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Architecture as an Educational Tool:

University of Connecticut School of Architecture

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Bachelor of Science/Master of Architecture
School of Art, Architecture, and Historic Preservation
Roger Williams University
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Architecture as an Educational Tool:
University of Connecticut School of Architecture Proposal

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Five Points on Architecture: A Personal Manifesto

-Architecture is TIME. As demonstrated by history, architecture has the ability to tell a story. This story may tell how a society functioned, its morals, its ideals, its education, its government. However, as time changes, so do people. We have the responsibility as architects to create architecture that will last, and do so long enough to tell a story of our time. History is essential to progression. If we do not know the failures of yesterday, we are far from creating the successes of tomorrow. What works in architecture will last; what doesn't work will teach new generations what to avoid and where to develop.

-Architecture is SPACE. Architecture has the ability to change our perception of space, which in turn can affect mood and sensation. Architecture involves the transformation of space, the transition between spaces, and the movement within space. Spaces should function, just as they should inspire. A library should have the ability contain books and allow its users to read them, just as a house should have the ability to contain people and allow its users to carry out their everyday functions in life. Architecture without function is more a work of art than a piece of architecture. Though architecture should be a piece of art that inspires, it should also have the ability to function.

-Architecture is MEANING. Thoughtless architecture is not architecture at all; it is thoughtless. Architecture should have the ability to appear thoughtless if so desired, but never actually be thoughtless. Every design decision deserves a meaning. Architectural design should be carried out with simplicity in mind, even if only underlying. Similar to a piece of music, from Classical to Jazz to Rock n Roll, architecture should strike something inherent in us which makes sense, even if not obvious. What seems to make sense to us, as humans, is balance. Though we are symmetrical on the outside, we are asymmetrical on the inside; in either case, we are still balanced. Balance does not necessarily mean symmetry; it means having a sense of equilibrium. Unless the desire of the architect is to design a space (or series of spaces) which results in the user feeling tension to some extent, architecture should demonstrate a sense of balance.

-Architecture is APPROPRIATE. Architecture should not be considered without regard for its surroundings. Site, orientation, regional climate, history, etc. all need to be considered to create a successful project. This idea should be the basis for sustainable design- working with the given environment to help ensure the building is not working against the natural tendencies of the land and all accompanying forces.

-Architecture is LIFE. Our architecture will affect every life which it comes in contact with. It can just as easily have negative effects as it can positive. Creating a space without considering how one will experience it is taking one's life and placing it as the last priority. Architecture affects how we think, feel, and function; this should not be taken for granted. Architects have a responsibility for the public, which involves taking into account everyone who is a part of it.

Current Issue

The National Architectural Accrediting Board (N.A.A.B.) has determined a list of criteria through which schools of architecture in the United States are examined and evaluated in their programs' fulfillment of the criteria. In analyzing this criteria, it appears the N.A.A.B. requirements are in line with a progressive, integrative, and collaborative program which meets educational and professional needs while still advocating advancement. However, upon analyzing the mission statements and curricula of accredited schools of architecture throughout the country, it appears the true essence of architecture, and therefore architectural education as well, is lost. Architecture is comprised of more than just architecture itself; it is born from the collision of numerous disciplines and is held together with a balance of experimentation and solid reasoning. While it is essential to advance architecture and architectural education in response to current and future circumstances, it should not progress as an exclusive, separate entity. Given the importance of recognizing, understanding, and applying the various disciplines involved, a school of architecture should aim to open itself to the campus and surrounding community, offering itself as an environment through which outside students, faculty, and guests can learn, while still allowing the school of architecture to advance in its own pursuits.

On the following pages, the N.A.A.B. criteria have been examined, and the successful aspects have been highlighted in terms of the most important criteria to provide a healthy, beneficial curriculum for a school of architecture. These criteria seem to best advocate progression, integration, and collaboration within an architectural program, which the N.A.A.B. seems to promote.

The curriculum is only one aspect of architectural education which should be examined. The physically built environment which houses the educational spaces is the manifestation of the curriculum, making it equally as important. Every student learns and develops in their own, unique manner, though the designs of many current schools of architecture do not reflect this. The design studio space has become one of the only environments provided for a student to work and collaborate, limiting the more intimate, informal, and possibly chance encounters which may also lead to a successful, perhaps more productive, learning experience. There is a need for flexibility of spaces, having the ability to respond to changes in technology and educational methods. The architecture school of the future needs to be able to adapt and progress with time, not only in terms of its curriculum, but in terms of the physically built environment as well. However, few schools, if any, currently fulfill this need.

National Architectural Accrediting Board Criteria

PART ONE (I): INSTITUTIONAL SUPPORT AND COMMITMENT TO CONTINUOUS IMPROVEMENT

SECTION 1 – IDENTITY & SELF-ASSESSMENT

I.1.1 History and Mission:

The program must describe its history, mission and culture and how that history, mission, and culture is expressed in a contemporary context. Programs that exist within a larger educational institution must also describe the history and mission of the institution and how that history, mission, and culture is expressed in a contemporary context. The accredited degree program must describe and then provide evidence of the relationship between the program, the administrative unit that supports it (e.g., school or college) and the institution. This includes an explanation of the program's benefits to the institutional setting, how the institution benefits from the program, any unique synergies, events, or activities occurring as a result, etc. Finally, the program must describe and then demonstrate how the course of study and learning experiences encourage the holistic, practical and liberal arts-based education of architects.

I.1.2 Learning Culture and Social Equity:

Learning Culture: The program must demonstrate that it provides a positive and respectful learning environment that encourages the fundamental values of optimism, respect, sharing, engagement, and innovation between and among the members of its faculty, student body, administration, and staff in all learning environments both traditional and non-traditional. Further, the program must demonstrate that it encourages students and faculty to appreciate these values as guiding principles of professional conduct throughout their careers, and it addresses health-related issues, such as time management. Finally, the program must document, through narrative and artifacts, its efforts to ensure that all members of the learning community: faculty, staff, and students are aware of these objectives and are advised as to the expectations for ensuring they are met in all elements of the learning culture.

Social Equity: The accredited degree program must provide faculty, students, and staff—irrespective of race, ethnicity, creed, national origin, gender, age, physical ability, or sexual orientation—with a culturally rich educational environment in which each person is

equitably able to learn, teach, and work. This includes provisions for students with mobility or learning disabilities. The program must have a clear policy on diversity that is communicated to current and prospective faculty, students, and staff and that is reflected in the distribution of the program's human, physical, and financial resources. Finally, the program must demonstrate that it has a plan in place to maintain or increase the diversity of its faculty, staff, and students when compared with diversity of the institution during the term of the next two accreditation cycles.

I.1.3 Response to the Five Perspectives:

Programs must demonstrate through narrative and artifacts, how they respond to the following perspectives on architecture education. Each program is expected to address these perspectives consistently within the context of its history, mission, and culture and to further identify as part of its long-range planning activities how these perspectives will continue to be addressed in the future.

A. Architectural Education and the Academic Community. That the faculty, staff, and students in the accredited degree program **make unique contributions to the institution in the areas of scholarship, community engagement, service, and teaching.** In addition, the program must describe its **commitment to the holistic, practical and liberal arts-based education of architects and to providing opportunities for all members of the learning community to engage in the development of new knowledge.**

B. Architectural Education and Students. That students enrolled in the accredited degree program are prepared: to live and work in a global world where diversity, distinctiveness, self-worth, and dignity are nurtured and respected; to emerge as leaders in the academic setting and the profession; to understand the breadth of professional opportunities; to make thoughtful, deliberate, informed choices; and to develop the habit of lifelong learning.

C. Architectural Education and the Regulatory Environment. That **students enrolled in the accredited degree program are provided with: a sound preparation for the transition to internship and licensure within the context of international, national, and state regulatory environments;** an understanding of the role of the registration board for the jurisdiction in which it is located; and prior to the earliest point of eligibility, the information needed to enroll in the Intern Development Program (IDP).

D. Architectural Education and the Profession. That students enrolled

in the accredited degree program are prepared: to practice in a global economy; to recognize the positive impact of design on the environment; **to understand the diverse and collaborative roles assumed by architects in practice**; to understand the diverse and collaborative roles and responsibilities of related disciplines; to respect client expectations; to advocate for design-based solutions that respond to the multiple needs of a diversity of clients and diverse populations, as well as the needs of communities; and to contribute to the growth and development of the profession.

E. Architectural Education and the Public Good. That students enrolled in the accredited degree program are prepared: to be active, engaged citizens; to be responsive to the needs of a changing world; to acquire the knowledge needed to address pressing environmental, social, and economic challenges through design, conservation and responsible professional practice; to understand the ethical implications of their decisions; **to reconcile differences between the architect's obligation to his/her client and the public**; and **to nurture a climate of civic engagement, including a commitment to professional and public service and leadership.**

SECTION 2 – RESOURCES

I.2.1 Human Resources & Human Resource Development

I.2.2 Administrative Structure & Governance

I.2.3 Physical Resources

The program must demonstrate that it provides physical resources that promote student learning and achievement in a professional degree program in architecture. This includes, but is not limited to the following:

- Space to support and encourage studio-based learning.
- Space to support and encourage didactic and interactive learning.
- Space to support and encourage the full range of faculty roles and responsibilities including preparation for teaching, research, mentoring, and student advising.

I.2.4 Financial Resources

I.2.5 Information Resources

The accredited program must demonstrate that all students, faculty, and staff have **convenient access to literature, information, visual,**

and digital resources that support professional education in the field of architecture. Further, the accredited program must demonstrate that all students, faculty, and staff have access to architecture librarians and visual resources professionals who provide information services that teach and develop research, evaluative, and critical thinking skills necessary for professional practice and lifelong learning.

SECTION 3 – INSTITUTIONAL AND PROGRAM CHARACTERISTICS

I.3.1 Statistical Reports

I.3.2. Annual Reports

I.3.3 Faculty Credentials

SECTION 4 – POLICY REVIEW

PART TWO (II): EDUCATIONAL OUTCOMES AND CURRICULUM

SECTION 1 – STUDENT PERFORMANCE -- EDUCATIONAL REALMS & STUDENT PERFORMANCE CRITERIA

II.1.1 Student Performance Criteria

The SPC are organized into realms to more easily understand the relationships between individual criteria.

Realm A: Critical Thinking and Representation: Architects must have the ability to build abstract relationships and understand the impact of ideas based on research and analysis of multiple theoretical, social, political, economic, cultural and environmental contexts. This ability includes facility with the wider range of media used to think about architecture including writing, investigative skills, speaking, drawing and model making. Students' learning aspirations include:

- Being broadly educated.
- Valuing lifelong inquisitiveness.
- Communicating graphically in a range of media.
- Recognizing the assessment of evidence.
- Comprehending people, place, and context.
- Recognizing the disparate needs of client, community, and society.

A.1. Communication Skills: Ability to read, write, speak and listen effectively.

A. 2. Design Thinking Skills: Ability to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.

A. 3. Visual Communication Skills: Ability to use appropriate representational media, such as traditional graphic and digital technology skills, to convey essential formal elements at each stage of the programming and design process.

A.4. Technical Documentation: Ability to make technically clear drawings, write outline specifications, and prepare models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

A.5. Investigative Skills: Ability to gather, assess, record, apply, and comparatively evaluate relevant information within architectural coursework and design processes.

A. 6. Fundamental Design Skills: Ability to effectively use basic architectural and environmental principles in design.

A. 7. Use of Precedents: Ability to examine and comprehend the fundamental principles present in relevant precedents and to make choices regarding the incorporation of such principles into architecture and urban design projects.

A. 8. Ordering Systems Skills: Understanding of the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.

A. 9. Historical Traditions and Global Culture: Understanding of parallel and divergent canons and traditions of architecture, landscape and urban design including examples of indigenous, vernacular, local, regional, national settings from the Eastern, Western, Northern, and Southern hemispheres in terms of their climatic, ecological, technological, socioeconomic, public health, and cultural factors.

A. 10. Cultural Diversity: Understanding of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the implication of this diversity on the societal roles and responsibilities of architects.

A.11. Applied Research: Understanding the role of applied research

in determining function, form, and systems and their impact on human conditions and behavior.

Realm B: Integrated Building Practices, Technical Skills and Knowledge:

Architects are called upon to comprehend the technical aspects of design, systems and materials, and be able to apply that comprehension to their services. Additionally they must appreciate their role in the implementation of design decisions, and the impact of such decisions on the environment. Students learning aspirations include:

- Creating building designs with well-integrated systems.
- Comprehending constructability.
- Incorporating life safety systems.
- Integrating accessibility.
- Applying principles of sustainable design.

B. 1. Pre-Design: Ability to prepare a comprehensive program for an architectural project, such as preparing an assessment of client and user needs, an inventory of space and equipment requirements, an analysis of site conditions (including existing buildings), a review of the relevant laws and standards and assessment of their implications for the project, and a definition of site selection and design assessment criteria.

B. 2. Accessibility: Ability to design sites, facilities, and systems to provide independent and integrated use by individuals with physical (including mobility), sensory, and cognitive disabilities.

B. 3. Sustainability: Ability to design projects that optimize, conserve, or reuse natural and built resources, provide healthful environments for occupants/users, and reduce the environmental impacts of building construction and operations on future generations through means such as carbon-neutral design, bioclimatic design, and energy efficiency.

B. 4. Site Design: Ability to respond to site characteristics such as soil, topography, vegetation, and watershed in the development of a project design.

B. 5. Life Safety: Ability to apply the basic principles of life-safety systems with an emphasis on egress.

B. 6. Comprehensive Design: Ability to produce a comprehensive architectural project that demonstrates each student's capacity to make design decisions across scales while integrating the following SPC

- A.2. Design Thinking Skills
- A.4. Technical Documentation
- A.5. Investigative Skills
- A.8. Ordering Systems
- A.9. Historical Traditions and Global Culture
- B.2. Accessibility
- B.3. Sustainability
- B.4. Site Design
- B.5. Life Safety
- B.8. Environmental Systems
- B.9. Structural Systems

B. 7. Financial Considerations: Understanding of the fundamentals of building costs, such as acquisition costs, project financing and funding, financial feasibility, operational costs, and construction estimating with an emphasis on life-cycle cost accounting.

B. 8. Environmental Systems: Understanding the principles of environmental systems' design such as embodied energy, active and passive heating and cooling, indoor air quality, solar orientation, daylighting and artificial illumination, and acoustics; including the use of appropriate performance assessment tools.

B. 9. Structural Systems: Understanding of the basic principles of structural behavior in withstanding gravity and lateral forces and the evolution, range, and appropriate application of contemporary structural systems.

B. 10. Building Envelope Systems: Understanding of the basic principles involved in the appropriate application of building envelope systems and associated assemblies relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

B. 11. Building Service Systems: Understanding of the basic principles and appropriate application and performance of building service systems such as plumbing, electrical, vertical transportation, security, and fire protection systems.

B. 12. Building Materials and Assemblies: Understanding of the basic principles utilized in the appropriate selection of construction materials, products, components, and assemblies, based on their inherent characteristics and performance, including their environmental impact and reuse.

Realm C: Leadership and Practice: Architects need to manage, advocate, and act legally, ethically and critically for the good of the client, society and the public. This includes collaboration, business, and leadership skills. Student learning aspirations include:

- Knowing societal and professional responsibilities.
- Comprehending the business of building.
- Collaborating and negotiating with clients and consultants in the design process.
- Discerning the diverse roles of architects and those in related disciplines.
- Integrating community service into the practice of architecture.

C. 1. Collaboration: Ability to work in collaboration with others and in multidisciplinary teams to successfully complete design projects.

C. 2. Human Behavior: Understanding of the relationship between human behavior, the natural environment and the design of the built environment.

C. 3 Client Role in Architecture: Understanding of the responsibility of the architect to elicit, understand, and reconcile the needs of the client, owner, user groups, and the public and community domains.

C. 4. Project Management: Understanding of the methods for competing for commissions, selecting consultants and assembling teams, and recommending project delivery methods.

C. 5. Practice Management: Understanding of the basic principles of architectural practice management such as financial management and business planning, time management, risk management, mediation and arbitration, and recognizing trends that affect practice.

C. 6. Leadership: Understanding of the techniques and skills architects use to work collaboratively in the building design and construction process and on environmental, social, and aesthetic issues in their communities.

C. 7. Legal Responsibilities: Understanding of the architect's responsibility to the public and the client as determined by registration law, building codes and regulations, professional service contracts, zoning and subdivision ordinances, environmental regulation, and historic preservation and accessibility laws.

C. 8. Ethics and Professional Judgment: Understanding of the ethical issues involved in the formation of professional judgment regarding

social, political and cultural issues in architectural design and practice.

C.9. Community and Social Responsibility: Understanding of the architect's responsibility to work in the public interest, to respect historic resources, and to improve the quality of life for local and global neighbors

SECTION 2 – CURRICULAR FRAMEWORK

II.2.1 Regional Accreditation

II.2.2 Professional Degrees and Curriculum

II.2.3 Curriculum Review and Development

SECTION 3 – EVALUATION OF PREPARATORY/PRE-PROFESSIONAL EDUCATION

SECTION 4 – PUBLIC INFORMATION

II.4.1 Statement on NAAB-Accredited Degrees

II.4.2 Access to NAAB Conditions and Procedures

II.4.3 Access to Career Development Information

II.4.4 Public Access to APRs and VTRs

II.4.5 ARE Pass Rates

Proposal

I propose a school of architecture focused on holistic approach to design, taking consideration for the various related fields to offer a positive learning environment. The building itself will serve as an educational tool, providing space for interactions to occur and for visitors to understand the inner workings of a school of architecture. The building should represent a progressive thought process and promote creativity and collaboration.

The idea of the building as a teaching tool is not a new idea. The Academic Village at the University of Virginia, as proposed by Thomas Jefferson in the early 1800s, had the essence of a school which could serve as a teaching tool in itself, though the idea died with Thomas Jefferson in 1826.

As no two people learn in exactly the same manner, the intent of the school is the accommodation of various means of learning. Creativity should not be limited, and the variety of spaces available for interaction should reflect this liberal attitude. The school must allow a student to develop in his/her own unique way, while still providing the opportunity to connect to the professional world and surrounding community. The school of architecture is a progressive environment, devoted to study, analysis, and design today for the world of tomorrow. Progression, creativity, and collaboration are among the strongest aspects which the school must promote to represent the ideals of the program.

The design studio is to be a place to test new thoughts and ideas rather than a place to be trained in a traditional method or single style. Displaying student and guest work, as well as the process from initial conception to final presentation, should become part of the experience of the school.

Ranging from private and isolated to public and communal, the school should provide a multitude of spaces for different types of meeting, thought, and learning. Architecture as a profession is dependent on collaboration for the success of a project, and this characteristic should therefore be reflected in the educational environment for architecture students.

The school of architecture specifically should be open to the study of, and interaction with, other disciplines. The university should not be restricting or limiting; it should be encouraging to exploration. The curriculum should not direct students only towards specific aspects of the profession, but should allow them to pursue and combine those aspects which they feel best suited to the path they wish to explore in the professional world. By creating a space which promotes collaboration and communication within and beyond the community, the school presents the opportunity to create a more knowledgeable society, thus allowing it to advance as a whole.

Progression of Architectural Education

1671 - Ecole des Beaux-Arts

The Ecole des Beaux-Arts was one of the initial schools of architecture in the world. It had a basis in the Classical style and formal design practice. The academic environment was very competitive in the school's attempt to discover the architectural genius. In a way, a course of study could be thought of as a pyramid, starting with a general mass of students at the base, but competing to discover the most outstanding student, who was the winner of the Prix de Rome.

The problem with this system is that students were not given creative freedom, but were all guided down similar paths, limiting the thought process.

1865 - Massachusetts Institute of Technology School of Architecture

1868 - University of Pennsylvania School of Fine Arts

1881 - Columbia School of Architecture

The beginnings of these architectural education programs, though the first in American history, were based on the traditional Ecole des Beaux-Arts in France. The focus of the curriculum was imitation and study of the classical style, rather than an exploration into the needs and different circumstances of the United States. Architectural education should not be solely about teaching students one style and limiting creativity; it should focus around exploration, research, analysis, critique, and overall progression. While history is important, there should never be a direct imitation of what has come before, for there are infinite solutions to nearly every architectural problem, and each architectural problem is different from the next. Architecture is not about the style; it is about the creation of space and the people who occupy and use it. At the very least, architectural education should focus on the needs of the present and anticipate those of tomorrow.

1873 - University of Illinois School of Architecture

1895 - Harvard School of Architecture

These two American architectural programs were unique in their attempt to break from the Ecole des Beaux Arts style-oriented education. Though the programs instilled value in historical research and understanding, history became something which was to be adapted, modified, or challenged. It is appropriate to look to history for precedents, but never as a source for imitation. These schools

understood that America posed new challenges and had different needs than their European predecessors, and so aimed at pushing students to develop a purely American style. Strongly influenced by German models for education which attempted to break from the constraints of the Ecole des Beaux Arts, these American programs participated in the beginnings of the Modern Movement in America before, and during, the conception of the Bauhaus.

It is important, even today, to understand the value of history as something to be used as the foundation from which to develop and progress, rather than a final product. These schools encouraged progression and new ways of thought, which are important principles to be incorporated into any school of architecture today as they were then.

1919 - The Bauhaus

"The ultimate aim of all creative activity is a building! The decoration of buildings was once the noblest function of fine arts, and fine arts were indispensable to great architecture. Today they exist in complacent isolation, and can only be rescued by the conscious co-operation and collaboration of all craftsmen. Architects, painters, and sculptors must once again come to know and comprehend the composite character of a building, both as an entity and in terms of its various parts. Then their work will be filled with that true architectonic spirit which, as 'salon art,' it has lost.

The old art schools were unable to produce this unity; and how, indeed, should they have done so, since art cannot be taught? Schools must return to the workshop. The world of the pattern-designer and applied artist, consisting only of drawing and painting must become once again a world in which things are built. If the young person who rejoices in creative activity now begins his career as in the older days by learning a craft, then the unproductive 'artist' will no longer be condemned to inadequate artistry, for his skills will be preserved for the crafts in which he can achieve great things.

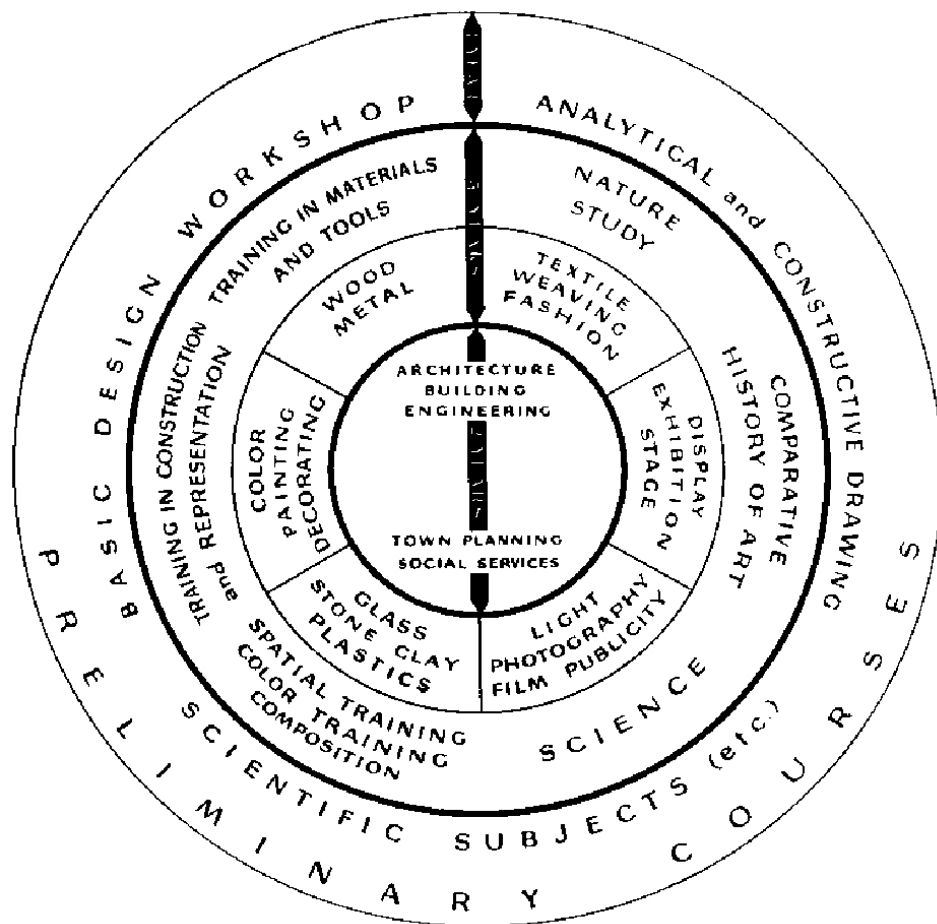
Architects, painters, sculptors, we must all return to crafts! For there is no such thing as 'professional art.' There is no essential difference between the artist and the craftsman. The artist is an exalted craftsman. By the grace of Heaven and in rare moments of inspiration which transcend the will, art may unconsciously blossom from the labour of his hand, but a base in handicrafts is essential to every artist. It is there that the original source of creativity lies.

Let us therefore create a new guild of craftsmen without the class-distinctions that raise an arrogant barrier between craftsmen and artists! Let us desire, conceive, and create the new building of the future together. It will combine architecture, sculpture, and painting in a single form, and will one day rise towards the heavens from the hands of a million workers as the crystalline symbol of a new and coming faith."

-Walter Gropius

The Bauhaus, as begun by Walter Gropius, attempted to make a very strong break from the traditional academy. Students were given the opportunity to pursue a trade of choice in addition to their formal education. A strong focus in the arts, in combination with industry, became the main focus of the school. The workspaces for the students became workshops for modernity, allowing students to advance in a direction of their choosing in a very liberal atmosphere.

The school worked well in its liberal atmosphere to let students choose their own path based on individual interests. The fact that there was an attempt to combine art and design with craft, industry, and technology was also revolutionary at the time for a school of architecture, and the idea of combining architecture with any related disciplines should be strongly emphasized in any architectural school even today.



Current Architectural Education

Yale University

"The task of architecture is the **creation of human environments**. It is both an expression of human values and a context for human activity. Through the design process, architecture addresses the interrelated environmental, behavioral, and cultural issues that underlie the organization of built form. The student of architecture is called upon to direct sensitivity, imagination, and intellect to the physical significance of these fundamental issues in designing a coherent environment for people. Architectural design as a comprehensive creative process is the focus of the Yale School of Architecture.

The objectives of the School of Architecture reflect the view that architecture is an intellectual discipline, both an art and a profession. The program, therefore, is based on the following intentions:

1. to **stimulate artistic sensitivity and creative powers**,
2. to **strengthen intellectual growth** and the capacity to develop creative and responsible solutions to unique and changing problems, and
3. to help the student **acquire the individual capabilities** necessary for the competent practice of architecture and **lifelong learning**.

The School adopts as basic policy a pluralistic approach to the teaching of architecture. Students have opportunities to become well acquainted with a wide range of contemporary design approaches. **The School does not seek to impose any single design philosophy, but rather encourages in each student the development of discernment and an individual approach to design.**

The Yale School of Architecture offers graduate-level professional education and advanced research opportunities in architecture and allied design fields. An undergraduate major in architecture is offered exclusively to Yale College students. In order to further the pursuit of a variety of interests within the study of architecture, the curriculum offers opportunities for study in several interrelated fields.

For the programs leading to the degrees of Master of Architecture, **the design studio is paramount in the School's curriculum**, emphasizing the interrelationships between purpose, design, competition, collaboration, innovation, and open discussion in an environment that **values risk-taking and experimentation**. The design studio is a workshop in which students come together to present and discuss projects and proposals with fellow classmates, faculty, visiting critics, professionals, and the public. The design studio combines **individual and group instruction**, varying from desk critiques with individual faculty members, to pin-ups before several faculty members, to more formal mid-term and final reviews before faculty and guest critics—all undertaken with the intention of fostering critical thinking, spatial form making skills, and tectonic skills. Education in the design studio values leadership skills, individual creativity, and

the understanding of problems and the ability to solve them as presented in the practice of architecture. The School of Architecture's mandate is for each student to understand architecture as a creative, productive, innovative, and responsible practice.

In addition to the design studios, courses in design and visualization, technology and practice, history and theory, and urbanism and landscape serve as a basis for developing a comprehensive approach to architectural design.

Design and visualization encompasses required studios, option studios, electives that concentrate on design logic and skills, and courses that support design thinking and representation.

Technology courses explore, as an integral part of the architectural design process, the physical context; the properties of natural forces; and building systems. In the area of practice, courses are concerned with issues related to the professional context of architecture and its practices and, in particular, with the architect's responsibility for the built environment.

Courses in history and theory examine attitudes concerning the design of buildings, landscapes, and cities that may contribute to a design process responsive to its broadest social and cultural context.

Courses in urbanism and landscape address the study of aesthetic, economic, political, and social issues that influence large-scale environments. This area deals with the relation of buildings to their urban contexts and natural environments.

Direct experience of contemporary and historical architecture and urbanism as well as firsthand contact with experts in various fields is an important part of the School's educational mission. To this end, many studios and classes incorporate both domestic and international travel as part of their course work. In addition, an intensive drawing course is offered each summer in Rome, Italy.

Urban studies are also supported through the extracurricular programs of the Yale Urban Design Workshop and Center for Urban Design Research. Students in the School of Architecture may participate with faculty and students from the School and throughout the University in the symposia, seminars, and research and design projects organized through these programs. In particular, the Urban Design Workshop extends the work of the School into the areas of community design and outreach, providing design assistance to groups and municipalities throughout the region.

The diversity of course offerings in the School, therefore, represents a concern for design which ranges in scale from the individual building to the urban landscape. Students are also encouraged to take courses in other departments and schools in the University.

Advanced studies and research in architecture and urbanism are supported throughout the curriculum, but they are a primary focus in the M.E.D. and post-professional (M.Arch. II) programs. The M.E.D. program provides opportunities for exceptionally qualified students to pursue advanced research in architecture and urbanism through course work and independent studies guided by faculty from the School and the University. Emphasis is placed on rigorous methods of research and scholarship leading to a substantial written thesis. In the post-professional

M.Arch. program, advanced studies in architecture and urbanism are supported by course work and design studios.”

The objectives of the Yale School of Architecture immediately place the human environment, and therefore the human, at the foundation of their program. This principle can, and should, apply to the future of any school of architecture by questioning how a student can best understand the human and the human environment, then by providing an atmosphere and curriculum which can best facilitate the search for a solution.

The school also pushes for each individual to develop their own approach to design. This intent promotes individuality and accommodation for various ways of learning, teaching, and overall development. Accommodation becomes a key factor in allowing every student to develop their unique abilities in an environment, and within a program, which is best suited to them.

Although the design studio promotes important principles such as collaboration, innovation, and open discussion, it is placed at a prominent level within the school's curriculum. For a school to express the “creation of the human environment” as its primary aim for teaching architecture, placing students within the boundaries of a design studio does not seem to be the most appropriate means of understanding the human and how the human interacts with his/her environment. Human behavior needs to be studied and understood by integrating psychological research into the curriculum.

Berlage Institute

“The Berlage Institute positions its activities in the void that exists between the rapidly changing forms of worldwide urbanization and the lack of models and principles available to structure the physical environment into a socially, culturally, and ecologically sustainable habitat. While the disciplines of architecture and urbanism are more and more compartmentalized areas of knowledge, the Institute—as a cultural platform—provides the context for its researchers to establish, test and propagate new forms of synthesizing skills that would strengthen the visionary quality of their work.

Research policy

The rapidly changing field of spatial practices makes evident that **architecture is no longer produced within a closed body of knowledge**. Therefore, the Berlage Institute organizes its activities according to a set of defined research trajectories. **The aim is to address supra-disciplinary knowledge, by relating the research ambitions to other disciplines (economy, sociology, etc.), and subdisciplinary knowledge**, by focusing on specific aspects of architectural production (materiality, organization, technology, etc.).

The activities of the Berlage Institute are structured along the following six distinct research trajectories: new live/work conditions, tourism and territory, emerging technologies and techniques, structuring metropolitan formations, cohabitation and conflict, and energy and the built environment. While developing specific insights to each respective trajectory, the Institute’s research activities collectively aim to advance new models, visions, and principles to be able to frame the different forces shaping the contemporary built environment.

The Berlage Institute participates with the cultural and professional sectors in three ways: project-based exchange with each research trajectory, the development of the public program as a form of post-professional education, and broadcasting through the Internet and publications. The Institute presents the results of its research projects in the form of seminars, workshops, exhibitions, and publications. This offers researchers the opportunity immediately to check their plans, visions, and convictions with reality.

Implementation of Research Policy

Postgraduate Program

The postgraduate program of the Berlage Institute provides the next generation of architects and urbanists with tools to better comprehend and intervene in the complexity of contemporary life. Study is conducted in an in-depth collaborative and experimental setting. This two-year research program is structured around three design research studios, a series of history and theory seminars, fieldwork, and master classes. Participants take part in two one-term studios in the first year and one year-long studio in the second year. A series of

public colloquia, lectures and exhibitions complements the research program.

PhD Program

The Berlage Institute offers a PhD program in conjunction with the Faculty of Architecture of Delft University of Technology. Presently, there are two different ways to obtain a PhD from the Institute. The first is through individual doctoral studies and the second through participation in 'The City as a Project' PhD program. The PhD program is meant to function in close relationship with the postgraduate program. PhD candidates are encouraged to take part in design studio presentations and other related postgraduate events.

Public Program

The architectural and urban research, ideas, and projects pursued at the Berlage Institute are expanded, consolidated, and complemented for presentation to a global audience through a series of architectural broadcasting initiatives. This content is disseminated as print publications, online interactivity, and public events. The flagship of the Institute's publication series is Hunch. Each issue includes contributions on a selected topic as well as other wide-ranging columns, essays, interviews and design projects. Published at the end of each term, The Berlage Papers is a large-format broadsheet highlighting recent news, activities, announcements, previews and reviews related to the Institute. The Institute's website, www.berlage-institute.nl, is a tool to exhibit the past and present activities of the Institute. The Institute's public program of lectures, exhibitions and other events is framed around a selected theme that complements the research topics presently being investigated.

Professional Development Program

Complementary to the postgraduate, PhD, and public programs, the professional development program broadens the Institute's activities to the professional sector through design research and continuing education activities, and contracted studies. The program focuses on the transmission and further advancement of the architectural knowledge developed within the Institute's research trajectories into the professional sector; while, at the same time, addressing new fields of speculation and research that may eventually feed back into the Institute's other activities. The professional development program is organized under the auspices of Berlage Institute—Centre for Research and Development (BI-CARD) and operates on the basis of external funding and grants."

The Berlage Institute recognizes the need for exploration now to better produce a "socially, culturally, and ecologically sustainable habitat" for tomorrow. There seems to be an understanding that the models and principles available today are not sufficient, and need to instead be developed and modified to apply to new circumstances. This leads to one of the most important aspects at the Berlage Institute - research.

A school of architecture should, without question, promote research. The field of architecture is ever-changing and ever-expanding, which is why research

becomes so crucial to the education of future architects.

Another important aim of the school is the integration of other disciplines directly into the research involved in the architectural curriculum. Since architecture is a multi-disciplinary field, any effort to encourage and direct students toward an interaction with other disciplines is advantageous.

University of Art and Design - Helsinki

"The mission of the Media Lab is to explore, discover and comprehend the new digital technology and its impact in society; to find and exploit the possibilities it opens to communication, interaction and expression and to evaluate, understand and deal with the challenges it poses to design and creative production.

From a historical point of view the separation of crafts, technology, design and art is a recent phenomenon. This distinction has been caused by economical and cultural change, especially in Europe. The separation is artificial. In the information society these domains best serve people and society when studied, considered and discussed in close relationship to each other. It's time to bring them together.

The information society requires multidisciplinary professionals that are able to work in multicultural teams that produce artefacts, products, media and art that are meaningful, bring up important issues and contribute to the development of the information society that focuses on well-being, both spiritual and material.

Traditional professional roles should be reconsidered. We should admit that to solve wicked problems that are related to peoples' well being we need multidisciplinary professionals and teams.

Towards a Digital Bauhaus

Professor Pelle Ehn (1998) from the School of Arts and Communication at Malmö University in Sweden has introduced the concept of the digital Bauhaus as a model for art and design institutions of the 21st century. According to Ehn 'the Bauhaus designer was a collective designer and his design manifestos envisioned a new unit of art and technology in the service of the people.' In a digital world art education should educate designers to be reflective and to work collectively. Designers should be able to participate in networks of minds and to unite art and technology to serve humanity. In the digital Bauhaus the objectives and working should be the same as in the original Bauhaus, even though the materials and the context are new.

Information Society and Convergence

Education's natural response on the convergence development is the multidisciplinary programs and courses that are able to bring together different discoveries and approaches from different fields of studies. To reach meaningful results in art and design education we must bring together artists, designers, engineers, scientists, social scientists and historians and put them to work together with 'wicked problems,' mix their roles in the process and ask them to teach and learn from each other.

Art and Design Education in the Information Society

In the information society we need skills to adopt knowledge, skills to cultivate knowledge, skills to create new knowledge and skills to share knowledge. These skills are best developed by practicing, working and playing with artefacts, such as written documents, drawings, blue prints, objects and compositions etc. We may adopt the existing cultural heritage, cultivate it and create something new out of it. Then we share our artefacts with others – contribute our artefacts to the pool of cultural heritage.

The Media Lab of the 130 years old University of Art and Design in Helsinki is celebrating its 10th anniversary this year. The mission statement of the Media Lab positions it as an institution that is actively involved in information society development through critical participation as artists and designers. The aim of the laboratory is to explore, discover and comprehend the new digital technology and its impact in society; to find and exploit the possibilities it opens to communication, interaction and expression and to evaluate, understand and deal with the challenges it poses to design and creative production. The aim includes the need to educate people whose expertise and sensibility extends beyond the traditional gamut of art and design.

The director of the Media Lab in Helsinki, Professor Philip Dean (2004) has stated that Media Labs around the world - especially those adopting an art and design approach - should have a crucial role in the coming years in creating and applying the glue between technology and people, between theory and practice and in guiding our information society towards adolescence.

The information society needs an art and design approach that is based on the traditions of humanity, spirituality and philosophy. The position of being critical is not enough – we must actively participate in the shaping of it. The information society must be designed.

Recommendations

To contribute to the process of achieving the United Nations Millennium Development Goals (MDG) the World Summit on the Information Society (WSIS) Plan of Action the Master Class on Art and Design, Technology and Culture in the Arab States should be:

(3) A multi-disciplinary program with teaching staff and students with different backgrounds including various areas of design, fine arts, computer science, media and journalism, politics and social science, history and art history and humanities in general. The aim should be to build up a multi-disciplinary learning community that will benefit from each other's skills and knowledge.

(5) The Master Class should mainly be composed of a series of collaborative workshops - face-to-face and virtual – where study groups are active producers of artefacts, art pieces, media, design proposals, prototypes, software and research papers. The aim should be to learn 'hands on' and 'minds on'.

(7) The Master Class should encourage collaborative learning, co-design, creativity, reflective practice, Design for All, usability and accessibility and these topics should be integrated to be part of the learning objectives of the workshops.

(8) The Master Class should emphasis the artist's and designer's responsibility in social, cultural and economical development and build up students social consciousness in respect of local and global cultural traditions and heritage."

The aim of this university directs its students in an appropriate direction, pushing for the collaboration of multidisciplinary professionals to solve modern-day problems and advance in all the arts. The idea of a digital Bauhaus is also a positive idea in relation to a school of architecture because it takes the successes of the Bauhaus, such as collaboration and liberal design, and links it to advances in technology to be applied to today.

Oslo School of Architecture

"AHOs educational program involves **research and project development focused on design**, and reflection on design, through criticism, history and theory development. The program works with design on all scales, objects, buildings, urban and landscaping.

Candidate programs at AHO are professional. The organization of studies in the studios and the focus on project work are important characteristics. AHOs architectural education is based on an academic model where teaching at the drawing board and learning of kunnskapsfag through the major project work is central. Industrial education has increasingly been divided into subject and has followed a polytechnic model.

Research Strategy 2008 - 2010

Goals and long-term main lines

AHO encourages knowledge in practical, academic and artistic fields, as well as control in international and relevant knowledge. AHO takes the best in their academic tradition and transforms this into a new institutional culture in which the **academic knowledge is clearer, R & D orientation is more pervasive, and the multi-disciplinary perspective is stronger.**

Main objective

AHO takes on a special responsibility to develop the institution to one of the leading environments for research and development within our discipline.

Different categories Research at AHO

Architecture, urbanism and design obtains knowledge from a variety of scientific disciplines, humanistic, artistic humanities, social sciences, science and technology / engineering science.

Research / scientific work is run within our disciplines on the basis of the understanding of reality, theory and methods drawn from all these vitenskapsverdenene. At the same time developed their own autonomous science traditions associated with the various academic disciplines.

Professional development embraces the knowledge of our subjects through project development, also referred to as 'research by design.' The subjects are 'making disciplines' that are characterized by the practice as the main source of new knowledge. These are encouraged through methods for exploration, developing, testing and criticism.

Development may have the character of artistic development aimed at creating works of art."

A unique aspect of the Oslo School of Architecture is its attempt to connect the academic world to the professional world. By providing professional offices for faculty use, students have an opportunity to work under professors' guidance in

internships, allowing for real-world experience before entering the profession. The school's strong push for students to learn through research and development and multi-disciplinary connections seems very advantageous in a field which consists of a multitude of disciplines and is constantly advancing to serve new needs for new people.

Mission Statement

The aim of the school is to prepare students for the future. Rather than only provide students with the knowledge and skill to tackle the big issues present in our time, the school allows an intelligent and rational approach to any architectural issue, even those that are still unforeseen. This can only be done by giving students experience with defining, analyzing, and reacting to any given problem. The goal is not to create students who merely become cogs in the wheel of professional practice - this leads to staleness and the inability to advance. Students are taught to free their minds from the constraints of traditional thinking. The focus of the school consists of exploration in the areas that promote creative thinking and welcome change, including the areas of technology, theory, research, and analysis. This does not mean history is invaluable; it is taught, studied, discussed, and examined with a critical eye. Questioning is one of the most powerful tools in the advancement of the profession.

What can I take from history that would be beneficial to modern issues?
Where is the error in modern thought?
What are my limits as an architect?

These are only a few questions which should be in the thoughts of every student, as well as faculty, to allow the mind, as well as the profession, to advance. The mission of the school is not to provide answers to these questions, but instead to give students better capabilities to evaluate and use the tools available to answer them on their own.

The school also aims to direct students to interact beyond the constraints of the building, therefore connecting to the surrounding community as well as the professional world are stressed. Students are encouraged to explore other disciplines in an attempt to increase awareness of the multitude of other fields which comprise the architectural profession.

The overall mission of the school is the promotion of collaboration and connectivity, encouraging students to expand their thinking and advance themselves, as well as the profession.

Program Code Definition

Design Spaces

There must be a variety of spaces available for different levels of public interaction and formality. These spaces become critical to the development of each individual since every person is unique in their ability to learn in different atmospheres. In general, these spaces are flexible in their organization with the intention of changing over time.

Informal Public Design Spaces (I.Pu.D.S.)

The informal public design space offers a space for public interaction with students in a casual atmosphere. This space serves a more public function, such as a space for dining and socializing, but also provides tools and spaces for design and discussion to occur at various levels.

Formal Public Design Spaces (F.Pu.D.S.)

The formal public design space takes the form of a lecture hall, where outside guests come to interact with students in a more reserved setting.

Exterior Public Design Spaces (E.Pu.D.S.)

These spaces are extensions of the public design spaces in an exterior environment. Outdoor seating and informal work spaces are provided, as well as servicing from the interior dining spaces.

Informal Private Design Spaces (I.Pr.D.S.)

The informal private design space is more for student-student and student-professor interactions to occur in a casual atmosphere. A cafe and lounge are associated with this space and drawing tools and smaller stations are located within the larger space to allow both large groups and small groups to collaborate and design simultaneously.

Formal Private Design Spaces (F.Pr.D.S.)

The formal private design spaces are meant specifically for instruction and discussion of designs and design techniques at a more intimate scale. These spaces serve as presentation spaces for individual classes and also as seminar/discussion classrooms.

Exterior Private Design Spaces (E.Pr.D.S.)

The exterior private design spaces are more intimate in nature and allow for students to interact with the surroundings while having smaller design and collaboration spaces.

Semi-Private Design Spaces (S-P.D.S.)

The design studio space is a more personalized, individual working

space for the student to develop or test ideas based on their own analysis, research, collaboration, or studies. Though this space is intended to be more individual and less collective, it should still promote a sense of open interaction and provide a means of showcasing one's work or inspiration for other students to question and appreciate.

Individual Design Spaces (I.D.S.)

The private design space allows students to analyze and design in a more quiet, private setting. This space is associated with a library for the quiet, reflective atmosphere, but remains as a separate or isolated entity attached to or within it. Small, individual work stations are provided in this area for personal use.

Program

Program	Area (sq. ft.)	# of Units	Total(sq. ft.)
Teaching Spaces			
Formal Studio Space (S-P.D.S.)			
First Year (100 students)	384	10	3,840
Second Year (80 students)	384	8	3,072
Third Year (60 students)	384	6	3,000
Fourth Year (40 students)	384	4	2,304
Fifth Year (40 students)	384	4	2,304
Studio Meeting Space (F.Pr.D.S.)	384	8	3,072
Classroom (F.Pr.D.S.)			
Small (<10 people)	352	6	2,112
Large (10-20 people)	816	1	816
Lecture Hall (F.Pu.D.S.)	2,000	1	2,000
Pin-up Space	360	10	3,600
			26,120
Advanced Working Spaces			
Computer Lab (F.Pr.D.S.)			
Individual Stations	22	54	1,188
Print Station	150	2	300
Teaching Lab	420	1	420
Documentation Room	100	2	200
Dig. Manufacturing Lab (I.Pr.D.S.)	300	2	600
Material Exploration Lab (I.Pr.D.S.)	1,800	1	1,800
Exterior Space (E.Pu.D.S.)	1,800	1	1,800
Storage	240	1	240
Virtual Reality Center (I.Pr.D.S.)	3,700	1	3,700
Computer Support	400	1	400
Preparation Space	400	1	400
			11,048
Working Spaces			
Wood Shop (S-P.D.S.)	1,500	1	1,500
Exterior Space (E.Pr.D.S.)	1,200	1	1,200
Storage	180	1	180
Metal Shop (S-P.D.S.)	1,000	1	1,000
Exterior Space (E.Pr.D.S.)	1,700	1	1,700
Storage	180	1	180
Model-Making Space (I.Pr.D.S.)	1,000	1	1,000
Library (F.Pu.D.S.)			
Book Stacks	2,200	1	2,200
Journals	100	1	100

Program	Area (sq. ft.)	# of Units	Total(sq. ft.)
Reception Desk	300	1	300
Meeting Rooms (I.Pr.D.S.)	700	2	700
Individual Tables (I.D.S.)	1,200	1	1,200
Ext. Read. Space(E.Pr.D.S.)	700	1	700
			11,960
Community Connection Spaces			
Professional Offices	400	2	800
			800
Services			
Restrooms	180	2	360
Private Restrooms	100	8	800
Mechanical	1,600	1	1,600
Janitor's Closet	250	2	500
Storage	180	1	180
Book/Supply Store	1,000	1	1,000
			4,440
Public Spaces			
Entry/Lobby	500	2	1,000
Exhibit Space (I.Pu.D.S.)	4,500	1	4,500
Formal Gallery Space (F.Pu.D.S.)	2,600	1	2,600
Student Gallery Space (F.Pu.D.S.)	1,000	1	1,000
Student Lounge (I.Pr.D.S.)	250	3	750
Cafe (I.Pu.D.S.)	1,000	1	1,000
Kitchen	250	1	250
Exterior Cafe (E.Pu.D.S.)	325	1	325
			11,425
Faculty/Administration			
Faculty Offices	180	15	2,700
Faculty Lounge	300	1	300
Kitchen	150	1	150
Administrative Offices			
Conference Room	500	1	500
Copy Room	100	1	100
Admin. Offices Reception	600	1	600
Dean's Office	300	1	300
			4,650
Total:			70,443
Circ. (20%):			14,089
Total:			84,532

Program Definition

Teaching Spaces

Formal Studio Space (S-P.D.S.)

Though multiple levels of collaborative spaces are available for interaction throughout the building, a formal design studio space is a more instructional atmosphere where professors can be stationed within the studio itself to interact with students. This particular design studio space has a more formal atmosphere than other collaborative spaces within the school. The space becomes one of the many spaces where students can test the ideas they gather from their own observations, research, or studies. The space is conducive to both individual and collective work, allowing students the ability to work on hand drawings and build models of various scales and materials at their desks, while still affording the opportunity for social interaction. The studio space itself acts as a display space of the student's work and becomes a means of expressing individuality. While this idea should not be put aside, the space should also not be a typical office cubicle. Students learn more through interaction with each other than attempting new challenges on their own.

The studio group can be thought of as a neighborhood within the larger context of the large design studio. The idea of a neighborhood would allow a student to interact within his/her group while reducing the overwhelming effect of being in a large, sea of desks and activity.

First Year (*10 groups, 10 people/group*)

The first year design studio focuses on basic design principles, precedent research and analysis, and graphic representation. An understanding of history in relation to contemporary works is critical at this stage for students to develop a foundation from which to build from. An introduction to modelling of various means is also taught to provide students with a broad means of self-expression.

Second Year (*8 groups, 10 people/group*)

The second year design studio introduces students to structural systems and construction methods and allows them to expand their individual design abilities. An integrative approach to design begins at this stage to encourage students to think of the building systems as a direct part of the design process. Participation in the surrounding community is pushed at this stage, including any construction opportunities and site visits through which students can learn construction methods and materials both visually and hands-on.

Third Year (*6 groups, 10 people/group*)

Reflecting the other courses at this stage of the program, students re-visit precedent research with a more analytical approach. Advances are made in building systems and integration in combination with the design process. Internships

with faculty and the broader community are encouraged as a way to begin to consider professional practice in relation to academic life.

Fourth Year (*4 groups, 10 people/group*)

The fourth year design studio should begin to push students to explore further their own areas of interest. This stage begins the process towards a thesis to be developed further in the fifth year. Challenging design opportunities are presented to students to push their design skills to advanced levels in preparation for their individual thesis work to come. Internships are strongly encouraged and community interaction is suggested as a way to begin the transition to the professional world.

Fifth Year (*4 groups, 10 people/group*)

The fifth year design studio has a primary focus on individual thesis work. Research and analysis are critical at this stage in developing a comprehensive thesis which challenges traditional ideas or tests new ones. As the accumulation of a five-year program, this stage combines all knowledge gathered up to this point in a completely integrative approach.

Classrooms (F.Pr.D.S.)

Each classroom acts as a multi-functional space. Group discussions, professor lectures, student presentations, etc. must be accounted for in the design of this space. The ideal seating arrangement for a lecture or discussion is often a horse-shoe shape with the professor at the base of the “U” and the open end toward the projection or screen. Advances in technology mean the space must be able to adapt and change over time to accommodate new means of presentation. The idea of the professor as a student should also be explored as a possible influence on the design of the classroom. Eliminating the hierarchy created from placing the professor at the head of the class brings the class to an even playing field, possibly increasing interaction between students and between the professor and student. Both classroom sizes act as formal private design spaces when not in use by a professor and class.

Lecture Hall (F.Pu.D.S.)

The lecture hall should have the ability to accommodate a large amount of occupants and should be more specifically directed toward a lecture presentation than a classroom. Acoustical quality, adjustable lighting, and seating arrangements are of primary concern for a listener to gain the most from the speaker.

Working Spaces

Workshops (S-P.D.S.)

Education in the use of the workshops should be incorporated early in the architectural program to provide students greater means for expressing their designs and exploring materials. Each student will be trained in the use of metal and wood-working in their first year and provided access to the workshops. The workshops are associated with the materials exploration lab to experiment in materials other than wood and metal, as well as an integration of those materials with others. Since an understanding of the construction and use of materials is important, digital manufacturing cannot be the only means of creating models. By taking the time to physically construct a model piece by piece, students develop a comprehensive understanding of how objects can fit together, then work with the resulting spaces, rather than just seeing the final result of a computer-generated model. The workshops collectively will be equipped with a surfacer, joiner, table saw, radial arm saw, several wood band saws, a metal band saw, metal and wood lathes, a milling machine, a router, a drill press, and vertical and horizontal belt sanders. Power and hand tools will be stored in the tool storage rooms adjacent to the workshops, housing equipment such as jig saws and disc sanders amongst many others.

Library (F.Pu.D.S.)

The library often acts as a multi-functional space for the individual student or group. The multi-functional characteristic of the library suggests a series of layers that should be distinguished within its boundaries. Individuals tend to use the library for research and reading, as well as a quiet place to do homework. Professors also utilize the space as a prime location to gather material for class discussions and lectures. The needs of the individual user are very different than the needs of a collective group of people who may use the library as a location for a group meeting as it offers adequate amount of seating in a productive and quiet atmosphere. Students, professors, and guests also use the library as a location for computer and internet access. Spaces need to be available for both group meetings and quiet, individual activity, without the interference of one upon the other. The library will associate with a smaller series of individual design spaces that offer a different atmosphere than the larger design studio space.

Individual Workstations (I.D.S.)

The individual workstations are attached to and incorporated within the larger library space. Each provides a quiet, individual workspace which is secluded from the larger design studio space, ideal for individual research and analysis, as well as homework and reading.

Advanced Working Spaces

Computer Lab (F.Pr.D.S.)

The computer lab has become a place for doing homework, accessing the internet, doing design work, and social interaction. With much of the profession advancing with technology, the computer lab should be flexible enough to change and adapt to the advancements in technology as well. A separate lab should be available for a teaching classroom, allowing students to continue working while class is in session in another room. A separate room should also be available for printing and plotting to avoid congestion in the lab created by the mixing of those working and those printing. The computer labs should have monitored access and be regulated to assure that everything is working correctly and no equipment is being misused.

Documentation Room

Regardless of how work is produced, a space is needed for the documentation of all work to give credibility to the school. Providing a place for records of work to be produced allows students to look to other students' work for inspiration and ideas, even if only as something to analyze further.

Digital Manufacturing Lab (I.Pr.D.S.)

Since the school aims to keep current with the changing times, the spaces which house equipment for technology should remain flexible. The digital manufacturing lab provides a place for the construction of models and other architectural explorations using the latest technology.

Materials Exploration Lab (I.Pr.D.S.)

An aspect of architectural practice which is commonly overlooked by many students due to lack of experience is the exploration of available materials and construction methods. Students need to develop an understanding of the limits of materials and methods of construction which can be best understood through hands-on interaction. Students have the unique opportunity to push materials and new construction methods to the limit in their designs with no real consequences since their works are simply investigations.

Virtual Reality Center (I.Pr.D.S.)

The virtual reality center offers the opportunity for guests and students to better understand designed spaces. A grid on the floor and ceiling allows the creation of a digital, 3D environment through which a user can physically walk through and modify designs. This concept will not only make it easier to design in three dimensions, but will make it easier for clients to understand design decisions.

Presentation Spaces

Gallery (F.Pu.D.S.)

The gallery interacts with the entry lobby as a way to immediately gain attention and interest from guests, as well as other students. The gallery is a display space not only for students, but for professors and guests. The material for the gallery is not limited to art and architecture, but any study or presentation that relates to the field. This space is a way to attract students, professors, and guests to work of other disciplines, encouraging anyone to look further into material that sparks their interest. The gallery should be highly visible from the exterior of the building to encourage anyone walking by to explore new material within the school.

Pin-up Space (F.Pr.D.S.)

Though advances in technology suggest the possibility of having only paperless presentations, the availability of a space where students can display tangible evidence of progress is still a necessity. Hand drafting, though quickly becoming a less popular form of presentation, is still an appropriate means of teaching students the basic principles of design and should therefore not be discarded. The space itself should also be flexible to accommodate various presentation formats and seating arrangements. While the space requires a certain degree of a formal and private atmosphere, the location of the space should also encourage outsiders to interact with presentations.

Community Connection Spaces

Professional Offices

The school should provide offices for faculty research and professional work. By encouraging this extension of the school from academic into professional, students may be given the opportunity for internships, working with professors outside of the classroom on real-world projects. The atmosphere and experience of this type of work offers an easier and more beneficial transition from school life to professional practice.

Community Organizations Office

An office should be provided to accommodate any organizations from within the community which promote community awareness and participation. This office is intended to be a resource center and link for students to the surrounding community. Service opportunities and community service can be arranged and conducted through this office. Students should be given the opportunity to connect with national organizations such as Habitat for Humanity through this office as well, for learning opportunities which also serve as community service.

Cafe (I.Pu.D.S.)

The cafe space provides a strictly informal atmosphere with varying levels of collaborative spaces within. The cafe is associated with the large, public exhibit space, encouraging architecture students to interact with the public, as well as students of other disciplines. The cafe space also has a smaller, exterior component and an associated kitchen space to service it.

Administration Spaces

Faculty Offices

Offices will be provided for full-time faculty and staff, providing a space for each professor to house material for their class. A personal workstation is provided for each office and space will be available within each office for class material to be assembled and prepared. Aside from space to prepare material for class, these offices serve as formal, one-on-one discussion spaces between the professors and students. Meetings pertaining to class material or extracurricular activities can take place in any of the offices. These offices have the ability to serve as small-scale formal private design spaces as well, where students and professors can discuss designs on a more intimate level.

Faculty Lounge

The faculty lounge provides an opportunity for faculty to discuss school or work-related material. The lounge has a degree of informality and can also serve as a possible location to eat. A small kitchen will be located adjacent to the faculty lounge to serve the professors, as well as administrative staff, throughout the day.

Administrative Offices

The administrative offices include space for the dean, assistant dean, and associate dean of the school of architecture. Each office has space for a personal workstation, as well as a space for small group meetings within the office.

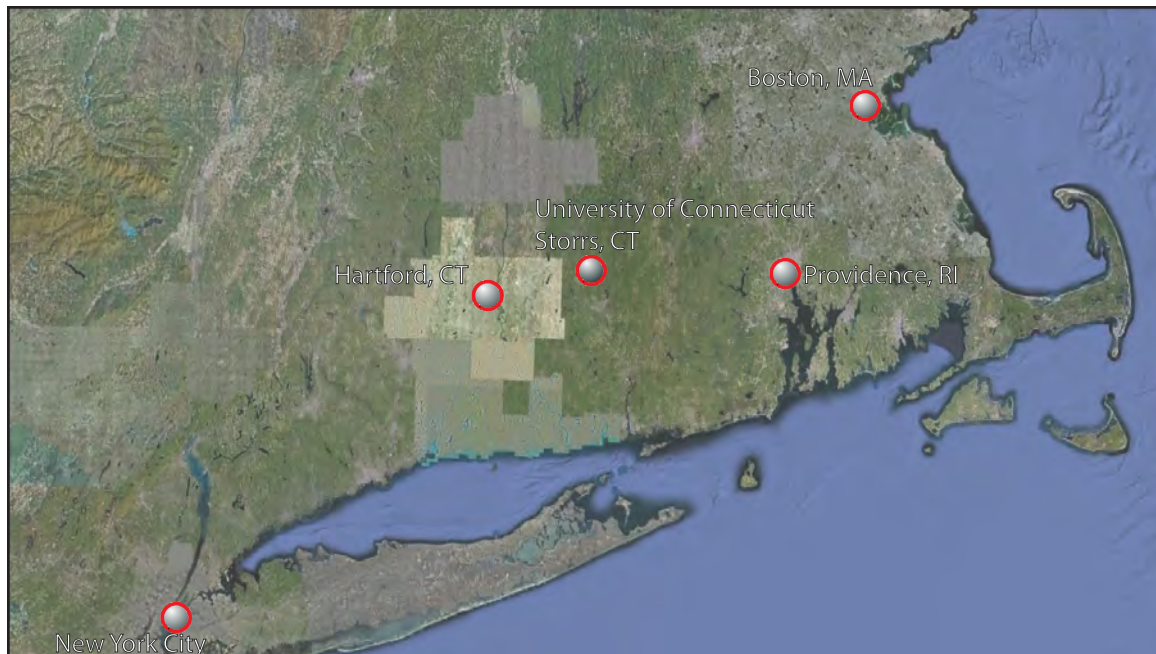
Admin. Offices Reception

The administrative office reception accounts for five secretary workstations which handle incoming calls, student and guest issues, related paperwork, and the overall school communications. Access to a copy room is also provided.

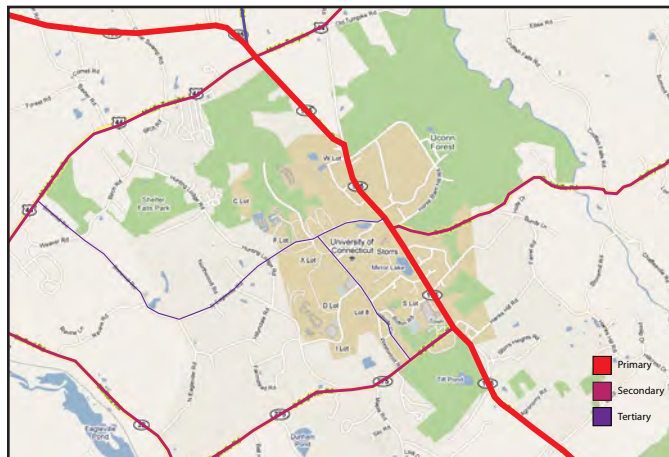
Conference Room

The conference room is large enough to accommodate all professors and administration at the school for occasional meetings concerning issues and concerns within the school or on discussion for the further development of the school's program. The space is a large, private collaborative space which serves the decision-making body of the school.

Site Selection: University of Connecticut, Storrs Campus



Vicinity of Major Cities

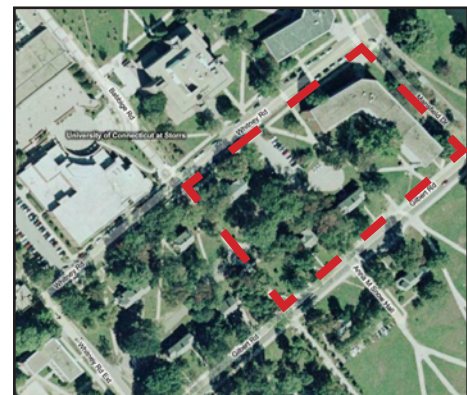


Vehicular Circulation

The University of Connecticut, located in Storrs, Connecticut, was chosen for its close proximity to several major cities of the country which offer ideal areas to study issues concerning urban planning and development.

Distances to Major Cities:

Boston, MA:	84 miles
New York City:	141 miles
Hartford, CT:	28 miles
Providence, RI:	53 miles





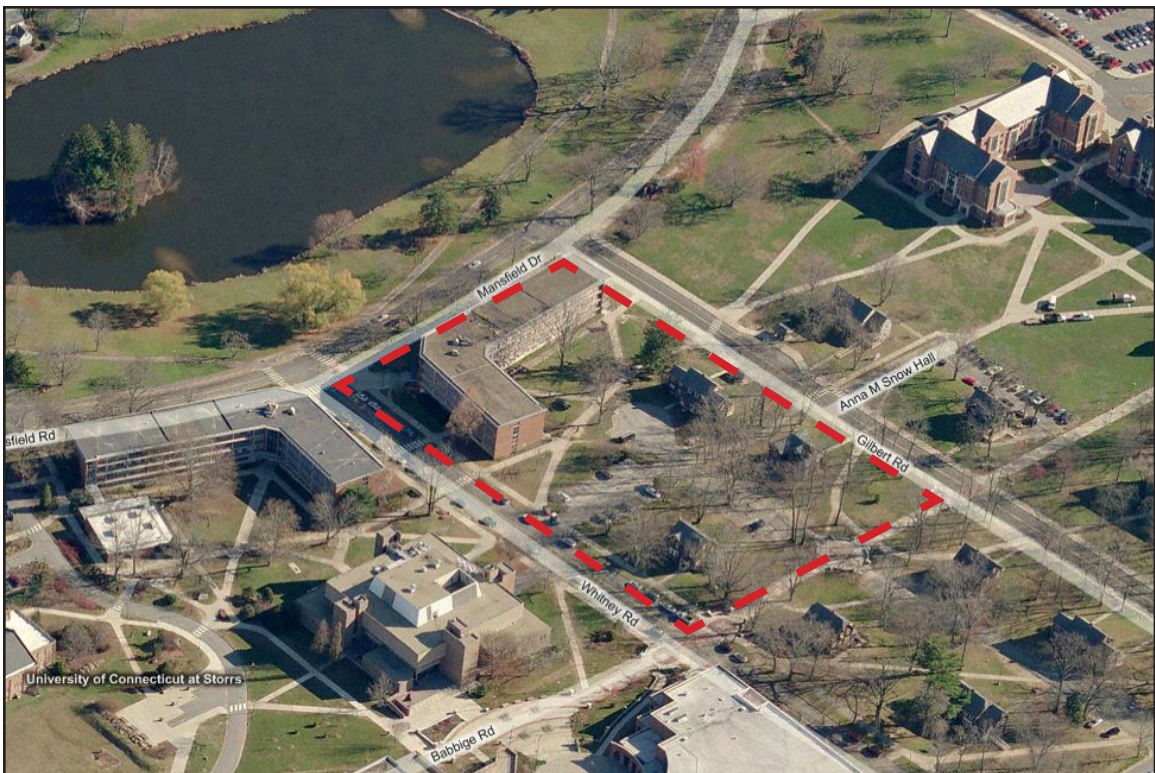
Bird's-eye View from North



Bird's-eye View from South



Bird's-eye View from East



Bird's-eye View from West

University of Connecticut Campus Guidelines

CAMPUS ARCHITECTURAL STANDARDS



The primary material for all new buildings on campus will be brick adhering to the range illustrated by the Benton Art Museum and Wilbur Cross Building. Detailing, roof material and fenestration should be consistent among all new buildings. Architectural elements should adhere to the following guidelines:

PRIMARY ROOFS

Primary roofs should be sloped to exceed 4:12, and made of slate shingles, employing the gray and gray/green shingles of the Benton Art Museum or Wilbur Cross Building. Concrete or synthetic shingles should be avoided. An

acceptable alternative could be a standing seam metal roof to match as closely as possible the color of the gray shingle. Flat roofs should be avoided.

WINDOWS

Windows should be appropriately scaled to relate to the individual "punched" openings of the existing campus. They should include brick, limestone or concrete detailing at the head and sill. Oversized or "bands" of windows should be avoided except as an expression of larger interior spaces. Window glazing should not be reflective or excessively tinted and window frames should be of a dark bronze color.

ENTRANCES

Entrances should be clearly indicated in the facade and a balance between their prominence and attention to human scale maintained. They should relate to exterior open spaces, pathways and visual/organizational axes.

Though the guidelines specify the primary roofs be sloped to exceed 4:12, there is no restriction on allowing only a single sloped roof as opposed to a pitched roof. Also, the guidelines do not specify the avoidance of an inverted roof, which may act as a device for rainwater collection, as a sustainable design technique, while still adhering to the 4:12 roof slope specified in the guidelines.

The Site Furnishing Standards are organized under the following headings. In addition, a manufacturer "cut-sheet", photograph or drawing is included to supplement the text and provide more detailed information regarding the layout, organization and implementation of the unit into the campus setting.

Criteria: An overview of general design considerations to follow in selecting equipment.

Recommendations: More specific description of the specified unit.

Location: Special considerations regarding where the specific unit should be used in the campus setting.

Source: The source or manufacturer will be provided (when applicable or available). The first source listed is the recommended unit. Other alternatives listed thereafter are generally the same unit, but may not measure up to the standards of design or quality as the first choice.

Proposal

As the architecture building is to not only represent progression, but also act as an important hub to connect north campus with south campus, I propose a building which does not strictly adhere to the campus guidelines, but instead uses its materiality and design to reflect its progressive and contemporary attitude. Students should be aware that this building is not simply a school for architectural education and students studying such, but is also a hub for both physical connection (in regard to the campus) as well as a mental connection (in regard to the collaboration of various disciplines).

University of Connecticut Design Standards

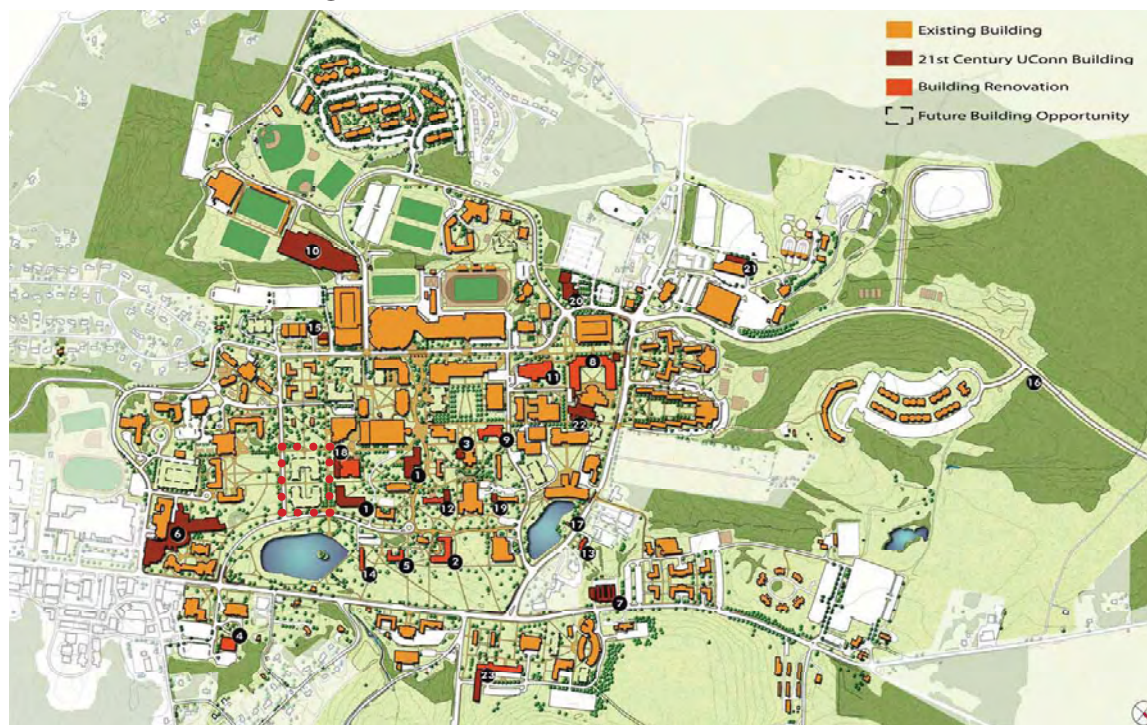
- A. All buildings and other projects for the University shall be designed as quality institutional facilities with components specified to provide maximum life-cycle usefulness. Life cycle costing shall be an integral part of the design process. Most campus buildings are intended to last an indeterminate amount of time, so adaptable facilities and planned maintenance are the norm, rather than short- term, write-off solutions.
- B. The Architect or Engineer shall design the project in compliance with all applicable Federal, State and Local Codes, ordinances, laws and other regulations which have jurisdiction over the nature of the construction, including the Americans with Disabilities Act (ADA). If any of the above vary from the material in this Standard, the most demanding requirements shall be followed.
- C. The University maintains a strong position calling for the maximum use of energy efficient designs and specifications for structural, mechanical and electrical work. All designs will be reviewed within this context.

University of Connecticut Sustainable Design Guidelines

Planning Sustainable Sites

Goal 1: Plan campus growth on the most suitable sites possible, avoiding unnecessary environmental impacts to the existing campus open space and natural resources.

-Ensure consistency with the current campus master plan and state and local plans for conservation and development in accordance with the current State of Connecticut Office of Policy and Management Plan Locational Guide



University of Connecticut Suggested Master Plan: Central Campus

- 1 Arjona and Monteith (new classroom buildings)
- 2 Beach Hall Renovations
- 3 Benton State Art Museum (completion addition)
- 4 Bishop Renovation
- 5 Family Studies (DRM) Renovation
- 6 Fine Arts Phase II
- 7 Floriculture Greenhouse
- 8 Gant Building Renovations
- 9 Gentry Completion
- 10 Intramural, Recreational & Intercollegiate Facilities
- 11 Jorgensen Renovation
- 12 Koons Hall Renovation/Addition
- 13 Lakeside Renovation
- 14 Manchester Hall Renovation
- 15 Natural History Museum Completion
- 16 North Hillside Road Completion
- 17 Observatory
- 18 Psychology Building Renovation/Addition
- 19 Storrs Hall Addition
- 20 Student Health Services
- 21 Support Facility (Architectural & Engineering Services)
- 22 Torrey Renovation Completion & Biology Expansion
- 23 Young Building Renovation/Addition



Buildings & Facilities

- 1 – Weston A. Bousfield Psychology Building Addition
- 2 – New Classroom Building
- 3 – William Benton Museum of Art Addition
- 4 – New Classroom Building
- 5 – Benjamin Franklin Koons Hall Addition
- 6 – Augustus Storrs Hall Addition
- 7 – Future Academic/Research Buildings
- 8 – Future School of Business Expansion
- 9 – Future Academic/Student Services Building
- 10– Bell/Clock Tower Designed
- 11– Future Academic Building

Open Space

- 1 – Central Campus Open Space Redesign
- 2 – Preserve Oak Lawn
- 3 – Develop the Sundial Space
- 4 – New Open Space
- 5 – Reinforce Connection to Mirror Lake

Circulation

- 1 – Eliminate Vehicular Access
- 2 – New Walkway Connection
- 3 – Reconfigure Walks to Reflect Pedestrian Desire Lines
- 4 – New Drop-Off and Accessible Parking Spaces
- 5 – Develop and Reinforce the Academic Way
- 6 – Create Combined Pedestrian Walkway/Service Corridor
- 7 – Whitney Road Converted to Pedestrian Walkway/Service Corridor
- 8 – Realign Fairfield Mall to Accommodate New Classroom Building



Goals

- Locate all 21st Century UConn projects.
- Enhance image of existing open spaces.
- Reinforce safe pedestrian environment.
- Accommodate service in a safe and aesthetic manner.
- Preserve future building opportunities beyond the 21st Century UConn initiative.

**Buildings
& Facilities**1 – Weston A. Bousfield Psychology Building Addition

The addition to the south of the Psychology Building will reinforce the future Whitney Road pedestrian/service corridor. Carefully consider which side of the building is most appropriate to add onto.

2 – New Classroom Building

This building reinforces the Forum as the heart of campus by placing many students in the area. The form of the building should respond to adjacent buildings in terms of height and should respect their historic character through careful setbacks. The building should be placed near the edge of the Fairfield Mall, but not terminate it. It should both respect the mall and the Academic Way, form the edge of a new open space to the south, and should form several smaller, more intimate open spaces/plazas. Building entrances should be accessible from both Fairfield Mall and the Academic Way.



Fairfield Mall

3 – William Benton Museum of Art Addition

The building addition to the Benton Museum of Art should be placed to the south and should respect the architecture of both the historic structure and the successful later addition that was added to the west.

William Benton Museum of Art

4 – New Classroom Building

This building becomes an important link between the South Campus Neighborhood and Central Campus. In order to facilitate this north/south movement, this building should accommodate a pedestrian corridor. Because of its prominent location with clear views from Route 195, careful consideration of its scale and design should be given. The building should define open space, take advantage of its proximity to Mirror Lake, and reinforce the campus open space system.

5 – Benjamin Franklin Koons Hall Addition

The Koons Hall addition should be carefully placed to respect both the historic architecture as well as the open space character of the surrounding area.

6 – Augustus Storrs Hall Addition

The Storrs Hall addition should be carefully placed to respect both the historic architecture as well as the open space character of the surrounding area. Koons and Storrs Hall additions should be considered together because of their collective impact on the architectural symmetry that is prevalent in this historic area of campus.

7 – Future Academic/Research Buildings

Relocation of the Graduate Residence Halls would provide future academic/research opportunities. Several buildings could together create a courtyard open space and connect West Campus Residence Halls to Central Campus.

8 – Future School of Business Expansion

If the School of Business expands, the addition should enclose the courtyard space that exists adjacent to the existing building. The addition should respect the current walkway systems, service corridors, and adjacent open spaces.

9 – Future Academic/Student Services Building

This building could serve as either additional academic space or student services (Student Union expansion). The placement would reinforce the Fairfield Mall and enclose the large Main Quadrangle. Prior to the need for this additional building, this space could serve as an open space that connects Fairfield Mall with the Main Quadrangle.

10 – Bell/Clock Tower Designed

With the recent addition of the Center for Undergraduate Education, implementation of the Academic Way and Fairfield Mall, and the future addition of a major academic building, the Forum will finally become the true academic crossroads that the original 1998 Campus Master Plan intended. An iconic, vertical feature that can be seen from all over campus such as a bell/clock tower should be placed adjacent to the Forum, Academic Way, and Main Quadrangle to strengthen the center of campus.



The Forum



The Academic Way

Open Space 1 – Central Campus Open Space Redesign

The Main Quadrangle should be redesigned to function as the most significant open space on campus. A large expanse of open lawn with large shade trees placed formally along the perimeter would provide an organizing feature for the entire campus and allow a variety of active and passive activities to occur, thereby becoming the “living room” of campus. If laid out carefully, large ceremonial events, including graduations, can be held here.

2 – Preserve Oak Lawn

The area between South and Central Campus is important for several reasons. The space is a serene transition between neighborhoods, the tall canopy of mature oaks creates a unique open space that cannot be found anywhere else on campus, and it is an area that is unique to UConn. This Oak Lawn should be preserved and utilized for passive recreation.



Oak Lawn

3 – Develop the Sundial Space

The sundial space west of the Benton Museum of Art should be further designed in conjunction with the Main Quadrangle and Academic Way to relate to all these spaces, and yet it should have a unique character. The space should be landscaped so it is unique to UConn.

4 – New Open Space

The open space between the two proposed academic buildings should be carefully developed as several smaller spaces. The space should act as a connection between the two academic buildings and should be a unique space unlike any other on the Main Campus at Storrs. The space should also relate in some way to the Academic Way. In addition, small plazas adjacent to the buildings for casual interaction or perhaps an amphitheater as an outdoor classroom could be incorporated by utilizing the natural change in grade.

5 – Reinforce Connection to Mirror Lake

UConn has a tremendous asset on campus in Mirror Lake. Although technically a stormwater retention pond, it creates a unique foreground feature that has gone relatively unused. With the redevelopment of the Jaime Homero Arjona Building and Henry Ruthven Monteith Building sites, it presents an opportunity to make a meaningful connection from campus to Mirror Lake. Using plazas, walks, and landscaping, the connections to campus can be reinforced.

Circulation

1 – Eliminate Vehicular Access

Create a welcoming transition between the vehicular and pedestrian environment in this very important area. Form a true gateway for pedestrians to enter Fairfield Mall, and decrease the size of the space to reduce its overall importance and increase the significance of the Forum.

2 – New Walkway Connection

Connect the open space to the rest of campus with well-planned walkways.

3 – Reconfigure Walks to Reflect Pedestrian Desire Lines

Reconfigure walks in this important confluence area so that they reflect the desire lines of pedestrians. In this area as well as others across campus, walks should connect doorways where pedestrians wish to go.

4 – New Drop-Off and Accessible Parking Spaces

In order to provide additional accessible parking spaces to the Central Campus, and especially the library, reconfigure the parking lot, add a drop-off, and designate all spaces as accessible only. The accessible only designation for this lot would eliminate heavy vehicular traffic.

5 – Develop and Reinforce the Academic Way

One of the main concepts of the 1998 Campus Master Plan is the implementation of the north/south pedestrian connection called the Academic Way. The Academic Way has been implemented very successfully from the Forum to the South Campus Residence Halls. Now that the Center for Undergraduate Education (CUE) and the Charles B. Gentry Building have been renovated, the Academic Way should be fully implemented from the Forum north to the Research Neighborhood and reinforced with large canopy trees.



South Campus Residence Halls



The Academic Way

6 – Create Combined Pedestrian Walkway/Service Corridor

With the implementation of the Academic Way as the major north/south pedestrian connection across campus, service access should be developed east of CUE and Gentry Building, and combined with a secondary pedestrian walk. The shared pedestrian walk/service access should be designed carefully to look like a campus walkway, yet allow the occasional necessary service vehicle.

7 – Whitney Road Converted to Pedestrian Walkway/Service Corridor

In the future, Whitney Road will no longer be necessary to accommodate regular campus vehicular traffic. By removing the road and turning it into a shared pedestrian walk/service access, the Central Campus Neighborhood gets ever closer to reaching the goal of becoming pedestrian oriented.

8 – Realign Fairfield Mall to Accommodate New Classroom Building

Fairfield Mall should be slightly modified to allow the development of a new academic building. The mall will remain curvilinear, and the academic building should not terminate the very important east/west pedestrian connection and views. The current asphalt pavement on the mall emphasizes vehicular dominance. Therefore, pavement of the path should be changed from asphalt to concrete or brick to reinforce the pedestrian dominance. Emergency access along Fairfield Mall will remain.

Goal 3: Reduce the impact of automobiles and roadways by providing and encouraging alternative transportation methods and alternative energy vehicles.

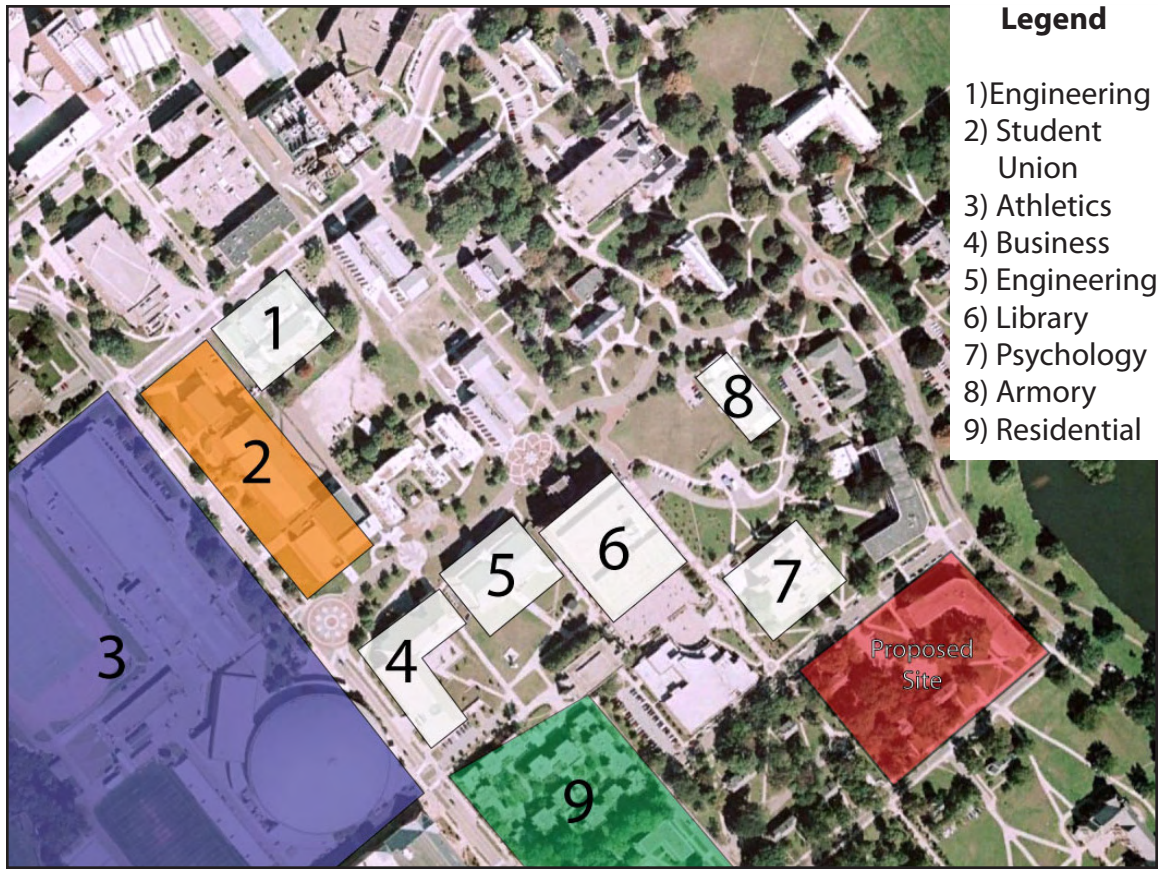
- Encourage clustering of residential, academic, research, and recreational uses, and other student services to reduce the potential need for vehicular travel.
- Encourage pedestrian and bicycle use.
- Maintain pedestrian-friendly campus cores served by a campus-wide bus system.



Walking Radius

The location of the proposed site on campus is conveniently located within 1/4 mile radius of many of the campus's amenities.

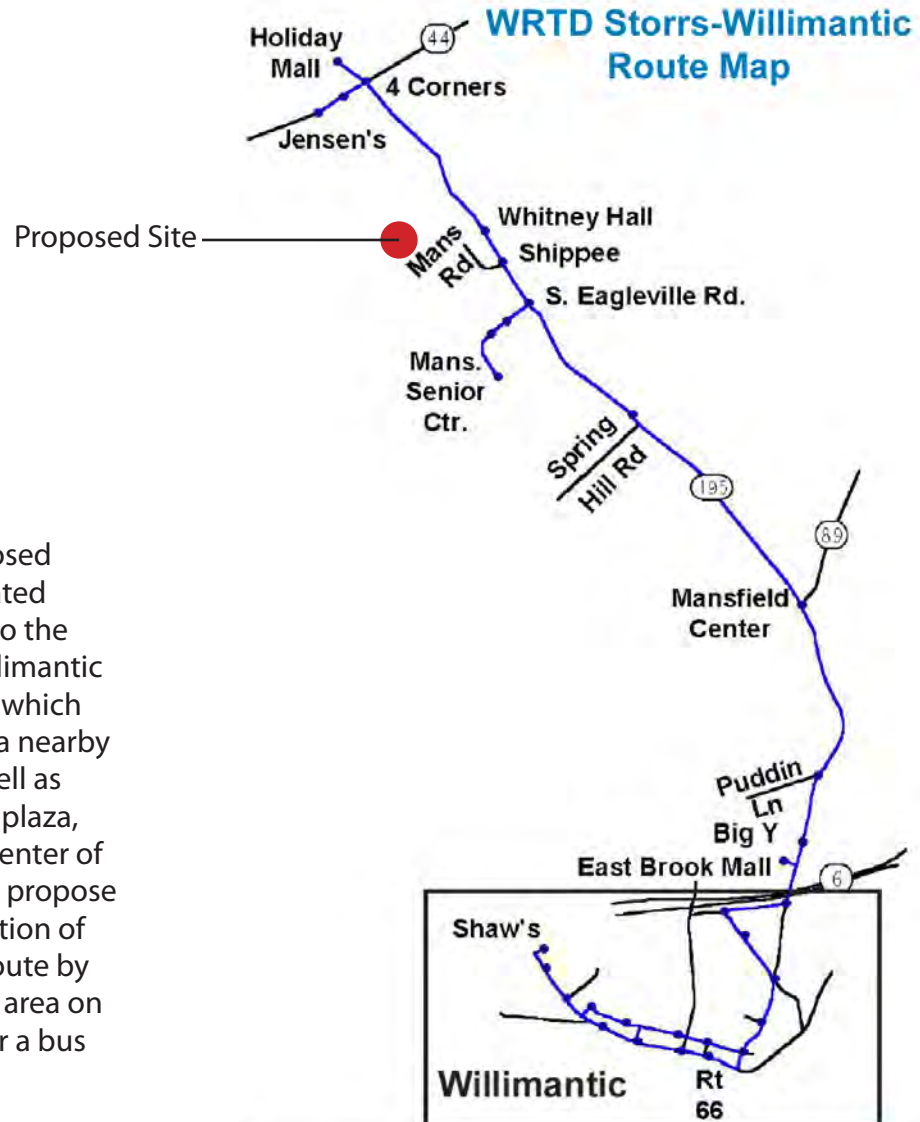
A large athletics facility, the student union, student residencies, and a 300 student lecture hall are located within this 1/4 mile walking radius.



Nearby Program

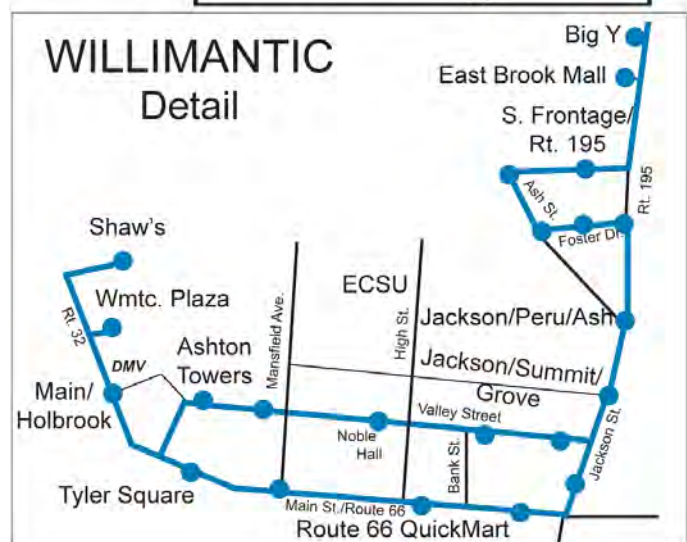
Many buildings with architecture-related disciplines are located within close proximity to the proposed site including two schools of engineering, the campus library, the school of business, a museum of art, and the school of psychology.

By locating related classes to the appropriate buildings nearby, the architecture students will have an opportunity to socially connect to the students of other disciplines, as well as physically have the opportunity to explore the nearby buildings and classrooms. The goal is to encourage the students to discover interdisciplinary connections by allowing them to leave the school of architecture and interact with the campus community.



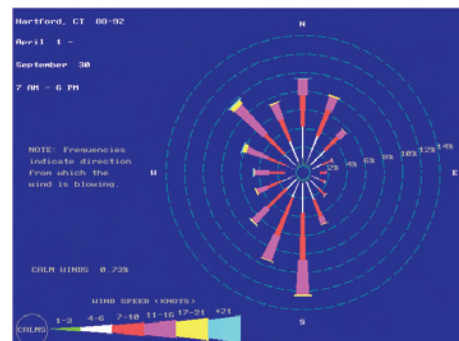
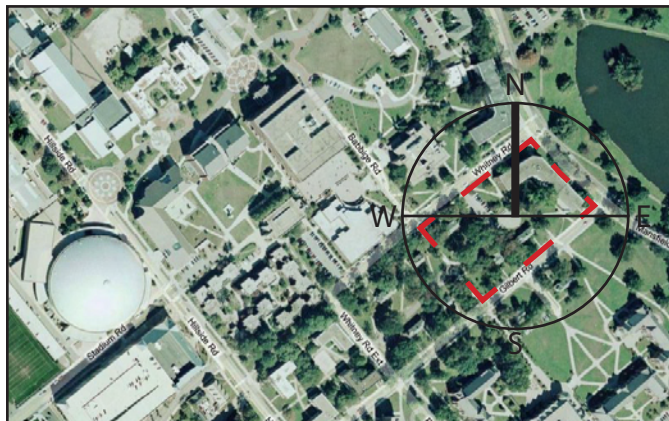
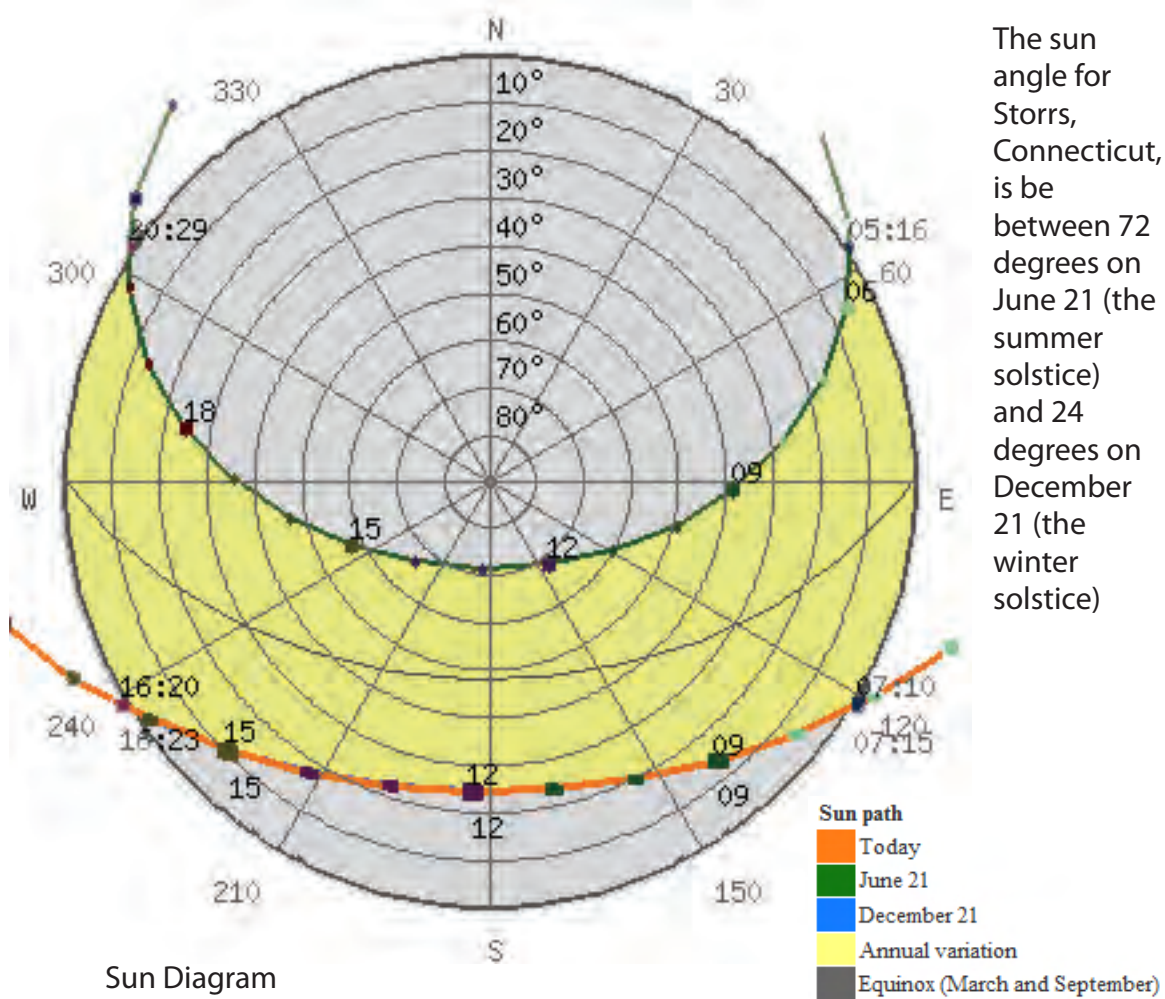
Bus Route

The proposed site is located adjacent to the Storrs-Willimantic bus route which connects a nearby mall, as well as shopping plaza, with the center of campus. I propose the utilization of this bus route by providing area on the site for a bus stop.



Goal 4: Develop site features to minimize adverse impacts to the site's microclimate

-Consider orientation, climate, and building materials.



Wind Rose, Hartford, CT
April 1-September 30

Goal 5: Provide site lighting that is sensitive to light pollution of the night sky and minimizes impacts on nocturnal environments.

Sun Diagram referenced from:

Wind Rose referenced from:

Goals and guidelines referenced from:

<http://www.gaisma.com/en/location/east-hartford-connecticut.html>

<http://home.pes.com/windroses/>

University of Connecticut Campus Sustainable Design Guidelines, November 2004.

Safeguarding Water

Goal 1: Reduce development stormwater runoff impacts on the quantity and quality of the area's water resources.

- Collecting rainwater from projected roofs, where feasible, and store it for reuse or slow release.

- Using a vegetated roof for flat or low sloping roofs.

Goal 2: Reduce potable water consumption associated with landscape irrigation.

Goal 3: Consider reducing the consumption of potable water and potentially reducing stormwater impacts by incorporating grey water systems for waste conveyance.

Goal 4: Explore the use of alternative wastewater treatment methods to reduce demand on campus waste treatment facilities.

- Considering incorporating alternative waste treatment systems to treat black water generated from buildings such as composting toilets, living machines, and constructed wetlands.

Conserving Materials and Resources

Goal 1: Reduce the total energy consumption of buildings.

- Consider providing seasonal shading to south facing glazing.

- Shade the south facade with deciduous trees.

- Incorporate porches to south facades to shade the glazing.

- Use of horizontal sun shades and roof overhangs to shade the glazing from summer sun.

- Examining the feasibility of mixed-mode natural ventilation to cool and ventilate buildings when the outside temperature is suitable.

- Consider the use of solar domestic hot water heaters.

Goal 2: Generate a portion of the project's electricity demand through renewable energy sources.

- Examine the implications of incorporating photovoltaics when planning and siting a new project, such as proper solar orientation, solar angle, and the site of the photovoltaic array.

Goal 3: Eliminate the use of ozone-depleting substances in campus buildings.

Goal 4: Verify and monitor the performance of building systems to ensure they have been designed, installed, and are operating to meet the maximum efficiencies intended.

Enhancing Indoor Environmental Quality

Goal 1: Ensure that indoor air quality is acceptable and free from known contaminants.

Goal 2: Create healthy interior spaces that support learning and are comfortable to users.

- Provide ample natural light into interior spaces wherever possible.

- Plan for internal shading strategies to reduce glare.

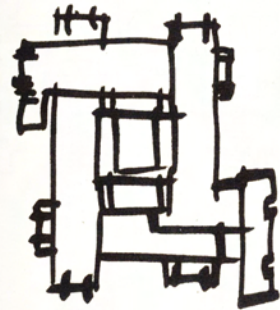
-Offer views to the outside from most interior spaces wherever possible. Designs should strive to provide a connection to the outdoors.

Precedent Research

Yale School of Architecture



Architect: Paul Rudolph
Structural Engineer: Henry A. Pfisterer
Mechanical Engineer: Van Zelm, Heywood + Shadford
Location: New Haven, Connecticut
Year of Completion: 1963



The Yale School of Architecture, designed by architect Paul Rudolph, was chosen as a precedent for its design based on the school's curriculum and intent. Since Paul Rudolph was chairman of the school at the time, he had the unique ability to be both the client and the architect. He worked closely with structural engineer, Henry A. Pfisterer, and mechanical engineers, Van Zelm, Heywood + Shadford, to create a completely integrated building that intended to "excite and inspire the occupant."

Though the curriculum has changed since 1963 when the school was built, renovations carried out under the current dean, Robert A.M. Stern, have involved the rebuilding and updating of the original building for modern times and future endeavors while still keeping Rudolph's vision for the school in mind. As explained by Stern, the focus of the school today is forward-oriented and flexible with changing times.

"Architecture is never one thing; it is a constellation of possibilities. A university is about open questions and not about definite answers." -Robert A.M. Stern

Dean's Letter:

Architecture's relationship to the wider world it serves continually evolves but always there is at its core an unchanging belief that the act of building is in and of itself a great and ennobling undertaking. In too many schools students and teachers now seem disinterested in building, distracted by cyberspace and a search for ways to transform the art of building into something else. Architecture is not a branch of information science; it is not a kind of electronics.

At Yale we continue to believe in architecture as the most palpable of all the arts and the most public, the art of the here and now, the art of making and preserving fixed places that are the settings for the interaction of people and ideas over time. At Yale, we hold the act of building paramount: the logical manipulation of environmental closure in the service of particular functions and symbolic purposes. This is our overwhelming preoccupation; this is the quintessence of architecture as an art and as a profession. We are wary of trends masquerading as ideas. In a time of hyper-specialization Yale remains committed to a broad and deep generalism. To be effective, an architect must recognize and respond to a host of factors that taken in their totality describe the architectural problem which a building represents: a building is not the solution but a solution. We embrace the complexities and the contradictions of the contemporary, recognizing that today's issues are not for architects to tackle in a vacuum. Architecture is a collaborative art, embracing local community groups, as in the affordable house that is our annual First Year Building Project, and environmentalism represented by our on-going collaboration in design and research with the School of Forestry and Environmental Studies. New Haven, one of America's most representative cities, remains a principal canvas of our investigations into urban issues, but we also turn our attentions to New York and to a number of international sites including Berlin and Shanghai.

The fundamental philosophical breadth of our approach is not only curricular and geographical but also artistic; we refuse to promote a single conception, artistic or otherwise, of what architecture is or might become. We recognize our obligation to the historic moment in which we study and teach and build, but we also recognize that that moment, however unique, is neither singular nor unchanging nor disconnected from the past or the future. Some would argue that in our postmodern era architecture has shifted from an objective to a subjective realm, and that, as a consequence, authority for judgment has passed from traditional measures of function, history, context or even technology to one dominated by psychological criteria, giving rise to a mood architecture obliged only to appeal to the tastes of clients or a limited coterie of aficionados. We are not so sure but we certainly recognize the psychological approach to our art needs to be examined along with those of other specialized, deterministic methodologies. Architecture is never one thing; it is a constellation of possibilities. A university is about open questions and not about definitive answers.

Many architecture schools function as academies, fostering a certain "true" way, insistent about one mode of aesthetic expression and one way of doing architecture, straight-jacketing students in isms and ideologies. But today's "ism" has a way of becoming tomorrow's "wasm". Singular systems of design are no substitute for methodologies; our responsibility is to see architecture from many sides; most of all, our responsibility is to think problems through. We do not celebrate a false, single-minded unity or even pretend that consensus can always be achieved; rather we hold open the doors of perception to the wide world of diversity. We welcome debate, even disagreement.

The first obligation of an architecture school should be to its own discipline. But that does not mean that architecture can be studied in a vacuum. We reach outside our field and our school in many ways. We ask critics, artists, environmentalists, sociologists, and others to share their ideas with us. To succeed at his or her art, the architect has to be a thinker and a maker, empowered by knowledge and a certain sense of humility. Everything is possible. But not everything is right for every situation. The important thing is to free ourselves from faddishness: architecture is not

a beauty contest or a style war. Beneath the high-flying rhetoric of aesthetic debate lies the fertile common ground on which a life-time of work in architecture is begun: we must focus on how buildings work, how the user fits into the picture, how the systems are integrated--how the building is built.

Architecture constantly makes and remakes our world. There are many ways of making architecture with many more no doubt to come the human capacity for imaginative invention is limitless but at the core there are certain standards that always define quality. To thrive as art, architecture must take risks; but risks need not get in the way of quotidian necessity. Ignoring the basics is not to make art out of building but to condemn architecture to infantilism. Great architecture is much more than pretty shapes and gee-whiz graphics. The art of building is very different from a romp through the sandbox of media hype. Architecture is construction, context and so much more: for those who chose to be architects, it is a culture, a commitment and a life long path to discovery.

Robert A.M. Stern,
Dean and J.M. Hoppin Professor of Architecture

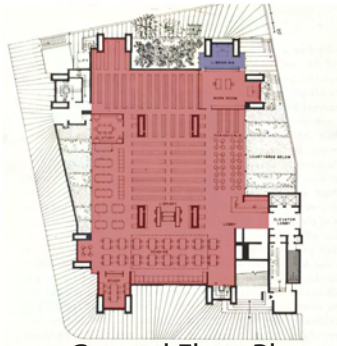


Bird's-eye View from South

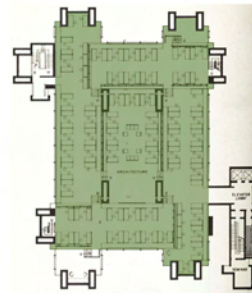


Aerial View

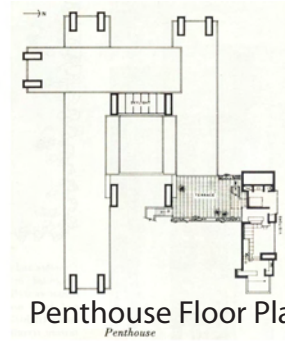
- Design Studio Space
- Classroom
- Administration
- Office
- Working Spaces
- Service



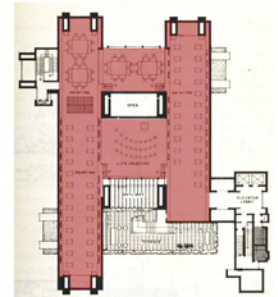
Ground Floor Plan



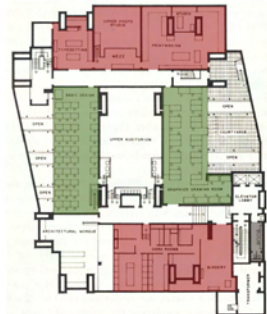
Fourth Floor Plan



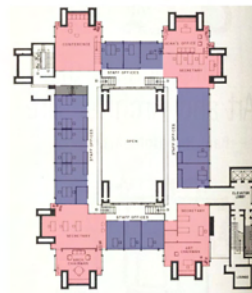
Penthouse Floor Plan



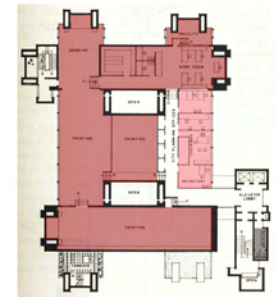
Seventh Floor Plan



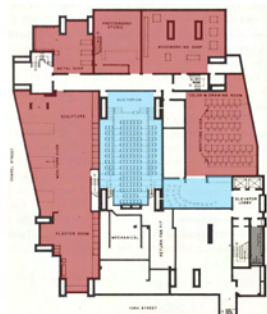
First Basement Floor Plan



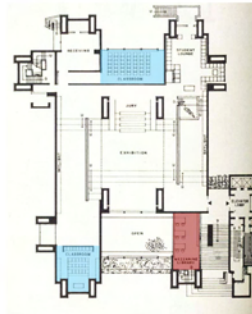
Third Floor Plan



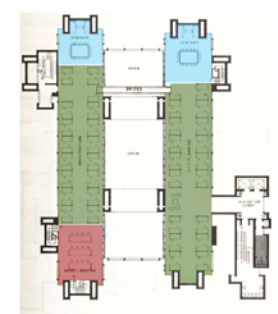
Sixth Floor Plan



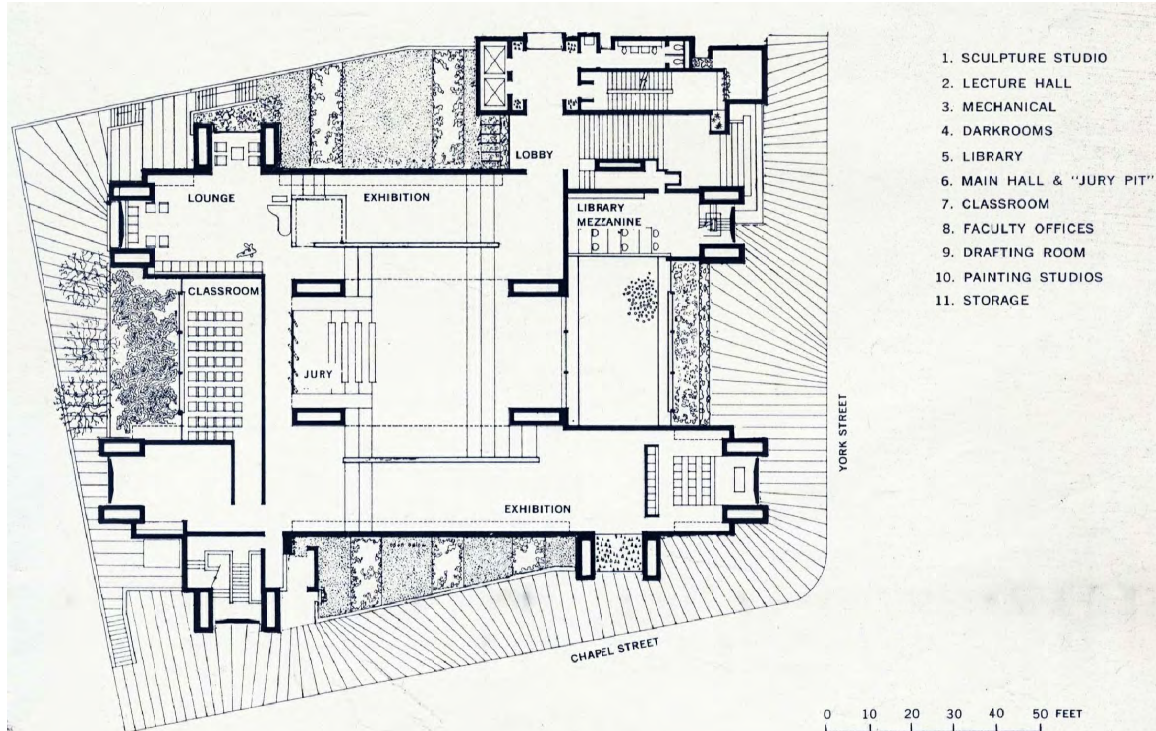
Second Basement Floor Plan



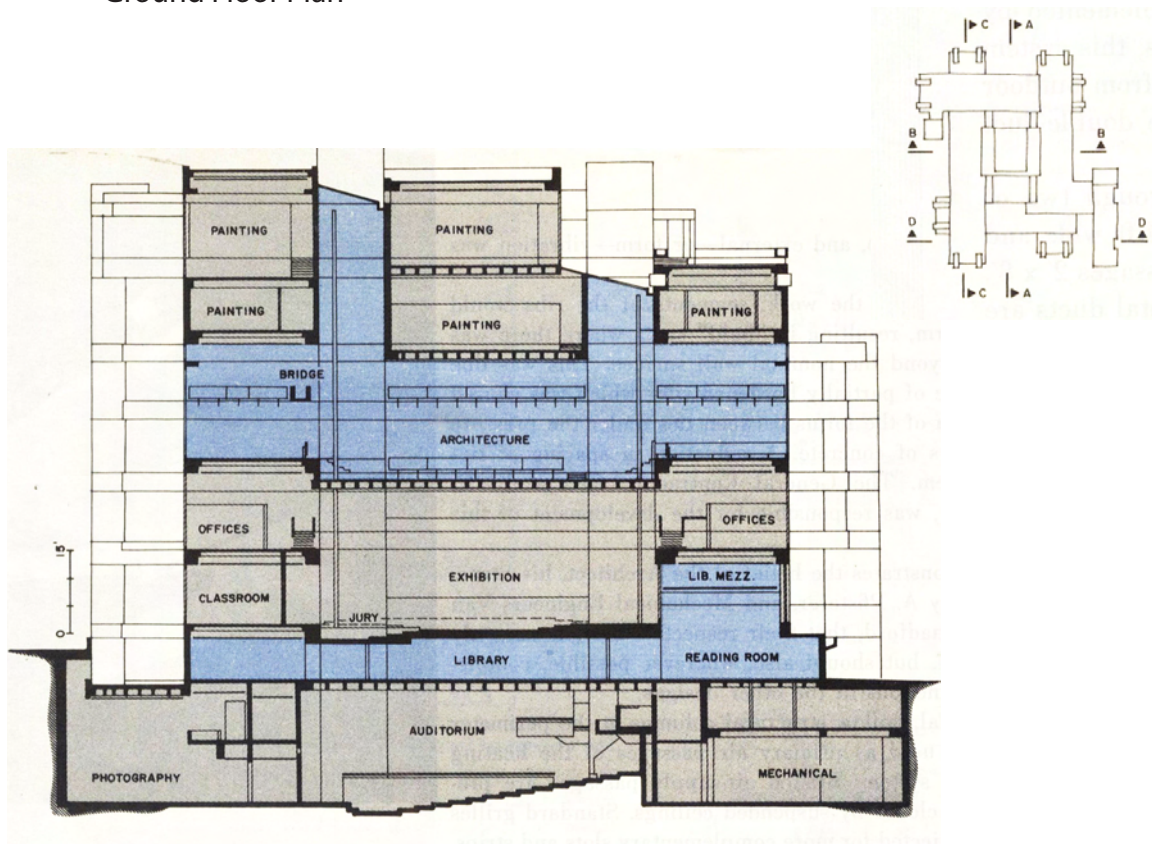
Second Floor Plan



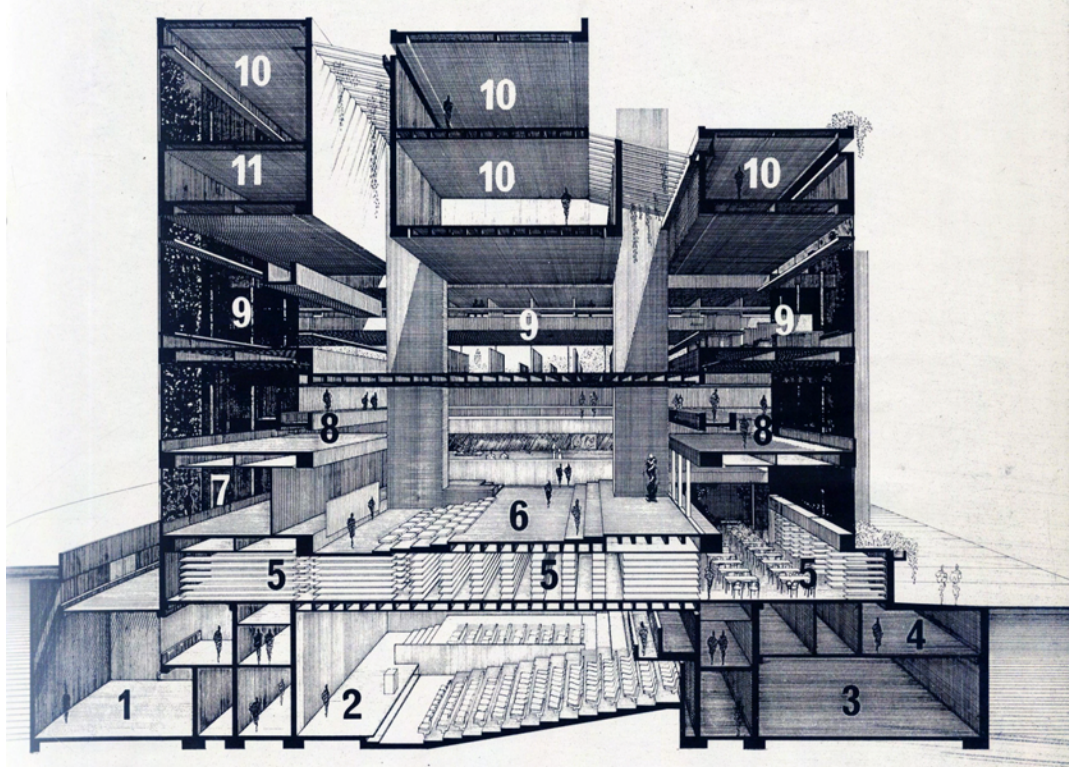
Fifth Floor Plan



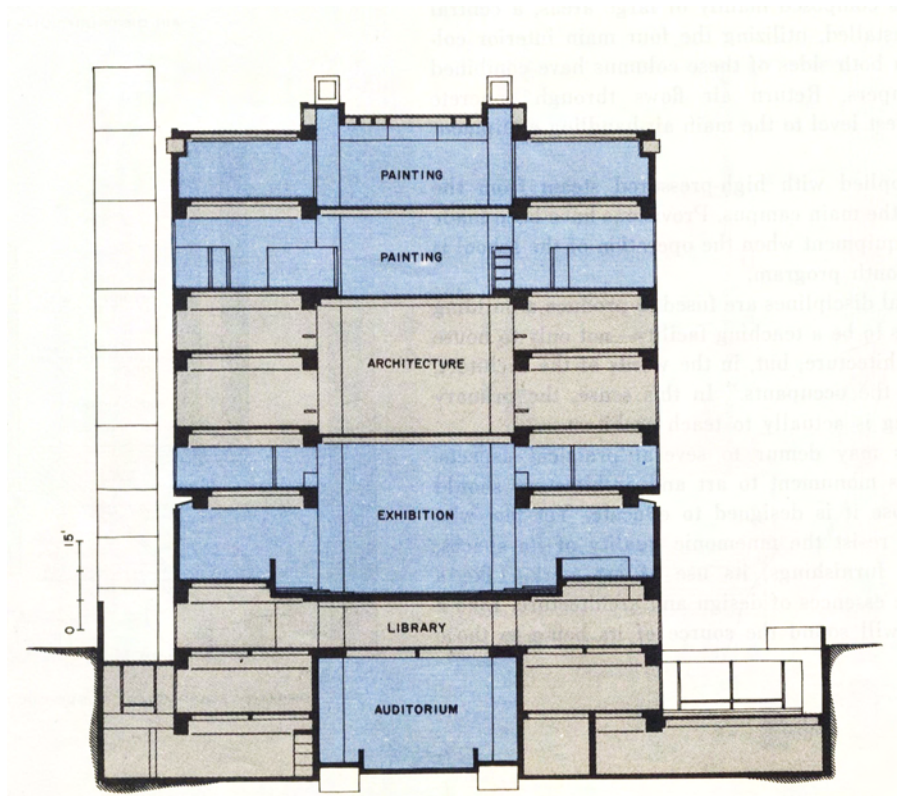
Ground Floor Plan



Section A-A



Section Perspective through auditorium and jury space



Section B-B



Auditorium - Basement Level 1



Exhibition Space - Second Floor



Library - Ground Floor (above)

Central Studio Space - Forth Floor
(below, right)



Oslo School of Architecture

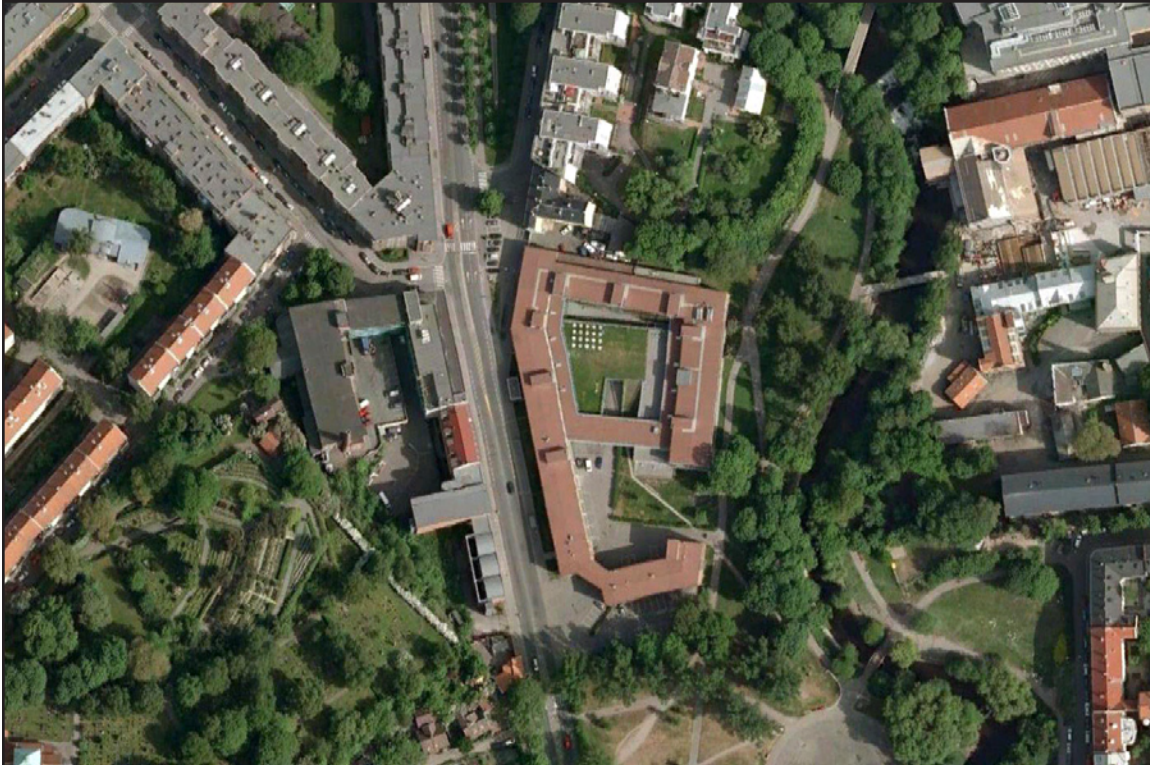


Architect: Jarmund/Vigsnæs
Location: Oslo, Norway
Year of Completion: 2001

The Oslo School of Architecture was chosen for its unique attempt at making a connection between the academic and professional worlds. The site chosen, along the Akerselva River, was aimed at being transformed from a former industrial area into the beginnings of a new campus for arts education. The building makes use of an existing factory to house the offices and studio spaces, while using new elements and program to define a central courtyard around which the program is situated.



Satellite Image: Large Context



Satellite Image: Immediate Context



Aerial Image: Northeast Corner

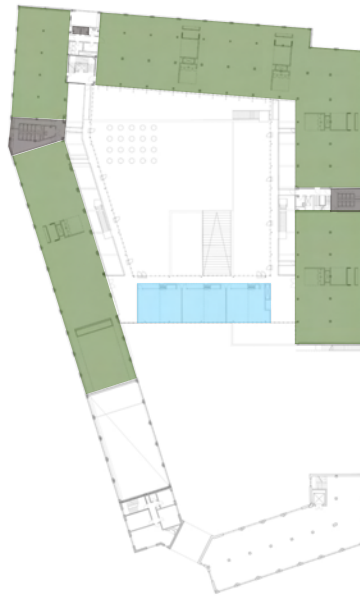


Site Plan

All images referenced from: <http://www.archdaily.com/2240/oslo-school-of-architecture-jva/>



Ground Floor Plan



Second Floor Plan



Third Floor Plan

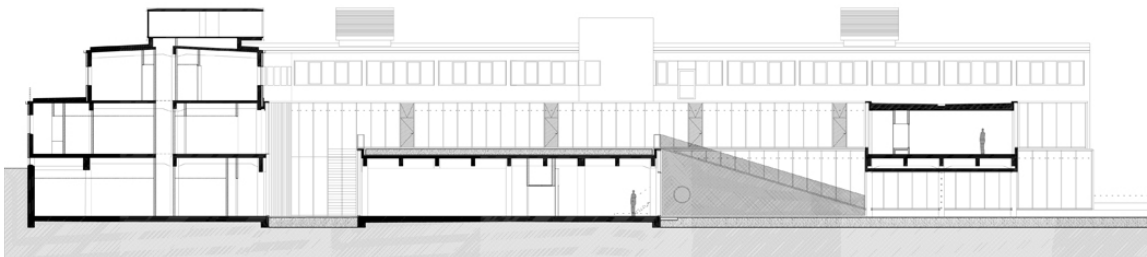
- | | |
|--|---|
| Design Studio Space | Office |
| Classroom | Working Spaces |
| Administration | Service |



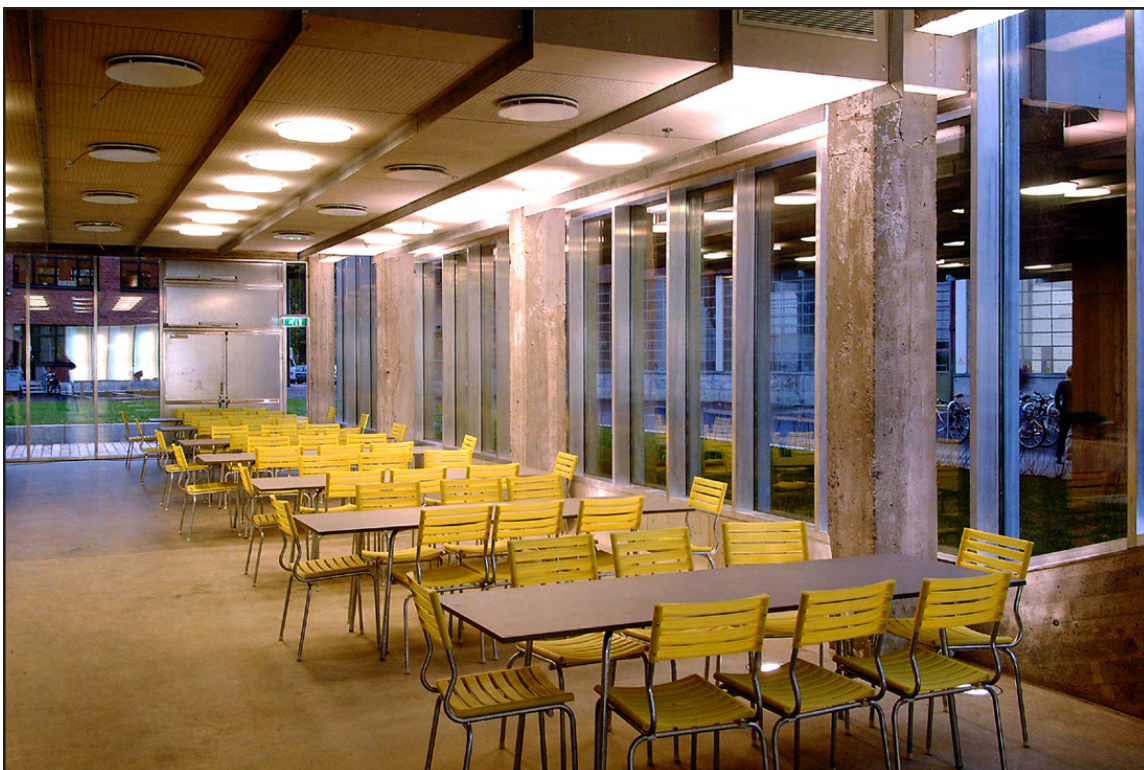
Approach to Courtyard



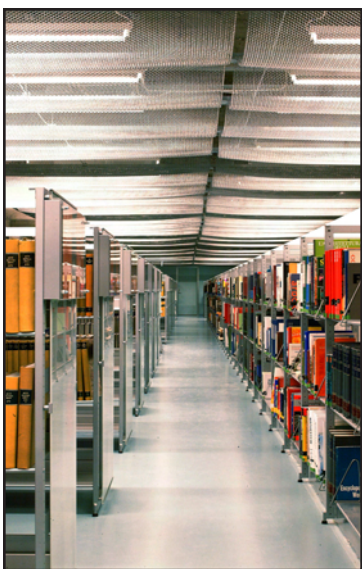
View away from Courtyard



Section through Courtyard



Cafeteria



Library Interior



Exhibition Space



Studio Exterior

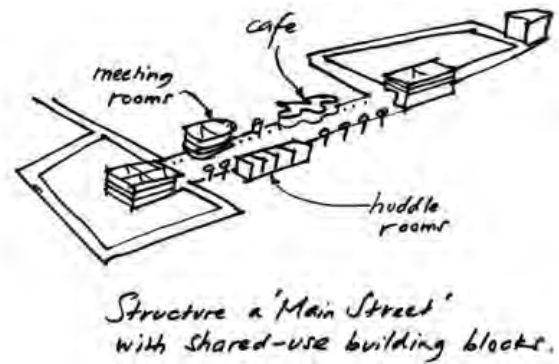
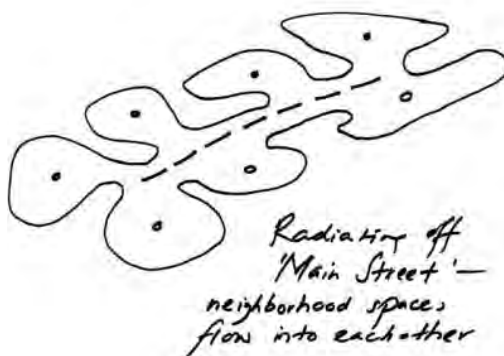


Studio Interior

Google Campus



Architect: Clive Wilkinson Architects
Location: Mountain View California
Year of Completion: 1997



All diagrams referenced from: Chang, Jade. "Behind the Glass Curtain." *Metropolis* 25 (2006): 136-147.



Aerial View



Ground Floor Plan

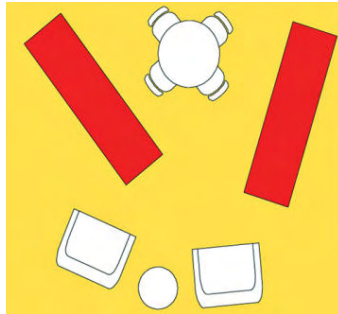
— "Main Street" within building



Final Model showing campus interior and building layout

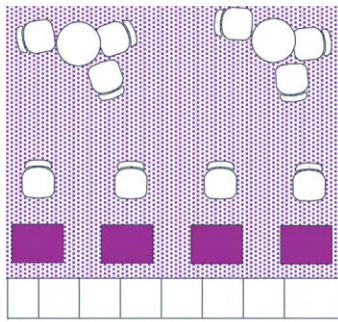
The campus was designed around the idea of a “main street.” Parking was placed below grade and on the outskirts of the campus to allow the main street to be pedestrian-friendly and vehicle-free.





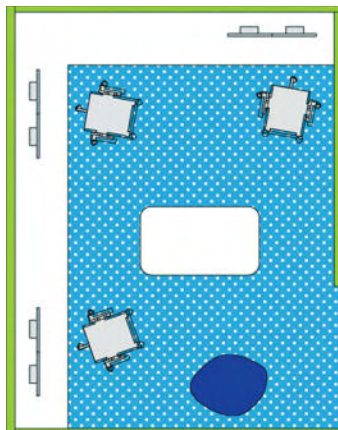
Library

- nomadic work
- visitor work space



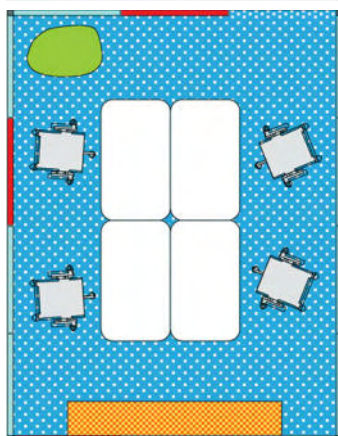
Bakery/Coffee Shop

- Active nomadic work-Opportunity for chance encounters and collaboration



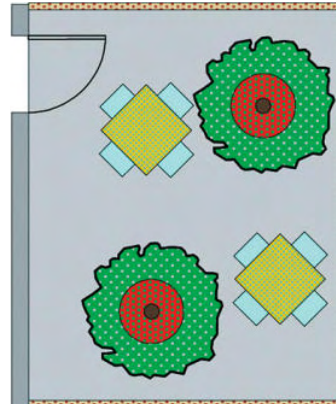
Workstation

- Quiet resident work
- Furniture reconfigurable to meet team's needs



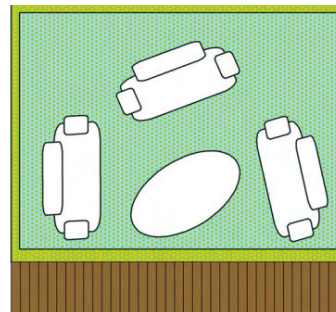
Workroom

- Quiet resident work
- Furniture reconfigurable to meet team's needs
- Panelized framing systems to accommodate joining offices for bigger teams



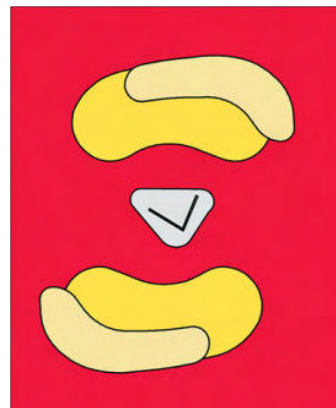
Terrace

- Quiet alternative for nomadic work
- Visitor work space



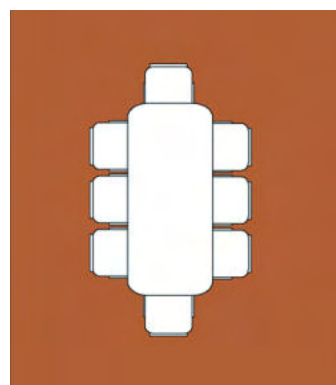
Supper Club

- Alternative dining setting for focused collaborative work



Open Meeting

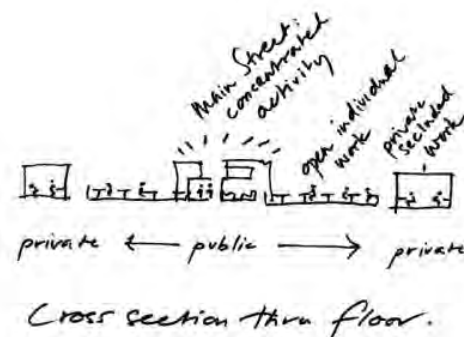
- Quiet nomadic work
- Visitor work space
- Impromptu team collaboration



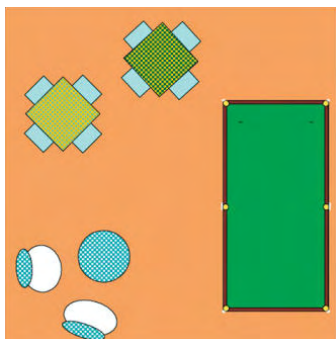
Open Huddle

- Impromptu team collaboration

One of the greatest achievements of the Google Campus is the consideration for the variety of different methods of collaboration. One of the first steps in creating a campus for the creative minds working for Google was to establish different collaborative atmospheres which are designed to accommodate different means of interacting. Ranging in size and degree of formality and publicity, each space offers a unique atmosphere for brainstorming to occur.

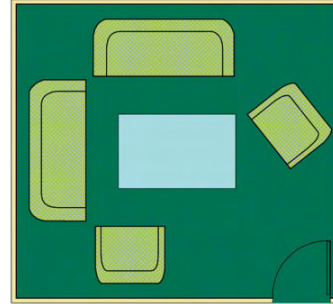


As designed, the organization for the campus develops along a "main street," offering different levels of privacy as an occupant advances away from the central axis.



Clubhouse

- Active nomadic work
- Opportunity for chance encounters



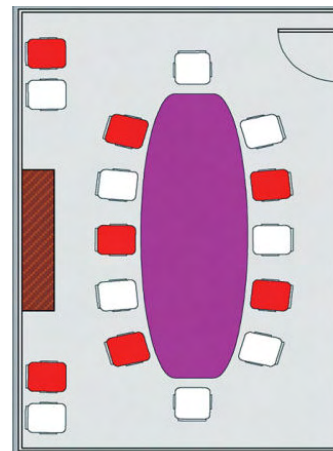
Closed Meeting

- Focused space for collaboration
- White boards
- Projection capabilities
- Optional as war room



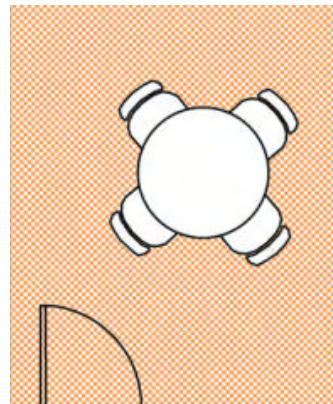
I-Bar

- Active nomadic work
- Visitor work space



Conference

- Focused space for larger collaborative groups
- White boards
- Projection capabilities



Huddle Room

- Quiet nomadic work
- Focused collaboration space
- White boards



Individual Work Space



Individual Work Space



Collaborative Meeting Space

All images referenced from: Chang, Jade. "Behind the Glass Curtain." *Metropolis* 25 (2006): 136-147.

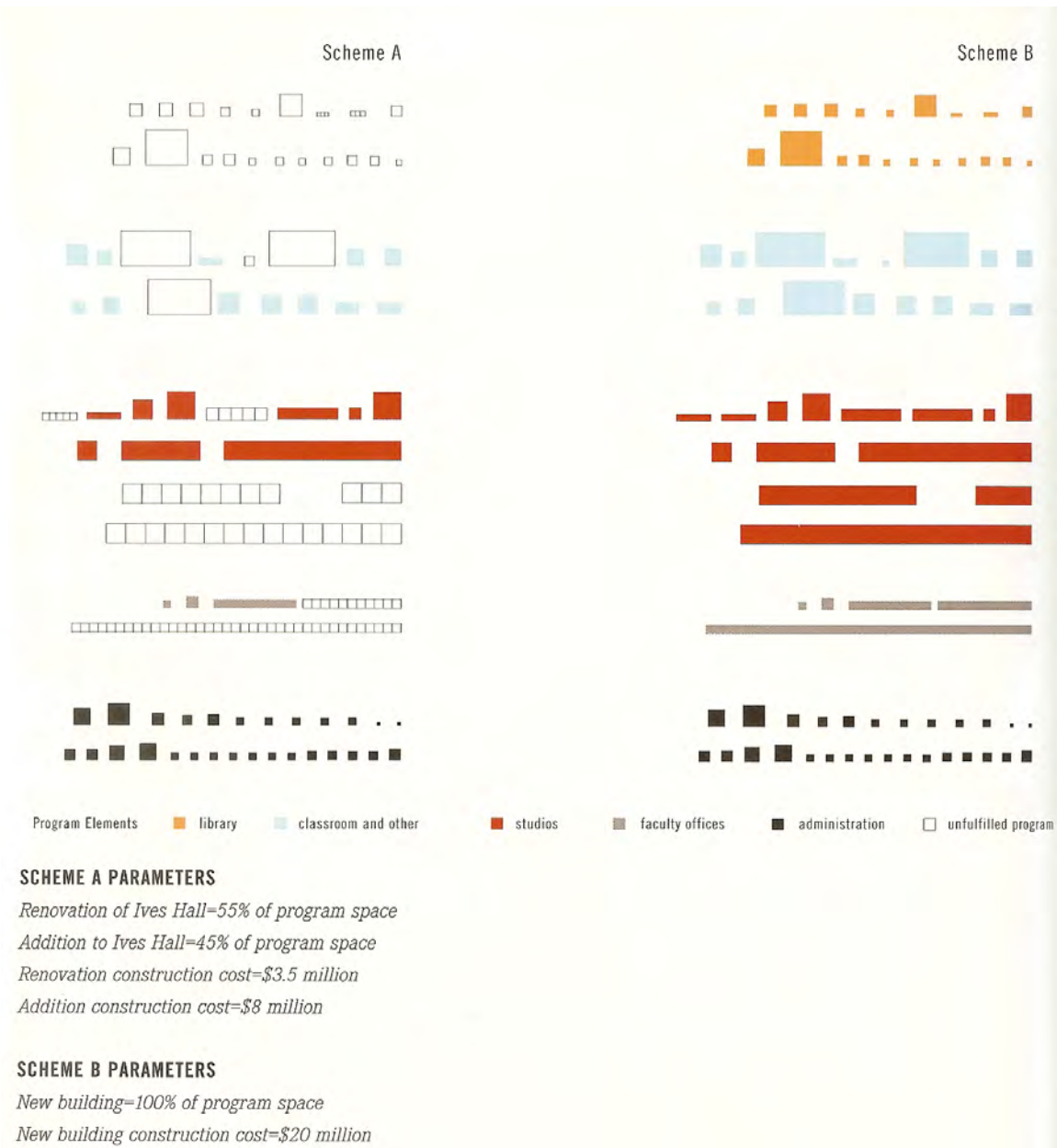
Knowlton Hall



Architects: Mack Scogin Merrill Elam
Location: Columbus, Ohio
Year of Completion: 2004

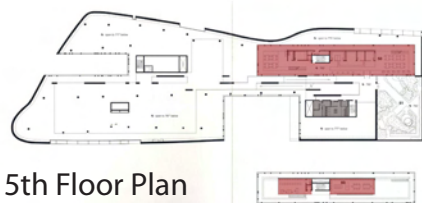


Center Space/Gallery



Program - 2 Schemes

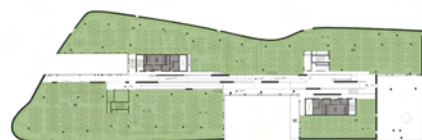
Mack Scogin Merrill Elam originally developed two schemes for the project. The first scheme involved the renovation of the existing Ives Hall, which was planned to house 55% of the program. A second scheme was also developed which accounted for 100% new building construction, which was to house all the program.



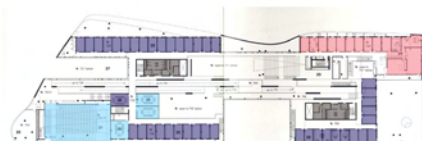
5th Floor Plan



4th Floor Plan



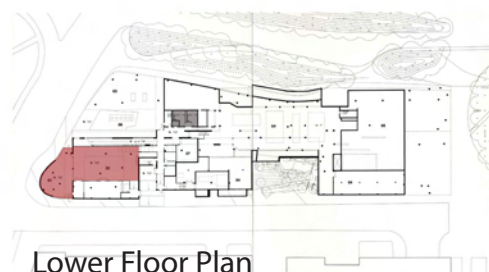
3rd Floor Plan



2nd Floor Plan



Ground Floor Plan



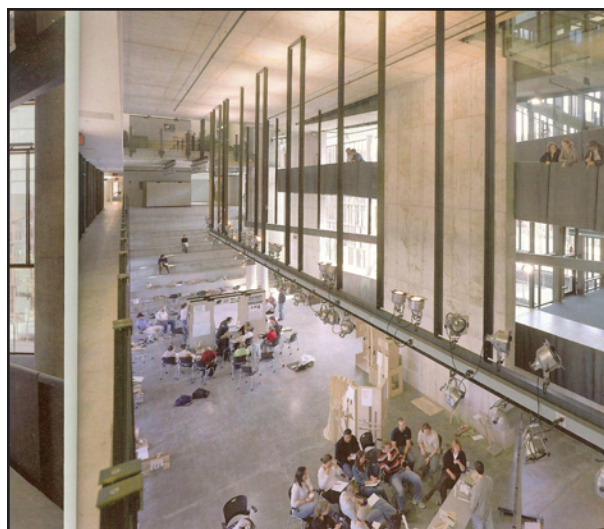
Lower Floor Plan



View from Northeast



View from Northwest



Center Space/Gallery

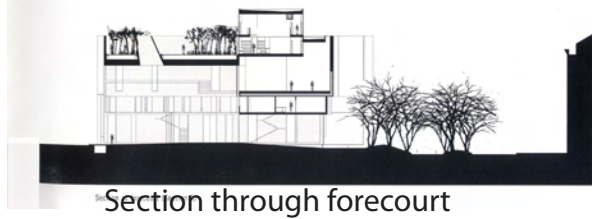
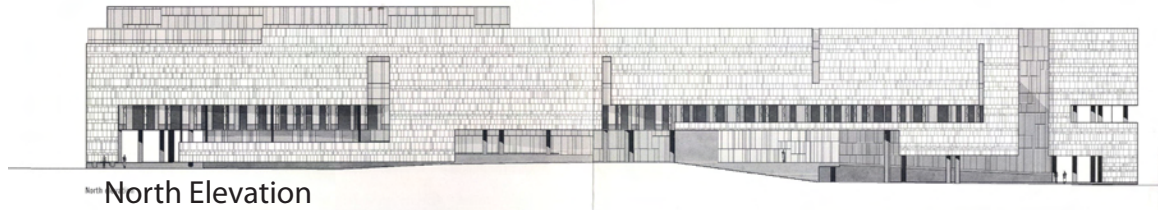
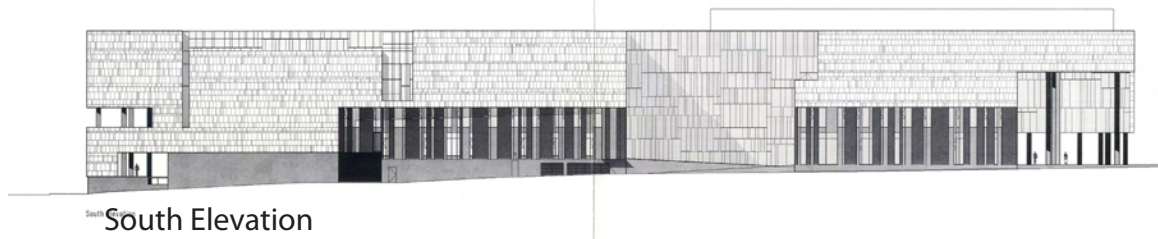
- Design Studio Space
- Classroom
- Administration
- Office
- Working Spaces
- Service

All images referenced from:

Gannon, Todd. *Source Books in Architecture 6: Knowlton Hall*. New York: Princeton Architectural Press, 2005.

Aspirations

- Recognize that a building is never neutral and that a building for a **school of architecture is by definition a teaching device** that either reinforces and enhances, or impedes a pedagogy.
- Make a building that participates in the pedagogy of the university by instructing the broader academic community in the nature and potential of architecture, and by revealing the **relationship of urban design, architecture, and landscape architecture as integrated disciplines.**
- Make a spatial configuration that sponsors open discourse in the broad community of architecture, a place of collective discourse that empowers the individual while speaking to architecture as a public act/ art/debate.
- Make a building that brings an encyclopedic approach to space, spatial relationships, light, materials, and means and methods of construction.
- Make a structure that aspires to:
 - privilege the individual in the collective;
 - balance the collective effort and the individual effort;
 - sponsor freedom of absorption;
 - make a condition that allows individuals to find their own place and path and creative response;**
 - provide an armature for production and a forum for discussion;
 - address the relationship between the pedagogy and the physicality of construction;
 - address the role of the computer in the studio;
 - create a nonhierarchical spatial condition that **promotes connectivity among departments, individuals, spaces, and ideas;**
 - use the dynamics of the site and context to **merge the architecture program to the public realm.**
- Make a place of possibility that is open ended - a provocation rather than an answer.**
- Ultimately design a building that **encourages speculation and discovery on the part of the students** within the program and promotes community among the three disciplines and the user body at large.





Center Space/Gallery (above)

Design Studio Spaces (below)



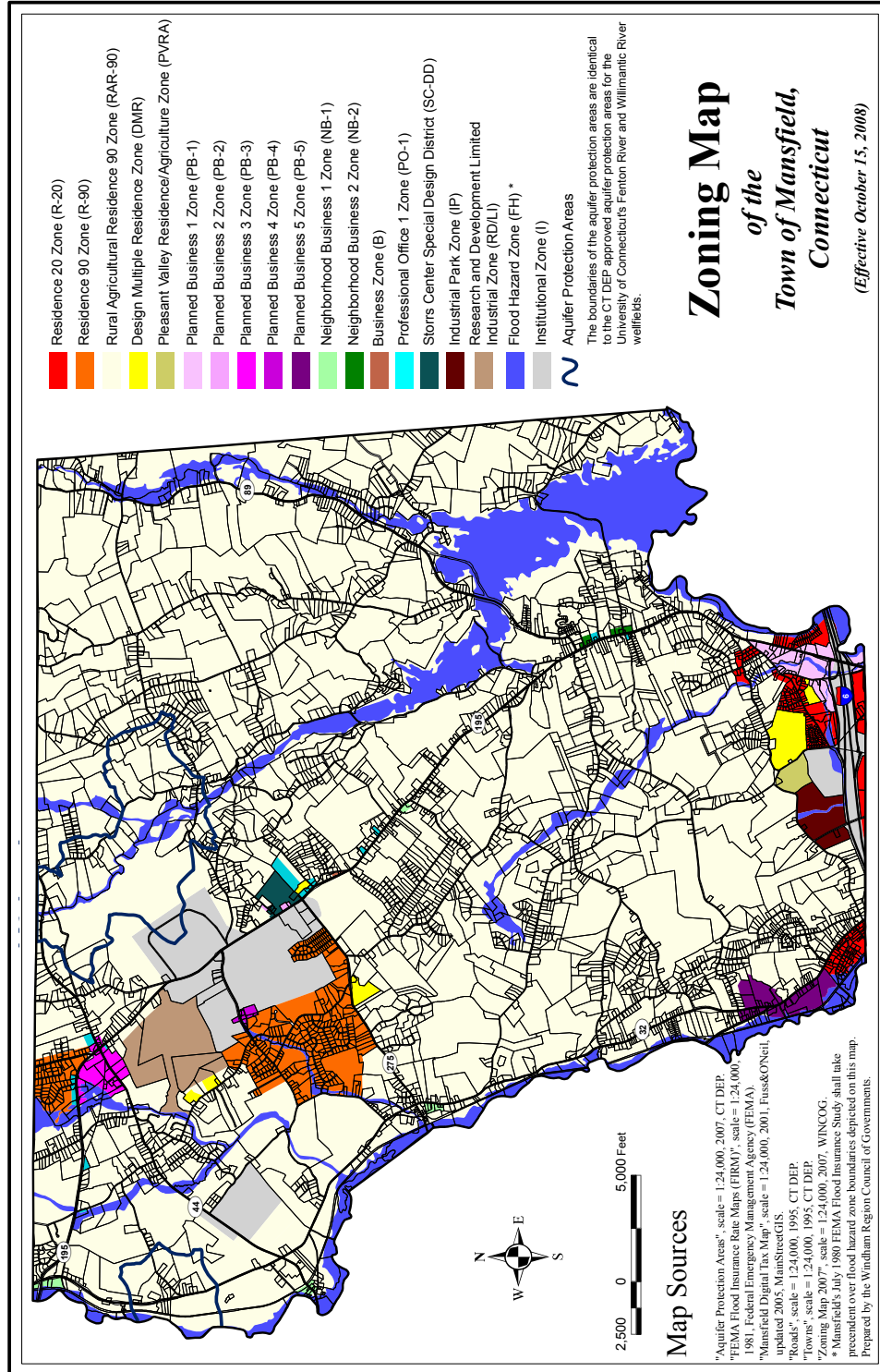
All images referenced from:

Gannon, Todd. *Source Books in Architecture 6: Knowlton Hall*. New York: Princeton Architectural Press, 2005.



Library: Double height space

Zoning: Town of Mansfield



According to the town of Mansfield zoning map, the proposed site is designated as an institutional zone, belonging to the University of Connecticut.

- b. Accessory facilities and uses, which are customarily associated with a permitted use. Accessory uses may include, but shall not be limited to:
 - 1. Accessory cafeterias or retail shops, conducted primarily for the convenience of employees, provided the use is located within a building and there are no advertising signs or exterior displays;
 - 2. Dwelling units for caretaker/security personnel, provided residential structures are located on the same lot as a permitted use;

W. Permitted Uses In The Flood Hazard Zone

The uses listed below in separate categories are permitted in the Flood Hazard Zones provided the provisions of Article X, Section E. are met and provided special permit approval is obtained in accordance with the provisions of Article V, Section B.

- 1. Agricultural and horticultural uses such as dairies and the keeping of farm animals, field crops, orchards, greenhouses, fish harvesting and accessory buildings, etc., provided the provisions of Article VII, Sections G.13 through G.15 are met, but specifically excluding commercial caged poultry or caged livestock operations and other intense commercial agricultural uses and the production or processing of fertilizers, forest, or mineral products;
- 2. Open Space Recreational Uses;
- 3. Parking Areas;
- 4. Accessory buildings as per the provisions of Article VII, Section D.7;
- 5. Sand and Gravel removal or fill operations as per the provisions of Article VII, Section D.11;
- 6. Hydropower Facilities;
- 7. Swimming pools as per the provisions of Article VII, Section D.14

X. Uses Permitted In The Institutional Zone

The uses listed below in separate categories are permitted in the Institutional zone subject to any requirements and standards set forth herein and all other applicable requirements of these Regulations.

- 1. Buildings and facilities owned and/or operated by the State of Connecticut or Federal government, provided the uses are governmental and not proprietary in nature, and provided the use does not involve the transportation of hazardous or radioactive materials from other sites to a storage or processing or disposal facility in Mansfield; (if questions arise, the Planning and Zoning Commission shall determine whether a proposed use may be included in this category);
- 2. Governmentally-owned and operated buildings and facilities involving the transportation of hazardous or radioactive materials from other sites to a storage or processing or disposal facility in Mansfield, provided special permit approval is obtained in accordance with Article V, Section B. All changes in use within this subsection require special permit approval;
- 3. Other uses listed in Article VII, Section D subject to provisions cited in Article VII, Section D and compliance with all other applicable requirements of these Regulations;

4. Single-family, two-family or multi-family housing in accordance with the Design Multiple Residence standards of Article X, Section A, provided the site is served by adequate public sewer and water and provided special permit approval is obtained in accordance with Article V, Section B;
5. Boarding houses and fraternity and sorority houses, provided that requirements of Article X, Section A are met and provided special permit approval is obtained in accordance with Article V, Section B;
6. Churches, other places of worship and identified accessory uses, provided the requirements of Article X, Section P are met and provided special permit approval is obtained in accordance with Article V, Section B. Buildings and uses that may be authorized under this section are cited in Article VII, Section G.8;
7. State-licensed group day care homes or State-licensed child day care centers as defined by the State Statutes, and other educational facilities, provided special permit approval is obtained in accordance with Article V, Section B;
8. Professional offices and other commercial uses that are directly related to and complementary to an existing governmental use located in the same institutional zone, provided special permit approval is obtained in accordance with Article V, Section B.

Y. Uses Permitted in the Storrs Center Special Design District

The uses permitted in the Storrs Center Special Design District are identified in Article X, Section T.

7. Effect of change in Subdivision or Zoning Regulations or boundaries of Zoning Districts after approval of a subdivision or resubdivision plan:

For all approved subdivision or resubdivision lots filed or recorded with the Town Clerk, special provisions are contained in Section 8.26a of the Connecticut General Statutes.

8. Exception to Maximum Height Requirements

The maximum height requirements of the Schedule of Dimensional Requirements may be waived by the Commission, provided special permit approval is obtained in accordance with Article V, Section B and provided the height waiver applies to one of the following: church spire, tower or belfry; flag pole; communications tower or antenna, including radio and television antennae; chimney; water tank; elevator bulkhead and other roof top mechanical structures; solar collectors; wind turbines; farm silos or similar uses. In all business and industrial zones, the Commission may waive the maximum height requirements for elevator bulkheads and other rooftop mechanical structures without additional special permit approval, provided the subject rooftop structures are approved as part of a site plan or special permit application.

9. Highway Clearance Setbacks

To help protect property owners from possible future highway expansion, all required setbacks from the front property line shall be measured from the highway clearance setback line as specified below. This requirement shall not apply to lots where the front property line already meets or exceeds the established highway clearance setback for the subject street. The highway clearance setback shall be measured from the center of the abutting street right-of-way, unless an irregular or undetermined right-of-way exists. In these situations, the highway clearance setback shall be measured from the center of the road pavement or other point designated by the Mansfield Director of Public Works.

STREET CLASSIFICATION	HIGHWAY CLEARANCE SETBACK
<i>(See Article III, Section I for listing of streets in each classification)</i>	
Arterial Street	40 feet
Collector Street	30 feet
Local Street	25 feet

C. Floor Area Requirements

1. Residential

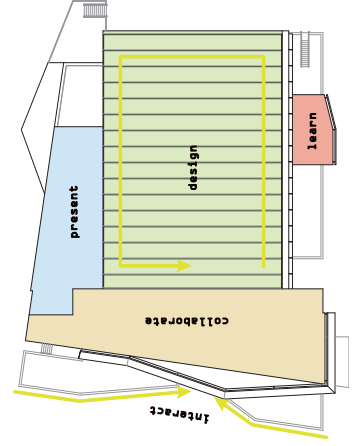
All buildings and structures used as residences shall meet the following minimum livable floor area requirements:

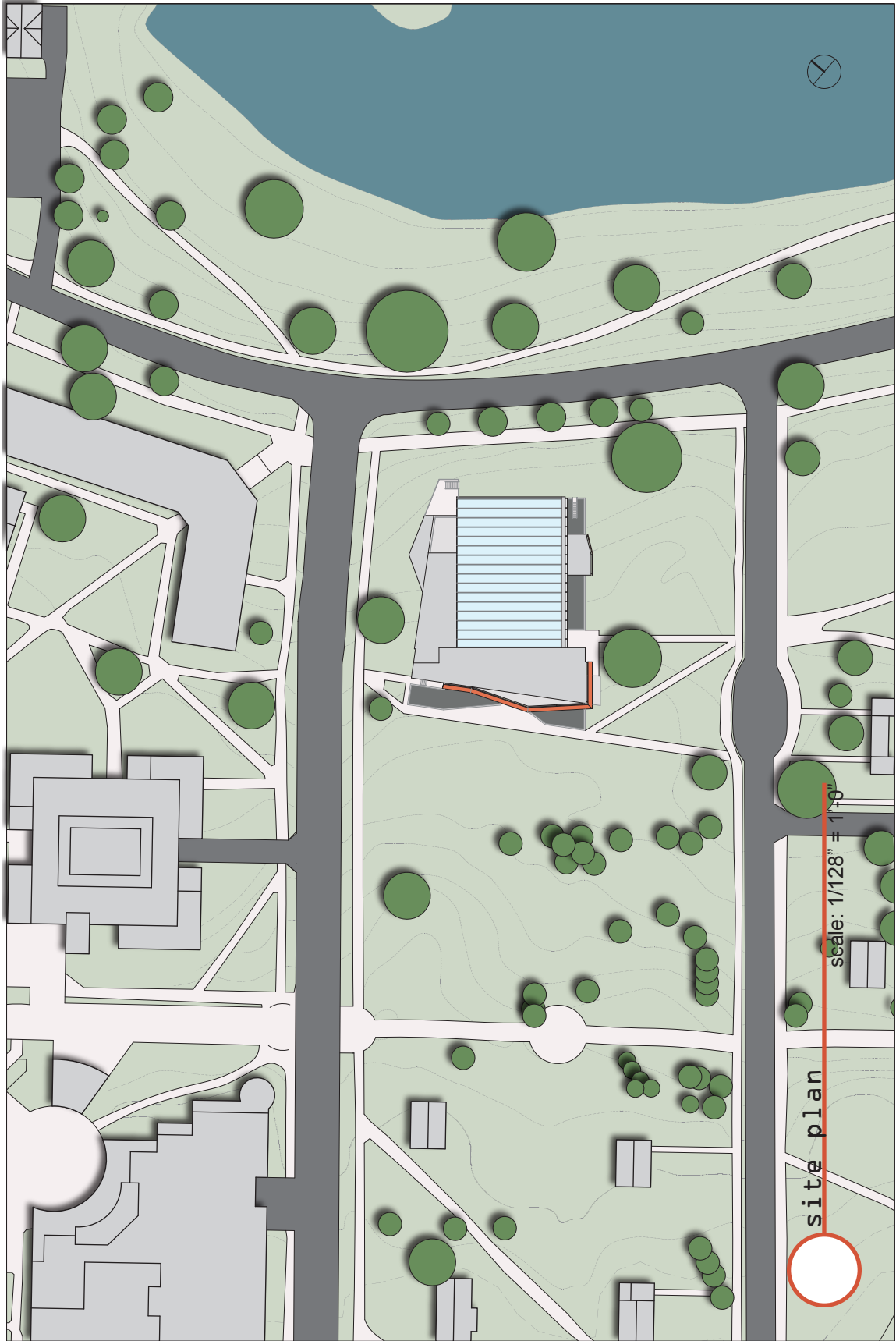
- a. Single-Family Dwellings-800 square feet
- b. Two-family Dwellings-800 square feet per dwelling unit
- c. See specific provisions for DMR, ARH, PVRA, SC-SDD and PRD zones and for multi-family housing, conversions and efficiency units allowed in other zones.

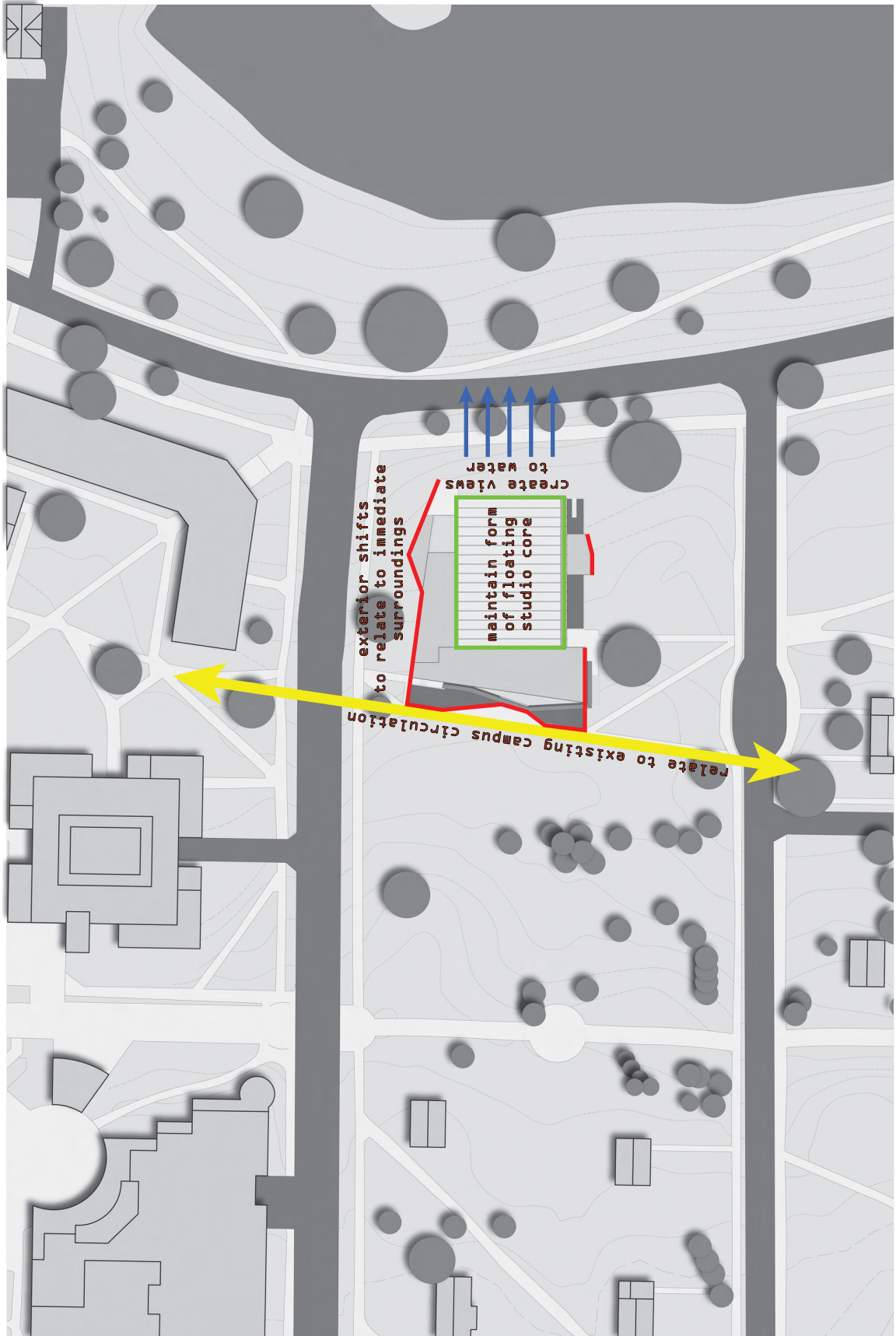
2. Business

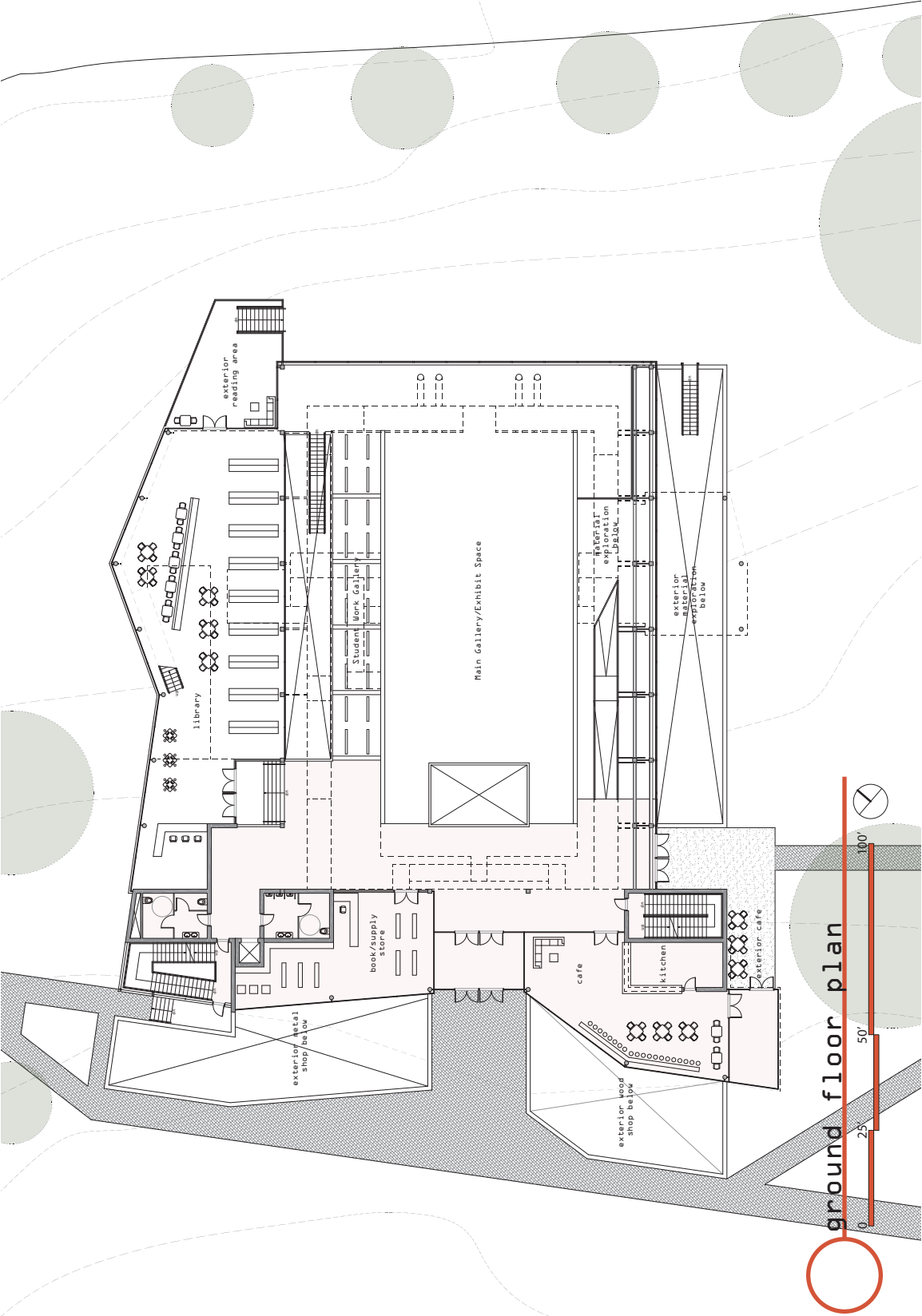
In all Business, Industrial and Institutional (PB-1 through 5, NB-1 and 2, B, PO-1, IP, RD/LI and I) zones, each new building shall have a minimum of 500 square feet of floor area on the ground level.

Design Proposal





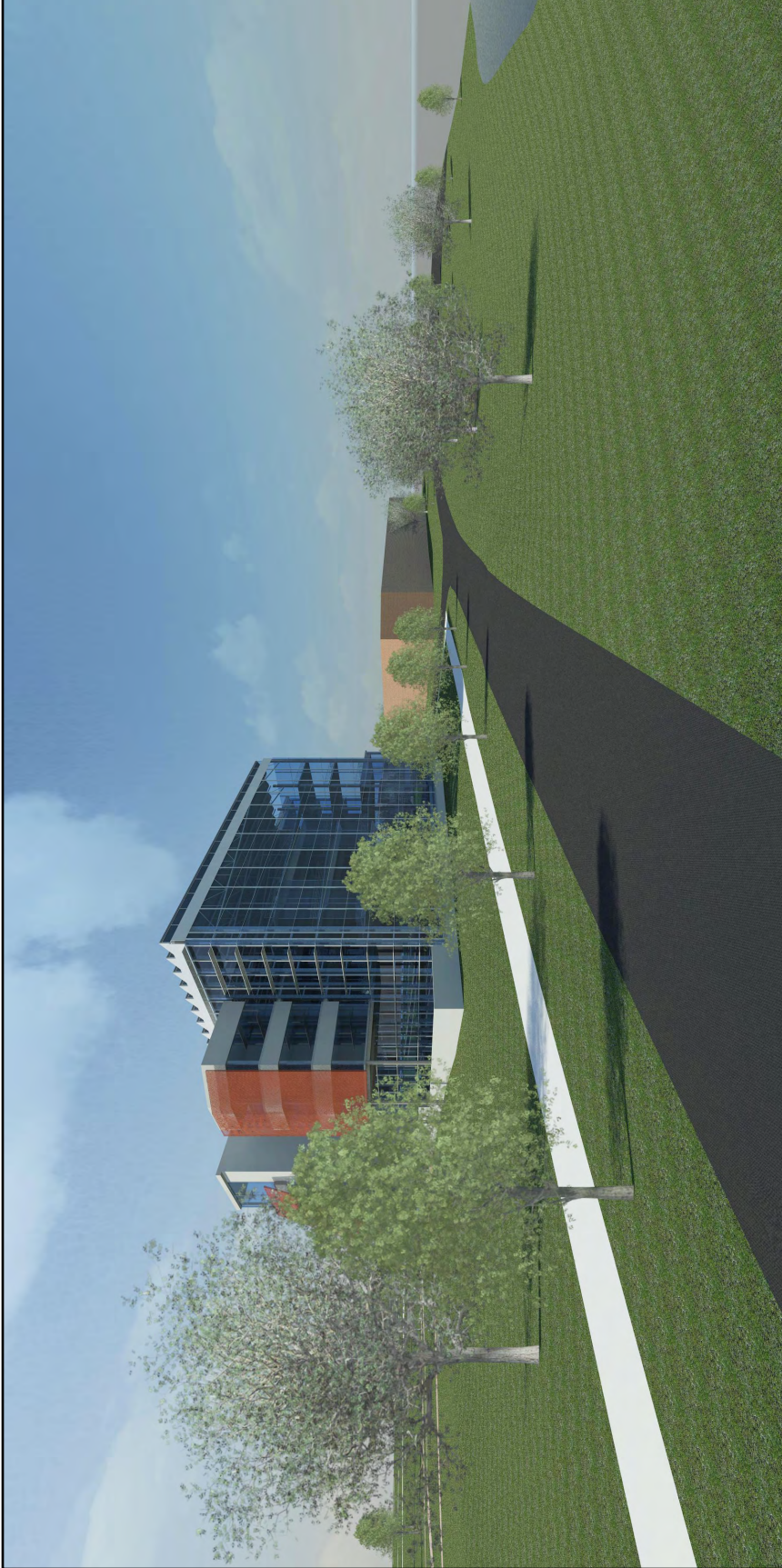




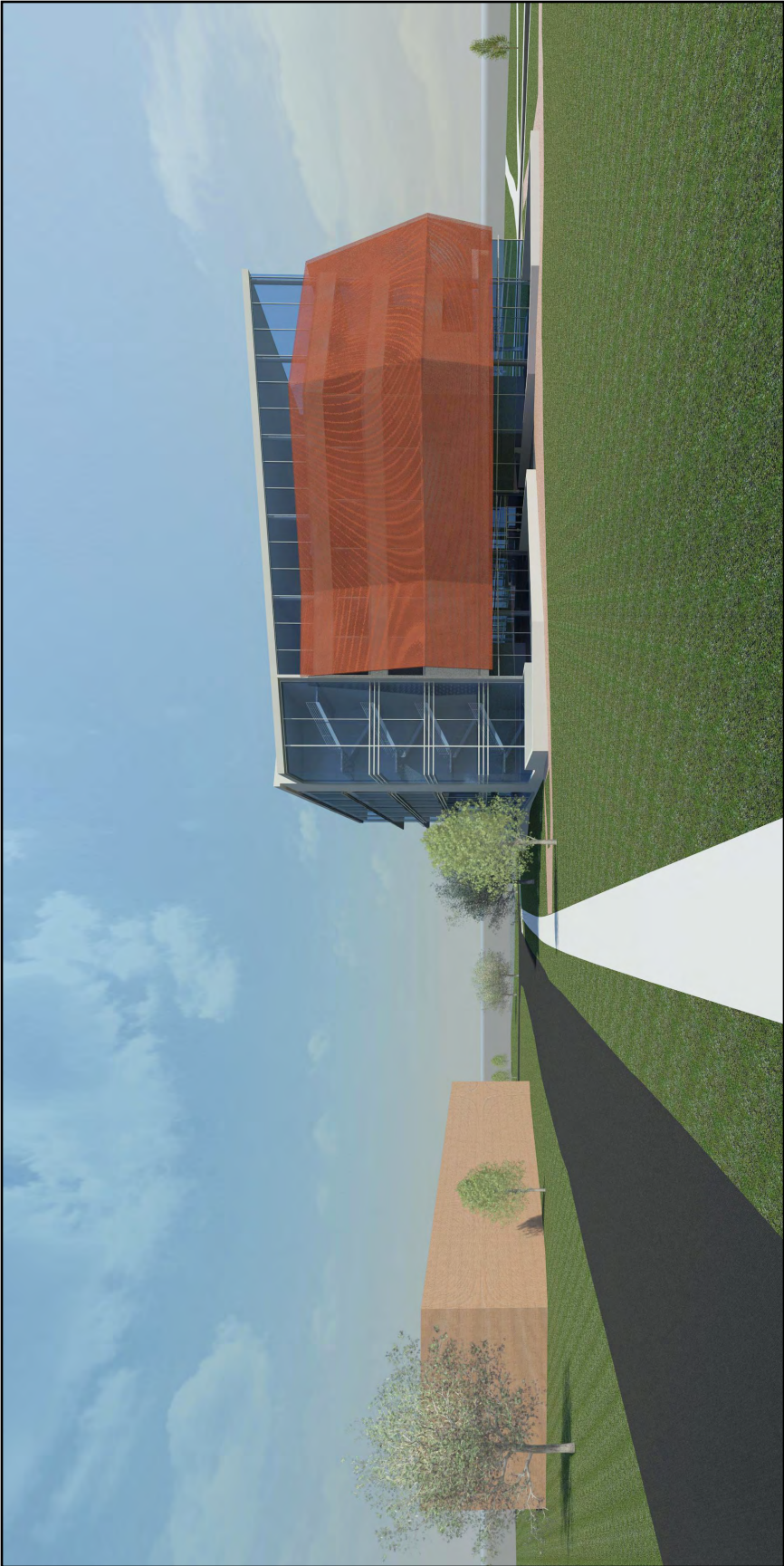
Interacting with the existing major campus circulation path connecting north and south campus, the ground floor is pulled back from the path to expose workshop courtyards below. In combination with these visual connections, the angled courtyard walls encourage those walking by to enter into the central ramped space of the building, which serves as a large, public space for exhibits and galleries, as well as an area to display student work. With the centralized design studios structured from the roof system above, the initial view from the interior of the ground floor allows for clear sight towards the adjacent lake. Designed to encourage guests to walk through the building, a ramp system beginning in this space circulates upwards through it, allowing both visual and physical connections to design studio spaces, presentation spaces, and communal working/collaboration spaces of each of the five years of student classes.



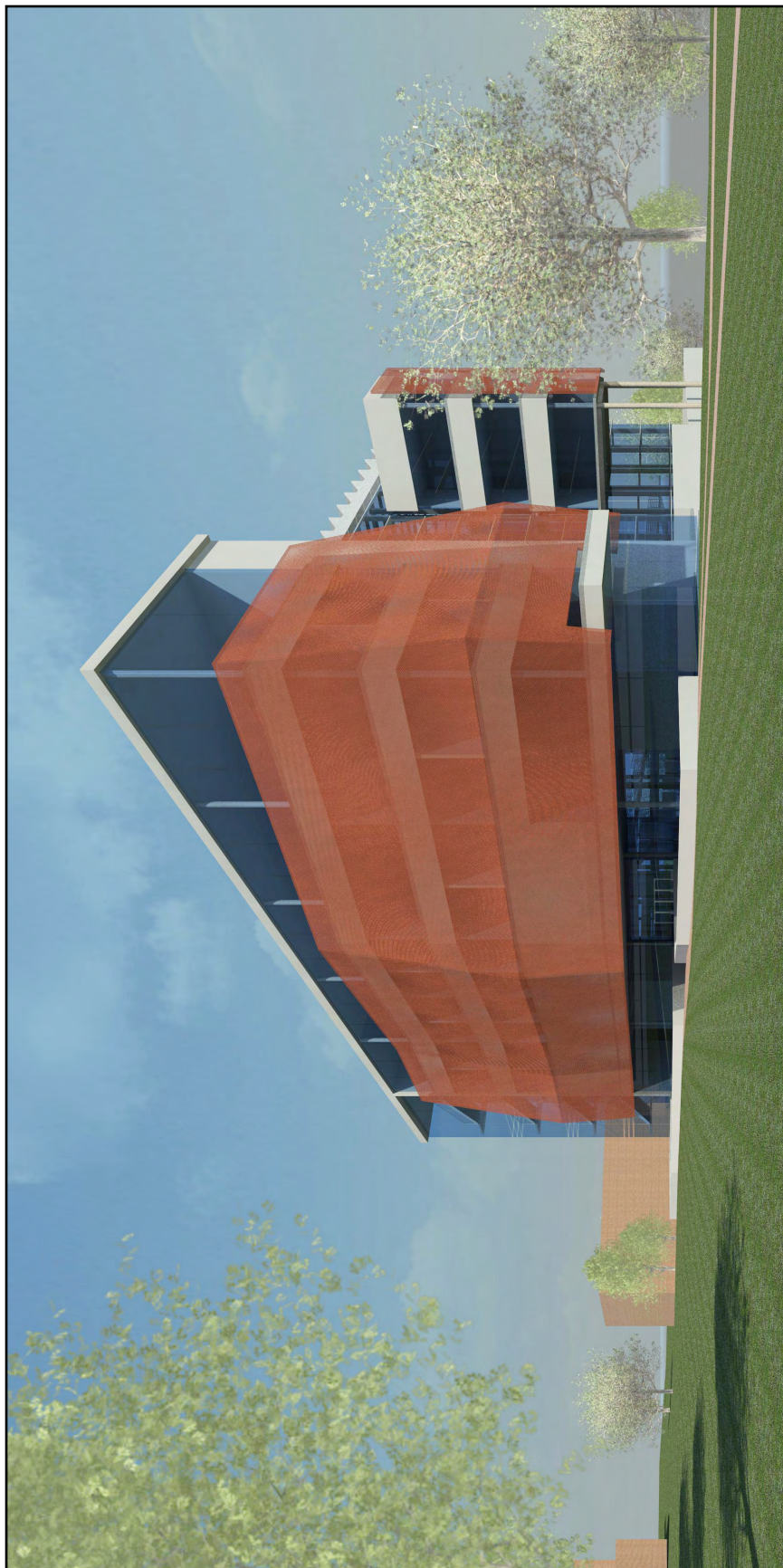
main entry and exterior workshops



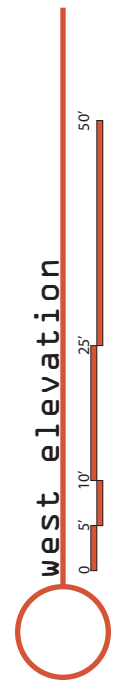
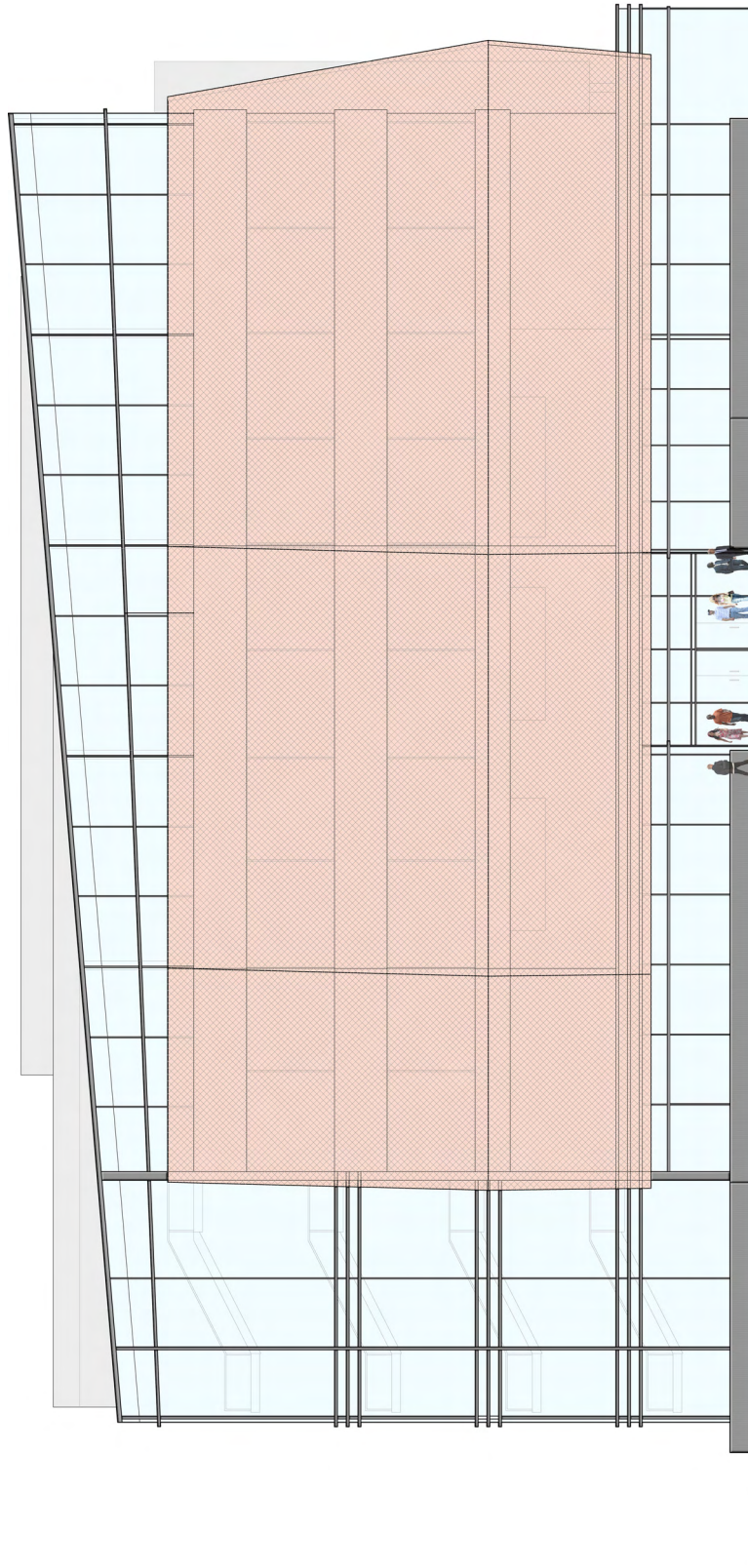
view north from lake

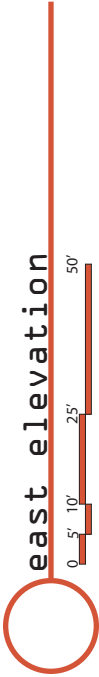
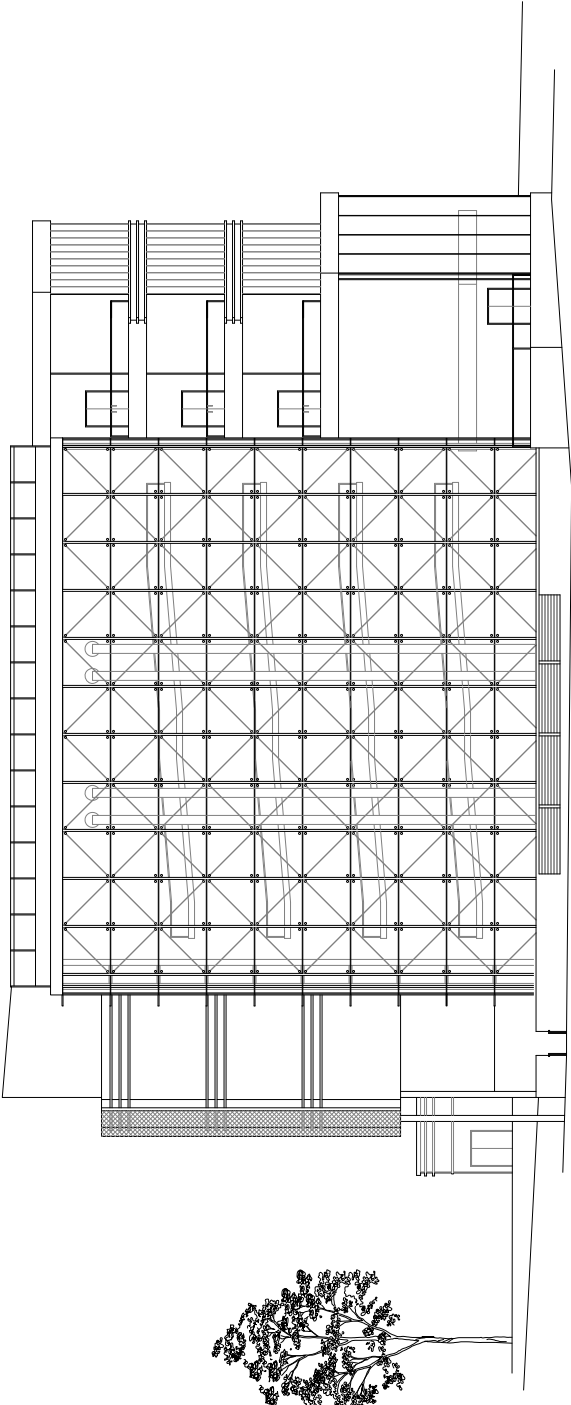


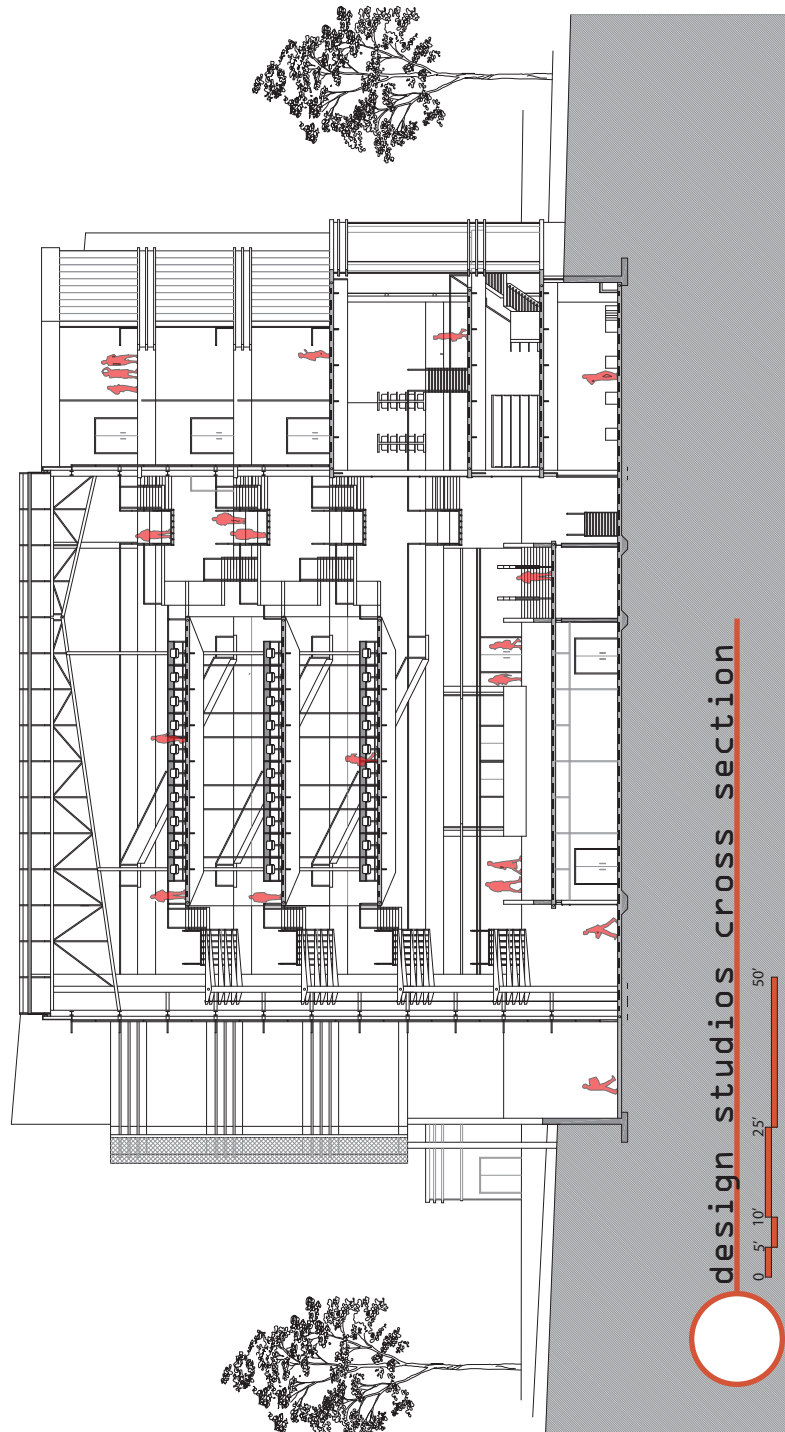
approach from west campus

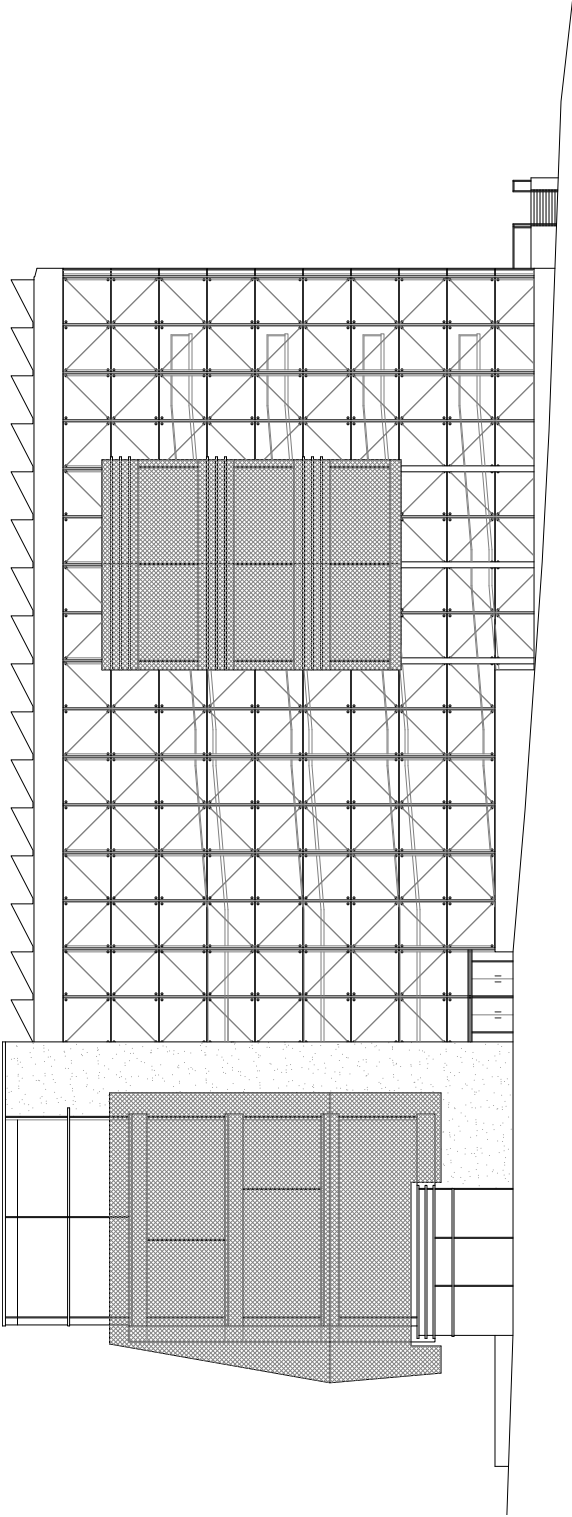


approach from south campus



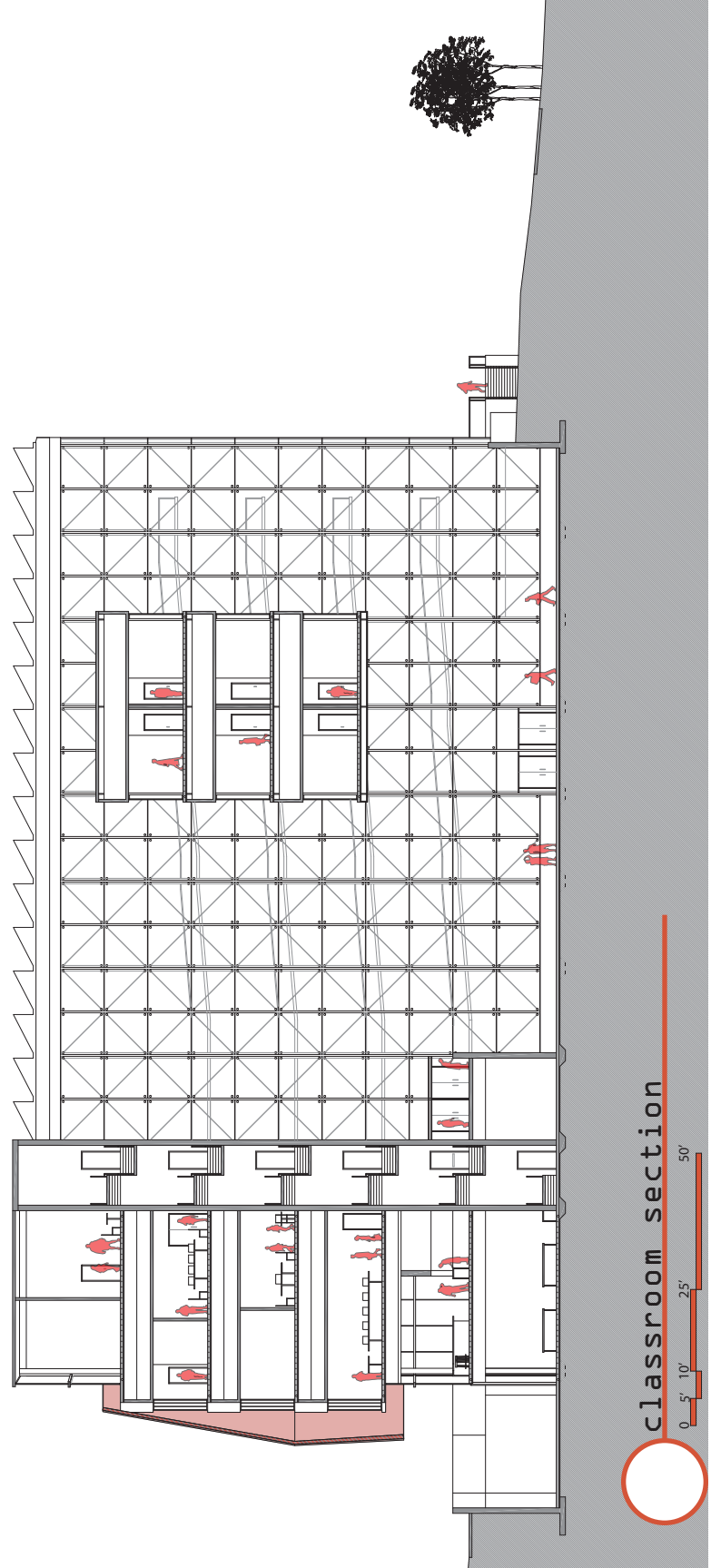


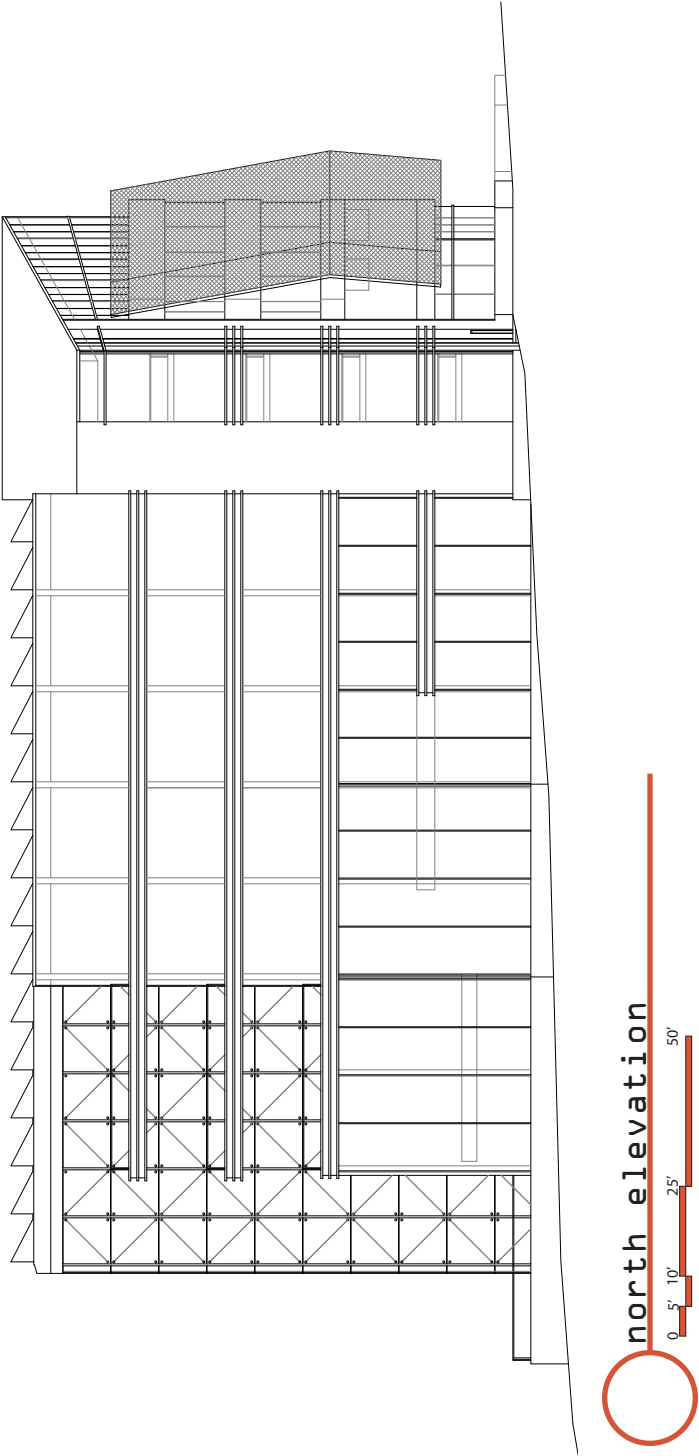


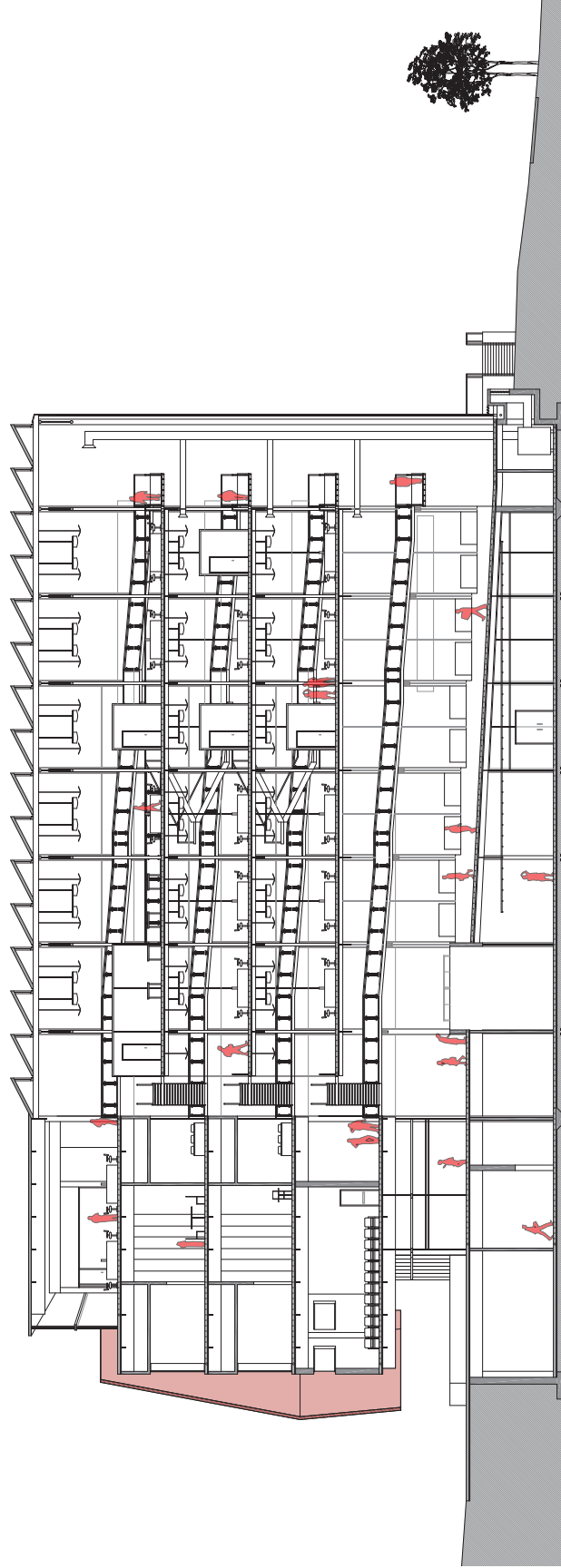


○ south elevation



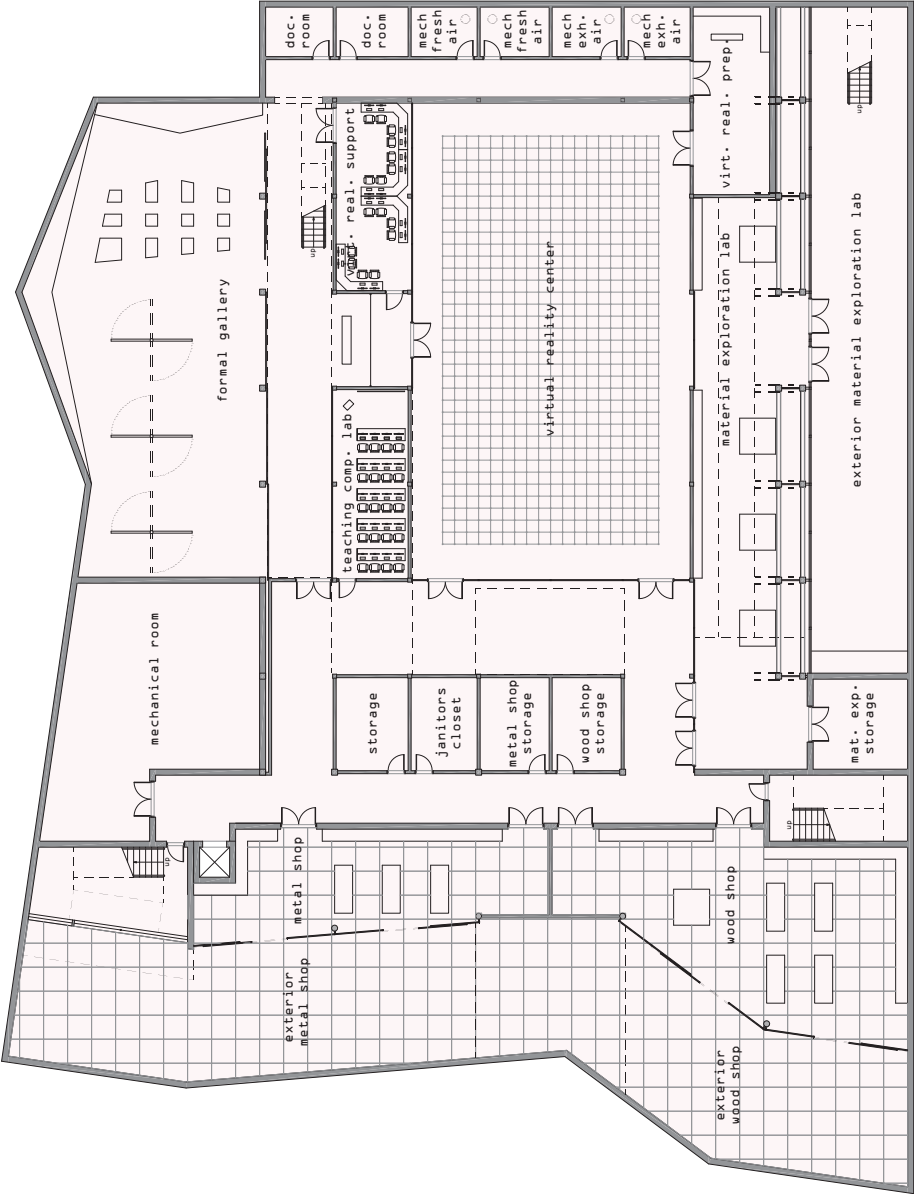




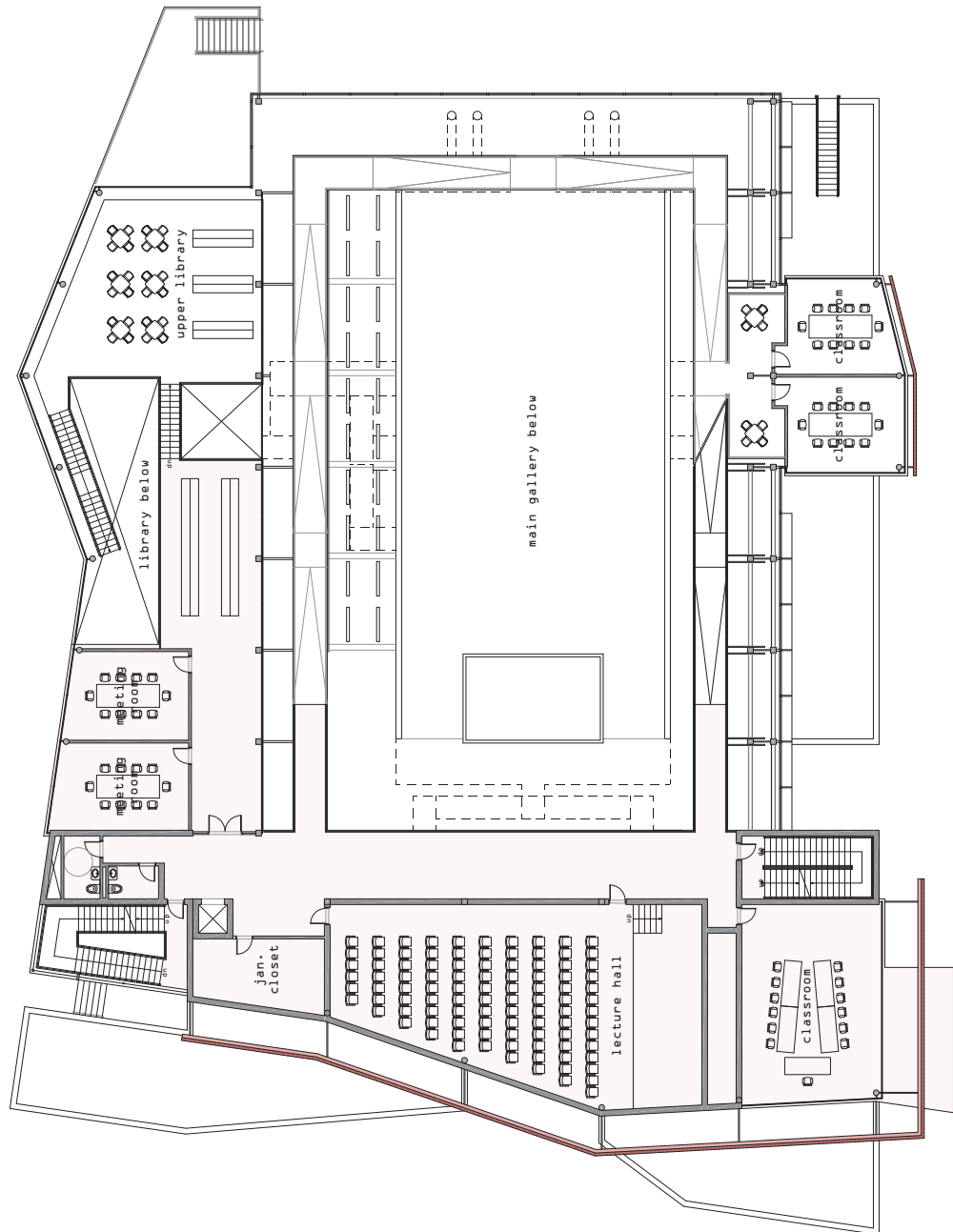


design studios section

0 5' 10' 25' 50'

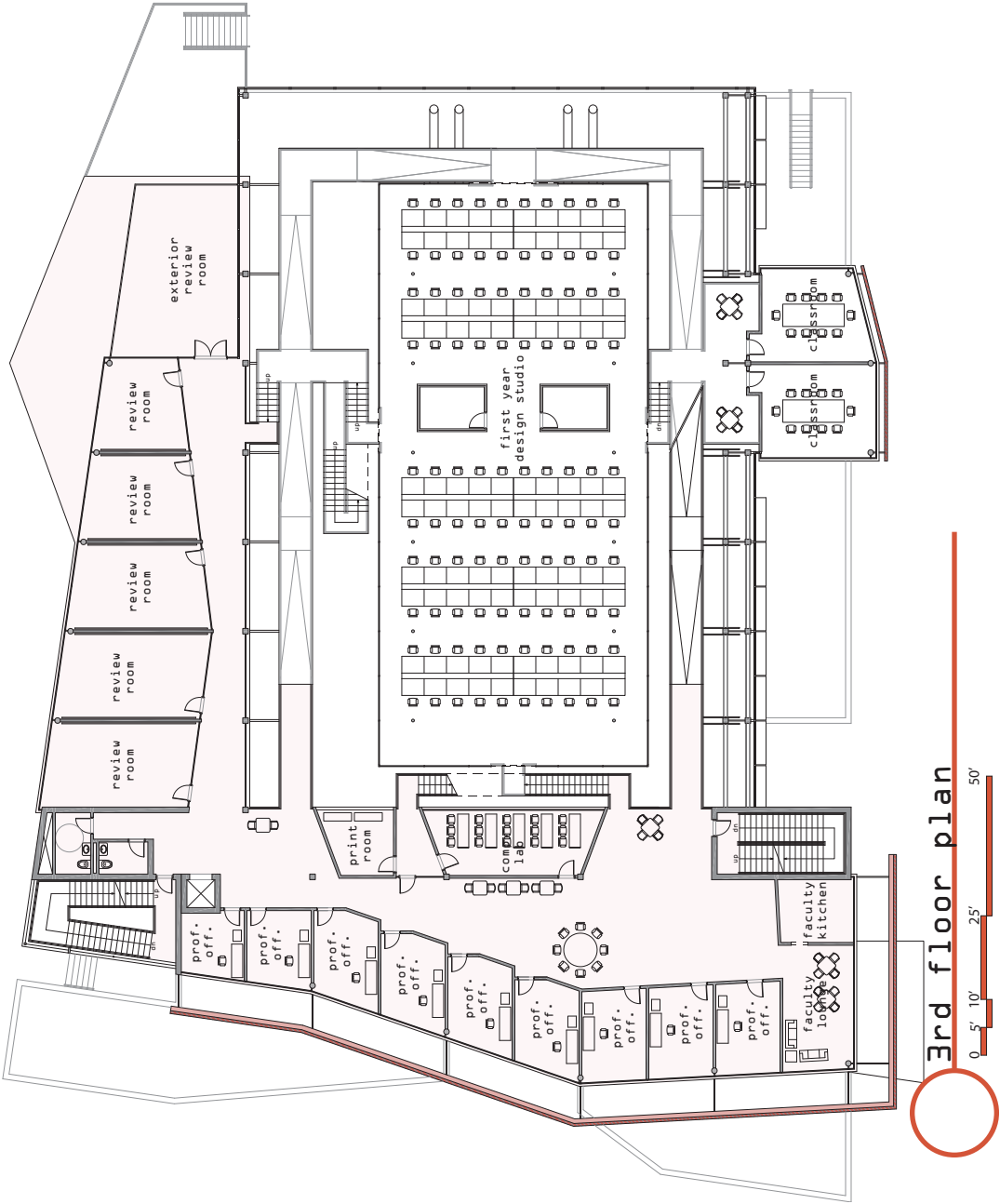


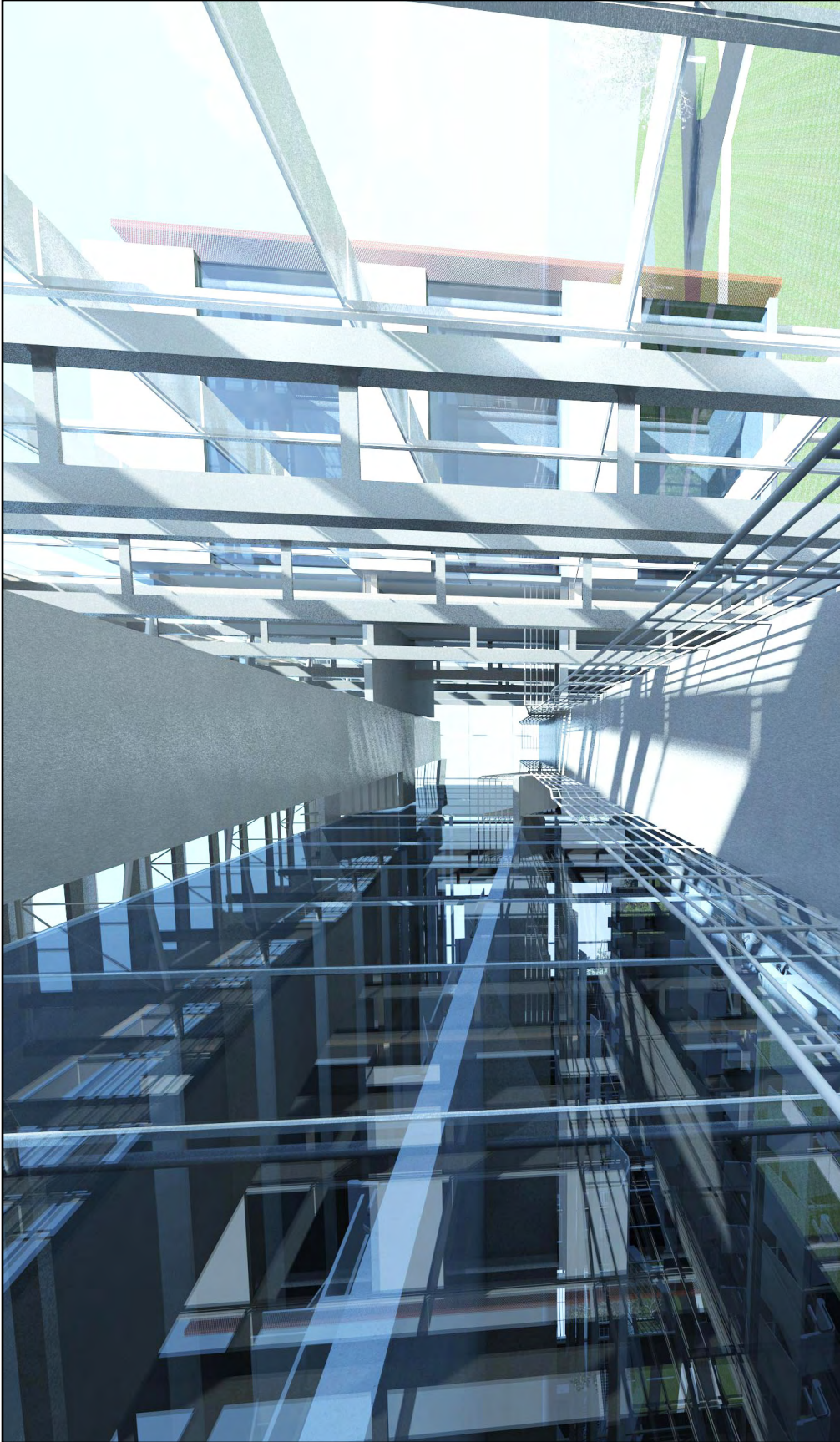
basement floor plan



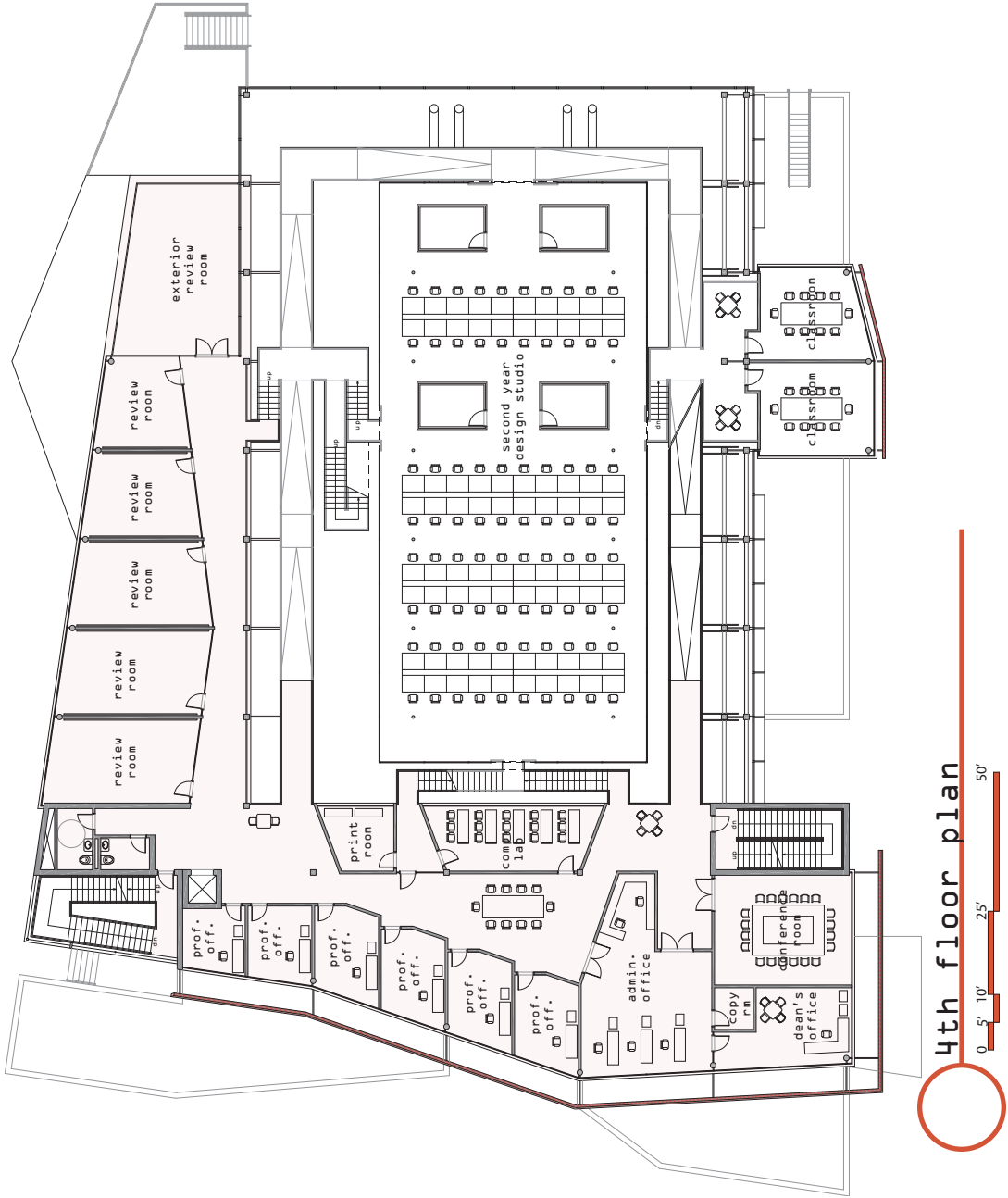
2nd floor plan

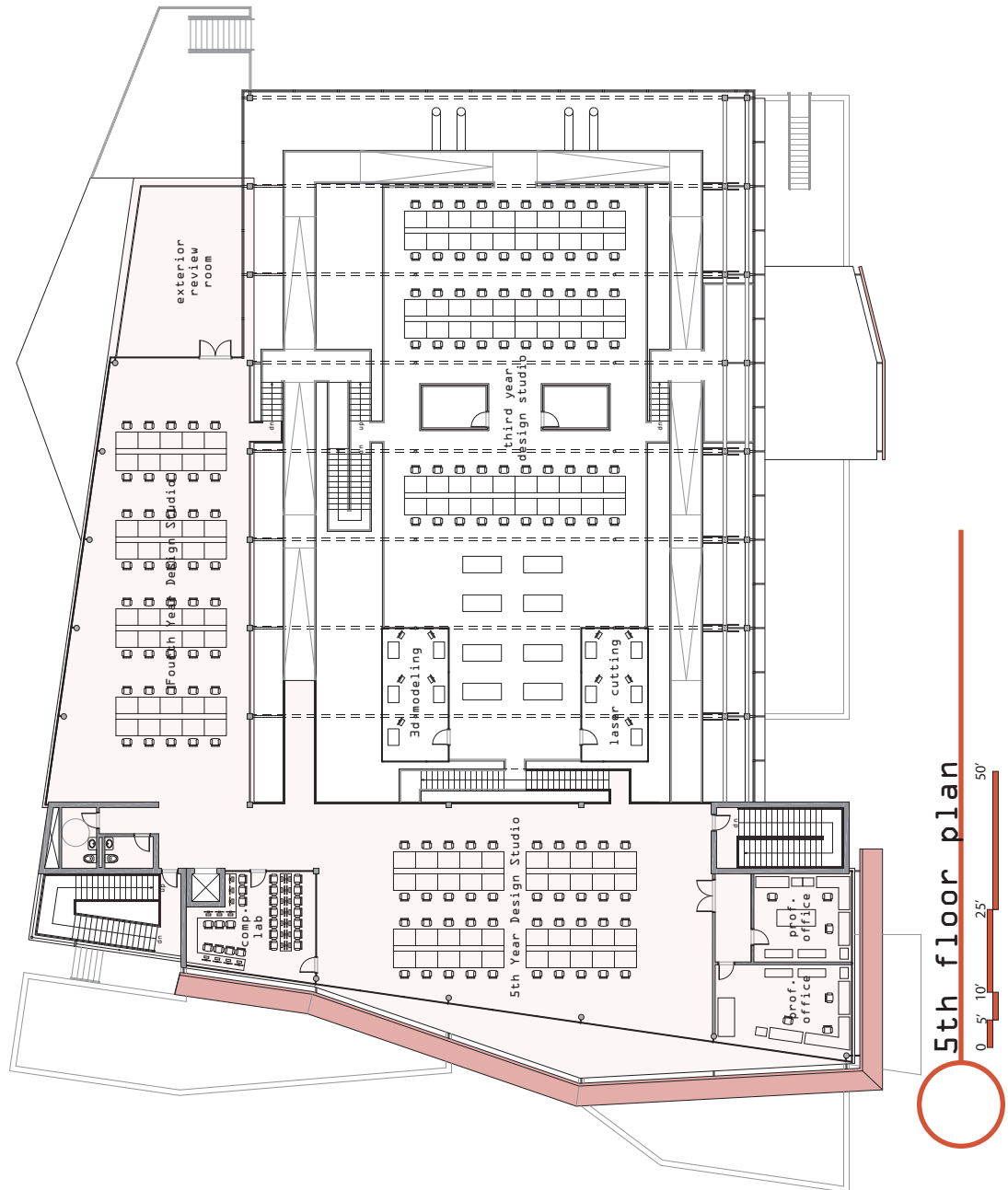
0 5' 10' 25' 50'

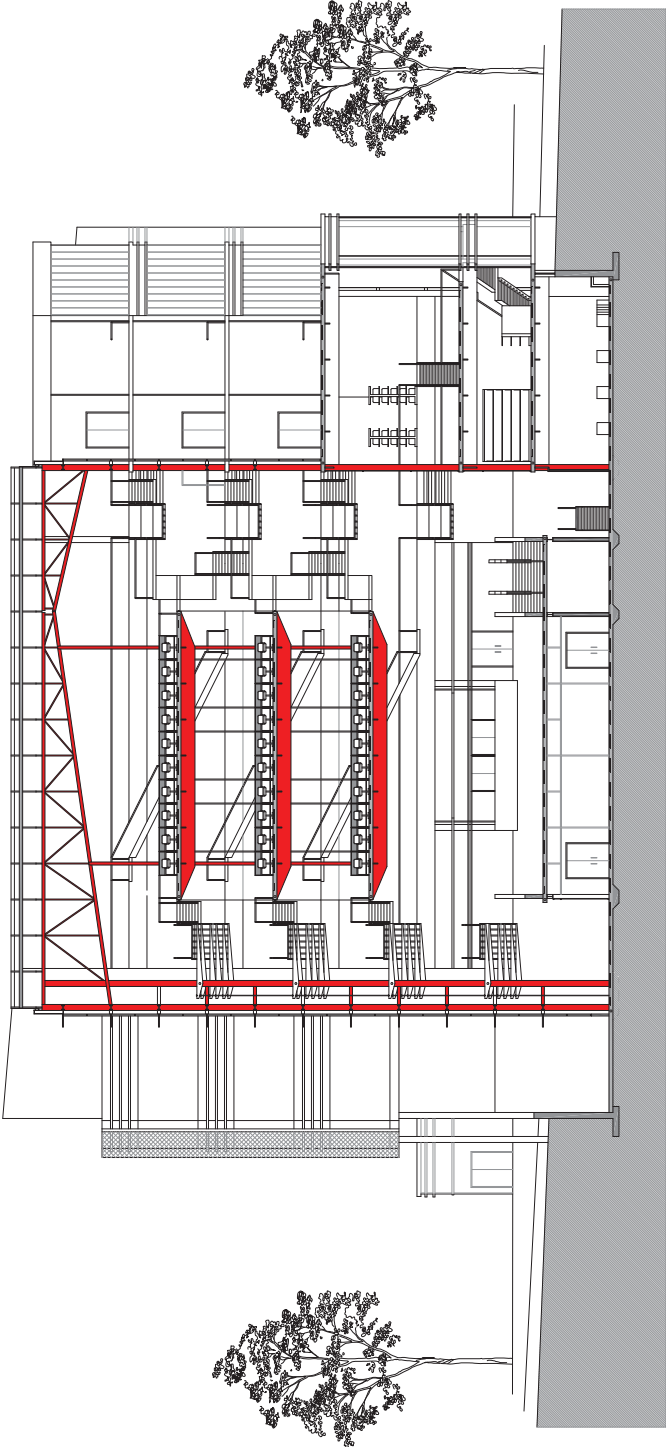




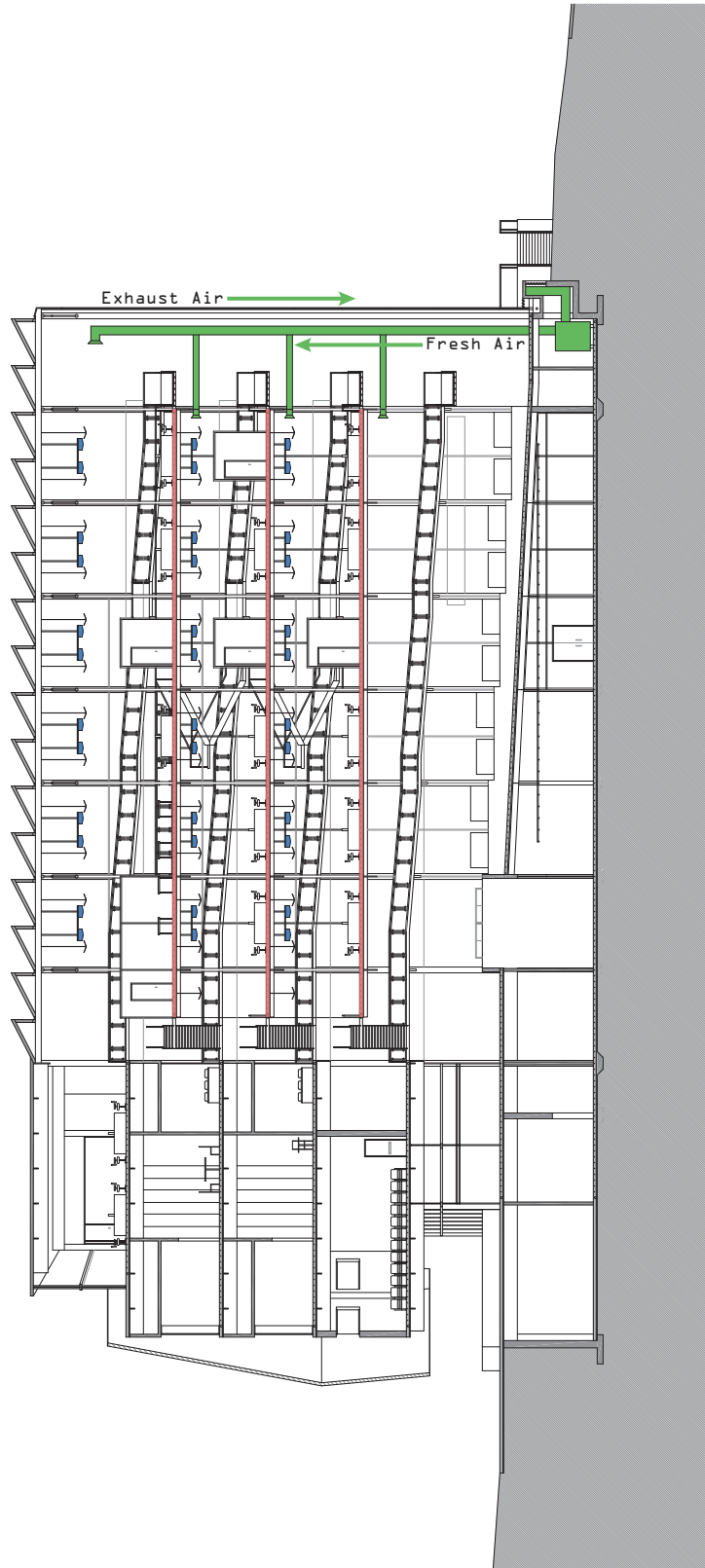
south ramp adjacent to 1st year design studio



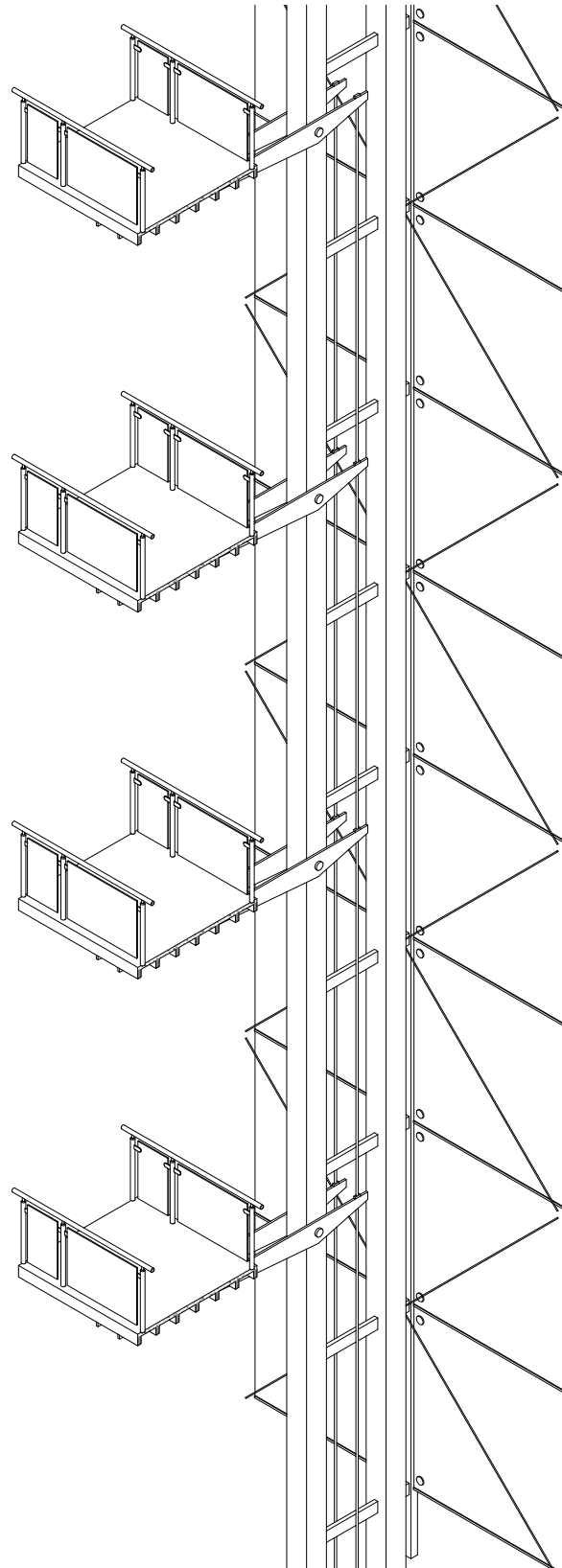




structural diagram



mechanical diagram



ramp structural axon
scale: $1/8" = 1'-0"$

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