
G W2 Lot
H W3 Lot (Wood Chip Lot)
I W4 Lot
J W5 Lot
K Library / C Wing (East)
L A Wing (East)
M B Wing (East)
N E1 Lot
O E2 Lot
P E3 Lot
Q E4 Lot
R MP Phase 3 Student Center
S MP Phase 3 Theater Addition



FIGURE 02.3 The Campus Today

CONTEXT

Regional Context

NCC is located in the southwest part of the state, and serves the 10-town region of lower Fairfield County, which includes Stamford, Norwalk, Greenwich, Darien, New Canaan, Wilton, Westport, Weston, Redding and Ridgefield. The campus is on the west side of the Town of Norwalk, between the Merritt Parkway to the north and Route 1 and I -95 to the south. The campus is located approximately mid-way between Stamford and Bridgeport and 2 miles northwest of Norwalk Harbor and Long Island Sound.

Area Context

The campus occupies a verdant suburban setting with good access. Divided by Richards Avenue into East and West Campuses, NCC is bounded to the west by Fivemile River and on the north by St. Johns Cemetery and Magrath Park. Single family residential neighborhoods border the east and south sides of the campus, along with a portion of a second cemetery.

NCC is not far from the Route 1 commercial corridor and Metro North transit corridor. Being embedded in an affluent residential neighborhood, however, means that development can create concerns with nearby residents. The north side of campus is buffered by the park and cemetery. The river and vegetation buffer the west side, however, residents on the opposite side of the river do observe students when they use this area.

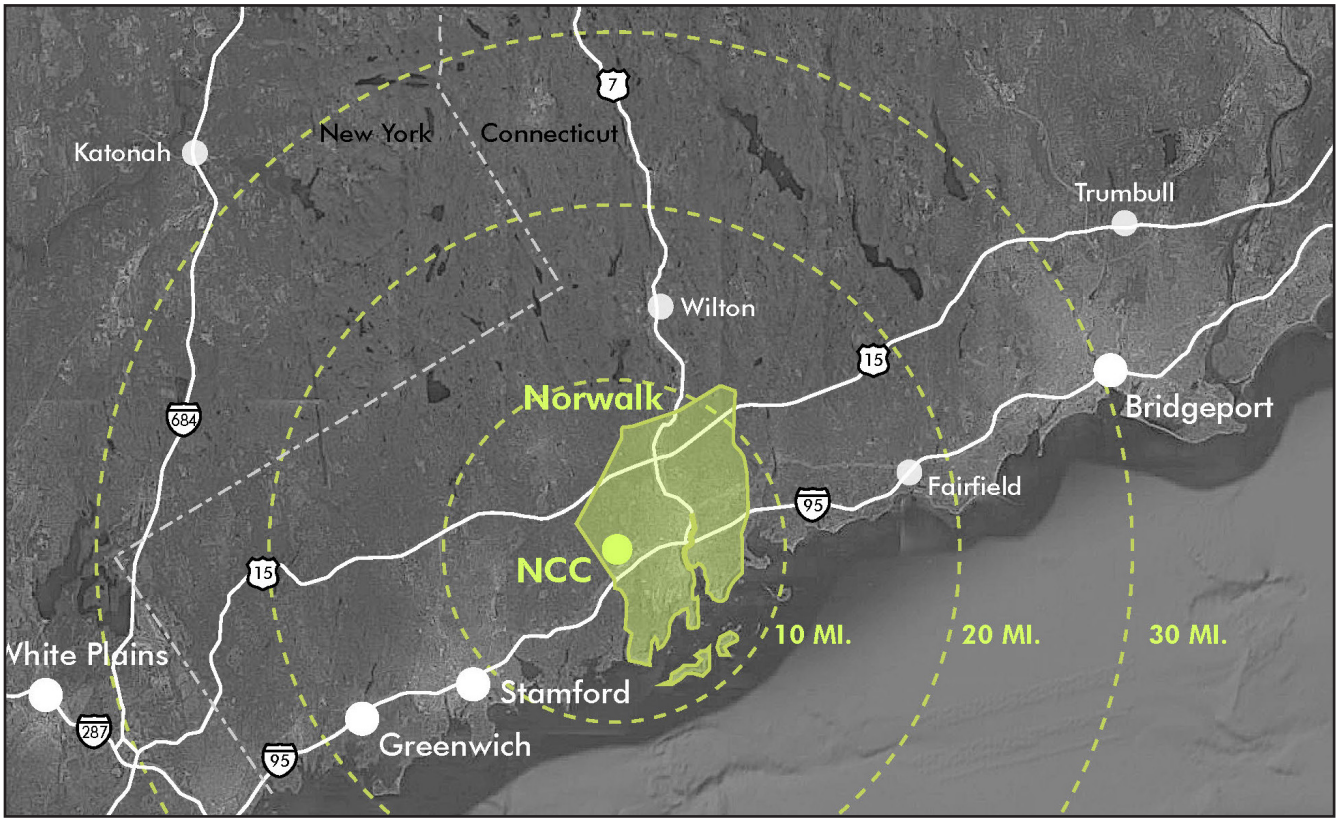


FIGURE 02.4 Regional Context

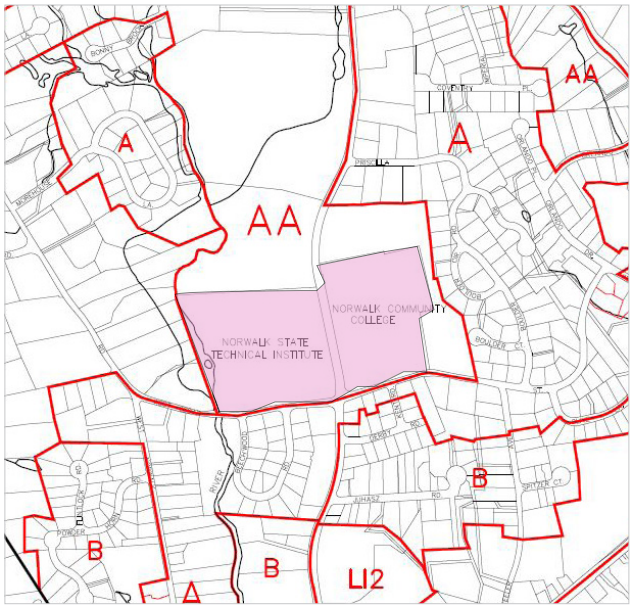


FIGURE 02.5 Area Zoning Map

KEY: Figure 02.5a

AAA	Residence Zone	L12	Light Industrial Zone
AA	Residence Zone		Campus
A	Residence Zone		
B	Residence Zone		

Zoning

NCC's campus occupies a AA Residential zone, which is intended for single-family dwellings and other compatible uses on lots of at least ½ acre. The campus is bounded by A Residence zones on the east, south and part of the west and by AAA Residence zones on the north and part of the west side.

Colleges are allowed in AA Residential zones by special permit. Front yards are 40 feet, side yards, 20 feet and rear yards 25 feet. Maximum allowable height is 2 ½ stories or 35 feet. As a state institution, however, development on NCC's campus is exempt from zoning.

Richards Avenue is not owned by the CSCU / NCC. As such, any proposed development over this public right-of-way would be subject to approvals by CT DOT and other authorities having jurisdiction.

KEY: Figure 02.6

- Residential
- Open Area
- Institution
- Industrial
- Commercial



FIGURE 02.6 Neighborhood Context

CAMPUS STRUCTURE AND SCALE

The two-part structure of NCC's campus generally works well. While only 200 feet separate the East and West Campuses, ideally the buildings would be linked. The figure ground diagram at right illustrates how the buildings reach towards each other, but do not link up. Since Richards Avenue will remain indefinitely as a major public thoroughfare, the integration would have to be done by a raised bridge connection.

The scale of Norwalk's campus is relatively compact for a suburban campus. Using an urban design guideline for walkability – the quarter mile radius related to a 5-minute walk – no part of the campus is more than a few minute walk from another part. This is tempered by a potential delay crossing Richards Avenue.

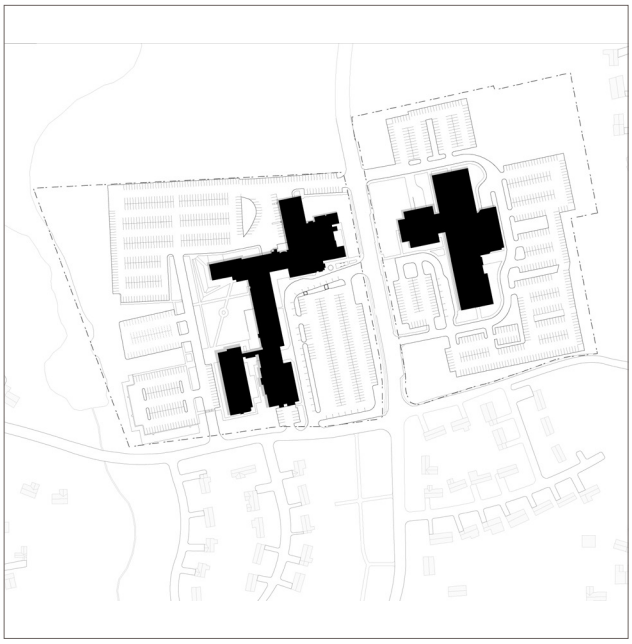


FIGURE 02.7 Campus Structure

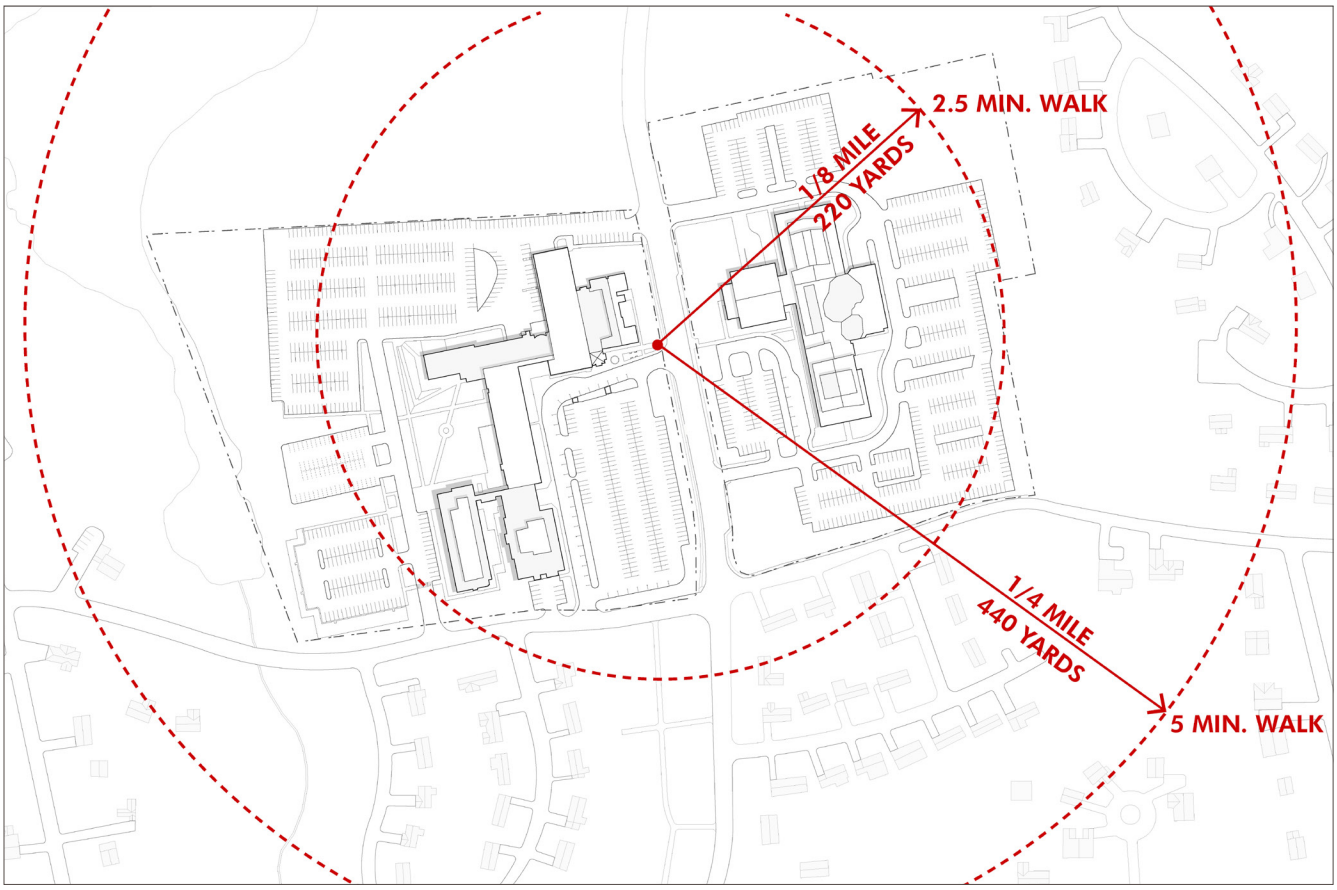


FIGURE 02.8 Campus Walkability Map

CAMPUS LAND USE

The majority of College land is occupied by buildings (approx. 11%) and parking (approx. 47%), as is the case with many commuter colleges. While there is some unpaved open space in front of the College, the largest green space is located behind the West Campus building complex – the opposite of the typical model of green space in front and parking in back. The Richards Avenue and West Cedar Street frontages do have some lawn, trees and stone walls that provide a suitable transition. Natural wooded areas occupy the northeast corner of the campus and western riverfront edges.



KEY

Parking Buildings Open Space Wooded Area River



FIGURE 02.9 Campus Land Use

LANDSCAPE CHARACTER

NCC has several landscape types, ranging from attractive gardens near the entrances to lawns to natural vegetation, plazas and parking lots. While the grass quad framed by the B and H Wings on the West Campus is especially attractive, with nice plantings, paths and artwork, its location in back and a level down from the main campus ground floor result in lower usage than it might have if it were more centrally located.

The well-designed landscape in the courtyard between the D and H wings has a good mix of hardscaped seating areas, landscape and pathways. Its south exposure makes this a light-filled space much of the day. Given security requirements that prevent open doors onto this space, however, it also is not as used as it could be.

The natural vegetation along the Fivemile River provides habitat and a good visual buffer from the neighborhood. This area, including the gravel space to the north, is not designed to encourage access by students.

A key goal for the Master Plan Update is to activate and enhance NCC's campus setting, to make it more attractive and green, while meeting functional requirements for access and parking.









Campus Aerial and Site Photos

WETLAND AND FLOODING CONSIDERATIONS

The western most edge of the West Campus along Fivemile River is in a FEMA Flood Zone. The risk to the campus appears minimal however, as the flood zone only covers the far corner of a parking area and is far from buildings.

The wooded area in the northeast corner of campus reportedly has some wetland areas. A wetland survey has not been done, however, so this is anecdotal. This area was not considered suitable or needed for development in the next 10 years.

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
- Without Base Flood Elevation (BFE) Zone A,V,A99
  With BFE or Depth Zone AE,AG,AH,VE,AR
- Regulatory Floodway

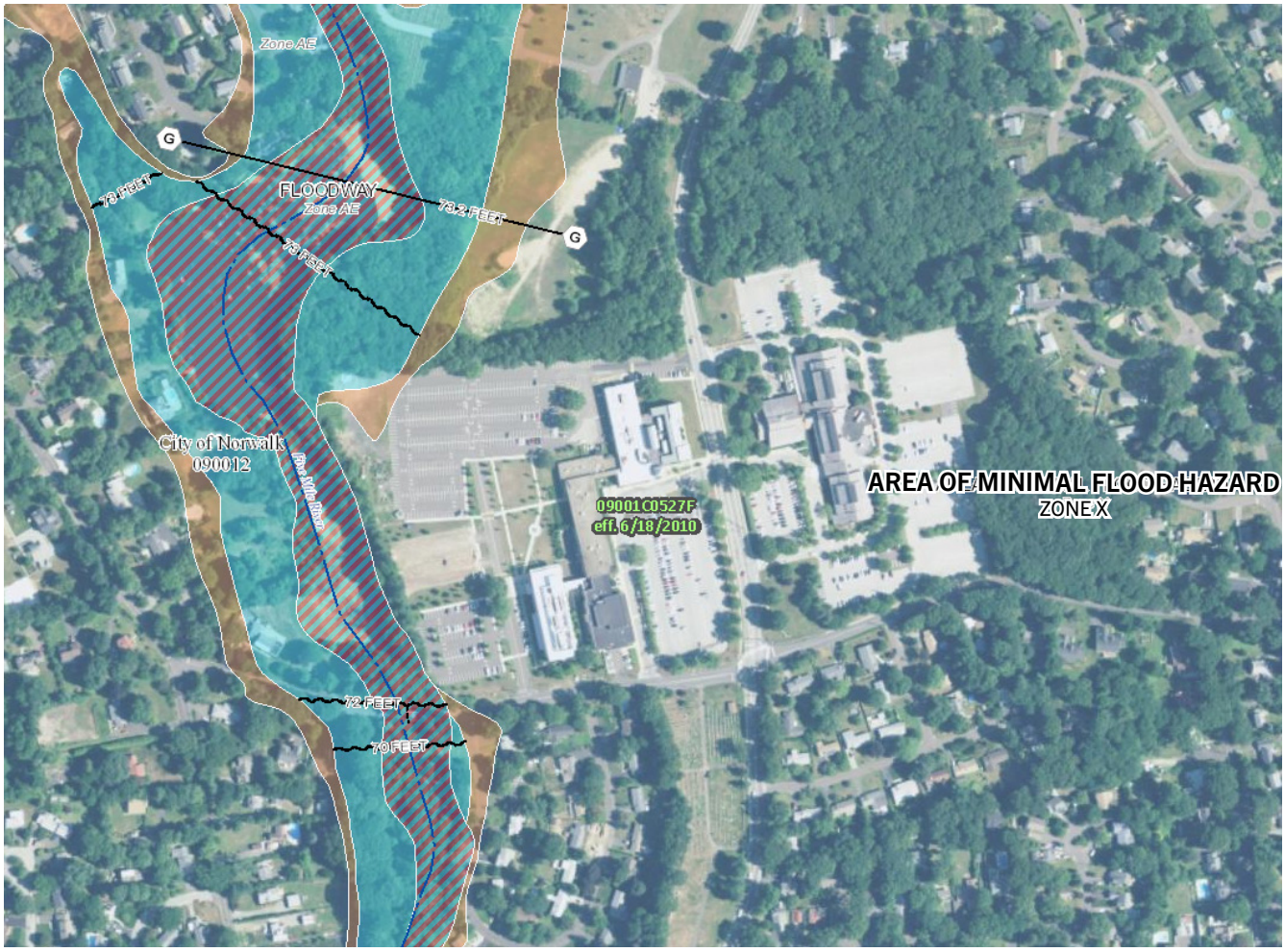


FIGURE 02.10 Wetlands + Flood Hazard Areas *(Taken from FEMA website)*

CIRCULATION AND ACCESS

The College is easily accessible from the Merritt Parkway and from Route 1 and I-95 to the south. The East campus has two entrances off Richards Avenue. The West Campus has two entrances on Cedar Street and two on Richards Avenue – a pair for the front lot and a pair for the rear areas.

Perhaps because the campus evolved from two separate institutions, the access drives are not well integrated from one side of campus to the other. There is no unifying loop road for example. In only one place do access points align across Richards Avenue. Creating a more coherent system would be ideal, consistent with DOT guidelines. The internal traffic flow in the West Campus front lot is problematic. There are backups at times when cars wait to exit onto West Cedar Street at afternoon peak periods.

The pedestrian crossing at Richards Avenue has been enhanced with safety features, including signage, flashing lights and on-street parallel parking to calm traffic. But this condition is still less than ideal. Elevating most pedestrian circulation by means of a bridge over the roadway to eliminate this conflict would be better for both vehicle circulation and pedestrians alike.

KEY

Main Campus Entry
Secondary Campus Entry
Main Route
Campus Exit
Campus Drive
Secondary Route
Bus / Transit Stop



FIGURE 02.11 Site Circulation and Access Points

PARKING

NCC has a total of 1,490 parking spaces, as shown on the diagram below. Almost all spaces are asphalt, with fixed stripes. One exception is the permeable paving lot on the West Campus. Originally grass and meant to support the green building rating for the H Wing, the lot did not function well, turning to mud. It is now covered in wood chips and used only when needed. Along Richards Avenue, there are parallel parking spaces not owned by NCC (not included in the total).

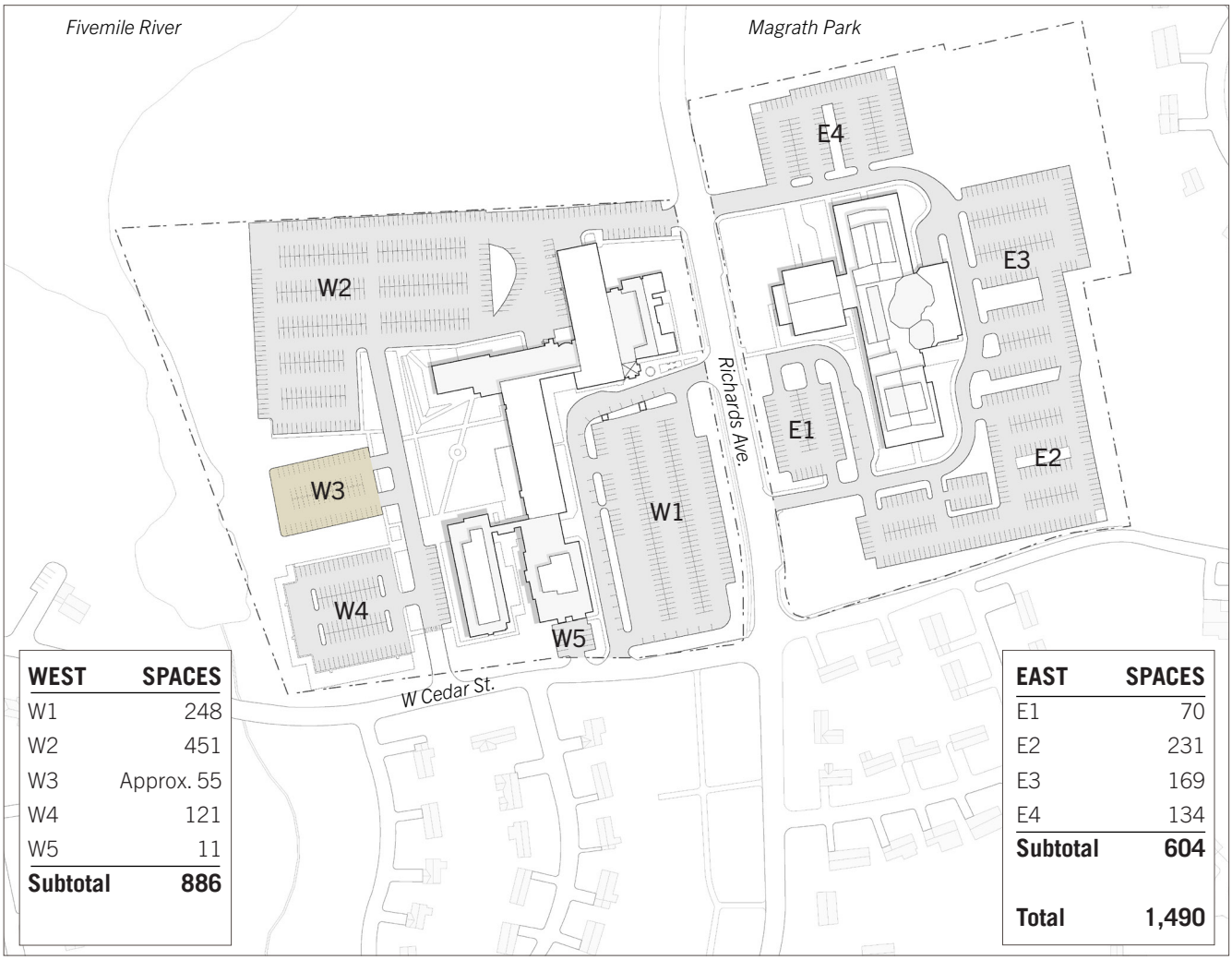
NCC has ample parking to meet its current and projected needs for the next 10 years. The current lots approach full capacity only at the start of the Fall Semester. Demand then subsides. No additional parking is needed in the Master Plan Update. If parking is lost for development, lost spaces should be replaced.



Existing Woodchip Parking Lot

KEY

Parking Lots Wood Chip Parking Lot



WEST	SPACES
W1	248
W2	451
W3	Approx. 55
W4	121
W5	11
Subtotal	**886**

EAST	SPACES
E1	70
E2	231
E3	169
E4	134
Subtotal	**604**
Total	**1,490**

FIGURE 02.12 Existing Parking

PUBLIC TRANSPORTATION

The Norwalk Transit District WHEELS bus network serves the NCC Campus. WHEELS Routes #11 and #13 and the Connecticut Avenue line connect the campus to downtown Norwalk and surrounding areas. Connections are possible to the Coastal Link line serving Bridgeport and Milford. With the recent introduction of UPass, more students reportedly are taking public transportation to access the campus.

There is one bus stop at NCC – on the West Campus. Buses enter from Richards Avenue. The stop is near the turn, and has a shelter for inclement weather.



Campus Bus Stop

KEY

- Bus Rt. 11
- Bus Rt. 13
- Rt. ConnAve + Conn Ave Sunday
- Rt. ConnAve / NCC Commuter Shuttle
- Bus Rt. 341 + 345
- Bus / Transit Stop



FIGURE 02.13 Public Transportation Lines

THE BUILDINGS

NCC's buildings are organized in two complexes. The East Campus is comprised of three wings, as delineated in the original construction drawings – the A Wing to the north, the B Wing at the center and south, and the C wing with the Library. A pending addition to the Theater is shown in the site plan below. This has been designed and bid, but is waiting for funding. The West Campus is comprised of five wings, as noted below. It also has a pending addition, the Student Center, shown in the site plan.

Academic functions, including shared classrooms and compute labs, are distributed on both the East and West Campuses. As a legacy of the former Technical College on the west side, most of these related functions are on the West Campus – Engineering, Architecture, Design, Allied Health, Sciences, Culinary, Computing and Information Technology. Arts, Music, Media, Early Childhood Education, ESL and other departments are on the east side.

Support functions likewise are distributed on both campuses, with departments related to student recruitment on the East Campus (Admissions, Financial Aid, Records, Testing) and departments related to student retention on the West Campus (student services, learning commons, tutoring, career placement, student activities, SGA). The Library is a distinctive wing on the East Campus. Facilities and maintenance have space on the partial lower levels of both the East and West Campuses.

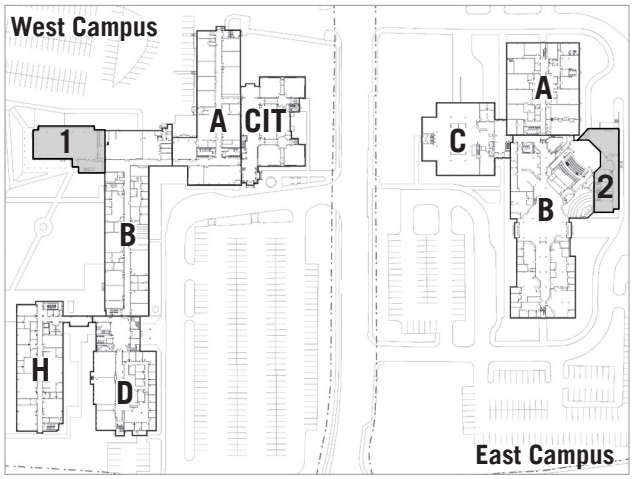


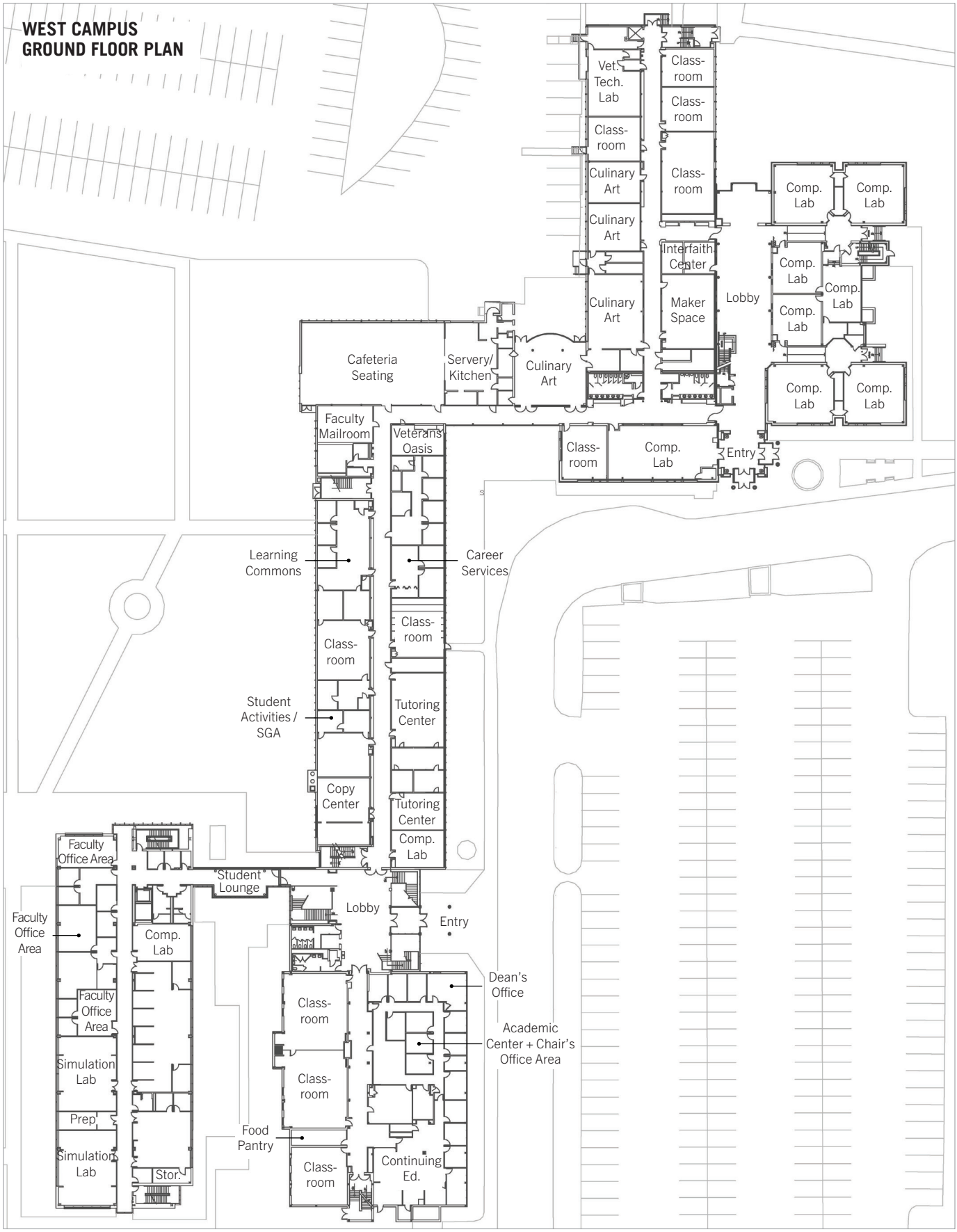
FIGURE 02.14 Campus Wings Key Plan

KEY

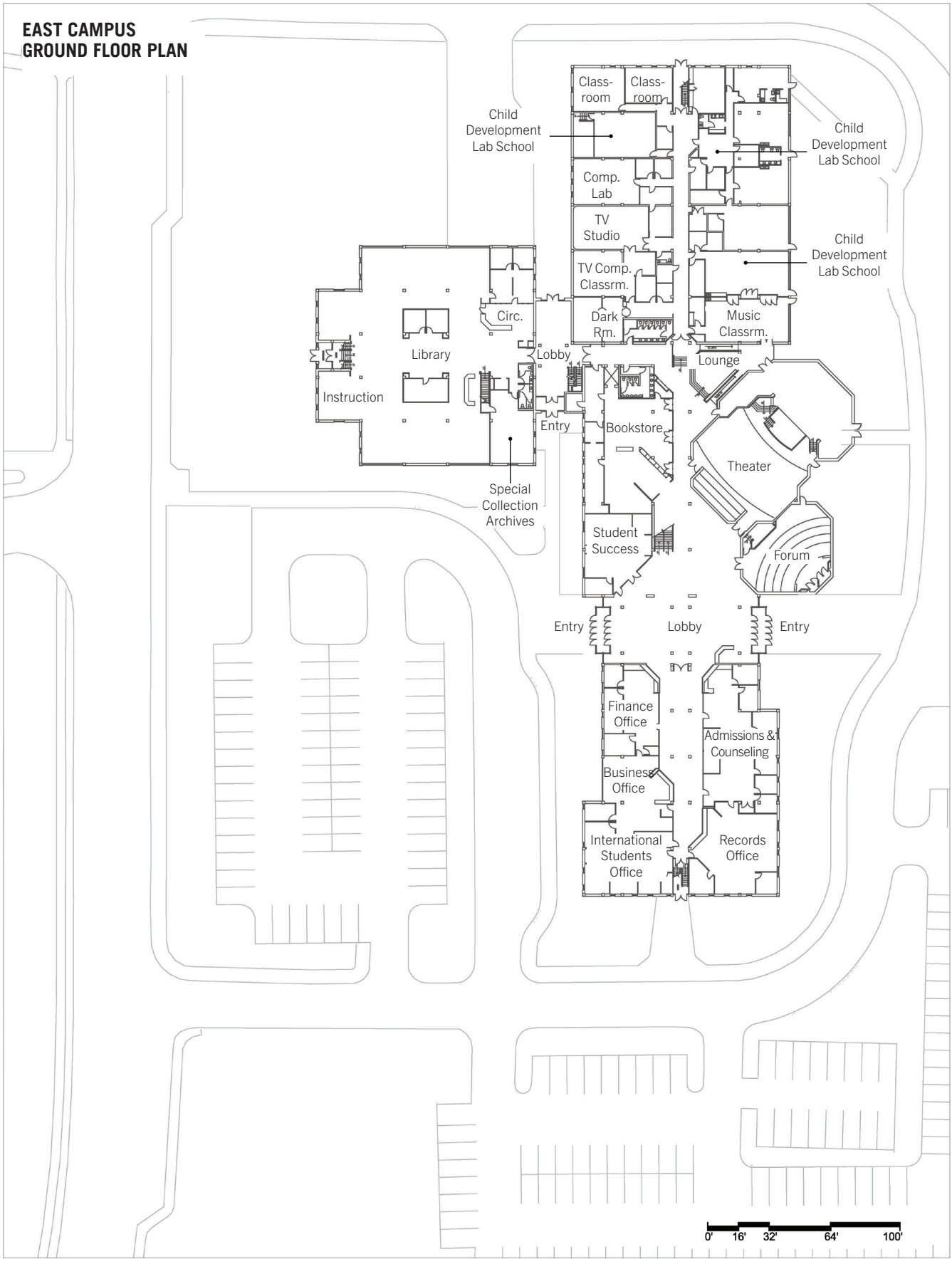
West Campus		East Campus	
A	A Wing	**A**	A Wing
B	B Wing	**B**	B Wing
CIT	CIT Wing	**C**	C Wing / Library
D	D Wing	**2**	MP Phase 3 Theater Addition (CP)
H	H Wing / Allied Health		
1	MP Phase 3 Student Center Addition (CP)		
	Construction Pending (CP)		

BUILDINGS	YEAR BUILT	EXPANDED/ RENOVATED	ASF	GSF
East - A Wing	1992	-	26,366 SF	34,581 SF
East - B Wing	1992	-	38,358 SF	61,389 SF
East - C Wing/ Library	1992	-	23,763 SF	37,509 SF
Subtotal			88,487 SF	133,479 SF
West - A Wing	1960	2014	21,722 SF	42,617 SF
West - B Wing	1960	-	29,309 SF	50,827 SF
West - CIT Wing	2005	-	13,176 SF	37,887 SF
West - D Wing	1970	1999	28,259 SF	49,333 SF
West - H Wing / Allied Health	2012	-	29,545 SF	48,073 SF
Subtotal			122,011 SF	228,737 SF
TOTAL TCC			**210,498 SF**	**362,216 SF**
Efficiency				*58%*

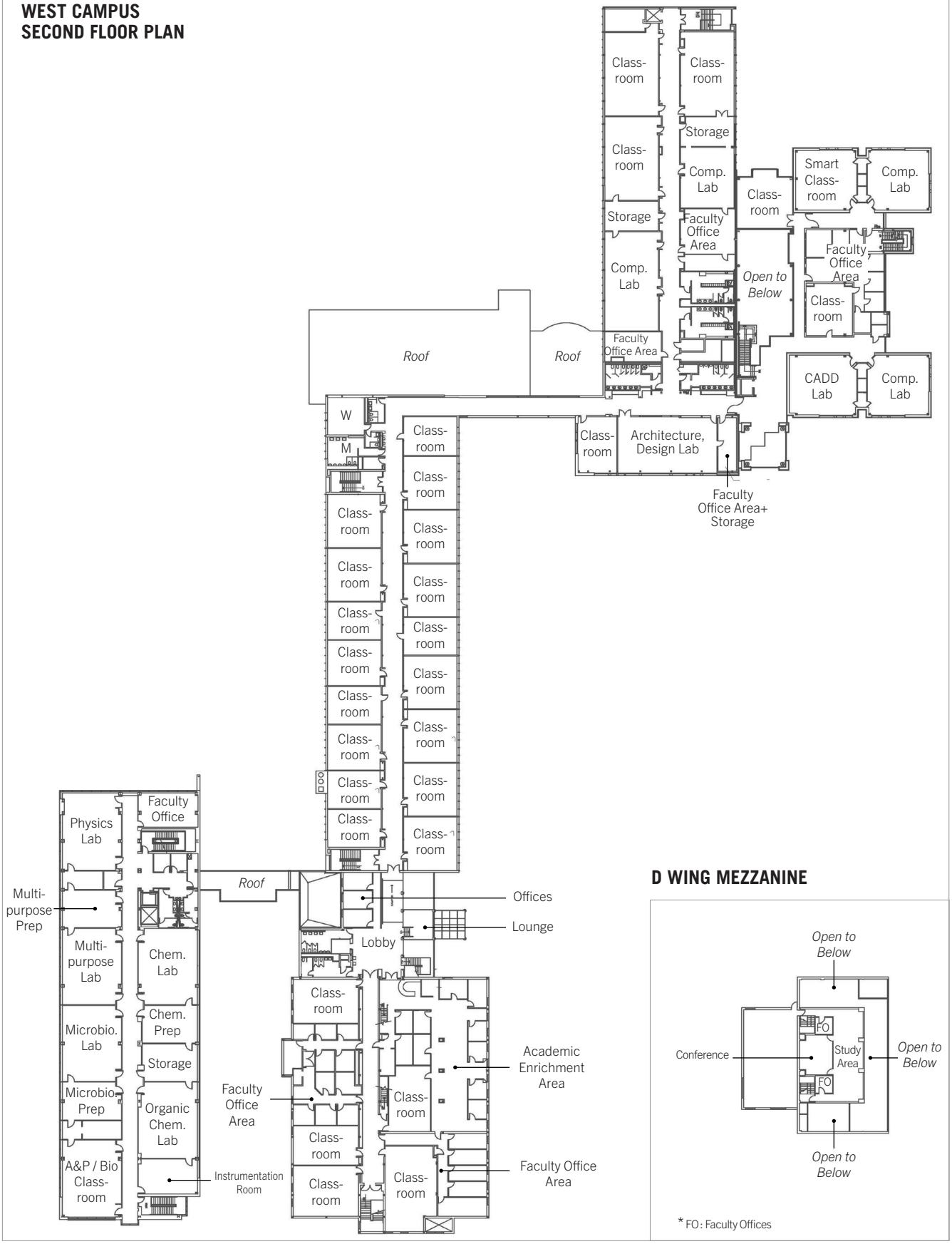
TABLE 02.1 Existing Building Inventory


WEST CAMPUS
GROUND FLOOR PLAN
Vet. Tech. Lab
Class-room
Class-room
Class-room
Class-room
Culinary Art
Culinary Art
Culinary Art
Interfaith Center
Maker Space
Lobby
Comp. Lab
Comp. Lab
Comp. Lab
Comp. Lab
Comp. Lab
Comp. Lab
Comp. Lab
Comp. Lab
Cafeteria Seating
Servery/ Kitchen
Culinary Art
Faculty Mailroom
Veterans Oasis
Class-room
Comp. Lab
Entry
Learning Commons
Career Services
Class-room
Class-room
Student Activities / SGA
Tutoring Center
Copy Center
Tutoring Center
Comp. Lab
Faculty Office Area
Student Lounge
Lobby
Entry
Faculty Office Area
Comp. Lab
Faculty Office Area
Dean's Office
Academic Center + Chair's Office Area
Class-room
Class-room
Simulation Lab
Prep
Simulation Lab
Stor.
Food Pantry
Class-room
Continuing Ed.

EAST CAMPUS
GROUND FLOOR PLAN



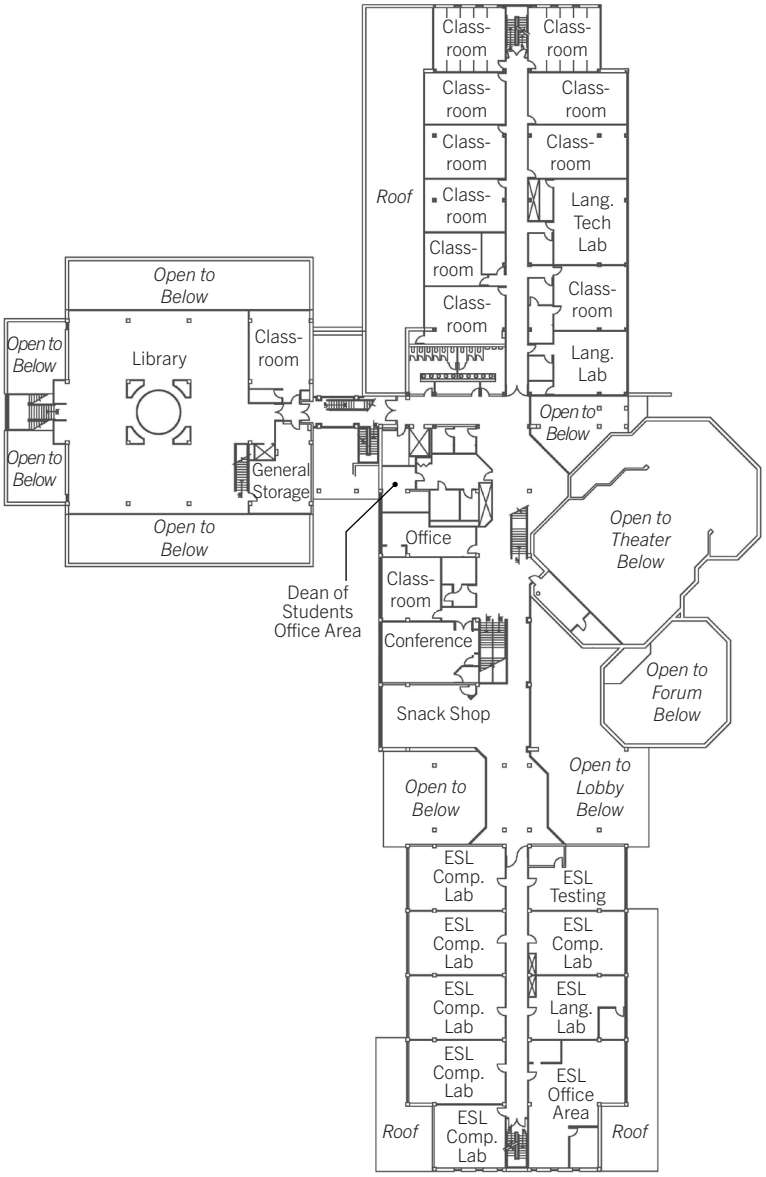
WEST CAMPUS
SECOND FLOOR PLAN



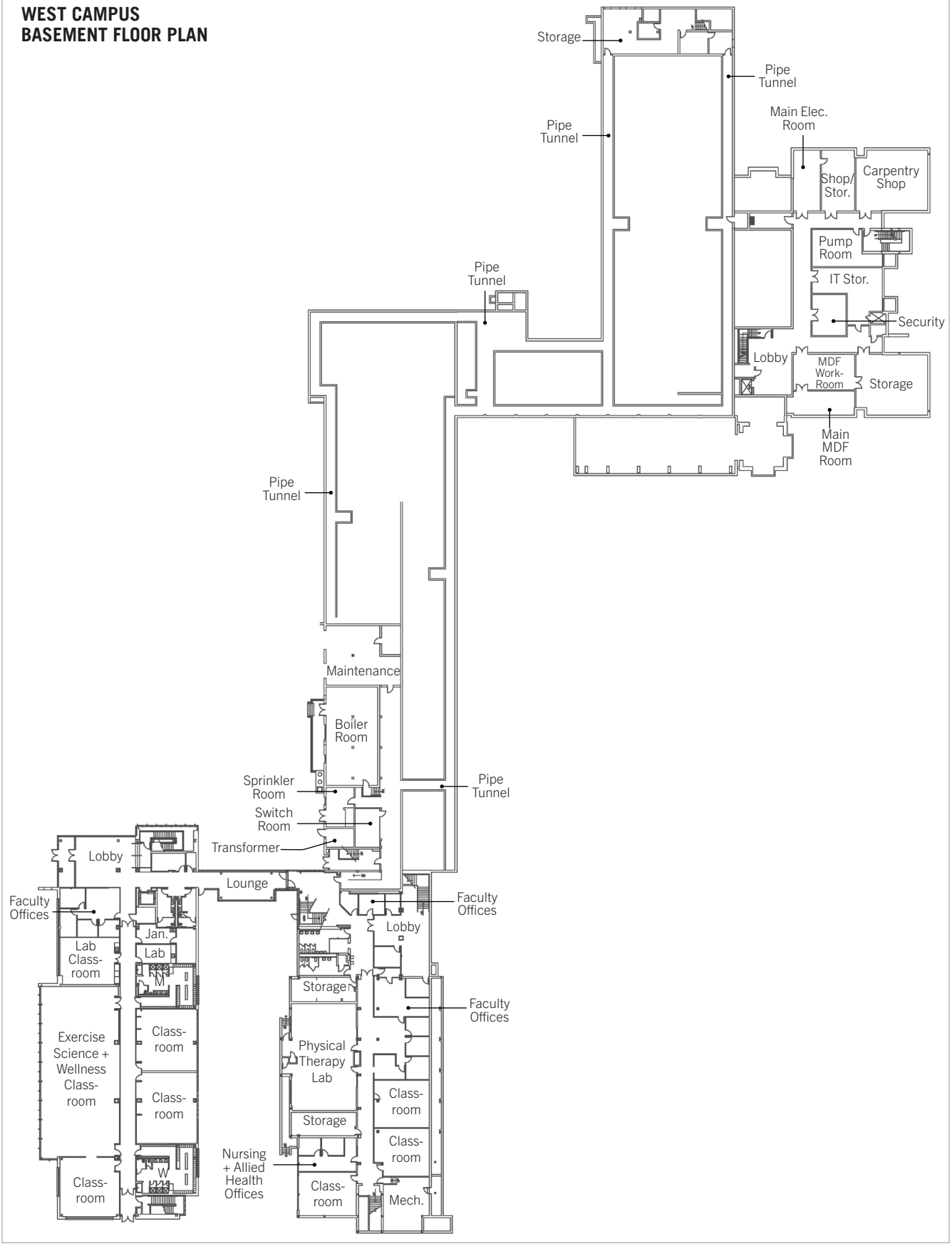
D WING MEZZANINE

* FO : Faculty Offices

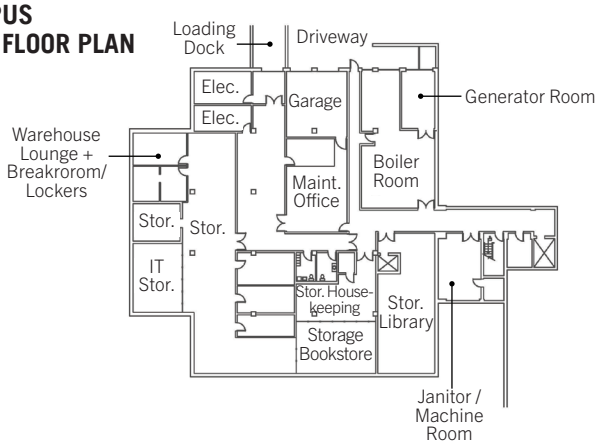
EAST CAMPUS
SECOND FLOOR PLAN



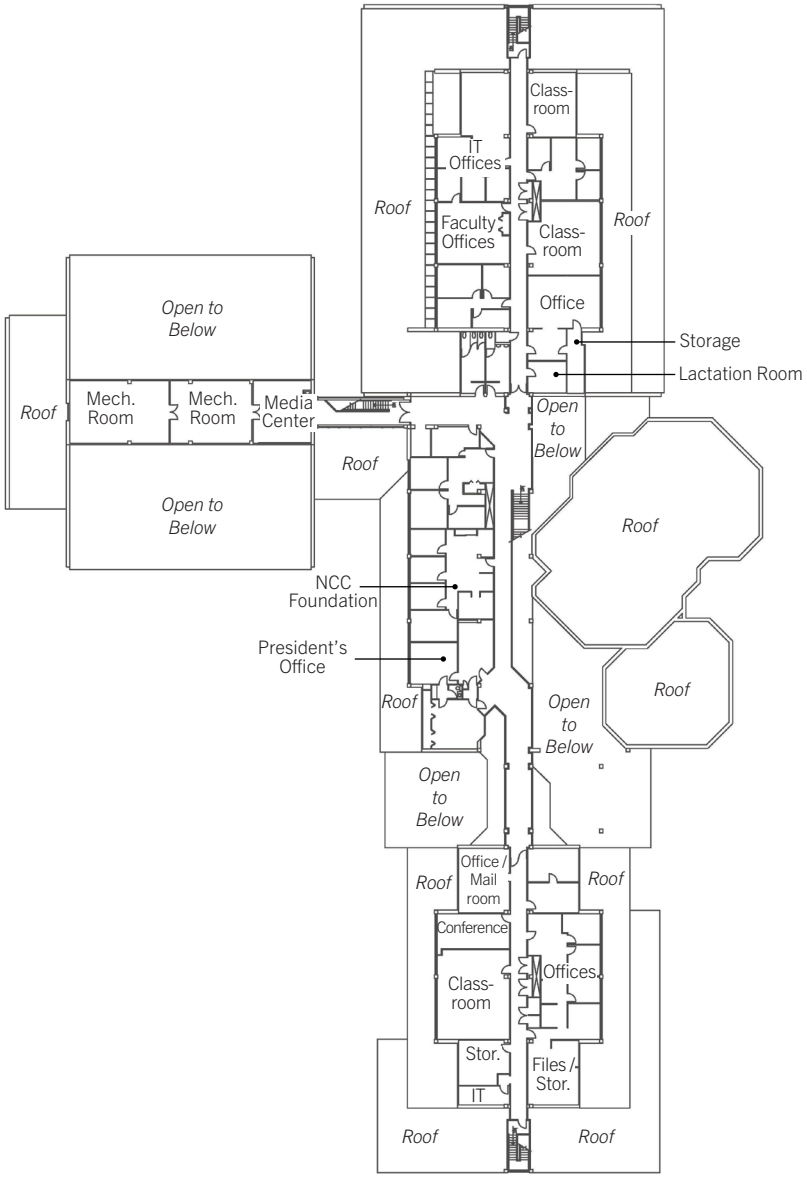
WEST CAMPUS
BASEMENT FLOOR PLAN



EAST CAMPUS
BASEMENT FLOOR PLAN



EAST CAMPUS
THIRD FLOOR PLAN



0' 16' 32' 64' 100'

CIRCULATION AND ACCESS

The site plan diagram on the opposite page illustrates the interior circulation on the first floor of the complex. The second floor circulation is similar. The East Campus is clearly organized with a strong North-South circulation spine on the first, second and third levels. The Library acts as a major cross axis.

The interior circulation system on the West Campus is more complex and attenuated. For efficiency, most corridors are double-loaded. As a result, there are many halls without views to the outside, as in the photo below of the B Wing. Glazed areas that connect wings do often provide visual relief and an opportunity for orientation as shown at right.

The key gap, illustrated in the site plan, is the lack of an interior connection between East and West Campuses. The outdoor walk from the CIT entry to the East Campus entry is inconvenient, especially in inclement weather. Connecting the building circulation systems with a pedestrian bridge has been a goal of previous master plans.



View of Lounge Area between H + D Wings on West Campus



View of Students Circulating Between Both Campuses



View of West Campus B Wing Hallway



View the Crosswalk Between Both Campuses

KEY

- Interior Horizontal Circulation
- Interior Vertical Circulation
- Main Entry
- Secondary Entry
- Exit Only
- Security Desk
- West to East Campus Circulation

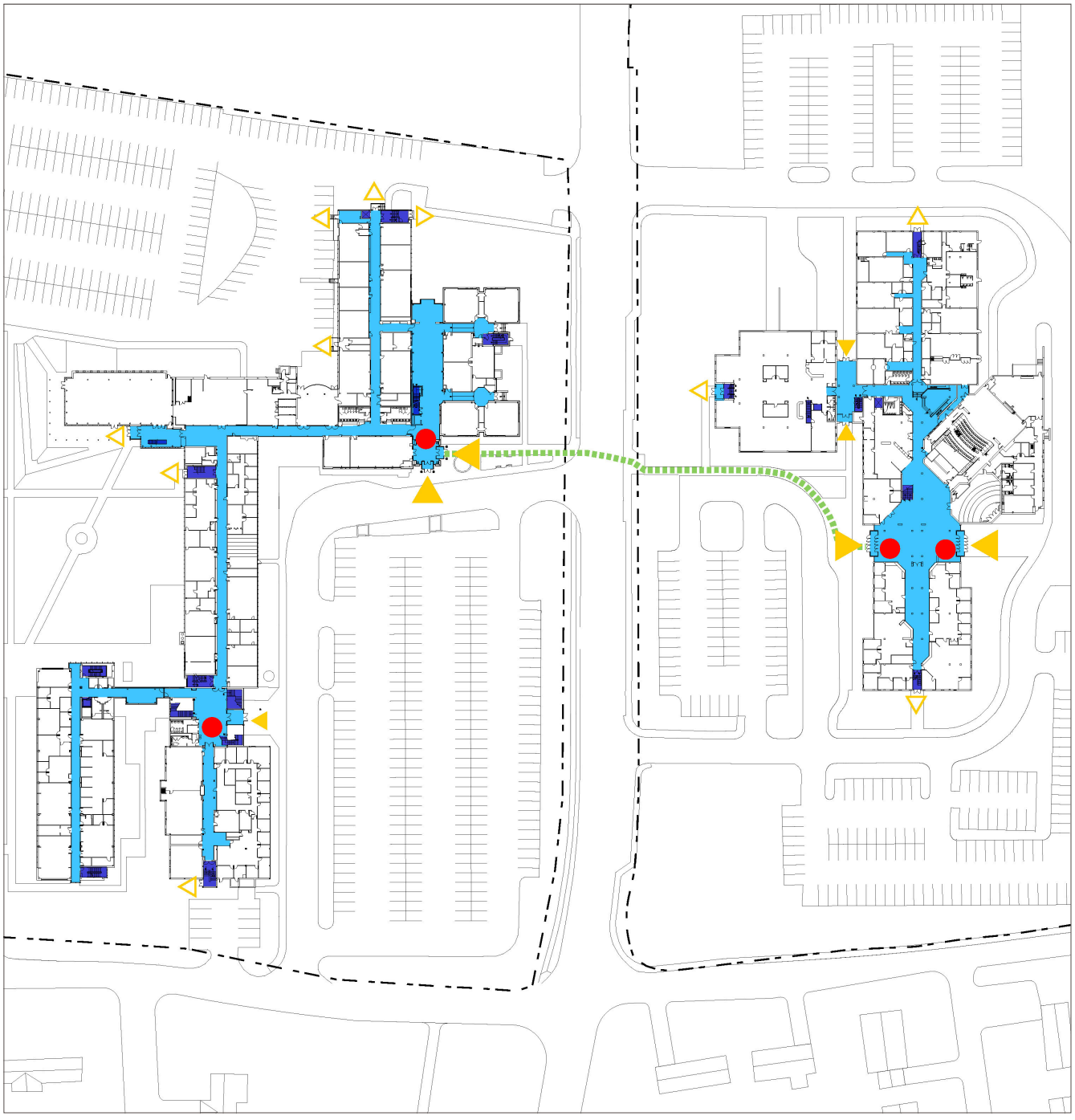


FIGURE 02.15 Interior Circulation and Entry /Exit Points

ARCHITECTURAL CHARACTER

NCC's buildings reflect an eclectic range of styles. All the buildings have red brick exteriors. This helps to visually connect these buildings, even though their individual style varies.

The East Campus is a three-part ensemble of brick buildings, each with broadly sloping roofs that step up in complex tiered levels. The appearance of these buildings is somewhat tired, especially given some exterior condition issues.

The West Campus has both older and newer buildings. The B Wing, the oldest on campus and built for the earlier technical college, is a modernist building with a gridded curtain wall. The D Wing's cast concrete exterior has the appearance of limestone, with sparse use of windows. The newer buildings, the CIT and H Wing, set the standard for good contemporary architecture on the campus. The banded brick walls, metal panel gables and sloped roofs convey a collegiate appearance in forward-looking language. The H Wing's dramatic cantilevered north end provides a transparent, welcoming entrance on this side and it attractively frames the quad.



Exterior View of the CIT Building



Exterior View of the West Campus H Wing



Exterior View of the East Campus B Wing



Exterior View of West Campus B Wing

BUILDING CONDITION

The condition of NCC's buildings varies greatly, reflecting the fact that some have not been significantly renovated since they were built decades ago, and others are relatively new. The campus site plan below illustrates how the Library (East Campus C Wing) and West Campus B Wing are in poor condition. These represent 24% of total campus area. The West Campus CIT, A and H Wings are in good condition (35% of the total). The balance of facilities are in fair condition (41%).

The color coded matrix reflects the condition for individual building components and systems, as assessed by NCC facility staff.

CODE CONSIDERATIONS

In 2017, NCC commissioned an ADA study which identified accessibility issues and order-of-magnitude budgets to bring the facilities into compliance. The total projected cost was $818,000 for the East Campus and $1,150,000 for the West Campus. General issues on both campuses included exterior curbs and ramps in select areas, outdated restroom layouts that require more clearance for wheelchairs in some areas, door clearances in certain places, and the need for Braille signage. In the West Campus, the mezzanine of the D wing does not have elevator access. The H wing has one elevator, but the third floor does not have a secondary accessible route when this elevator is out of service. Some ramps at the CIT and H wings were also noted as exceeding permissible slopes. The planned renovation of the B Wing will address some of these conditions.

In the East Campus, attic level mechanical equipment rooms do not have sufficient clearance around equipment and do not have access other than by removable ladder to an access panel in the upper balcony of an atrium space. Fire alarm coverage in the D Wing and East Campus are not adequate and do not meet current codes. The East Campus switch gear room requires a second means of egress in order to meet current code.

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 / Critical Condition- Needs Investment in 5-10 years
- U-Condition Unknown / Unclear



FIGURE 02.16 Existing Building Conditions

CLASSROOM UTILIZATION

The planning team analyzed the utilization of NCC's general purpose classroom inventory using the fall 2018 course schedule. The findings are summarized on the charts and tables on the following pages.

The College has 55 total general purpose classrooms, used as a shared resource. The majority (69%) are located on West Campus. Most classrooms are in the 33-48 seat range, followed by the 21-32 seat rooms. There is only one large classroom (80 seats – the tiered classroom in B Wing), which is used less than 10 hours per week.

Classrooms are used most heavily Monday through Thursdays, with very low use Fridays and Saturdays. Daytime demand is consistently higher than evening demand.

The average space per seat is 24 SF. This is low relative to current guidelines and represents rooms with row seating and less flexibility for a range of different layouts to support different teaching methodologies. 28 SF on average is recommended.

The scatter chart reflects the average hours per week and seat fill rate for each general purpose classroom. Typically, 30 hours per week or higher is a good utilization rate and 60% or more is a good fill rate. NCC's classrooms have consistently high fill rates, however few are used more than 30 hours per week. This suggests that the mix of classroom types should be reassessed. NCC may need fewer classrooms, but ones with more seats on average.

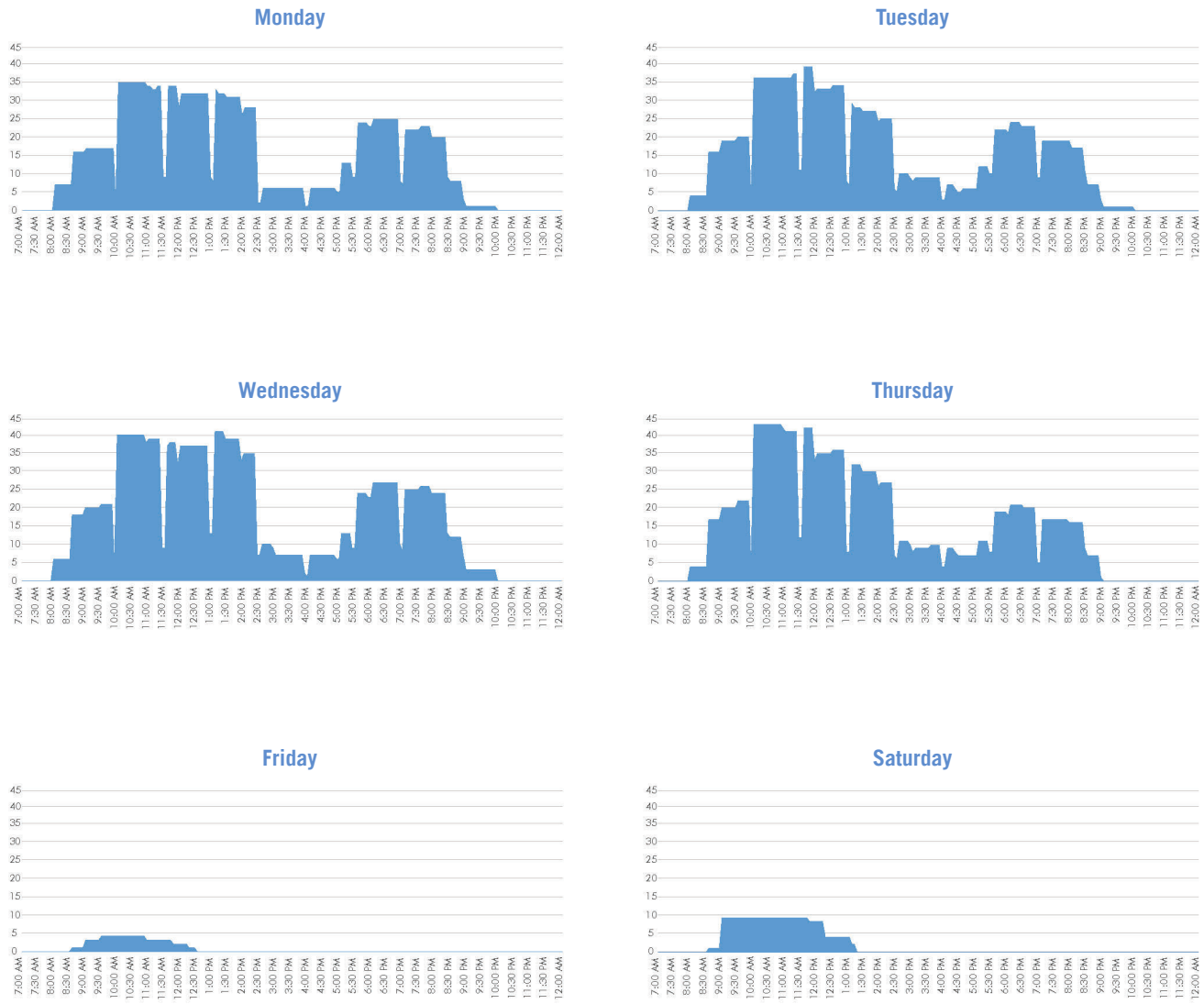


FIGURE 02.17 Classroom Utilization Summary: Rooms in Use by Day and Time

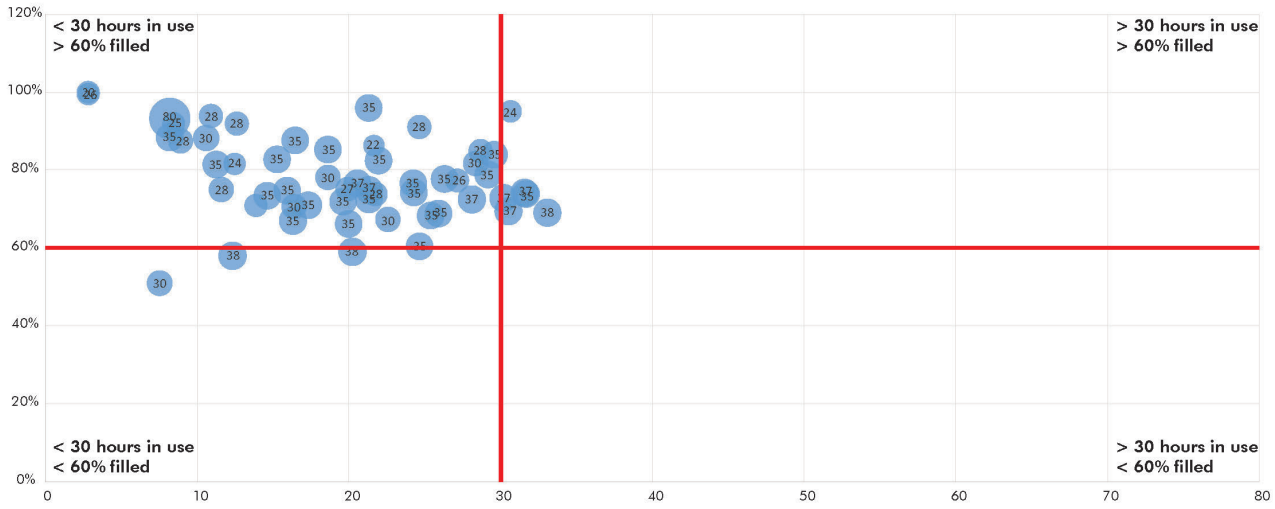
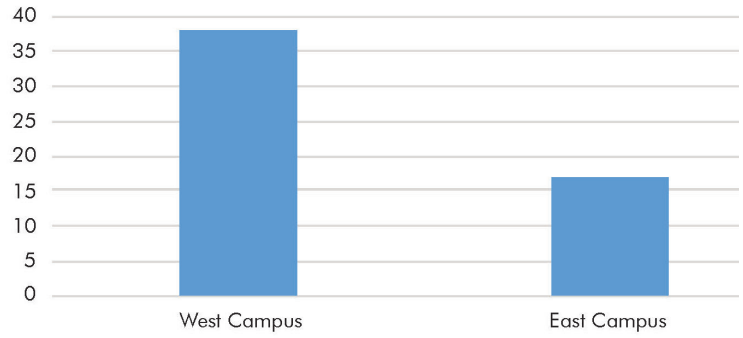


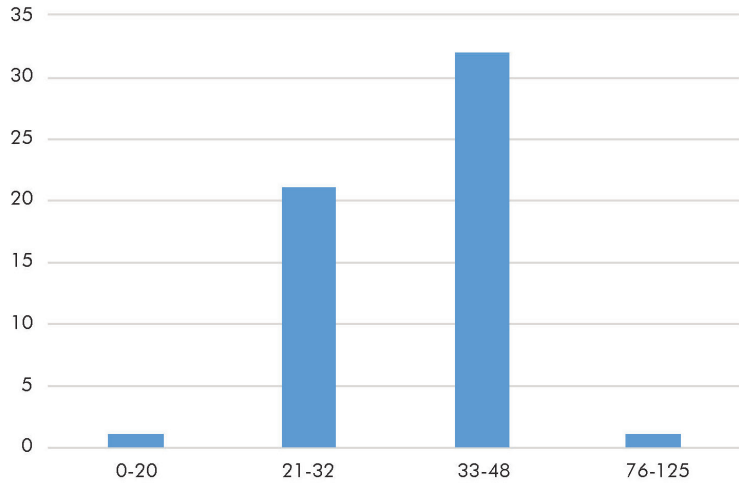
FIGURE 02.18 Utilization Hours in Use Versus Rate by Room

NUMBER OF CLASSROOMS BY BUILDING



Row Labels	#of Rooms
West Campus	38
East Campus	17
Grand Total	55

NUMBER OF CLASSROOMS BY SIZE



Row Labels	#of Rooms
0-20	1
21-32	21
33-48	32
76-125	1
Grand Total	55

FIGURE 02.19 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
DWEST	38	29,809	1,219	25	32	764	20	77%	10,967
DEAST	17	11,841	596	20	35	316	19	80%	4,995
Grand Total	55	41,650	1,815	24	33	1,080	20	78%	15,962

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	1	376	20	19	20	3	3	100%	58
21-32	21	16,152	574	29	27	361	17	82%	4,907
33-48	32	23,376	1,141	20	36	708	22	75%	10,650
76-125	1	1,746	80	22	80	8	8	93%	347
Grand Total	39	41,650	1,815	24	33	1,080	20	78%	15,962

FIGURE 02.20 Classroom Utilization



KEY

Classrooms Other Instructional Spaces

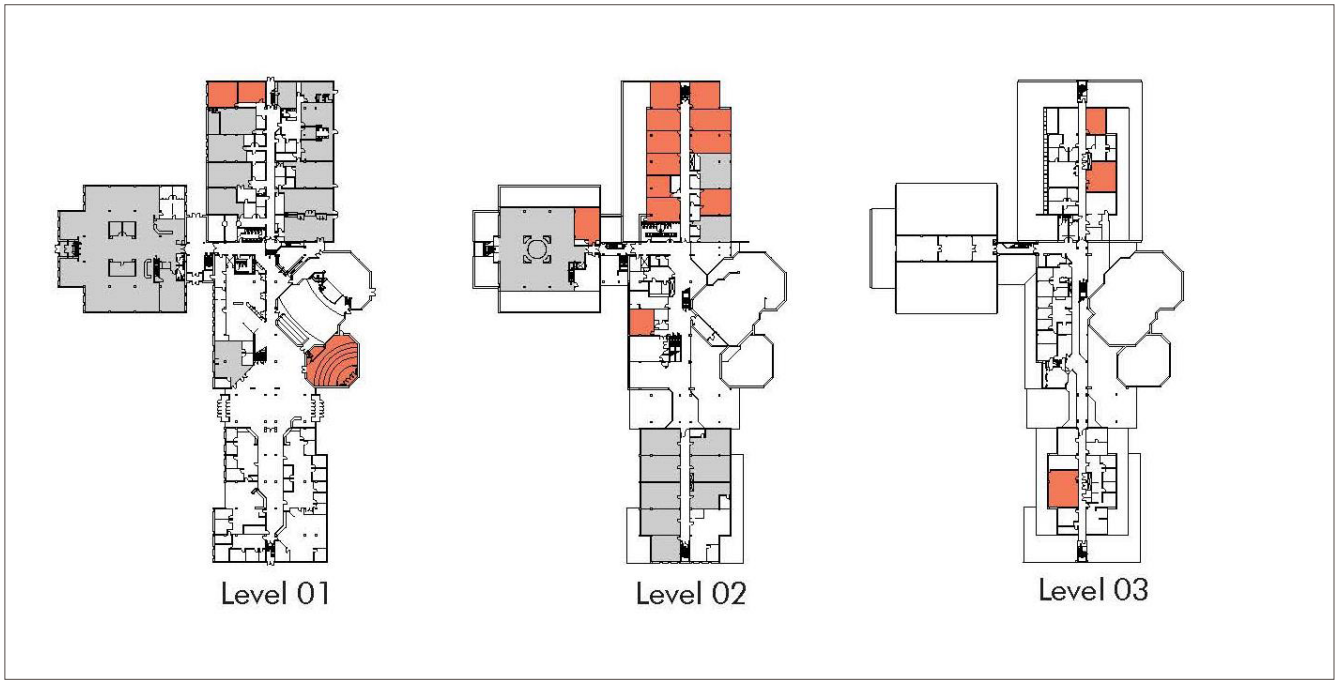


FIGURE 02.21 East Campus Classroom Distribution

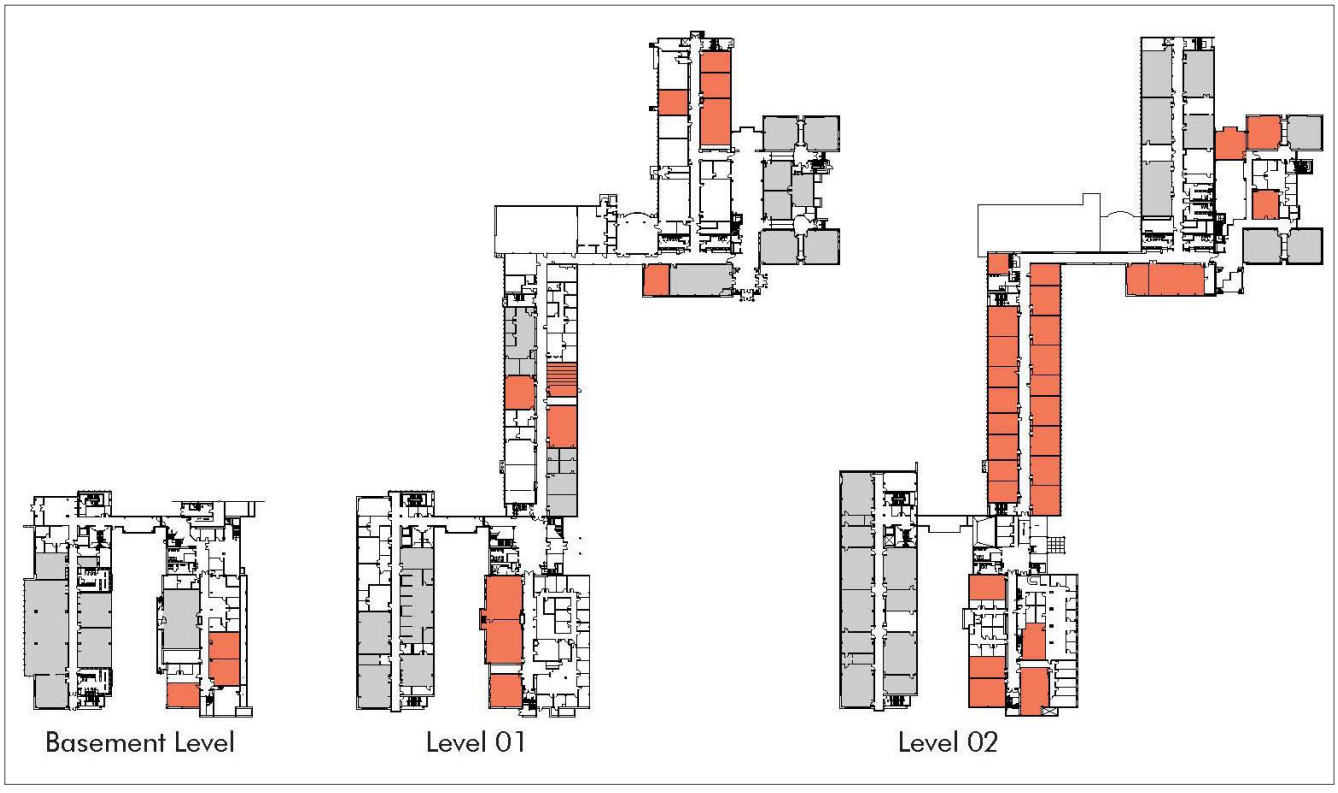


FIGURE 02.22 West Campus Classroom Distribution

ENERGY AND INFRASTRUCTURE

HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS

Heating

There are (2) heating plants on campus, one on east and one west, serving their respective campuses. Both plants have dual fuel boilers, although East campus boilers are hot water while the West campus boilers generate steam.

Air Conditioning

All buildings on campus are air-conditioned. There is no central utilities plant. A combination of packaged rooftop air conditioning units (RTU) and chillers, depending on the building, provide cooling to the buildings. East campus and Building H on West campus have air-cooled chillers, and Building D on West campus has a water-cooled chiller. All other buildings have RTU's.

Ventilation

Ventilation air for the buildings is introduced through air handling systems.

East Campus:
- (2) 400 ton Air Cooled Chiller (100% Redundancy)
- (2) 2500 MBH Boilers (100% Redundancy)

West Campus:
- (4) Steam Boilers 2500 MBH Steam Boilers
- (1) 150 ton Water Cooled Chiller in D Wing
- (1) 250 ton Air Cooled Chiller on H Wing

Electrical Systems Overview

- Lighting is mostly fluorescent & HID for parking lots.
- Upgrading to LED lighting is recommended.
- Building Electrical System needs to undergo an NFPA 70E (Short Circuit and Arc Flash) study.

East Campus:
- 2000 Amp, 277/480V, 3 Phase Service
- 350 KW Generator
- Automatic Transfer Switch, ATS-1 is located at Generator Room, is rated 150A @480V/3PH. ATS-2 is rated at 260A, 480V/3PH. ATS-2 is located at boiler room and is dedicated for Mechanical equipment, Jockey pump, compressors.

West Campus:
- CIT: 3000 Amp, 277/480V, 3 Phase Service which back feeds original B Wing Service
- H wing: 1600 Amp, 277/480V, 3 Phase Service
- B Wing: Switchgear is located at basement level. It is back fed from CIT building via 500KVA transformer. Switchgear is rated 1600A @ 208V, 3PH, 4W.
- CIT + A Wing do not have any emergency power
- B Wing: is provided with 35kW generator for life safety loads.
- H Wing: is equipped with 150kW generator for life safety loads.



East Campus Chiller



West Campus Switchgear

Plumbing Systems Overview

- Booster Domestic Water Booster Pumps for both East and West Campus
- The buildings domestic water, sanitary and storm drain sewers are served by the local municipality.
- Both East & West Campus have natural gas distribution from the local utility.
- B wing kitchen uses propane for cooking.
- Multiple electric water heaters located throughout campus.



East Campus Domestic Water Booster Pump

Fire Protection Systems Overview

- All incoming fire protection water services are equipped with a backflow preventers.
- All buildings are provided throughout with sprinkler except for B Wing entry.
- Booster pumps are provided on both East (electrical driven) and West (diesel driven) campus.



West Campus Diesel Booster Pump

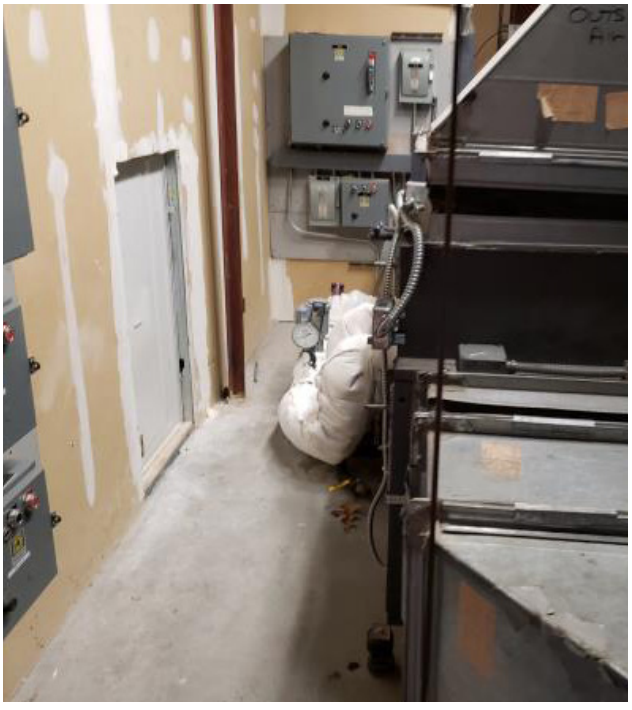
Key Considerations

- Fire alarm coverage in D Wing and East Campus are not adequate and do not meet current code.
- The current switchgear room on East Campus is not code compliant as it does not have a second means of egress.
- East campus attic mechanical rooms do not proper clearance space for service and maintenance of air handling units.

(Refer to the Technical Appendix for additional Energy and Infrastructure information)



Site Plan: East Campus Mechanical Room Locations



Existing Conditions in Mechanical Rooms

STUDENT ENGAGEMENT

To get a better understanding of campus opportunities and constraints from students' perspective, the planning team hosted a workshop with students from the SGA and other campus organizations. 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 Norwalk Community College.

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 and on the following page.

WORKSHOP EXERCISE #1

Existing Site Plan



Ground Floor Plan



KEY

Places that need improvement

Favorite places

WORKSHOP EXERCISE #1 TAKEAWAYS

Places that Need Improvement:

- "Wood Chip" Parking Lot
- B- Wing
- Bus Stop Area
- CIT Front Lawn
- Theater
- CIT Building Lobby
- A- Wing Computer Lab + Culinary Kitchen
- West Campus Cafeteria
- C-Wing Library
- West Campus B- Wing Student Activites Space
- East Campus Snack Shop

Favorite Places:

- H- Wing
- Courtyard between Wings H+D
- Front Lawn of C-Wing / Library
- West Campus Cafeteria
- H- Wing Student Lounge
- West Campus B- Wing Student Activities Space
- West Campus B- Wing Learning Commons Study Space
- West A- Wing Maker Space
- West Campus Cafeteria



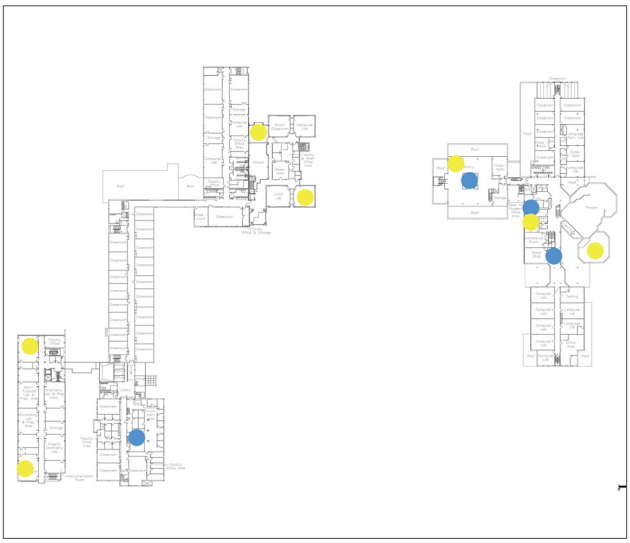


WORKSHOP EXERCISE #2

Ground Floor Plan



Second Floor Plan



KEY

Places you like to study

Favorite learning spaces

WORKSHOP EXERCISE #2 TAKEAWAYS

Favorite Places to Study:

- Cafeteria
- Study Rooms in Learning Commons
- Tutoring Classrooms + Writing Center
- H- Wing Student Lounge
- C- Wing / Library
- East A- Wing Computer Labs
- East B- Wing Open Area by Snack Shop
- D- Wing Academic Enrichment Study Area

Favorite Learning Spaces:

- East B- Wing Forum
- West A- Wing Maker Space
- West B- Wing Learning Commons
- C- Wing / Library
- CIT Building Classrooms + Computer Labs
- H- Wing Physics Lab + Biology Classrooms

OPPORTUNITY SITES

Assessing opportunity areas for potential expansion, the consultant team considered both the campus and NCC's larger service area.

President Levinson noted that there may be a significant number of potential NCC students in the Stamford area who are now not able to access the main Norwalk Campus. Assessing a potential satellite facility in Stamford is recommended. This would be a leased facility. Site selection was not part of the scope for this Master Plan Update. The JM Wright Technical High School may be a suitable host site. See Recommendations for additional information.

NCC's East and West Campuses appear fairly built out. Additional development capacity remains, however. Some open space, including parking areas, adjacent to existing buildings are suitable for additions. These zones where additions could be considered are illustrated on the opposite page. Sites that are removed from the current buildings were not considered appropriate for new development since they would be disconnected and not as efficient or integrated. In general, compact development is preferred, for sustainability to avoid sprawl and to promote connectivity and community. For development areas that displace parking, replacement parking spaces must be included as part of the project.



Aerial View over NCC

KEY

- Construction Pending
- Opportunity Area for Building Development
- Satellite Facility
- Opportunity Area for Pedestrian Bridge



FIGURE 02.23 Opportunity Sites Diagram


NCC



3 SPACE NEEDS

INTRODUCTION

ASSESSMENT METHODOLOGY
- STANDARDS
- CLASSROOM ANALYSIS

ENROLLMENT PROJECTIONS

CONVERSION TO STUDENT FTE PROJECTIONS
- CREDIT & NON-CREDIT ENROLLMENT PROJECTIONS
- SPACE DISTRIBUTION BY COMPONENT

OVERALL ASSESSMENT

DISTRIBUTION OF SPACE ACROSS THE TWO MAJOR CATEGORIES: ACADEMIC & SUPPORT

ACADEMIC SPACE ASSESSMENT
- CLASSROOMS
- COMPUTER LABS
- ACADEMIC ENRICHMENT + FIRST YEAR EXPERIENCE
- ART, ARCHITECTURE + DESIGN
- BUSINESS
- COMPUTER SCIENCE
- ENGLISH
- ENGLISH AS A SECOND LANGUAGE
- HUMANITIES
- MATHEMATICS + ENGINEERING
- NURSING AND ALLIED HEALTH
- SCIENCE
- SOCIAL AND BEHAVIORAL SCIENCES

SUPPORT SPACE ASSESSMENT
- ACADEMIC SUPPORT
- ADMINISTRATIVE SERVICES
- ASSEMBLY & EXHIBITION
- CAMPUS SERVICES
- CHILDCARE CENTER
- CONTINUING EDUCATION & WORK FORCE DEVELOPMENT
- LIBRARY
- STUDENT ACTIVITIES
- STUDENT SERVICES
- TECHNOLOGY

A POTENTIAL STAMFORD CAMPUS

CONCLUSIONS
- REVISED BENCHMARKING
- SPACE ASSESSMENT

PARKING NEEDS

SUMMARY

INTRODUCTION

This section covers the space need assessment (SNA) for the Norwalk 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, Norwalk Community College occupies slightly more than 217,155 Assignable Square Feet (ASF), representing approximately 345,000 Gross Square Feet (GSF) across two campuses and eight wings.

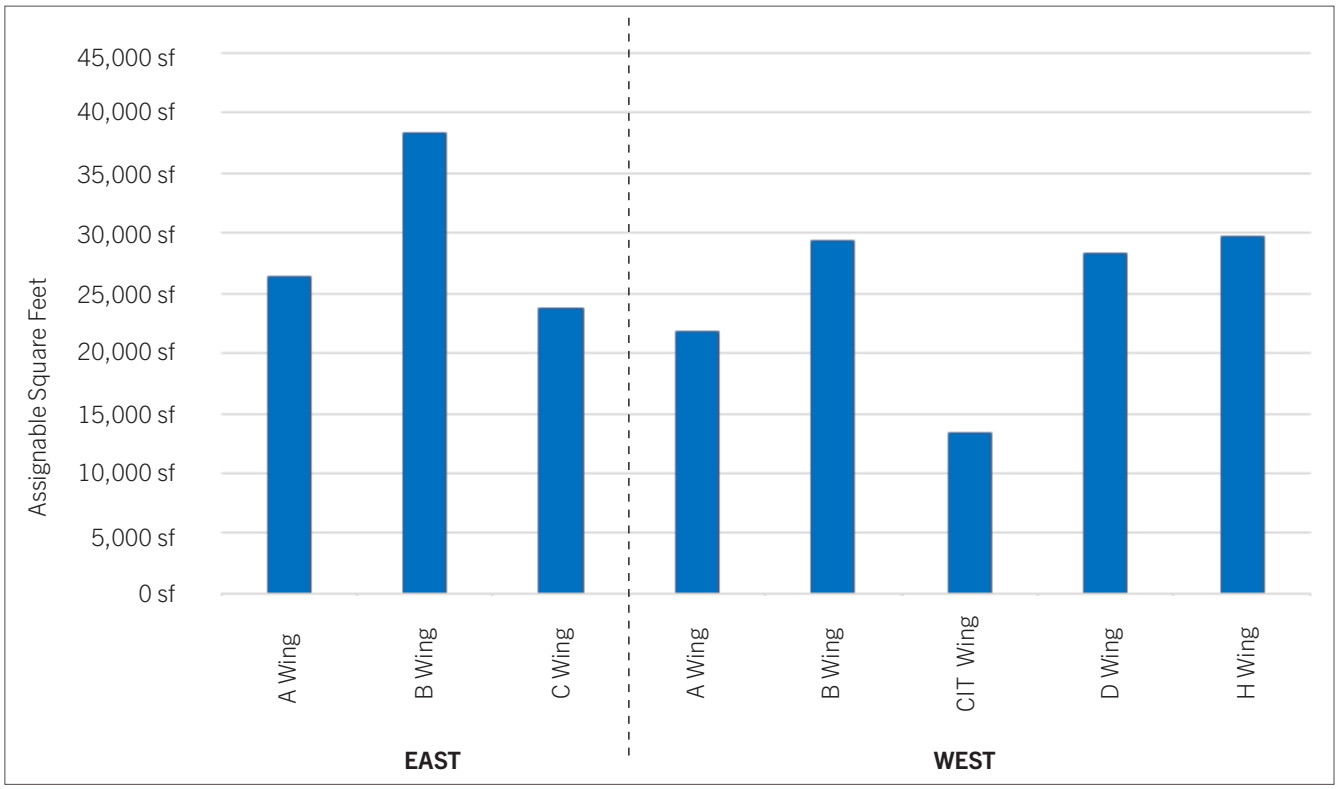


FIGURE 03.1 Existing Assignable Square Feet by Campus & Building

ASSESSMENT METHODOLOGY

While most space assessments function much as a "square footage cost estimate" does, the assessment for Norwalk 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, NCC 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 both for 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 clusters, rather than individual or departmental majors.



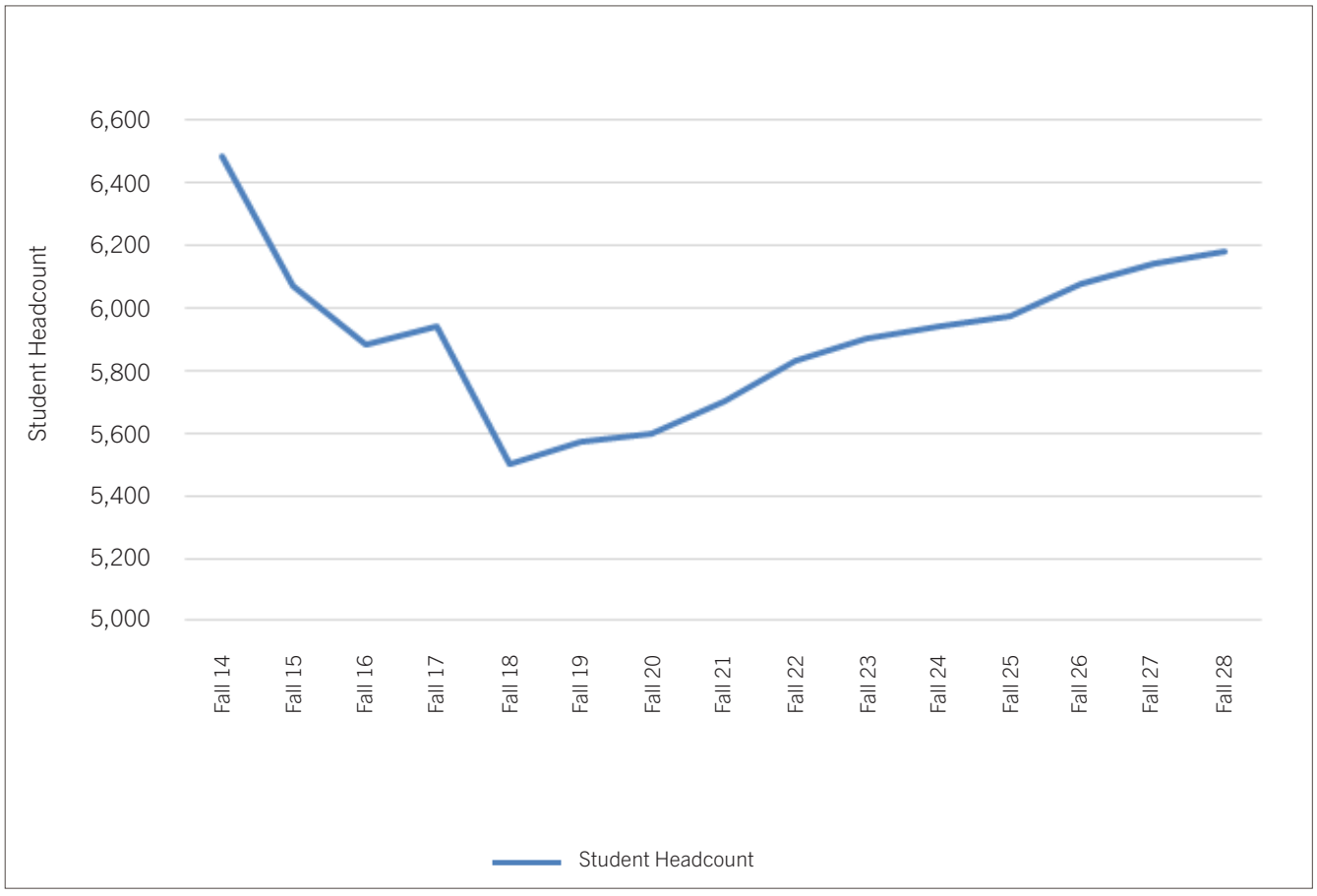


FIGURE 03.2 Credit Enrollment Projecttions in Student Headcount

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 9.00—will remain constant over this time frame, resulting in a projected student FTE growth equal to the projected student headcount enrollment.



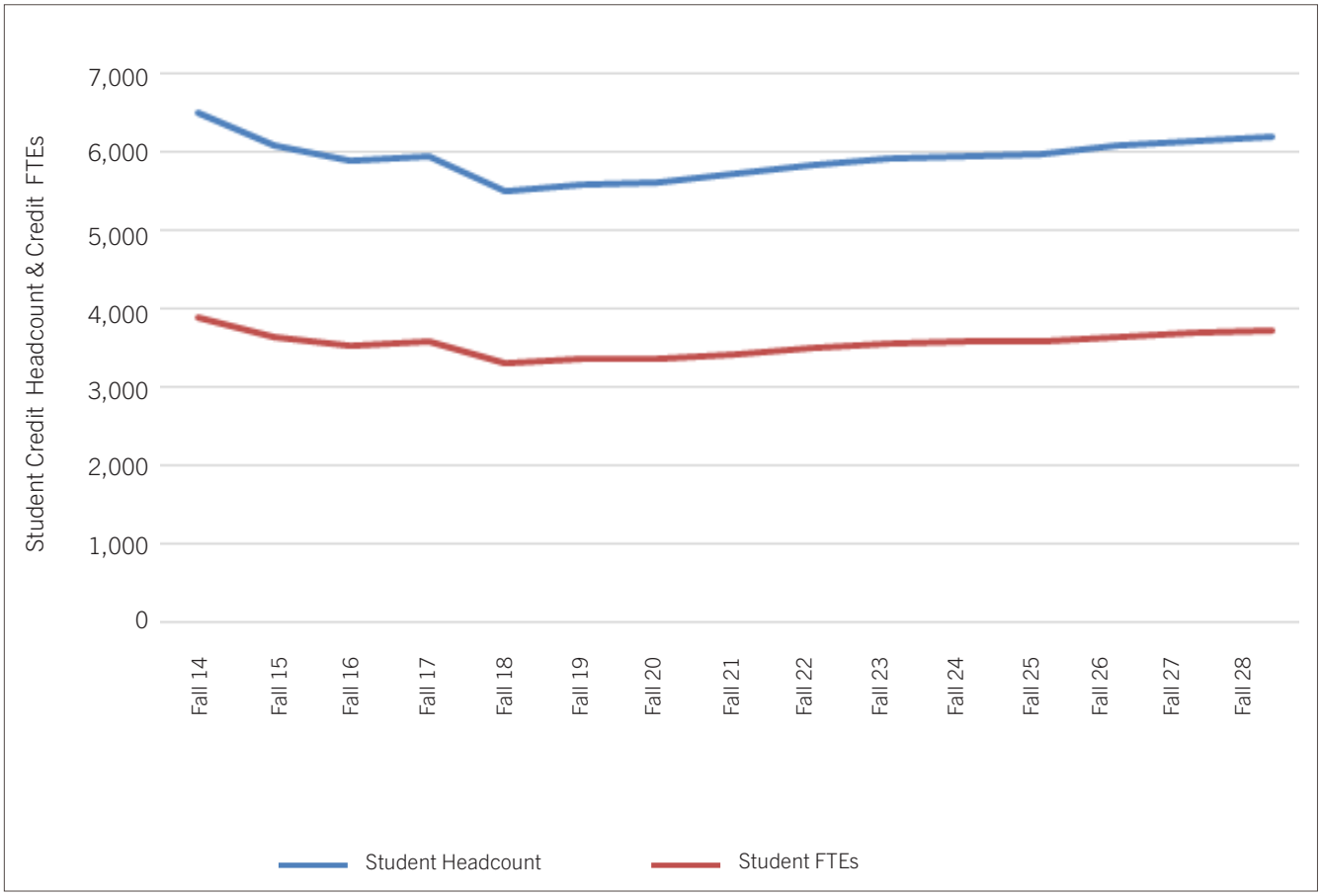


FIGURE 03.3 Credit Enrollment Projections in Student Headcount and Credit FTEs

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 chart below illustrates the projected FTE enrollment by discipline. The chart is sorted by total student FTEs, with the largest discipline, Mathematics, at the bottom. Mathematics, English, Biology, Art, Psychology, Sociology, and History represent 50% of all credit instruction at the College. The 18 disciplines identified represent 80% of all credit FTEs. The remaining 27 disciplines not individually identified represent the remaining 20%.



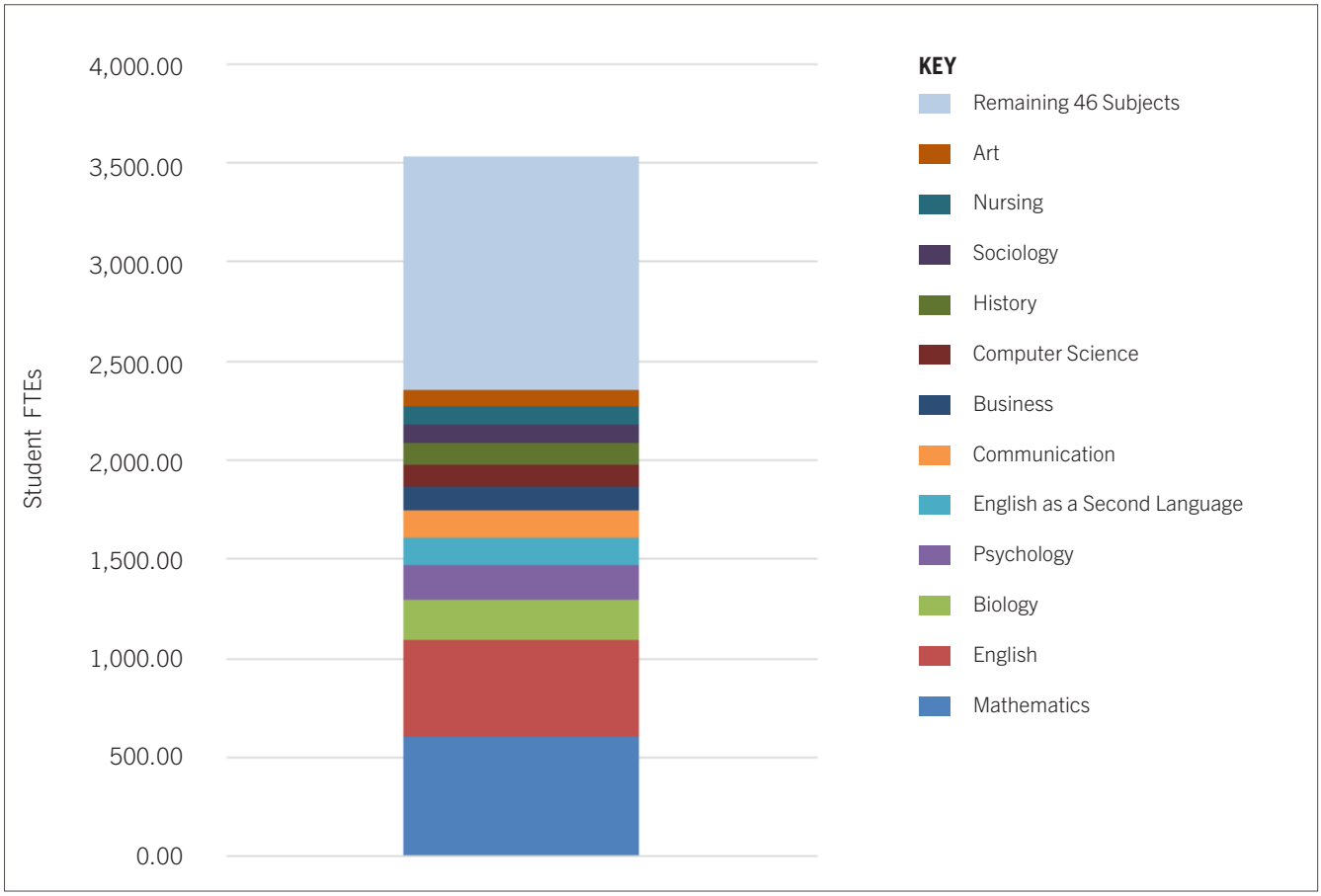


FIGURE 03.4 Fall 2018 Student FTEs by Discipline

CREDIT & NON-CREDIT ENROLLMENT PROJECTIONS

The Master Plan Team also provided student headcount projections for the Non-Credit components of the College. The following chart illustrates the proposed non-credit enrollment along with the credit projections. Because non-credit may not occur on-campus or represent only a single session or meeting, the chart does inflate the relative importance of the non-credit. Typically, when measured in weekly student contact hours, non-credit and workforce development, headcounts generates approximately 5 to 6% of the activity of the credit student. So, while the chart illustrates that the non-credit headcount is modest, the actual impact on facilities is even less.



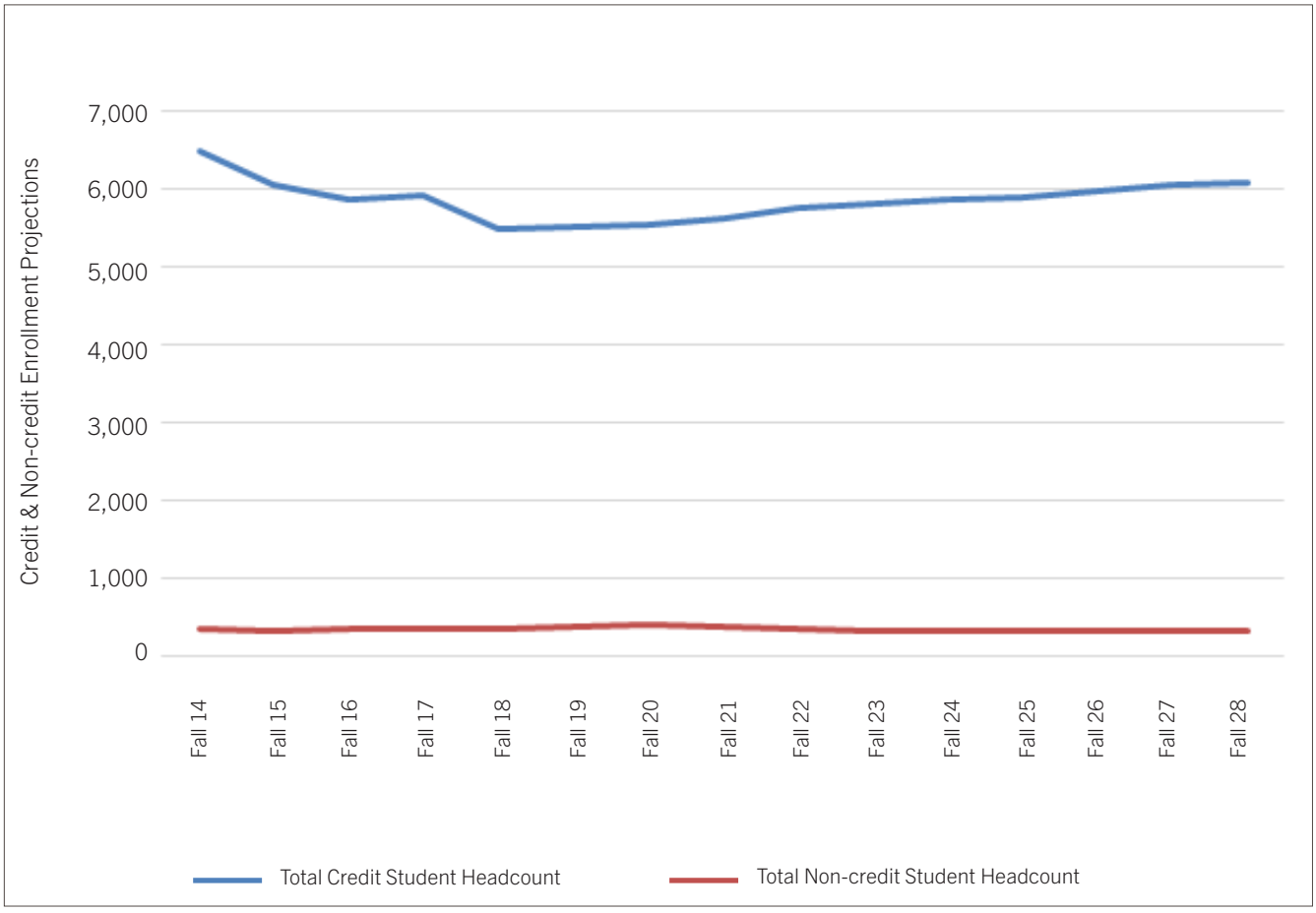
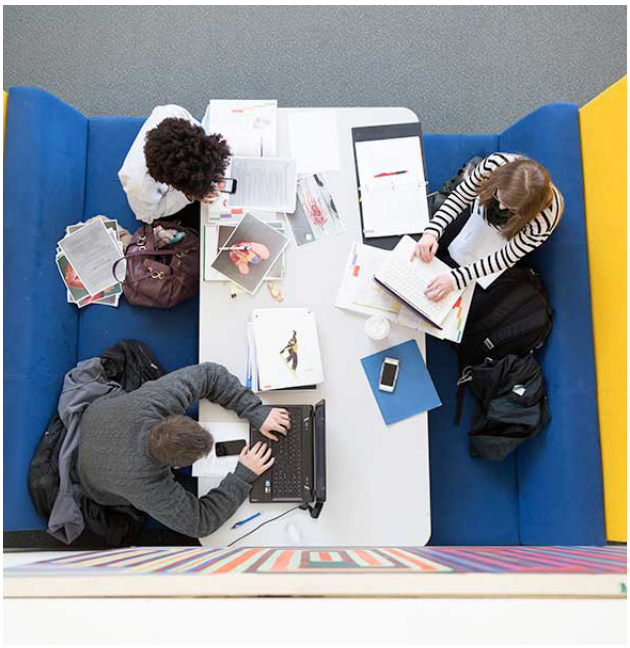


FIGURE 03.5 Credit & Non Credit Enrollment Projections

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, then the academic departments. The most significant components in the inventory are the Classrooms, the Computer Labs, the Nursing & Allied Health Department, the Science Department, the Library, the Student Activities, and Student Services.



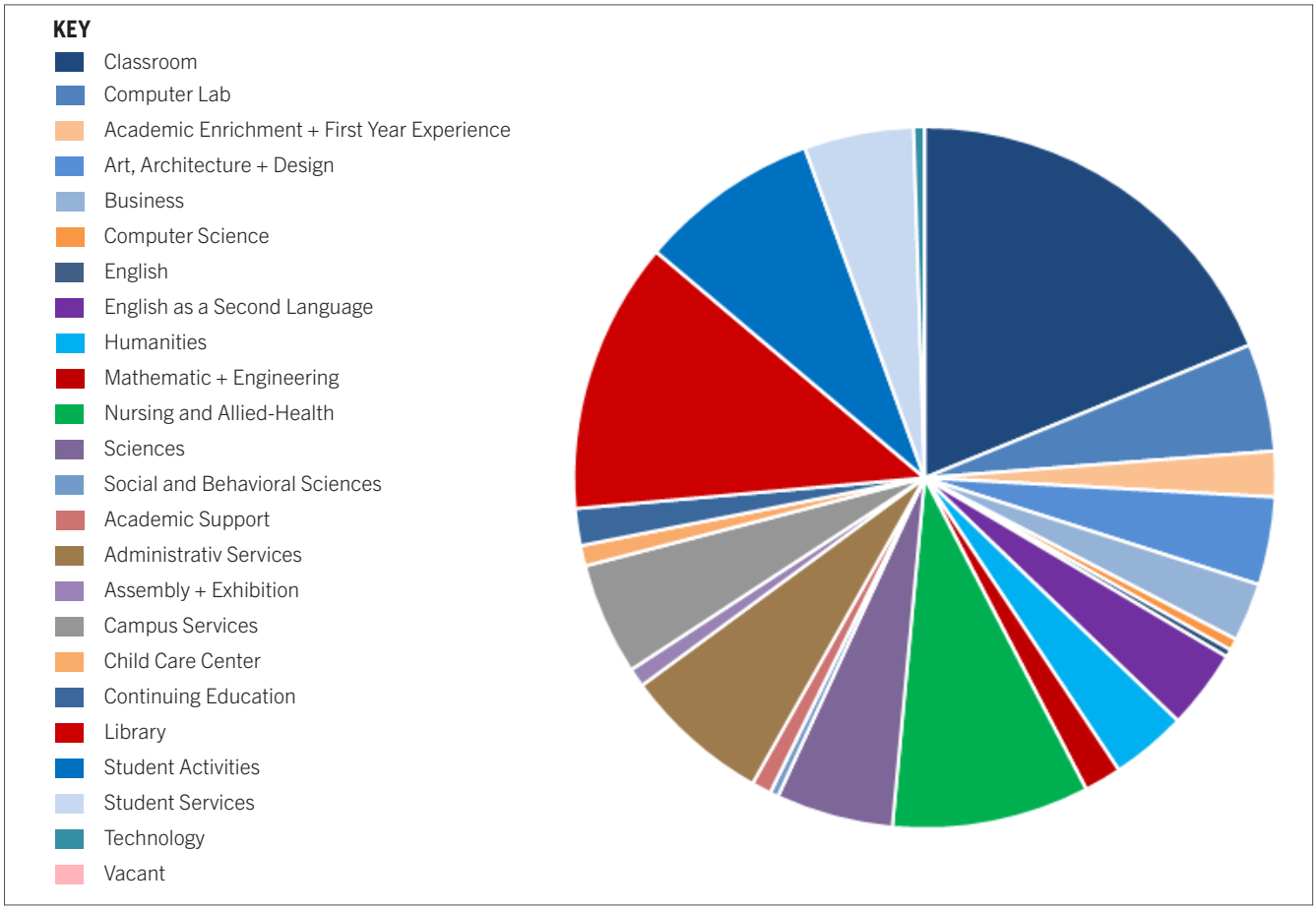


FIGURE 03.6 Fall 2018 Current Space Distribution by Component

OVERALL ASSESSMENT

Currently, the College has 65 assignable square feet (ASF) per student FTE. 37 ASF per student FTE is devoted to Academic Space—classrooms, computer labs, teaching labs, and faculty offices. The remainder—25 ASF—is devoted to the Support Space on campus, including the Library, Assembly & Exhibition space, and Student Activities. The 65 ASF currently places NCC at the lowest level for its peer group. Manchester Community College and Naugatuck Community College, the two other community colleges 3,000 plus student FTEs, average 77 ASF per Student FTE. Gateway Community College has an ASF per student FTE of 59. The chart below illustrates the assignable square feet per student FTE, including any middle colleges, across the Connecticut community colleges.



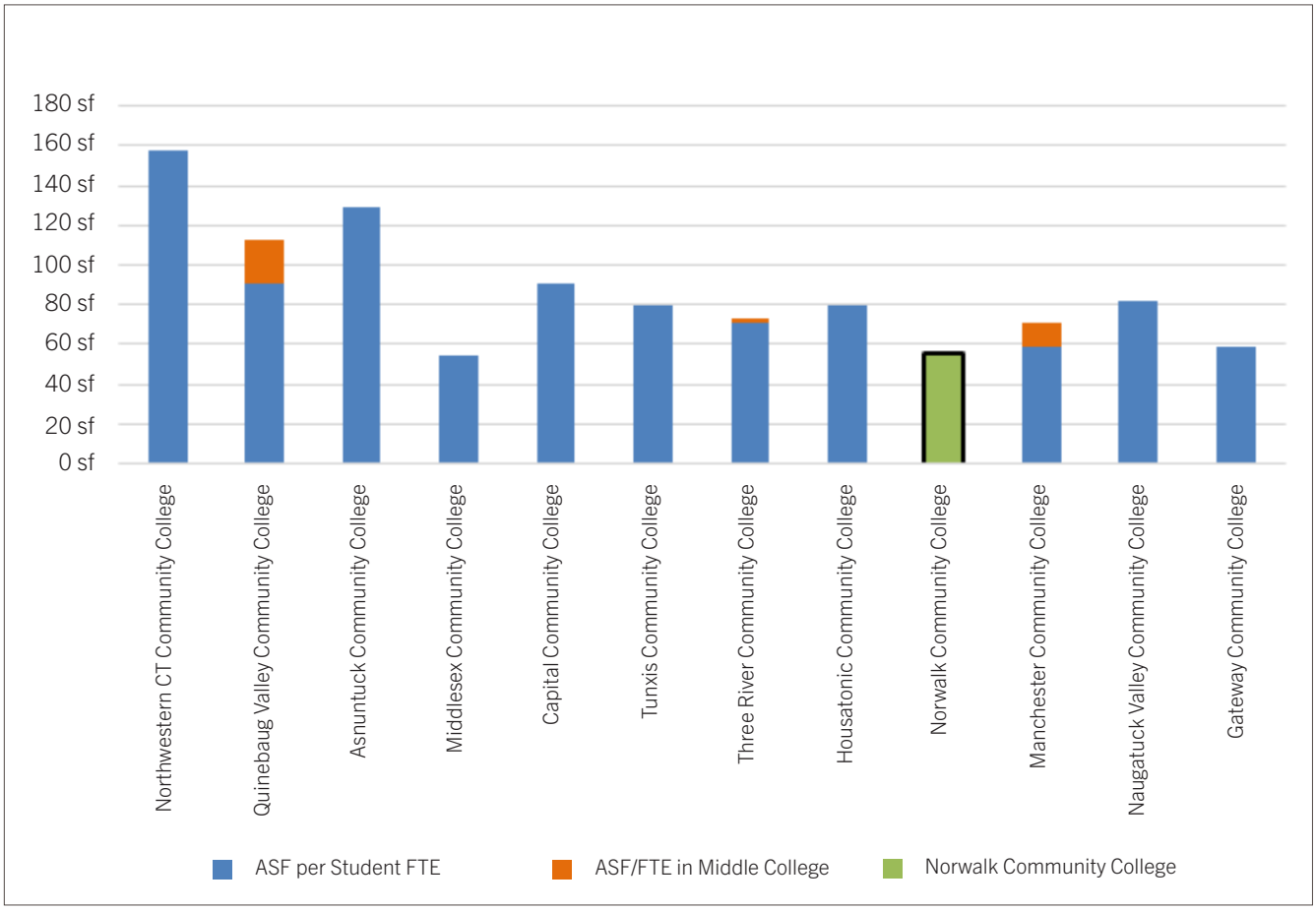


FIGURE 03.7 Benchmarking Across the Connecticut Community College System

Norwalk Community College with roughly 3,350 student FTEs, falls into the upper 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, NCC's space allocation should be higher than Gateway Community College's, though less than Three Rivers'. The following chart shows the Fall 2016 and Fall 2017 student credit enrollment across the twelve community colleges.



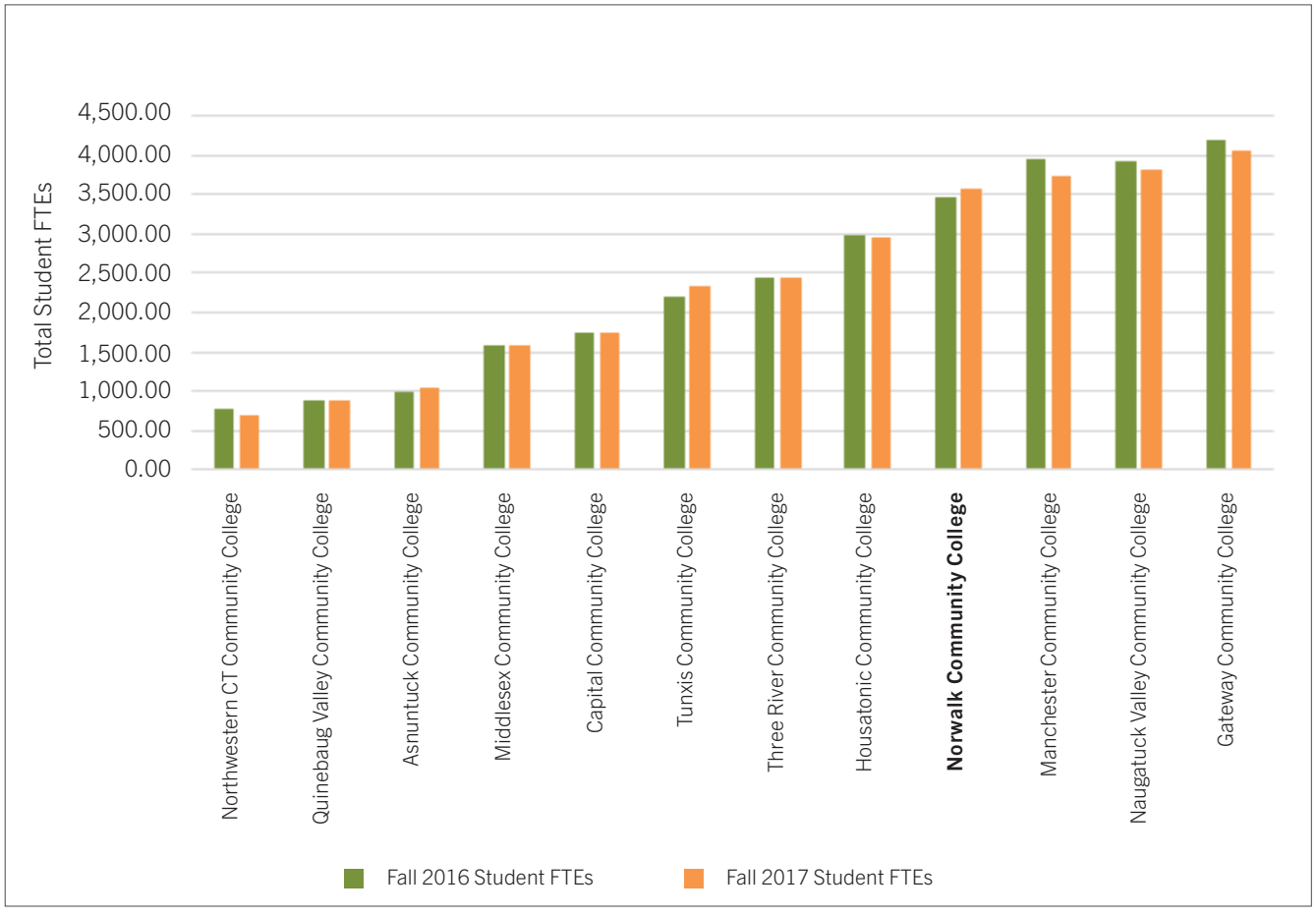


FIGURE 03.8 Fall Over Fall Credit Student FTEs

DISTRIBUTION OF SPACE

ACROSS THE TWO MAJOR CATEGORIES: ACADEMIC & SUPPORT

The following chart represents five of the twelve community colleges. These are the community colleges whose facility inventories have been updated as part of the ongoing master plan process. Both NCC and MCC have a similar amount of space per student FTE, though substantially different in the distribution. Norwalk's Support Space is substantially less than the Academic Space This split typically does not happen at most small community colleges (less than 5,000 FTEs).

The Support Space because of the modest total enrollment and less efficiency typically tends to be much higher than the Academic Space. While there are several pressing issues in the Academic Space –critical bottlenecks that hamper both student recruitment and retention—the most significant deficit for space at Norwalk Community College is in the Support Space. The chart represents the split between Academic Space and Support Space for the five community colleges.



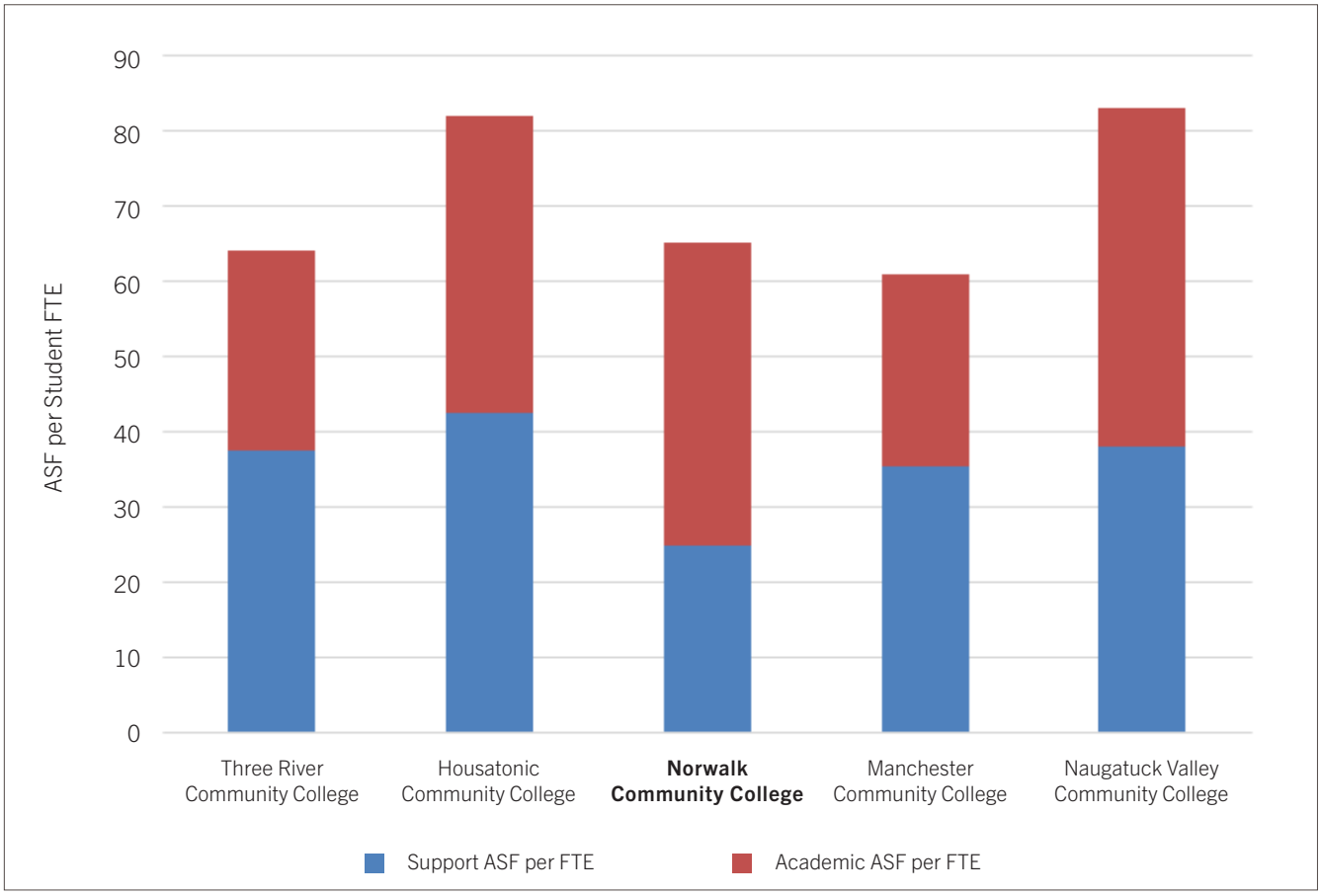


FIGURE 03.9 Assignable Square Feet per FTE by Category

ACADEMIC SPACE ASSESSMENT

The following chart shows the assessment for Academic Space at Norwalk 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
While there is currently a modest surplus of classroom space, the anticipated growth will place the College at a deficit by 2028. This assessment involves several variables, including time utilization and adequate size for both seating and pedagogy. The current utilization analysis alone would suggest a more significant surplus.

Computer Labs
The computer labs, because they do not include the variable of space per station, are currently underutilized. While part of this underutilization will be resolved by enrollment growth, there will remain a modest surplus in 2028.

Academic Enrichment + First Year Experience
Academic Enrichment + First Year Experience needs a modest increase in space. Supporting first year students, the department should be integrated with efforts to expand Academic Support Spaces.

Art, Architecture + Design
The Art, Architecture + Design, located primarily in A Wing, West Campus, requires a modest expansion of studio space to support anticipated enrollment growth within programs supported by the department.

Business
Located on the West Campus in A Wing and D Wing, the focus for the expansion is the Culinary Arts program.

Computer Science
Located in CIT, the Computer Science Department requires a modest expansion to accommodate faculty including adjuncts. The computer labs are assessed separately as a College shared resource.

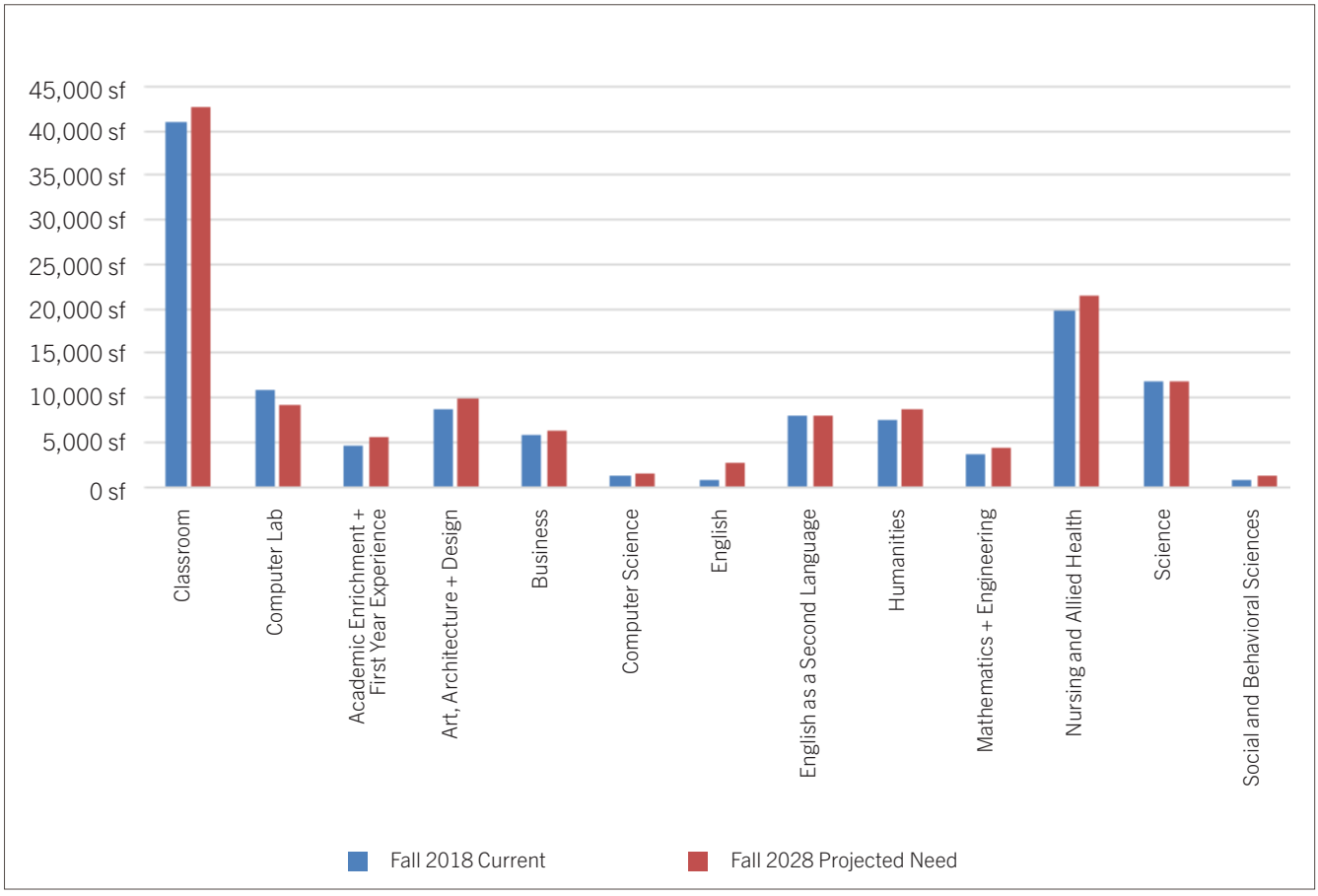


FIGURE 03.10 Academic Space: Current & Projected Need

English
English needs to be substantively expanded to accommodate faculty, both fulltime and adjuncts. The department should remain on the West Campus.

English as a Second Language
The ESL Department is adequate for the anticipated enrollment growth.

Humanities
The vast majority of the Humanities Department is located on the East Campus. Consolidation, along with a modest expansion, is warranted.

Mathematics + Engineering
The largest content area at the College based on student FTEs, Mathematics + Engineering needs to be expanded to provide adequate office space plus teaching facilities.

Nursing and Allied Health
Located in H Wing, the Nursing, and Allied Health requires a modest expansion to accommodate a few functions not anticipated at the time of the new building. Nursing also is integrating a Team-Based Learning (TBL) course, which requires an 81-seat capacity room. TBL rooms are now quite common in most schools of medicine for instructional delivery. This room can be accomplished within the classroom inventory. Alternatively, given that a community college is unlikely to have other departments adopt this pedagogy, the room could be developed as part of the Assembly & Exhibition Space.

Science
Part of the most recent expansion of the College, the Science Department is adequate to support the anticipated enrollment growth.

Social and Behavioral Sciences
With space on both campuses, the Social and Behavioral Sciences should be consolidated and slightly expanded to provide adequate office including adjuncts along with appropriate support space.



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 Learning Commons, are located on the first floor of B Wing. While a current renovation project will include a redesign of the Academic Support programs, the College will need to expand these functions further through new construction.

Administrative Services

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

Assembly & Exhibition

Currently, the assembly facilities at the College are limited to the Founder's Room. This subcategory of Support Space needs to be expanded substantively.

Campus Services

Campus Services is currently located at the basement level of the East Campus. Given the size of the College, the Campus Services are among the most modest in the system. Campus Services is one of several areas contributing to the current and projected shortfall of Support Space at Norwalk Community College.

Childcare Center

The Child Care Center, located in the A Wing, is adequately sized.

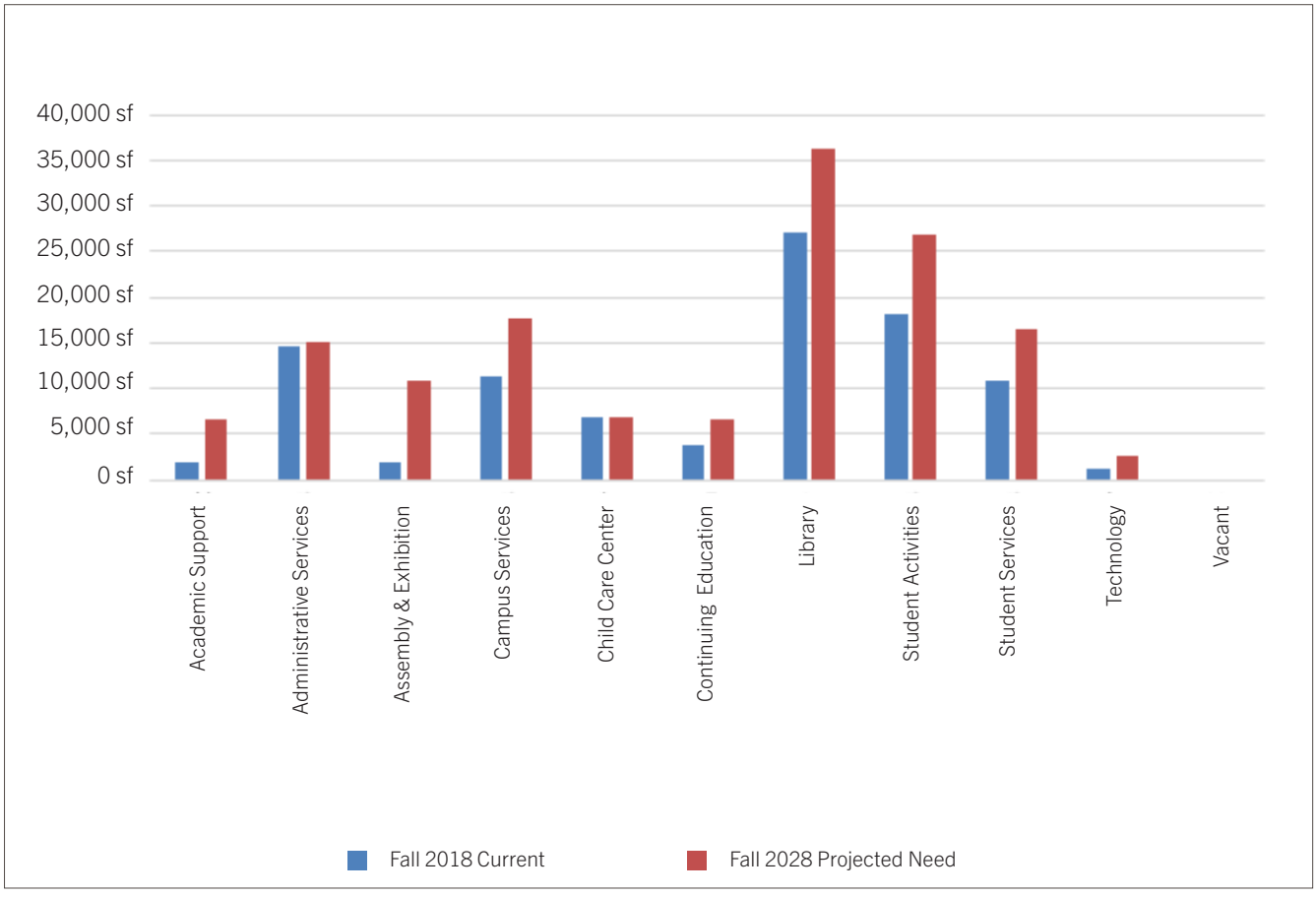


FIGURE 03.11 Support Space: Current & Projected Need

Continuing Education & Work Force Development
Continuing Education & Workforce Development includes expansion of more on-campus instruction, including a lab expansion for the non-credit Allied Health Programs.

Library
Currently, the Library occupies over 27,000 ASF. The projected need driven by student space and not collection space is approximately 36,000 ASF. This total does not include integrating the Learning Commons and related functions into the Library. Currently, the Learning Center is located on the West Campus.

Student Activities
The Student Activities Space at the College is equally distributed between the East and West Campuses. The College is currently expanding the foodservice, which is located on the West Campus. With this expansion included in the existing assessment, the College needs to expand from roughly 18,000 ASF to 27,000 ASF by 2028, resulting in a 50% expansion.

Student Services
The intake component of Student Services is moderately consolidated on the East Campus. The ongoing services of Student Services are located on the West Campus. Most of the shortfall occurs on the West Campus in these ongoing services. Total expansion required is roughly 5,500 ASF or a 50% expansion on the current space allocated to Student Services.

Technology
The Information Technology Services, which has gone through a period of system centralization, still need expanded space on campus to manage hardware, maintain the network, and provide user support to the College. The expansion requires a roughly 100% expansion.



A POTENTIAL STAMFORD CAMPUS

The Master Plan Team developed three scenarios for a satellite facility in Downtown Stamford. The scenarios are based on three levels of enrollment, with the resulting facilities ranging from an Extension site, offering key first year content along with workforce development, to a full Branch Campus, which would support complete programs without reliance on the Norwalk campuses. The table below outlines the three scenarios.

Subcategory	Extension Site Scenario	Extension Center Scenario	Branch Campus Scenario
Academic Space			
Classroom	9,250 sf	11,625 sf	14,375 sf
Computer Lab	1,500 sf	1,500 sf	2,250 sf
Academic Enrichment + First Year Experience	0 sf	0 sf	450 sf
Art, Architecture + Design	0 sf	0 sf	2,250 sf
Business	0 sf	0 sf	450 sf
Computer Science	0 sf	450 sf	600 sf
English	450 sf	600 sf	750 sf
English as a Second Language	300 sf	450 sf	450 sf
Humanities	0 sf	0 sf	0 sf
Mathematics + Engineering	450 sf	600 sf	7,750 sf
Nursing and Allied-Health	0 sf	0 sf	0 sf
Science	0 sf	3,750 sf	4,800 sf
Social and Behavioral Sciences	0 sf	0 sf	750 sf
Total Academic Space	**11,950 sf**	**18,975 sf**	**34,875 sf**
Support Space			
Academic Support	1,800 sf	2,250 sf	3,300 sf
Administrative Services	450 sf	450 sf	450 sf
Assembly & Exhibition	0 sf	0 sf	1,800 sf
Campus Services	450 sf	750 sf	2,250 sf
Child Care Center	0 sf	0 sf	0 sf
Continuing Education	450 sf	750 sf	1,500 sf
Library	0 sf	1,800 sf	2,250 sf
Student Activities	1,250 sf	2,250 sf	3,750 sf
Student Services	4,500 sf	4,500 sf	6,000 sf
Technology	300 sf	450 sf	600 sf
Total Support Space	**9,200 sf**	**13,200 sf**	**21,900 sf**
Total Assignable Square Feet	**21,150 sf**	**32,175 sf**	**56,775 sf**
ASF per Student FTE	*42 sf*	*43 sf*	*45 sf*
Targeted Student FTEs	*500.00*	*750.00*	*1,250.00*

TABLE 03.1 Stamford Satellite Campus: Summary Space Table

CONCLUSIONS

Raising NCC to relative parity with the midsized Connecticut Community Colleges will require a substantive increase of space at the College. Total new construction space required is 59,200 ASF or 102,000 GSF. The total need is equal to two-thirds of the current East Campus. The following chart illustrates the total 2028 projected need in comparison to the East Campus and West Campus.

Recognizing the current and anticipated constrained funding climate, this Master Plan Update provides recommendations totalling approximately 45,000 GSF in added floor plan. The balance of the total 102,000 GSF need is studied as long-term expansion.



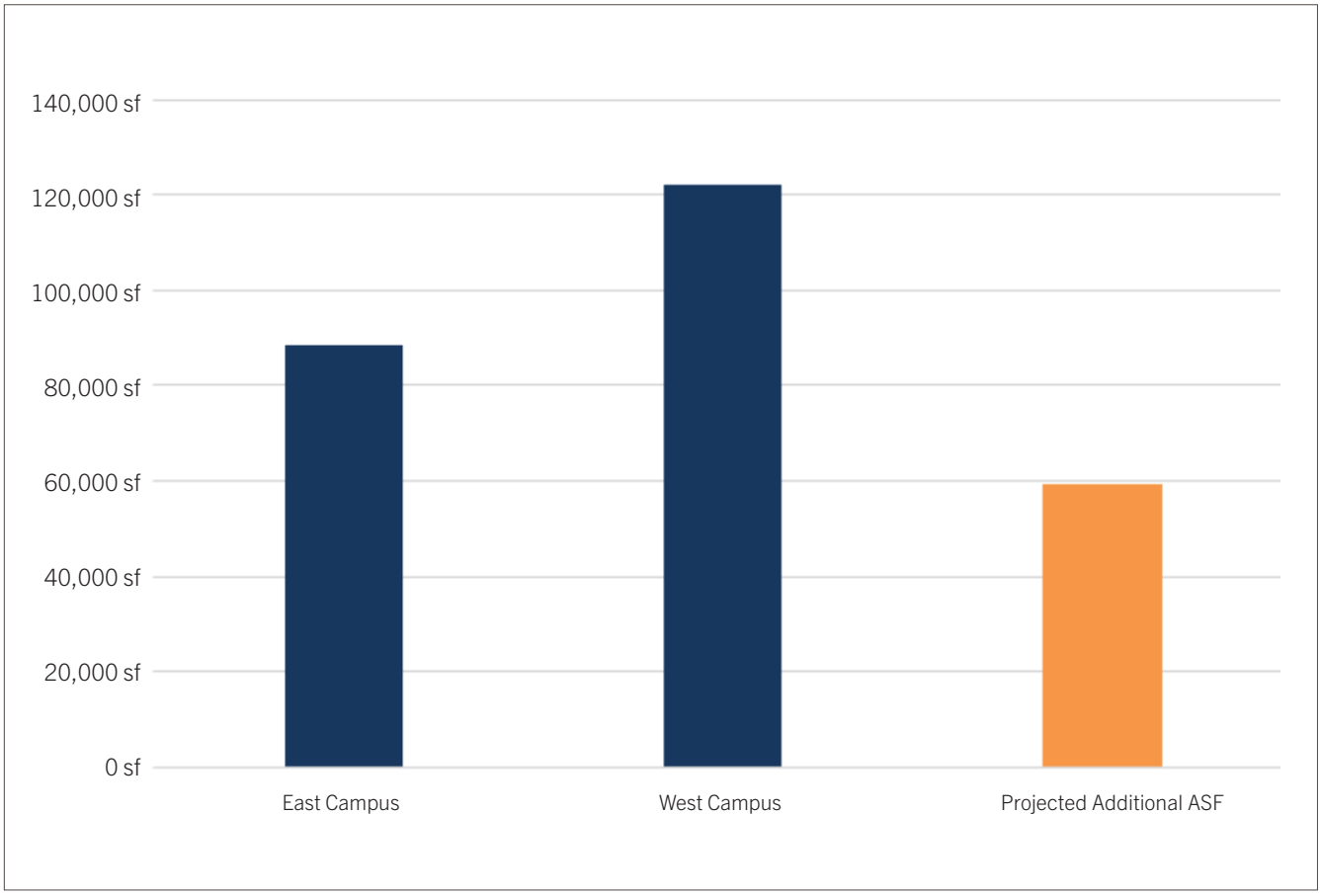


FIGURE 03.12 Projected Additional Assignable Square Feet at NCC

REVISED BENCHMARKING

The following chart illustrates both the current and proposed Norwalk Community College benchmarked against the system. The projected assessment will place Norwalk Community College at parity with Manchester Community College and still less space per FTE than Naugatuck Community College. Manchester and Naugatuck are the two community colleges with enrollments closest to the enrollment of Norwalk Community College.



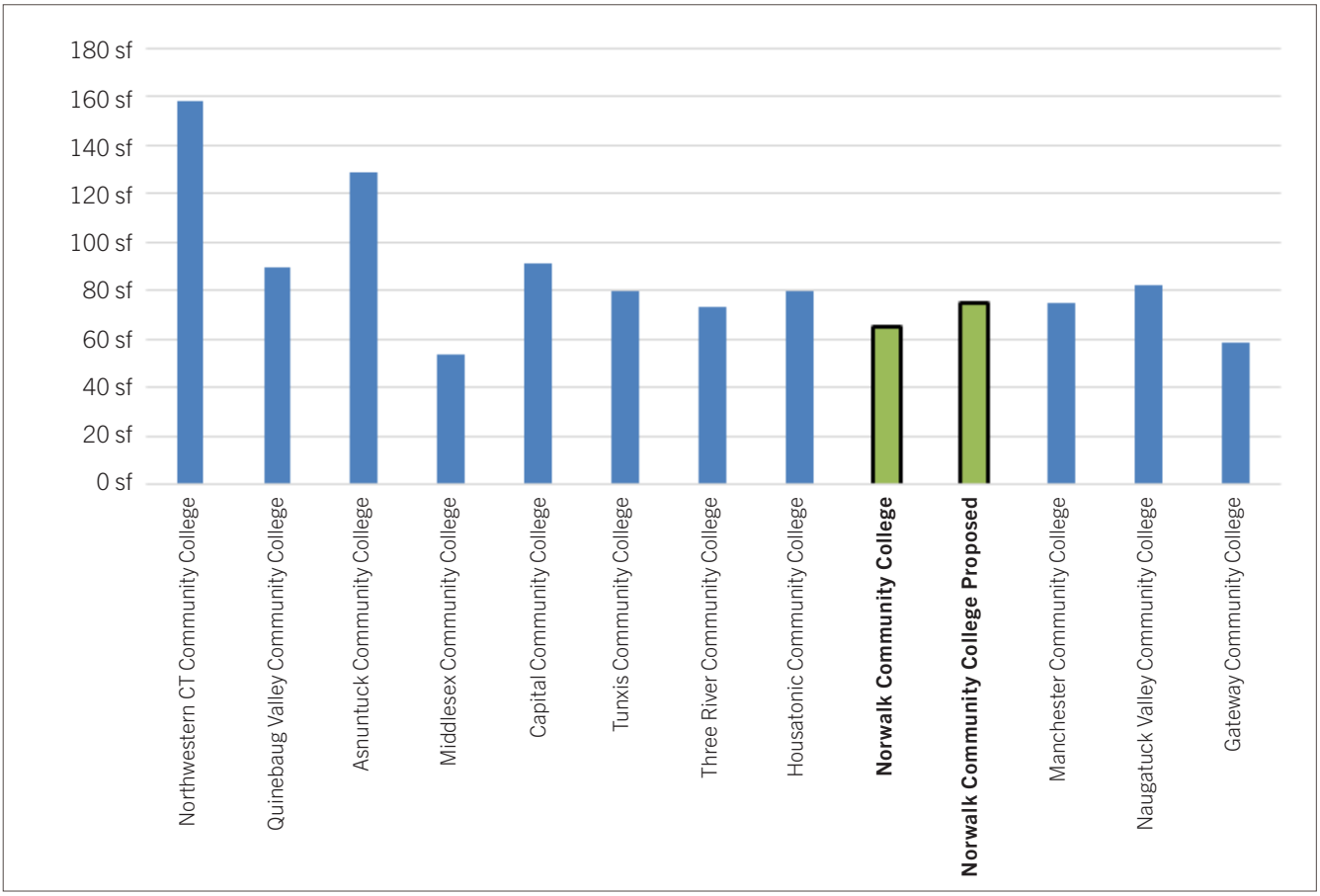


FIGURE 03.13 Current and Proposed Benchmarking: ASF per Student FTE

SPACE ASSESSMENT

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

Category	Fall 2018 Current	Fall 2018 Projected Need	Fall 2023 Projected Need	Fall 2028 Projected Need
Academic Space				
Classroom	40,878 sf	38,464 sf	40,728 sf	42,633 sf
Computer Lab	10,767 sf	8,194 sf	8,677 sf	9,083 sf
Academic Enrichment + First Year Experience	4,551 sf	5,678 sf	5,678 sf	5,678 sf
Art, Architecture + Design	8,790 sf	8,976 sf	9,479 sf	10,009 sf
Business	5,849 sf	5,678 sf	5,996 sf	6,332 sf
Computer Science	1,178 sf	1,234 sf	1,303 sf	1,376 sf
English	768 sf	2,345 sf	2,476 sf	2,615 sf
English as a Second Language	7,944 sf	7,944 sf	7,944 sf	7,944 sf
Humanities	7,587 sf	8,765 sf	8,765 sf	8,765 sf
Mathematics + Engineering	3,729 sf	4,352 sf	4,352 sf	4,352 sf
Nursing and Allied- Health	19,747 sf	21,345 sf	21,345 sf	21,345 sf
Science	11,716 sf	11,716 sf	11,716 sf	11,716 sf
Social and Behavioral Sciences	845 sf	1,234 sf	1,234 sf	1,234 sf
Total Academic Space	**124,349 sf**	**125,925 sf**	**129,693 sf**	**133,082 sf**
ASF per Student FTE	*37 sf*	*38 sf*	*37 sf*	*36 sf*
Support Space				
Academic Support	1,964 sf	6,567 sf	6,567 sf	6,567 sf
Administrative Services	14,666 sf	14,987 sf	14,987 sf	14,987 sf
Assembly & Exhibition	1,880 sf	10,877 sf	10,877 sf	10,877 sf
Campus Services	11,226 sf	17,678 sf	17,678 sf	17,678 sf
Child Care Center	6,827 sf	6,827 sf	6,827 sf	6,827 sf
Continuing Education	3,695 sf	6,667 sf	6,667 sf	6,667 sf
Library	27,218 sf	32,694 sf	34,619 sf	36,238 sf
Student Activities	18,061 sf	24,249 sf	25,676 sf	26,878 sf
Student Services	10,939 sf	14,884 sf	15,760 sf	16,497 sf
Technology	1,106 sf	2,425 sf	2,568 sf	2,688 sf
Vacant	0 sf	0 sf	0 sf	0 sf
Total Support Space	**97,582 sf**	**137,855 sf**	**142,226 sf**	**145,904 sf**
ASF per Student FTE	*29 sf*	*41 sf*	*40 sf*	*39 sf*
Total Assignable Square Feet	**221,931 sf**	**263,780 sf**	**271,919 sf**	**278,986 sf**
ASF per Student FTE	*66 sf*	*78 sf*	*76 sf*	*75 sf*
Current & Projected FTEs	*3,344.69*	*3,344.69*	*3,541.57*	*3,707.25*

TABLE 03.2 Summary Space Assessment Table

PARKING NEEDS

The College reports that the existing parking lots meet peak demand for current enrollment. Lots are near capacity at the beginning of the fall semester. Demand reduces somewhat over the course of the year. The far north west lot on the West Campus at these times has spare capacity. As is typical, remote lots are less used and lots closer to main entrances are more congested, giving the impression at times to some of a parking shortage. In reality, with a short walk, there is sufficient parking.

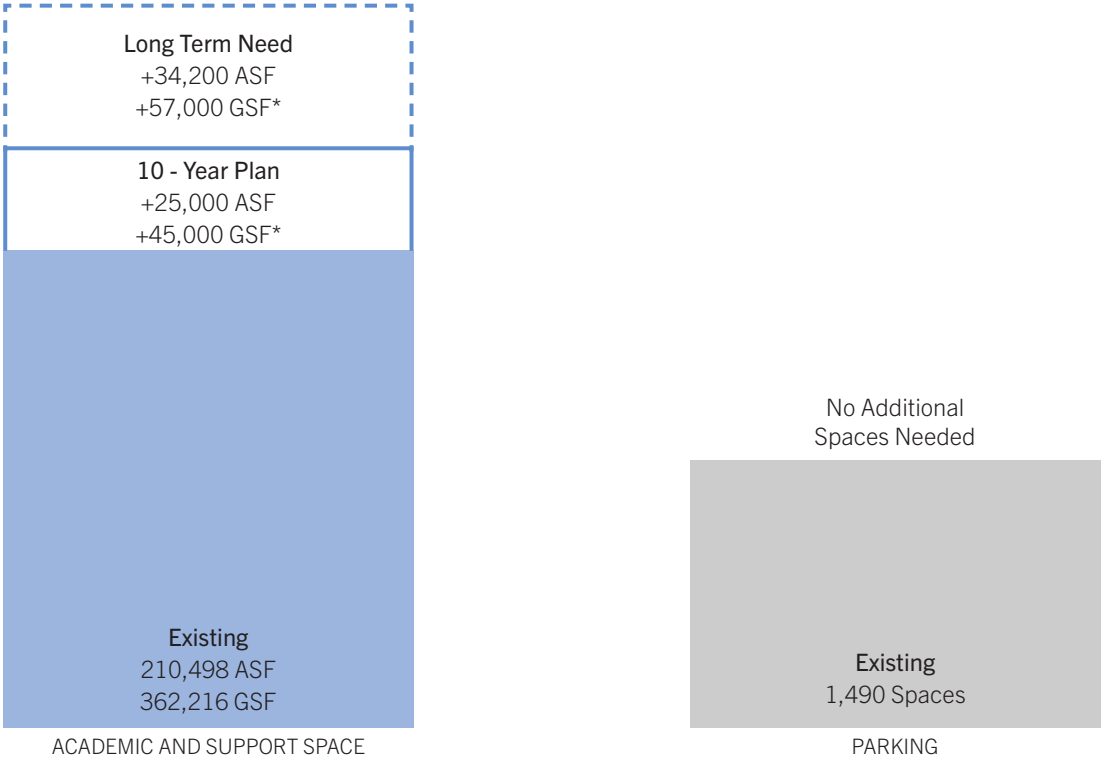
After falling enrollment in recent years, the projected 10-year enrollment for NCC reflects from growth back to 2015 levels, with approximately 6,100 students (HC/credit).

In this context, the Master Plan does not project a need for any additional parking spaces. The demand for parking may dampen with continued use of U Pass and bus routes, especially the link to Metro North.

Spaces lost to development should be replaced to maintain the overall capacity.



SUMMARY



**Including expansion for MP Phase 3 Student Center Addition (5,400 GSF) and Theater Addition (5,300 GSF)*

FIGURE 03.14 Space Needs Summary


NCC



4 RECOMMENDATIONS

INTRODUCTION

PLANNING PRINCIPLES + STRATEGY

MASTER PLAN SUMMARY

STAMFORD SATELLITE FACILITY

ACCESS + LAND USE

BUILDING PROJECTS

- STUDENT CENTER ADDITION (MP PHASE 3)
- THEATER ADDITION (MP PHASE 3)
- B WING RENOVATION
- B WING MAINTENANCE ADDITION
- D + H WING THIRD FLOOR CONNECTOR
- D WING MEZZANINE EXPANSION
- PEDESTRIAN BRIDGE + LIBRARY RENOVATIONS
- WEST CAMPUS NEW ADDITION

ACCESS, PARKING AND OPEN SPACE PROJECTS

- WEST CAMPUS QUADRANGLE
- RICHARDS AVENUE ACCESS
- PARKING STRATEGY
- CONVERT WOOD CHIP PARKING LOT TO PERMANENT
- WEST CAMPUS PARKING RECONFIGURATION
- EAST CAMPUS PARKING RECONFIGURATION
- PARKING ALTERNATIVES EXPLORED
- COURTYARD ENCLOSURE
- OUTDOOR RECREATION AND PATH

ENERGY AND INFRASTRUCTURE PROJECTS

- ENERGY MASTER PLAN
- MASTER PLAN MEP RECOMMENDATIONS

LONG TERM EXPANSION

GUIDELINES

- ARCHITECTURAL CHARACTER
- SUSTAINABILITY

IMPLEMENTATION AND COST

- PROJECT PRIORITIES
- PHASING
- COST ESTIMATES

CONCLUSION

MASTER PLAN TEAM

INTRODUCTION

INTRODUCTION

The Master Plan Recommendations encompass projects for building renovations and expansions, open space, access and infrastructure. The scope addresses space needs for the current and projected enrollment in 10 years.

NCC's Master Plan process was distinctive in that addressed not only campus needs, but also the need for a leased, shared satellite facility in Stamford to serve unmet demand. The Plan includes a pedestrian bridge to link the East and West Campuses across Richards Avenue, combined with necessary modifications to the Library to allow this connection to happen, without adverse functional impacts. The Recommendations span from small to large scale renovations, to additions, to landscape and HVAC plant upgrades.

Together, the projects recommended for Norwalk's Master Plan Update represent a comprehensive vision for the College's capital needs over the next decade, resulting from a collaborative process.



PLANNING PRINCIPLES + STRATEGY

The Master Plan Team synthesized the following Planning Principles from the 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.

Planning Principles

- Unify the East and West Campuses with a pedestrian bridge
- Explore a Stamford Extension Site to expand NCC's effective service area and revenue
- Renew older facilities to optimize function and appearance
- Make better use of NCC's beautiful campus setting and manage parking demand
- Expand in a way that is contextual, sustainable, integrated
- Prioritize facility improvements that will support student recruitment and retention

Plan Strategy

The Master Plan reflects a three-part strategy for physical planning.

1. Optimize the use of existing facilities and unify the campus through focused renovations, additions and infrastructure upgrades
2. Expand facilities on the main campus responsibly and incrementally over the next decade to meet highest priority needs in a constrained funding climate. Further expansion to be long term.
3. Explore a NCC Extension Site in Stamford to expand NCC's effective service area and revenue.



MASTER PLAN SUMMARY

MASTER PLAN RECOMMENDATIONS

The location of the recommended Master Plan projects is illustrated on the site plan below. They reflect a mix of building renovations, open space and infrastructure projects. Each is described in more detail in the following sections.

KEY

- **A** Stamford Extension Site
- **B** B Wing Renovation
- **C** B Wing Maintenance Addition
- **D** D Wing Mezzanine Renovation
- **E** D + H Wing Connecting Bridge
- **F** Campus Bridge
- **G** Library Addition + Renovation
- **H** West Campus Addition
- **I** Reconfigured W1Parking Lot
- **J** New Quad
- **K** D + H Wing Courtyard Fence
- **L** New Parking (Wood Chip Lot)
- **M** MP Phase 3: Student Center Addition
- **N** MP Phase 3: Theater Addition
- **O** Expanded W2 Parking Lot
- **P** Reconfigured E2 + E3 Parking Lots
- **Q** Outdoor Rec. Area + Riverwalk



FIGURE 04.1 Master Plan Recommendations

STAMFORD SATELLITE FACILITY

College leadership believes there is unmet demand west of campus in the Stamford area. Providing a satellite facility closer to them could allow them the opportunity of a NCC education. A satellite may also increase overall enrollment and revenue for the College. The area plan below illustrates how the greater Stamford area is about 7 miles west of the NCC main campus.

CSCU community colleges have founded satellite campuses. The most successful is Naugatuck Valley's in Danbury. While this site is relatively distant (27 miles) from NVCC's campus, the demographic map below demonstrates how this location has a concentrated density of population. Stamford is a similar area of denser population.

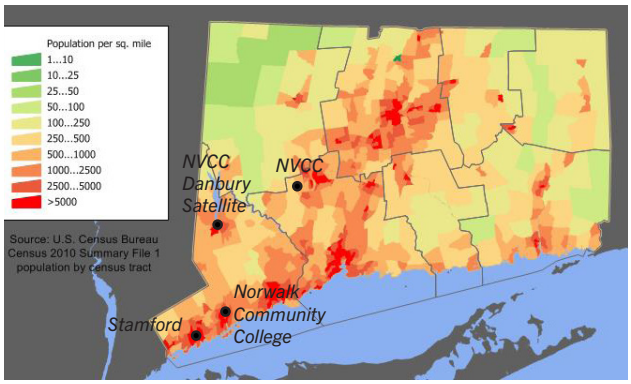


FIGURE 04.2 Connecticut Population Centers

The consultant team assessed three different programmatic models for a satellite facility, of varying levels of academic offerings and facility needs, as summarized on the opposite page. An Extension Site facility would include classrooms, computer labs, spaces for English, ESL and math, as well as area for academic services, student support, continuing education, campus services, student activities and other support areas.

An Extension Center model is a more robust model, including space for the sciences and library, and more area for academic support and student activities. A branch campus would include facilities for additional academic departments, potentially Art, Design and Architecture, and Engineering, and more space for classrooms, computer labs, science, and math *(Refer to the Technical Appendix for additional program information)*. A Branch Campus would require more than twice the support space as an Extension Site.

President Levinson directed that an Extension Site would be the most appropriate model to explore.

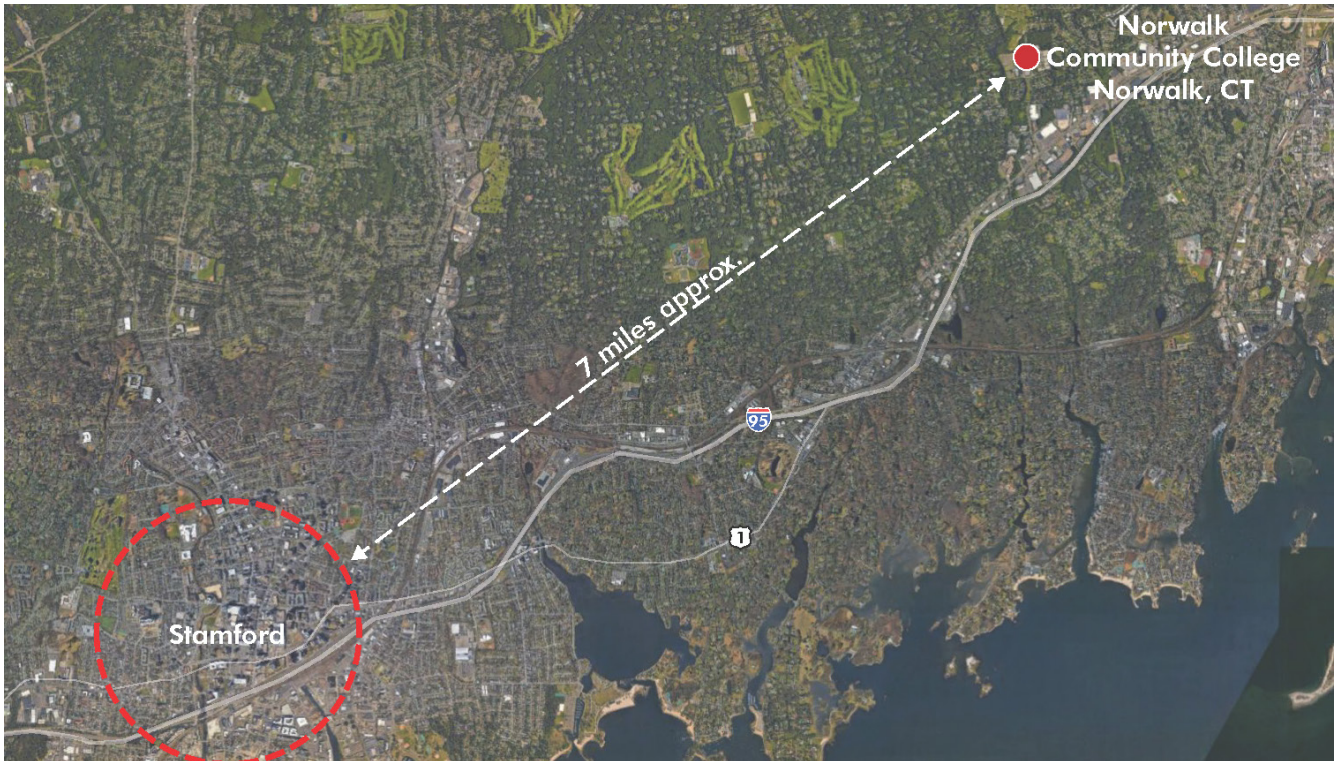


FIGURE 04.3 Stamford Extension Site Distance Map

	Extension Site (ASF)	**Extension Center** (ASF)	**Branch Campus** (ASF)
Academic Space	11,950	18,975	34,874
Support Space	9,200	13,200	21,900
Total Space (ASF)	**21,150**	**32,175**	**56,774**
ASF/FTE	42	43	45
Target FTE	500	750	1,250
Size Relative to Main Campus	10%	15%	27%

TABLE 04.1 Stamford Facility: Three Program Models

Program Areas	**ASF**
Classrooms	9,250
Computer Labs	1,500
English	450
English as Second Language	300
Mathematics + Engineering	450
Academic Support	1,800
Administrative Services	450
Campus Services	450
Continuing Education	450
Student Activities	1,250
Student Services	4,500
Technology	300
TOTAL	**21,150 ASF** **38,500 GSF**
JM Wright Technical High School (Potential Site)	200,000 GSF

**General Academic Space, shared use with Continuing Ed*

TABLE 04.2 Stamford Extension Site Program

JM WRIGHT TECHNICAL HIGH SCHOOL

The J.M. Wright Technical High School in Stamford is a relatively new, 200,000 GSF facility in Stamford. It reportedly has some additional capacity. It is not used in the evening. This may be a suitable location for assessing potential shared use agreement. CSCU is already in the process of finalizing a Memorandum of Understanding with the State's Technical High Schools for shared use.

The Master Plan recommends NCC and CSCU explore the feasibility of a NCC Extension Site in Stamford, with a focus on J.M. Wright THS. An Extension Site would be a leased facility. As such, it is not included in the cost estimates for capital projects.



Exterior View of JM Wright THS



FIGURE 04.4 JM Wright THS Aerial View

ACCESS

Access to the main campus remains largely unchanged in the Master Plan Update. One vehicle entry point to the West Campus is relocated southward on Richards Avenue in order to make space for a new quadrangle in front of a new academic wing. (see conceptual site plan in Access, Parking and Open Space section on page 33). The other vehicle entries to the West and East Campus remain in place.

The UPass program has seen an increase in students using transit to campus. Given the Norwalk bus link to the MetroNorth train station, it would be beneficial in the coming decade if more students, faculty and staff could access the campus by means other than a single-occupancy vehicle.

More broadly, a possible new Extension Site in Stamford aims to increase access to a population of potential students for whom the current distance is a barrier to enrolling at NCC's main campus.

KEY

- Main Campus Entry
- Secondary Entry
- Transit Stop

LAND USE

The most significant change in land use is the greening of the front of the West Campus, with the introduction of a new quadrangle in place of part of the parking lot. This will create a more verdant and collegiate appearance. The zone of land occupied by buildings expands outwards somewhat but remains compact. There are four building expansions – two relatively small scale additions on the East Campus and a small and larger addition on the West Campus over time when funding permits.

The zone of land occupied by parking also remains similar to today, with some infill of grass islands to add capacity on the east side and modest expansion on the west side and replacement of the wood chip lot to offset parking spaces lost to make the new quadrangle.

The natural areas on campus also will remain largely unchanged. There are no proposed projects in the wooded area north of the East Campus or along the east and south edges. The Fivemile River frontage will remain almost entirely natural area. The Plan proposes clearing one area for a lawn for student recreation and river access.

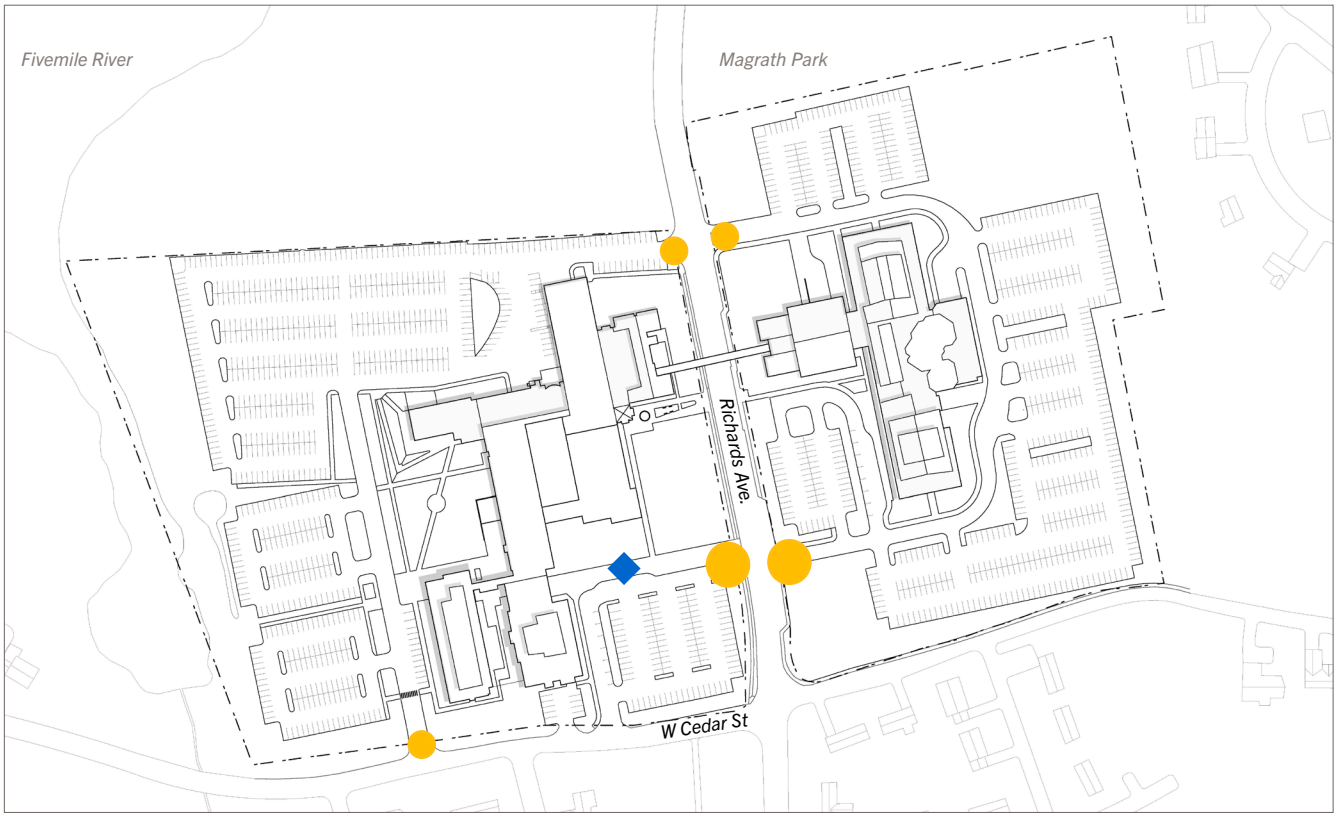


FIGURE 04.5 Access and Land Use Diagram

BUILDING PROJECTS



KEY

- Comprehensive Renovation
- New Construction



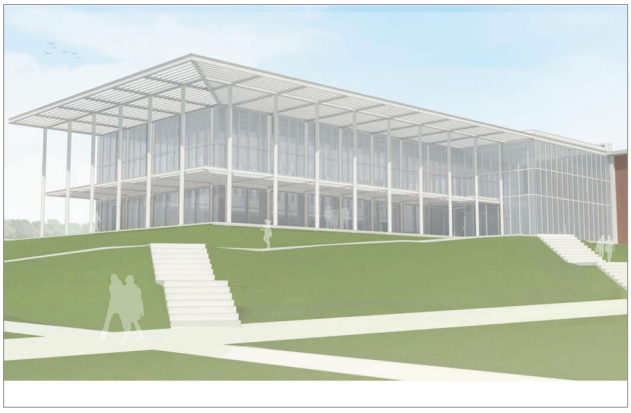
FIGURE 04.6 Building Projects Summary

STUDENT CENTER ADDITION (MASTER PLAN PHASE 3)

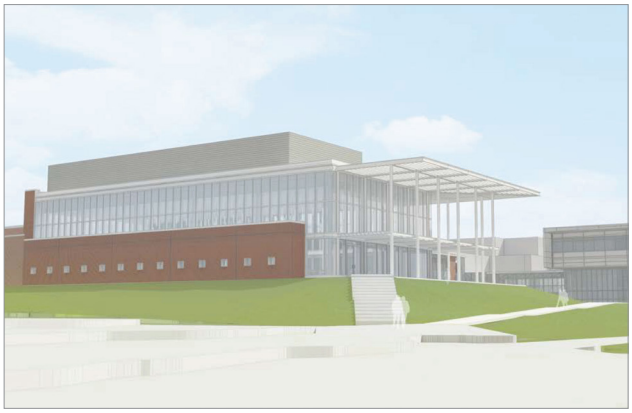
This project, identified in the prior master plan, has been designed and bid. Funding and construction are pending. It is included in this Master Plan in two ways – as part of the existing areas and site plan, and also as a recommended project in order to validate its need for implementation. The project will fully renovate and expand existing food service areas on the West Campus and include a 5,400 SF addition that will serve as a dining and multipurpose space. Since the current dining area, server and kitchen are both undersized and in poor condition, this project answers a distinct need.



View of Existing Cafeteria



Rendering of Student Center Addition: by Mitchell Giurgola Architects



Rendering of Student Center Addition: by Mitchell Giurgola Architects

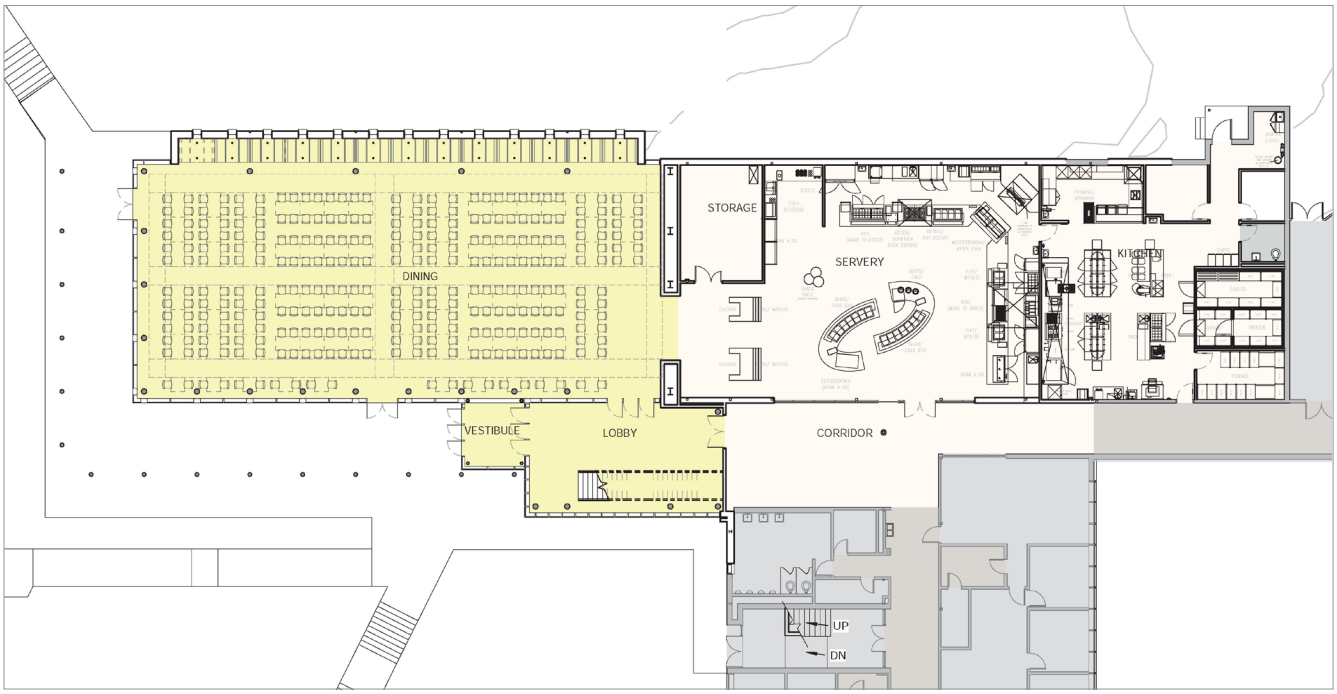


FIGURE 04.7 West Campus Student Center Ground Floor Plan: *by Mitchell Giurgola Architects*

THEATER ADDITION (MASTER PLAN PHASE 3)

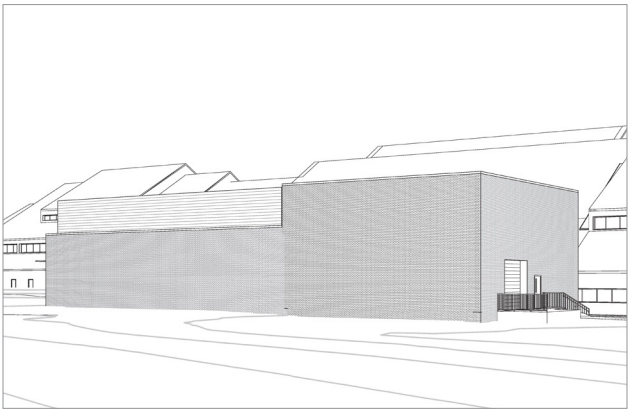
This project on the East Campus provides essential support space to the theater so it can function better for performing arts and other functions. It adds dressing rooms, a green room, expanded backstage and a loading dock to the existing theater, built in the 1980's. The added space totals 5,300 SF. This project was also identified in the last master plan, has been designed and bid, and is awaiting funding and construction.



View of Existing Theater



Rendering of Theater Addition: by Mitchell Giurgola Architects



Rendering of Theater Addition: by Mitchell Giurgola Architects

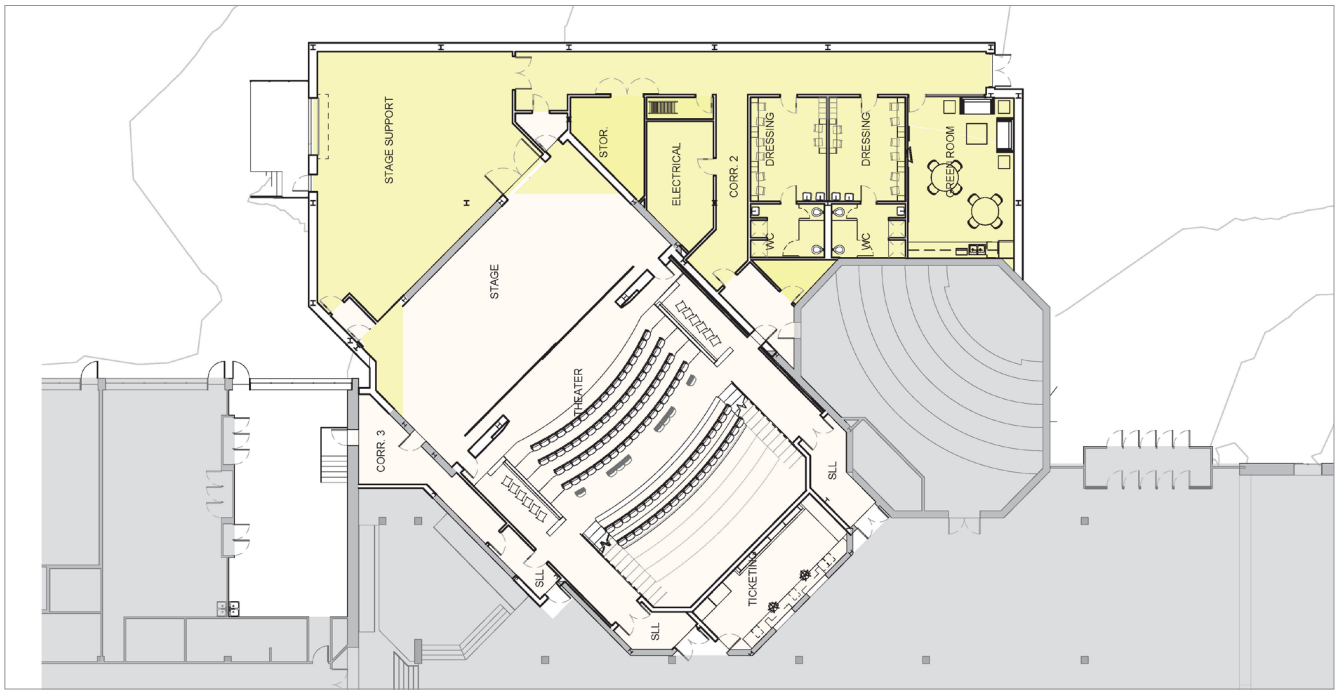


FIGURE 04.8 East Campus Theater Addition Ground Floor Plan: *by Mitchell Giurgola Architects*

B WING RENOVATION

An original building from the Norwalk Technical High School, the B Wing has outlived its useful life. Its exterior cladding, roof, building systems and layout require a complete renovation in order to bring the facility up to par. There is value on the structure and the lower level.

The Plan recommends a comprehensive renovation to reconfigure the entire first and second floors as well as to replace all building MEP/FP systems, cladding, and roofing. On the first floor, the main goal of the renovation is to expand student services areas to address strategic goals of student success and retention. The second floor will remain primarily instructional space, but with all new spaces, finishes and technology.

The first floor today includes several functions not directly related to student services. The tiered lecture hall holds few classes. The Faculty Staff Mail Room, which also functions as an adjunct office space, is already planned to be removed when the Student Center addition is built. The goal for adjunct areas going forward is to distribute them with their own departments, rather than cluster them.

Programmatically, the Plan recommends relocating or eliminating certain functions not related to student services, so student services can expand in place. Since these functions benefit from a larger footprint, the Plan recommends changing the circulation from double loaded, center hallway to a single-loaded hallway along the east side of the building. The table below represents a scenario for expanding student services and the veterans' oasis over 30%.

The concept locates the Student Government Association next to the cafeteria (which will become the expanded student center) for visibility and access. Career Services and Community Partnerships would benefit from being located adjacent to the D Wing lobby. Student Activities and Tutoring are intentionally separated for acoustics. The computer lab is retained since the college needs this function. The Copy Center is relocated to free up space. (See page 16 for Copy Center relocation concept).

Program Elements	Existing ASF	Proposed ASF
Learning Commons	1,686	2,208
Student Activities/ SGA	1,388	1,818
Tutoring Center Areas	2,540	3,327
Career Services/ Comm. Ptrs.	1,932	2,462
Veterens Oasis	448	683
Subtotal / Student Services	7,994	10,498
Computer Lab	540	540
Classrooms	1,755	0 (remove)
Copy Center	983	0 (relocate)
Subtotal	3,278	540
TOTAL	11,272	11,038
Faculty Mail Room	577	

TABLE 04.3 B Wing First Floor Program Summary



Existing Interior View of B Wing Hallway



Existing Exterior View of B Wing

EXISTING

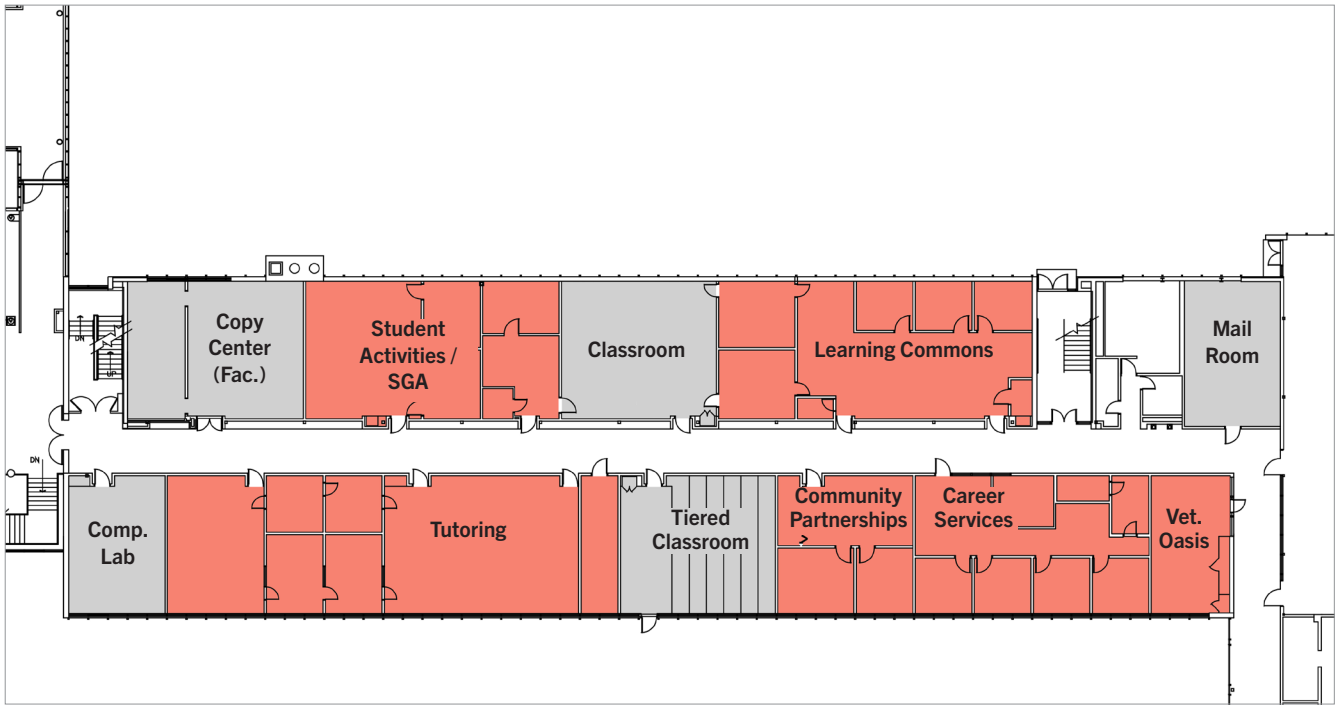


FIGURE 04.9 West Campus B Wing Existing First Floor Plan

PROPOSED

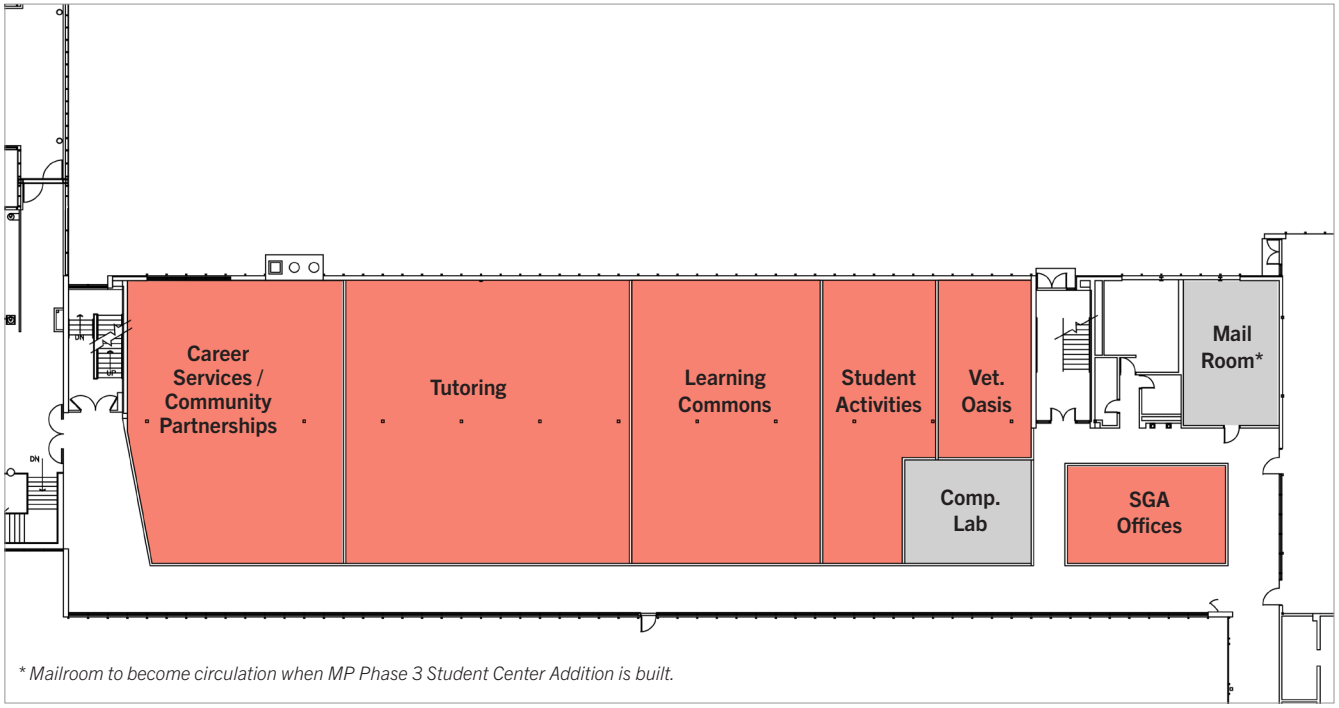


FIGURE 04.10 West Campus B Wing Proposed First Floor Plan

The B Wing contains 20 classrooms, 36% of NCC's total. Given that these will need to be taken off line during the renovation, the College should carefully assess classroom scheduling before project implementation to confirm logistics.

NCC Total Class Inventory	55	
B Wing 2nd Floor	18	
B Wing 1st Floor	2	
Total	20	(36%)

(Temporarily off line for renovation)

The proposed second floor plan illustrates a concept for comprehensive renovation of these classrooms.

The center corridor remains, as the space on either side is more than sufficient to yield a range of well-proportioned classrooms. The Plan recommends that the design architect undertake a college-wide assessment of classrooms and curriculum in order to determine the preferred mix of classroom sizes for the newly configured spaces. The concept plan reflects fewer larger classrooms compared to the present. These might correspond to social science courses. If the preferred courses to be taught here were to be more Math and English, with smaller section sizes, the renovated plan would have more classrooms with smaller seat counts. Whatever the layout, the classrooms would be flexible with flat floors, about 28 SF per seat, to allow a range of teaching layouts and equipped with new technology and furniture.

EXISTING

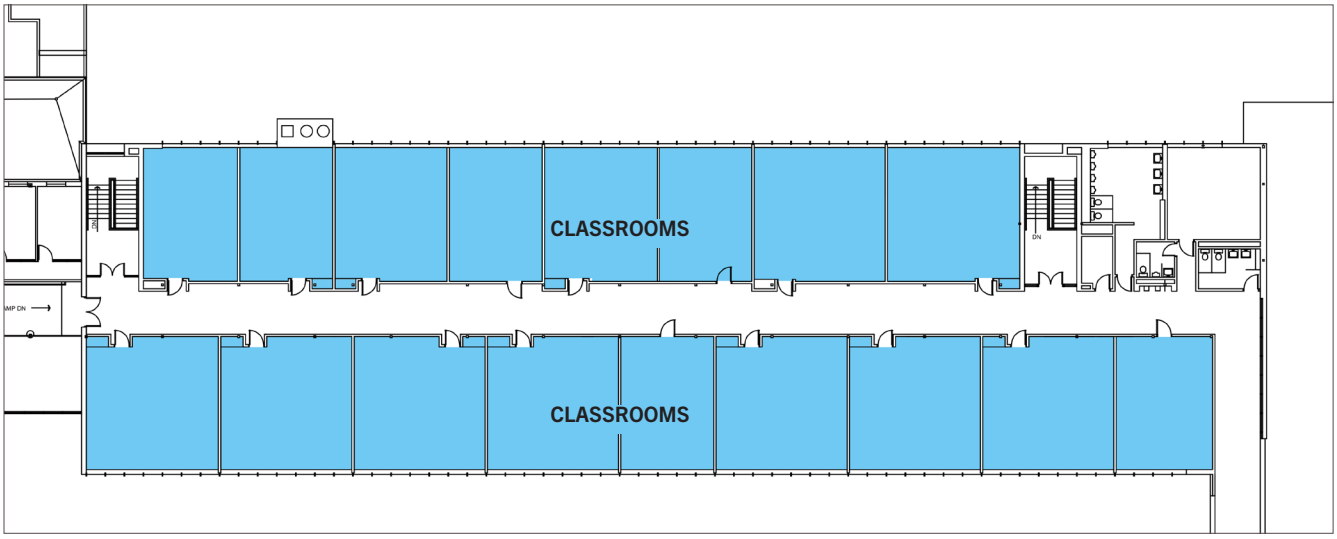


FIGURE 04.11 West Campus B Wing Existing Second Floor Plan

PROPOSED

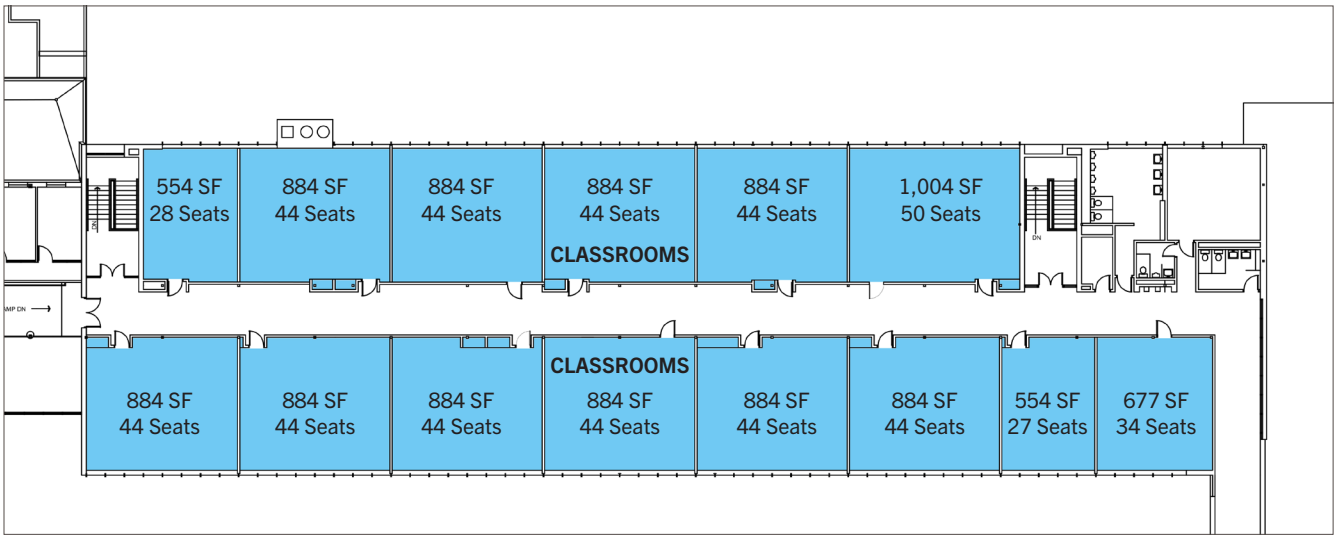
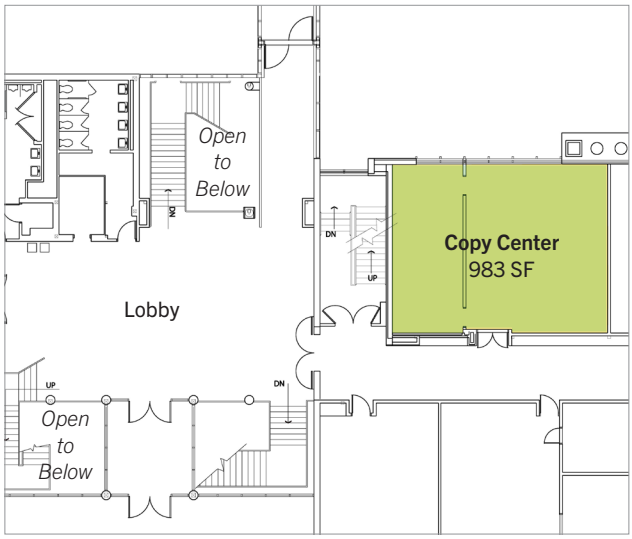


FIGURE 04.12 West Campus B Wing Proposed Second Floor Plan Scenario

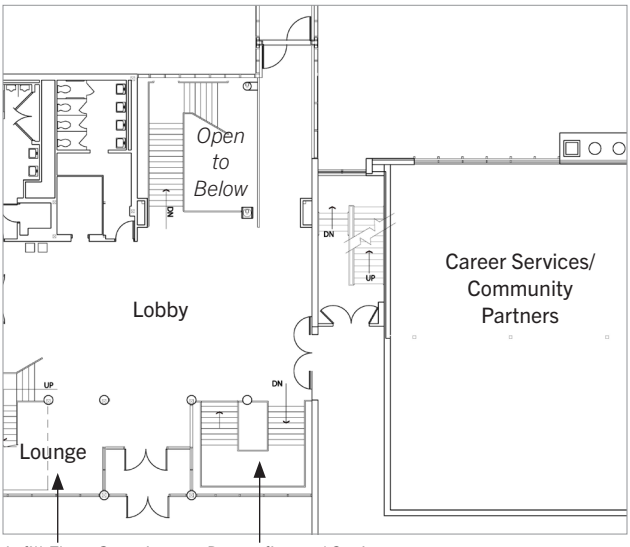
The Copy Center is removed from the B Wing first floor to a proposed new location one level below at the foot of the lobby stairs, as shown below. This area is now occupied by some faculty offices and an underused lower lobby. The faculty offices could be relocated to the D Wing Mezzanine.

KEY Existing Location Proposed Location

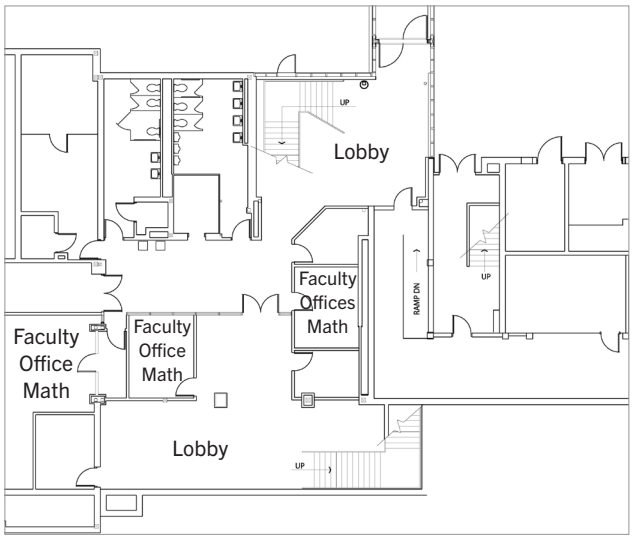
EXISTING FIRST FLOOR



PROPOSED FIRST FLOOR



EXISTING BASEMENT FLOOR



PROPOSED BASEMENT FLOOR

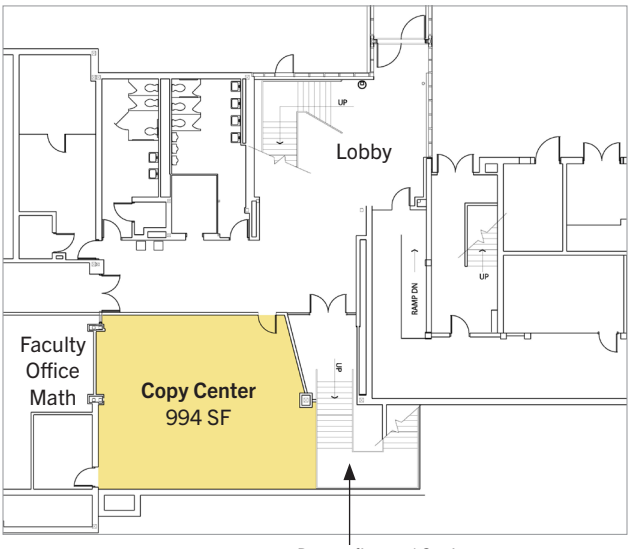


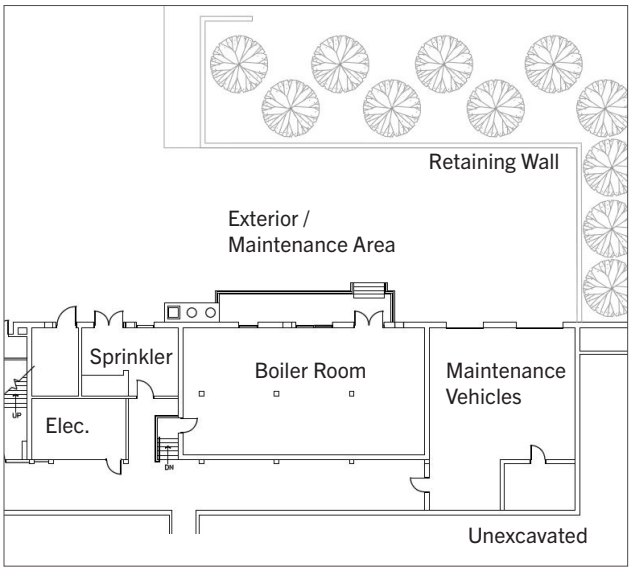
FIGURE 04.13 Existing + Proposed Copy Center Locations

B WING MAINTENANCE ADDITION

To provide needed expansion for campus services, the Plan recommends an addition onto the lower level of the B Wing into part of the exterior maintenance yard. Views to this area from the quad and planned student center addition area are screened by a row of trees and an existing retaining wall. The 1,400 GSF addition will provide covered space for maintenance vehicles. The current maintenance vehicle garage space will be converted to needed storage space.

The roof can be a low-slope built-up roof with ballast, or alternatively a green roof, as this will be visible from inside the B Wing. Note that this project is separate from the pending B Wing renovation.

EXISTING



PROPOSED

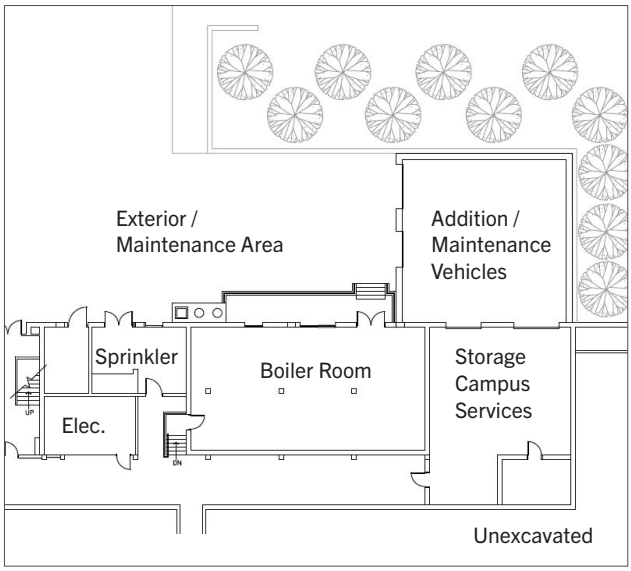


FIGURE 04.14 Existing + Proposed Basement Floor Plans of Maintenance Addition



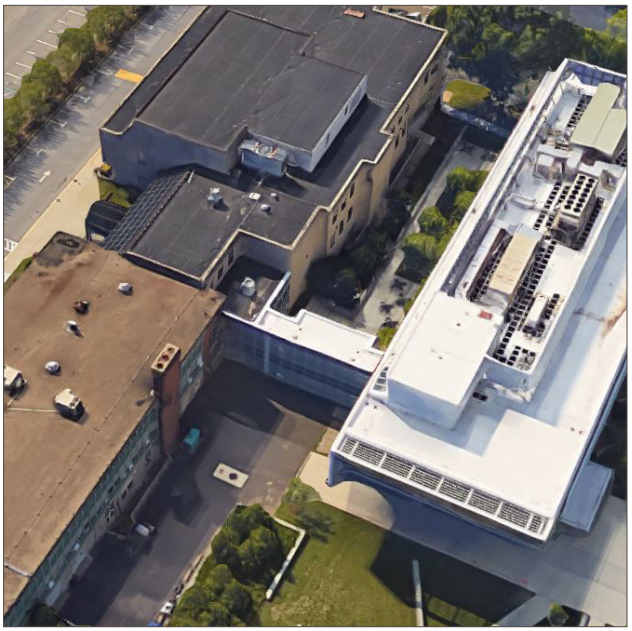
Existing Exterior View of B Wing



Existing Exterior View of B Wing

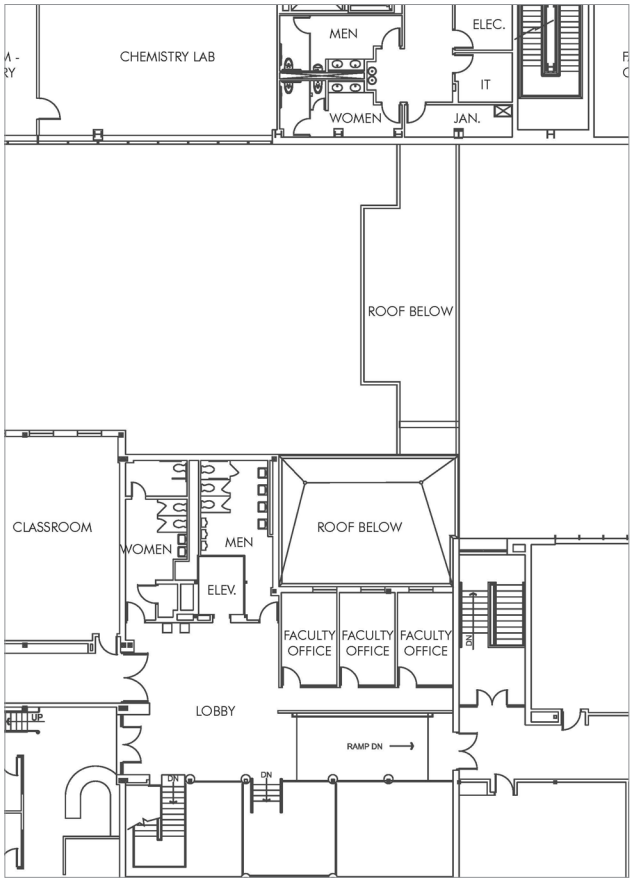
D + H WING THIRD FLOOR CONNECTOR

This project adds a floor on the existing 2-story connector between the D and H Wings on the West Campus. The purpose of the project is to improve connectivity and accessibility. With only one elevator in the H wing, the third floor is not accessible by wheelchair when this elevator is out of order (which has happened more than once). This project will allow third floor H wing occupants to access the D Wing directly with its other elevator. The new route will displace three offices. Two of these offices are replaced in the new layout, which infills a small roof area of the D Wing. The other office could be located in the D wing mezzanine, described on the following pages. The final design of the project will need to address fire separation between the wings with rated door enclosures.



Aerial View of Existing D + H Wing Connector

EXISTING



PROPOSED

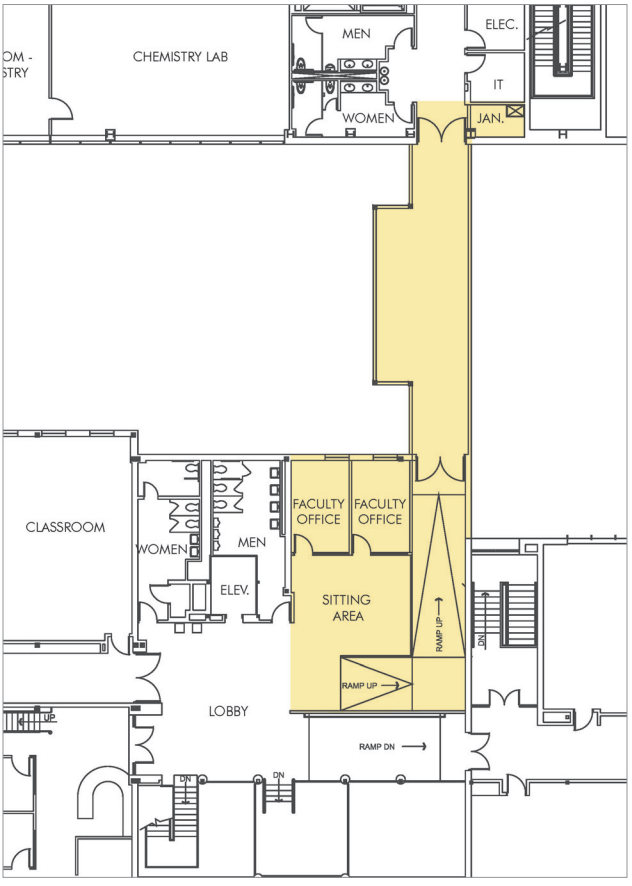


FIGURE 04.15 Existing + Proposed 3rd Floor Plan of D + H Wing Connector

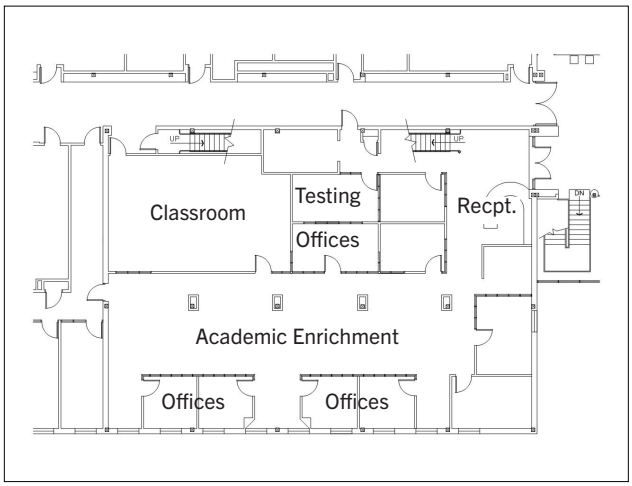
D WING MEZZANINE EXPANSION

The upper level of the D Wing is a mezzanine that is underutilized and not wheelchair accessible. Noise from this balcony to the Academic Enrichment area and classroom below can cause disruption. The Plan recommends adding a Limited Use Limited Access (LULA) lift to provide accessibility to this level and allow a wider range of permissible uses. The project also recommends expanding the mezzanine by infilling the double-height space with floor framing, a span of about 12 to 15 feet. This new area can include storage in the center, offices at the perimeter, a conference room and some study area.



View of Reception Area on Second Floor

EXISTING





View of Classroom on Second Floor

PROPOSED

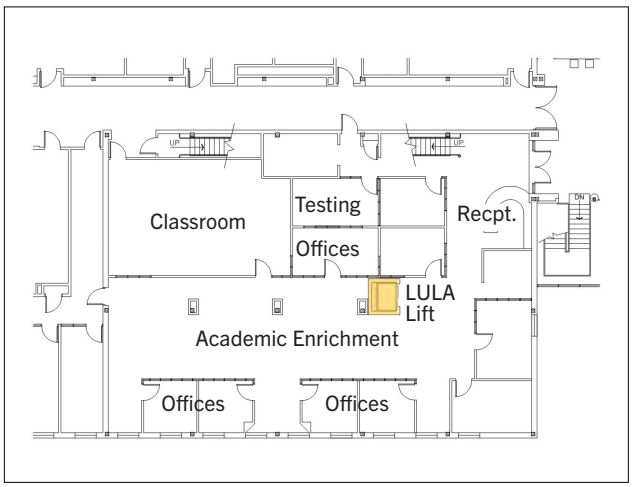


FIGURE 04.16 Existing + Proposed 2nd Floor Plan of D Wing



View of the Offices below from Existing Mezzanine

Existing Mezzanine SF	1,370 SF

- 2 Math Faculty Offices
- Academic Enrichment Conference
- Study Area

Proposed Mezzanine SF	3,423 SF

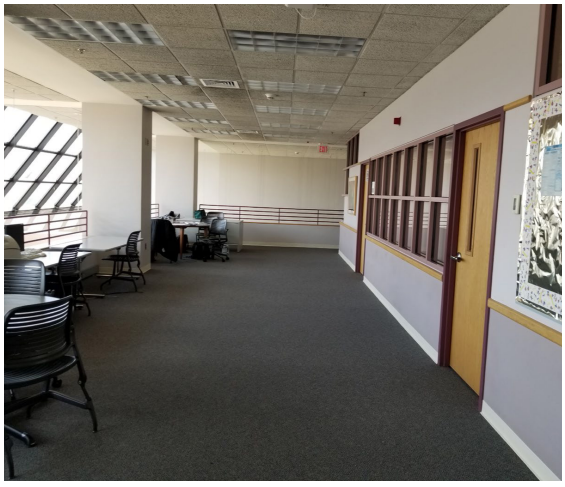
- 8 Faculty Offices
- Conference Room
- Storage
- Study Area

KEY

Floor Area New LULA Lift

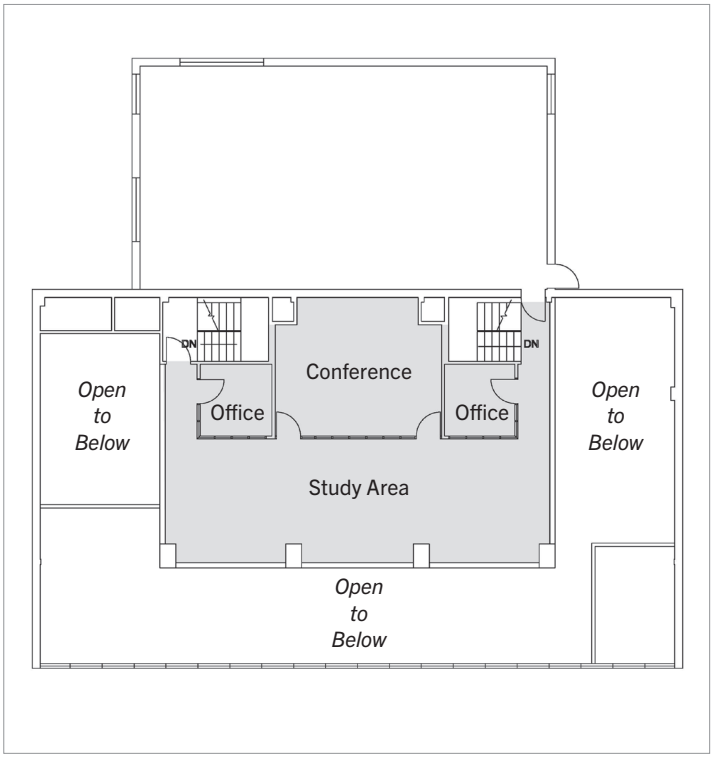


View of the Mezzanine Level



View of the Mezzanine Level

EXISTING



PROPOSED

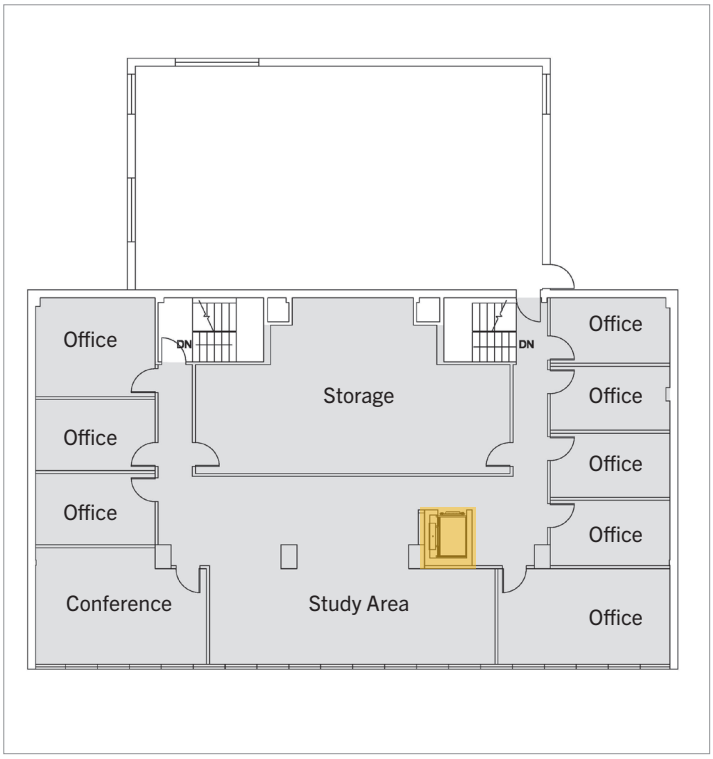


FIGURE 04.17 Existing + Proposed D Wing Mezzanine Level

PEDESTRIAN BRIDGE + LIBRARY RENOVATIONS

As one College divided into two campuses, NCC has sought for many years to integrate its facilities. The 2000 Master Plan on its report cover featured an open-air pedestrian bridge over Richards Avenue. In recent years, the College, Town of Norwalk and CT DOT have collaborated to improve the crosswalk safety, by adding parallel parking along the avenue as a traffic calming measure. A more permanent link is needed, however, which links the East and West Campus buildings in an elevated walkway, over the avenue. This will both enhance safety and create a more unified academic community. Given the NCC does not own the land under the bridge, it is a public right-of-way for Richards Avenue, the Plan recommends a simple approach that could facilitate approvals.

This Master Plan Update recommends a pedestrian bridge between the East Campus Library wing and the CIT Building on the West Campus. The recommended concept is an attractive, simple and cost-effective structure that provides a direct route. The bridge alignment between the circulation systems of the East and West Campuses is illustrated in the plan diagram on the next page. The centerline of the second floor of the library aligns exactly with an existing second floor hallway at the CIT Building. The current window can be removed to provide a sufficient is 8'-8" opening. Introducing a cross-campus route through the second floor of the Library will reduce the library's space significantly, by about 4,500 SF. Since the Library needs significantly more space, not less, the bridge project and providing replacement space for the library must be bundled as a single project.

The elevation of the library second floor is over 9 feet higher than the level of the CIT second floor. The bridge must address this level change. By sloping the bridge walkway at 1:20, it is possible to avoid stairs, lifts, and handrails needed for a steeper ramp.



View of the Proposed Bridge Connection Point in the Library

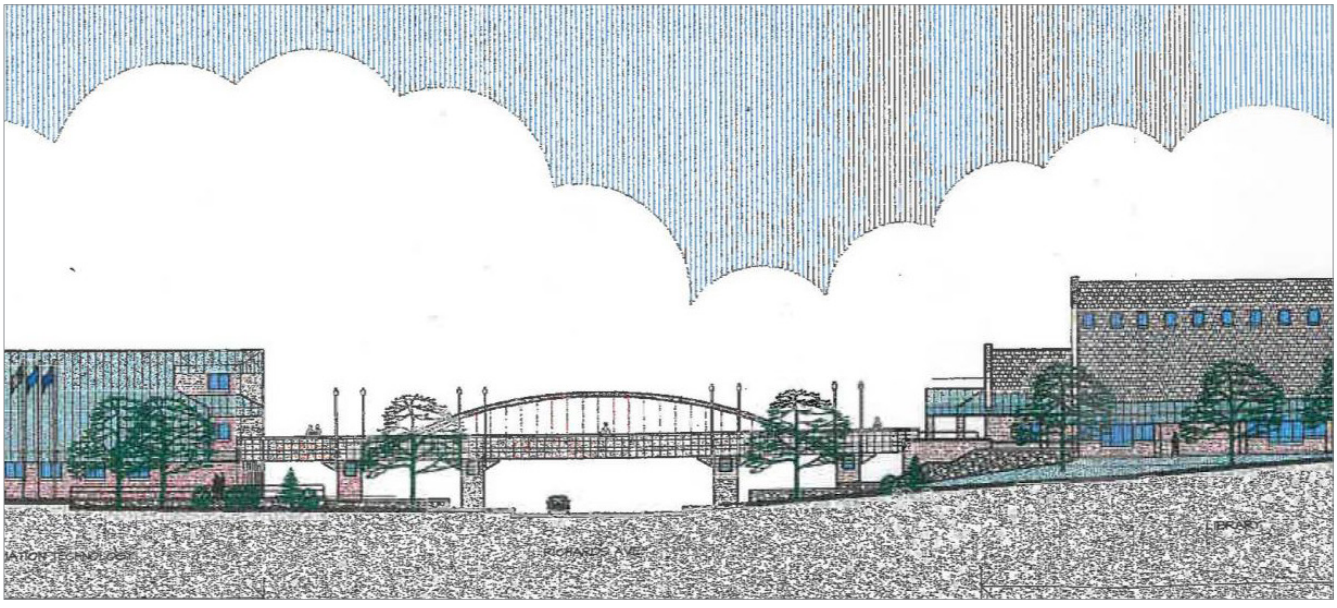


FIGURE 04.18 Bridge Concept from 2000 NCC Master Plan: North Elevation



Exterior View of the Library



Exterior View of the CIT Building



View of the Proposed Bridge Connection Point in the CIT Building



View of the Library from the CIT Building Hallway Connection Point

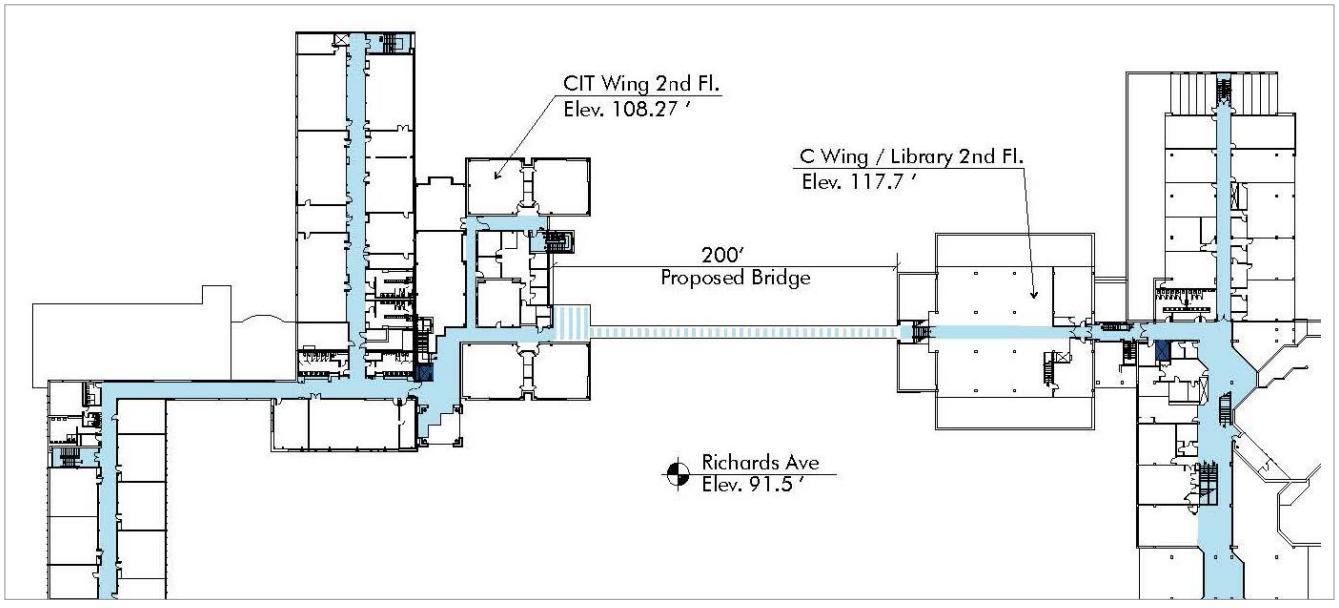


FIGURE 04.19 Proposed Bridge Alignment Diagram

The Plan recommends a supporting pier on either side of Richards Avenue, located on NCC property. The piers could be clad in banded brick, similar to the CIT Building. The distance between the piers can be spanned easily by steel beams or girders, providing adequate clearance below for vehicles. The recommended cross section of the bridge is illustrated on the next page. The top could have PV panels, and louvers to allow natural ventilation when conditions permit. The concept shown is an insulated glass unit inner layer with a glass rain screen outer layer. Some precedent images of glazed pedestrian bridges are also shown on the following page.

KEY

Library Addition

The exterior glass can have a ceramic frit to reduce heat gain and potentially add visual interest. One approach could be to fade the frit from opaque at the structure to see-through in the middle, for a cloud-like effect. Another approach could be to expose the structure, possibly painting it to match the color of the trim of the adjacent buildings.

The Library not only loses space for the cross campus pathway, but also space that is no longer linked to the library, as illustrated in the floor plan below. This space can be repurposed as a Student Lounge, a space need for NCC. The Plan recommends a 4,500 GSF addition to the west end of the Library to receive the bridge and to provide necessary replacement area.

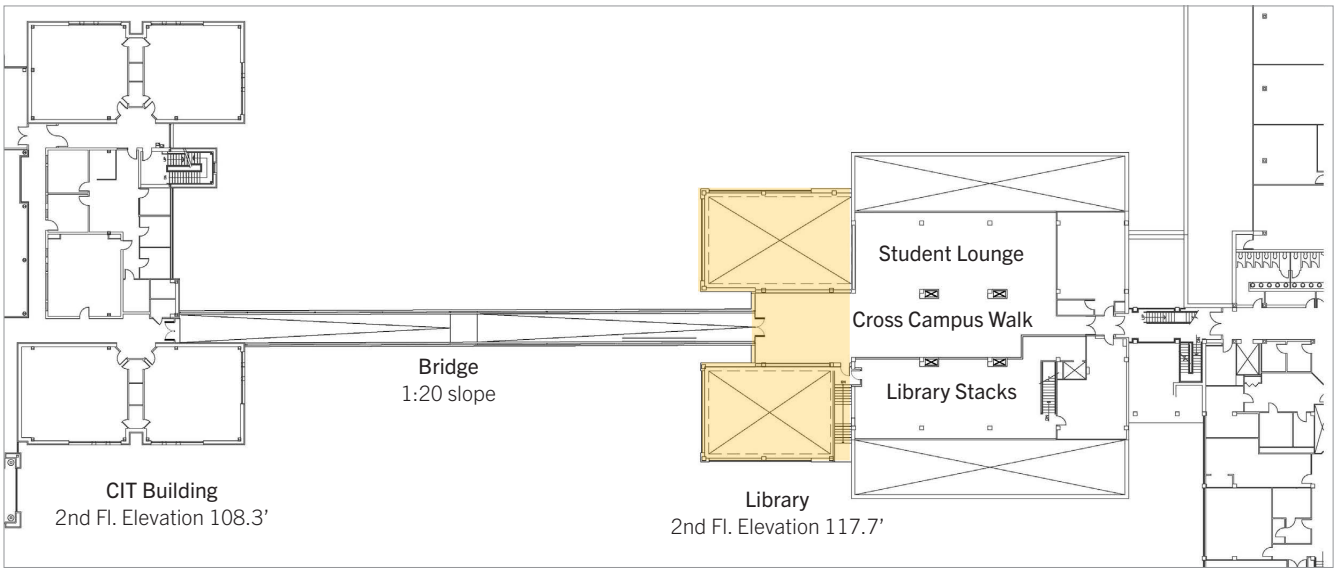


FIGURE 04.20 Bridge Plan Concept

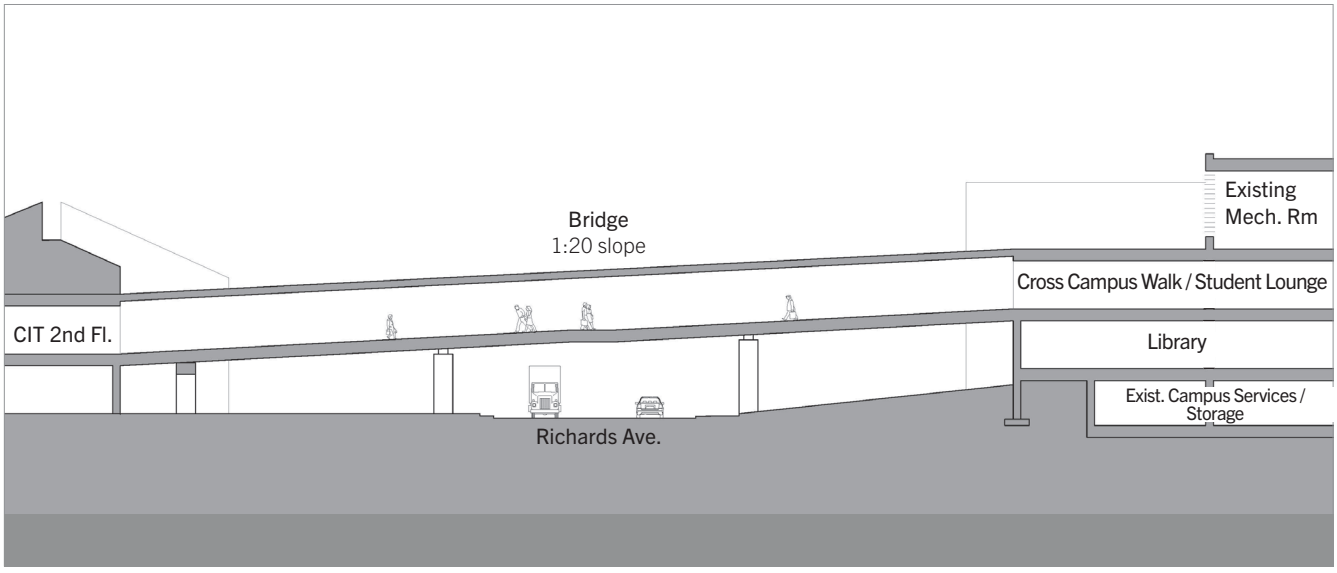


FIGURE 04.21 Bridge Section Concept

PROPOSED BRIDGE CONCEPT

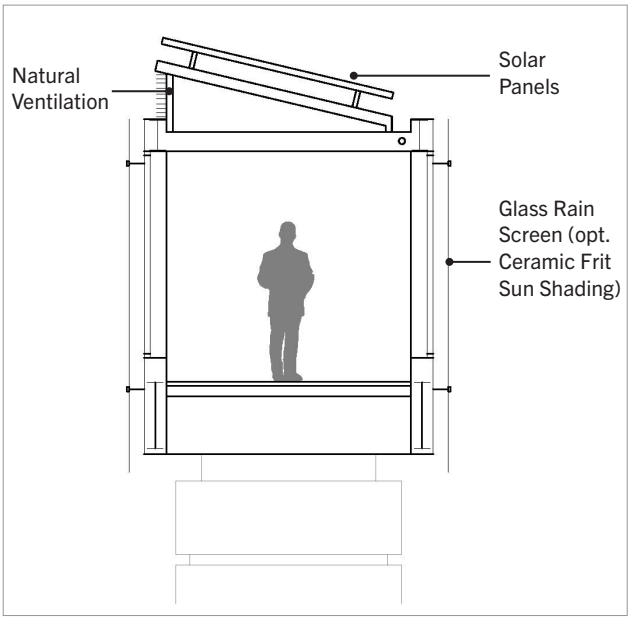


FIGURE 04.22 Bridge Cross Section Concept



Proposed Bridge Concept Rendering Option 1



Proposed Bridge Concept Rendering Option 2 with Ceramic Frit.

BRIDGE PRECEDENT IMAGES



Precedent: Pedestrian Bridge Concept for LAX Airport



Precedent: Pedestrian Bridge Concept . Vienna, Austria

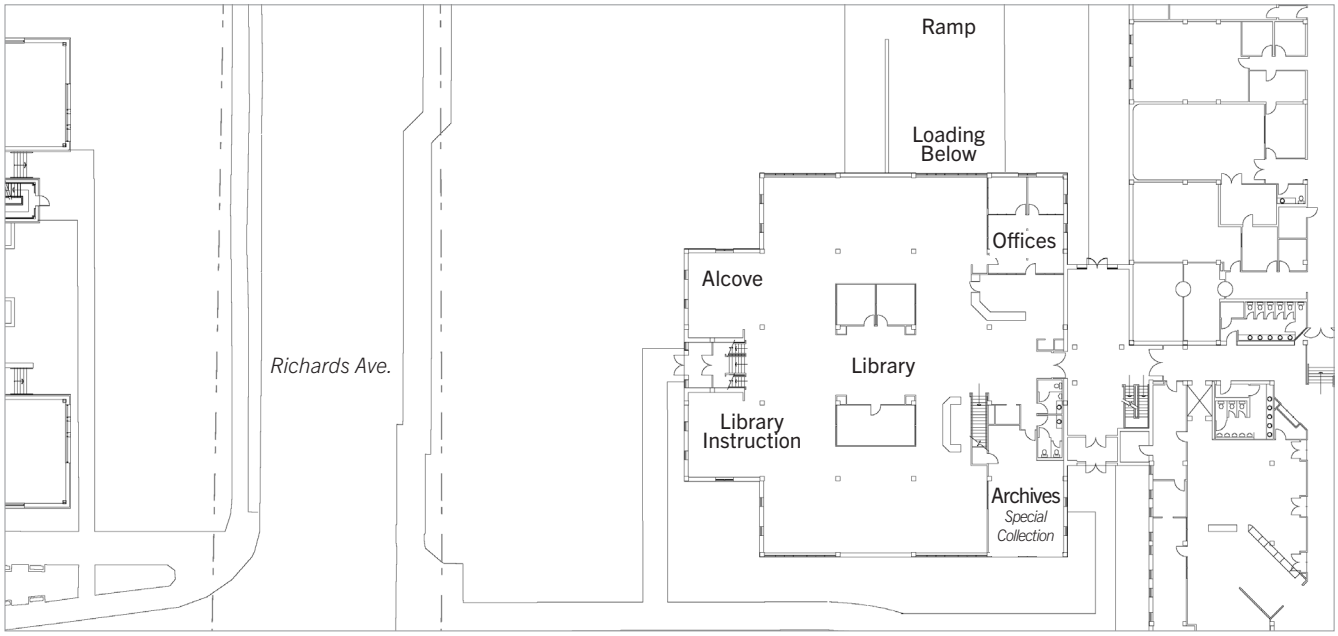


Precedent: Ceramic Frit Glass Treatment . Austin, TX Airport

To integrate the addition, the Library needs to be renovated. This renovation is also an opportunity to update the library, which has not been significantly updated since it was built in the 1980's, to meet current needs. The new layout illustrated in the following floor plans is a concept scenario; the actual design should come from a detailed programming study and design.

The concept design keeps the current Library entrance, reference desk and office area on the first floor. The remaining Library space on the second floor becomes stacks. The library special collections and archive moves from the first floor to the second floor storage space with this non-library registration material moving elsewhere (possibly the D Wing mezzanine). The concept shows the addition as a quiet study area, with the cross-campus walkway to the

EXISTING FIRST FLOOR



PROPOSED FIRST FLOOR (PRELIMINARY CONCEPT)

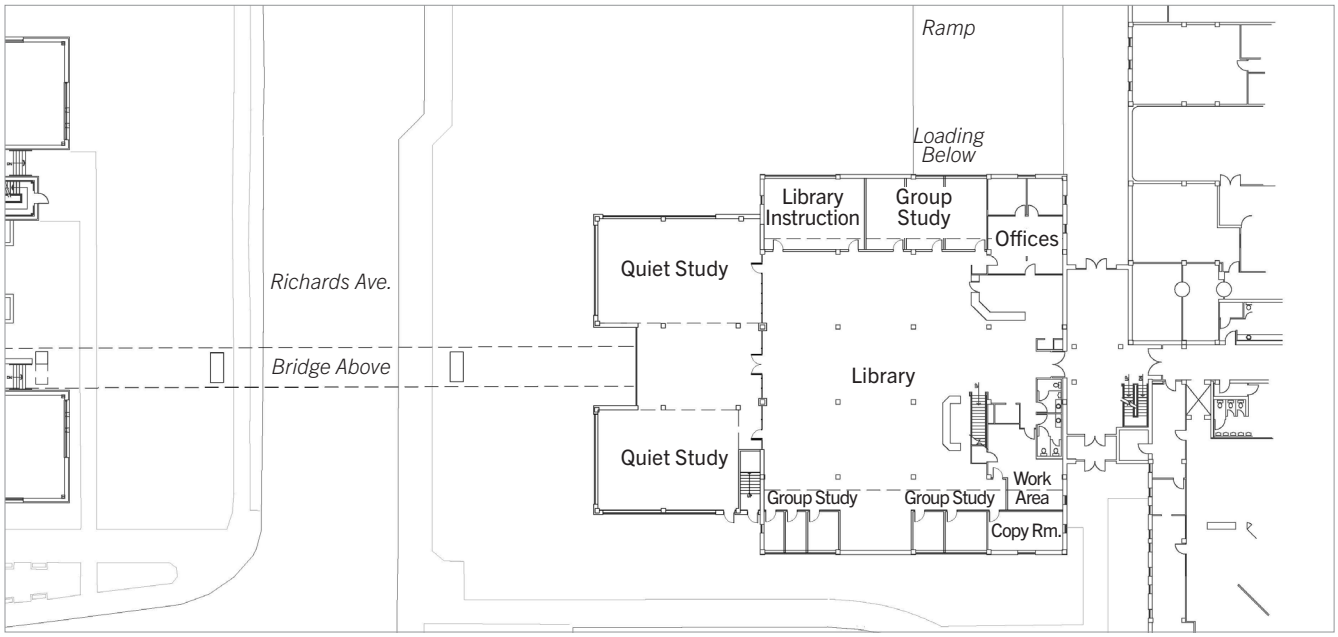
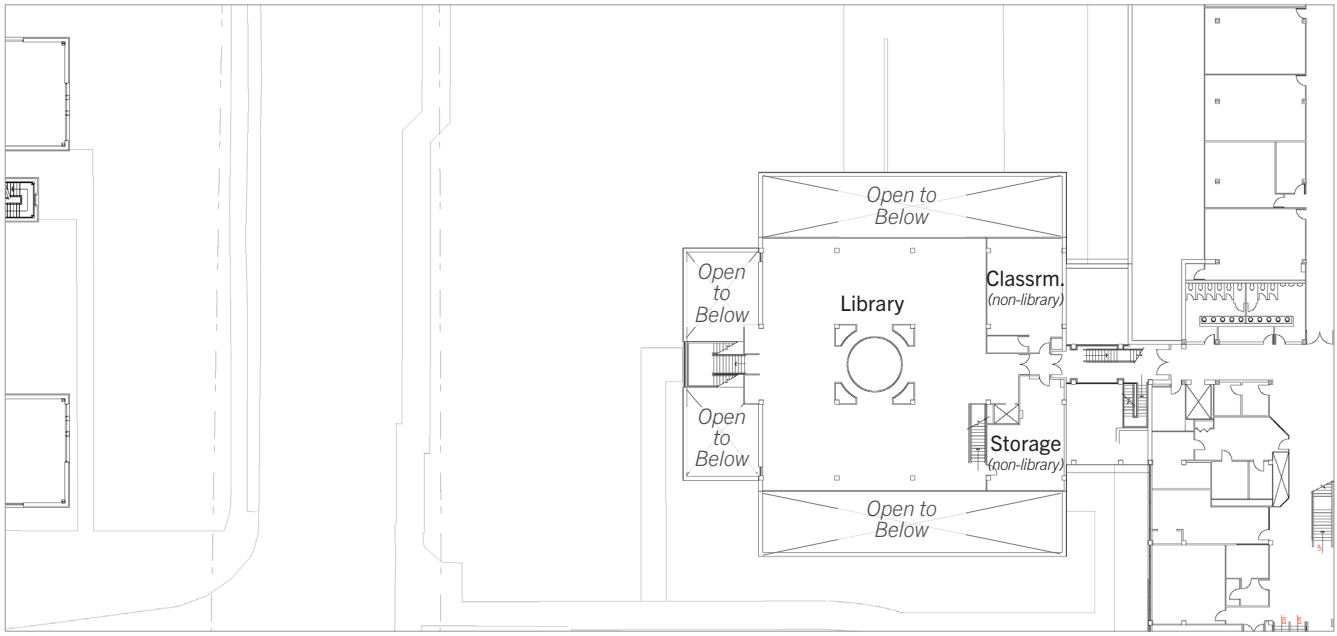


FIGURE 04.23 Existing + Proposed Library First Floor Plan

bridge above, enclosed in sound-insulated glazing. To block sound spill from the second floor student lounge to first floor library, the Plan recommends adding a wall at the balcony edge to the underside of the ceiling, as shown in the sections on pages 27 and 28. The Library Instructional Space and group study areas are located along the perimeter walls. The circular opening in the second floor is filled in to provide the pathway to the bridge. The gallery there would relocate either inside the library or it could remain on the second floor and have high visibility at the cross campus walk.

The exterior appearance of the addition would match the brick and roof material of existing Library. The window wall could have horizontal mullions and glazing similar to the CIT Building so this would read like an ensemble with the bridge across the avenue.

EXISTING SECOND FLOOR



PROPOSED SECOND FLOOR

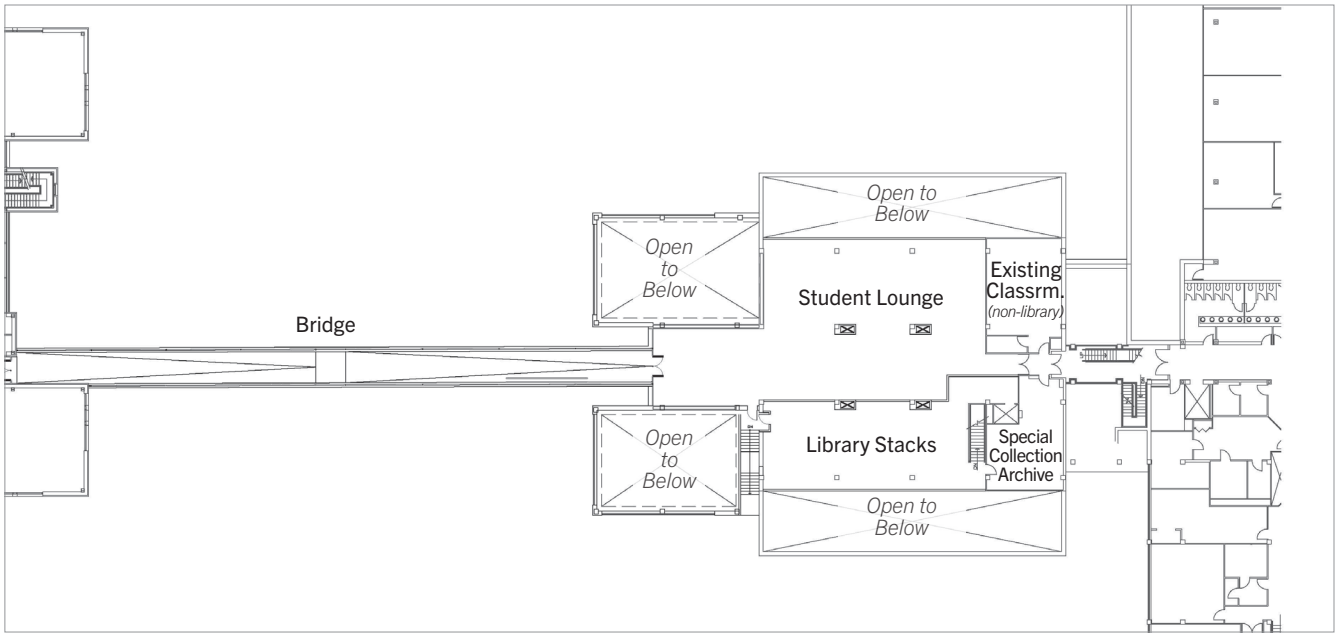
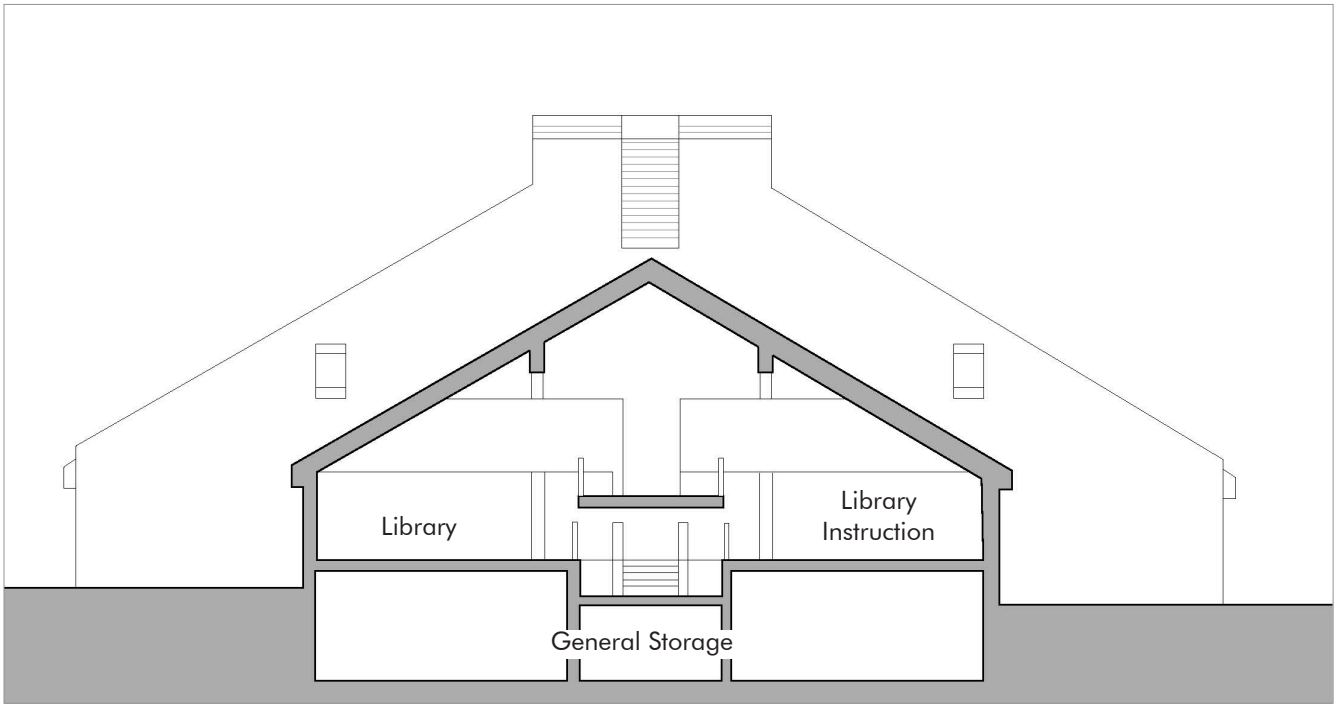


FIGURE 04.24 Existing + Proposed Library + Bridge Second Floor Plan

WEST END LIBRARY SPACE - EXISTING CROSS SECTION



WEST END LIBRARY SPACE - PROPOSED CROSS SECTION

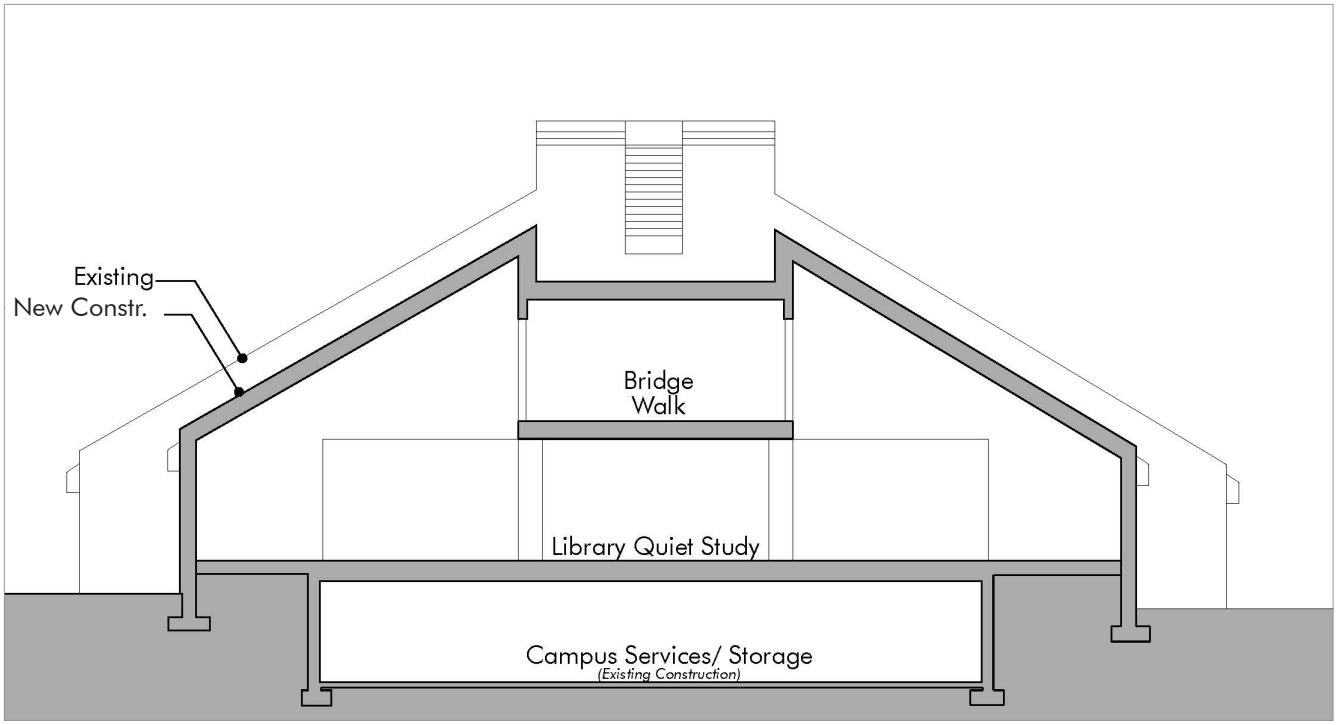
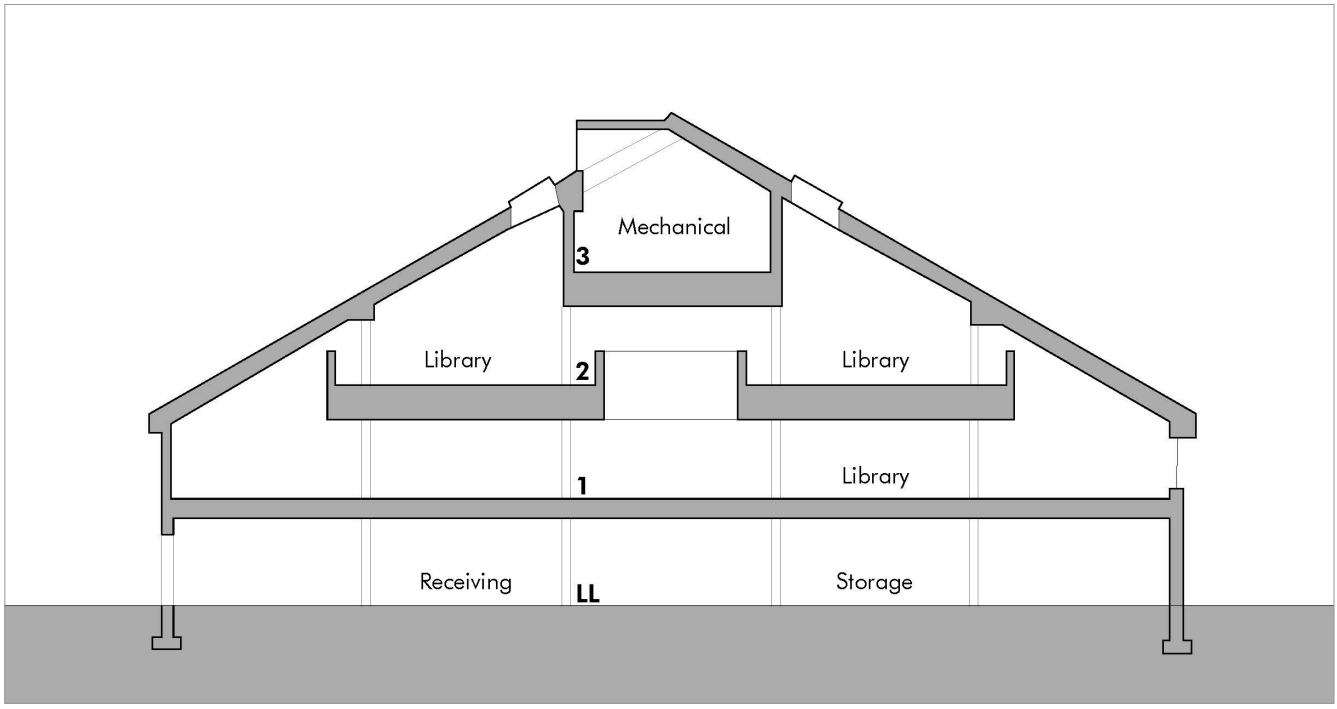


FIGURE 04.25 Existing + Proposed Cross Section of the Library West End

MAIN LIBRARY SPACE - EXISTING CROSS SECTION



MAIN LIBRARY SPACE - PROPOSED CROSS SECTION

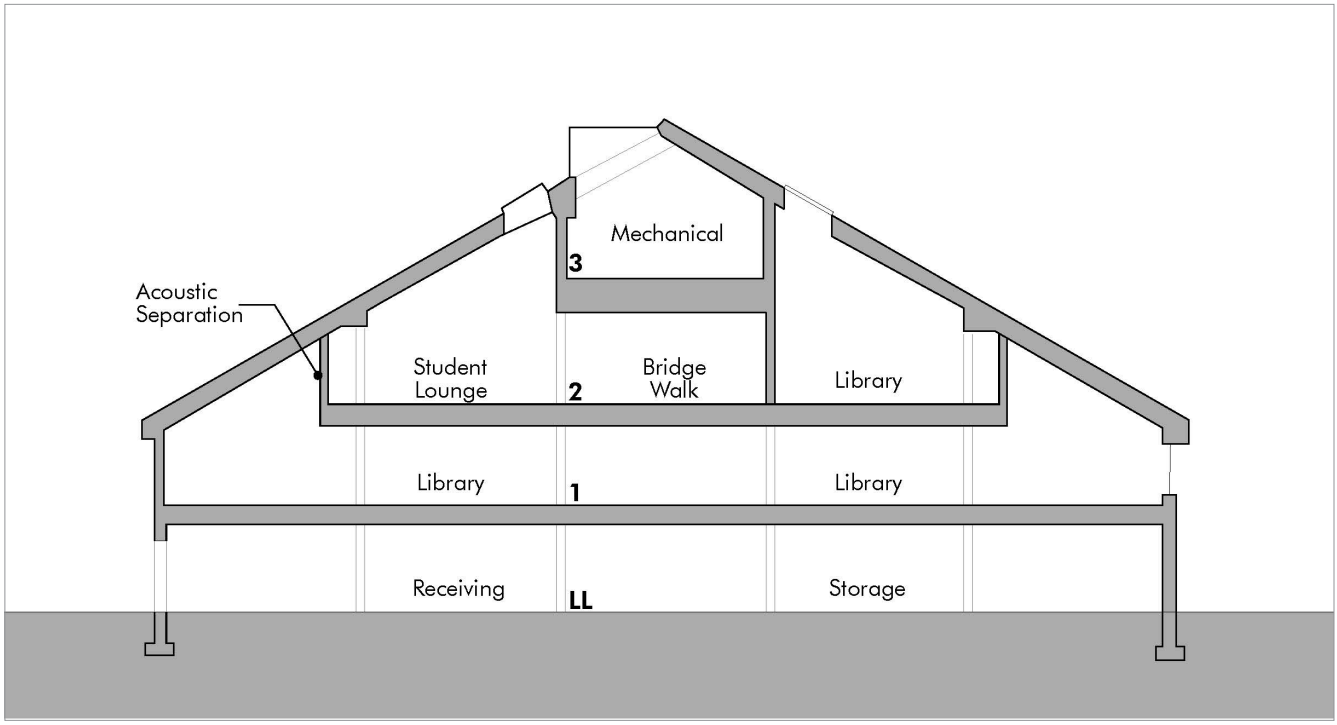


FIGURE 04.26 Existing + Proposed Cross Section of the Library Main Space



Concept Rendering of Proposed Pedestrian Bridge + New Quadrangle



WEST CAMPUS NEW ADDITION

The 10-year Master Plan Update provides a total of approximately 45,000 GSF in expansion. Some of this added area is included in the projects described previously. This project, a new 2-story, 28,400 GSF wing on the West Campus, provides the balance of this expansion.

Programmatically, the Plan does not prescribe a specific mix of spaces for this addition. The actual space program should be assessed closer to the time the project is implemented, when the College's needs at that time are better understood. The new construction represents an opportunity to replace and expand specialized facilities by relocating them, and then repurpose the old space for other uses. Given that the culinary facilities needs both renewal and expansion, this program could be a candidate for the new wing. Given its proximity to the B Wing, the first floor of the new wing could provide the balance of the expansion eventually needed for student services to support retention. To the right are two potential program scenarios.

Physically, the consultant team studied several locations for the new wing. The West Campus had the majority of the functional need, so this was the focus. The preferred location, connected to the CIT and B Wings creates a compact ensemble with the existing campus, that is well integrated. The circulation connects easily to the existing hallways, making wayfinding clear. The massing here fits comfortably with the campus setting, linking well to the CIT Building. The addition is set back far enough from Richards Avenue so as not to be obtrusive. (See the following section for information on the resulting site plan, the relocated access drive and replacement parking).

Other location options for this addition were considered. There is adequate space in back, west of the A Wing, but this site was considered too "out of the way". An addition there would not have visibility and presence, and would make interior wayfinding challenging. An addition extending outward towards Richards Avenue could be too obtrusive. Siting the expansion in the parking lot west of the H wing and campus drive would result in a separated building not integrated with the complex.

Architecturally, the exterior of this addition should have similar character and materials as the CIT Building. In this way, these two buildings facing Richards Avenue will convey a unified, collegiate appearance, with the new harmonizing with the existing and framing the new grass quadrangle (described in the following section).

Available Additional Space

- 28,400 GSF
- 15,600 ASF (7,800 ASF per floor)

Scenario 1	ASF
1st Floor	
Balance of Student Services	2,400
Lounge / Study	1,200
Student Activity Space	4,200
Total	**7,800**
2nd Floor	
Design, Comp. Labs (replace)	3,200
Other Academic Spaces	4,600
Total	**7,800**

Scenario 2	
1st Floor	
Balance of Student Services	2,400
Design, Comp. Labs (replace)	3,200
Lounge / Study	2,200
Total	**7,800**
2nd Floor	
Culinary (relocated / expanded)	7,800

TABLE 04.4 New Wing: Space Program Possibilities

EXISTING SITE PLAN

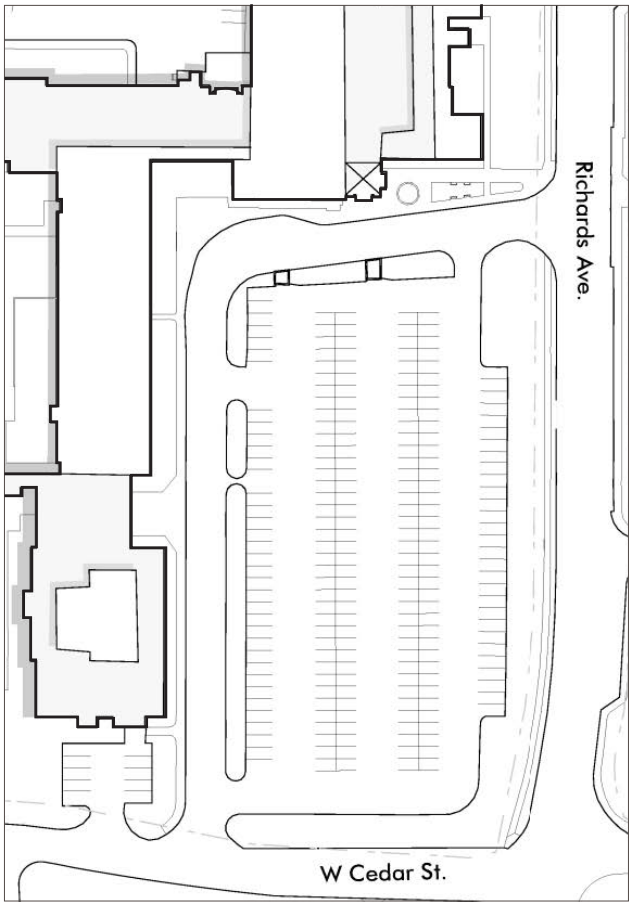


FIGURE 04.27 Existing West Campus Addition Site Plan

EXISTING AERIAL VIEW



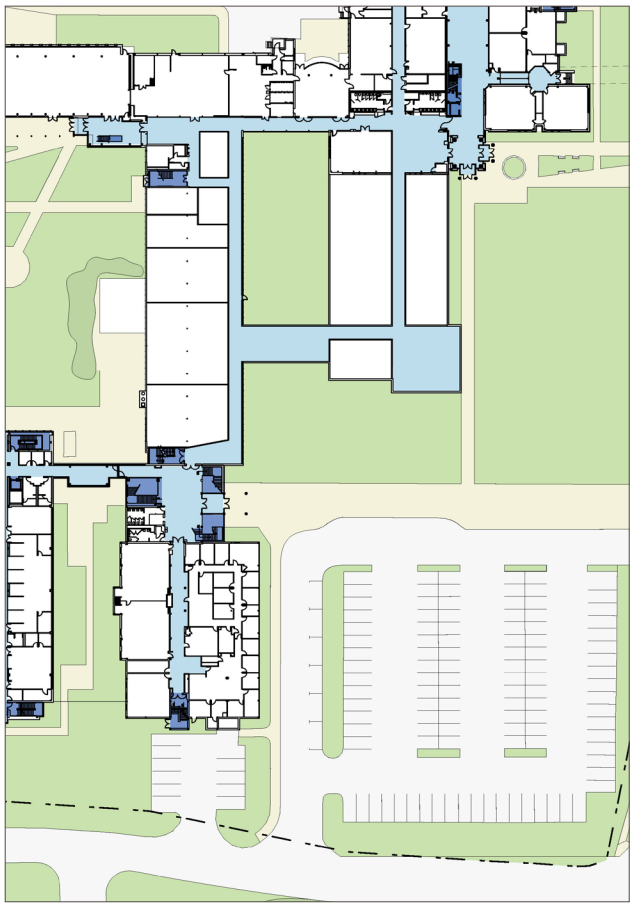
Existing Aerial View

PROPOSED AERIAL VIEW



Proposed Aerial View with New West Campus Addition

PROPOSED FIRST FLOOR



PROPOSED SECOND FLOOR

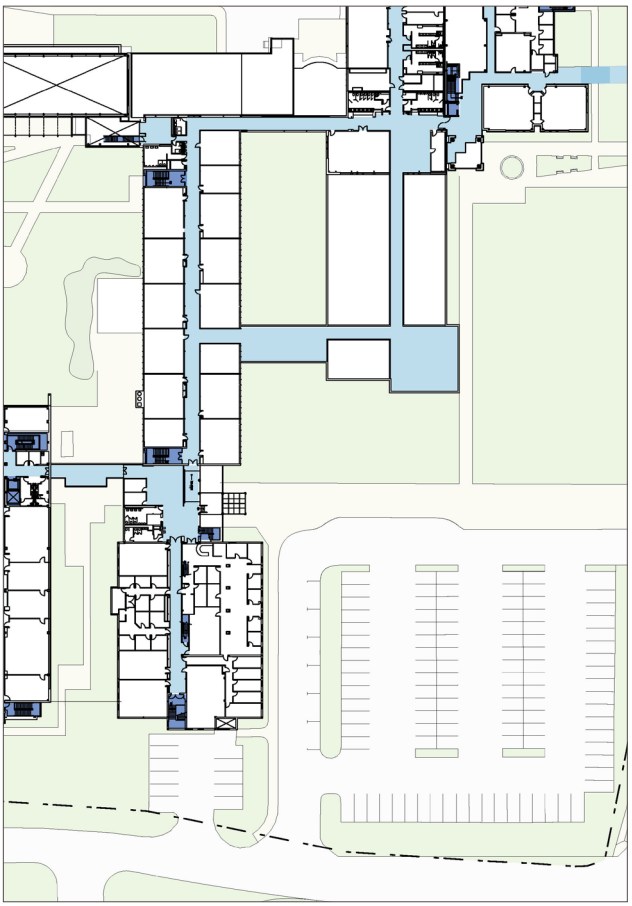


FIGURE 04.28 Proposed First and Second Floor Plans of West Campus Addition

ACCESS, PARKING AND OPEN SPACE PROJECTS



KEY

- Parking Reconfiguration Projects
- Open Space Projects
- Campus Access Projects



FIGURE 04.29 Access, Parking + Open Space Projects Summary

WEST CAMPUS QUADRANGLE

For a College in an attractive green neighborhood, it is ironic that parking lots are in front and the green spaces are mostly in back at NCC. Large expanses of asphalt are a main impression when passing the College in a car. Many community colleges have green frontages and parking at the periphery or in back.

Creating a more collegiate, verdant setting can have a strategic benefit with supporting recruitment and retention. Accordingly, the Plan recommends converting part of the West Campus front parking lot into a quadrangle. This will provide a level grass space for student recreation and events and provide a suitable, more collegiate setting for NCC's frontage. This project would likely be done when the new academic wing is built. The quad requires moving the vehicle entrance to the West Campus further south on Richards Avenue.



Precedent: Three Rivers CC Quadrangle



Before: Existing Parking, CIT, Library



After: Proposed Quadrangle, Pedestrian Bridge, CIT, Library

RICHARDS AVENUE ACCESS

The Plan recommends relocating the West Campus curb cut opposite the curb cut of the East Campus entry drive on Richards Avenue. This is approximately 205 feet from the intersection with West Cedar Street. To address potential congestion, dedicated left turn lanes should be provided for both north and southbound traffic on Richards Avenue. The current road right of way should have ample dimension, though some space now used for parallel parking may have to be converted. A traffic study should be done to confirm flows and level of service.



Richards Ave. Parking

KEY Main Campus Entry

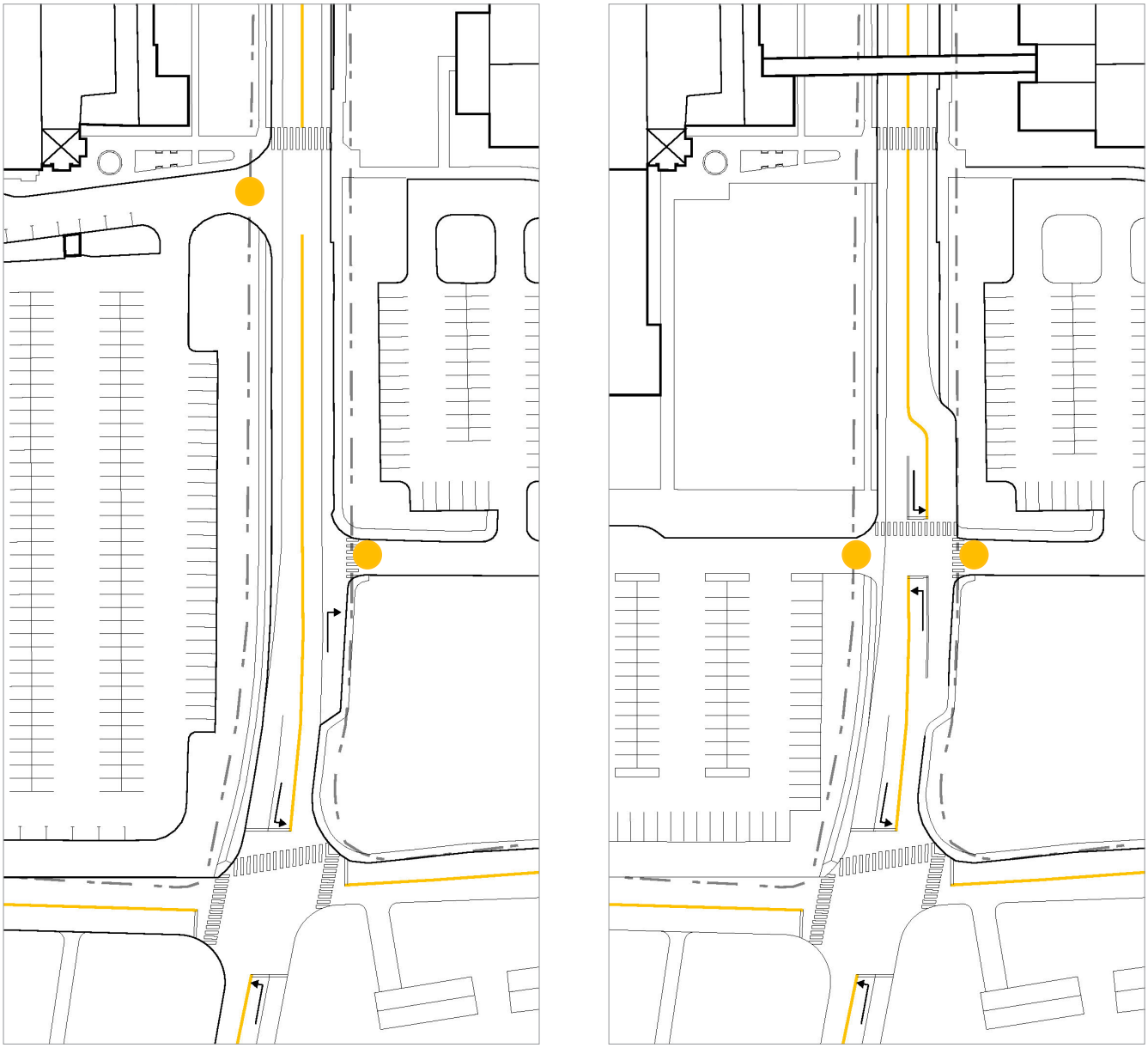


FIGURE 04.30 Existing + Proposed Richards Ave Lane Reconfiguration Study

PARKING STRATEGY

The Master Plan parking strategy is two-fold.

1. Overall approach to campus access

2. Approach for replacing parking spaces lost in making the new quadrangle

The Plan recommends a balanced, sustainable approach to campus access, optimizing Transportation Demand Management (TDM) to reduce single occupancy vehicle use to the greatest extent practical. This means continuing to support and publicize the U Pass program and transit, as well as carpooling, bike and pedestrian access.

Recognizing that at NCC in its suburban setting, most will still have to access the campus by car, the Plan recommends that parking be provided that is sufficient to meet peak demand, while balancing site design with amenities and green space. The existing number of spaces was considered to be sufficient for current enrollment. Going forward, when enrollment increases, the College should assess parking supply and demand, especially as the U Pass program matures and more may use transit.

To replace parking spaces lost in making the new quadrangle, the Master Plan recommends optimizing surface parking in the East and West Campuses, as described in the following projects.

Total Existing Spaces	1,490
Spaces Lost for Quad	137
Spaces Gained	
Convert/Expand Woodchip Lot	50
Expand West Campus North Lot	49
Reconfigure East Campus Lots	25
Resulting Total	1477



Existing NCC Transit Stop + Bus

CONVERT WOOD CHIP PARKING LOT TO PERMANENT

The so-called wood chip parking lot was part of the H Wing project. It reportedly was originally a reinforced grass lot, used to gain sustainability points for this LEED Gold project. Car wheels turning in the grass turned it to mud, however, requiring facilities staff to put down wood chips to minimize mud covering cars. People avoid parking in this lot when they can. It is generally considered a problematic area. Since it cannot be marked with parking lines, the parking efficiency is likely lower than other lots.

The Plan recommends replacing the two-bay wood chip lot with a three-bay asphalt lot. This will add 50 estimated spaces. The added spaces come from a more efficient, permanent layout and from expanding the lot somewhat into grass areas to the north and south as shown on page 37. An integral part of this project is providing a stormwater detention feature along the west edge of this lot, between the parking and the river frontage. This will filter the water. A pedestrian path next to the lot will connect the campus to the river frontage.



Existing Wood Chip Lot

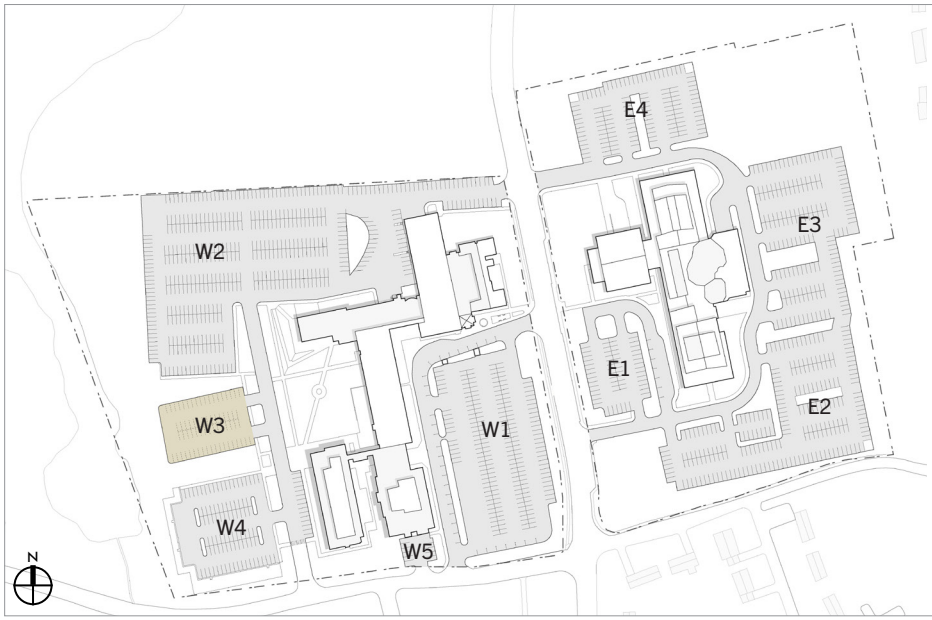
WEST CAMPUS PARKING RECONFIGURATION

The Plan recommends expanding the parking lot to the west into the gravel area at the north end of the West Campus, maintaining a 100-foot setback from the River. This adds 49 spaces. This project will avoid repaving most of the north lot, but will require removing the far west portion of the lot which slopes down.

EAST CAMPUS PARKING RECONFIGURATION

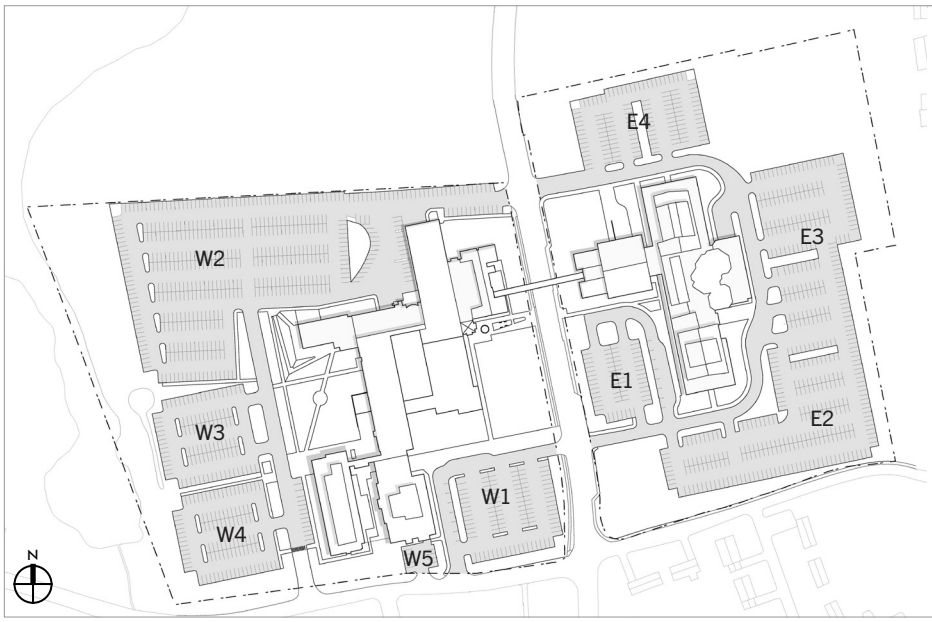
Parts of the East Campus lots have wide islands between the parking bays. To add capacity and make up for spaces lost making the quadrangle, the Plan recommends reconfiguring some of the parking lots in the East Campus to be more efficient as shown in the site plan below. The new plan still allows for green islands and trees to break up the areas of asphalt, and avoids more costly approaches such as extending parking into wooded areas at the campus periphery or a parking deck.

EXISTING



LOTS	SPACES
E1	70
E2	231
E3	169
E4	134
Subtotal	604
W1	248
W2	451
W3	55 approx.
W4	121
W5	11
Subtotal	886
TOTAL	1490

PROPOSED



LOTS	SPACES
E1	70
E2	251
E3	174
E4	134
Subtotal	629
W1	111
W2	500
W3	105
W4	121
W5	11
Subtotal	848
TOTAL	1477

FIGURE 04.31 Existing + Proposed Campus Parking Reconfigurations

PARKING ALTERNATIVES EXPLORED

Below-Grade Garage:

One way to create the quad and not lose spaces would be building an underground garage. The consultant team studied the feasibility of this approach. Physically, there is adequate space available for a one-level garage that could be located under the quad that could fit about 100 spaces. It could be accessed by a slip ramp from the reconfigured surface lot, at a reasonable slope. Economically, however, this approach is costly and not recommended as part of this Master Plan. The expense of excavation, structure, vertical circulation (not shown in this test fit study) and required mechanical ventilation makes any below-grade garage an expensive proposition (see the following section on estimated project costs).

Remote Lot:

If additional parking is needed, and this is not feasible on campus, it may be beneficial to explore use of a parking lot off campus, in a leased or shared use arrangement, and initiating a shuttle service. This would require finding a suitable lot with sufficient capacity, perhaps one with peak weekend use that could be used by NCC on weekdays. The operating costs for shuttle service and leasing must be considered.

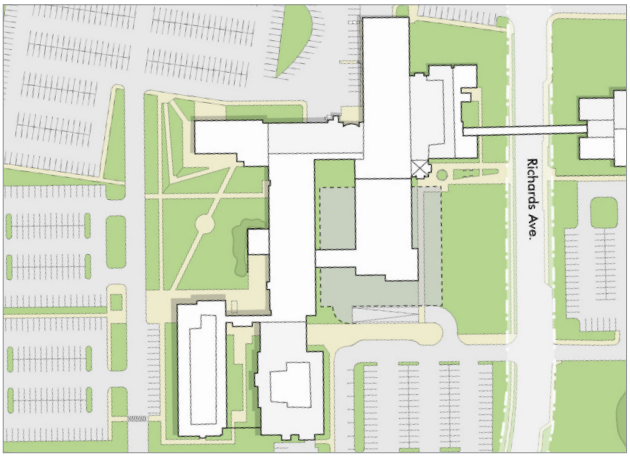


FIGURE 04.32 Underground Parking Study Site Plan

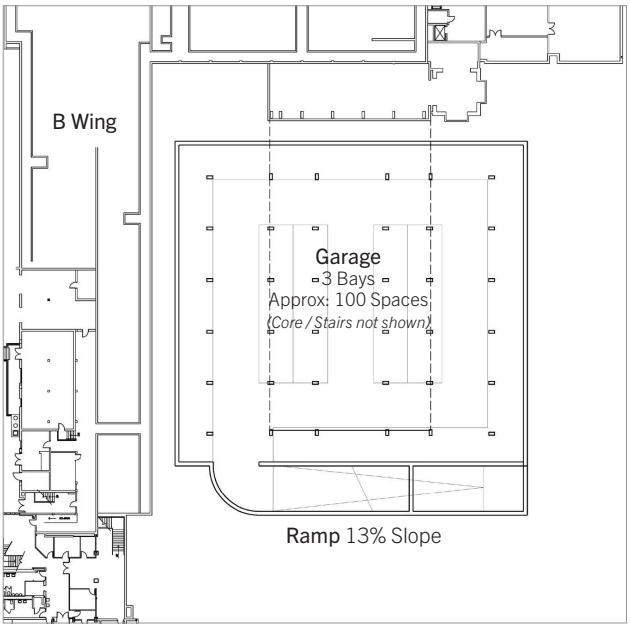


FIGURE 04.33 Underground Parking Study Floor Plan Layout



Aerial Rendering of Ramp + Site of Underground Parking Study

COURTYARD ENCLOSURE

The courtyard between the D and H Wings on the West Campus, with its landscaping, mature trees, stone walls and seating area, is especially welcoming and attractive. Stakeholders noted, however, that it is not used nearly has much as it could be, given security factors. Doors from the flanking buildings to the courtyard are locked to prevent unauthorized access.

The solution to activating the courtyard is simple and cost effective. The Master Plan recommends installing an ornamental metal fence at the south end of the courtyard, with a locked gate. This will restrict unauthorized access from the West Cedar Street frontage while allowing doors from the D and H Wings to be unlocked. This should increase use and enjoyment of the courtyard in the fall and spring. The fence would have a secured gate with hardware to permit fire egress. The fence could be vertical metal pickets, sufficiently high to prevent access. Its location should avoid the mature tree at this end of the courtyard.



View of the D+H Wing Courtyard from W Cedar St.



View of the D+H Wing Courtyard from the Connecting Bridge

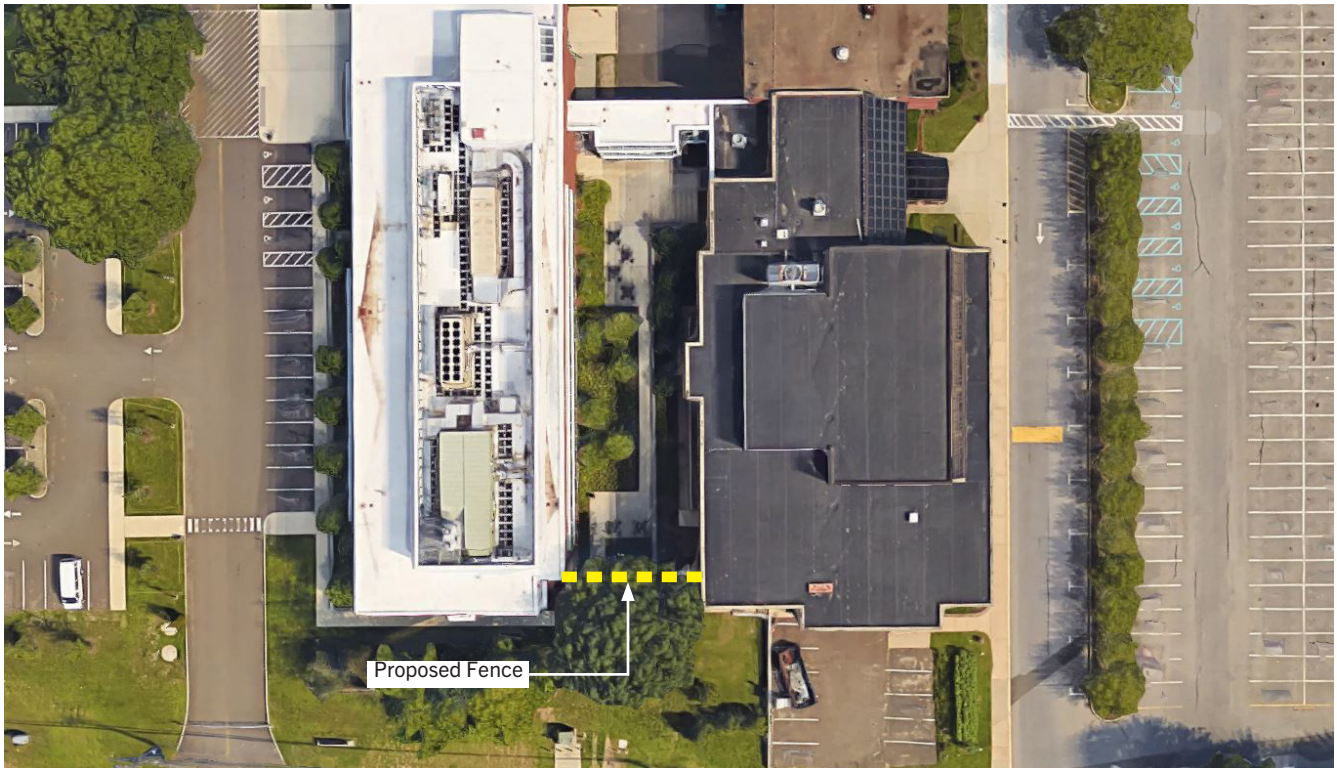


FIGURE 04.34 Aerial View of Proposed Fence Enclosing D + H Wing Courtyard



View of Existing Site by River



View of the Fivemile River

OUTDOOR RECREATION AND PATH

Norwalk Community College is located in a beautiful area, with woods along much of the periphery and the Fivemile River to the west. The campus does not fully take advantage of the setting, however, and is visually cut off from the river. There are few areas, other than some spaces near the H Wing for students to gather.

In addition to the new quad, the Plan recommends detailed study of the west edge of the West Campus to make better use of this area. This area could have its natural areas largely preserved and parts of the landscape enhanced in order to provide some clear open space that extends to the river edge, a trail, areas for gardens and/or biology department use (as today) plus managed areas for vehicle storage and maintenance as needed with appropriate screening.

Several stakeholders mentioned that a walking path around the campus would be desirable. There are pleasant wooded and grass areas along many edges. Other parts of the campus perimeter, however, are more constrained, with parking lots extending to the property line in one case, and possible wetland considerations in others. A detailed feasibility study is recommended to determine the cost / benefit of a possible walking trail around the campus.



Aerial Rendering of River Walk and Outdoor Recreation Area



Concept Aerial Rendering of NCC Campus



ENERGY AND MEP INFRASTRUCTURE PROJECTS

ENERGY MASTER PLAN

An Energy Master Plan was conducted for NCC prior to this Master Plan. The EMP includes both system-wide and campus-specific recommendations for energy conservation measures (ECMs), procurement, renewable energy and policies. One ECM at NCC is replacing older lighting with energy efficient LEDs. Many of NCC's fixtures are still fluorescent. Lighting control upgrades are needed as well. Once these and other projects are implemented, NCC's energy use should be reduced significantly. The detailed findings and recommendations are included in the Technical Appendix.

MASTER PLAN MEP RECOMMENDATIONS

The Master Plan includes recommendations for HVAC, electrical, plumbing and fire protection both to coordinate with architectural renovations and additions, including the new pedestrian bridge (detailed in the Technical Appendix) and as stand-alone projects to address upgrades for systems nearing the end of their useful life are described as follows.

East Campus AHU Replacement & Mechanical Room Upgrades

The most significant HVAC infrastructure project is addressing the obsolescence of the Air Handling Units serving the East Campus in a multifaceted project.

- Attic Mechanical Equipment Rooms (MERs) do not have access to meet current code.



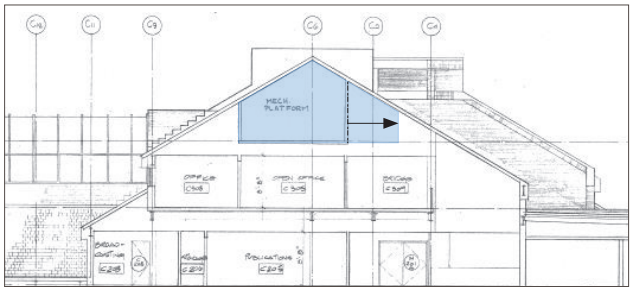
Precedent: Pull Down Ladder into Mechanical Space at MxCC

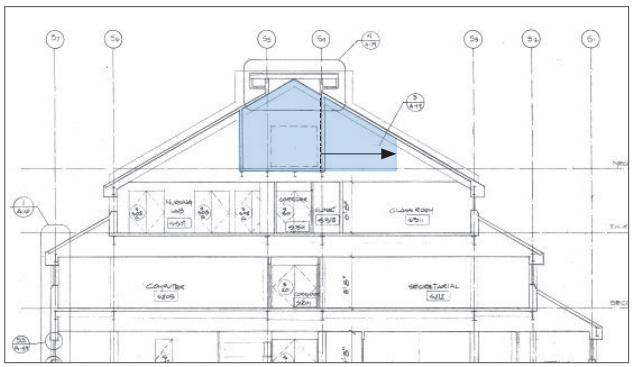
- Provide pull-down ceiling panels with ladders at three locations.



Site Plan: East Campus Mechanical Room Locations

- Replace 5 Air Handling Units (AHUs) in East Campus Attic MERs.
- Conduct a detailed study to assess the feasibility to add floor structure and expand MER spaces for adequate clearance.

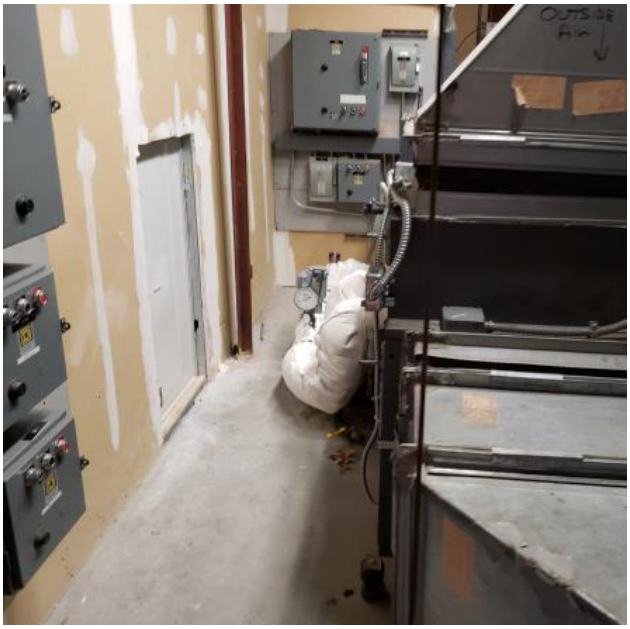




Proposed East Campus Mechanical Room Expansion

- Attic MERs do not have sufficient clearance around equipment for access, servicing and to meet current codes.





Existing Conditions in East Campus Attic Mechanical Equipment Rooms: insufficient clearance to service or replace outdated AHUs.

East Campus Controls Upgrade

- Parts of the east campus are still on pneumatic controls.
- These should be figured and upgraded to Direct Digital Controls.

West Campus A Wing Equipment Replacement

- The kitchen makeup air units have reached the end of their useful life and should be replaced.
- This will happen as part of the Master Plan Phase 3 Student Center Addition / renovation.
- The Remote Terminal Unit's, while approaching the end of their useful life, are in good condition and should be expected to last beyond it with proper maintenance.

West Campus D Wing Plant Upgrade

- The existing chiller and cooling tower, as well as (2) of the air handling units in D Wing are close to their expected useful life.
- These should be replaced.

Fire Alarm Upgrades

- Fire Alarm coverage is poor on the East Campus, on equipment and at West Campus B & D wings.
- The Fire Alarm system should be replacement and additional devices installed for expanded coverage.

LONG-TERM EXPANSION

The 10-year Master Plan projects in the previous sections total approximately 45,000 gross square feet in floor area added to the campus (excluding the potential leased facility for an extension site in Stamford, and the bridge). These recommendations account for much, but not all of NCC's needs for academic and support space, which can be summarize as follows:

Additional Space Need: 107,000 GSF *(59,000 ASF at 55% efficiency factor)*

Additional Space Provided: 45,000 GSF

Balance of Long-Term Need: 62,000 GSF

The consultant team studied three options for long-term expansion to accommodate 62,000 GSF, one expands on the East Campus, one on the West Campus and the third in a distributed manner with smaller additions on both sides of Richards Avenue.



Aerial View of NCC Campus

Option 1: East Campus

This option locates a 3-story building on the parking lot north of the north wing of the East Campus complex. This new construction can be integrated functionally with a pedestrian bridge connection at the second and third floor levels, directly in line with the main circulation spine of the other buildings. The vehicle access drive remains at ground level, with modified grading if necessary for adequate overpass clearance. By adding floor area on the East Campus, this approach more balances east and west.

One strategy to replace lost parking could be a lower level garage, as shown. The drive would require reconfiguring part of the Early Childhood program playground. A 2-story addition is not recommended since its larger footprint extends farther to the west, impacting the berm that acts as a buffer, and to the east into the woods, which may contain wetlands.

Option 2: West Campus

This approach locates a 3-story wing in part of the north parking lot, connected to the A Wing. It creates a service yard between the one-story Student Center and its south façade, used for accessing food service loading areas. While this option is linked to the West Campus complex, the connection from the A Wing is remote from the core and as a result, may be hard to find, creating wayfinding problems.

The option shows an above-ground garage to replace lost parking and to allow greening of more of the West Campus by removing some surface parking west of the student center. The size and location of the garage should be carefully considered to optimize campus fit and views from buildings, and to connect well with site circulation.

Option 3: Distributed

Rather than putting all expansion in one project in one location, this option distributes the proposed additions in three locations. The intent is to create more of a compact ensemble of buildings, addressing the Richards Avenue frontage at the center of the College. A 3-story addition on the East Campus connects to the existing building, forming a "U-shaped" composition with a small quad at the center in place of parking. Another addition to the Library could provide needed expansion there. The addition shown on the West Campus extends the new academic wing to be the same length as the B Wing, fronting the pedestrian plaza.

The parking lost to the east addition could be replaced with a one-level parking deck in the location shown. This would be low-profile at one level above ground and visually screened from neighbors by trees. The other additions, avoiding parking lots, would have no parking impact.

Summary

The preferred approach will depend on several factors best considered in the future closer to when the expansion is needed. One factor is adjacency – what location would put the functions in the expansion close to existing functions that should be in proximity. Another factor is budget. Can a large scale addition be funded, or is are smaller projects more realistic? Recognizing that flexibility is needed when addressing long term development, this Master Plan does not prescribe one option, but rather frames some possible approaches.

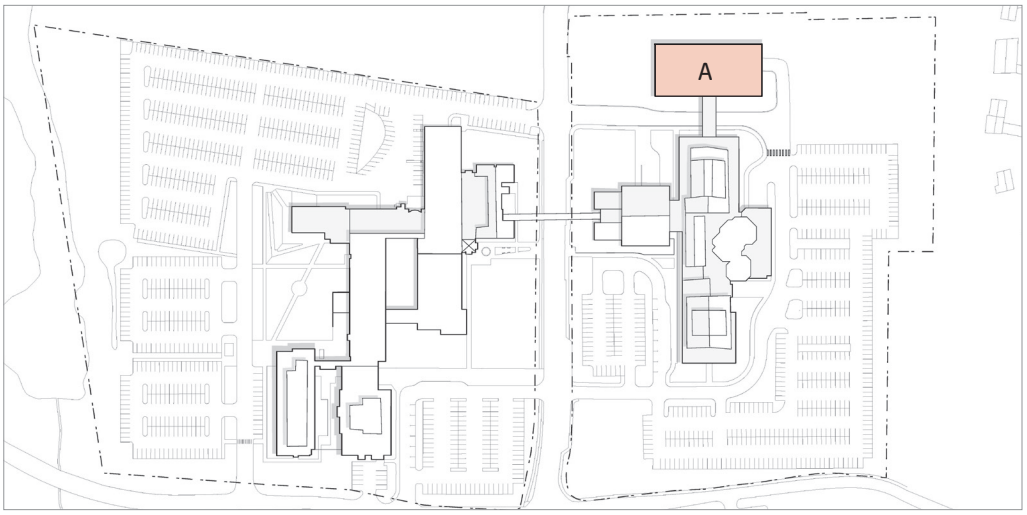
KEY

Parking Additions

Building Additions

OPTION 1: EAST CAMPUS

A 3 Story Building Addition
- 62,000 SF
- Parking Below

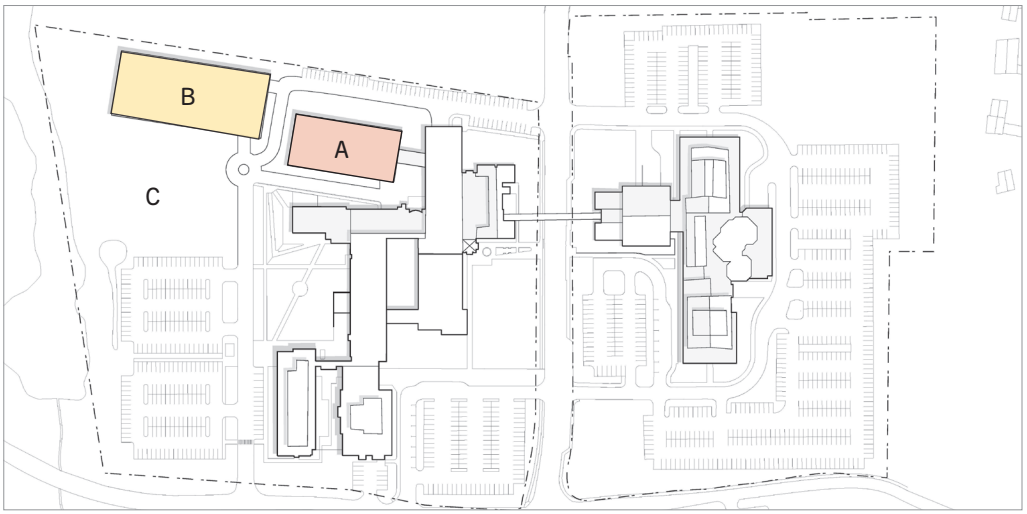


OPTION 2: WEST CAMPUS

A 3 Story Building Addition
- 62,000 SF

B Parking Garage

C Green Space



OPTION 3: DISTRIBUTED

A 2 Story Building Addition
- 9,600 SF

B 3 Story Building Addition
- 48,000 SF

C 1 Story Building Addition
- 4,000 SF

D Green Space

E 1 Level Parking Deck

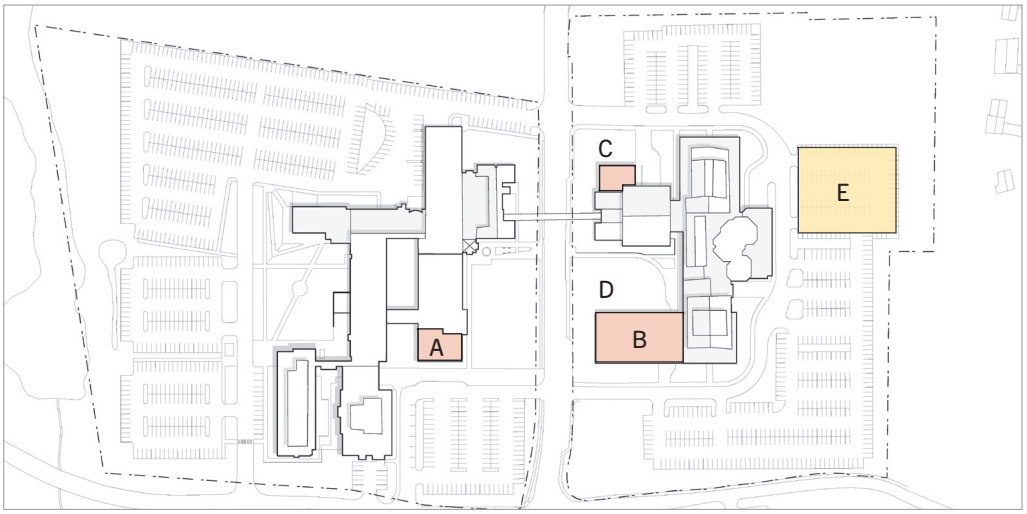


FIGURE 04.35 Three Options for Long Term Expansion

GUIDELINES

ARCHITECTURAL CHARACTER

Since NCC's buildings already reflect a wide range of styles, the Master Plan recommends that additions and new buildings have an architectural character that connects and harmonizes with the materials and detailing of recent buildings rather than introducing a new style.

For the Library Addition, the Plan recommends use of exterior brick and roof materials and roof slope to match the original library. The gable end and glazing of the addition can draw from the attractive character of the CIT Wing across Richards Avenue. Once the pedestrian bridge is completed, these can appear as an ensemble.

The recommended character of the pedestrian bridge (illustrated earlier in this chapter) can be summarized as simple and contemporary. The supporting banded brick piers drawing from the CIT Wing and the bridge enclosure reflecting a simple, sophisticated language, in high-efficiency glazing.

The new West Campus Wing represents an excellent opportunity to "reface" this frontage facing the new quad and Richards Avenue beyond. The Plan recommends matching the exterior language of the adjacent CIT Building with its banded brick and glazing with horizontal accents. In this way, the addition will work as a uniform ensemble with the CIT building. The result will be a much more collegiate appearance than today with the B Wing façade of 1960's glass grid and expanse of parking in the foreground.



Proposed Concept Rendering of Library Addition



Proposed Concept Rendering for New West Campus Addition



Existing Exterior of CIT Building

SUSTAINABILITY

The graphic below illustrates the integrated approach to sustainability in the Master Plan. By optimizing the use of existing facilities, and potential shared use of a facility for the Stamford Extension Site, the Recommendations embody a sustainable approach to development and operations.

New construction and major renovations like the B Wing Renovation are required to comply with Higher Performance Building Standards of the State of Connecticut. This relates approximately to the U.S. Green Building Council LEED Certified rating. The consultant team encourages NCC to strive for the highest level of sustainability in design and energy use feasible within the project budget and operational parameters.

The Plan recommends that new and renovations utilize high-efficiency insulation in the building envelop, energy-efficient LED lighting, low flow plumbing fixtures, recycled materials and energy efficient heating and cooling systems.

The proposed location of the West Campus new wing reflects a compact development strategy, to minimize site impacts and avoid sprawl.

The landscape approach balances adding useable green space in place of front parking lots, with replacement parking in rear areas. The proposed conversion of the permeable parking lot (which has failed functionally) to asphalt is paired with recommended landscape features to manage storm water quantity and quality.

CSCU and the College should explore the feasibility of installing solar canopies in the West Campus north parking lot through a Power Purchase Agreement (PPA).



Building:
Required - CT High Performance Building Standards
Reuse existing buildings
Increase natural light
Possible shared use of existing building for Stamford Extension Site



Stormwater:
Retain / Treat / Infiltrate



Transportation:
Continue to promote bus service
Encourage ride share program



Land:
Minimize Additional Development Footprint



Landscape:
Add trees at parking
Add new quadrangle
Engage Fivemile River



Energy:
Implement Energy Master Plan recommendations
High efficiency systems
Solar canopies in parking lot

IMPLEMENTATION AND COST

PROJECT PRIORITIES

The Master Plan team, as endorsed by the president, assigned priorities to the recommended projects as follows:

Priority 1

- Student Center (Master Plan Phase 3)
- Theater Addition (Master Plan Phase 3)
- B Wing Renovation (+ associated moves)
- Stamford Extension Site
- Pedestrian Bridge / Library Replacement Space
- East Campus Attic Mechanical Upgrades (Replace Air Handlers + Expand MERs)
- D Wing Plant Replacement
- East Campus Control Upgrades

Priority 2

- Maintenance Addition
- New Wing
- New Quad, Reconfigured Parking at East and West Campuses
- Convert Wood Chip Parking Lot to Permanent
- Third Floor Connection D to H Wings
- D Wing Mezzanine Access / Expansion
- Outdoor Recreation Space on River , Campus Loop Trail

KEY

Priority 1 Priority 2



FIGURE 04.36 Project Priorities Diagram

PHASING

Project phasing, sequence and timing will depend on available funding. The first projects expected to be implemented are the Student Center and Theater Additions, the Phase 3 projects from the previous master plan. The B Wing renovation is in design and also anticipated to be built soon when funding is available.

Other Master Plan Recommendations will be implemented when funding is available. The balance of the Priority 1 projects would come first, followed by the Priority 2 projects.

Beyond the 10-year horizon of this Master Plan, additional expansion could be realized to meet the full space needs assessment.



MP Phase 3 Student Center Addition



Interior View of B Wing Hallway



MP Phase 3 Theater Addition



Exterior Facade of B Wing

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

Building Projects	GSF	Order-of-magnitude Construction Cost	Project Cost
Master Plan Phase 3 Projects: Student Center and Theater *	10,700	$20,500,000	$29,725,000
West Campus B Wing Renovation	5,400	$3,223,700	$4,674,365
Maintenance Addition, West Campus B Wing Lower Level	1,400	$667,400	$967,730
D Wing Mezzanine Expansion / Renovation	1,820	$760,260	$1,102,377
Third Floor Connector D to H Wings	900	$700,640	$1,015,928
Richards Avenue Pedestrian Bridge	2,500	$2,105,660	$3,053,207
Library Expansion / Renovation to accommodate Bridge	19,750	$6,453,778	$9,357,977
New Wing, West Campus	28,400	$15,351,886	$22,260,235
Stamford Satellite Leased Facility**	38,455	NA	NA
Subtotal (excluding satellite)	**70,870**	**$49,763,324**	**$72,156,819**
Circulation, Landscape and Open Space Projects	SF Parking		
Sitework, Access and Parking for New Wing, West Campus	54,000	$990,170	$1,287,221
New West Parking Lot (2-bay wood chip lot to 3 bay asphalt)	42,400	$496,563	$645,531
Expand NW Parking Lot	32,000	$955,000	$1,241,500
Reconfigure East Parking Lots	97,400	$1,536,000	$1,996,800
Fence at H Wing courtyard	NA	$40,000	$52,000
Subtotal	**225,800**	**$4,017,733**	**$5,223,052**
MEP Infrastructure Projects			
East Campus Mechanical Rooms Expansion / Access upgrades***	NA	TBD	TBD
Replace East Campus Air Handlers - Allowance	NA	$500,000	$650,000
East Campus Control Upgrades - Allowance	133,500	$467,250	$607,425
D Wing Plant Replacement - Allowance	NA	$1,500,000	$2,175,000
Subtotal	**NA**	**$2,467,250**	**$3,432,425**
Total / 10-Year Projects		**$56,248,306**	**$80,812,296**
Parking Long-term Option: below-grade garage	*NA*	*$6,177,161*	*$8,030,309*

** Construction Cost provided by CSCU from bid.*

*** Not in master plan scope since a leased facility.*

**** Requires detailed study in order to establish scope and cost.*

CONCLUSION

The Master Plan Update for Norwalk CC defines the capital needs to address the College's highest priority strategic goals. The Plan also encourages exploration of a leased Extension Site / Satellite Facility in Stamford to capture unmet demand and expand the College's educational impact to areas that may not be fully served at present.

The Plan carries forward several currently planned and designed projects that the College has invested time to scope and approve, in the Master Plan phase 3 additions. The Plan also defines what we believe to be the optimal space strategy for the long-planned comprehensive renovation of the B Wing and pedestrian bridge to integrate the East and West Campuses, while maintaining the integrity of the Library. The Recommendations combine small-scale incremental renovations with larger near and long-term expansion to both add capacity and green the site. By aligning the College's physical assets with its projected enrollment, programs and goals for the next decade, the Master Plan Update aims to support Norwalk CC's mission, so it continues to be a leading community college, and a vital resource for its community and the region.



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