

THE LIFE OF BUILDINGS: A NARRATIVE THROUGH TIME

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Thesis submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of Master of Architecture in Architecture.

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THE LIFE OF BUILDINGS: A NARRATIVE THROUGH TIME

Black Mountain College
Archival Gallery + Library
in the River Arts District of
Asheville, North Carolina

J E S S E T Y L E R W H I T E

A B S T R A C T

The metaphor of buildings as “living beings” offers insight into our attitudes towards buildings and how we might conceive of buildings differently as architects. By personifying buildings as being alive, we understand the full life of a building, not only its past history but also its future needs, transformations or uses. The ceremonial opening of a building often assumes a finished construction existing within a fixed moment in time. In reality, however, buildings perpetually evolve throughout their entire lifetime. The story of a building’s life, a chronicle of both the process of making and its evolution, can be narrated by the architect through the language of details.

This thesis proposes a Gallery + Library Archive for Black Mountain College at the site of a fire-ravaged cotton mill within the River Arts District of Asheville, North Carolina. The project seeks to establish a continuum between the historic past of the site and the current transformations of the district. The architectural design of the new building serves as a vehicle to study buildings in time and details that reveal the process of a building’s making.

DEDICATED TO
Bhavneet, of course.



T A B L E O F C O N T E N T S

ABSTRACT	iii
DEDICATION	v
FOREWORD: BUILDINGS AS LIVING BEINGS	viii
INTRODUCTION	2
“FULLY AWAKE”	20
CONCEPTION: THE IDEA OF A BUILDING	28
LABOR: THE MAKING OF A BUILDING	58
DIGITAL IMAGINATION	68
AFTERWORD	88
BIBLIOGRAPHY	90
IMAGES CITED	91

BUILDINGS AS LIVING BEINGS

The fifteenth-century Italian architect and theorist Antonio di Piero Averlino, known as “Il Filarete,” readily recognizes that buildings have lives just like human beings. In his book *Treatise on Architecture*, Filarete states that buildings are born after a father (the Patron) gives an idea of a building to the mother (the Architect). Before a building can be born, however, the architect must nurture the nascent idea of the building for nine months, letting the idea gestate and grow in the architect’s imagination. After making drawings to arrive at a design that reflects the desires of both father and mother, the Mother/Architect gives birth to the building by presenting the Father/Patron a wooden model, measured and proportioned to the final building. Upon encountering materials and methods of construction, the architect also becomes the nurse of the building by selecting the finest builders to raise the baby/model into an adult/building. Throughout its lifetime the building is cared for and maintained in good health, although it undergoes many transformations and eventually dies.¹

This metaphor offers insight into our attitudes towards buildings and how we might conceive of buildings differently as architects. By personifying buildings as living beings, we understand the full life of a building, not only its past history but also its future needs, transformations or uses. The ceremonial opening of a building often assumes a finished construction existing within a fixed moment in time. In reality, however, buildings perpetually evolve throughout their entire lifetime. Even the word “building” carries a double meaning, existing as both noun and verb, implying both the action “to build” and the result “that which is built”-- it is something “formed yet still forming.”²

The 20th century architect Louis Kahn extends this analogy of a building as a living being by stating, “an architect has the opportunity of creating life. It’s like a human body.” In Kahn’s view, a building is most alive when it’s either under construction or fallen into a state of ruin. During the middle stages of a building’s existence, when the building is

“in servitude,” programmatic concerns overwhelm the inhabitants and the spirit of its making is not felt. All the elements that contribute to its built-form are “locked and unable to tell the adventure of its making.” In order to bring the building to life, Kahn advocates that architects should express the process of making within the building and to leave the marks of construction, which would “filter through the entire society of building, to architect, engineer, builder and craftsman.”³

Although more than five hundred years removed, both Filarete and Kahn use the metaphor of buildings as living beings to remind us that buildings exist in time. While Filarete considers the full lifespan of a building and the perpetual evolution of their existence, Kahn recognizes that buildings have a spirit that unfolds in steps and stages, revealed through the process of construction. This spirit or life is defined by Kahn as the “desire of making,” while Filarete compares it to the impulse of falling in love, for “their is so much pleasure and desire in building.”

The story of a building’s life, a chronicle of both the process of making and its evolution, can be narrated by the architect through the language of details. Details are tectonic fragments fluent in a language of construction and craftsmanship, exemplifying a union of the Greek meanings of *poiesis* and *techne*. Details not only satisfy the mind—as tectonic expressions of building—they also reach the soul—arousing human senses through a composition of material, light and space. Furthermore, a single detail can be a generator for a building’s making or form, relating geometries across many scales. Details can be designed with specific materials and construction methods that anticipate a building’s metamorphosis in order to become richer in age, either from weathering or use. With additions to buildings and other alterations, details can give clues to the buildings full lifespan and mitigate the transition between existing spaces and newly added components. Thus, if we analyze each stage of a building’s development, we can see how details serve to curate the building’s life story.

CONCEPTION: THE IDEA OF A BUILDING. Before a building can be born, it must be conceived. Described by Filarete as the “gestation period,” this phase of development proceeds in steps and stages.⁴ The process is fluid, flexible and variable; it begins with a nebulous, formless idea and matures slowly toward a physical reality.

Within a contemporary context, it is worthwhile to study the work of Carlo Scarpa. The twentieth-century Venetian architect observes the duality between architectural theory and practice -- one associated with the world of the mind and the other the physical world. Some architects attribute this split to the philosophical divide between an *a priori* Platonic and an *a posteriori* Aristotelian approach to architecture. For Scarpa, harmony is reached between these two worlds through the development of details. As Marco Frascari notes, Scarpa used the detail as a signifying expression of the “place of meeting between mental construing and actual construction.”⁵ Not only was the detail necessary to satisfy the constraints of building forces and structural logic, but it also served as a signifier of meaning and expression. Influenced by the rich history of Venetian buildings and craftsmanship, Scarpa extracted an intimate knowledge of material and construction techniques from the established tradition. This experiential knowledge allows him to playfully expand on and develop innovative works of architecture that fit within the context of the place.

Scarpa’s working methods display this constructive aptitude, for his drawings reflect the transformational process that occurs between drafted design and built-form. These drawings are focused toward construction rather than strict Cartesian representation. The drawings allow the building to arise out of a myriad of partial sections and elevations that interplay with detail development worked out in the margins. Similarly, contemporary architect Peter Zumthor likens working drawings to human beings by stating, “Working drawings are like

anatomical drawings. They reveal something of the secret inner tension that the finished architectural body is reluctant to divulge: the art of joining, hidden geometry, the friction of materials, the inner forces of bearing and holding, the human work which is inherent in manmade things.”⁶ Perhaps the spirit of making within a working drawing is transferred to the built work, bringing the building to life in a similar manner to Filarete and Kahn’s original metaphor.

LABOR: THE MAKING OF A BUILDING. According to Filarete’s description, the beginning of construction marks the moment a building is born. Yet, in this vital stage of development, many architects are not directly involved in the making of a building. Construction drawings often represent the architect’s final responsibility in the process of making. As Giuseppe Zambonini notes, “This contradicts a fundamental opportunity in making: the learning each time from a new condition, permitting one to enter each project with the attitude of a beginner.” Within the profession today, the architect is too often separated from the construction site. While the argument that architects should construct their entire buildings is not being made, knowledge from the act of making can improve the resultant architecture. Prototyping innovative design solutions during conception improve and inform the design process. Karl Wallick reminds architects that “prototyping is a way of thinking and doing, learning and revising... Begin with a question; form is a result of process.”⁷

Knowledge from the physical act of construction, as distinct from the intellectual pursuit of designing *a priori*, is vital if architects desire to imbue their designs with the spirit of making. In his book *Shop Class as Soulcraft*, Matthew B. Crawford argues there has been a partition between thinking and doing and that considerable knowledge can be gained through the experience of doing. Crawford suggests the true essence of a thing is not discovered simply through deductive reasoning

1 Filarete, Antonio Averlino. *Treatise on Architecture*. Translated by John R. Spencer, 12-14. New Haven: Yale University Press, 1965.

2 Pérez-Gómez, Alberto. “Architecture as Process.” In *Manual*, edited by Jennifer N. Thompson, 6-8. New York: Princeton Architectural Press, 2002.

3 Frampton, Kenneth. “Louis Kahn: Modernization and the New Monumentality, 1944-1972.” In *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture*, edited by John Cava, 227. Cambridge: MIT Press, 1995.

4 Filarete, Antonio Averlino. *Treatise on Architecture*. Translated by John R. Spencer, 12-14. New Haven: Yale University Press, 1965.

5 Frascari, Marco. “The Tell-the-Tale Detail.” In *VIA 7: the Building of Architecture*, edited by Paula Behrens and Anthony Fisher, 23-37. Cambridge: MIT Press, 1984.

6 Zumthor, Peter. *Thinking Architecture*, 18. Basel: Birkhäuser Architecture, 2010.

7 Wallick, Karl. KieranTimberlake: *Inquiry*, 6-7. New York: Rizzoli, 2011.

but rather intimate experience. He believes that knowledge is something that must be cultivated through long practice, and supports his claim by referencing Martin Heidegger: “the nearest kind of association is not mere perceptual cognition, but, rather, a handling, using, and taking care of things which has its own kind of knowledge.”⁸ Knowledge unveiled empirically during the process of making can alter and improve the final outcome.

MIDDLE AGES: THE METAMORPHOSIS OF BUILDINGS. The final act of construction does not conclude the life of an architectural work. Instead, this moment marks the beginning of a slow, gradual process of degradation that will have dramatic effects on the building’s appearance and durability. This notion of impermanence in building should not be resisted but embraced. As John Ruskin reminds us, “Nothing that lives is or can be rigidly perfect; part of it is decaying, part nascent. Irregularities and deficiencies are not only signs of life, but sources of beauty.”⁹

A building in time can express the vitality of life through its material metamorphosis. Architects have the ability to narrate this story through careful selection of materials and an understanding of the alchemic process of weathering. The intentions of patina, distressed surfaces, seasoned wood, or moss-covered stone reveal inherent beauty and acknowledge the natural process of a material existing within its environment. The process of weathering can also assist in telling the story of a building. Whether the building exists within a flood plain, near the ocean, or with high sun or wind exposure can all be deduced from a careful reading of the building. David Leatherbarrow reminds us that through the process of weathering “the ‘finish’ of the local environment” is added.¹⁰

For many architects, daylight is particularly significant in the telling of a building, and is even considered a building material just like brick, stone, wood or steel. For Mario Frascari, daylight brings building materials to life. Frascari describes this phenomenon by personifying light as an entity “born in the materials of construction and imprisoned in the body of an edifice.” Frascari expresses how materials and architecture as a whole are “co-existent with light,” being truly expressed only when under the presence of light, when the sensation to touch and feel material textures overtakes us. Frascari alludes to light as the catalyst to bring forth the tectonic presence of architecture. Details designed with reveals or small openings that rely on the play of light and shadow can achieve this expression.¹¹

LATE AGES: THE DEATH OR REBIRTH OF BUILDINGS. Eventually a building reaches the point in its life when it is no longer suitable as a place of habitation. Buildings typically outlast their parents (Patron and Architect), leaving decisions to be made by subsequent generations that determine their elderly fate. In some cases the building is demolished, and the site retains little remembrance of previous life. In other cases, the building exists as a ruin, a fragmented memory of a past life. However, Filarete reminds us that sometimes a building “is cured of its sickness by a good doctor. If it has a doctor when it becomes ill, that is, the master who mends and cures it, it [will] stand a long time in good state.” Thus, a building can experience a cycle of rebirth.

In fifteenth-century Italy, Leon Batista Alberti dealt with similar questions about the context and memory residing in a place as he addressed the ruins from the Roman Empire. Alberti advises young architects to “not to let your desire to build impel you headlong into commencing the work by demolishing any existing building or laying

extensive foundations for the whole of it: this is what a foolish or rash man would do.”¹² Alberti embraced the found conditions of a site, allowing the development of new and existing construction to work together as part of a continuum.

Contemporary architect W.G. Clark advocates a similar notion by encouraging architects to respect “what was lost with something that atones for the loss. In the best architecture this replacement is through an intensification of place.”¹³ Often this process is more about reinterpretation than retelling, as fragments of its historical life find a way to be expressed within the contemporary context. This can occur with artful detailing, as specific materials are selected that relate a building to its past life or its native environment. Or perhaps a dialogue can be established that contrasts the preexisting structure with the new construction. Giuseppe Zambonini advocates for “details with the purpose of joining the existing space with newly introduced components to create a dialectical juxtaposition of the two extremes. The idea is to first radicalize the differences and second to establish unity.”¹³ These “third pieces” or “skirts,” are detailed moments that not only join architectural elements in space but also in time. The contrasts between the various methods of construction may reflect the building technologies of the corresponding eras, allowing a dialogue between the past and present.

In most developed cities, numerous abandoned buildings exist in districts where former industries once thrived but have since become obsolete. The industrial infrastructure of many of these districts has the potential to be “mended” or “cured” by a good doctor. In fact, the city fabric is at risk if these areas are not rehabilitated, for they often are situated near urban centers with high property value, along rivers and water fronts designating trade posts from a previous industrial age. As city officials and informed citizens move toward repair, reuse, and renewal, architects have the opportunity to embrace the challenge of working within the existing conditions of a site. The inheritance of these elderly buildings or partial fragments from a previous age can be sources of beauty that guide future development. Often these buildings contain a historic and cultural significance that can be a catalyst for new design, spurring a cycle of rebirth in the life of the building.

8 Crawford, Matthew B. *Shop Class as Soulcraft*, 161. New York: Penguin Press, 2009.

9 Ruskin, John. *The Stones of Venice*, 172. New York: Da Capo Press, 1985.

10 Leatherbarrow, David, and Mohsen Mostafavi. *On Weathering: The Life of Buildings in Time*, 16. Cambridge: The MIT Press, 1993.

11 Frascari, Marco. “The Lume Materiale in the Architecture of Venice.” *Perspecta* 24 (1988): 136-145.

12 Alberti, Leon Battista. *On the Art of Building in Ten Books*. Translated by Joseph Rykwert, Neil Leach, and Robert Tavernor. Cambridge: MIT Press, 1988.

13 Clark, W.G. “Replacement.” In *Clark and Menefee*, edited by Richard Jensen, 10. New York: Princeton Architectural Press, 2000.

14 Zambonini, Giuseppe. “Notes for a Theory of Making in a Time of Necessity.” *Perspecta* 24 (1988): 2-23.



Black Mountain College
Archival Gallery + Library
in the River Arts District of
Asheville, North Carolina

I N T R O D U C T I O N

This thesis proposes a Gallery + Library Archive for Black Mountain College at the site of a fire-ravaged cotton mill ruin in the River Arts District of Asheville, North Carolina. This historically industrial district recently witnessed a period of rebirth, as artists and entrepreneurs have transformed many of the large brick buildings into artist studios and new businesses. The Gallery + Library Archive would celebrate the influence of Black Mountain College on experimental art and education while simultaneously support this expanding community of artists and residents.



The River Arts District is located east of the French Broad River, west of Downtown Asheville, and north of the Biltmore Estate.

S I T E

The city of Asheville is located within the Blue Ridge Mountains of Western North Carolina. This unique mountain city prides itself for its beautiful natural surroundings and an eclectic arts culture. The most famous attraction is the Biltmore House, the summer home of George Vanderbilt and the largest private residence in the United States. In the late 19th century, construction on Vanderbilt's house helped Asheville rise to prominence, as the city's infrastructure was upgraded to accommodate the necessary rail lines and roads needed to facilitate construction. This in turn connected Asheville to many other major Southeastern cities.

The region most affected by this growth was the river district, a low lying valley within the river basin of the French Broad River. Known today as the "River Arts District," this region was once a thriving industrial manufacturing sector. This historically industrial district stretches along the French Broad River for approximately 1.4 miles. The western bank of the river consists of narrow parkland flanked by steep mountainous terrain while the eastern bank remains relatively flat and contains most of the industrial buildings and infrastructure from the previous century.

The site of the proposed Gallery + Library Archive is indicated by the red circle. This site is in the heart of the River Arts District and lies between a series of bridges that connect to the downtown area of Asheville.



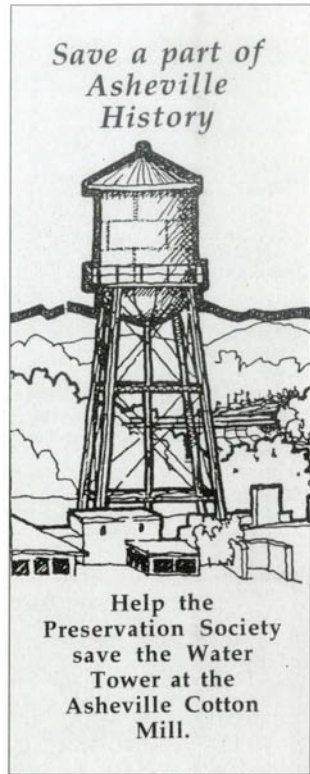
R I V E R A R T S D I S T R I C T

The River Arts District consists of turn-of-the-century industrial brick buildings. In the mid-1980s local artists began purchasing studio spaces within these large, open structures. Within the last few decades, the industrial heritage of the district has been transformed by a diverse community of artists and new businesses. The area hosts a unique and tightly-knit community of studio artists, restaurants, breweries and traditional manufacturing. A synthesis of industrial heritage and personal artistic touch marks the district with a sense of the past and a vibrant spirit of rebirth.

More than 180 artist studios are located within the existing fabric of the River Arts District, scattered among nineteen historic industrial buildings. Twice a year a weekend celebration known as Studio Stroll showcases the artists' work through a series of exhibitions open to the public. This event has gained widespread popularity that brings thousands of visitors to the area. The event, however, highlights the fragmented nature of the district and the need for greater walkability and bike paths to facilitate local transportation. This fragmentation gives opportunity for a future building to become the anchor or heart for the district.



This collage displays the unique material palette of the district. Many of these turn-of-the-century brick buildings have been stamped with personal expressions that reveal the air of creativity that permeates the district today.



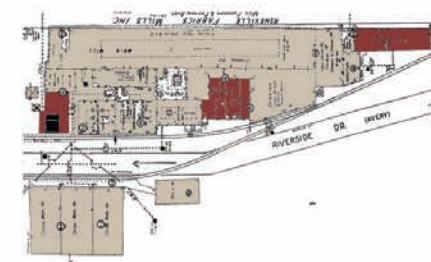
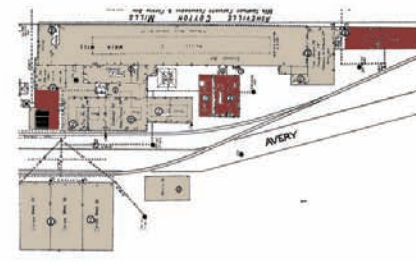
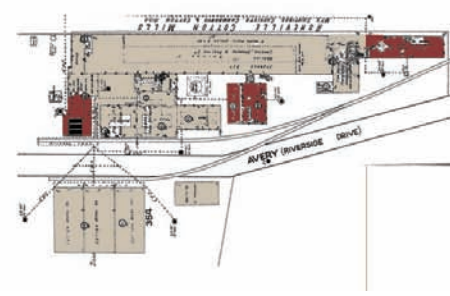
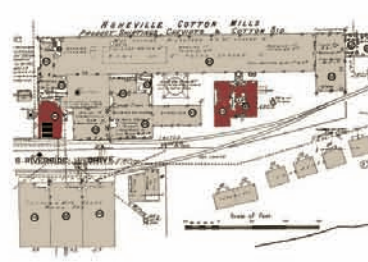
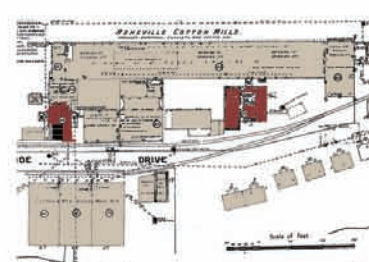
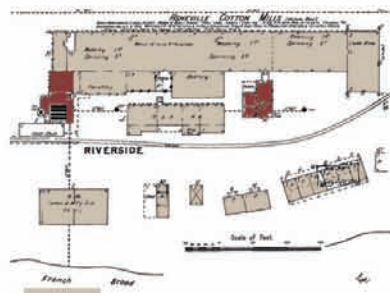
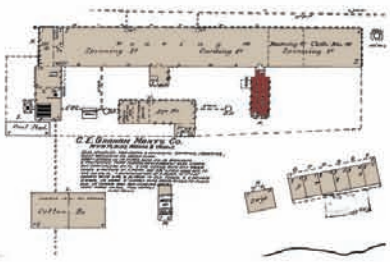
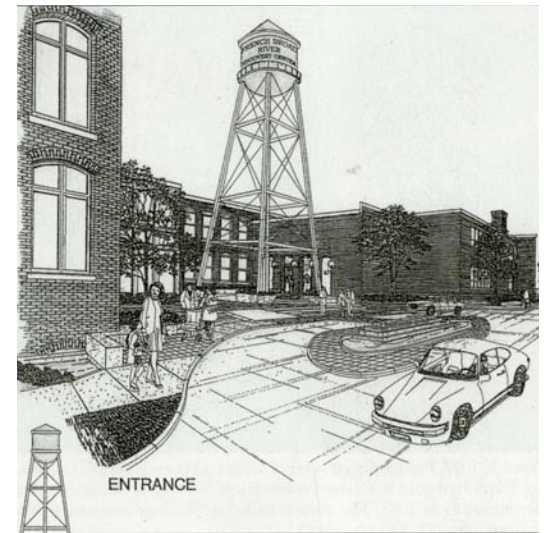
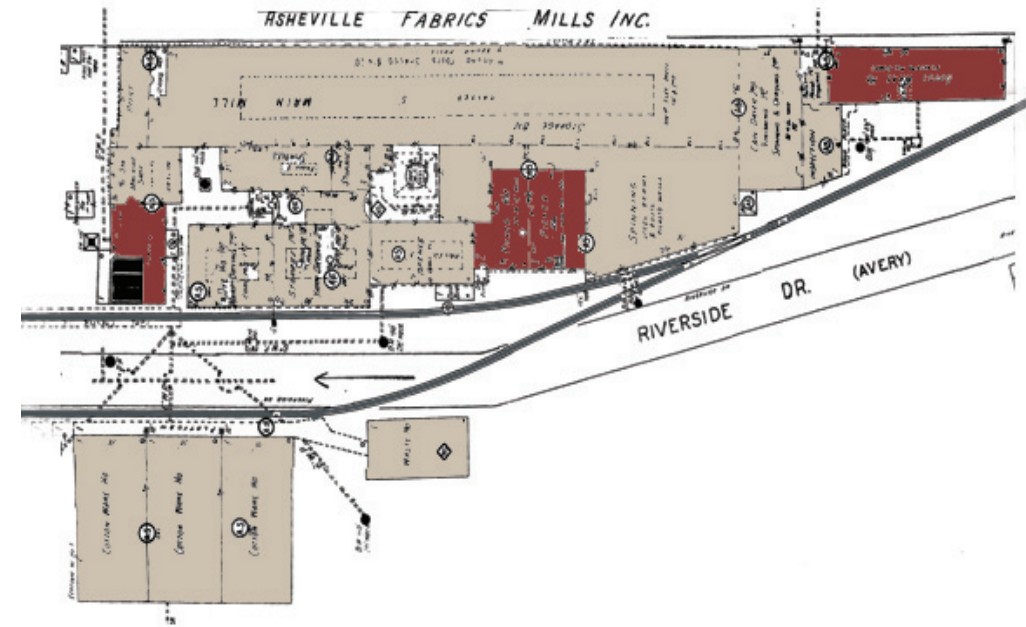
The image (left) depicts the efforts to save and restore the cotton mill water tower which had become a symbol for the district. The illustrated map (right) was painted by local artist Judith Cheney showcases the past and future of the district.

THE ASHEVILLE COTTON MILL

The Asheville Cotton Mill opened its doors as the Graham Manufacturing Company in 1893 and is largely considered the “historical heart” of the district. The site of the mill is located within the northern portion of the River Arts District between the river and the railroad track. The Earle Chesterfield Mill was located on the opposite side of the railroad track.

The Asheville Cotton Mill closed in 1953 as the industry declined after WWII. The building stood vacant for over forty years before it was purchased by the Preservation Society of Asheville in 1993. With the River Arts District showing signs of rebirth, the Preservation Society intended to use the mill to host several shops and a textile museum. The prominent water tower became the symbol of the district. A similar plan for proposed for the Earle Chesterfield Mill after a weekend-long design charrette created a master plan for a mixed-use “urban village.”

Thus, by the mid 1990s, the discussion on the future of the River Arts District centered around these two mills. The Preservation Society considered the Asheville Cotton Mill “the key structure in the area’s redevelopment.”



A study of the Sanborn maps between 1893 to 1923 reveals the evolution of the cotton mill through the years. The building experienced perpetual growth and reconfiguration as the industry developed. The red areas represent portions of the mill still in existence.

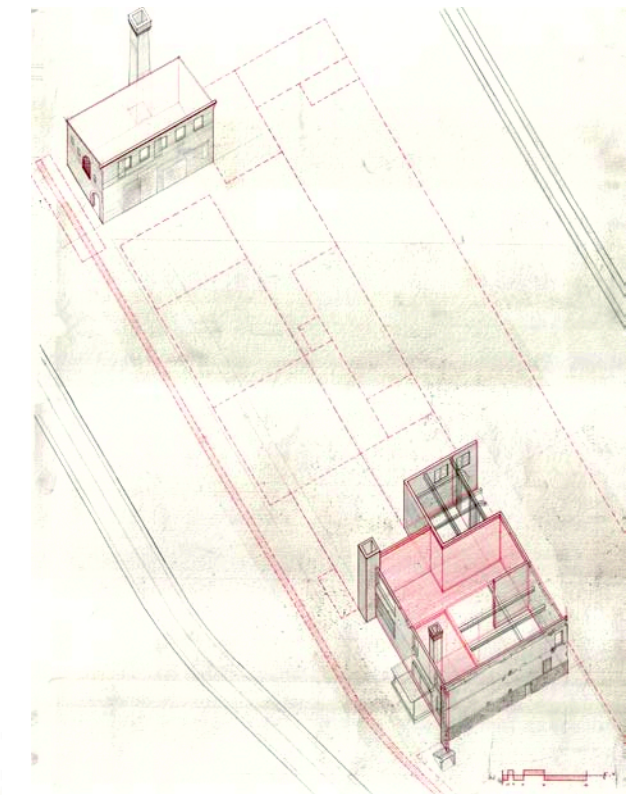
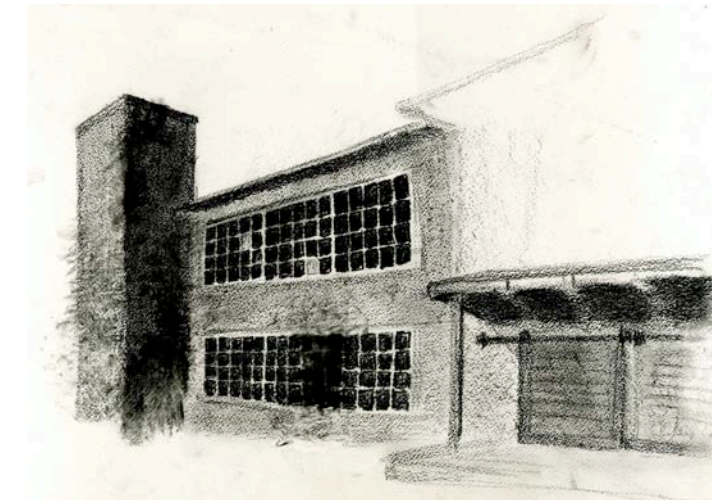


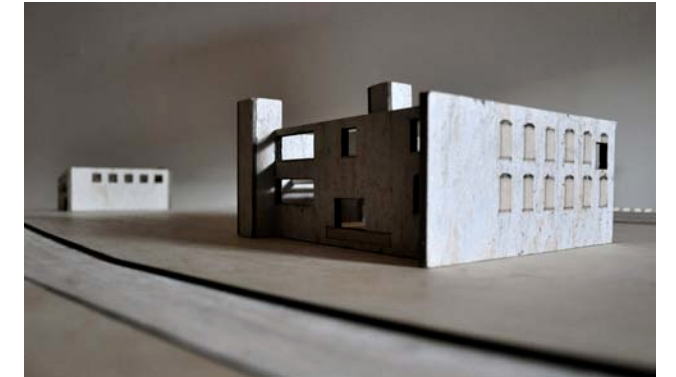
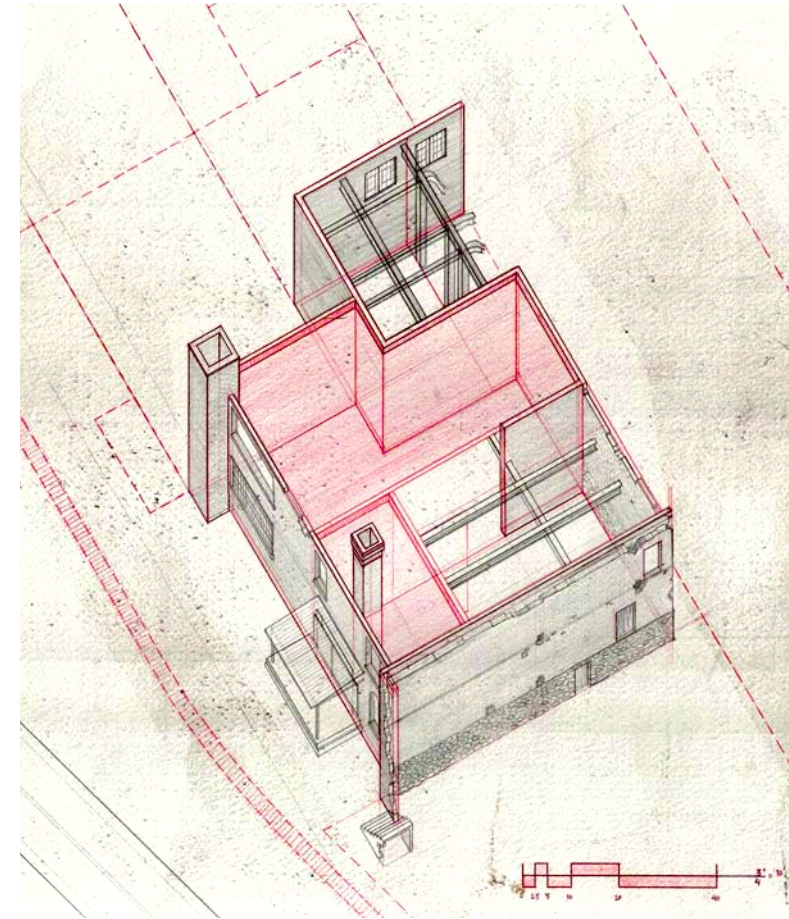
(Above) Photograph of the Asheville Cotton Mill's southern wall which has been taken over by the natural vegetation on the land.
 (Right, clockwise from top) The present day ruin and historic footprint of the Asheville Cotton Mill; the recently constructed Cotton Mill labyrinth; a sketch of the front elevation of the ruin.

THE RUINS OF THE COTTON MILL

Contemporary architect W.G. Clark reminds us that “in ruins, where the intended use of the building has departed, it is often unclear whether the structure is landscape or architecture. Conditions are reversed and a missing roof allows sunlight and vegetation inside and the building becomes a garden.”

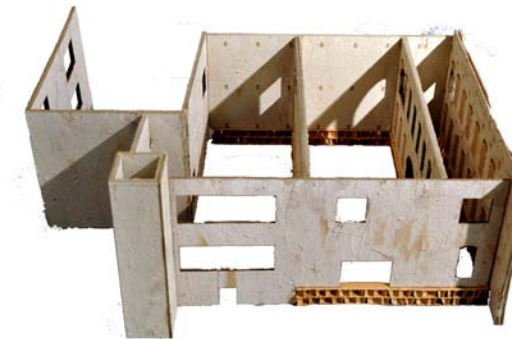
The ruins of the Asheville Cotton Mill have acquired a sense of belonging to the land. Although abandoned and structurally unsound, the ruinous mill provides a sense of place to the River Arts District. The site remains a popular destination for visitors searching for a sense of the past. In fact, the ruinous mill seems to have fostered a spiritual quality to the site, for local residents and volunteers have built a labyrinth directly behind the ruin. The stated purpose of the labyrinth was to create a place for “conflict resolution, meditation, and celebration.”





(Left) The model shows the site conditions of the Asheville Cotton Mill. The black buildings indicate the existing buildings today while the newspaper buildings reveal the historic buildings lost in the fire.

(Right) The building model represents the existing brick wall ruins of the Asheville Cotton Mill.





Photos of the Asheville Cotton Mill ruins. Natural vegetation and local graffiti artists have fostered a unique sense of place.

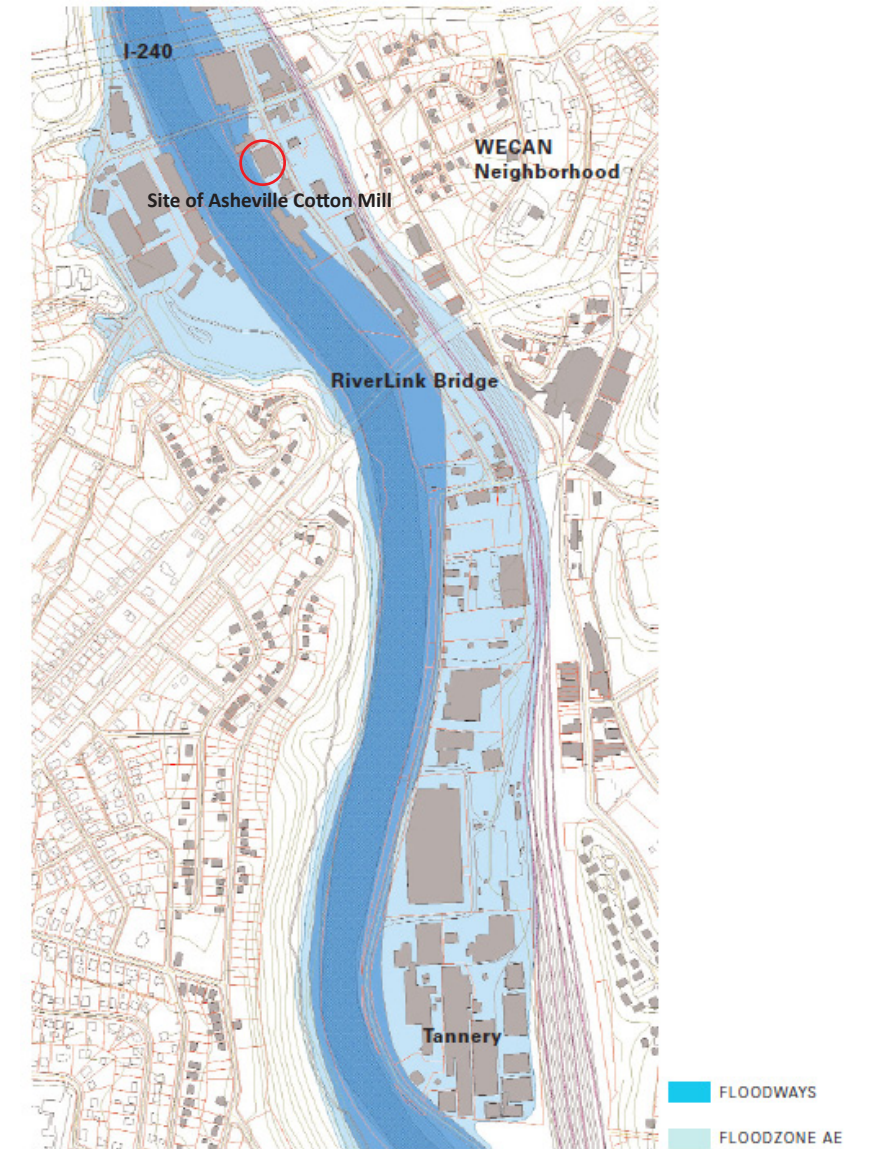


F L O O D C O N S T R A I N T S

The relatively flat site of the historic Asheville Cotton Mill lies within a floodzone region of the French Broad River. This region has been prone to flooding with the most devastating example occurring in 1916. In fact, the Warehouse Studios recently memorialized this event by painting a white wavy line across their brick facade to mark the height of the 1916 flood. Building restrictions specify that new construction must set the first floor elevation at least two feet above the hundred year flood line, or approximately 10 ft above the current ground level. These building restrictions, however, provide an opportunity for an open outdoor ground floor with abundant covered space to facilitate pedestrian foot traffic and to create an active street life.



The flood of 1916 is the worst flood of Asheville's known history. Although flooding has occurred in years since (with the most recent in 2004 after Hurricane Ivan), the flood of 1916 is still remembered for its devastation to the city.





Black Mountain College
Archival Gallery + Library
in the River Arts District of
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**“ FULLY AWAKE ” : THE LEGACY
OF BLACK MOUNTAIN COLLEGE**

The founders of the Black Mountain College believed that the study of art was indispensable to any liberal arts education, and they hired the famed Bauhaus instructor Josef Albers to be the first teacher. With Albers at the helm, students were taught to see afresh, free from restrictions or preconceptions. Students followed Albers’ mantra of being “fully awake” by living with an acute awareness of their senses and surroundings. What developed in both students and teachers was an environment of artistic experimentation, where “how” a piece of art was created became more important than “what” was produced. This experimental and pioneering attitude towards creating continues to shape the arts culture of Asheville today.

BLACK MOUNTAIN COLLEGE

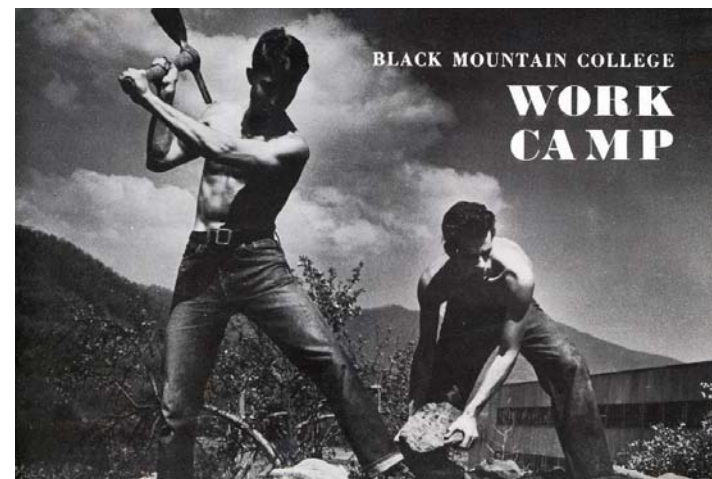
Black Mountain College was born out of desire for a new method of education. Circumstances originating in Europe with the rise of the Nazis and the closing of the Bauhaus cultivated a progressive attitude committed to creative and cultural freedom. The College was unlike other colleges or universities at the time, for it was owned and operated by the faculty and was governed by the principles of democracy. This attitude of shared responsibility trickled down to all members of the college. Students and faculty alike participated in its operation, including farm work, construction projects and kitchen duty. The secluded location in the mountains outside of Asheville, North Carolina added to this sense of community.

Although often mistaken as an art school, Black Mountain College was actually a liberal arts college. The founders of the College believed that the study of art was indispensable to any liberal arts education. Through art, students developed a new way of seeing that allowed them to challenge their original preconceptions. There was encouragement to experiment and find new ways of doing activities rather than study the past for guidance. An atmosphere of artistic dialogue and community collaboration guided and affirmed the students' work.

Black Mountain College existed from 1933 to 1956 and produced some of the most well-known artists, writers, and innovators of the 20th century. A partial list includes people such as Willem and Elaine de Kooning, Robert Rauschenberg, Josef and Anni Albers, Merce Cunningham, John Cage, Cy Twombly, Kenneth Noland, Franz Kline, Buckminster Fuller, M.C. Richards, Francine du Plessix Gray, and Charles Olson.

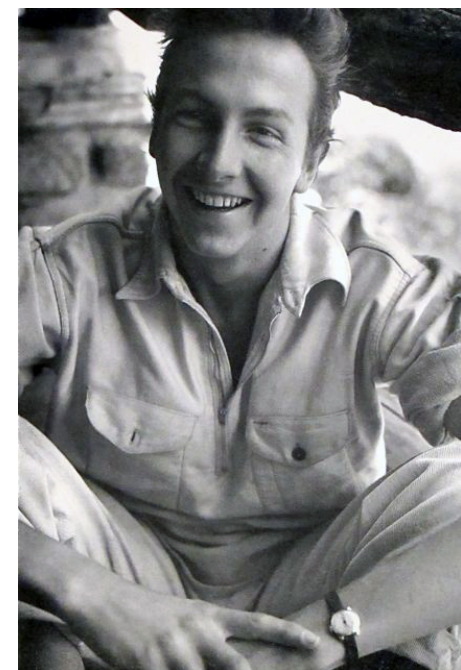
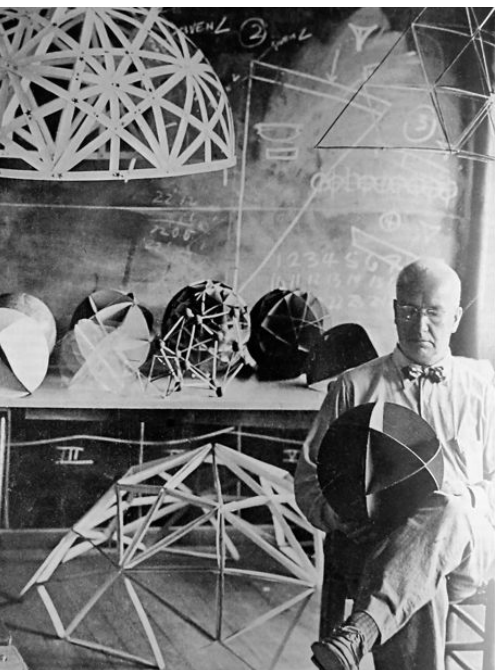


The Studies Building on Lake Eden. This building was designed by A. Lawrence Kocher from the *Architectural Record* and was constructed by students and faculty.



(Top Left) The image depicts Buckminster Fuller and students at work on a geodesic dome. (Bottom Left) The image shows the responsibility and participation of students in maintaining the school. (Right) The cover bulletin image highlights the remoteness and freedom of the school's location in the mountains of North Carolina.





Faculty from Black Mountain College
(from left): Buckminster Fuller, Josef Albers, Elaine and Willem de Kooning, Merce Cunningham, John Cage, Charles Olson, and Robert Rauschenberg.

LEARNING FROM THE COLLEGE

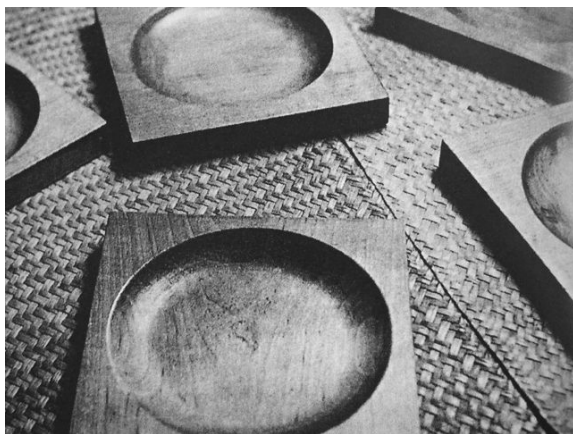
As Founder of Black Mountain College, John Andrew Rice believed it was essential to learn from the works of one's own time in addition to the classics. This avant garde stance was embraced from the beginning and could be revealed through the diversity of the faculty members. With ties to the Bauhaus and connections with the Museum of Modern Art, Black Mountain College was able to recruit many of the leading painters, sculptors, composers, choreographers, photographers and writers of the day. Such a close-knit group of experimental artists attracted many outside influential thinkers as well, as famed intellectuals like Albert Einstein and Aldous Huxley were known to pay visits.

At its core, Black Mountain College practiced a patient commitment to the process of making rather than a final aesthetic product. By learning "to see" through alert awareness of the senses, Black Mountain College students learn to shed preconceived notions and instead became engaged in the process of their work. This attitude of letting ideas or questions guide the process rather than answers deduced from the start may be a great lesson for architects practicing today. Architects could learn to allow their designs to evolve throughout the construction process rather than adhere to the original image of the building. Poetic building strategies could perhaps be discovered that improve and enhance the built work, imbuing the design with a spirit of experimentation and a keen attention to detail.



(Clockwise from top left).

Kenneth Snelson's *Wooden Floating Compression Column* (1948) studies the "Tensegrity Principle" by working with ordered, tension-based structures, clearly following his mentor Buckminster Fuller. Anni Albers *Neckpiece* (1940) uses aluminum washers and red ribbon to challenge the preconceived notion of a washer and to display it as jewelry. Mary Gregory's *Wooden Plates* (1942) crafts these elegant plates using universal geometry.



THE LEGACY OF THE COLLEGE

With the rise of the River Arts District and the eclectic arts culture that permeates throughout Asheville, it is easy to trace the origin of this spirit, at least partially, to Black Mountain College. Today, the legacy of Black Mountain College can be found at the Black Mountain College Museum + Art Center in Asheville. In 1993, this museum and art center was founded to pay tribute to and to raise awareness of Black Mountain College. Through a series of workshops, lectures, and exhibitions, the BMCM+AC "preserves and continues the unique legacy of educational and artistic innovation of Black Mountain College for public study and enjoyment."

The great efforts of this organization could be catalyzed through a more formal and appropriate space in Asheville. The current museum is too small to host and display a permanent collection of work and is greatly limited by the constrained space. A Black Mountain College archive could additionally host a library that would include the original BMC library collection. The library archive is currently held three hundred miles east of Asheville at Wesleyan College in Rocky Mount, North Carolina. This collection of more than eight thousand books would be of interest and receive greater exposure in the Asheville area.

The influence of Black Mountain College can still be found around Asheville today, as shown by this tribute wall located in a downtown alley. The wall displays a series of quotations from notable BMC alumni.

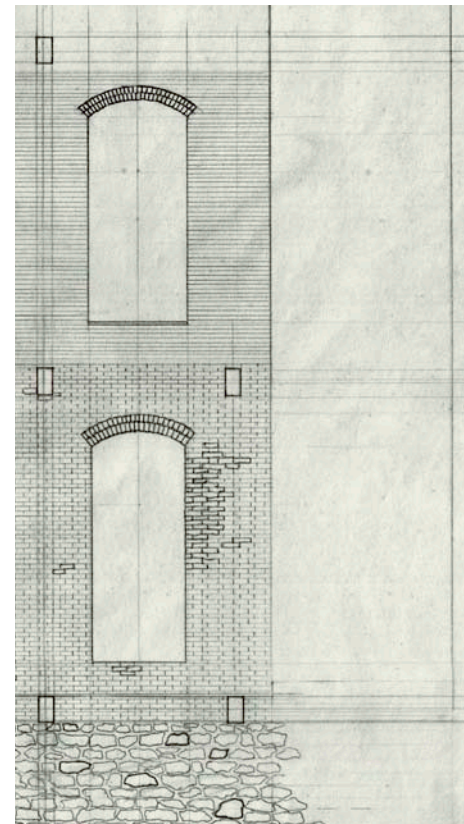
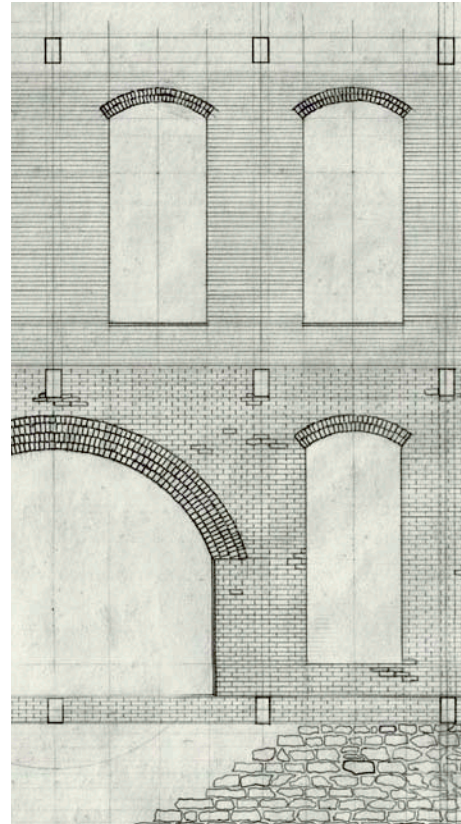
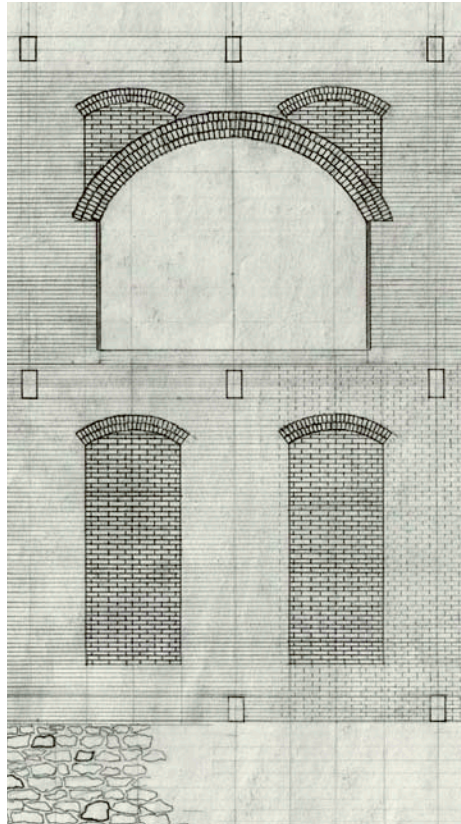


Black Mountain College
Archival Gallery + Library
in the River Arts District of
Asheville, North Carolina

CONCEPTION: THE IDEA OF A BUILDING

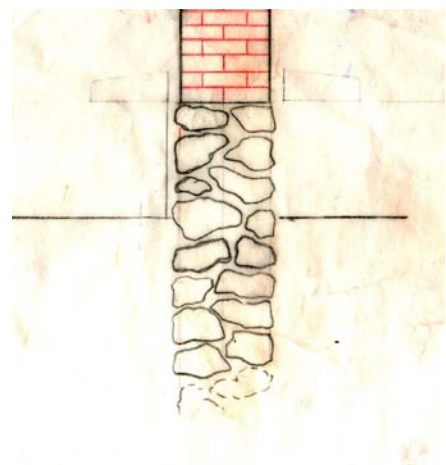
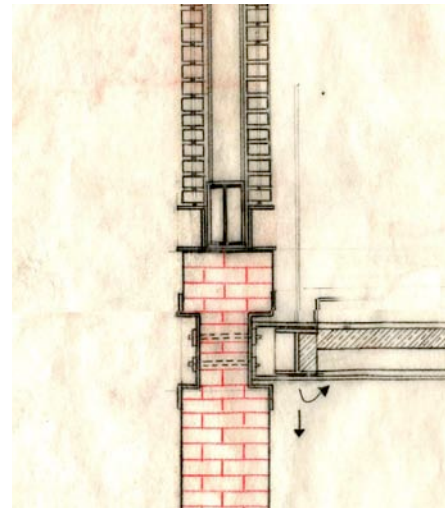
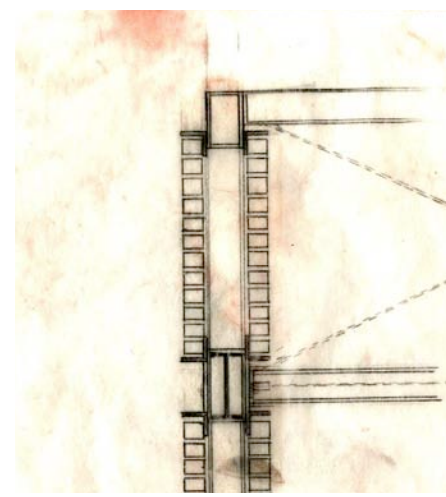
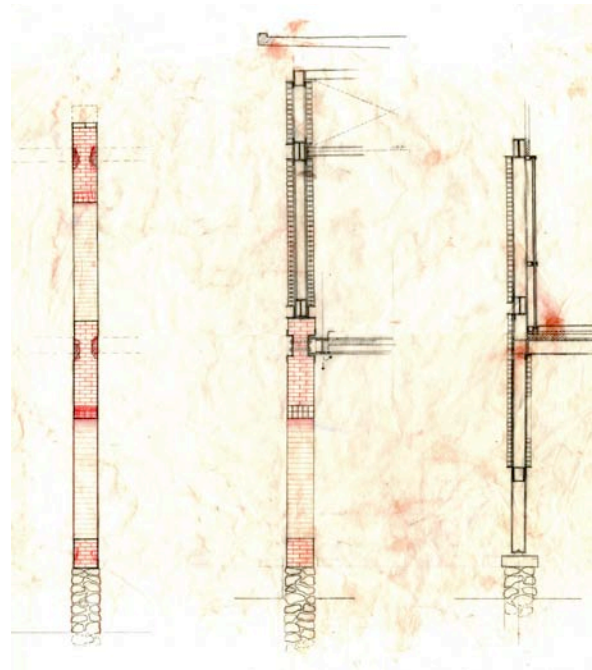
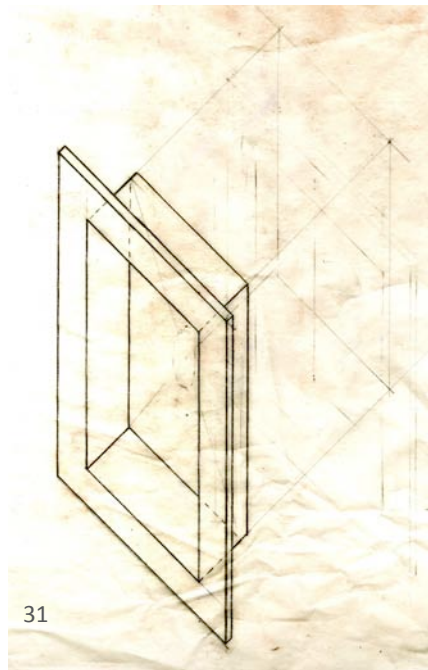
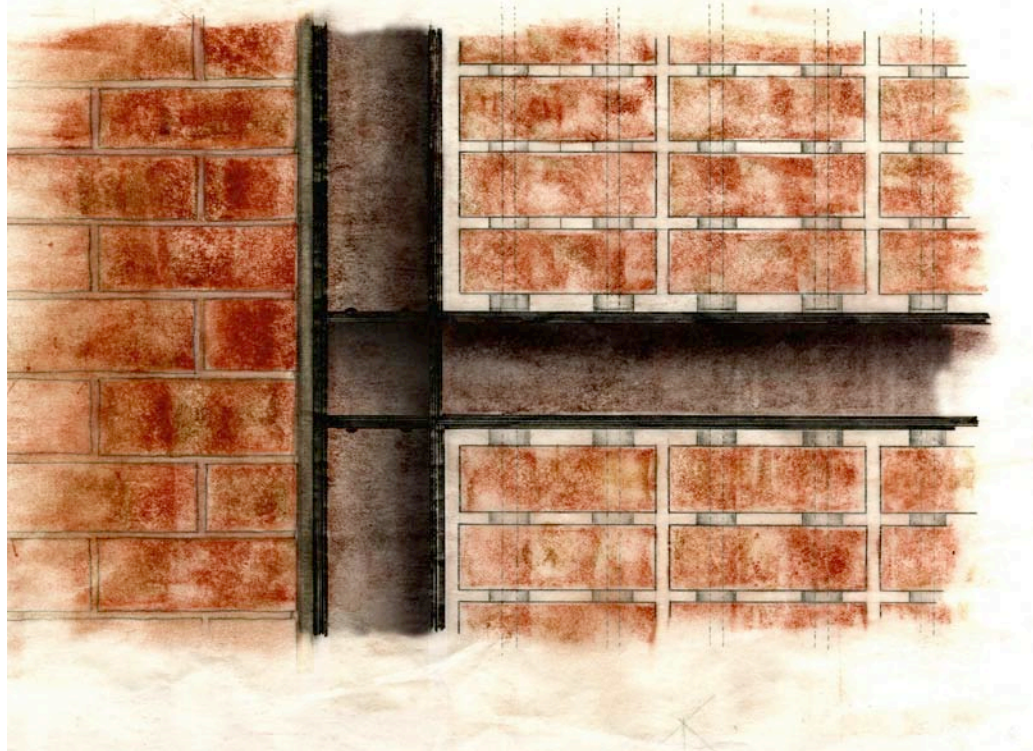
The idea of a new building at the site of the Asheville Cotton Mill ruin attempts to respect and honor the memory of the place. A recognition of precedent will be considered to reveal moments that highlight the embedded history of the site. However, the existing architectural fabric would not dictate the design of the new building. Following the traditions of Black Mountain College, this proposal adopts an attitude of experimentation and new beginnings. The design begins with a nebulous, formless idea that matures slowly toward physical reality. Detail development often precedes and informs the final design outcome. An acknowledgement that buildings exist in time is carried throughout the entire process to respect the idea of buildings as “living beings.”

In developing an archive for the Black Mountain College collection, a full gallery space would significantly expand the current collection of the undersized Black Mountain College Museum + Art Center. In addition, a library archive could host the original Black Mountain College book collection and make it available for public study.



One of the original walls of the Asheville Cotton Mill still exists as a fragment of the standing ruin. This wall allows for a legible reading of the mill's history and transformations.

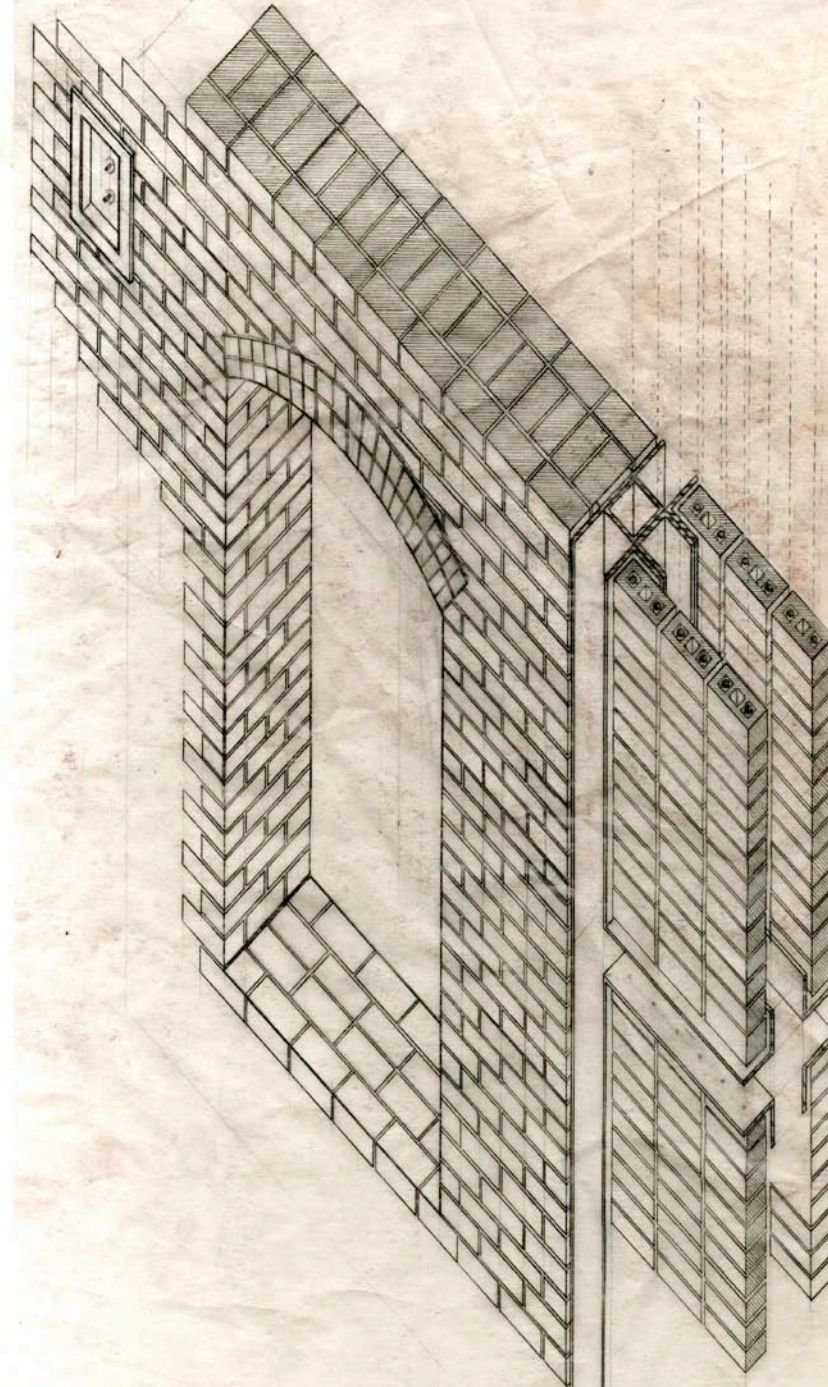
Leon Batista Alberti, the 15th-century Italian architect, embraced the found conditions of a site, allowing the development of new and existing construction to work together as part of a continuum. Often this process is more about reinterpretation than retelling, as fragments of its historical life find a way to be expressed within the contemporary context. This can occur with artful detailing; or, perhaps a dialogue can be established that contrasts the preexisting structure with the new construction.



DETAIL : BRICK SCREEN

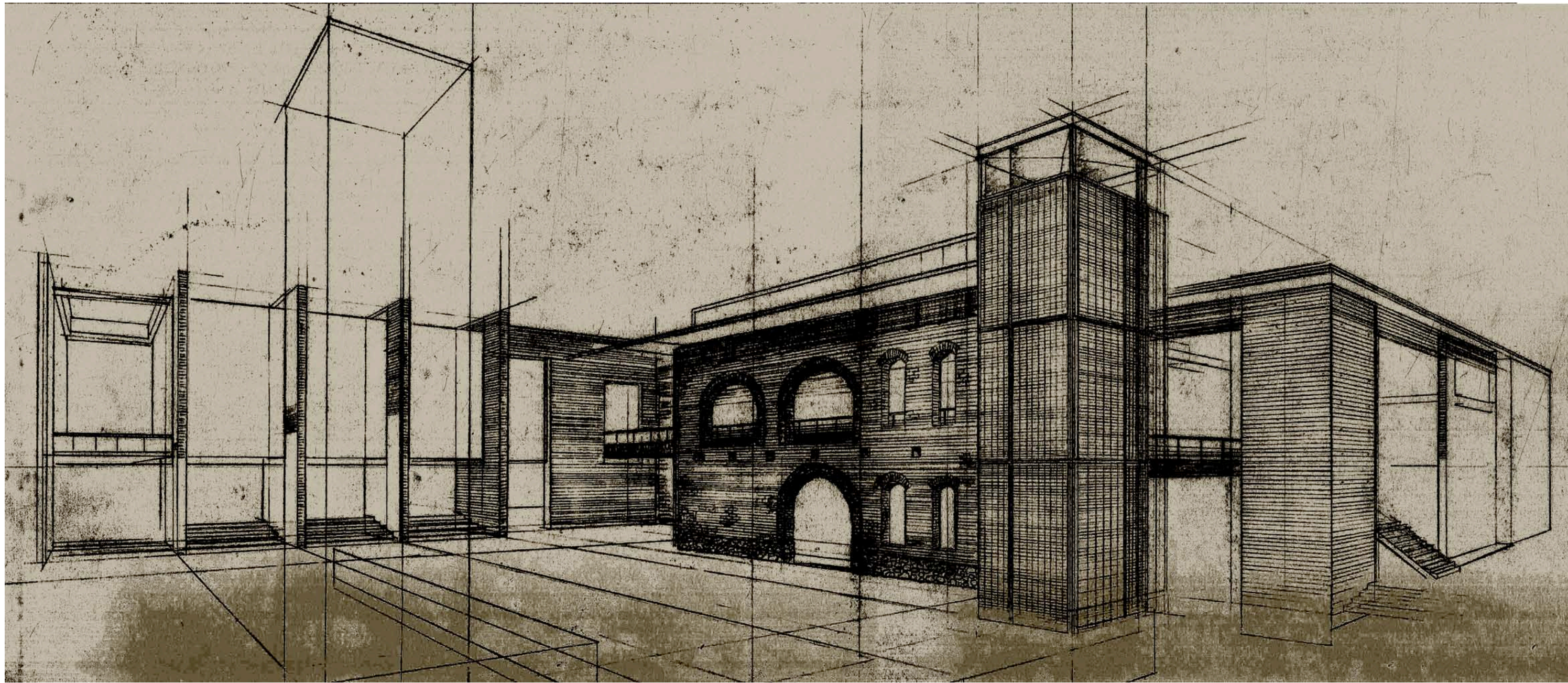
The existing ruin of the Asheville Cotton Mill includes the original room constructed in 1893 used for picking cotton seeds. The brick walls contain legible traces that mark the alterations and additions that occurred throughout the buildings lifetime. The load-bearing brick walls with arched openings reveal the durable nature of masonry construction as well as the presence of the human hand in construction. It is desired to integrate a portion of the found ruin by continuing the length of the wall, although the new portion of the wall would contrast with the original construction methods.

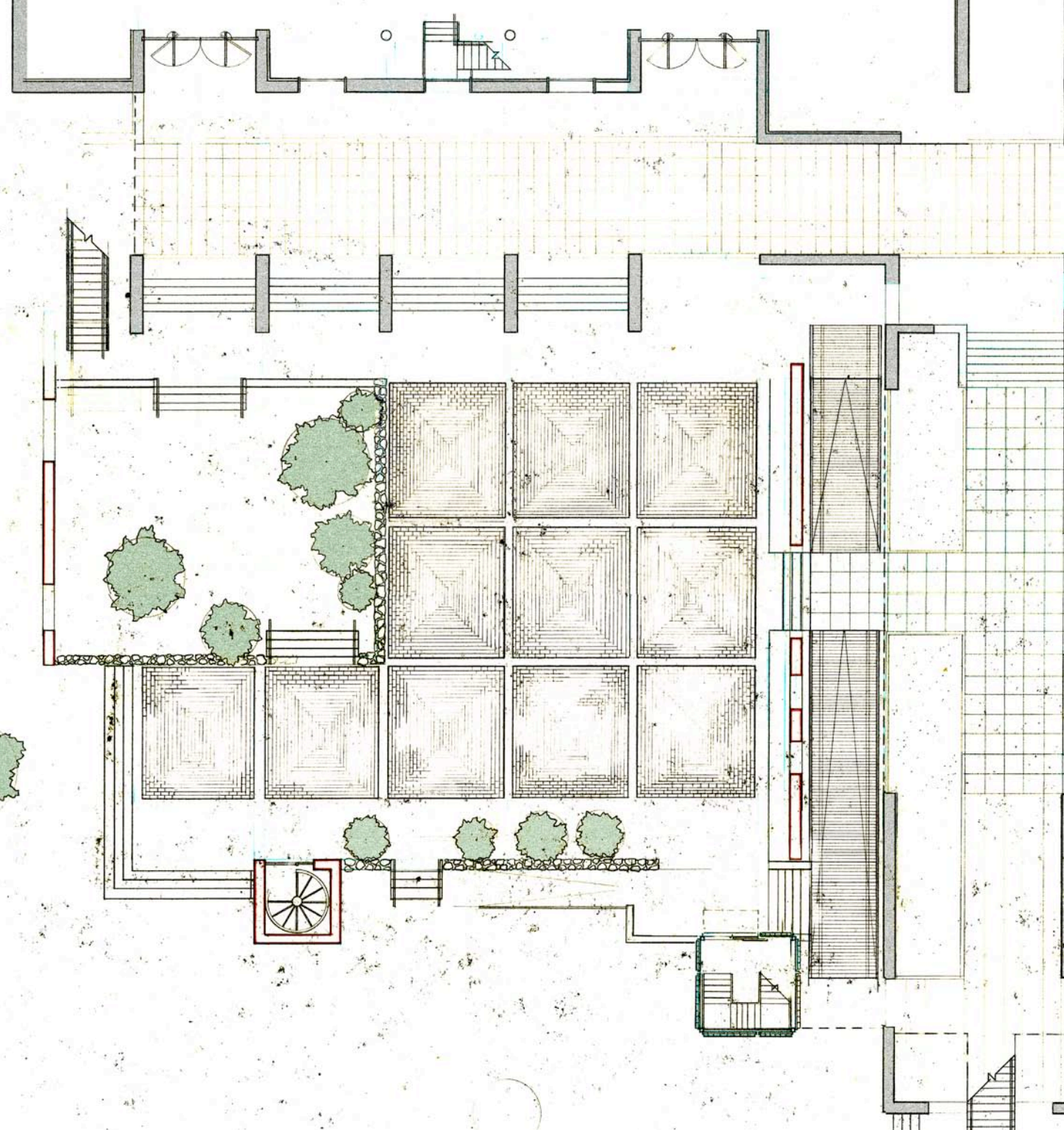
A steel structural frame in-filled with brick screen panels was developed to tie into the existing masonry wall and to continue the length of the wall in an honest expression of today's building technologies. The bricks would be set and contained within a rectangular metal frame with vertical steel rods keeping the bricks in place and a series of neoprene spacers between the bricks to allow air and indirect light to be carried through the wall. These brick frames would be welded to the steel structural framework behind. The weathering effects of brick would be preserved in the addition, yet the mortarless brick screen would give the wall a subtle lightness that highlights the veneer nature of brick today (in contrast to the load-bearing existing wall).



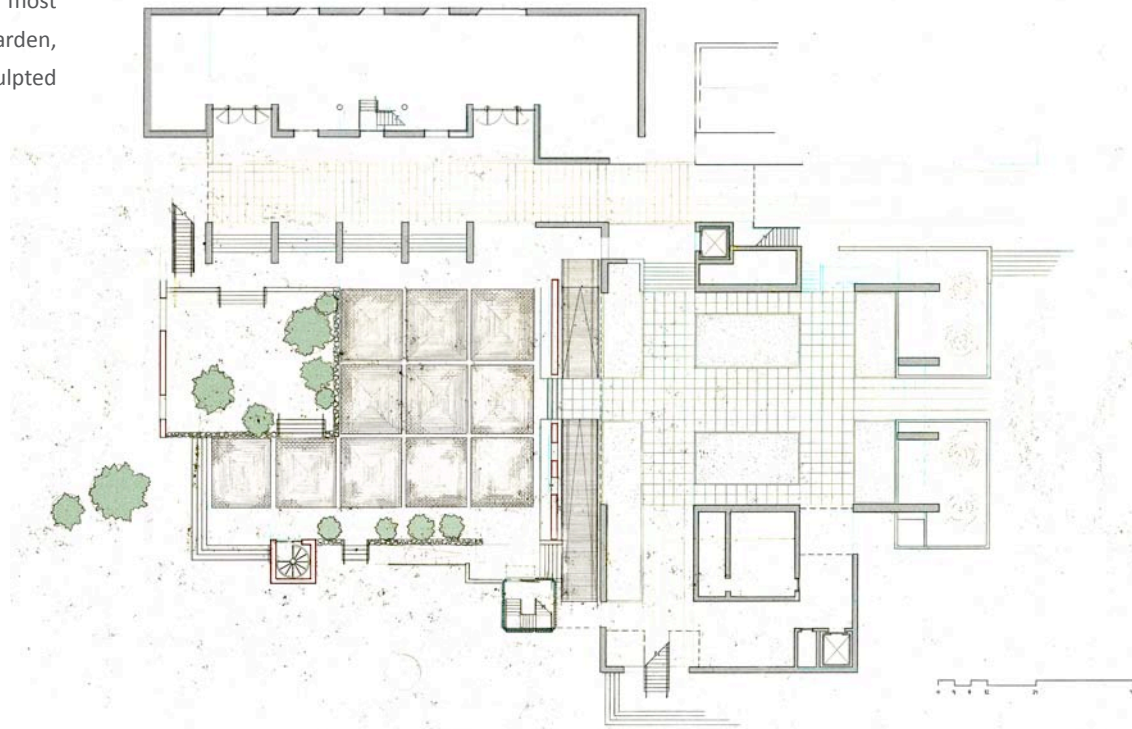
The development of the steel-framed brick screen wall allows for the existing brick wall to be reinforced and supported while simultaneously continuing the length of the wall. Using the brick screen wall, a steel stair tower could be created to showcase the brick screen in-fill panels. The movement of people ascending and descending the tower would be subtly observed through the screen.

Since the ruin is structurally unsound and largely unfit for rehabilitation, only a fragment of the ruin will be preserved and tied into the brick screen wall. The remaining site of the ruin would be transformed into a courtyard in which a new building could develop around.





Although fragments of the Asheville Cotton Mill ruin are preserved, the majority of the space is transformed into an open brick courtyard. The courtyard reuses bricks from the original ruin to create a brick-patterned floor. Similar to the labyrinth currently constructed on the site, the brick courtyard squares provide a space for walking and meditation. The northern most portion of the ruin is left as a sculpture garden, allowing for natural vegetation and sculpted works to coexist.



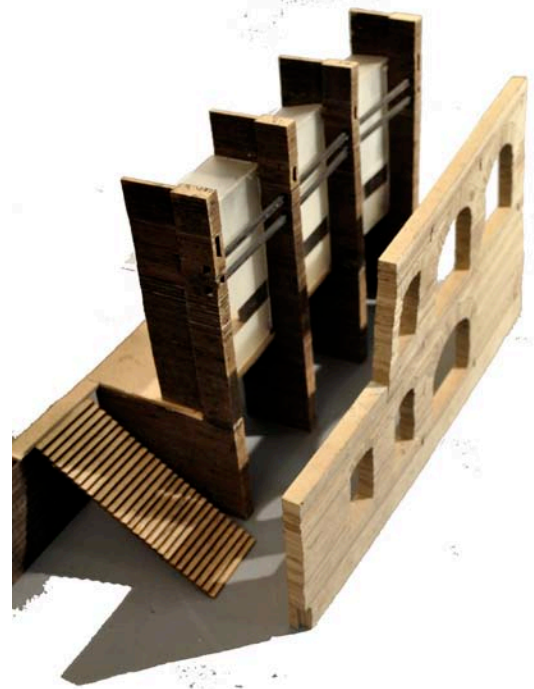
The ground floor plan centers around the brick courtyard and the walkability of the site. Existing in a floodzone, the ground floor plan was thought of as an outdoor gallery space with both covered and uncovered areas.

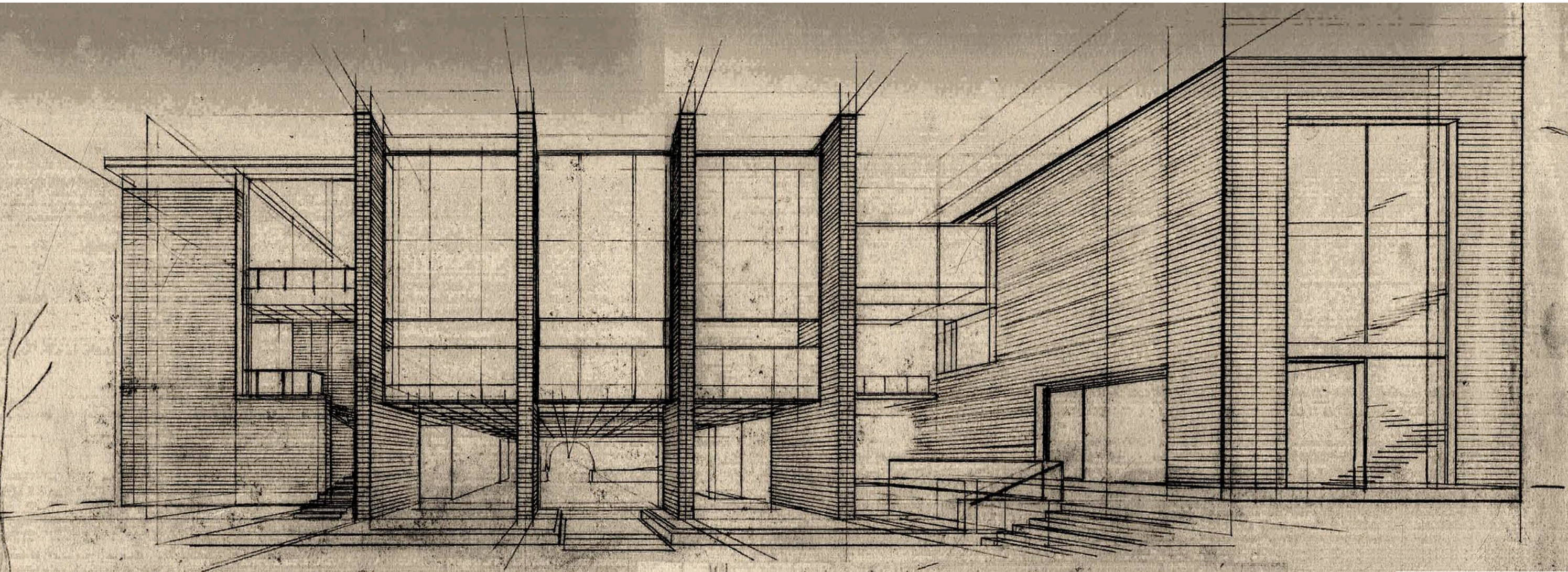


A working model representing cast-in-place concrete walls was constructed to figure out the relationship between the existing brick wall and the new construction. Originally designed to laterally support and tie into the brick fragment, the concrete wall arrangement was eventually rotated and allowed to stand in contrast to the ruin. The stacking of chipboard pieces mimics the layered nature of board-formed cast-in-place concrete walls.

DETAIL: CAST-IN-PLACE CONCRETE

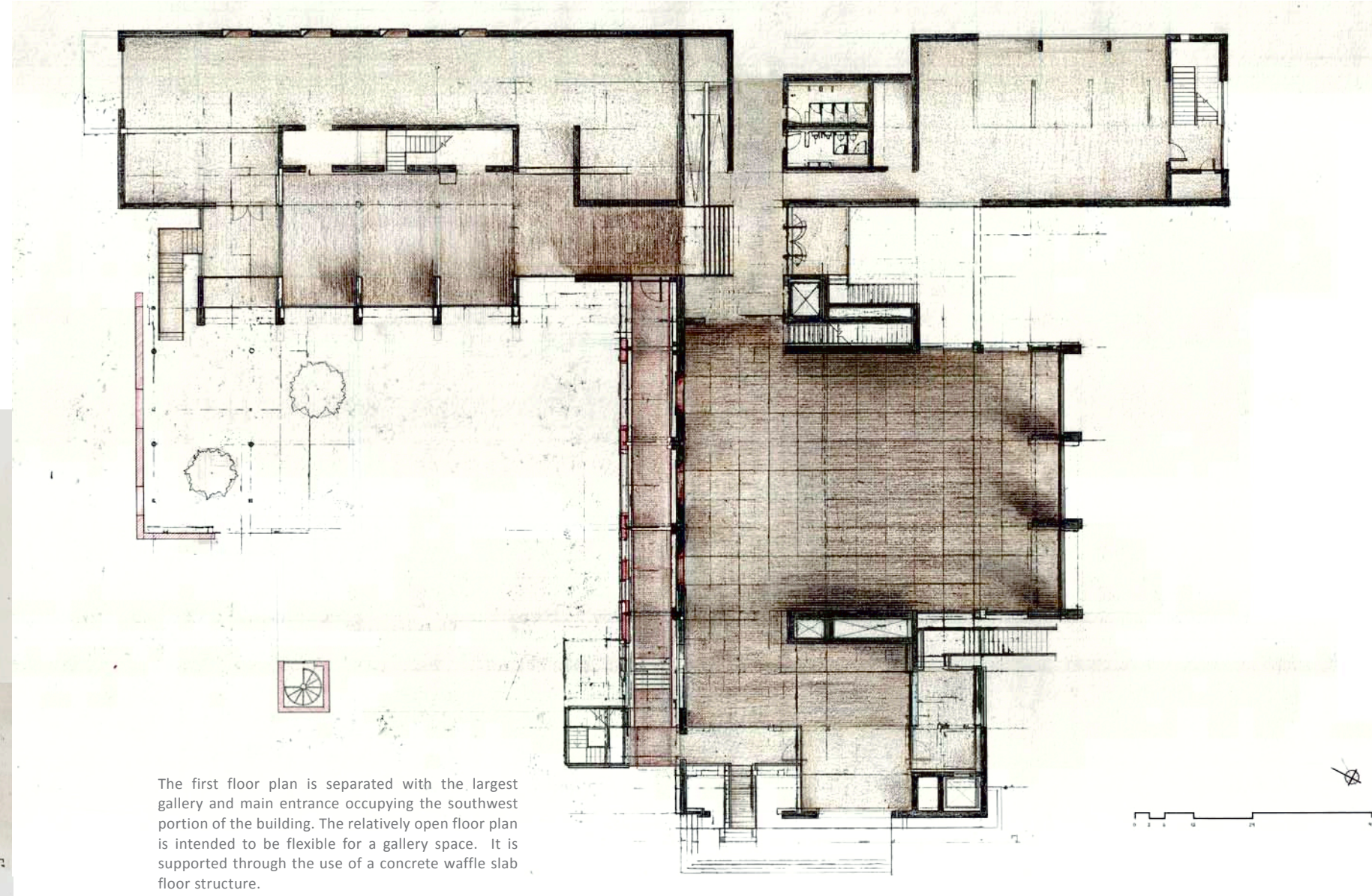
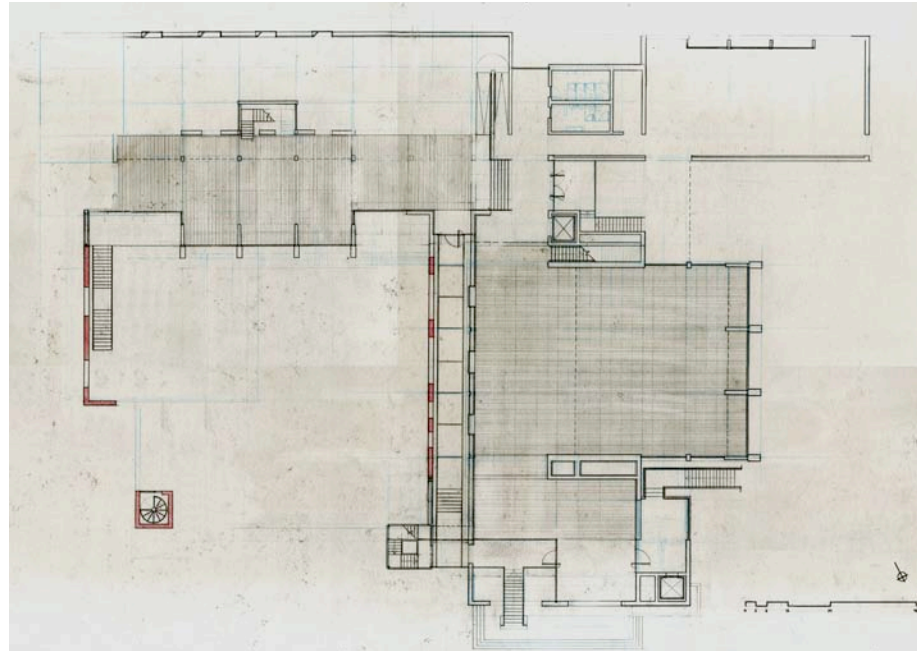
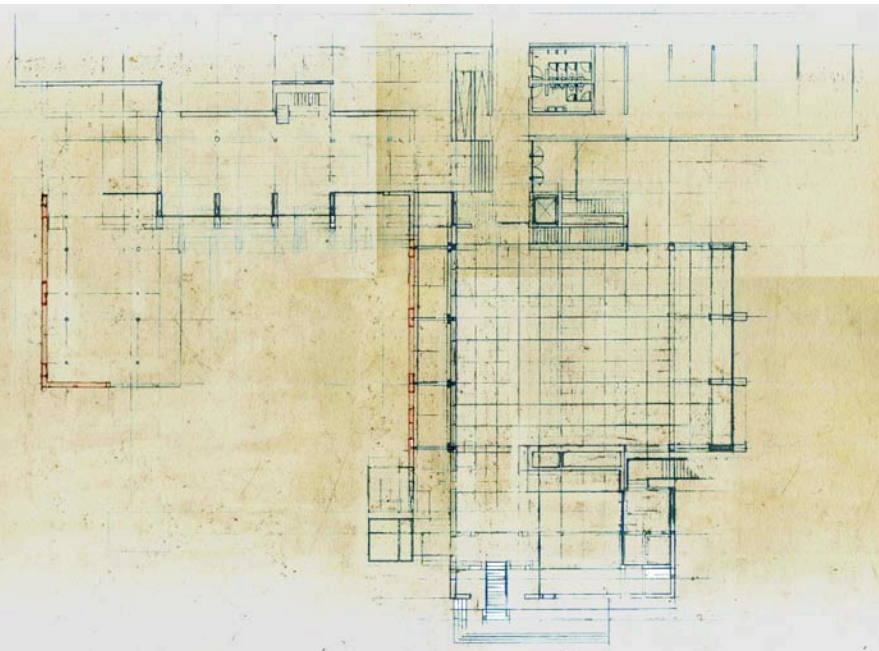
When thinking of buildings in time, it is impossible not to consider the material selection both in terms of durability and weathering. Cast-in-place concrete was chosen as the primary building material for its mass and its ability to read as a “process” material. The formwork required to pour a cast-in-place concrete wall imprints the wall with a memory of its presence. Wooden 2” x 6” boards are selected to form the walls due to their more intimate scale and horizontal striation pattern reminiscent of brick coursework.



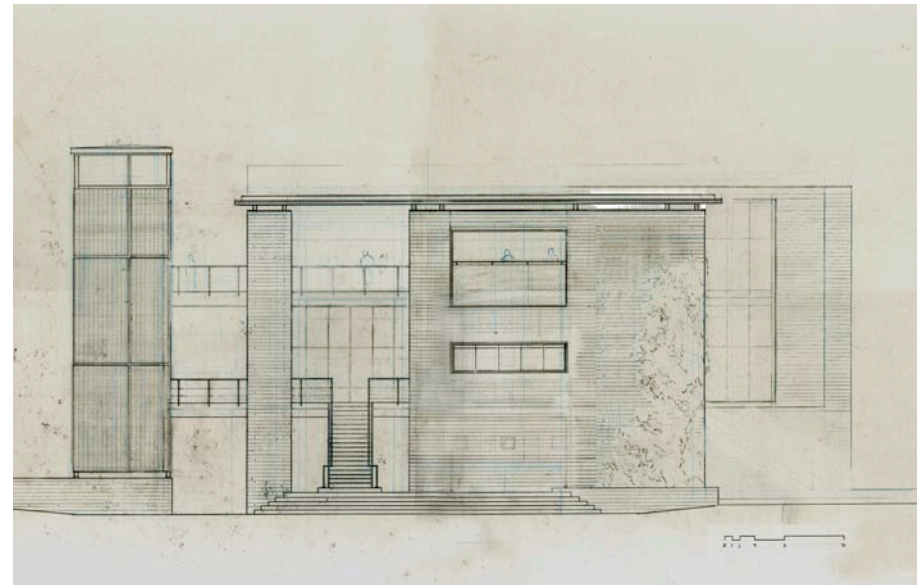
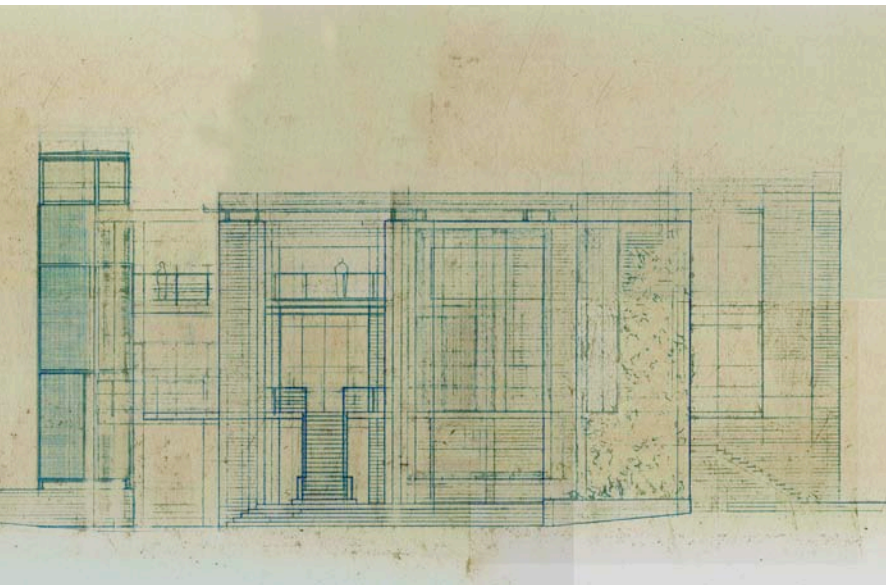


At the ground level, the concrete pillars create a permeable boundary at the southern end of the site and behind the courtyard area. This allows for passive movement throughout the site and an opportunity for outdoor gallery space or other community events. On the interior, the concrete pillars act as monolithic vertical fins to receive and reflect sunlight. Thus, the tall, narrow spaces created between the pillars are full of air and light.

Similar to the life of a building, the conception of a building matures slowly. The building takes form through an evolutionary process as design decisions are tested through a series of drawings and models. The construction lines on the page trace the architect's thinking and decision making process. When these working drawings are presented together, the design process can be seen as a continuum.



The first floor plan is separated with the largest gallery and main entrance occupying the southwest portion of the building. The relatively open floor plan is intended to be flexible for a gallery space. It is supported through the use of a concrete waffle slab floor structure.



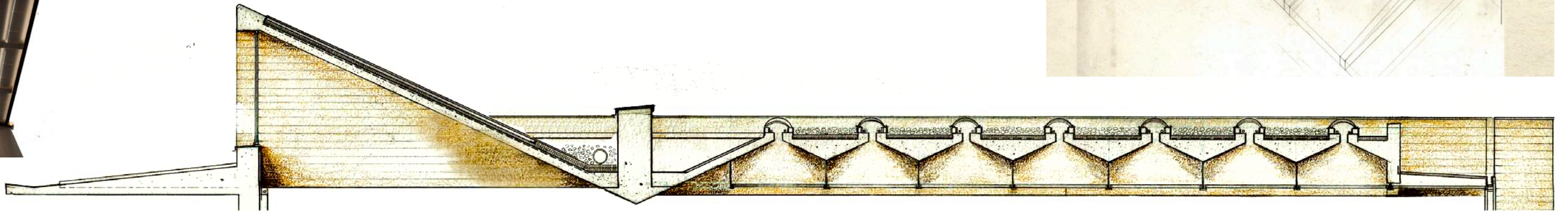
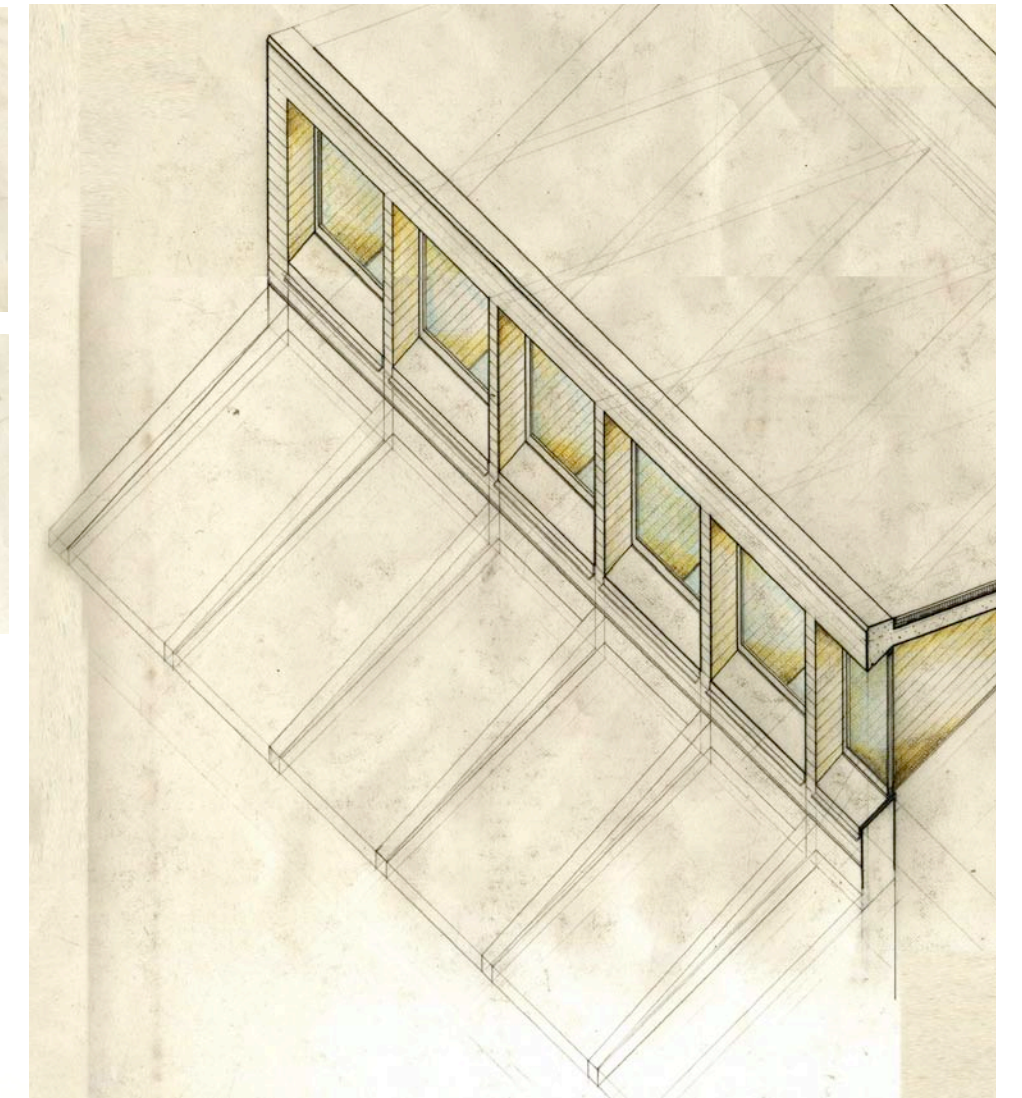
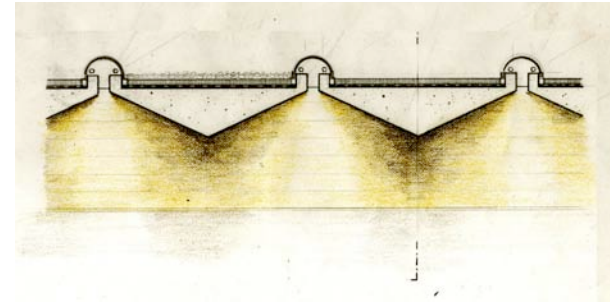
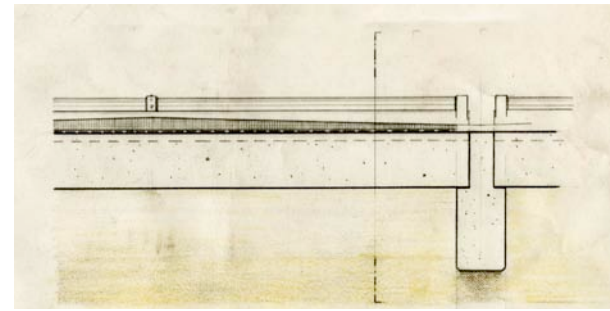
The design evolution of the front elevation of the gallery. The exterior pathways rise above the site of the original cotton mill. Vegetation grows on the concrete wall to allow the building to merge with the landscape in time.

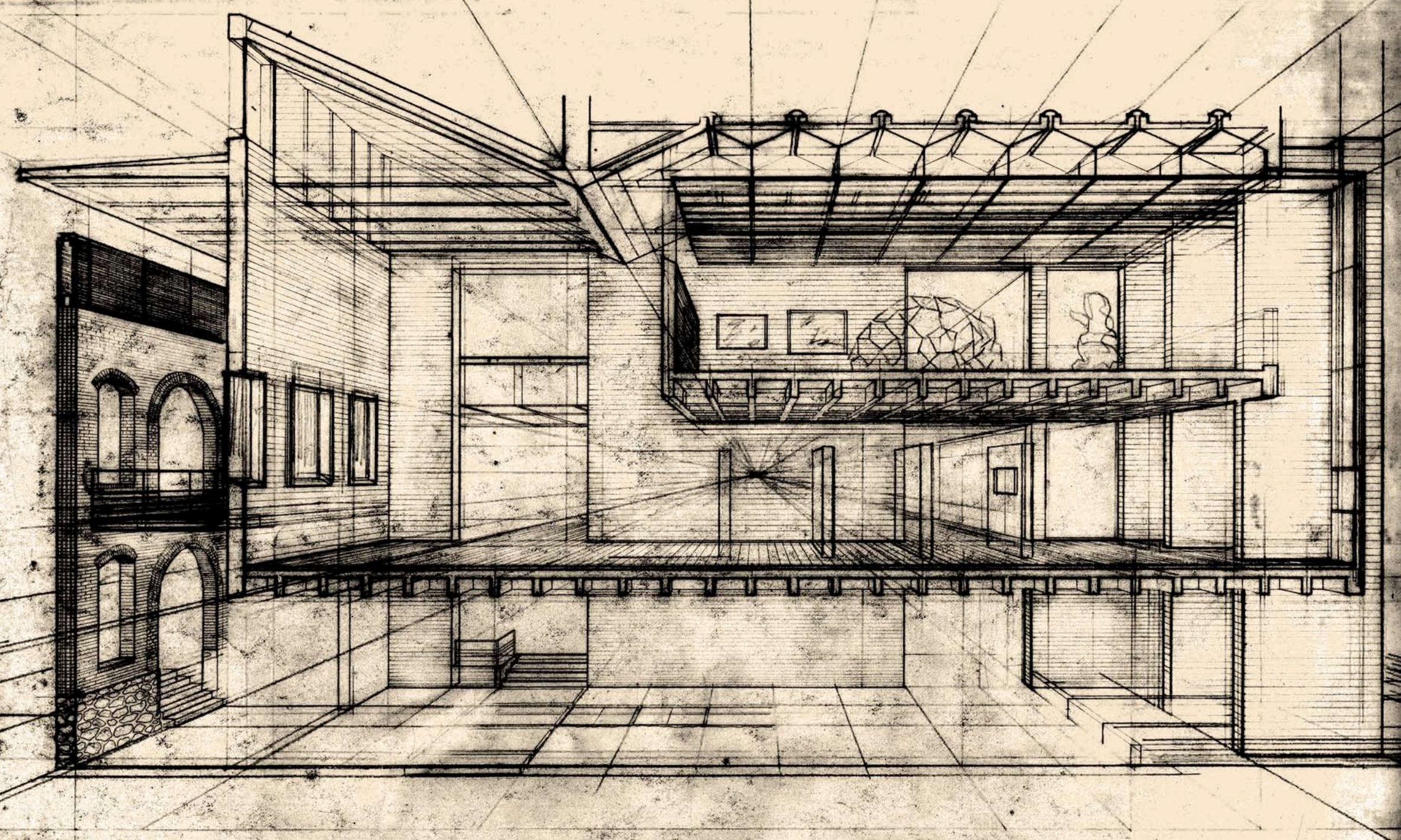


DETAIL: CONCRETE ROOF

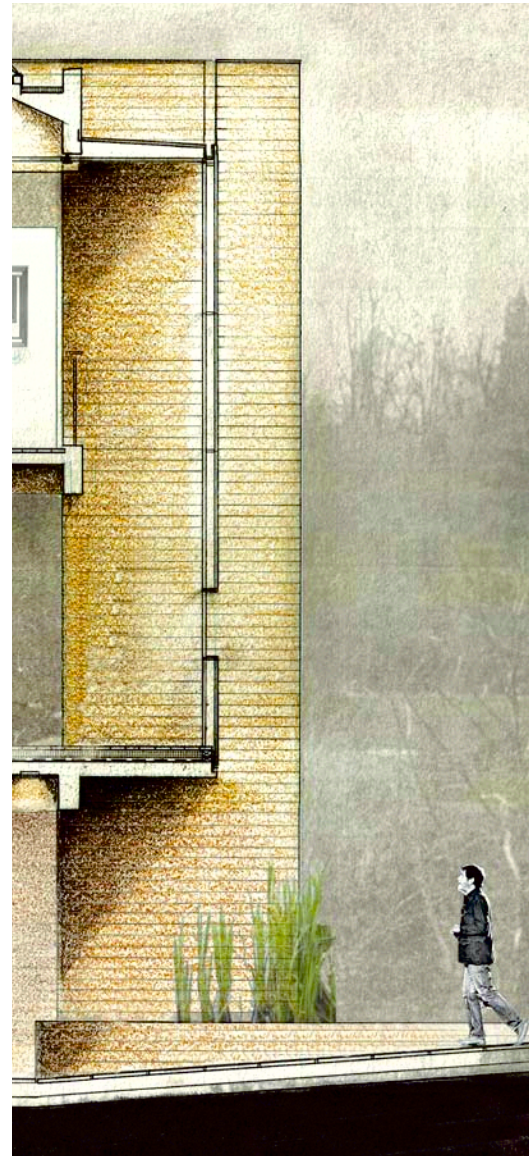
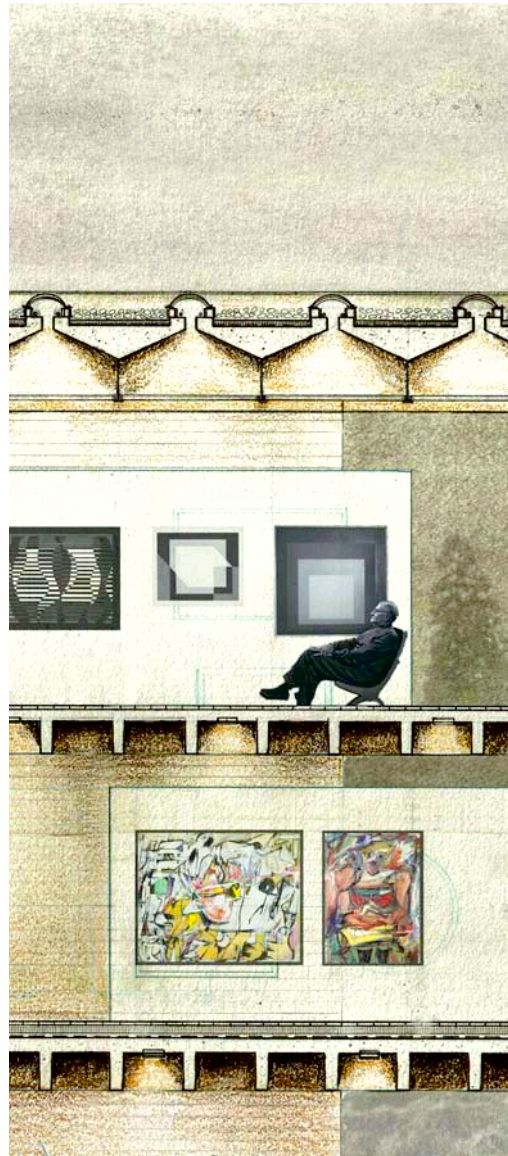
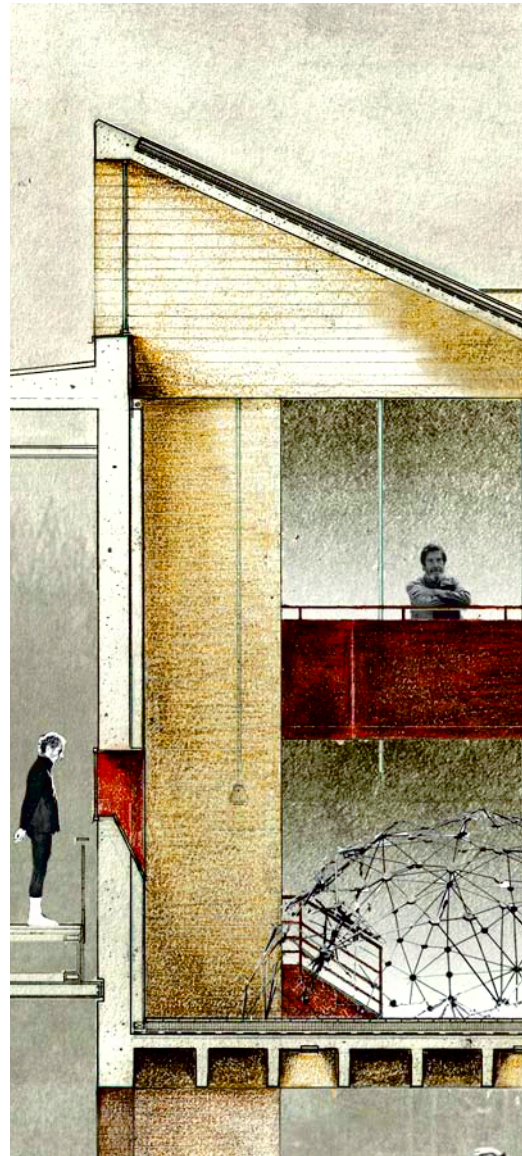
For many architects, daylight is particularly significant in the telling of a building, and is even considered a building material just like brick, stone, wood or steel. For Marco Frascari, daylight brings building materials to life. Frascari expresses how materials and architecture as a whole are “co-existent with light,” being truly expressed only when under the presence of sunlight. Frascari alludes to light as the catalyst to bring forth the tectonic presence of architecture.

In order to bring forth the presence of light into the gallery, a concrete roof structure with a series of skylights was conceived. The largest skylight allows northern sunlight to flood down to a double-height gallery space below. A series of smaller skylights allow filtered natural light to enter the upper gallery space. The light provides an ambient glow to the ceiling of the gallery after it passes through a layer of suspended fritted glass tiles.





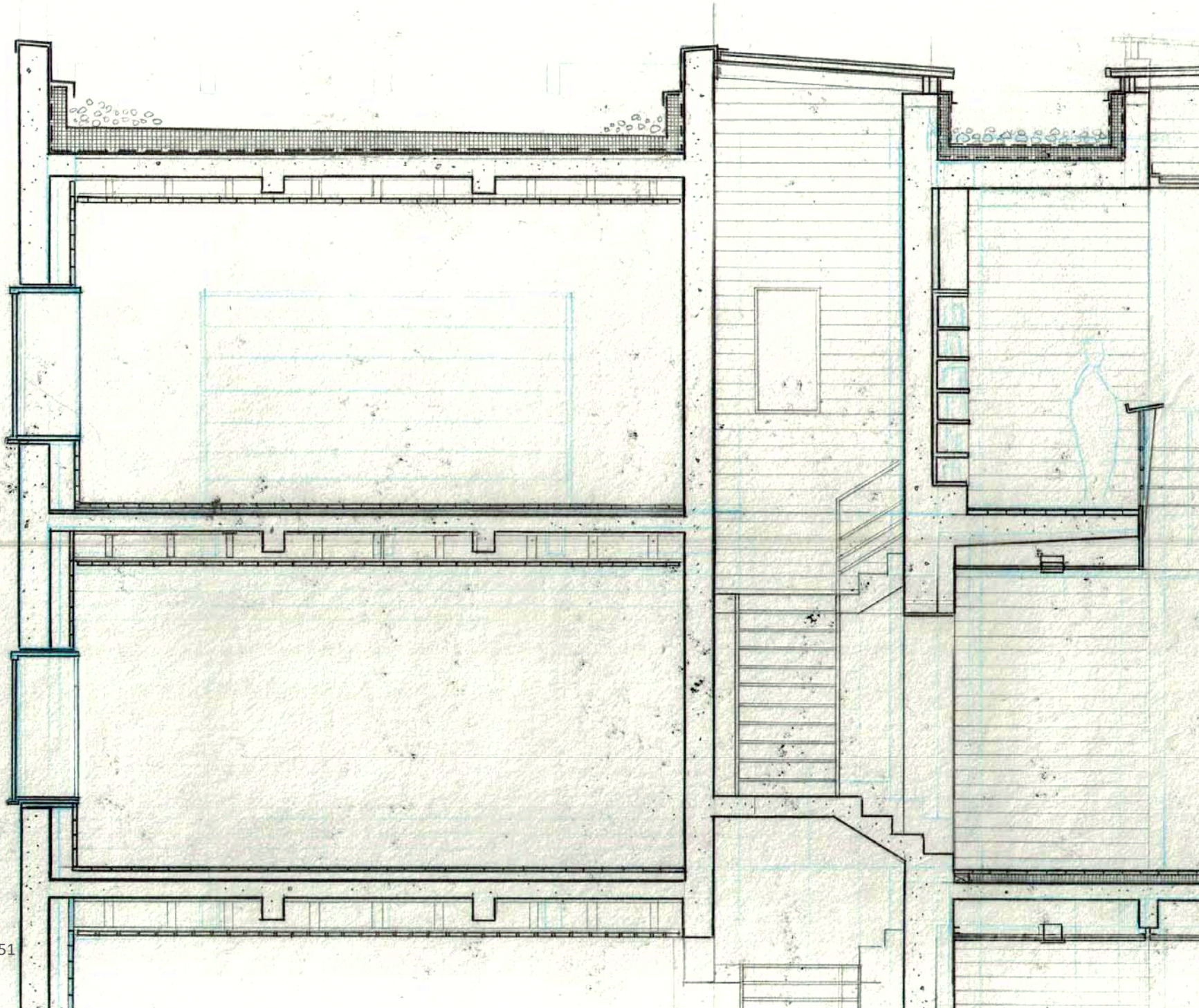
The Black Mountain College Gallery Archive has two floors to display the collection. The first floor is relatively open in order to accommodate temporary exhibitions. The second floor gallery would serve as a permanent collection. Larger works could be displayed either in the double height space on the first floor or the outside ground level. The gallery space could also host various events for artists in the River Arts District.



GALLERY ARCHIVE: BLACK MOUNTAIN COLLEGE

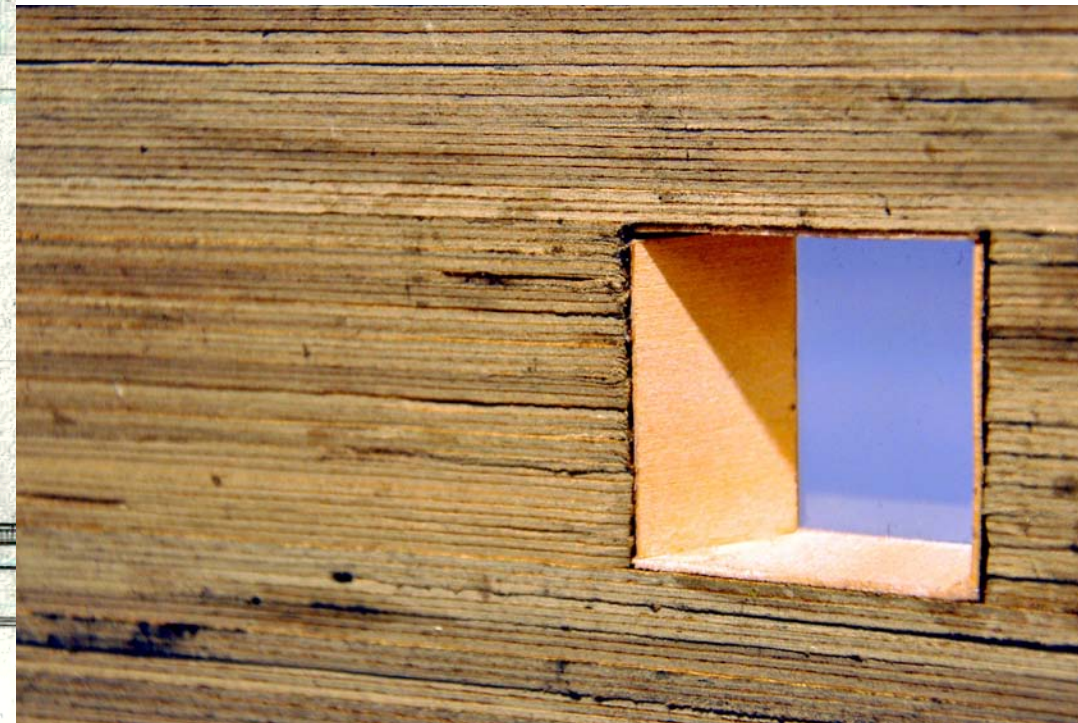


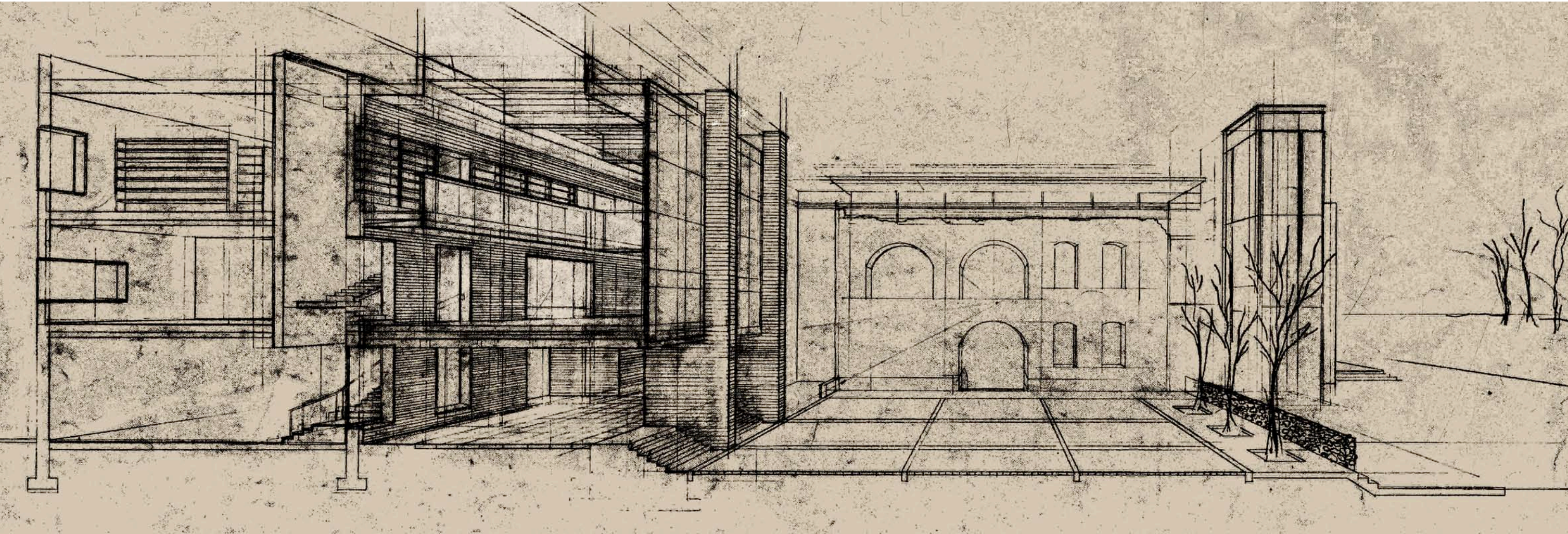
The ghosts of Black Mountain College wander the halls of the Gallery Archive in this cross section. The first floor gallery is elevated fourteen feet above the ground level. The second floor gallery uses a series of skylights to bring the filtered natural light to the space. The ground floor is left open to the exterior, allowing larger sculptures to be showcased throughout the site.



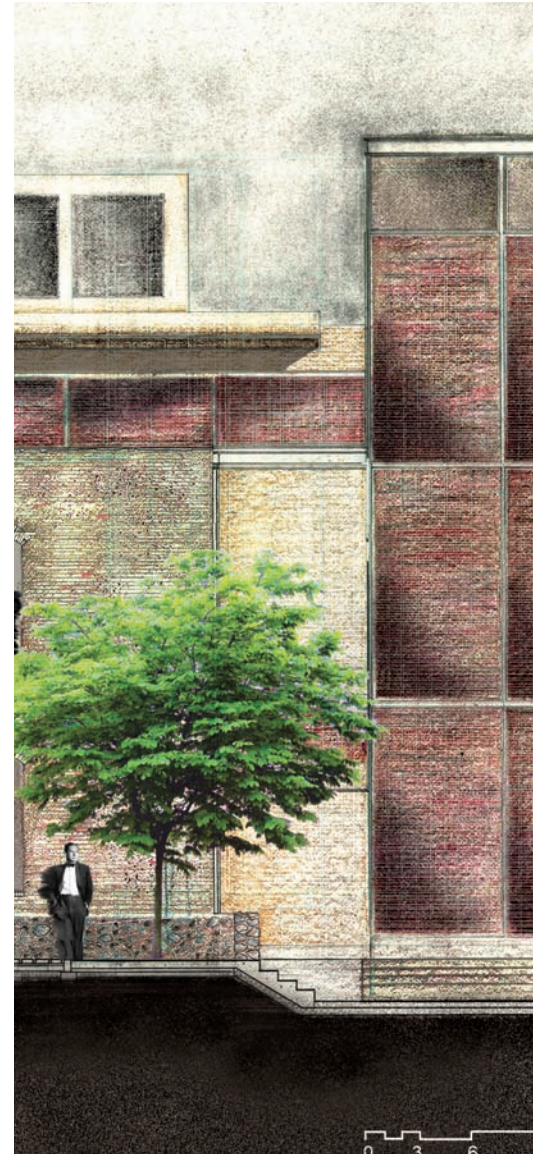
D E T A I L : W I N D O W

The load-bearing masonry walls of the Asheville Cotton Mill contain deep window sills that invite inhabitation of their space. These thick brick wall openings were the inspiration for a new window type designed with a deep sill and intended for human occupation. For spaces such as a library, these windows can serve as satisfying places of retreat while reading. The windows would be lined with inviting materials such as light-colored hardwoods that softly warm in exterior sunlight. By introducing a slight angle in the vertical jamb of the window, additional sunlight is received and indirectly introduced into the interior space.

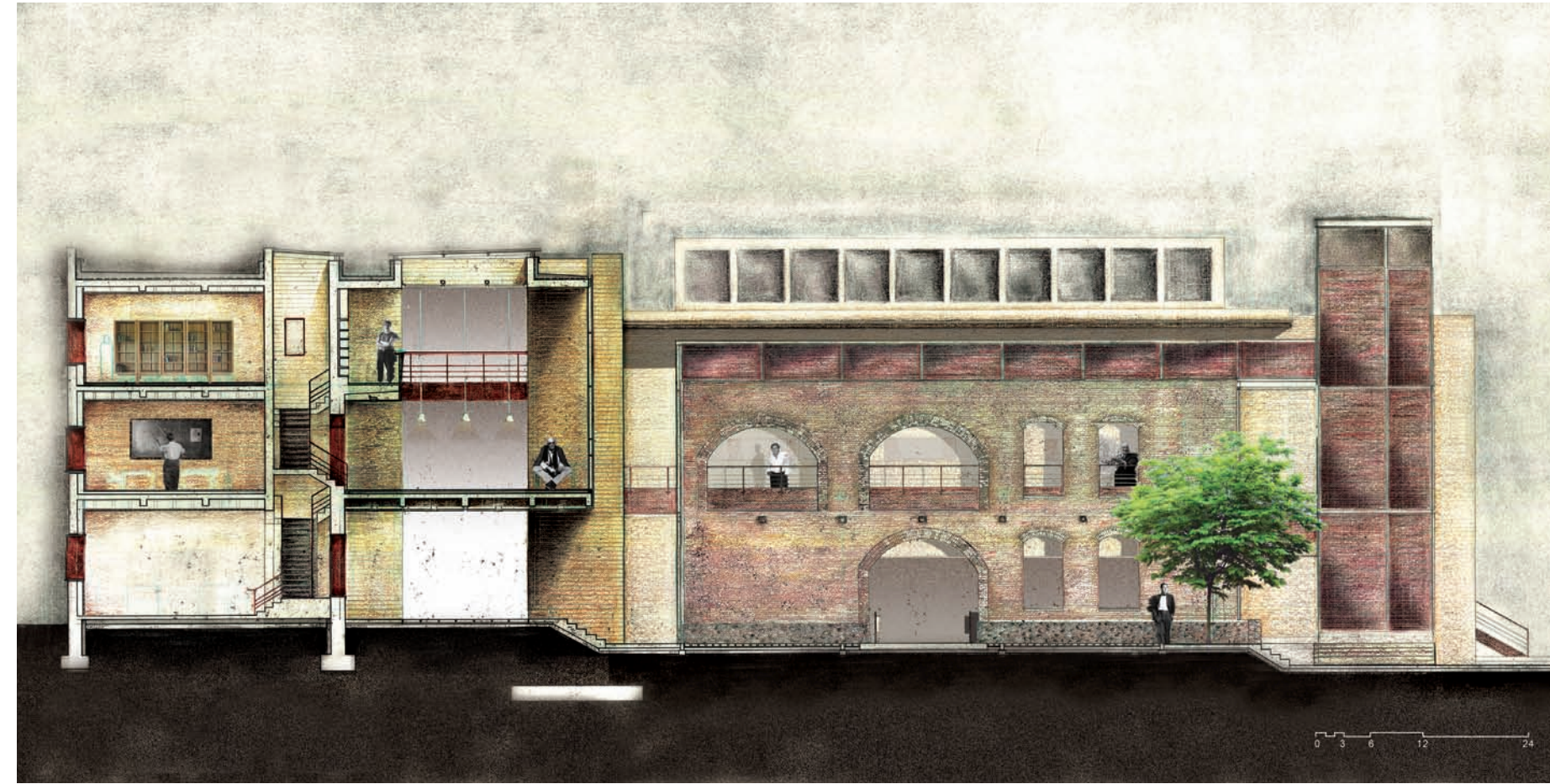




The Black Mountain College Library Archive is situated behind the gallery and extends out toward the brick courtyard to make an L-shape. The main reading room is a double-height space with a catwalk elevated along the back wall. The view out of the reading room is of the French Broad River with mountains in the background. The books would be stored behind the reading room in a long library corridor. Unlike the gallery, the ground floor would be enclosed and would include a gift shop.



LIBRARY ARCHIVE: BLACK MOUNTAIN COLLEGE



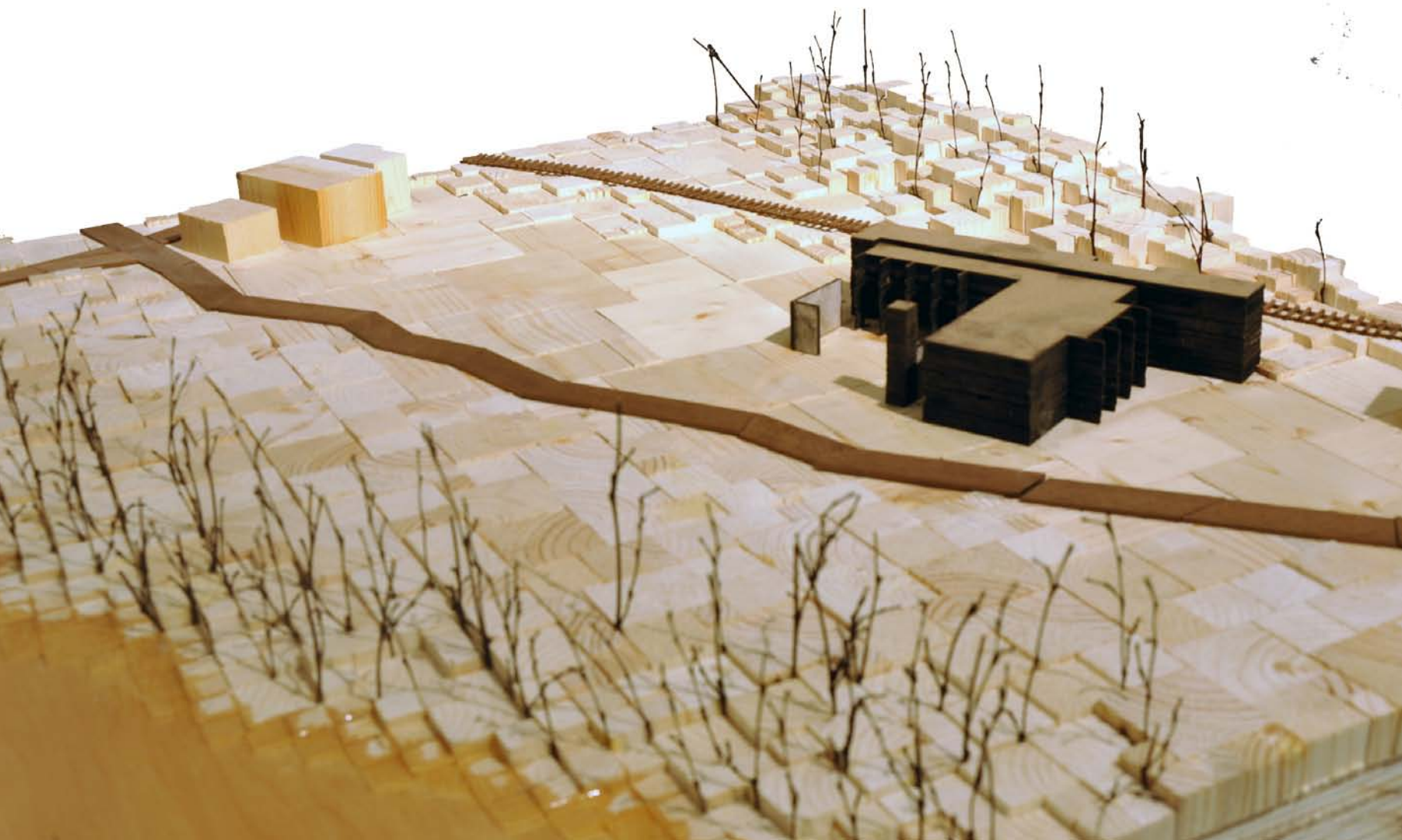
The ghosts of Black Mountain College wander the halls of the Library Archive and brick courtyard in this cross section. The first floor reading room is elevated twelve feet above the ground floor. The second floor catwalk overlooks the reading room and views out to the brick courtyard and the French Broad River. The ground floor is left open to the exterior under the reading room but enclosed for the back portion of the library to host a gift shop and a ground floor entrance.



Black Mountain College
Archival Gallery + Library
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LABOR: THE MAKING OF A BUILDING

Working at the scale of a model, architects can regain the capacity of “thinking as doing” by experimenting and developing ideas and design decisions for a project. In fact, model making is vital if architects desire to imbue their designs with a spirit of making. A series of working models reconciles ideas conceived in the mind with the physical, material world. Not only are design decisions tested but often new design solutions are discovered through the act of making. Models are physical constructions that demonstrate how to build, yet allow for design evolution since changes could be made before completing a set of drawings.



S I T E M O D E L :

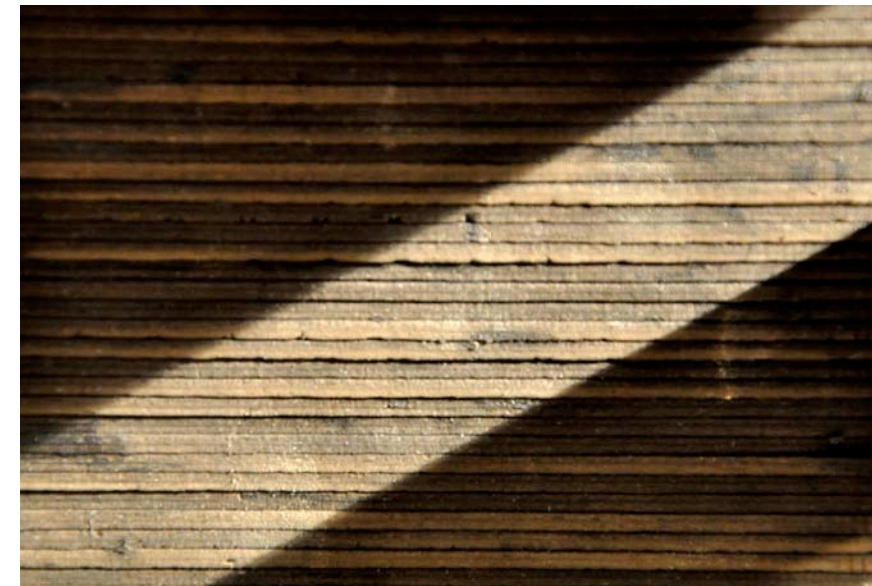
A site model was constructed to illustrate the existing conditions of the Asheville Cotton Mill site. The Black Mountain College Gallery + Library Archive would occupy only a portion of the relatively large site. The building could serve as a catalyst for future development. Rather than adopt a master-plan approach to the entire site, the archive would be the first building in an evolutionary chain of potential development. The site model highlights the flatness of the land between the river and railroad track. The site slopes up significantly beyond the railroad track. The land between the river and the road is currently parkland with no plans of development.





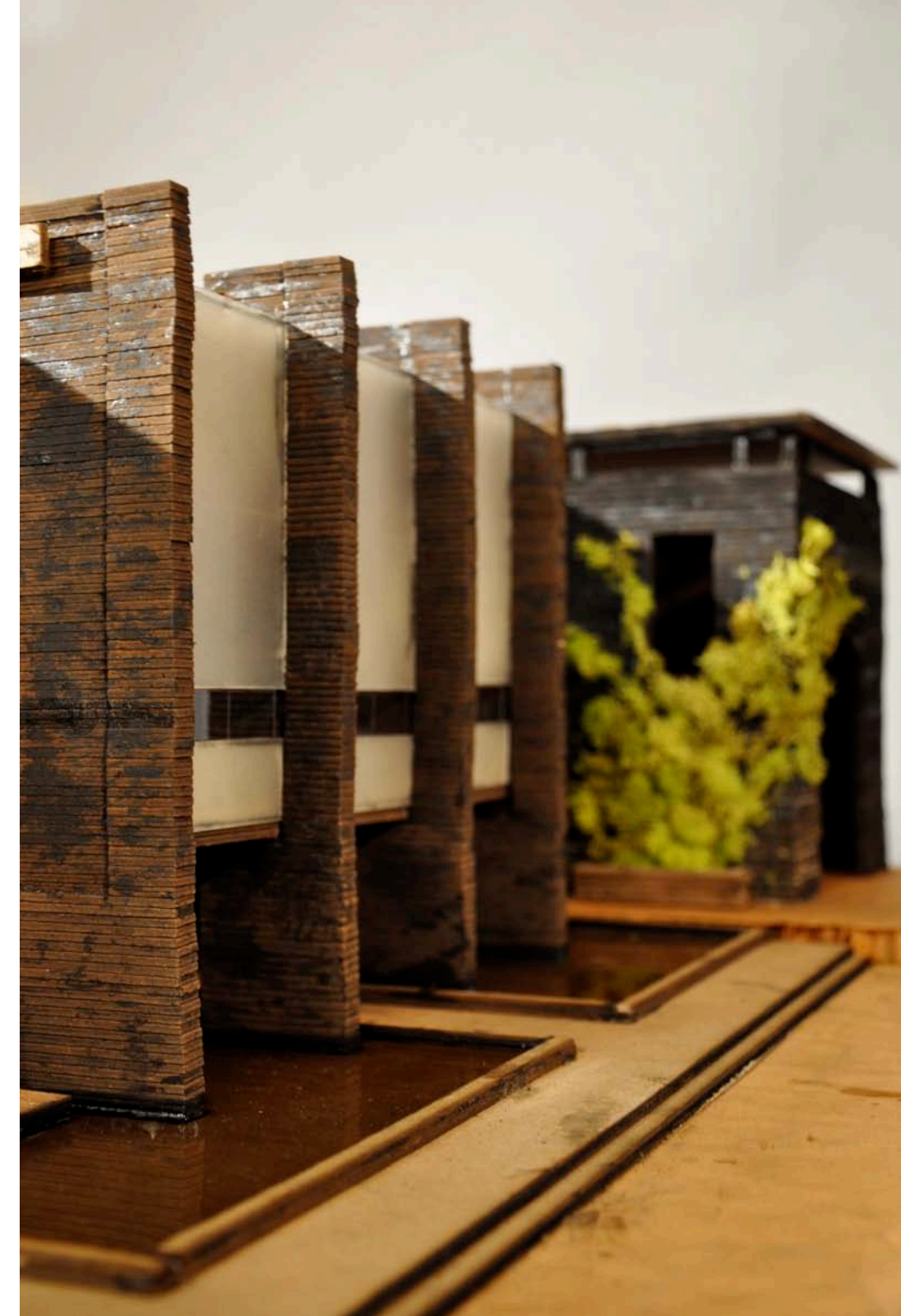
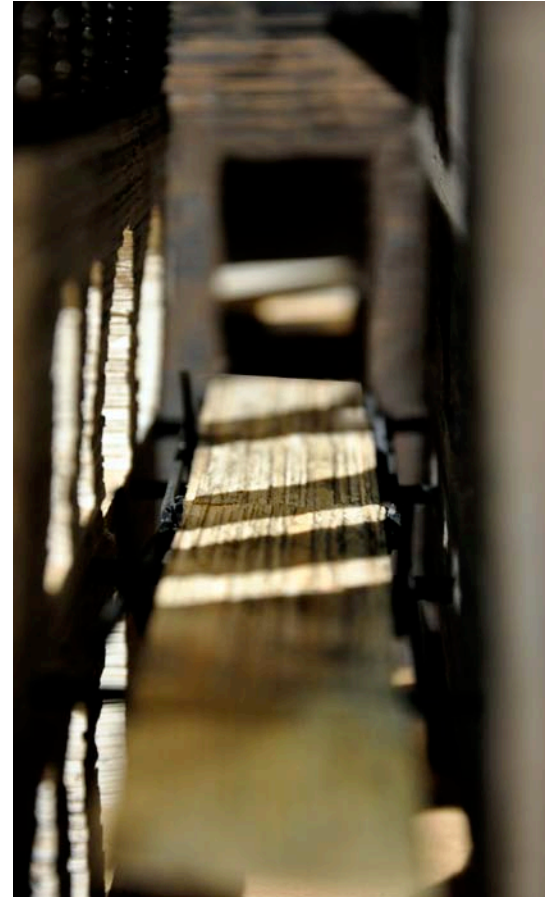
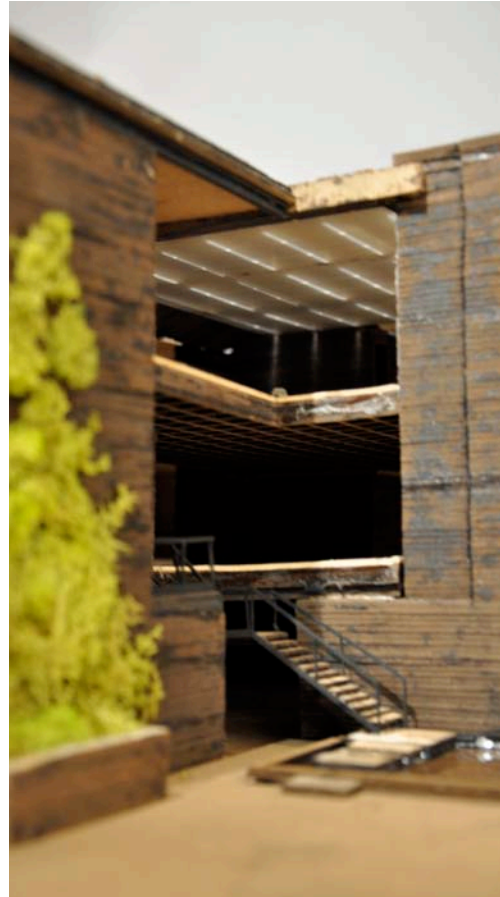
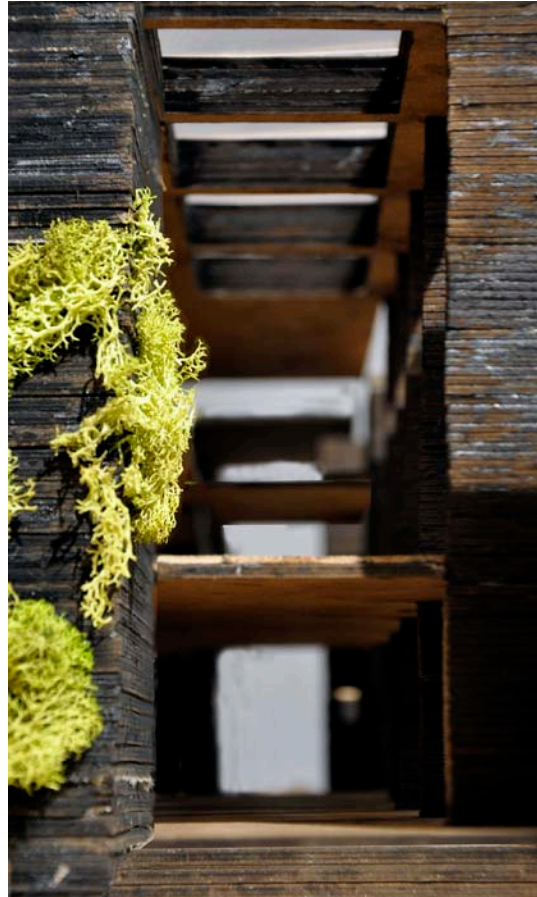
BUILDING MODEL :

A working model of smaller detailed components developed into a larger building model for the entire Black Mountain College Gallery + Library Archive. The model is built almost entirely of chipboard, achieving different textures through a variety of cutting techniques. The model attempts to achieve the character of board-formed concrete walls through an intensive stacking of chipboard pieces. The diversity in texture is intended to reveal the process of its making.





These images attempt to display the character of the monolithic board-formed concrete walls. The vegetation provides a natural contrast for these walls. The planting beds are intended to cultivate ivy to represent the natural process of the landscape merging with the architecture.



These images (left) show a series of close-up perspectives of major axis points within the building. The image (right) reveals the south line of concrete pillars with a reflecting pool on the ground floor.



Black Mountain College
Archival Gallery + Library
in the River Arts District of
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D I G I T A L I M A G I N A T I O N

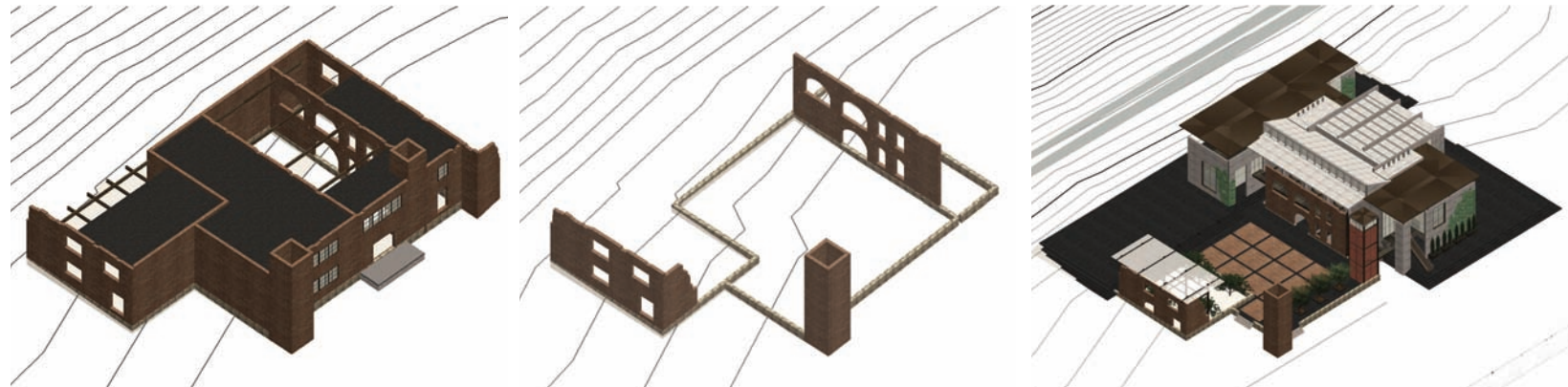
The tools of the architect have expanded with the rise of computers. Advanced technology offers many advantages to practicing architects. Although there is a danger in mistaking technology for the entire process of design, computers can provide new dimensions of architectural imagination. Digital modeling programs allow design decisions to be tested quickly and easily, while rendering software offers realistic depictions of buildings with a variety of lighting conditions. Additionally, energy modeling software allows for greater analysis and more informed design decisions.



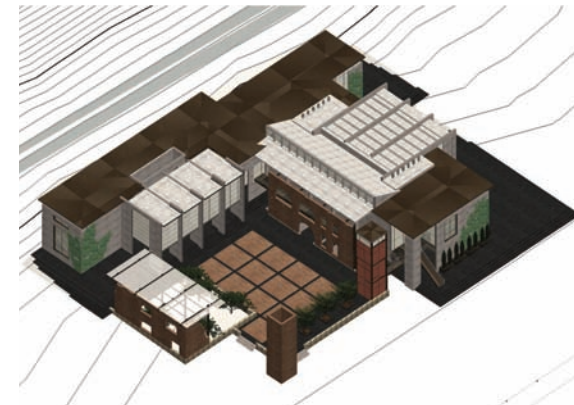
D I G I T A L B U I L D I N G M O D E L :

This digital rendering represents the Black Mountain College Gallery + Library Archive from the front perspective of the road. The building is modeled in the early afternoon with the sun in the southwestern sky. The ghosts of Black Mountain College are actively exploring the grounds of the site.

The series of models reveal the evolution of the Black Mountain College Gallery + Library Archive. The images depict the cotton mill ruin, the partial fragments preserved, the gallery archive, and the gallery + library archive, respectively.



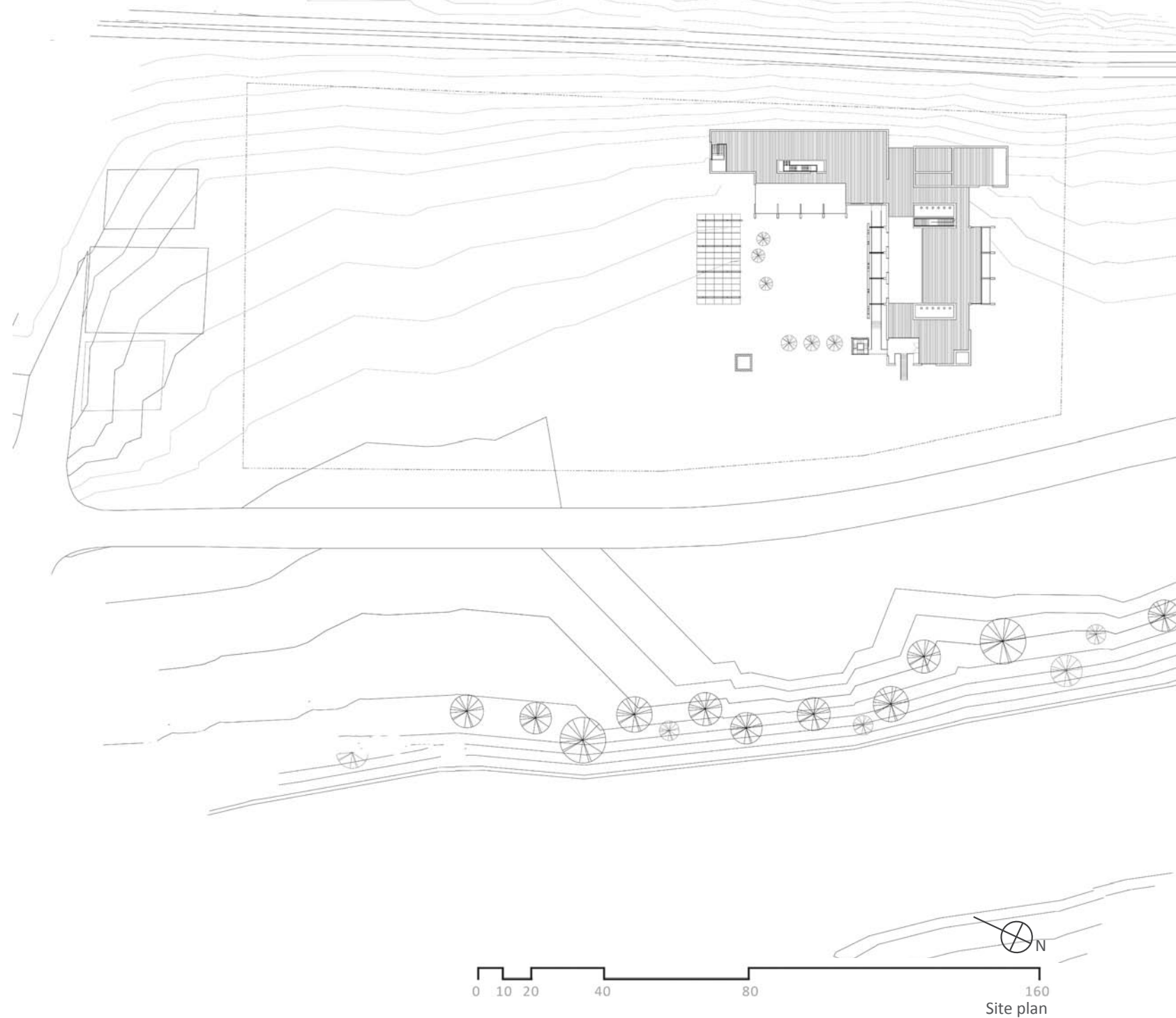
This digital rendering of the Black Mountain College Gallery + Library Archive is from the south perspective of the site. The building is modeled in the early morning with the sun in the southeastern sky. The ghosts of Black Mountain College are relaxing near the reflecting pool.





This digital rendering of the Black Mountain College Gallery + Library Archive is from the north perspective of the site. The building is modeled in the late afternoon with the sun in the western sky. The ghosts of Black Mountain College are enjoying the open brick courtyard.





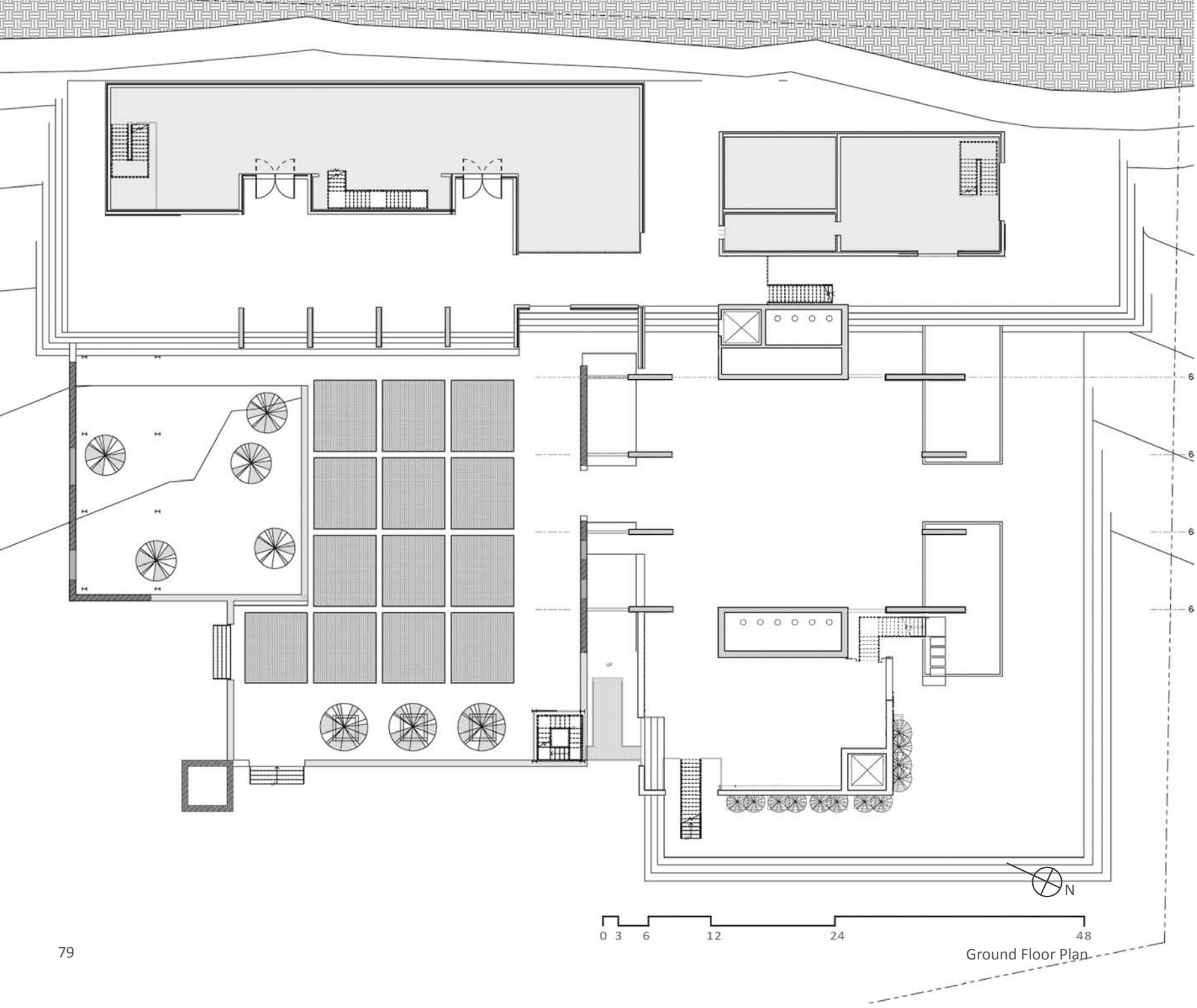
This elevation represents the Black Mountain College Gallery + Library Archive from the west view of the road. The building is situated in the relatively flat river basin with the mountains sloping upward behind. The ghosts of Black Mountain College are actively exploring the grounds of the site and the various paths and entryways of the building.



West Elevation

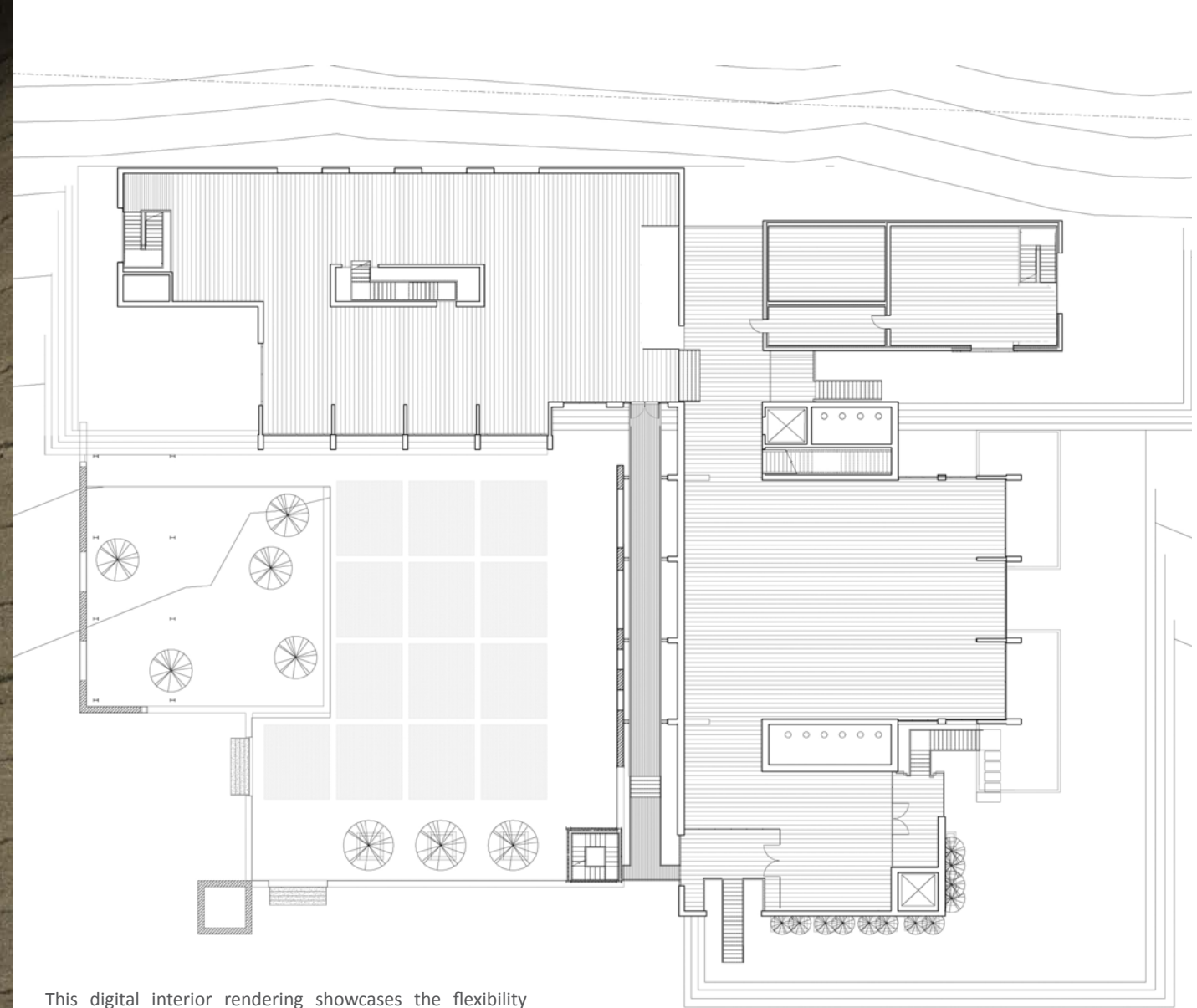
Site plan

0 4 8 16 32 64'

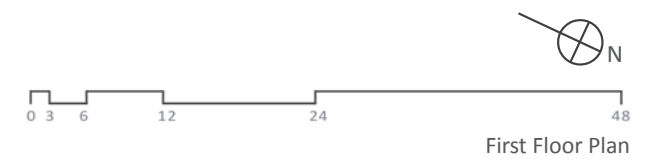


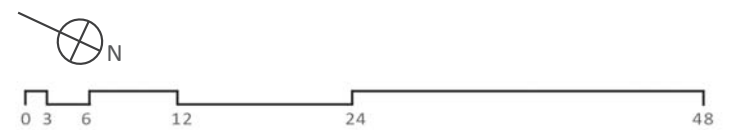
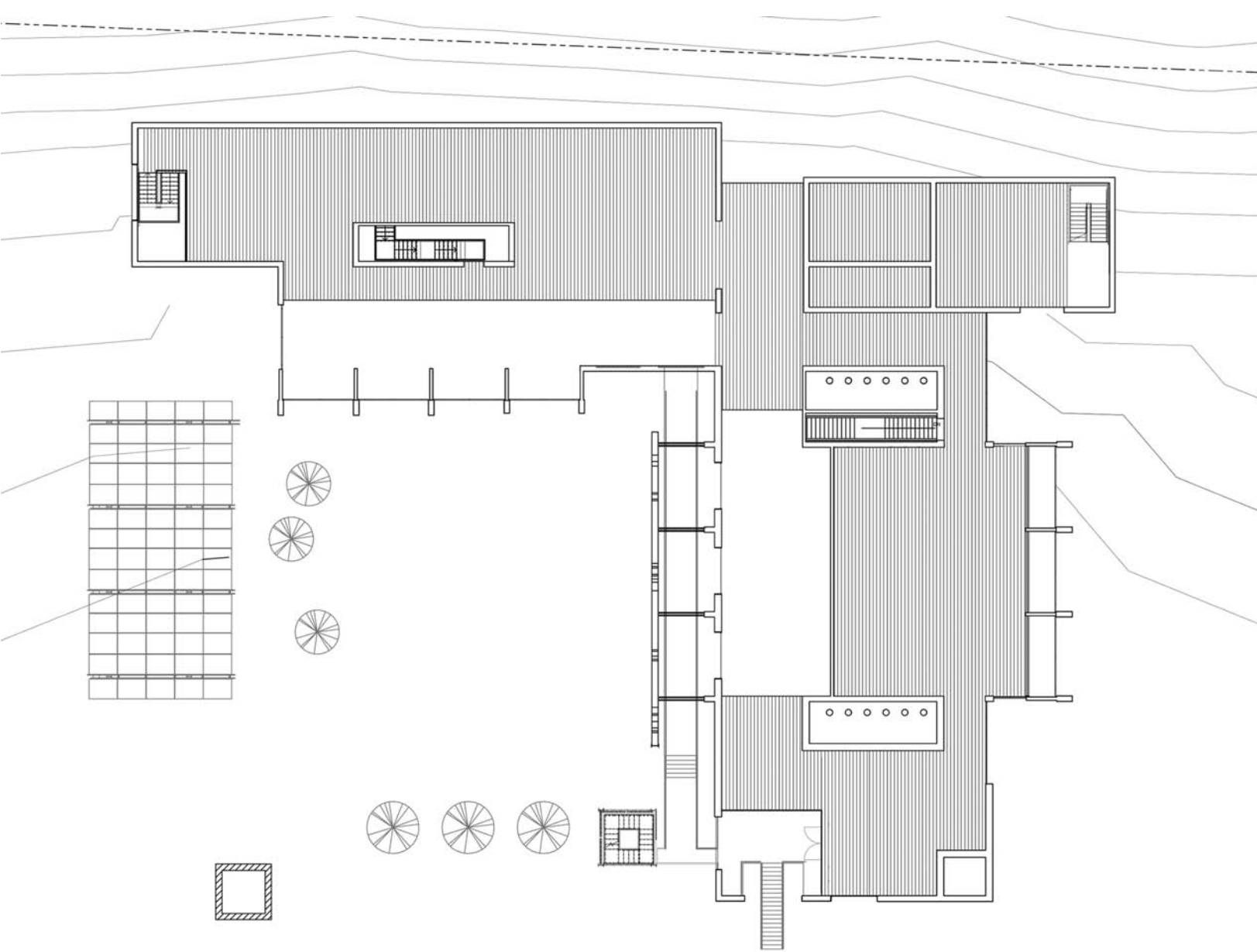
This elevation represents the Black Mountain College Gallery + Library Archive from the south view of the site. The building is situated between the French Broad River and the mountain range, with the highway bridge to the north. The railroad line runs behind the building, separating the cotton mill site from the site of the Earle Chesterfield mill.





This digital interior rendering showcases the flexibility of the first floor gallery and its open floor plan. The double height space allows larger sculptures and works to be displayed while the single height space provides ample room for gallery display walls. The ghosts of Black Mountain College are admiring the art collection.





Second Floor Plan

This digital rendering reveals the pathway to the library between the original ruin wall and the new gallery space. The walkway provides views out to the brick courtyard. The ghosts of Black Mountain College are enjoying this interstitial space between the past and present.







A F T E R W O R D

As the backdrop to our everyday life, buildings provide a sense of comfort and relief. We seek shelter in buildings that reflect our own true nature, or at least the nature of what we aspire to be. In doing so, we cannot help but to personify them as living beings. The character of their personality can relate to our own life story. The building's life is told through both formal elements of the building's design and the matrix of details that constitute its construction. Through careful study and reading of the building, its spirit can be awakened and felt.

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