

## ABSTRACT

Title of Document: ADAPTIVE REUSE IN MARTINSBURG:  
THE INTERWOVEN SCHOOL OF CRAFTS

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This thesis explores critical regionalism and sustainable design through the adaptive reuse of the former Interwoven Stocking Company mill in Martinsburg, West Virginia. New programming establishes the manufacturing complex as the Interwoven School of Crafts, a learning institution dedicated to the production of functional, handcrafted arts and thereby also to the continuance of local culture.

Regionalistic ideas are further explored through the development of a visitor center and gallery building that showcases the work of the artists. Nestled within the historic complex, this contemporary building is the interface between spaces, materials, and time periods. By building a contemporary structure the character of the existing buildings is enhanced by the contrast rather than trivialized by imitation or replication. By designing with sustainable principles and building craft in mind the newer components will contribute to both the character and the long lifespan of what is already on site.



ADAPTIVE REUSE IN MARTINSBURG: THE INTERWOVEN SCHOOL OF CRAFTS

By

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## Dedication

For Clay and my grandparents, GG and Socks.

## Acknowledgements

Special thanks go to Ridgecrest Investments for all of their generous assistance, and to the many people who have taken an interest in and offered assistance for this project.

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“We shape our buildings, and afterwards our buildings shape us.”  
Winston Churchill

**Figure 1: View of the Interwoven Site from Porter Avenue.** This image shows the relationship between the site and the homes of people living in the surrounding residential neighborhood. [Photograph by author.]

## Chapter 1: Inhabiting History

This thesis began with a fascination and a desire to explore the inner workings of that fascination. There is something wonderful about places that are *old* and also about the possibilities that they present. What makes these places so intriguing to so many people? And what will become of them?

As the futures of historic places are challenged by issues of change it is the values of society that will determine the outcome. There must be an understanding that history and place are inseparable. When one fades the other goes with it. History is then more than words and ideas and records; it is something that can be inhabited. It is the legacy of historic places to provide an experiential link to the past.

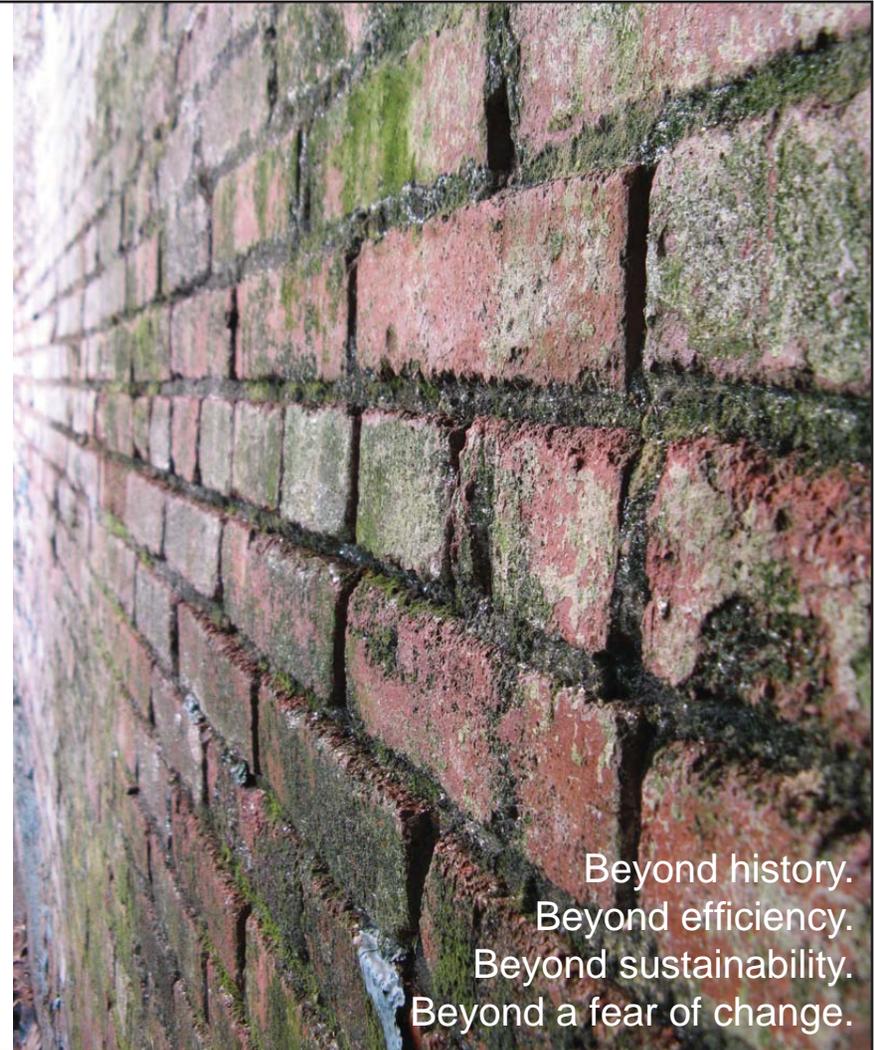


**Figure 2: View of the Interwoven Site from Porter Avenue.** This image represents one of the typical views from Porter Avenue and the impressions that many people receive from a distance. [Photograph by author.]

## *Section 1: Architecture and the Senses*

Beyond the practical argument for sustainability and the socially aware argument for preserving our history is an argument for saving a more ephemeral quality of older buildings- they are experientially different from buildings of today.

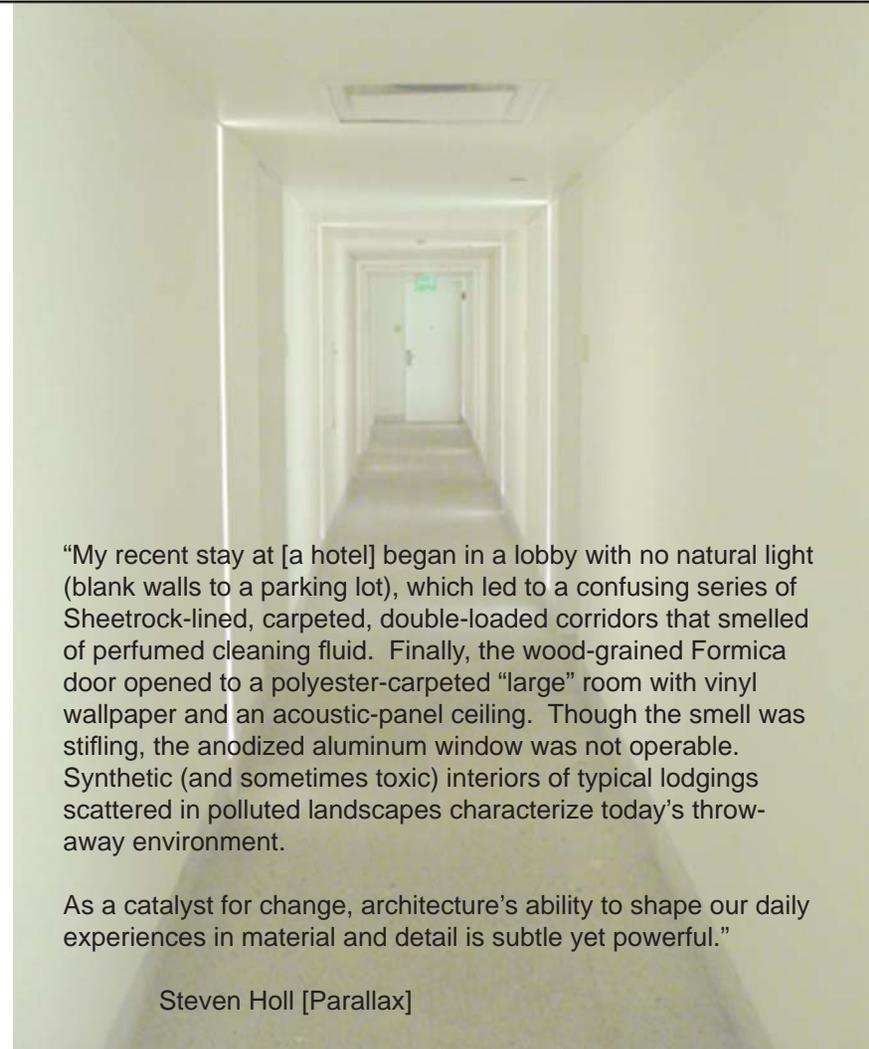
Even in a state of neglect or decay historic buildings hold power. Today these buildings are unusual environments for most people, and in the exploration of these places curiosity is piqued and awareness heightened. The senses absorb the current conditions, but the imagination constructs a story and envisions what might have been. This is how history manifests itself in a place. No amount of photography or videotaping can fully capture the phenomenological qualities of any place, and this is certainly true of spaces for which modern



**Figure 3: Exterior Brick Wall at Interwoven Site.** This wall is an example of the site's tactile qualities. [Photograph by author.]

people may have little direct, personal experience from which to reference.

As compared to those of fifty or a hundred years ago, modern buildings are constructed differently and occupied differently. If this were untrue the proportionally smaller spaces of older homes would not feel uncomfortably small to most modern homeowners. The open, sunlit workrooms of an old factory would not feel so glorious to the inhabitants of endless, artificially lit office floor plates. By all sensory accounts historic buildings are experientially different, and their reuse and habitation is often preferred in the face of more generic architecture.



“My recent stay at [a hotel] began in a lobby with no natural light (blank walls to a parking lot), which led to a confusing series of Sheetrock-lined, carpeted, double-loaded corridors that smelled of perfumed cleaning fluid. Finally, the wood-grained Formica door opened to a polyester-carpeted “large” room with vinyl wallpaper and an acoustic-panel ceiling. Though the smell was stifling, the anodized aluminum window was not operable. Synthetic (and sometimes toxic) interiors of typical lodgings scattered in polluted landscapes characterize today’s throw-away environment.

As a catalyst for change, architecture’s ability to shape our daily experiences in material and detail is subtle yet powerful.”

Steven Holl [Parallax]

**Figure 4: Steven Holl Quotation.** This collage illustrates the connection between materiality and experience. [Image by author.]

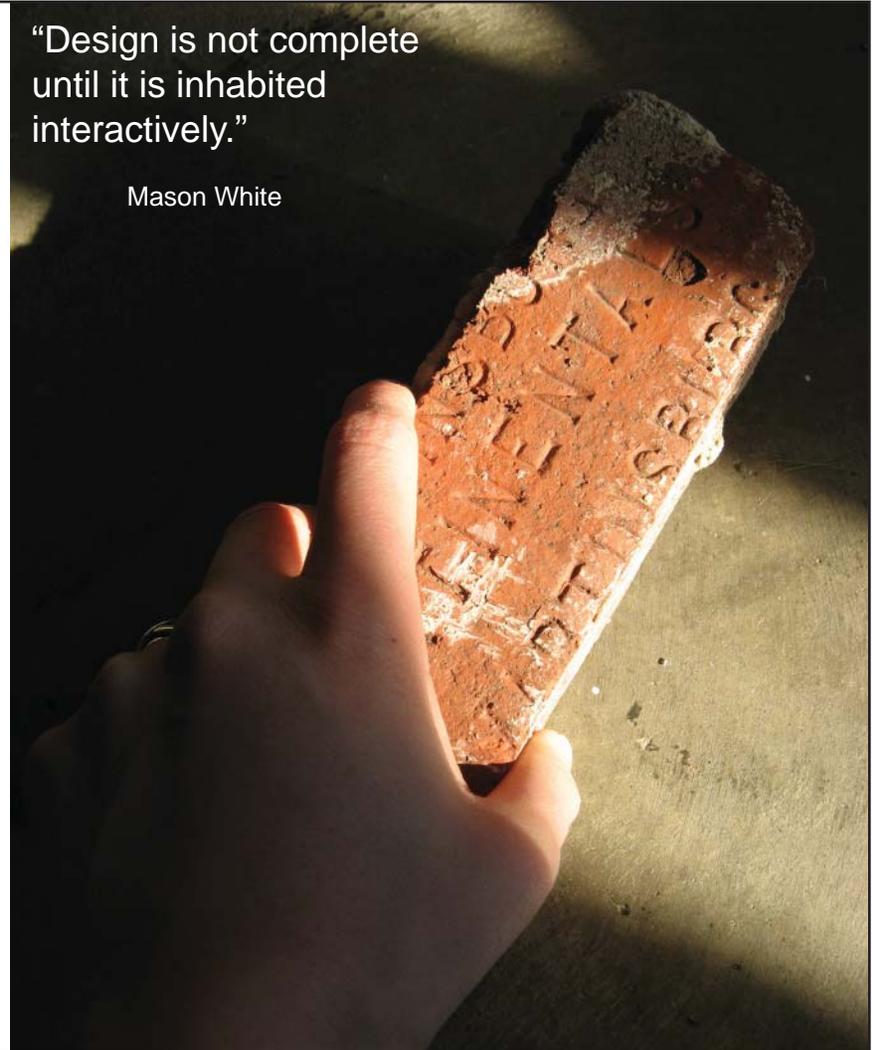
## *Section 2: Symbiotic Relationships*

This thesis takes the attitude that historic buildings are living parts of their environments, and that they have the power to enrich the life of every person who comes in contact with them.

The most profound interaction with a historic building is achieved from the symbiotic relationship of inhabitant and inhabited. These buildings are the antithesis of generic; they have uniqueness and identity in which people take pride. Rather than being places where people have to be, buildings like this are often places where people want to be. People who occupy these places take care of them, and the buildings are enjoyed often instead of occasionally.

“Design is not complete until it is inhabited interactively.”

Mason White

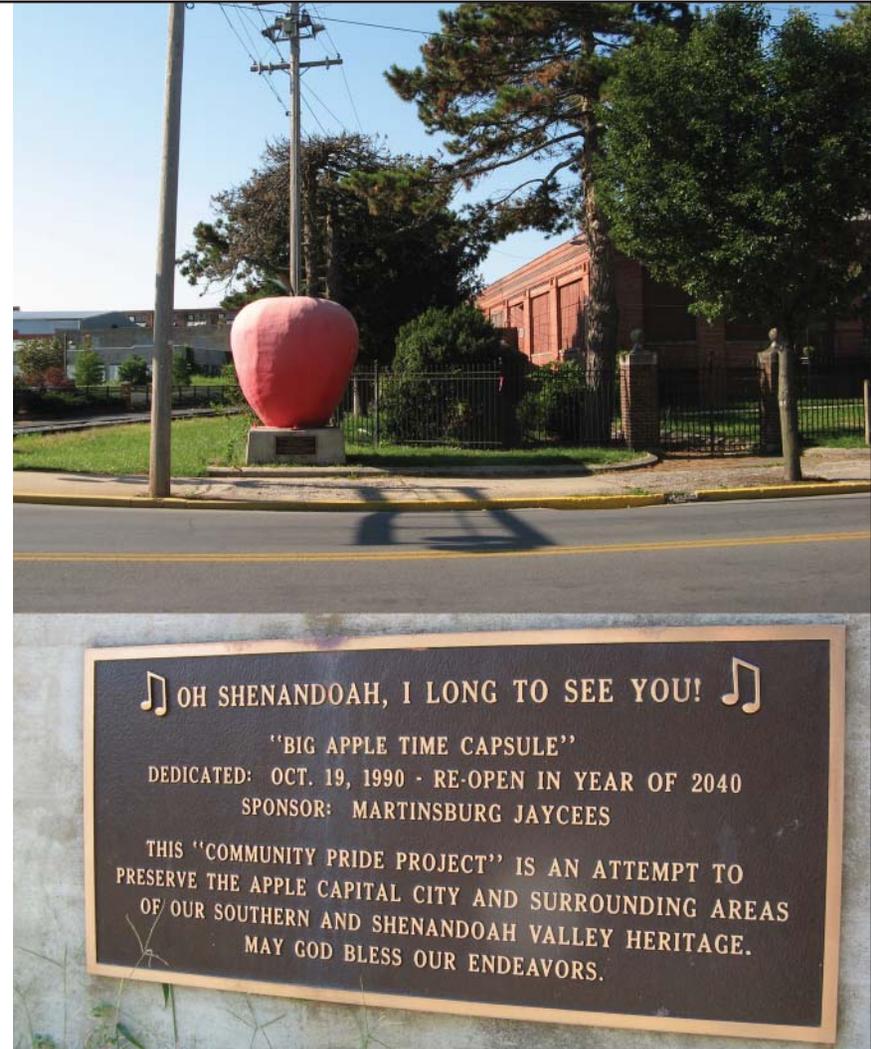


**Figure 5: Picking up a brick.** A desire to engage with a place is only the beginning; interaction grows from there. [Photograph by author.]

### *Section 3: Continuity of Culture*

A place is not important simply because it is old but rather because there is some cultural value implied by its continued existence. Places that are irrelevant are treated as temporary; they are drastically changed or demolished with ease. That a place has lasted for a long time implies that there is some reason that the people around it consider it worth saving or reusing.

Over time people become emotionally invested in their surroundings, and in being “historic” a place contains something of the culture that surrounds it. The continued legacy of such a historic place is in how it captures the history of a culture and transmits it into the future, and so the preservation of the place becomes the preservation of the culture itself. Ownership grows beyond legal dictation when people become invested in the future of their history.

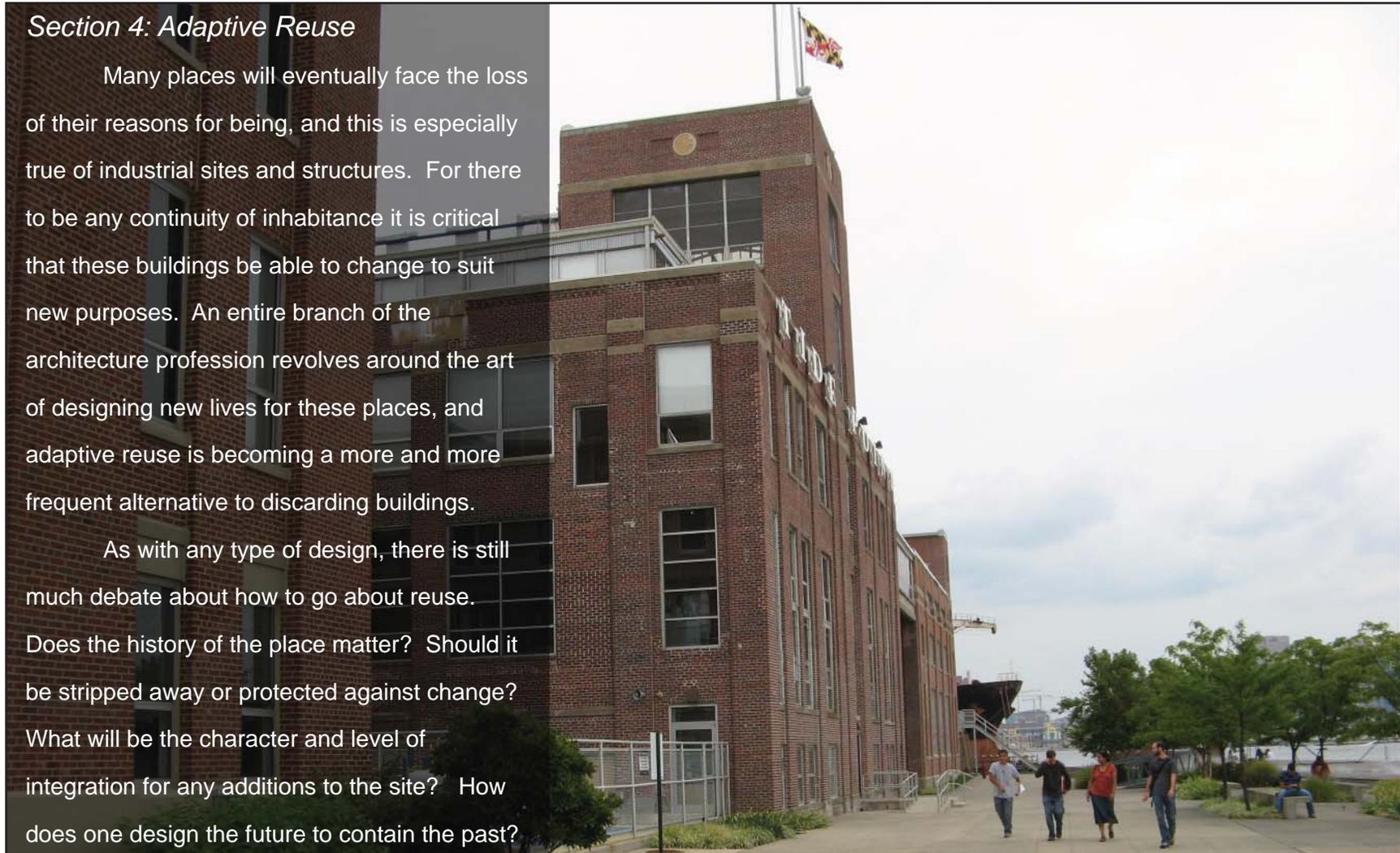


**Figure 6: The Big Apple Time Capsule.** This cultural icon occupies a corner of the ISC site along an important road. [Photographs by author.]

#### *Section 4: Adaptive Reuse*

Many places will eventually face the loss of their reasons for being, and this is especially true of industrial sites and structures. For there to be any continuity of inhabitation it is critical that these buildings be able to change to suit new purposes. An entire branch of the architecture profession revolves around the art of designing new lives for these places, and adaptive reuse is becoming a more and more frequent alternative to discarding buildings.

As with any type of design, there is still much debate about how to go about reuse. Does the history of the place matter? Should it be stripped away or protected against change? What will be the character and level of integration for any additions to the site? How does one design the future to contain the past?



**Figure 7: Tide Point in Baltimore, MD.** Tide Point is one of many examples of successfully reused factories along Baltimore's harbor. Landscaping, repair, and modern upgrades have made this complex functional and integrated with the waterfront. [Photograph by author.]

## The Value of Thoughtful Contrast

In every way, older buildings feel different from newer ones; they cannot be replicated, nor should they be. Replication and imitation extend the appearance but not the character or the sensory experience. The power of the original is reduced when it is unthinkingly multiplied, and so this thesis adopts many of the ideas of critical regionalism.

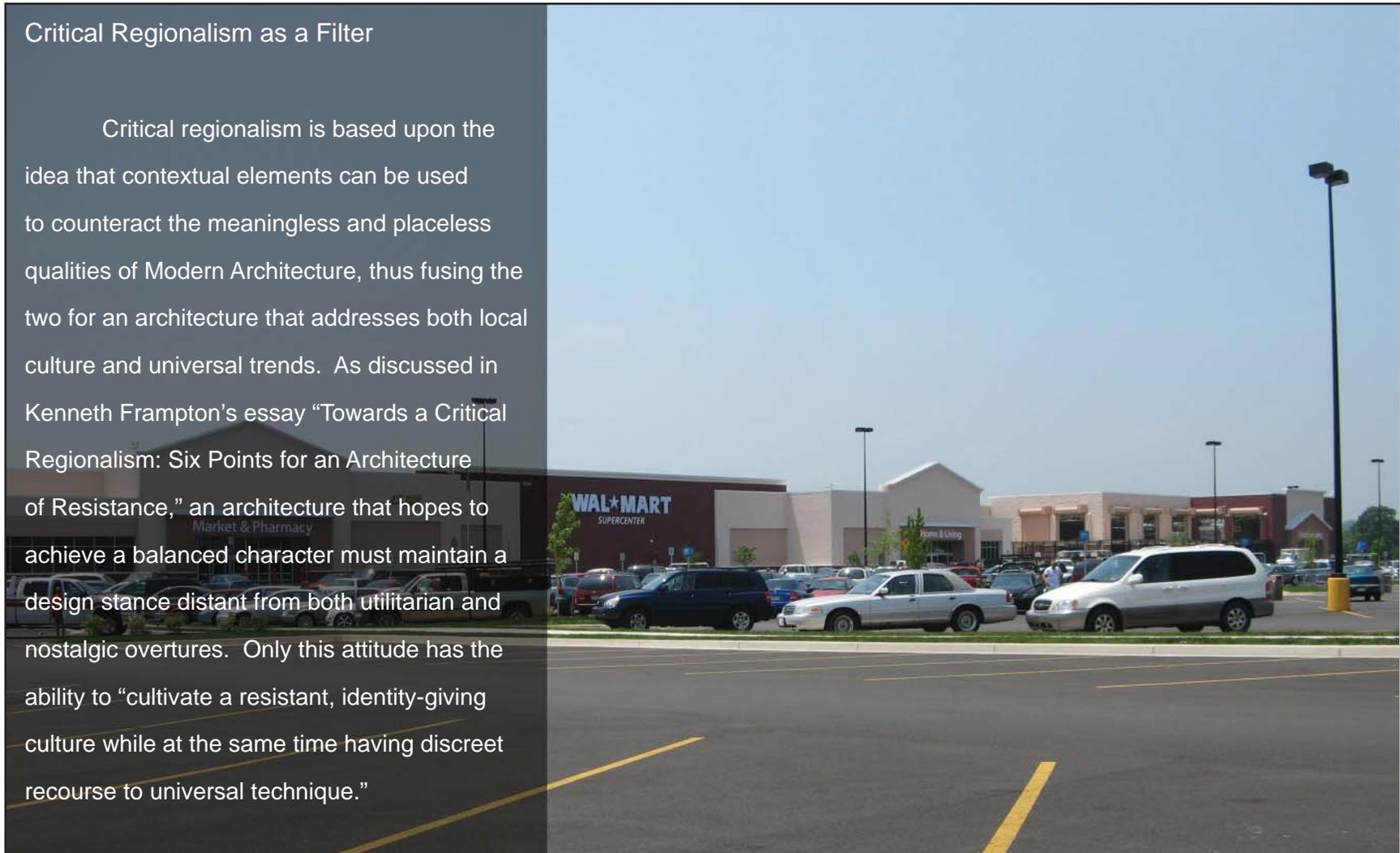
By creating contrasting interventions that complement the originals without mimicking them, a design may emphasize the character of the original and through this awareness increase the appreciation of that building. Neither architecture nor culture can live solely in the past; there is nothing to be gained in stagnancy. The question is one of how to embody the present without dismissing the past.



**Figure 8: Berkeley County Judicial Center.** This mill sets a precedent for modern additions to historic downtown. [Photographs by author.]

## Critical Regionalism as a Filter

Critical regionalism is based upon the idea that contextual elements can be used to counteract the meaningless and placeless qualities of Modern Architecture, thus fusing the two for an architecture that addresses both local culture and universal trends. As discussed in Kenneth Frampton's essay "Towards a Critical Regionalism: Six Points for an Architecture of Resistance," an architecture that hopes to achieve a balanced character must maintain a design stance distant from both utilitarian and nostalgic overtures. Only this attitude has the ability to "cultivate a resistant, identity-giving culture while at the same time having discreet recourse to universal technique."



**Figure 9: Spring Mills Wal-mart.** This store's typology is completely ignorant of the local culture and building style. Both site and building design show a complete disinterest in connecting with any of the surroundings, or with people on the sidewalk. [Photograph by author.]

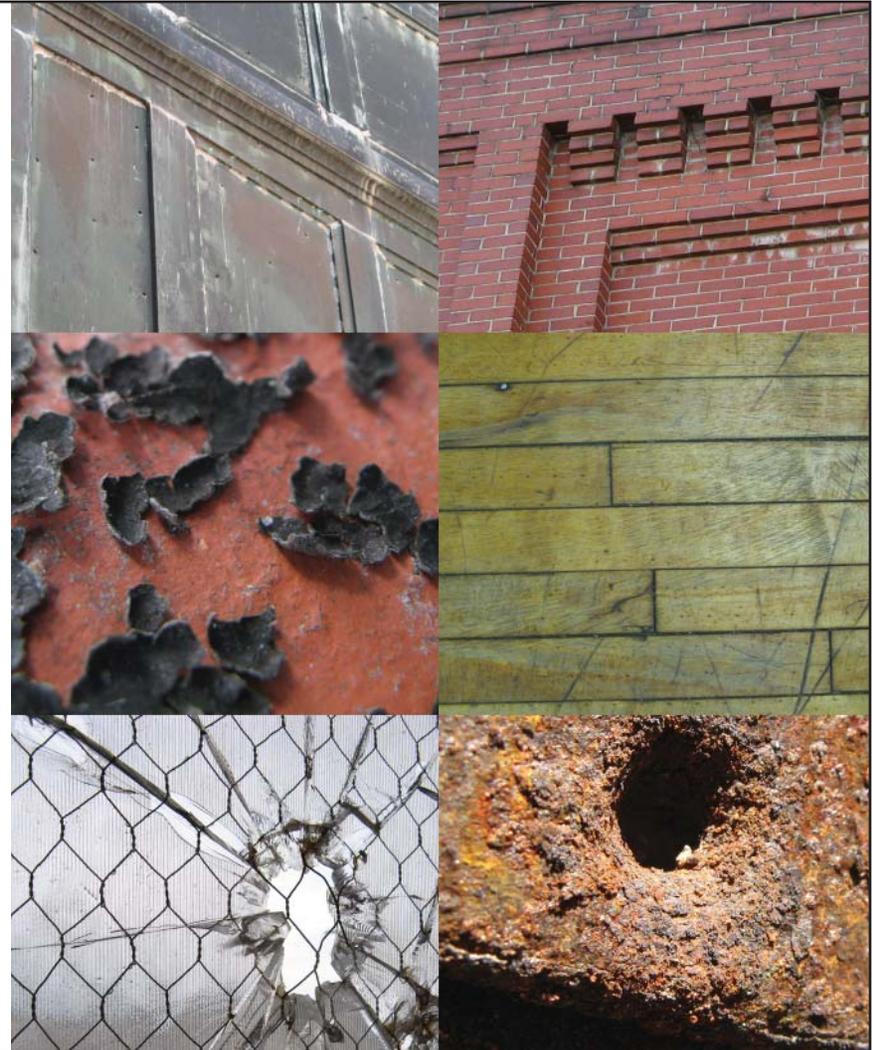
In the essays collected in *Discovering the Vernacular Landscape* J.B. Jackson portrays an attitude that is less about confrontation or conflict and more about integrating these two disparate elements. Somewhere in the space between the work of these authors is a point of balance, and so for this thesis the resulting intention is a mixture of Frampton's mediation and Jackson's acceptance.

But what does this mean in terms of design expression? The short answer is that a building should respond to both where it is and larger ideas about design. While not quoting the forms of the context, a building or site should be sensitive to local climate, light, and topography; these are critical to the phenomenology of a particular location.



**Figure 10: Downtown Martinsburg.** Images of Queen Street reflect the character of the town's larger scale context. [Photographs by author.]

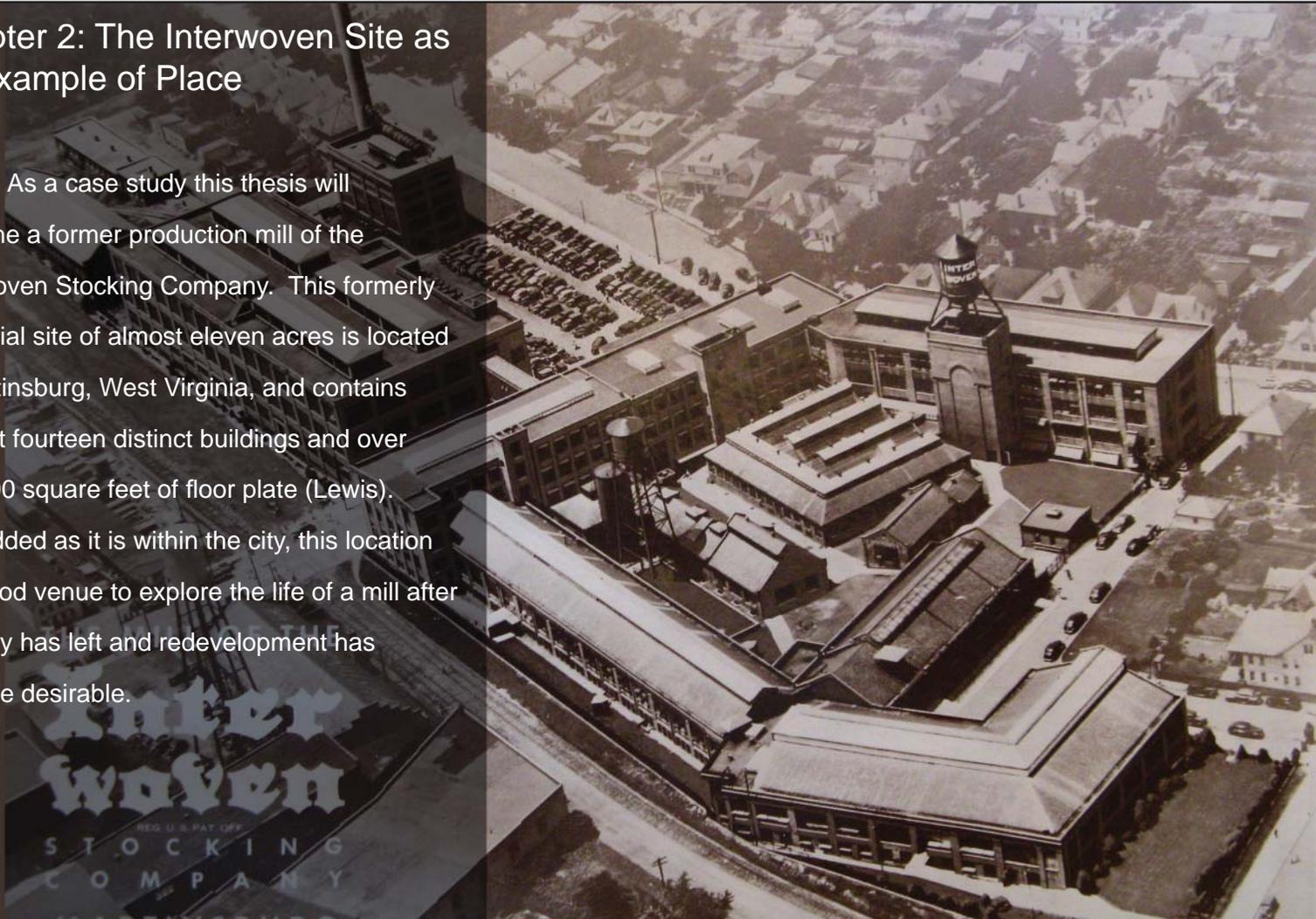
Materiality and construction are also imperative to a person's understanding of place. Often there is a use of local materials with an intention that something be discovered about them. Unorthodox usage or juxtaposition is a way to present a material that is commonly overlooked in a manner which draws attention to the material. Seeing, feeling, hearing, or smelling something in an unusual way creates a consideration of everyday usage and relates the sensory experiences. On a related note, it is important to realize a place must activate all of senses for a person to fully appreciate the experience- vision alone is not enough.



**Figure 11: Interwoven Site Materials.** These are some of the building materials which may be used in new design. [Photographs by author.]

## Chapter 2: The Interwoven Site as an Example of Place

As a case study this thesis will examine a former production mill of the Interwoven Stocking Company. This formerly industrial site of almost eleven acres is located in Martinsburg, West Virginia, and contains at least fourteen distinct buildings and over 450,000 square feet of floor plate (Lewis). Embedded as it is within the city, this location is a good venue to explore the life of a mill after industry has left and redevelopment has become desirable.

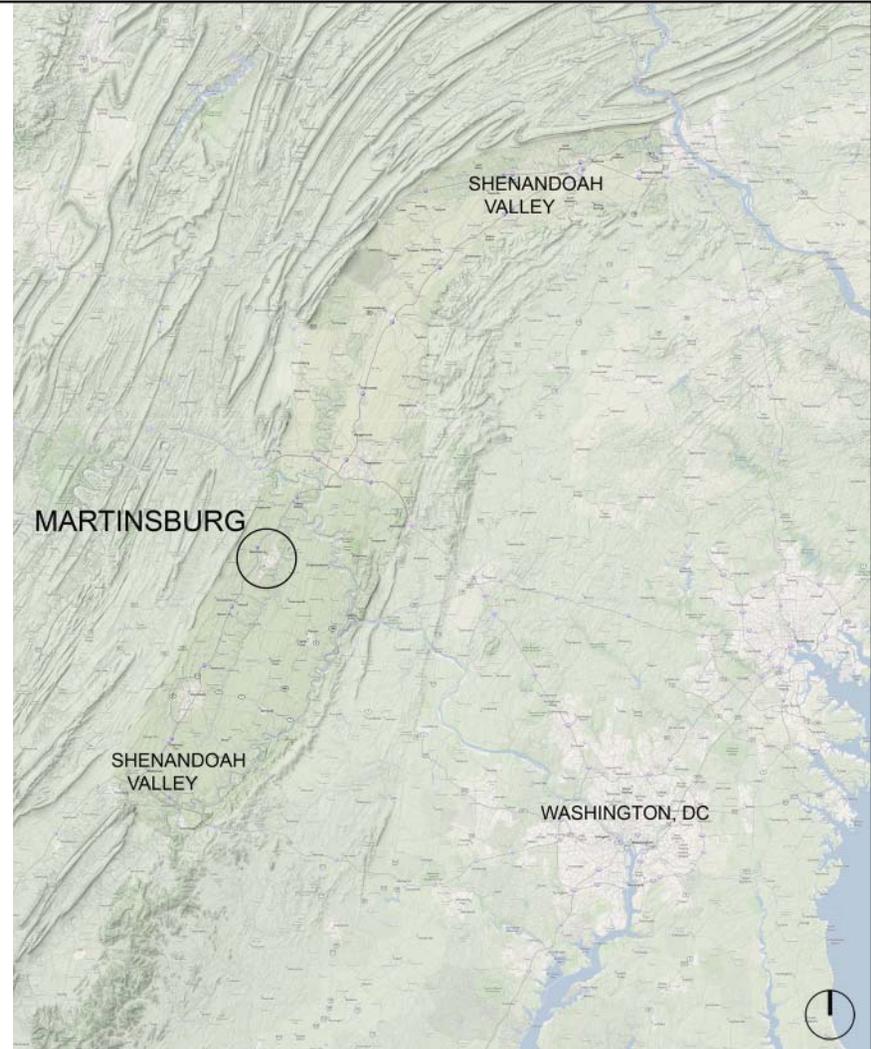


**Figure 12: 1930's Interwoven Stocking Company Aerial.** This is a rare overall image of the site during its prosperous years. [Image courtesy of Grove & Dall'olio Architects.]

## *Section 1: Site and General Context*

### The Shenandoah Valley

The city of Martinsburg is located in the eastern panhandle of West Virginia, nestled in the Shenandoah Valley. This location provides something of a geographic divide across which both climate and culture show some separation. In this sheltered area industry and culture have developed somewhat independently from the surrounding area, but railroads and the interstate system keep the city connected to the rest of the region.

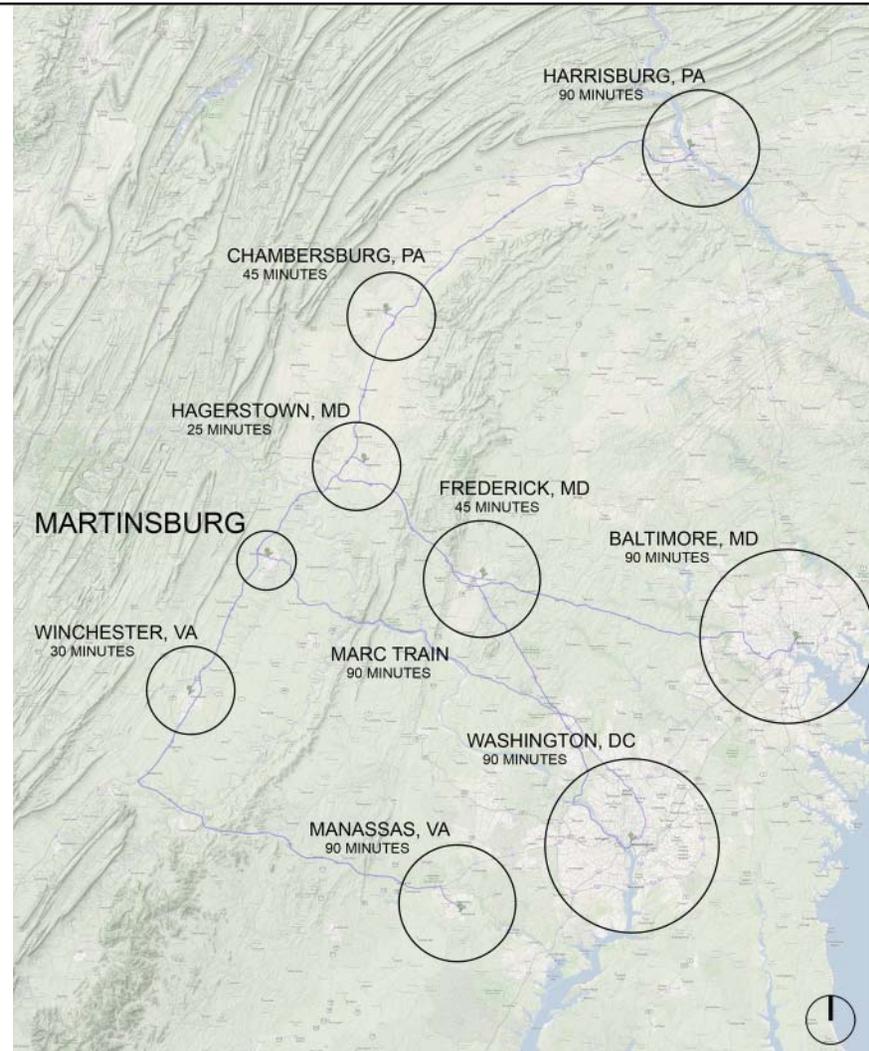


**Figure 13: Geography of the Appalachian Mountains.** This image shows the mountains forming the Shenandoah Valley. [Image by author.]

## Transit Connections

Despite the relative seclusion of the Shenandoah Valley the city of Martinsburg is well connected. Hagerstown, Maryland, and Winchester, Virginia, are both within 30 minutes. Frederick, Maryland, is 45 minutes away. And with a 90 minute drive there are several larger urban destinations available including Harrisburg, Pennsylvania; Baltimore, Maryland; Manassas, Virginia; and the District of Columbia. Martinsburg's location adjacent to I-81 and 15 minutes from I-70 has given Martinsburg the same north-south and east-west connection by interstate that it originally had by rail.

There are also other transit options for those so inclined. Rail commute is available to DC via MARC line in about 90 minutes, and other rail lines connect to parts of Virginia in under 30 minutes. For those who prefer a more scenic route, the Appalachian Trail is 20 minutes away.

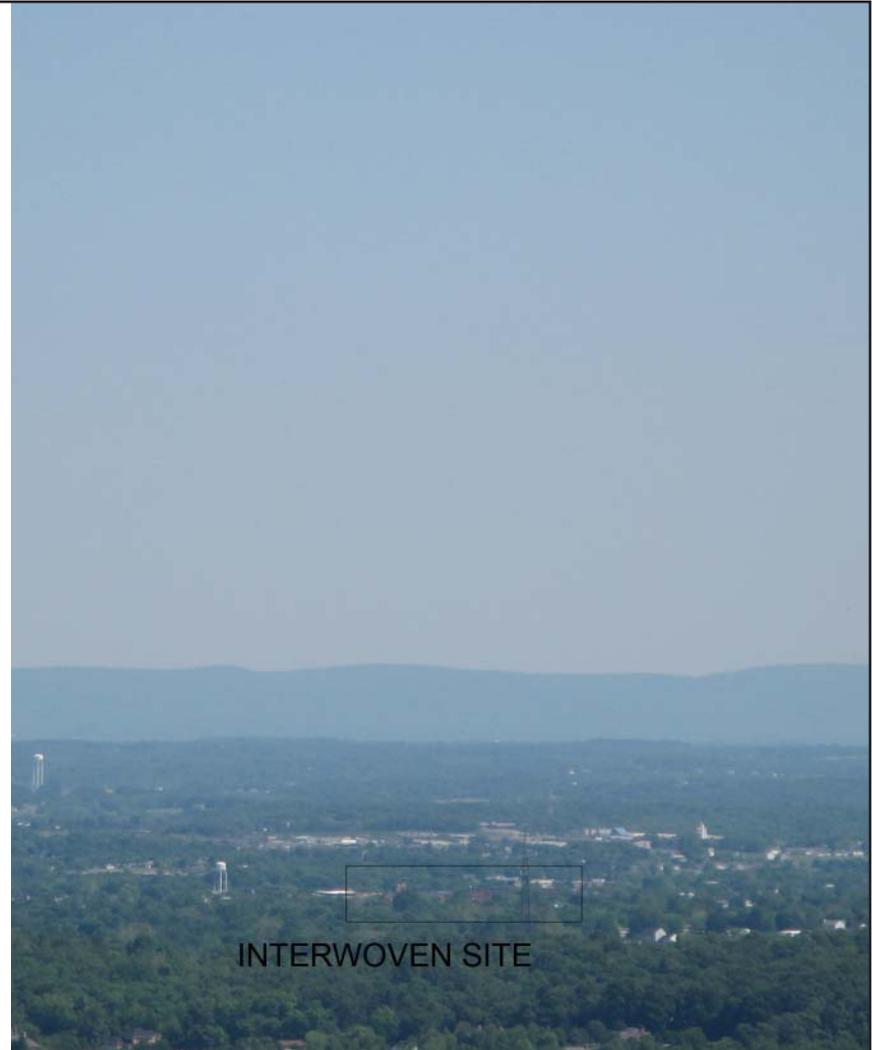


**Figure 14: Transit Connections.** This diagram illustrates the relative transit times between Martinsburg and other cities. [Image by author.]

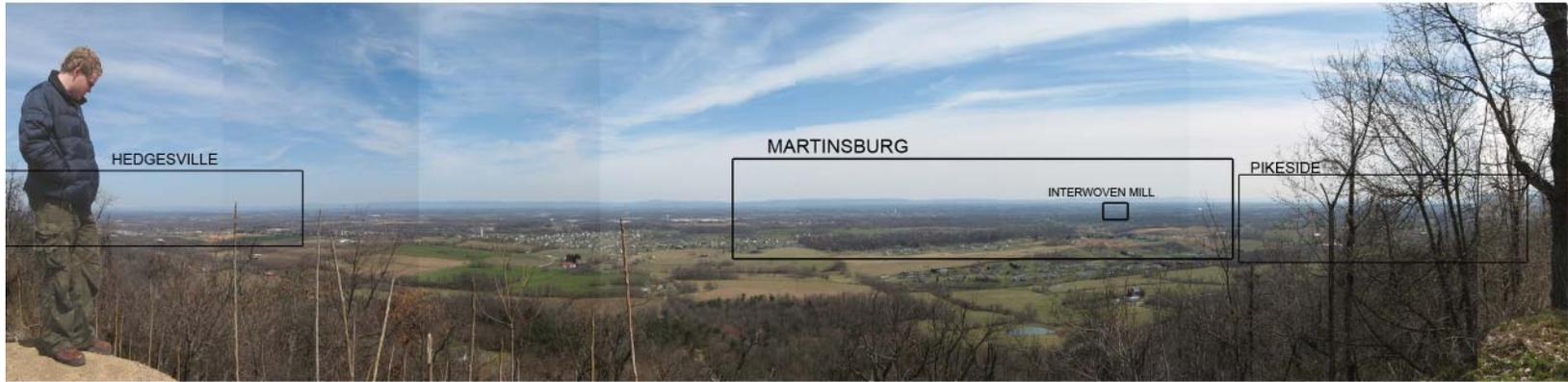
## Shenandoah Valley Panoramas

From the switchback near the top of North Mountain the view of the Shenandoah Valley is spectacular. The bottom of the valley is a patchwork of fields, orchards, and communities; the sky is a mix of bright blue and clouds. The horizon between is a line of blue mountains, the other side of the valley nearly twenty miles in the distance.

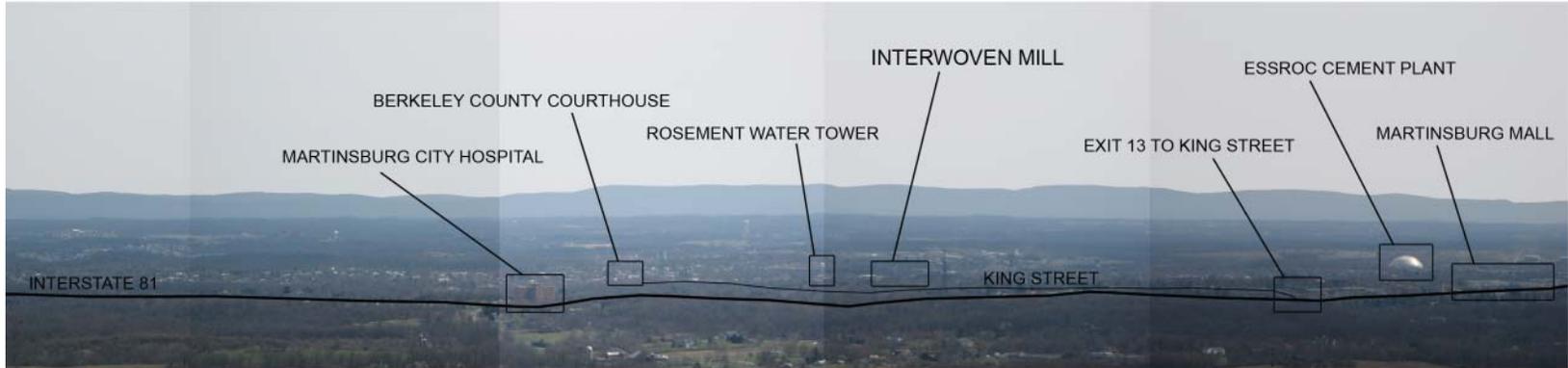
The overlook at Parks Gap provides a sweeping panorama that includes Martinsburg and a few other small towns. Landmarks become sensible with a little work: the interstate, the geodesic dome of a concrete plant, water and radio towers, and a few large buildings. With good binoculars it is also possible to make out the complex of buildings that make up the Interwoven site, and it is impressive to see that buildings which are very imposing to a person in town are rather insignificant in the context of the valley.



**Figure 15: View from Parks Gap.** The buildings of the Interwoven complex are barely visible from North Mountain. [Photograph by author.]



VIEW FROM PARKS GAP - NORTH MOUNTAIN



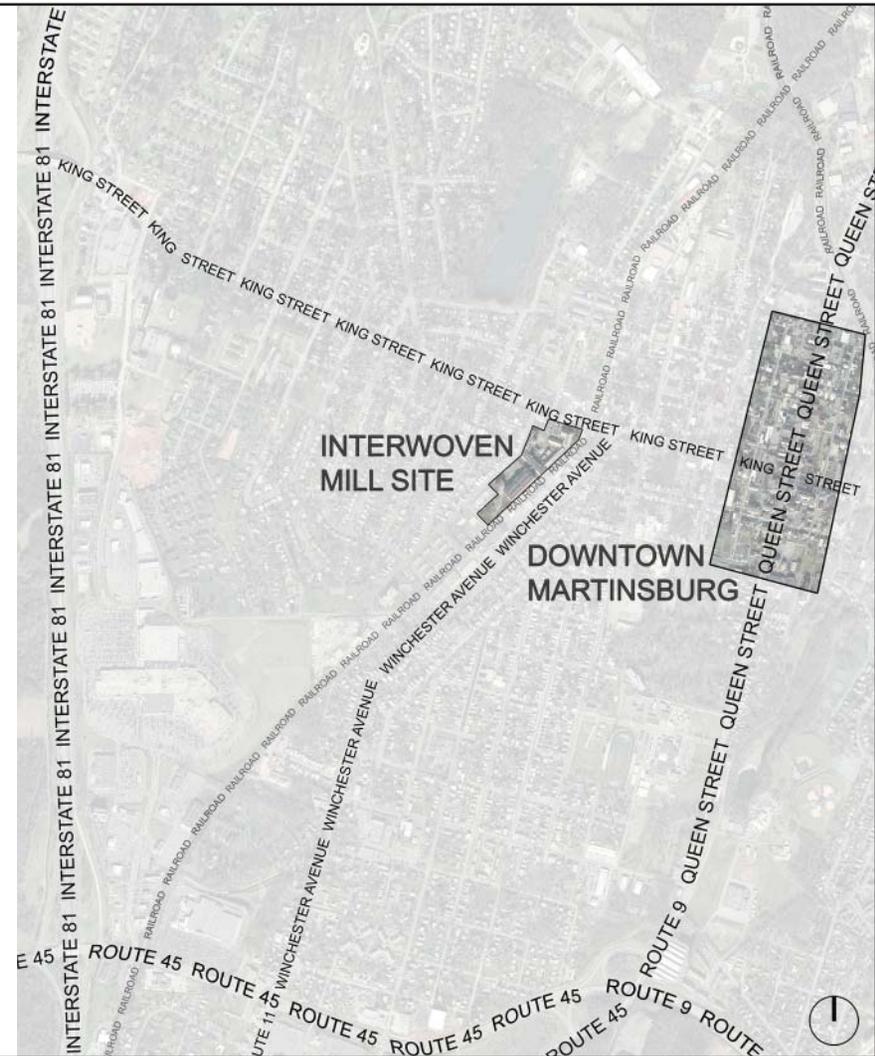
ENLARGED PARTIAL VIEW OF MARTINSBURG

**Figure 16: Shenandoah Valley Panoramas.** These Images show the City of Martinsburg and the Interwoven site within the larger context of the Appalachian Mountains and the Shenandoah Valley. [Photographs by author.]

## Interwoven as a Part of Martinsburg

The Interwoven complex is located adjacent to King Street, which is the main connector between downtown Martinsburg and Interstate 81. Queen Street is Martinsburg's Main Street, and the civic center of Martinsburg is located at the intersection of King and Queen, less than half a mile from Interwoven. Winchester Avenue is another of the most important streets in town because of the path of Route 11.

Route 11 is the local route that parallels the interstate, and where it winds through each town plays a large role in defining commercial areas. When Route 11 enters Martinsburg from the north it follows Queen, but then it shifts to King and follows Winchester out. This results in a bar of commercial that moves to run a block away from the Interwoven Site and an area that has surprisingly high traffic given its distance from the official downtown.

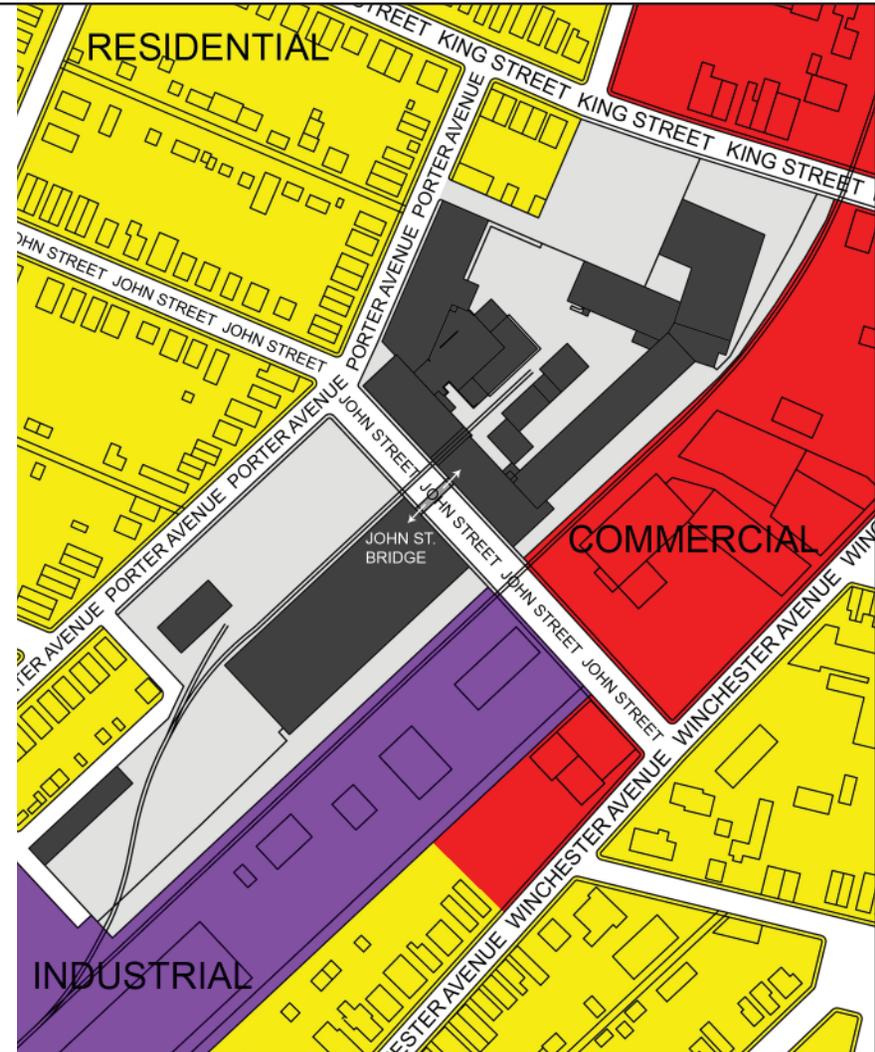


**Figure 17: Interwoven in Martinsburg.** This diagram shows the most important features of the city as related to the site. [Image by author.]

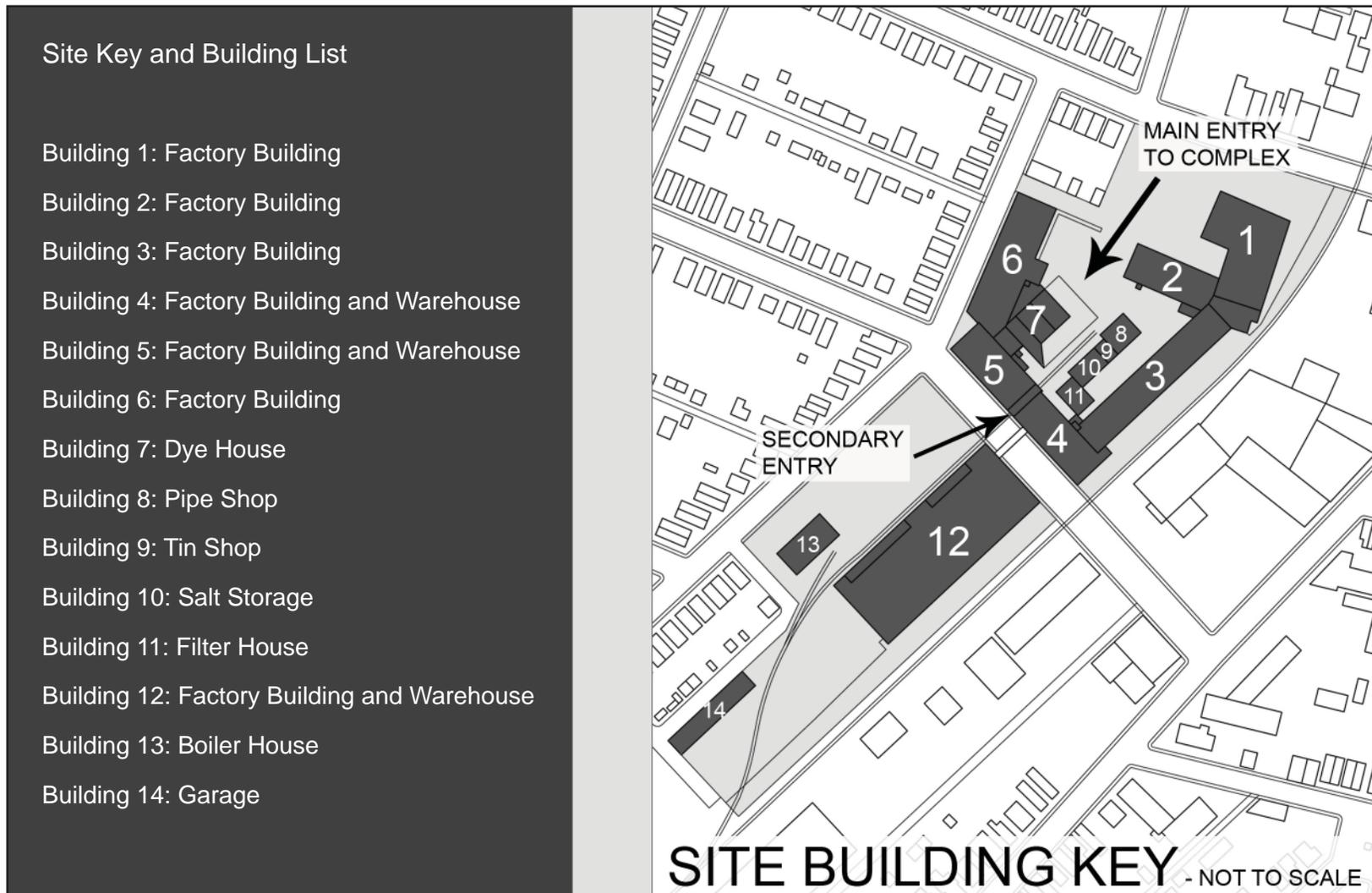
## Neighborhood Context

Because of its size and location, the Interwoven site has the benefit of many urban connections. As mentioned previously, the site fronts King Street and is near Route 11's path down Winchester Avenue. John Street and Porter Avenue are important for moving traffic around the residential areas to the west, and because of the traffic there is a bridge over John Street. The site also has its own rail spur into the complex in addition to being adjacent to the main tracks.

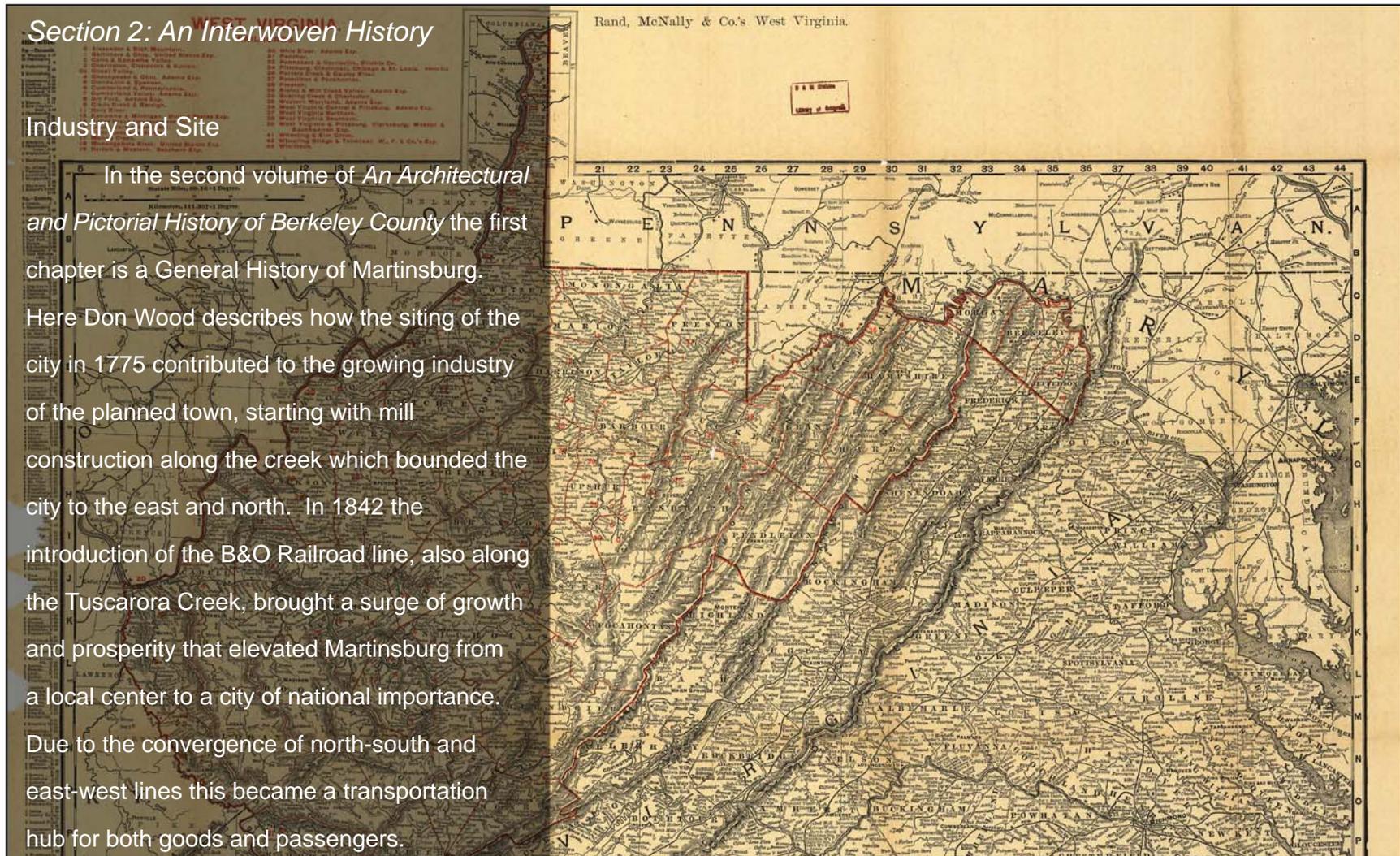
The surrounding fabrics of the city also create an interesting dynamic. All of the nearby blocks to the west are residential, and a block away to the east is more of the same. There is some industrial usage remaining around the south portion of the site, but much of what was once industrial is now commercial. It follows that the future of the site lies in weaving together some of these uses and respecting the others.



**Figure 18: The Interwoven Neighborhood.** This diagram shows the roads and uses in the vicinity of the Interwoven site. [Image by author.]



**Figure 19: Buildings on the Interwoven Site.** This diagram is from later in the design process but shows the buildings and their numbering for future reference; individual buildings are discussed later in Chapter 5. [Image by author.]



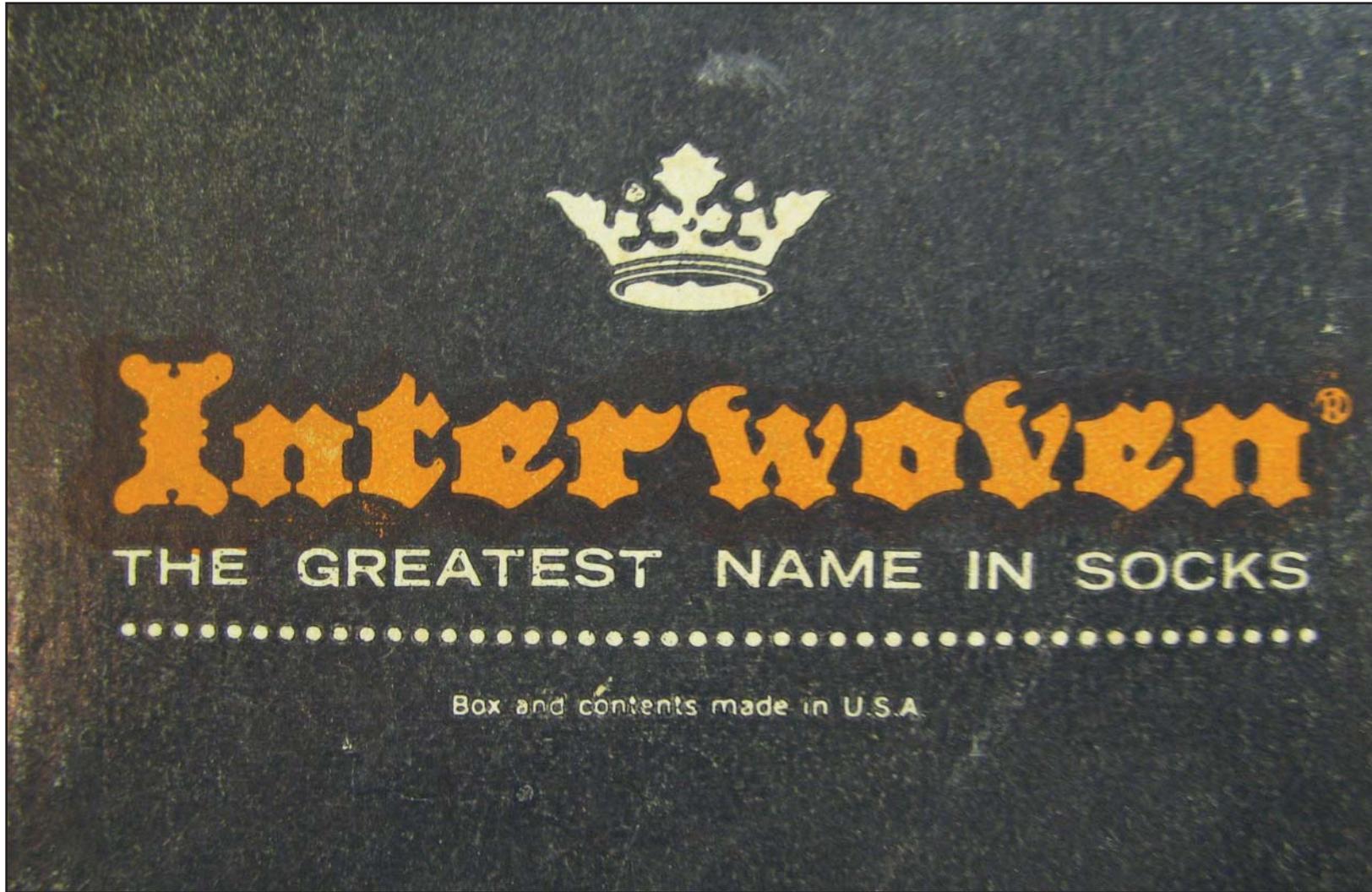
**Figure 20: 1898 Railroad Map and Shippers' Guide of West Virginia.** The eastern panhandle connects the main body of the state to the populations beyond the Appalachian Mountains. [Rand McNally and Company.]





The 1873 addition of a Martinsburg and Potomac Railroad rail line to the west of the city created a second area of commerce that would soon become a large-scale industrial zone. 1890 brought electricity to Martinsburg and with it the industrial revolution. Martinsburg became attractive to industries from car production and brass founding to textile and garment manufacturing. The Interwoven site is a memory of the days when Martinsburg was a booming textile town—a relic of history embedded in the modern fabric of the town.

Figure 22: Berkeley County Detail of an 1898 Railroad Map and Shippers' Guide of West Virginia. This detail shows the relationship between geography and rail lines. [Rand McNally and Company.]



**Figure 23:** Logo from an **Original Interwoven Product Box**. This box was found in an antique store which currently occupies part of the Interwoven site; there are a large number of relics of Interwoven both in the site and in Martinsburg. [Photograph by author.]

## The Life and Death of Interwoven

One of the textile companies that became important in Martinsburg was the Interwoven Stocking Company, though it did not begin or end under that name. In 1891 a small, failing textile factory called the Middlesex Knitting Mills was bought by E. E. Kilbourne, the inventor of an automatic knitting machine that could produce seamless hosiery. He used his technology and business savvy to turn the mill around, and the new Kilbourne Knitting Machine Company moved to the industrial area on the western periphery of Martinsburg where a new complex of buildings started to develop.

Growth was slow at first, but increased dramatically over the following decades. Though the 1885 and 1891 Sanborn insurance maps do not even show the city as reaching beyond the railroad tracks, by 1897 there are a half dozen buildings on the northern portion of the modern site,



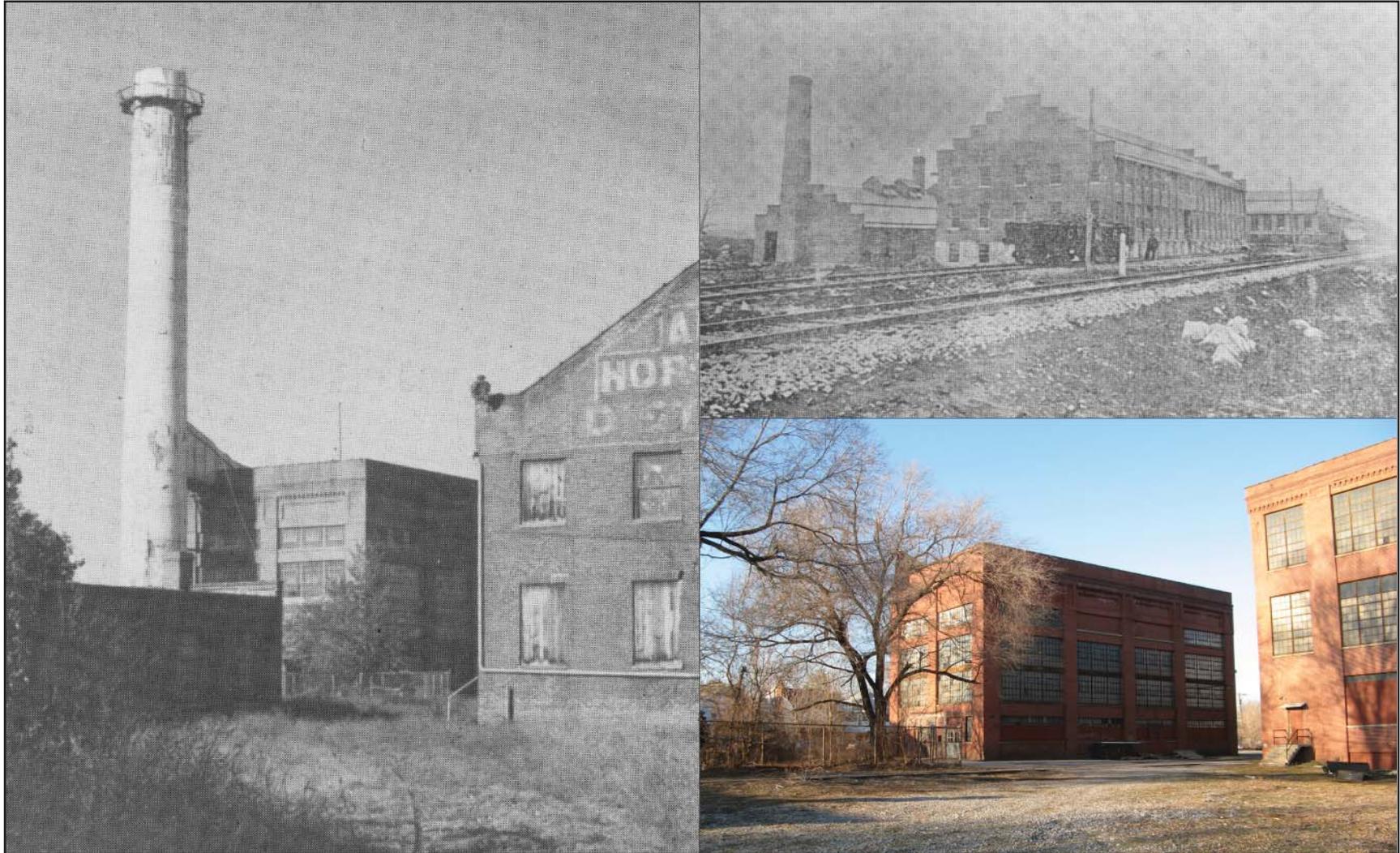
**Figure 24: Looking North Along the CVRR Tracks.** 1901 and current views. [Martinsburg & Berkeley Co. in the 20th Century and author.]

a few of which are still standing today. 1913 shows very few changes to this area save that another lasting building had been added and that the Interwoven name had become prominent; John Wyckoff Mettler bought Kilbourne's company and united it with others under the Interwoven name.

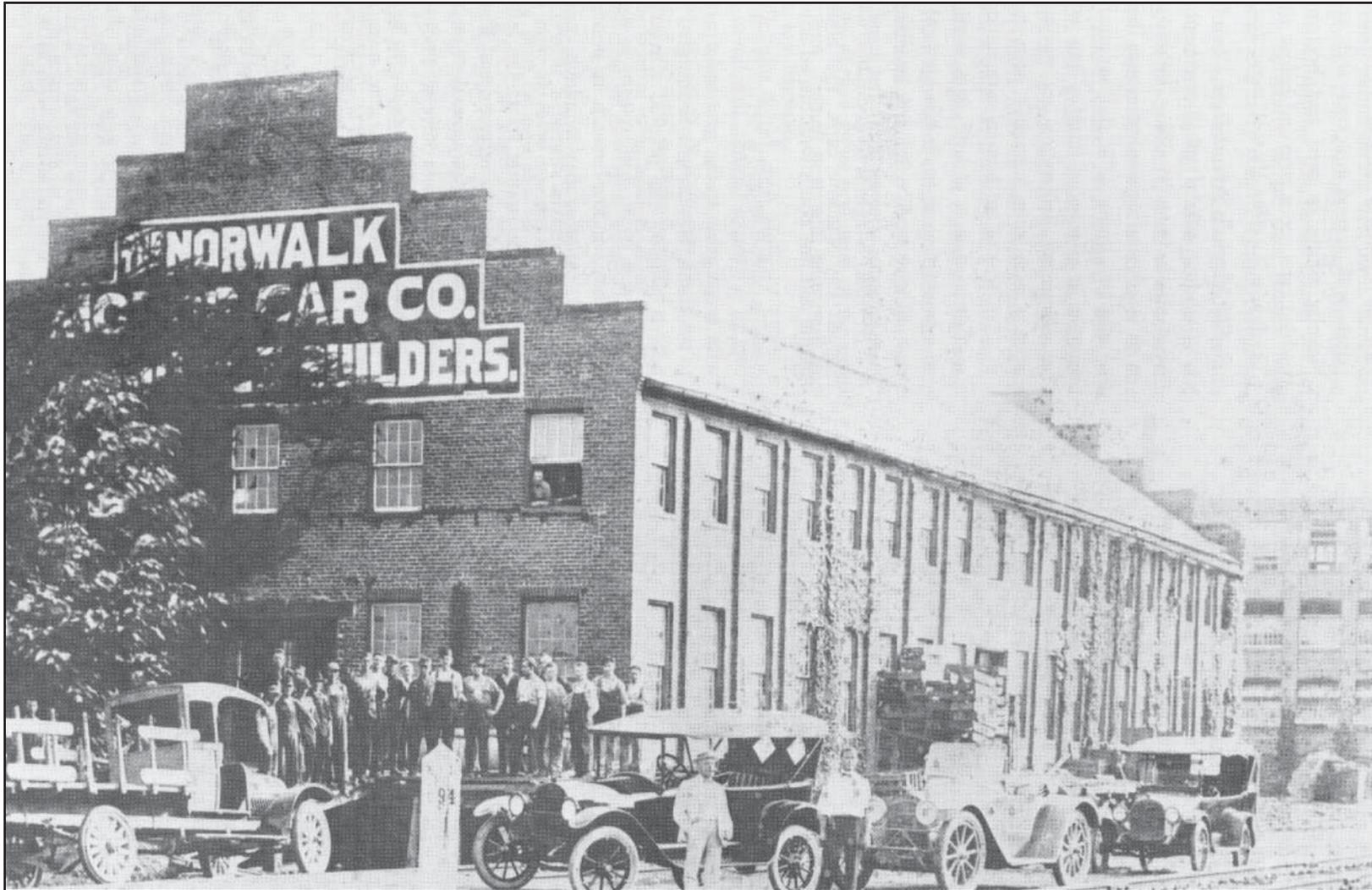
The southern portion of the modern site developed differently. The 1897 diagram shows the buildings of the Brooklyn Brass Manufacturing Company, which by 1907 had been bought by the American Horticultural Distributing Company. By 1913 they had again changed hands to the Norwalk Motor Car Company. The Brooklyn Brass and Norwalk buildings would be demolished in the 1920's to make way for new construction as the Interwoven complex grew. The American Horticultural Building would last through all of the new construction on the site as a warehouse until being demolished to make way for truck access to the basement floor of the new building.



**Figure 25: Interwoven Neighborhood in 1897.** This is the first in a series of images that document growth in the area. [Image by author.]



**Figure 26: Three Views from the South Corner of the Site.** This collection shows an area over time, including the Norwalk Motor Car and American Horticultural buildings. [An Architectural and Pictorial History of Berkeley County with current photograph by author.]



**Figure 27: View of the Norwalk Motor Car Company from the 1910's.** The demolished Norwalk Motor Car factory occupied the current site of Building 12, and Building 4 is visible in the background. [An Architectural and Pictorial History of Berkeley County.]

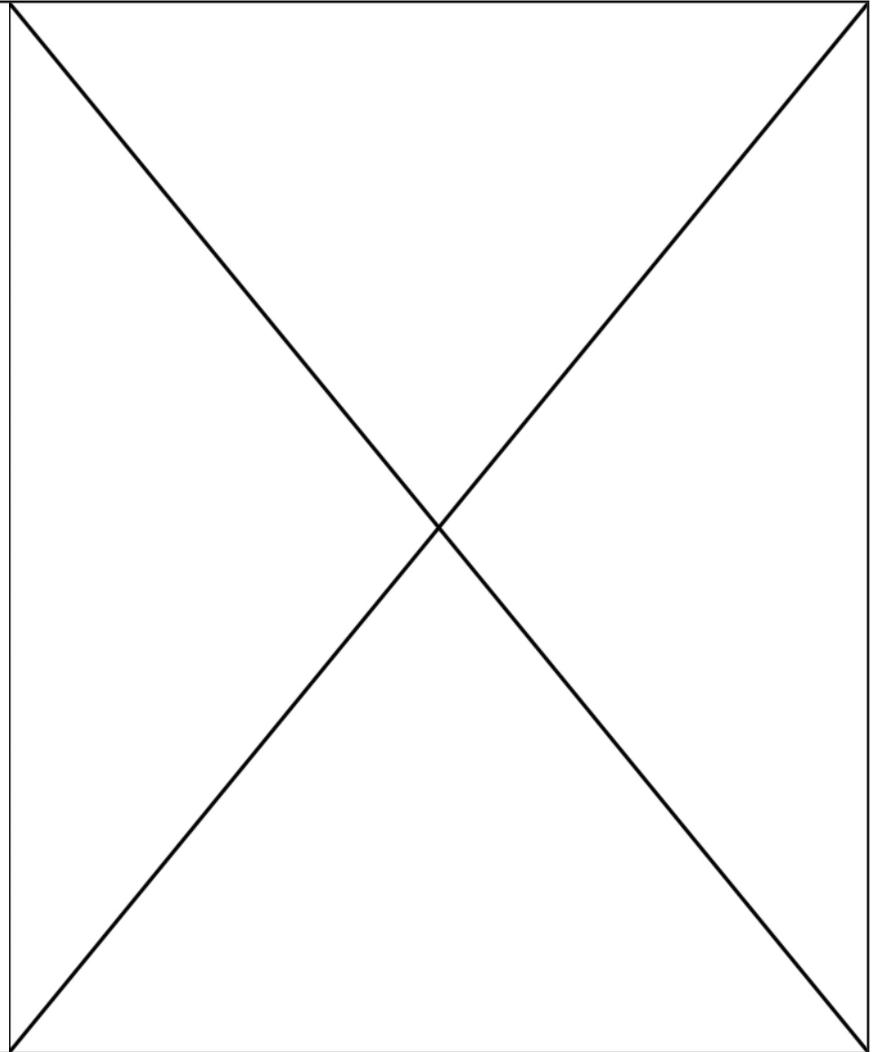
The 1922 diagram reflects that Martinsburg became the main production and distribution center for the Interwoven empire. The northern section of the site has been built out to most of its historic extent, and all but one of the buildings there have been constructed. Materials used in construction are changing though; while the older buildings are typically constructed of timber and brick, some of the newer buildings introduce concrete and even steel. This may reflect that while Continental Brick is less than three miles away from the site, a concrete plant had been introduced within half mile.

The character of the context has also changed since construction began at this site adjacent to the Cumberland Valley Rail Road. The residential fabric of the city is wrapping around the Interwoven site, partially due to the introduction of mill worker housing, and a strip of residential is still separating the mill from having a presence on King Street.



**Figure 28: Interwoven Neighborhood in 1922.** This is the second in a series of images that document growth in the area. [Image by author.]

1922 also marks the year that Interwoven started collaborating with Norman Rockwell for advertisements. “A Long Way to the First Hole” is a good example of the freedom Rockwell had with this particular commission in using his sense of humor—and love of puns—to design ads for the product. Durability was a major selling point of Interwoven socks and was emphasized in each of the ads. It was one of the key features that helped the company grow to become the largest men’s hosiery company in the world, and Rockwell’s work was an important part of Interwoven’s advertising campaign. Between 1922 and 1948 Rockwell designed between seven and nine ads for Interwoven, some of which could be considered among the cleverest of his advertising works. Because of the nature of advertising work most of the originals appear to be lost, but reproduction prints of many are still readily available. (Moffatt)



**Figure 29: Norman Rockwell Advertisement for Interwoven.** One of the early Interwoven ads produced in 1922. [Norman Rockwell.]

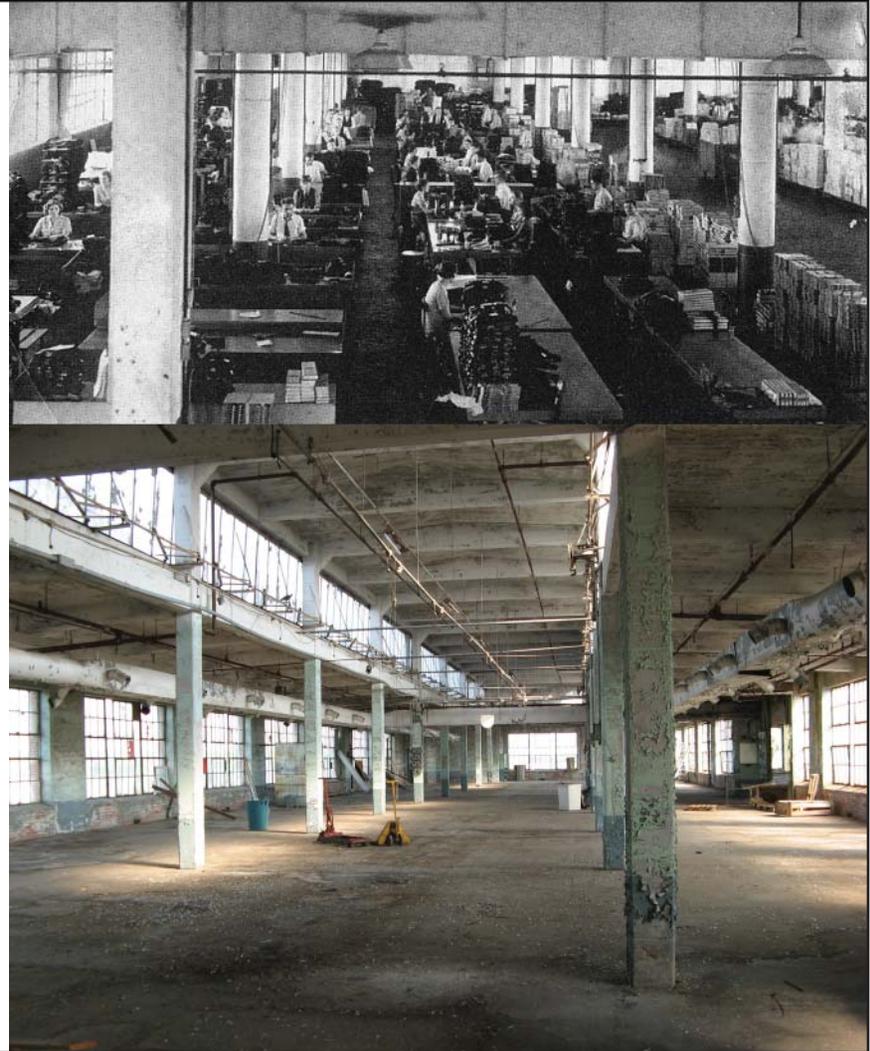
The 1931 diagram shows that Interwoven had expanded significantly again. Almost all of the modern site had been acquired, and several buildings had been added. On the northern portion of the site Interwoven demolished housing to make way for a mill that fronts Kings Street with a generous lawn, and this building is shown in images of the Interwoven strike. The two houses remaining within the current site's bounds are later demolished to create more space for parking. The southern portion of the site has been greatly altered, the two largest changes being a power plant to supply the entire complex and the addition of a warehouse and production building large enough to dwarf all of its predecessors.

The context also changed significantly in the nine years between Sanborn maps, and both city and company reflect the growth of the area. The city had



**Figure 30: Interwoven Neighborhood in 1931.** This is the third in a series of images that document growth in the area. [Image by author.]

expanded to a population of 18,000, and for many years the Interwoven Stocking Company was the largest employer in the area with around 1,800 hands at this production site alone. What is now designated as the Boomtown historic district had filled out with additional homes, and the housing to the west of the Interwoven had also filled in and wrapped completely around the site, partially due to the need for worker housing. Though the Great Depression did create some setbacks for the town, this trend of the city's growth continued in the post WWII era of baby boomers and single-family-housing suburbs.



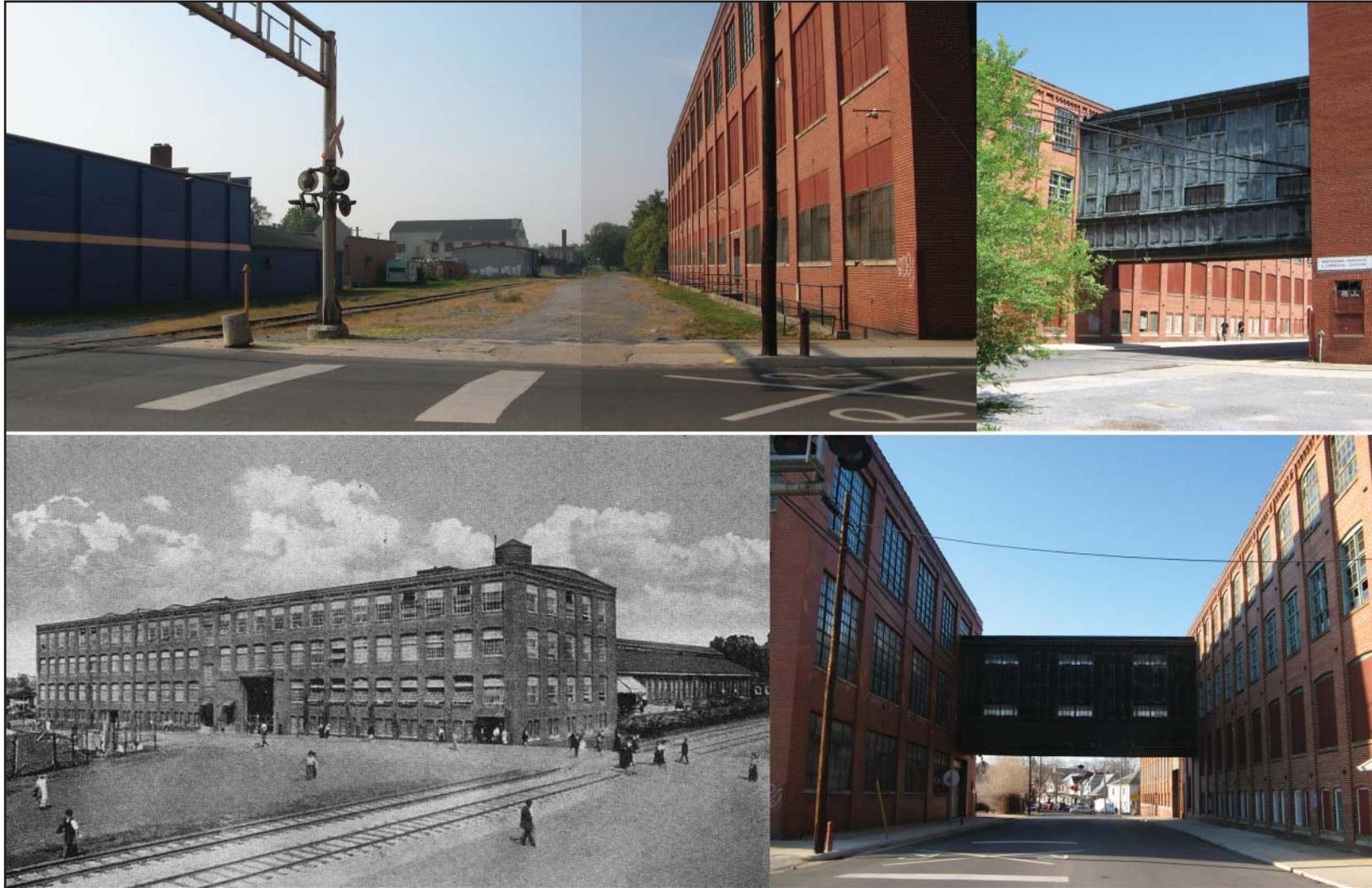
**Figure 31: Building 6 3rd Floor.** 1936 workroom and modern view of the same. [Martinsburg & Berkeley Co. in the 20th Century and author.]



**Figure 32: 1930's Interwoven Stocking Company Aerial.** This aerial shows the site at the height of build-up. Today four of the buildings, the water towers, and the smoke stack are no longer part of the site. [Image courtesy of Grove & Dall'olio Architects.]



**Figure 33: 1934 Interwoven Mill Strike.** This photograph shows the character of downtown Martinsburg during an era when pedestrians, bicyclists, and automobiles were more integrated and this area more active. [An Architectural and Pictorial History of Berkeley County.]



**Figure 34: Before and After Building 12 Construction.** These images compare a 1925 photograph with current images of how the Interwoven complex bridges John Street. [Martinsburg & Berkeley County in the 20th Century with current photographs by author.]



**Figure 35: Current and Historic Views.** These images show a view from the south of Building 4 and from the west of the southern parking area. Historic photos circa 1950's. [An Architectural and Pictorial History of Berkeley County with current photographs by author.]

The Interwoven site did not undergo many significant physical changes for decades; the big changes were managerial. Even after the advent of truck transportation damaged Martinsburg's role as a textile town, Interwoven remained an integral part of life in Martinsburg. When Mettler Jr. sold the site to the Martinsburg Mills in 1962 the company was still the largest employer in the county with over 900 hands. That number declined steadily—despite assurances that the factory would remain open—until manufacturing discontinued in 1970. The remaining hundred employees operating the complex as a warehouse facility were laid off in 1971, and the old buildings fell into disrepair.

The Interwoven name remains barely alive. Mettler Jr. sold it to a separate company in 1962, and socks made in South Carolina are still sold under the Interwoven name.



**Figure 36: Building 7 Damage.** This photograph shows the building with one of the most severe levels of damage including collapsed building sections; most of the wooden clerestory windows in this building are also glassless and rotting away. [Photograph by author.]

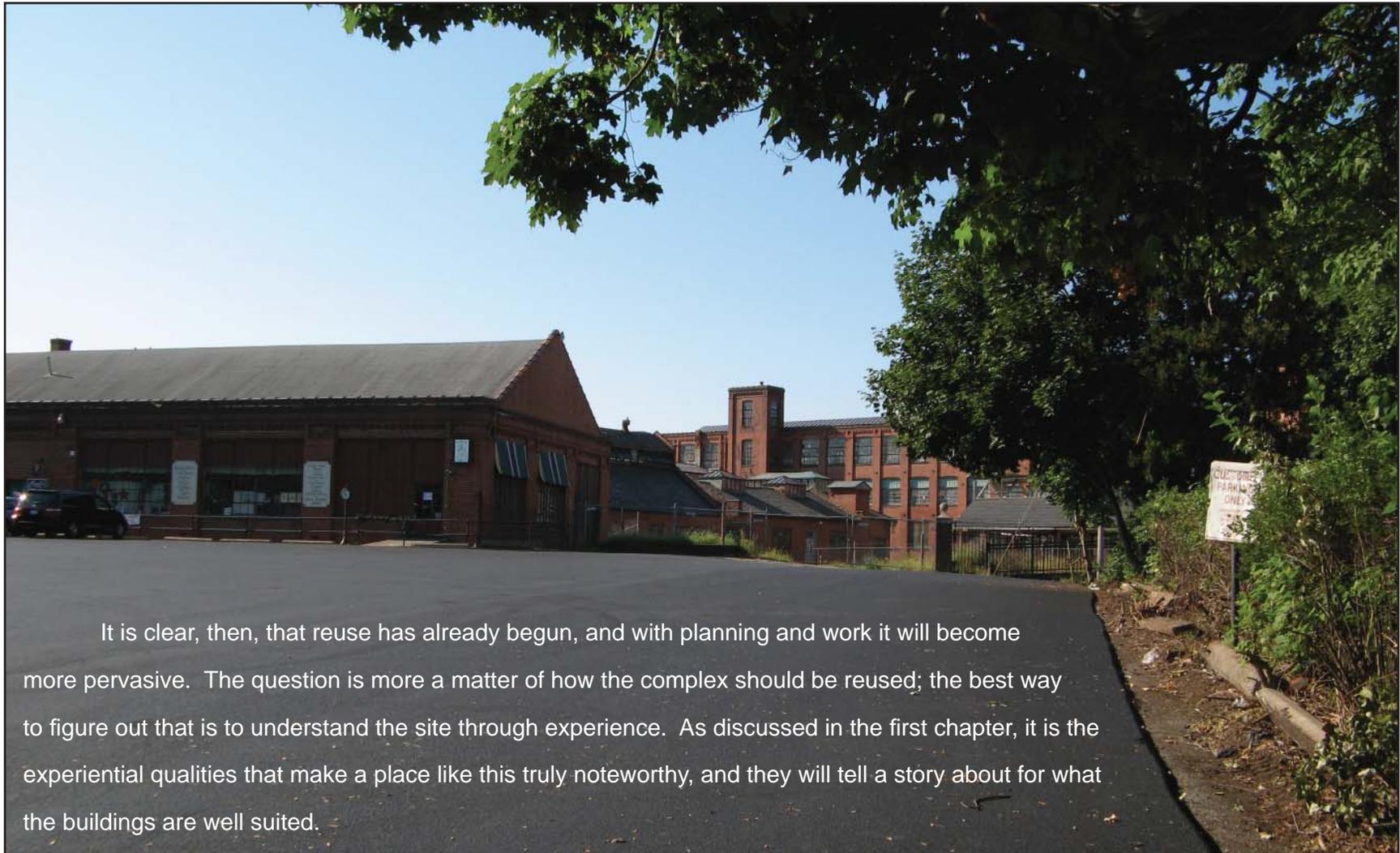
### *Section 3: Interwoven Today*

The 2006 diagram reflects the current buildings still standing on the site; what it does not show is their condition. Several of the small buildings in the courtyard have been demolished, and part of the dye house (Building 7) has been cleared away following collapse. Many of the other buildings need some kind of significant repair from leaks, broken windows, or other vandalism.

For the most part the buildings are in remarkably good condition, and that is a testament to the quality and durability of their original construction. Several parts of the buildings have been in use intermittently, and a few continue to be used today. There are stores in buildings along King Street, and the lower floors of the largest building on the site are currently used as a warehouse. Until a few years ago parts of the buildings along John and Porter had also been used for retail.



**Figure 37: Interwoven Neighborhood in 2006.** This is the fourth in a series of images that document growth in the area. [Image by author.]



It is clear, then, that reuse has already begun, and with planning and work it will become more pervasive. The question is more a matter of how the complex should be reused; the best way to figure out that is to understand the site through experience. As discussed in the first chapter, it is the experiential qualities that make a place like this truly noteworthy, and they will tell a story about for what the buildings are well suited.

**Figure 38: View of North Parking and Courtyard from the Sidewalk.** This photograph shows both sides of the complex; the building in the foreground is in use while the buildings in the background are fenced off and awaiting repair. [Photograph by author.]

## Compression and Expansion

The most dramatic spatial contrast within the buildings is between small and large spaces. Most of the entrances deposit visitors into tight spaces with low ceilings and little natural light. The lower photograph shows an example of this experience; a stairwell of Building 4 spirals upward in its small tower with stuffy air and moderate light. Leaving this state of compression at the top floor one walks out into an expansive skylit space. Most floors already have ceiling heights around twelve feet, and top floors are often higher even without their skylights. The upper photograph shows the third floor of Building 12 where ten foot skylights are stacked onto an already eighteen foot floor. These buildings demonstrate the ideas of Frank Lloyd Wright at a dramatic scale; appreciation of an expansive space is greatest when contrasted with compressive spaces.



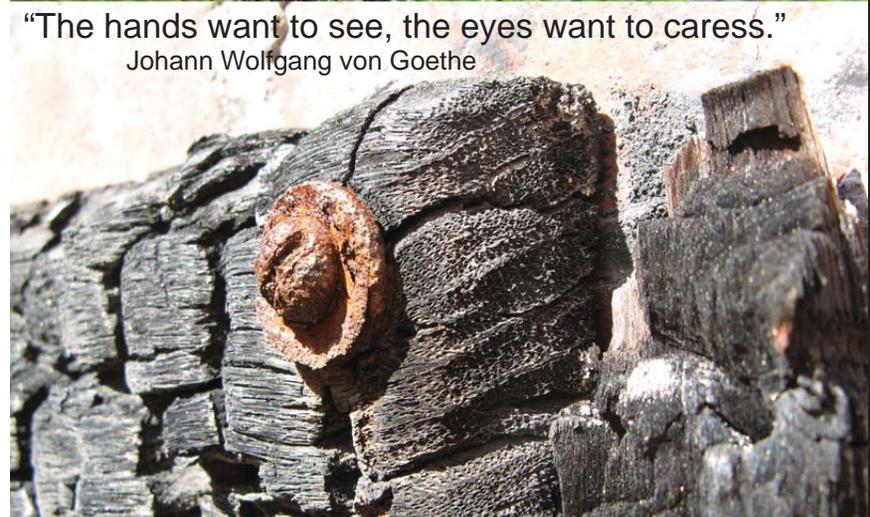
**Figure 39: Compression and Expansion.** These images show the contrasting spatial conditions in the buildings. [Photographs by author.]



**Figure 40: The Character of Light.** Both the skylight in Building 11 and the third floor in Building 5 illustrate the dramatic qualities of light in the buildings. Once again it is the variety of conditions that makes each building interesting. [Photographs by author.]

## Texture

Despite the deep impressions of echoing footfalls and the smell of musty wood and brick, touch is probably the most activated sense on this site. Materials here are not smooth or cool, and plants are not manicured. There are serendipitous instances of tactile activation everywhere. Doorknobs must be turned or fire doors thrust aside, railings touched, bricks grabbed for handholds. The different feelings of walking on solid wood floors, concrete, gravel, or grass all emphasize one another. They are articulated and wonderful, never hidden or muffled beneath something else. Materials are also not always in the forms or locations intended, and so there are instances of charred wood, shattered glass, and plants that are slowly retaking the site. It is fortunate that humans retain such a remembered repertoire of textures and that an image can transmit some idea of tactile sensation.



**Figure 41: Moss and Charred Wood at Interwoven Site.** These are a tiny sampling of the textural details of the site. [Photographs by author.]



**Figure 42: Building 4 Floor Construction.** Due to the nature of industrial work, few aesthetic finishes were applied to these buildings; damage, alterations, and design make it possible to observe a great deal about their method of construction. [Photographs by author.]

## Cleaning Up

Unfortunately the site has more than interesting experiences to offer. Because of the time period of construction and occupancy there are unsafe materials including asbestos insulation and profuse amounts of peeling lead paint. The biggest hurdle in reuse may be making the buildings inhabitable without losing the favorable qualities.



**Figure 43: Peeling Lead Paint on a Column.** Lead paint is everywhere in these old buildings, and the crunch of paint flakes underfoot is inescapable. Paint clean up may pose a greater challenge than the asbestos simply because it is everywhere. [Photograph by author.]

## Chapter 3: Place as a Generator of Program

### *Section 1: Climate and Building Design*

In this age of energy concerns and the sudden (re)discovery that buildings can and should be built to respond to climate, it is fortuitous that these buildings already do. When construction began on the first of the Interwoven buildings electricity was a novelty in Martinsburg. Although the factory equipment was run with electricity the buildings were designed with the conventional wisdom of every other building in the region; climate control relied on intelligent design.

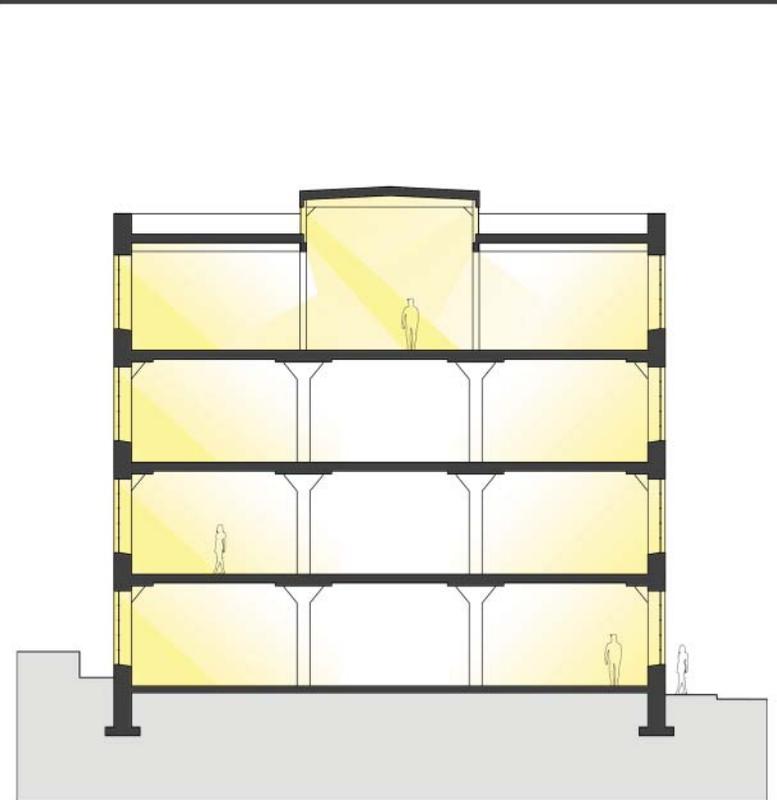


**Figure 44: Operable Clerestory in Building 8.** Most of the Interwoven buildings were designed for natural ventilation. [Photograph by author.]

## Daylighting

As many of the photographs in this document show, the light in these buildings ranges from flooding to fleeting. Because floor heights, large windows, and proportionally thin buildings allow light to penetrate deeply into each floorplate, there are fewer interior light fixtures than one would expect to see in a modern building. Much of the work requiring higher levels of light appears to have taken place on the top floors of buildings, and each of these floors has skylights or clerestory windows that create a relatively even level of light for the workers. Even on lower floors the light is rather good, and this standard is even maintained for most of the basement floors where chamfered light wells are carved away from lower windows to allow light and service access. Stairwells and other tight places typically have enough natural light to make them passable without electricity, and in fact places without any natural light are rare.

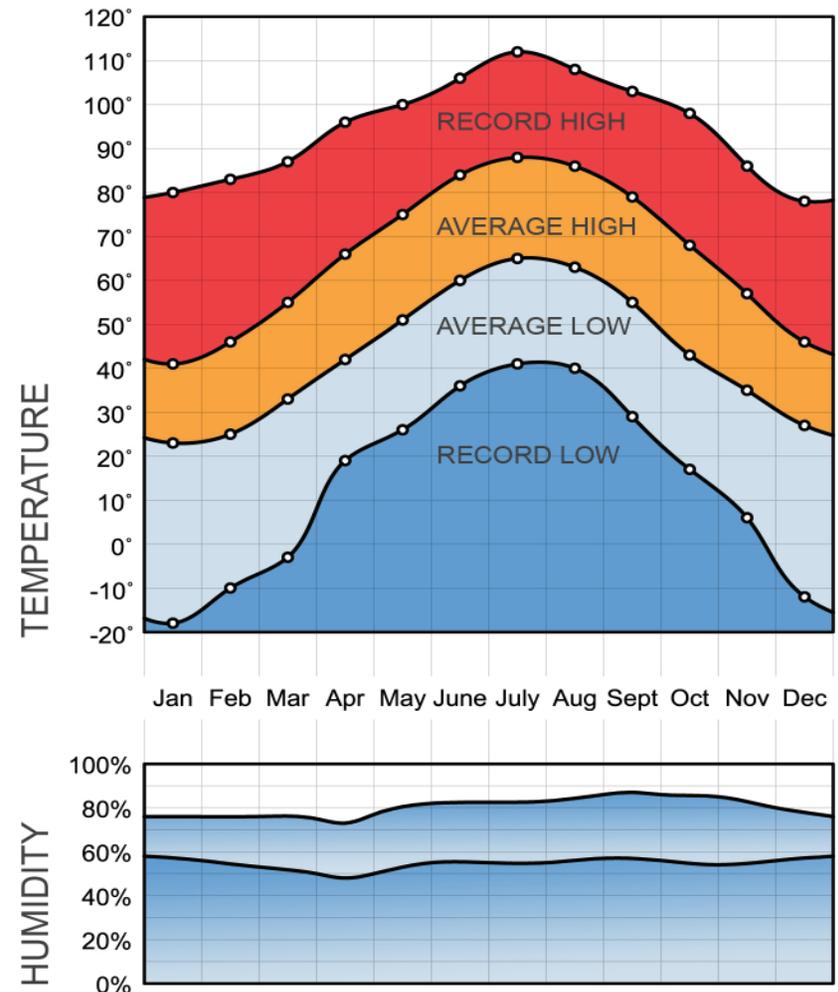
## DAYLIGHTING AS A STANDARD DESIGN PRACTICE IN EXISTING BUILDINGS



**Figure 45: Daylighting in Building 6.** This diagram shows how light filters into a typical building on this site. [Image by author.]

## Seasons of the Valley

On average, Martinsburg has a relatively mild climate with components that could be easily accommodated on their own; their combination is what makes for uncomfortable weather. Winters, for example, are not particularly cold compared to many other cities in the United States or even in the mountains, but cold is not the only issue. Wind speed is greater in winter than summer, and peaks in March when precipitation is on the rise and the temperature is cold. Spring is warmer, but the skies are usually somewhat overcast as humidity rises. Summer is generally considered the most miserable time of year; the cloud cover, dense valley vegetation, and drop off in wind speed combine to make an environment that is almost unbearably hot and humid. Fortunately this is followed by autumn, which is often considered to be the most enjoyable season thanks to clear skies, crisp air, and fall foliage.

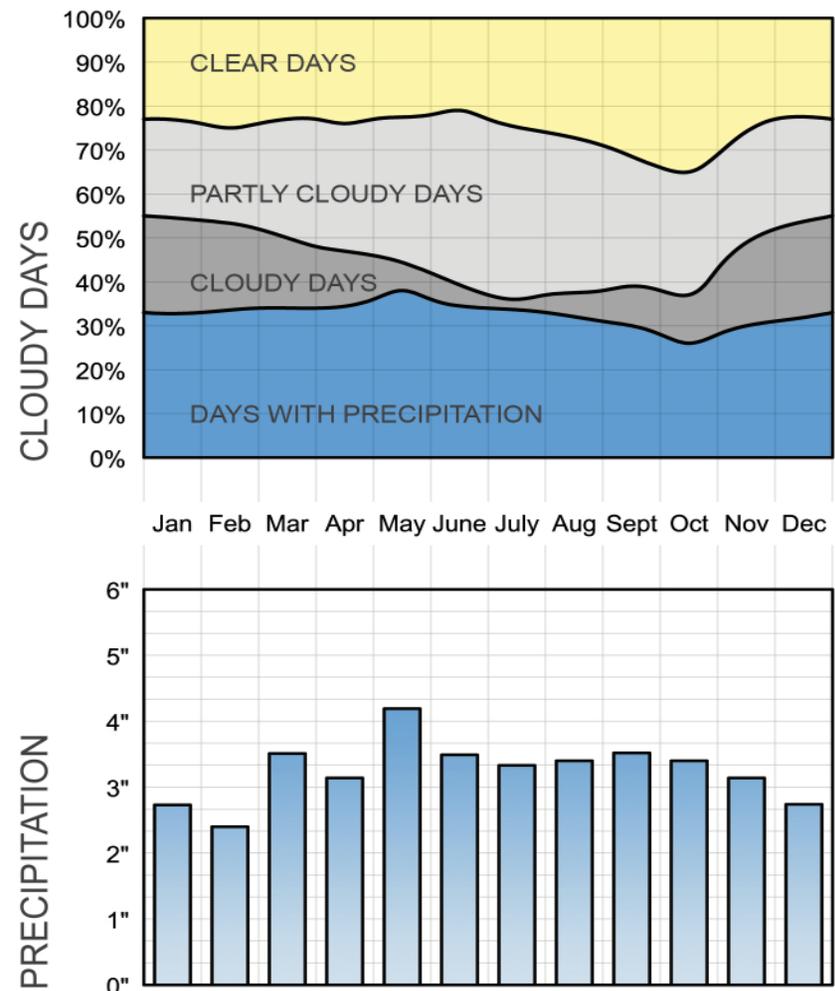


**Figure 46: Temperature and Humidity.** Climate diagrams for Martinsburg, West Virginia. [Image by author.]

## Building Climatic Responses

So how do the buildings on the Interwoven site respond to the climate of the valley? Cloudy days create even, diffuse light that is good for illumination, and the profuse windows of the buildings take advantage of this. Those same windows are also operable to allow natural ventilation in warm weather, and it appears that the buildings were used in a manner that further takes advantage of wind. Buildings that are not well positioned for wind were used mostly as warehouses, and the courtyard buildings all have gabled roofs with operable windows that catch the rising hot air and pull it away. The thermal mass of the brick and concrete walls also keeps the interior cooler by absorbing heat during the day and radiating it away at night.

Winter is a different story and in many ways a greater challenge. Here wind is the enemy and it is quite apparent that the single pane windows in metal frames provide minimal



**Figure 47: Cloudy Days and Precipitation.** Climate diagrams for Martinsburg, West Virginia. [Image by author.]

protection. Large overhead ducts were undoubtedly used to move heated air into the spaces, but they will have to be replaced for use today. The lack of glare is still nice, but in winter the direct sunlight would bring heat as well. The thermal mass changes roles when the radiated heat becomes welcome, and the walls also become useful for absorbing and reradiating the heat of the interior. Working when it is too cold is much harder than when it is too hot, and heating these buildings is undoubtedly quite difficult.

The trick will be balancing the maintenance of useful qualities with modern needs. If the large spaces are carved up too much they will lose their ability to be ventilated naturally and impair natural light. The windows really should be replaced with something more efficient, but are there updated replicas that can capture the proportions of the originals? Can any of the originals be kept in place? Clearly this is a matter of complication.



**Figure 48: Wind Direction and Speed.** Climate diagrams for Martinsburg, West Virginia. [Image by author.]

## Section 2: Sectional Typologies

### TOP FLOORS

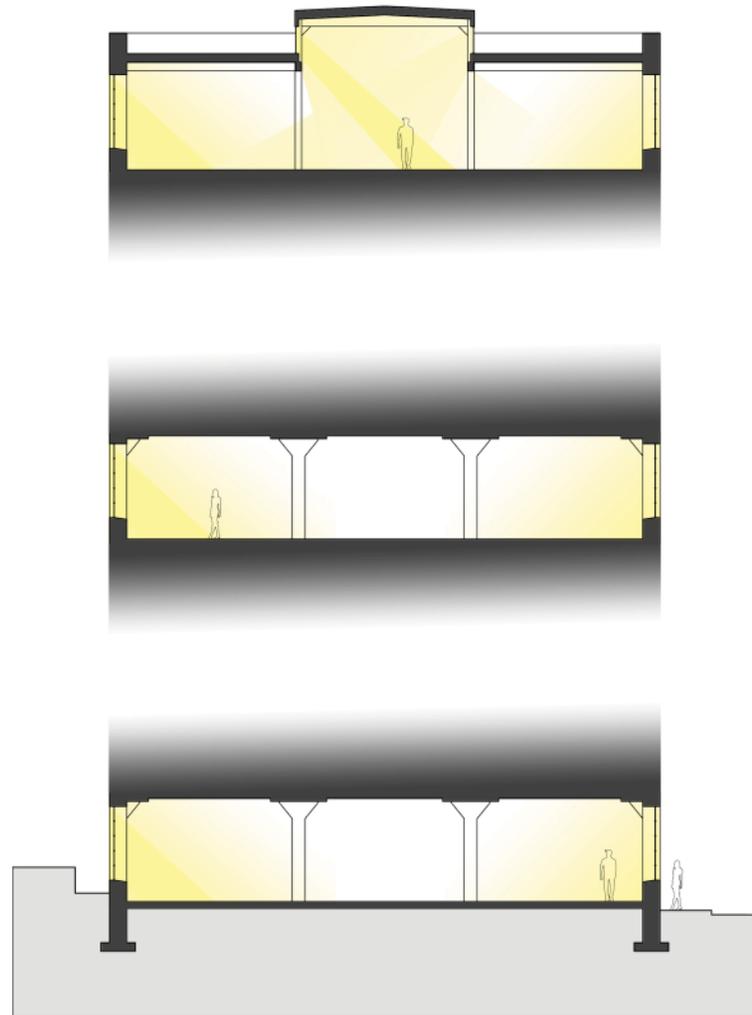
- Excellent daylight from skylighting and windows.
- Preservation of the open character is ideal.
- Light and scale make the best locations for groups of people making highly detailed crafts.
- Floors are not easily accessible.

### MIDDLE FLOORS

- Good daylight for moderate detail crafts.
- Interior structure could be used for divisions if necessary.
- Slightly more assessible than top floors.

### GROUND FLOORS

- Windows are often partially or fully below grade with light wells.
- Well suited for a variety of support program elements.
- Most are easily accessed at grade from some point.



**Figure 49: Sectional Typologies.** This diagram illustrates the characteristics of the three main sectional types which exist within the Interwoven buildings. [Image by author.]

*Section 3: Current Development Plans*

Today the Interwoven complex is owned by Ridgecrest Investments and is in planning for commercial redevelopment. Ridgecrest is a company based in Frederick, Maryland, that invests in small towns by revitalizing underutilized buildings near downtowns. Their projects are typically large, older buildings in towns of central Maryland and eastern West Virginia.

**Figure 50: Ridgecrest Investments Site Plan.** The site will be developed in phases, and of the Interwoven sections the portion fronting King Street will be first. Its visibility will involve the community in the project and generate interest. [Grove & Dall'olio Architects.]

In this venture the Interwoven site has been combined with that of the Perfection Garment Company to form three campuses, and parts of the East (Perfection) campus have already been updated and are occupied by tenants. The images at right are of the campus when it was under construction in October of 2007, and there is an interesting mix of methods. Many materials are simply cleaned and refinished or painted. Others would be expensive or problematic to restore and are instead covered to await the possibility of future restoration; the space between creates a hidden area for things like modern lighting and ventilation. The end result is a mix of old and new adjacencies, for example the clean, the white new interior paint on one side of the glass and the old painted ads on the other.

The methods and outcome of this portion of the site give many indications for how the Interwoven complex will be handled. The success of the East Campus will affect how the



**Figure 51: East Campus Ground Floor.** Construction is for updates, repair, and cosmetic work; the structure is fine. [Photographs by author.]

community and city feel about the remainder of the project. The following pages show more of the design for the other campuses, which are labeled on the following page.

In order to create the designs shown, Ridgecrest is collaborating with Grove & Dall'olio Architects, a local firm with a specialty in historic preservation and adaptive reuse projects. In developing the current design Grove & Dall'olio has drawn from the experience of having worked on this project with several of the previous owners. Current plans involve a mix of uses that may include retail, office, residential, and dining; the variety and flexibility of the complex will allow development to meet the needs of the clients. It is very promising to see that the design extends beyond the buildings themselves to the full site and its relationship to the streets, something oft overlooked by developers and designers alike.



**Figure 52: East Campus Current Images.** By the spring of 2008 the first section of ground floor was occupied. [Photographs by author.]

**West Campus**  
398 Parking Spaces  
(including 2 levels of interior parking)

**North Campus**  
97 Parking Spaces  
(includes 1 level of interior parking)

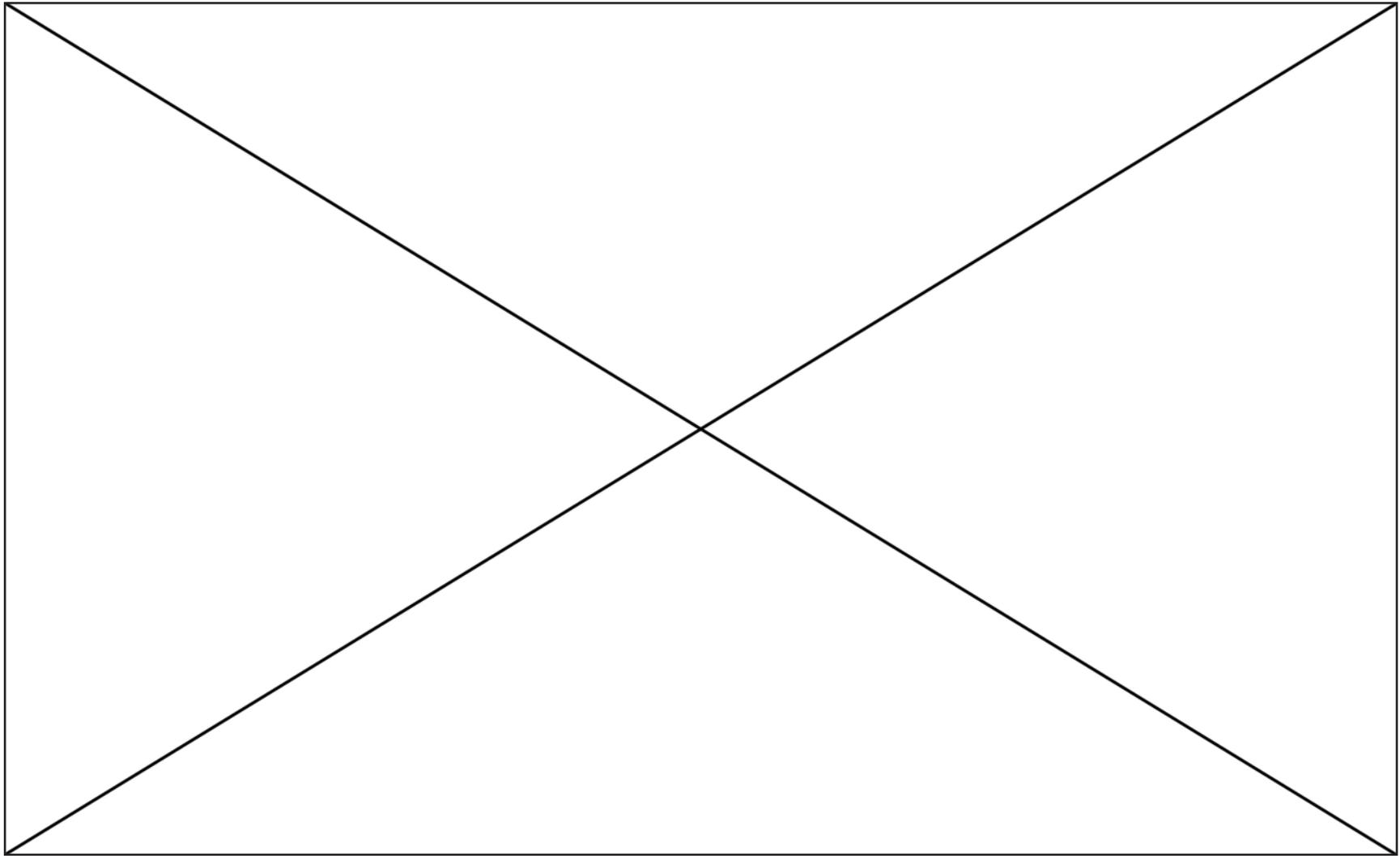
**East Campus**  
144 Parking Spaces

# INTERWOVEN MILLS

Shown is an artists rendering of the courtyard located in the north campus as well as photos of finished space at a similar project. Contact Lori Zaleski at (301) 695-5736 for

ridgecrest  
investments inc.

**Figure 53: Ridgecrest Investments Advertising Flyer.** This side of the flyer gives more graphic information about the future character of the site while the other gives more of a verbal description for those interested in details. [Grove & Dall’olio Architects.]



**Figure 54: Ridgecrest Investments Ground Floor Plan for the North Campus.** This plan shows a more detailed view of the plans for the North Campus, including the significant attention paid to the grounds. [Grove & Dall'olio Architects.]

#### Section 4: *Ritual and the Industrial Place*

Industrial production is by its nature a ritualistic process, and the buildings used for this purpose therefore become intimately associated with and permeated by a ritual quality. Both the professional lives of the workers and the movement of materials are scripted by the factory, and often this rhythm extends in to the surrounding area. Businesses such as restaurants will adjust hours, traffic patterns will change with the workers' shifts, and family lives will accommodate the imposed schedules. A neighborhood or small town may be defined by its factory, and when the rhythm is broken the effects are felt by everyone the factory touches, no matter how indirectly. The association, however, is lasting; people remember and understand the nature of the buildings and keep that connection through time.



**Figure 55: CMOG Hot Glass Show.** Gaffer Eric Meek demonstrates the process of blowing and shaping a piece of glass. [Image by author.]

It therefore makes sense that the repurposing of industrial buildings should draw upon this character, introducing new rituals which complement the old. In the case of the Interwoven Stocking Company, their goal was a beautiful, high quality product that would be durable enough to endure a long life of use; by their reputation it is clear that the socks they produced achieved this goal. Bringing attractive, functional, and well-crafted products into the lives of people is a goal that should be maintained and expanded upon.

*ritual (n)* – an action or set of actions which are repeated with regularity in an established and precise manner

**Figure 56: Close-up of an Egg Basket.** Weaving a basket, such as this one by Tracey McIntyre, takes many hours and requires a set process to dye materials or to prepare them to flex during weaving instead of cracking and splintering. [Photograph by author.]

Reintroducing the hosiery manufacturing process would not be helpful here, but there are other more meaningful industries that would bring a culturally sensitive note to the redevelopment of the site. Skilled handcrafts are a deeply embedded part of the regional culture, and they remain as a reminder of the Germanic and Celtic immigrants who brought them. By selecting industries from inside the region rather than bringing an industry in from outside a mutually supportive connection is established between the current population and the program of the site. This connection is intensified given that the culture of the region is being threatened with the homogenization made possible by its interstate-accessible location. In the face of the overwhelming influx of national chain businesses and suburb-seeking outsiders it stands to reason that one way to preserve a local identity is to cultivate those rituals which are being forgotten and lost.

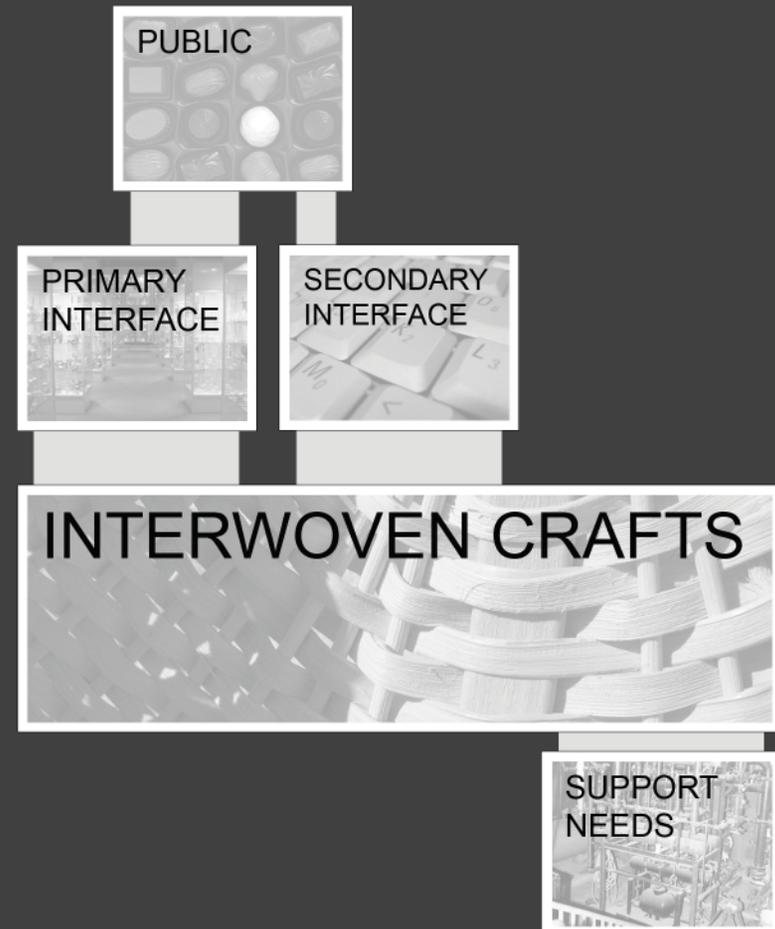


**Figure 57: Close-up of a Wooden Cradle.** This cradle was handcrafted by Scott McIntyre over 25 years ago. [Photograph by author.]

### Section 5: The Interwoven School of Crafts

In response to the nature of the buildings and the culture of the region, the program that was selected for exploration in this thesis is centered around a craft school. Production areas and support functions for the crafts would take up most of the site, and others would be best suited with commercial functions as the current development plans dictate. Areas for administrative functions would interface between public and private—both in terms of community-complex and commercial-educational divisions—to create a more integrated community whole. While the diagram at right shows program group relationships, the following diagram is a larger detail of the individual program elements.

## PROGRAM GROUPS



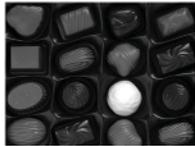
**Figure 58: New Program Groups for the Interwoven Site.** This diagram illustrates how the groups relate. [Image by author.]

# PROGRAM

## PUBLIC PROGRAM



MARTINSBURG VISITOR CENTER



CLASSIC CHOCOLATES



DINING



PARKING

## PRIMARY INTERFACE



GALLERY AND VISITOR CENTER

## SECONDARY INTERFACE



ADMINISTRATION



LIBRARY AND ARCHIVES

## INTERWOVEN CRAFTS

### LIGHT INDUSTRY



QUILTING



BASKETWEAVING

### MEDIUM INDUSTRY



WOODWORKING



TEXTILE WEAVING

### HEAVY INDUSTRY



METALWORKING



CERAMICS



GLASSWORKING

## SUPPORT NEEDS



COMMUNITY SPACE



MECHANICAL



STORAGE



PARKING

**Figure 59: New Program Elements for the Interwoven Site.** This diagram illustrates the program elements and their relationships to the other components. [Image by author.]

## Public Functions

Public program would be both commercial and civic. The Martinsburg-Berkeley County Visitors Bureau has expressed an interest in moving into Building 1 in order to occupy a historic building along the main road between interstate and downtown. This would be beneficial to the site because it would bring more visitors to the area. Classic Chocolates already maintains a shop in a gift store currently on site, and with space they could expand their enterprise. Locating a dining establishment in Buildings 8 through 11 is part of the current development plans and makes good use of the more intimate scale of those buildings. Both functions would help to draw both locals and visitors deeper into the complex where they can engage more activities. Parking is a necessary design component for a downtown site, but the goal should be to balance maximized parking with more attractive and sustainable design.

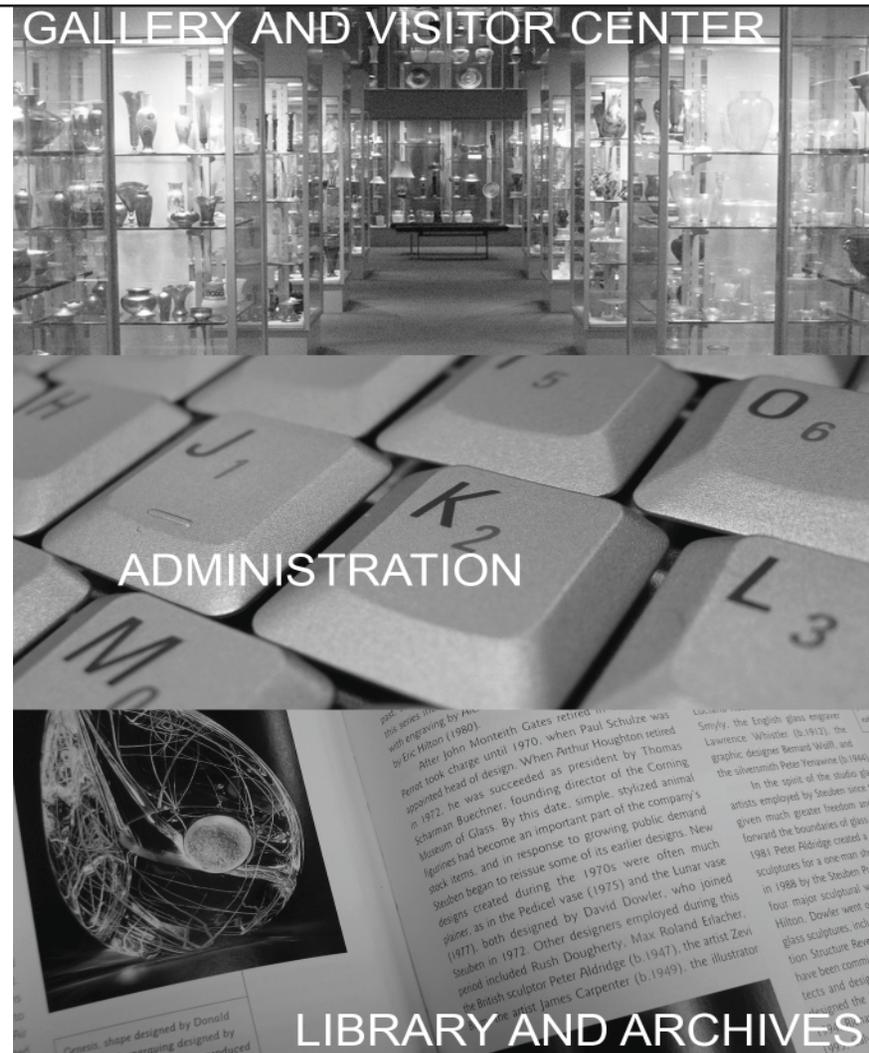


**Figure 60: Public Functions.** Details of the icons for the city visitor center, chocolate shop, restaurant, and parking area. [Image by author.]

## Interfaces

Two levels of interface between the public program and the craft school allows each to be somewhat more specialized for a group. The primary interface is a gallery and visitor center geared slightly more toward the public; this program needs a highly visible and accessible location. The building would provide information about the school while displaying and selling the work of students, instructors, and local artists.

The secondary level of interface is geared more toward serving the members of the school. Administrative services would help those who are interested in activities like taking classes, teaching, exhibiting work or facility use. The Library and Archives would serve both affiliates of the school and scholars, and it could be connected to the local library system. Both should be easily accessible and operate independently from the school; the library should also be above the ground floor.



**Figure 61: Interface Program.** Details of the icons for the gallery and visitor center, administration, and library and archives. [Image by author.]

## The Crafts

Drawing from cultural knowledge and Wigginton's Foxfire books, a collection of crafts were selected for their relevance and hands-on techniques. The idea behind a craft school is that a person learns to interact with a material as directly as possible to create a unique work of art, and to that end more mechanized crafts have been removed from consideration. Large teaching and productions areas for these crafts will take advantage of the open spaces and bright light, and their support needs will utilize the remaining spaces of the complex. Some of the crafts are more closely related than others, and all of the crafts require varying levels of infrastructure. Chapter 5 explains their arrangement into the buildings.



**Figure 62: Haptic Model.** In this model uses tactile interaction with representative materials to convey program. [Photograph by author.]

Quilting and basket weaving are the crafts that require the lightest infrastructure. Quilting is often highly detailed and requires bright light. The assembly of a quilt usually takes place on a large table, and both large bolts and smaller pieces of fabric are best stored on shelves. Individual sewing machine stations are not very large, but some quilting looms and machines are very large. The space for quilting must be flexible to work well.

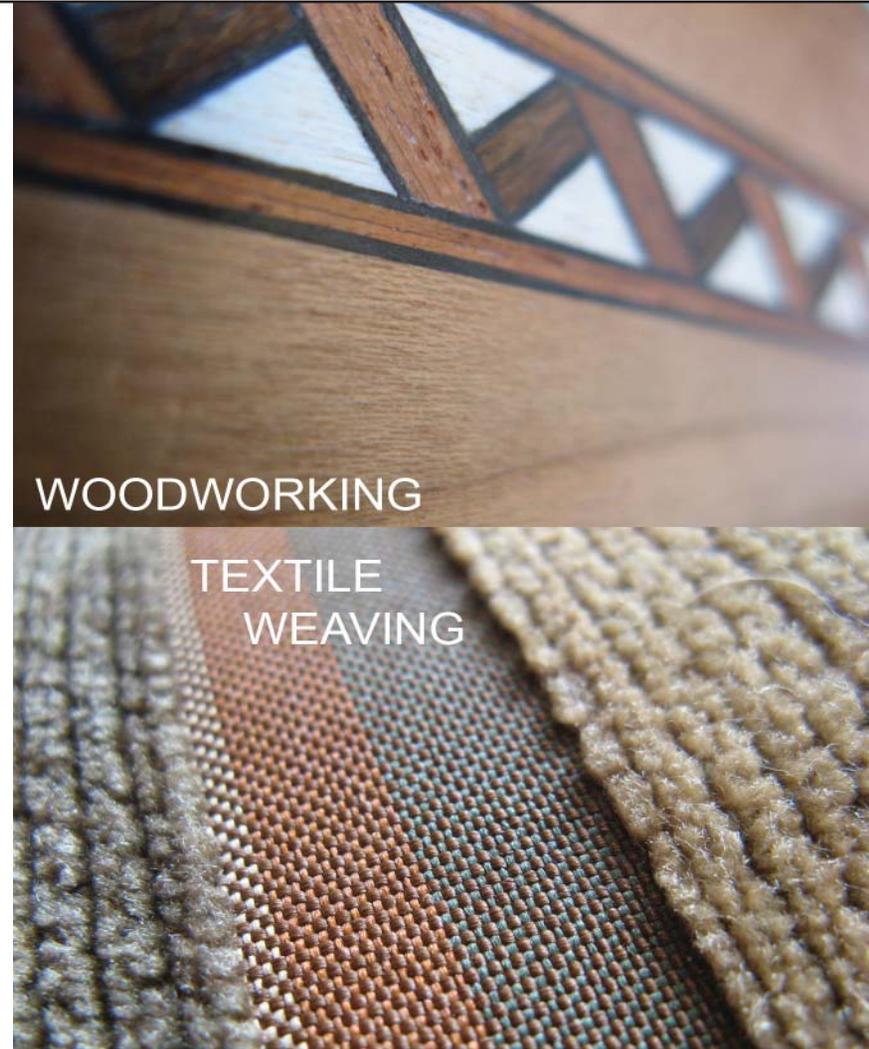
Basket weaving's most challenging requirement is for both wet and dry areas. In order to weave reeds or canes they must be soaked in water to avoid splitting, cracking, or unwanted bends. The sinks or tubs must be large enough to hold large amounts of material or entire baskets, either for soaking or dyeing. The materials are moved between there and a work table that can withstand moisture but be dried if needed. Finished baskets require areas for drying and storage.



**Figure 63: Light Industry.** Examples of the quilting and basket weaving crafts. [Image by author.]

Crafts with a moderate level of infrastructure are woodworking and textile weaving. Depending on the scale, woodworking can require very little equipment or a massive amount, and so a space should be flexible enough to handle changing scales of work. Working area may include benches, tables, or open floor spaces; tools range from hand chisels and sanders to saws with large catch tables. Ducting for dust collection will take up extra space in the building, and more isolated and ventilated areas are necessary for finishing products away from dust and evacuating fumes.

For the purpose of this project “weaving” refers to an individual weaving on a personal loom of some kind, though small-scale semi-mechanized weaving may also be reasonable. Weaving looms should be moveable because they require access from all sides, at minimum for maintenance needs. The artist should have easy access to fiber storage, for example shelving or bins for yarn, and tables and frames are required for blocking pieces.



**Figure 64: Medium Industry.** Examples of the woodworking and textile weaving crafts. [Image by author.]

The heavy industries at Interwoven are all ones that require furnaces or kilns for much of their work: metalworking, ceramics, and glassworking. Metalwork could be cast, hammered, welded, woven, or any combination thereof. The different needs reflected within that spectrum once again require a large, adaptable space that could be outfitted with workbenches, anvils, tables and stools, or low platforms. Most of the work, especially that involving pouring liquid metal or forming hot metal, will require designated areas for protection. Finishing areas for weather treating or anodizing may need to be separate.

Ceramics will have various stages of completion that require special management. Wet clay must be stored away from heat; an artist retrieves the necessary amount and moves it to a work table or ceramic wheel. The items made from this “green” clay are then partially



**Figure 65: Heavy Industry.** Examples of the metalworking and ceramics crafts. [Image by author.]

fired to remove moisture before a glaze is applied to seal the porous material of the bisqued piece. Many artists mix and store their own glazes, and this is done in an area with a sink designated for chemicals. For finishing a piece returns to the kiln where it is fired to bake on the glaze and rest until cool.

Glassworking can use either molten glass or cool pieces that are fused together later. Figure 55 shows one of the processes of working with molten glass as demonstrated at the Corning Museum of Glass.

Glassblowing uses the largest work area usually necessary for an artist. Torchwork requires a station, usually seated, with a fixed torch and many different materials within reach. Fusing requires a table near the material stores; pieces will be arranged, temporarily affixed, then moved to a kiln and heated until they fuse. All glass requires controlled cooling in a kiln to strengthen the glass and prevent shattering.



**Figure 66: Heavy Industry.** Examples of the ceramic and glassworking crafts. [Image by author.]

## Support Needs

This program provides for the background functions that make teaching the crafts possible. In contrast to the public exhibition space of the gallery and visitors center, a community space internal to the craft school would provide an informal place for work in progress to be displayed and discussed by people from all of the craft programs. This would also be a place to socialize or put in rotating exhibitions of guest work.

More purely functional areas are also necessary. Concentrated mechanical space will allow more open interior spaces to work in, and storage of materials and finished work will need to be distributed throughout the complex. Parking specifically for students and teachers may be minimized by encouraging people to live in the surrounding residential areas and walk or bike. Providing things like secure, covered bike parking and shuttles in bad weather will encourage this.



**Figure 67: Support Needs.** Details of the icons for community space, mechanical needs, storage, and parking. [Image by author.]

## Chapter 4: Design Guidelines

### *Section 1: No Imitation or Replication*

Enhance the existing character of the site with contrasting but complementary interventions.

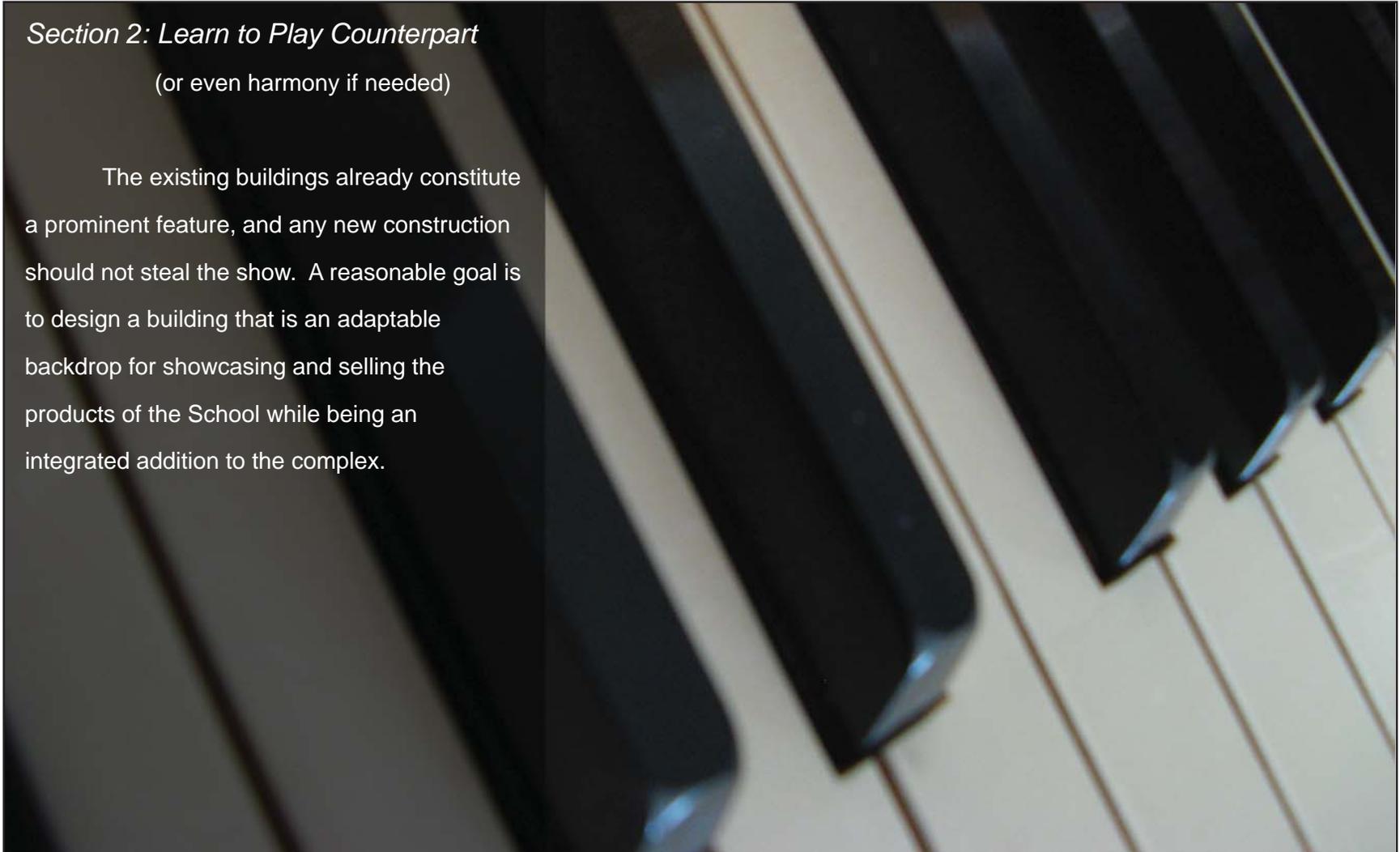


**Figure 68: Building 13, Repeated.** One example of this building is a part of a complex of individually different buildings; repeating any notable building overmuch lessens the qualities that make it interesting and unique. [Photograph by author.]

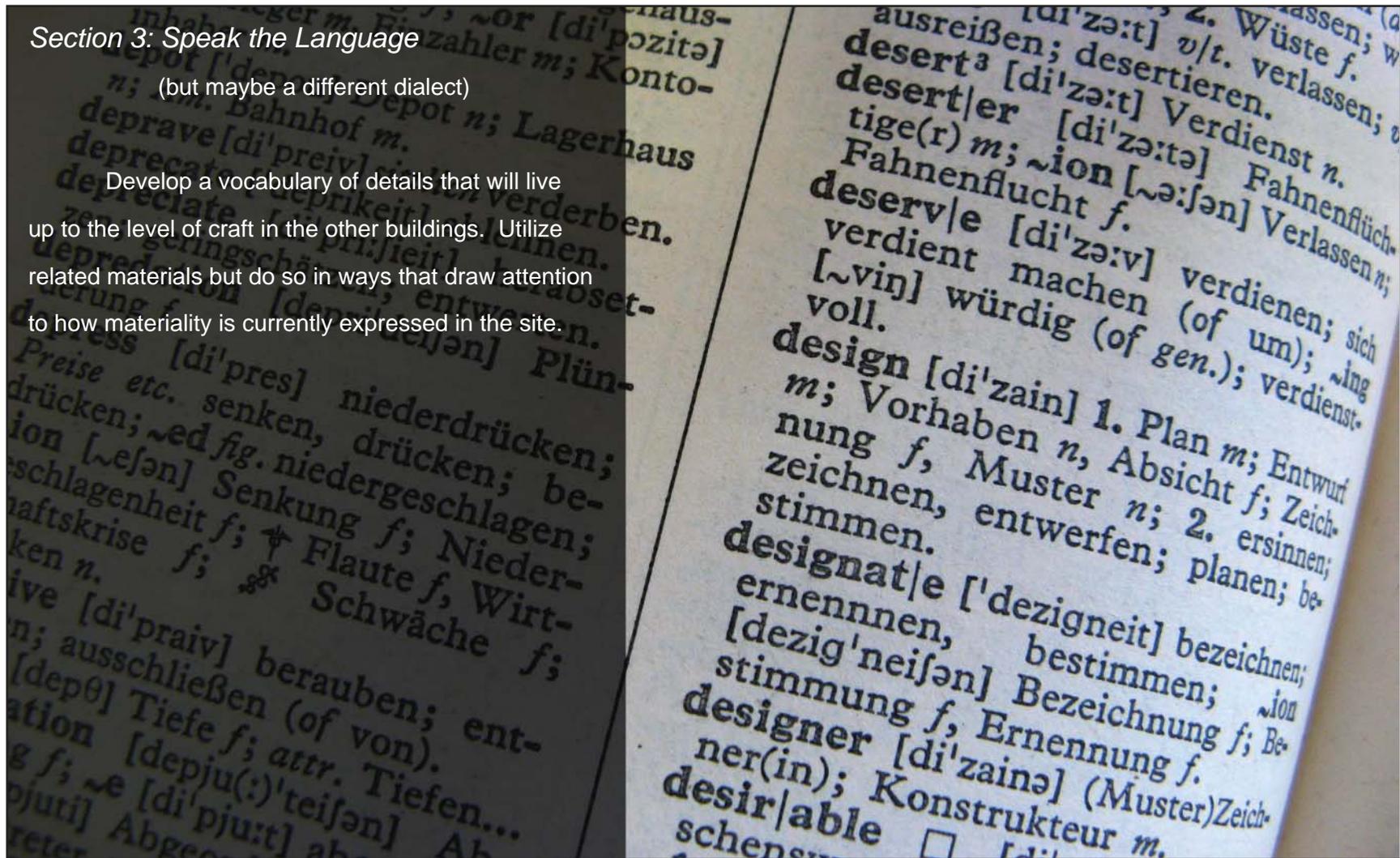
## *Section 2: Learn to Play Counterpart*

(or even harmony if needed)

The existing buildings already constitute a prominent feature, and any new construction should not steal the show. A reasonable goal is to design a building that is an adaptable backdrop for showcasing and selling the products of the School while being an integrated addition to the complex.



**Figure 69: Piano Keys.** Comparison to music- especially piano music- is a good way to think about integrating new and old. Multiple parts are being played, but no matter how different in sound they still integrate for a wholistic song. [Photograph by author.]



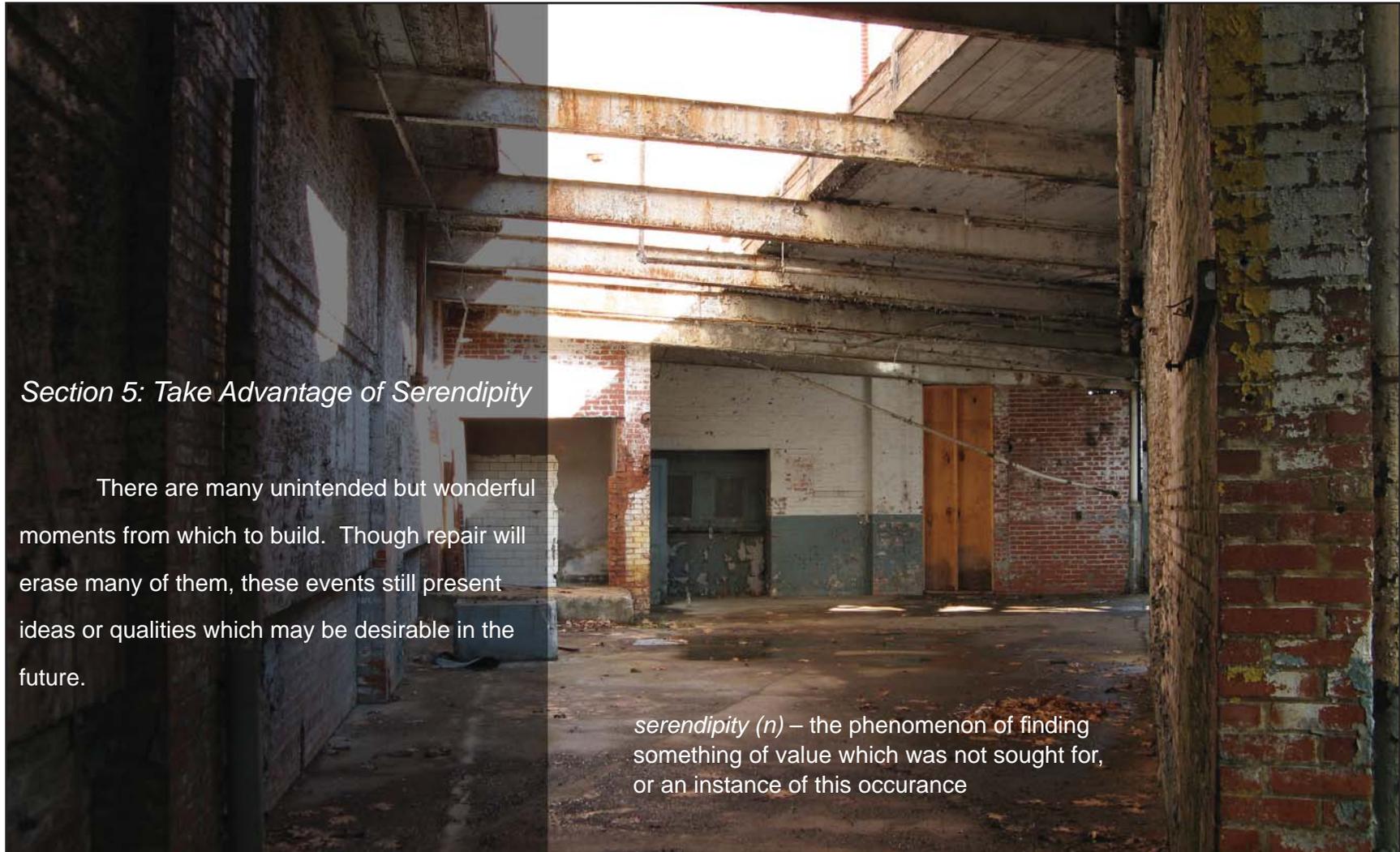
**Figure 70: Page of an English-German Dictionary.** Designing a building that is related but unique is like learning to speak a language instead of merely parroting words. It is the difference between repetition and comprehension. [Photograph by author.]

#### *Section 4: Reduce, Reuse, Rethink*

Many existing elements on the site have the potential for reuse. There must be creative ways to make them into potential assets instead of liabilities.



**Figure 71: Recycling Symbol.** Life would probably be easier if every item included instructions for being environmentally responsible, but it is up to each person to see the possibilities and act on them. Individual awareness makes all the difference. [Photograph by author.]

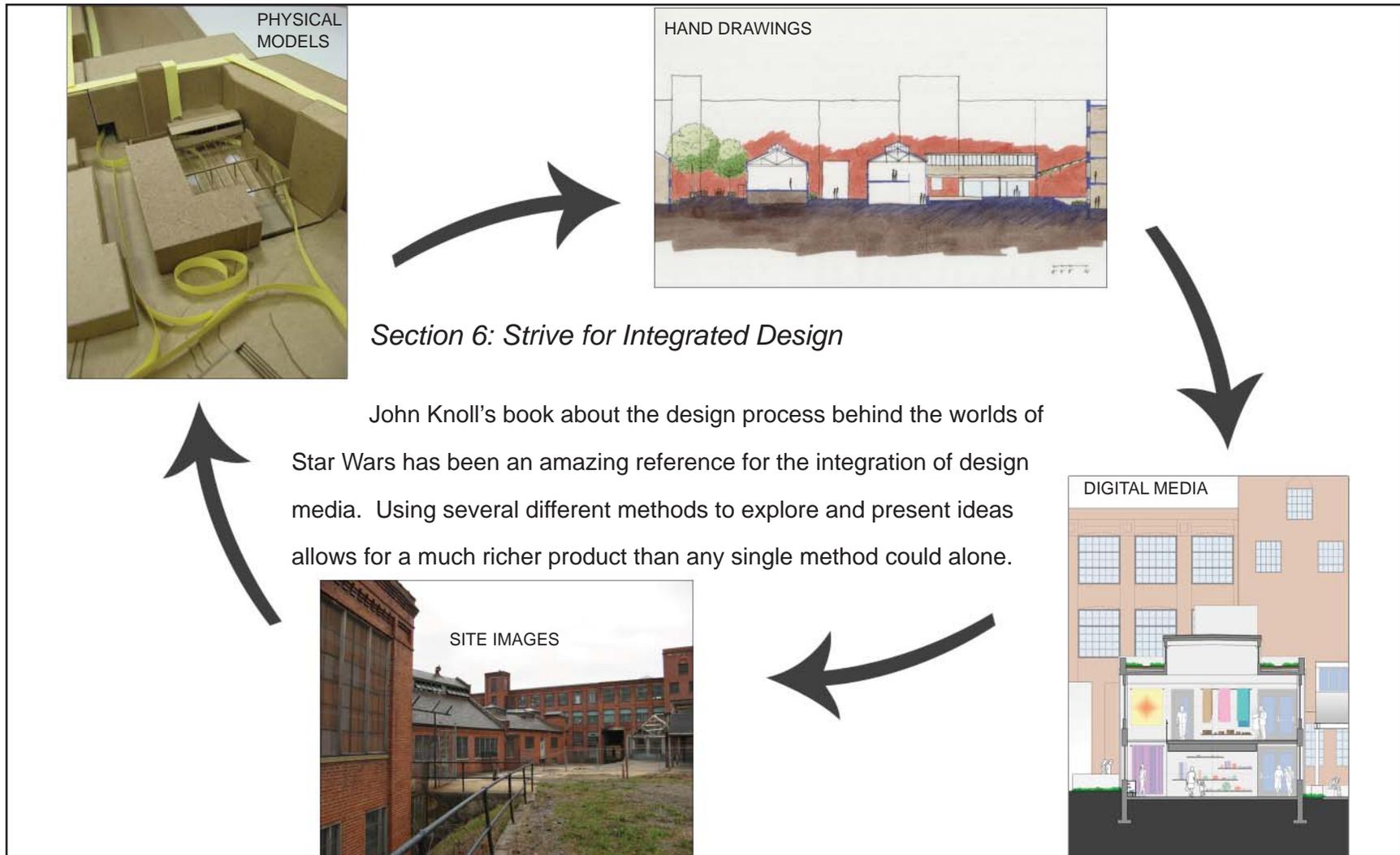


### *Section 5: Take Advantage of Serendipity*

There are many unintended but wonderful moments from which to build. Though repair will erase many of them, these events still present ideas or qualities which may be desirable in the future.

*serendipity (n)* – the phenomenon of finding something of value which was not sought for, or an instance of this occurrence

**Figure 72: Building 7, West Connector.** The damaged condition of the roof creates dramatic lighting and unintended views; this damage also creates an opportunity to cultivate some of these features when the roof is removed and redesigned. [Photograph by author.]



**Figure 73: Integrated Design.** This diagram illustrates the four main groups of media that are used in architectural design; in film the equivalents would be physical models, paintings and digimats, digital models and animations, and live filming. [Image by author.]



## Chapter 5: The Interwoven Site

**Figure 74: Operable Windows in Building 12.** One of the unique qualities of this building is that there are very large expanses of windows, large portions of which are operable. [Photograph by author.]

## *Section 1: Character Casting*

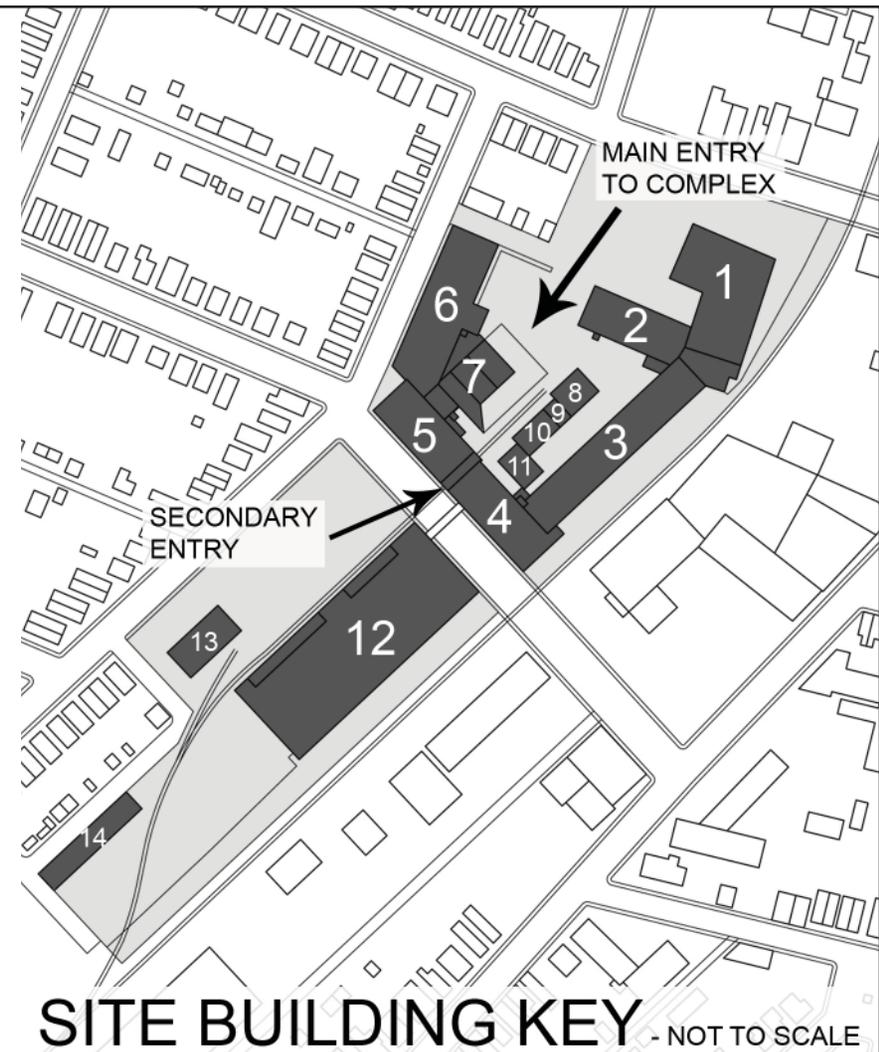
Deciding where and how to place program into existing buildings can be a complicated issue, but the process is easier if the individual buildings are thought of as actors to be cast. Each building or space has a unique set of characteristics that will allow it to do some things well and others very poorly. Some situations are more flexible than others, but it is important to recognize if a situation will inevitably fail. Success is more likely with intelligent type-casting of the buildings' personalities.



**Figure 75: Makeshift Apartment in Building 4.** A previous owner of the complex constructed an apartment in part of the top floor of this building; this is an example of a poor way to utilize this space. [Photograph by author.]

## Section 2: The Buildings

The diagram at right numbers the buildings from the reference point of a person visiting the site for the first time. For the sake of clarity at this scale the street names have been eliminated, but they are visible in the diagram of the Interwoven neighborhood on page 18. The buildings are numbered working back from the first one encountered near King Street, then wrapping around clockwise and following along the rail tracks through the underpass and on to the south corner of the site. In the following pages each building has a description and block of documentation images followed by a sectional drawing depicting future program usage. The entries labeled in the diagram refer to the final programming of the site and the way in which people will enter the complex.

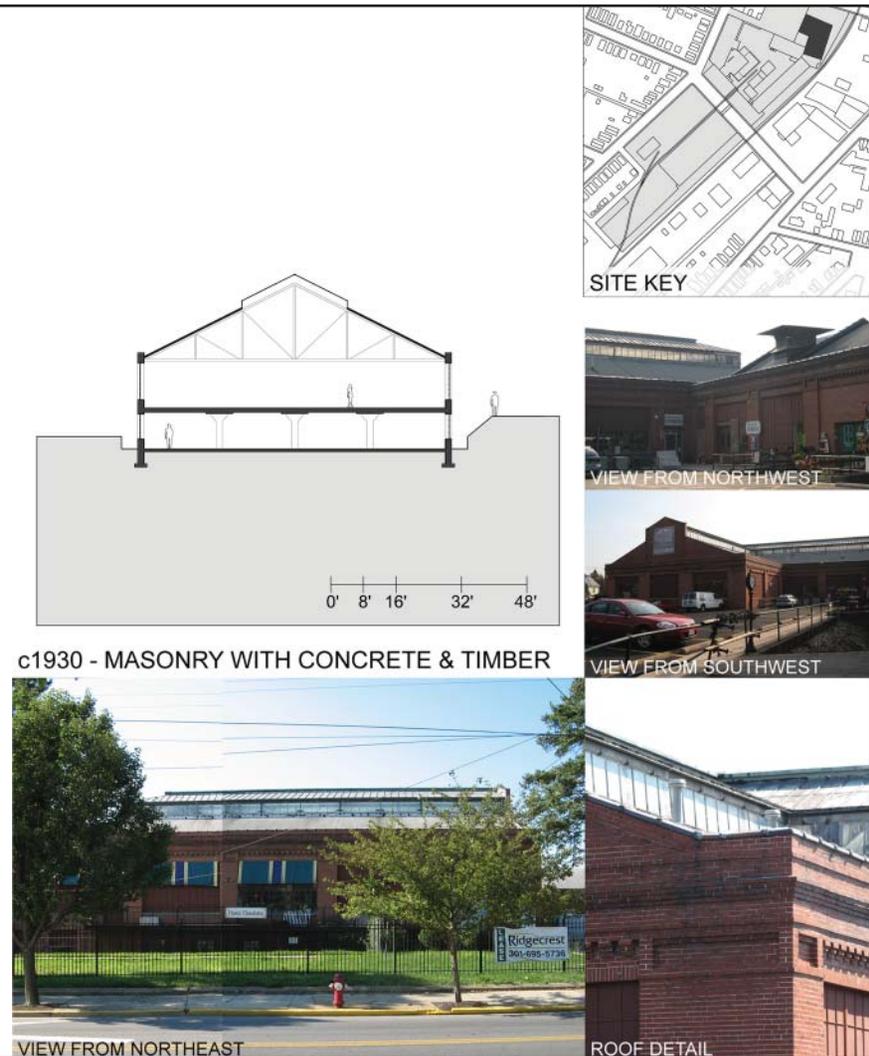


**Figure 76: Site Building Key.** All buildings are numbered for reference, and the entrances for the complex are also marked. [Image by author.]

## Building 1

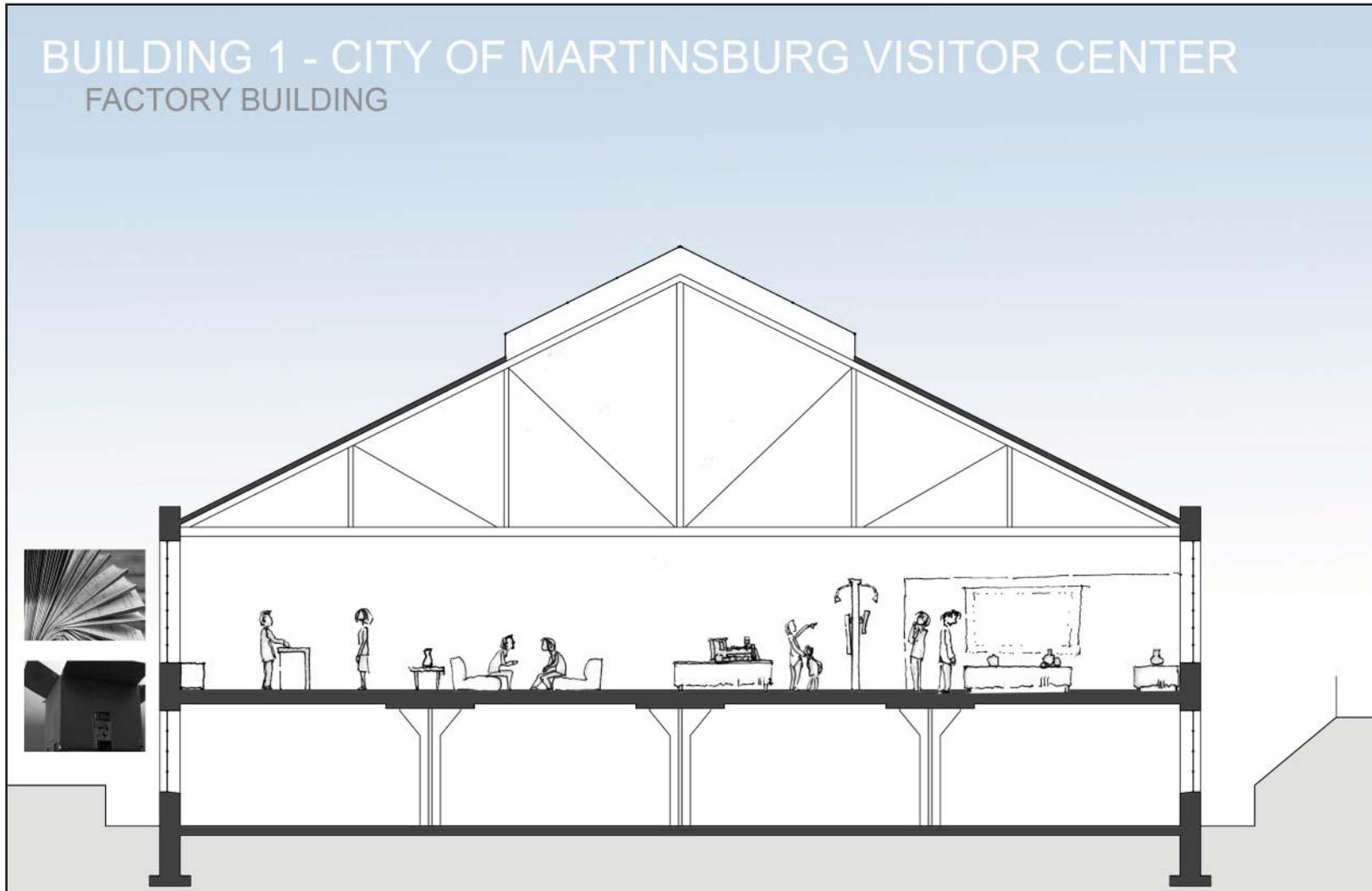
This building's relationship to King Street makes it an excellent location for retail or civic program; the city visitor center fits well into that category. The open area of the upper floor will work well for exhibits of many different sizes, all easily visible from a front desk. The lower floor could work for the same purpose or for offices, storage, or meetings rooms. The lawn area could be used for events or as a park with its own displays, so there is potential here for many kinds of activation from a single user group.

Having the visitor center here will also be beneficial for the school; there is a potential to teach people about the complex through the center. Building 1 is a good example of the character of the other buildings, and there are enough relics in the complex and around the region to form a museum in itself. People could learn about the buildings and then visit them on a tour of the School of Crafts.



**Figure 77: Building 1 Documentation.** The most striking features are the lawn and the skylights. [Images and photographs by author.]

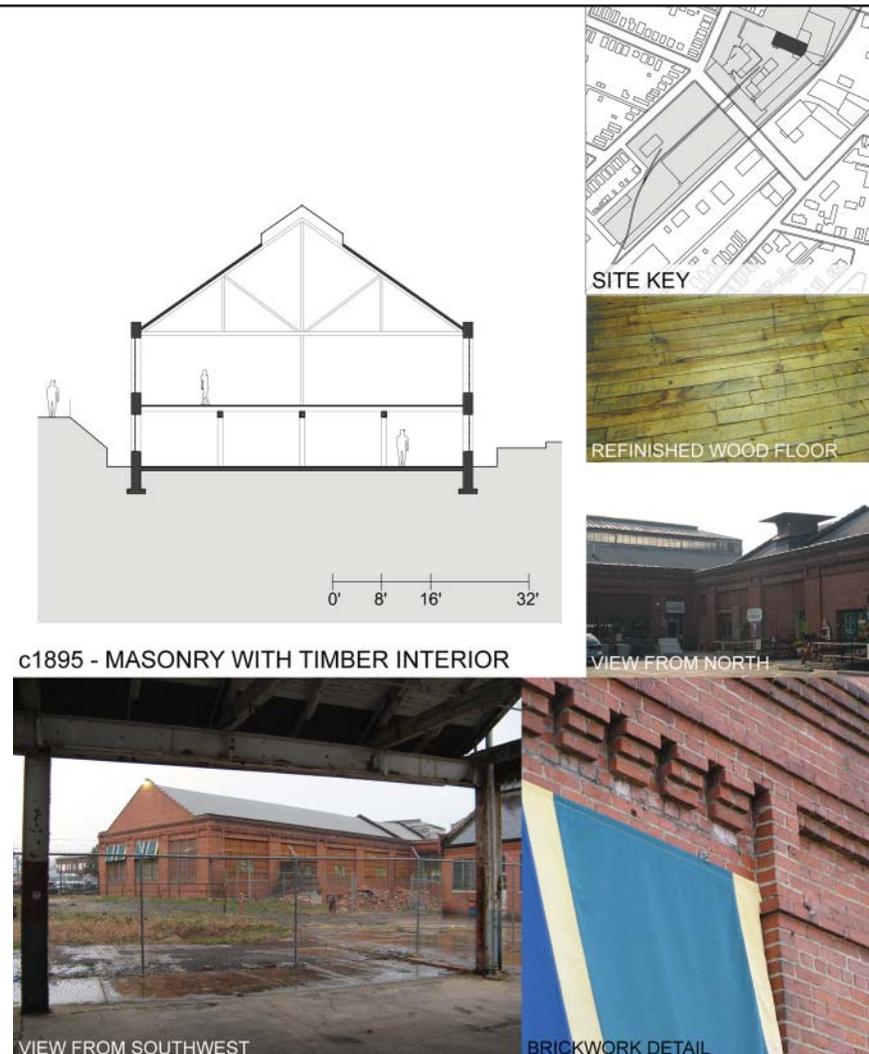
# BUILDING 1 - CITY OF MARTINSBURG VISITOR CENTER FACTORY BUILDING



**Figure 78: Building 1 Section.** Above is the character of the City of Martinsburg Visitor Center as depicted by the gestural drawing of Lin Mao. The icons at left indicate the floor-by-floor programming. [Image by author.]

## Building 2

Though in a slightly less prominent location, this is another highly visible building that is well suited to retail-type functions. Classic Chocolates has ample room to expand in this building to include much larger areas for sales, production, storage, and even bakery or creamery functions if desired. Chocolate work is a handcraft much like any of the others on site, and here is an opportunity for visitors to watch the artists at work. Additional production on site would bring more jobs into town and potentially utilize the nearby residential fabric to eliminate extended commutes.



**Figure 79: Building 2 Documentation.** Awnings and painted windows hide an expansive interior. [Images and photographs by author.]

# BUILDING 2 - CLASSIC CHOCOLATES

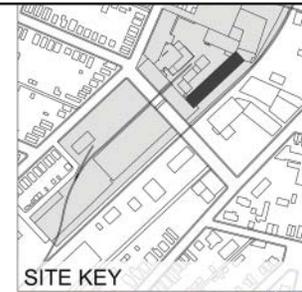
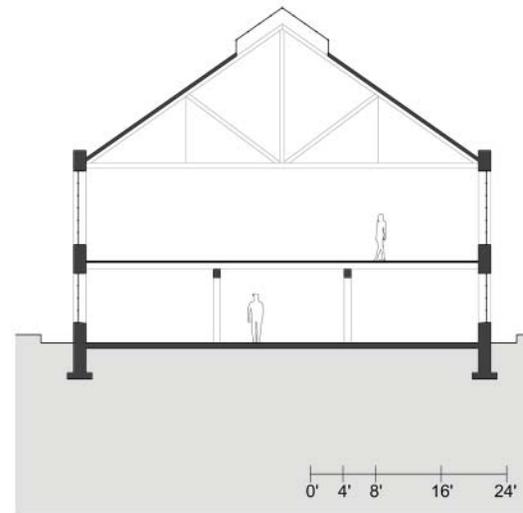
## FACTORY BUILDING



**Figure 80: Building 2 Section.** Above is the character of Classic Chocolates as depicted by the gestural drawing of Lin Mao. The icons at left indicate the floor-by-floor programming. [Image by author.]

### Building 3

This linear building would work well for woodworking because it would allow all the tools and work areas to be on the same level. Work areas for larger, specialized tools could be centralized with work areas for more common tools to either side; a single level allows pieces to be rolled around the floor as needed with relative ease. Both floors are close to ground level, and with the elevator to move between floors, getting even large pieces in and out of the building would not be difficult. This is probably the oldest building on site, and the lower floor is a forest of columns that could be easily subdivided for storage, ventilated finishing rooms, or workshops for smaller and more intricate projects. The only major sacrifice in working in the lower floor is that there is noticeably less light natural light available.

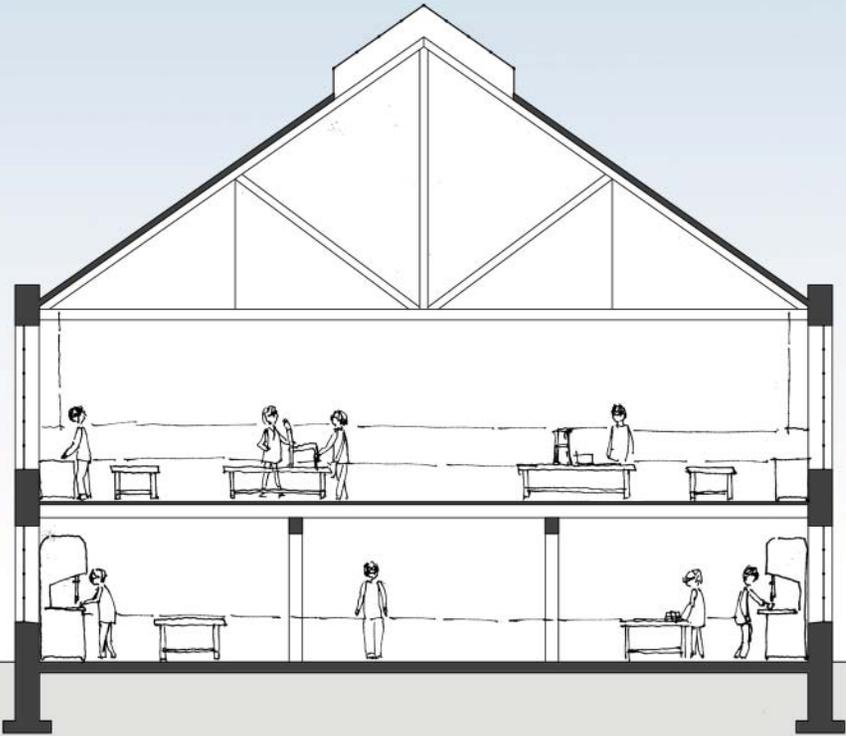


c1895 - MASONRY WITH TIMBER INTERIOR



**Figure 81: Building 3 Documentation.** This building is very linear and has a continuous skylight. [Images and photographs by author.]

BUILDING 3 - WOODWORKING  
FACTORY BUILDING



**Figure 82: Building 3 Section.** Above is the character of the woodworking shops as depicted by the gestural drawing of Lin Mao. The icons at right indicate the floor-by-floor programming. [Image by author.]

## Building 4

This building is the only one with floor-by-floor interior views that do not have significant obstructions, and so it is a good measure of the other buildings with four stories. In this case the building is important because of its connections. The basement has one of the complex's main entrances, the lower two floors connect to the woodworking building, and the upper two floors connect to the buildings to the west and south.

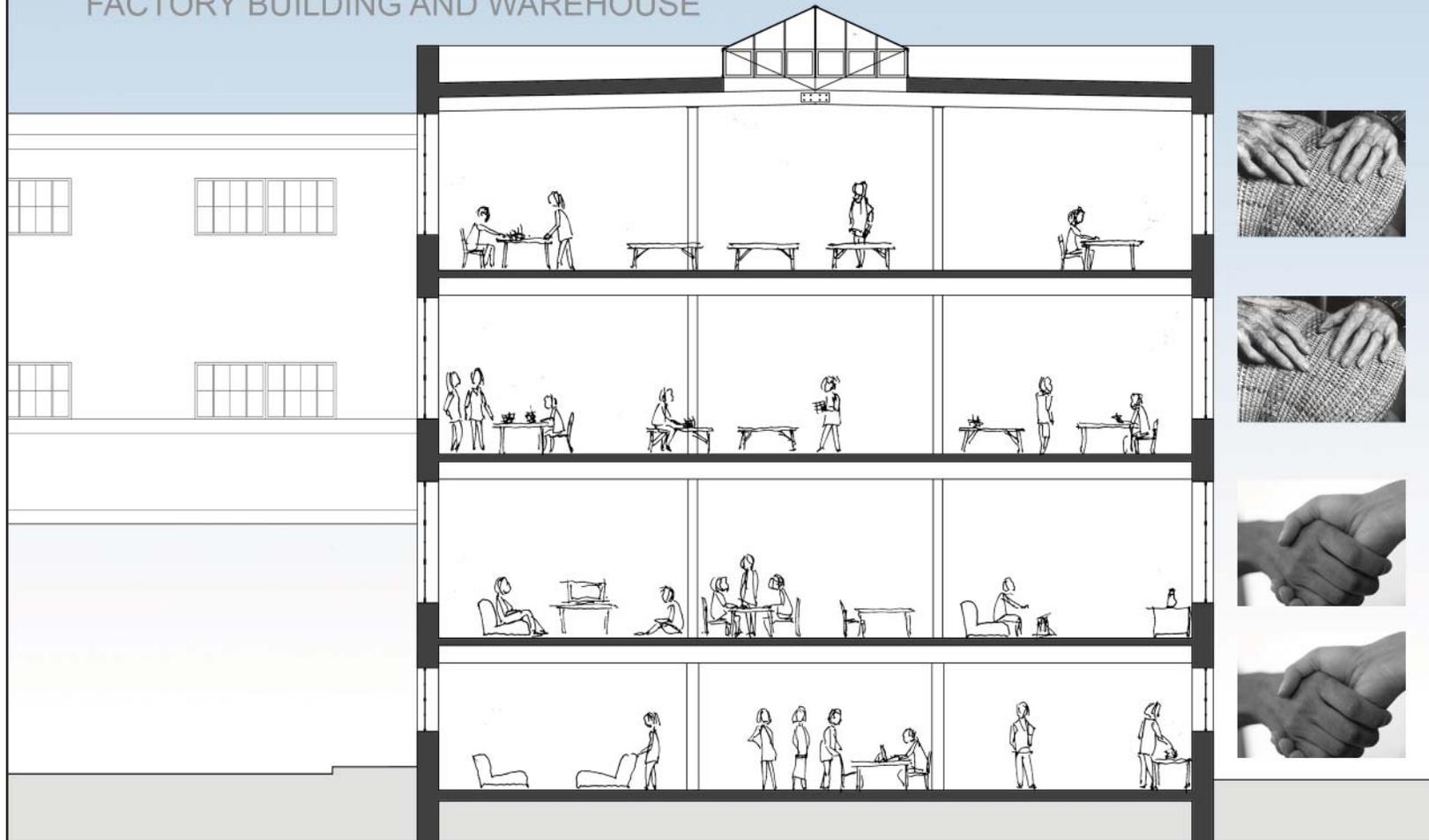
Both of the upper stories have good natural light, and the holes that a previous owner cut into the floor between are actually useful for letting more light down. Basketweaving studios are located on these floors because in addition to being related to the original weaving of the site, they do not use hot materials or many dangerous tools. The community space is also in this building on the lower two floors so that is it near the entrance and the connections to the other crafts.



**Figure 83: Building 4 Documentation.** The righthand series of images shows the variety of interiors. [Images and photographs by author.]

# BUILDING 4 - BASKETWEAVING AND COMMUNITY SPACE

## FACTORY BUILDING AND WAREHOUSE

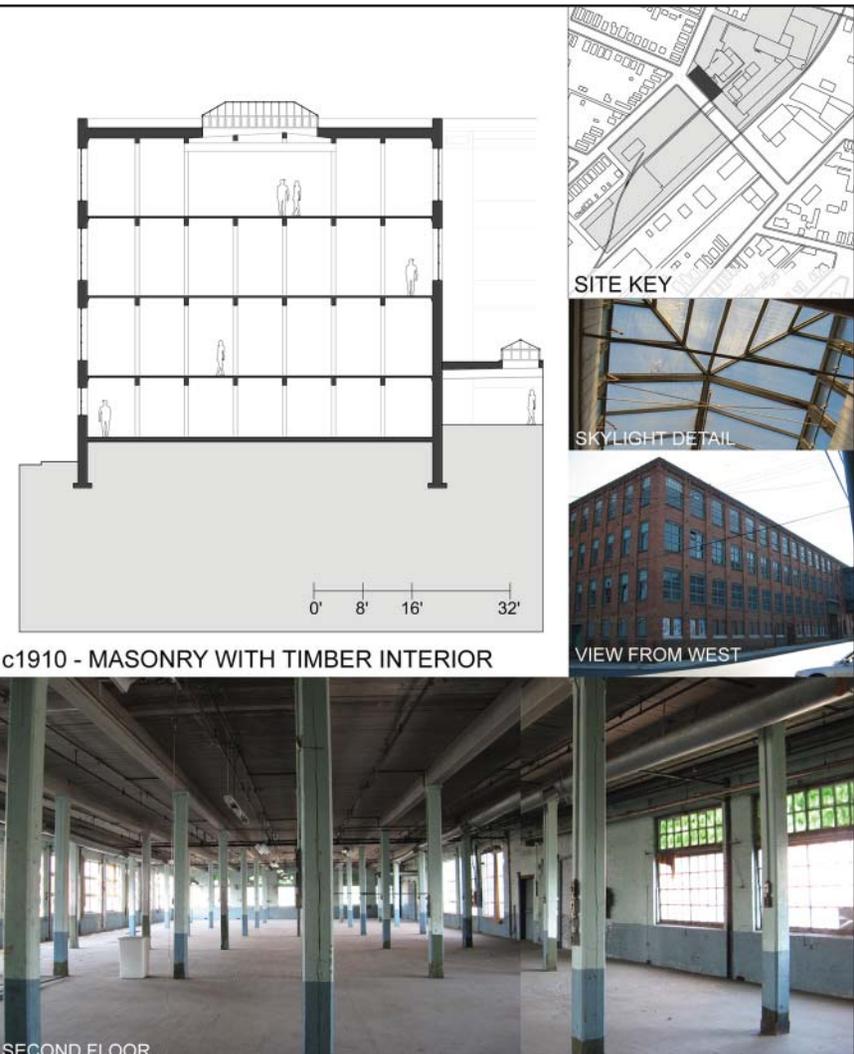


**Figure 84: Building 4 Section.** Above is the character of the basketweaving and community spaces as depicted by the gestural drawing of Lin Mao. The icons at right indicate the floor-by-floor programming. [Image by author.]

## Building 5

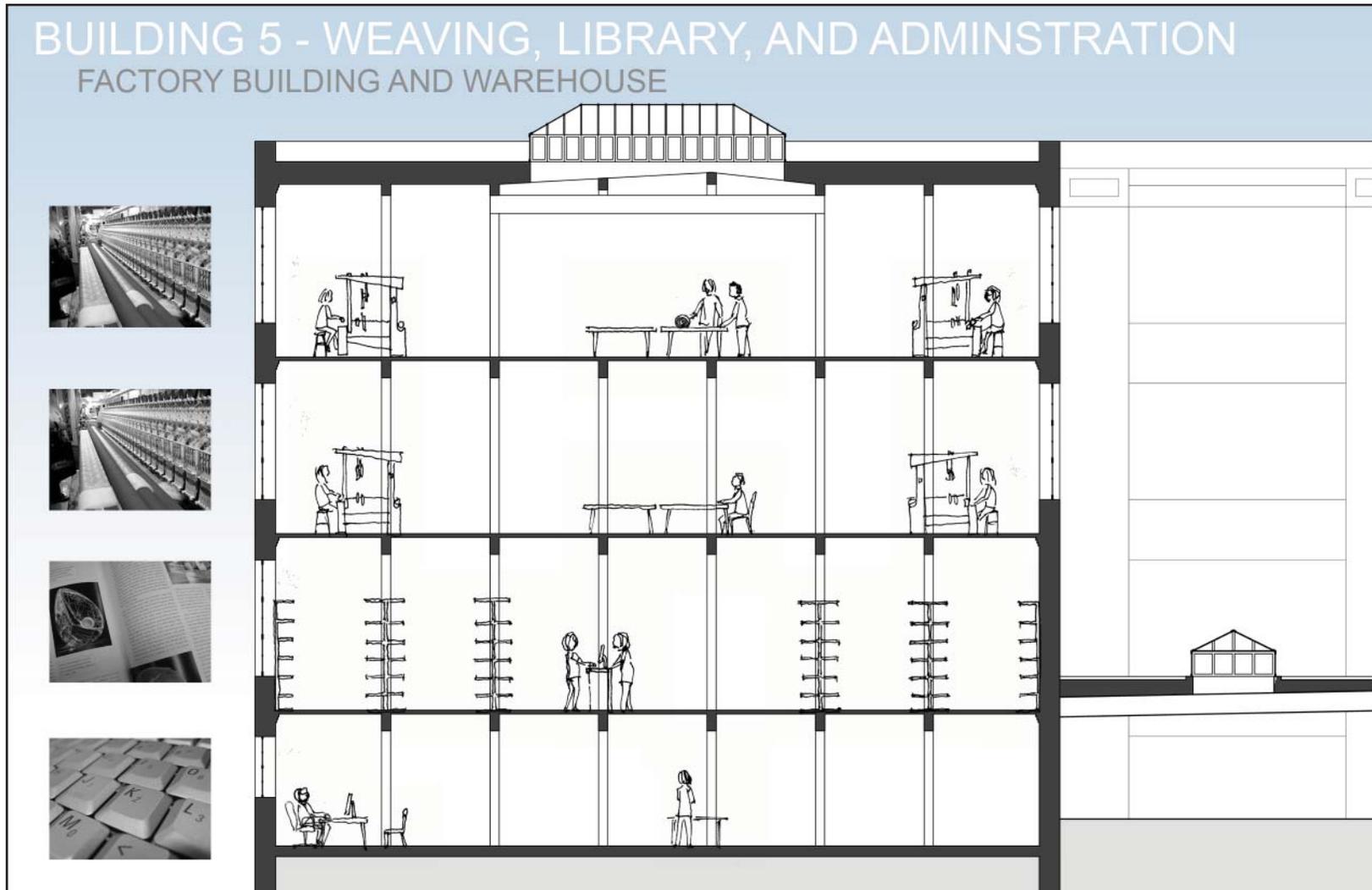
The historic need to roll carts through these buildings is expressed in a complex that connected horizontally more than vertically, and given this horizontality, it can be difficult to discuss buildings separately. Buildings 5 and 6, for example, are connected at every floor via fire doors and therefore some of their program is continuous.

Building 5 is the older of the two, and within its brick masonry exterior is a timber interior with rather divided spaces. The upper two floors are connected to the other large buildings of the complex via Building 4, and so the textile weaving studios are a natural choice to utilize the natural light and exhibit another weaving craft related to the original purpose of the site. The basement is connected to the public main entrance to the complex, and the lower two floors contain continuous public program that is discussed under Building 6.



**Figure 85: Building 5 Documentation.** This building is among the most visible due to its corner location. [Images and photographs by author.]

# BUILDING 5 - WEAVING, LIBRARY, AND ADMINISTRATION FACTORY BUILDING AND WAREHOUSE

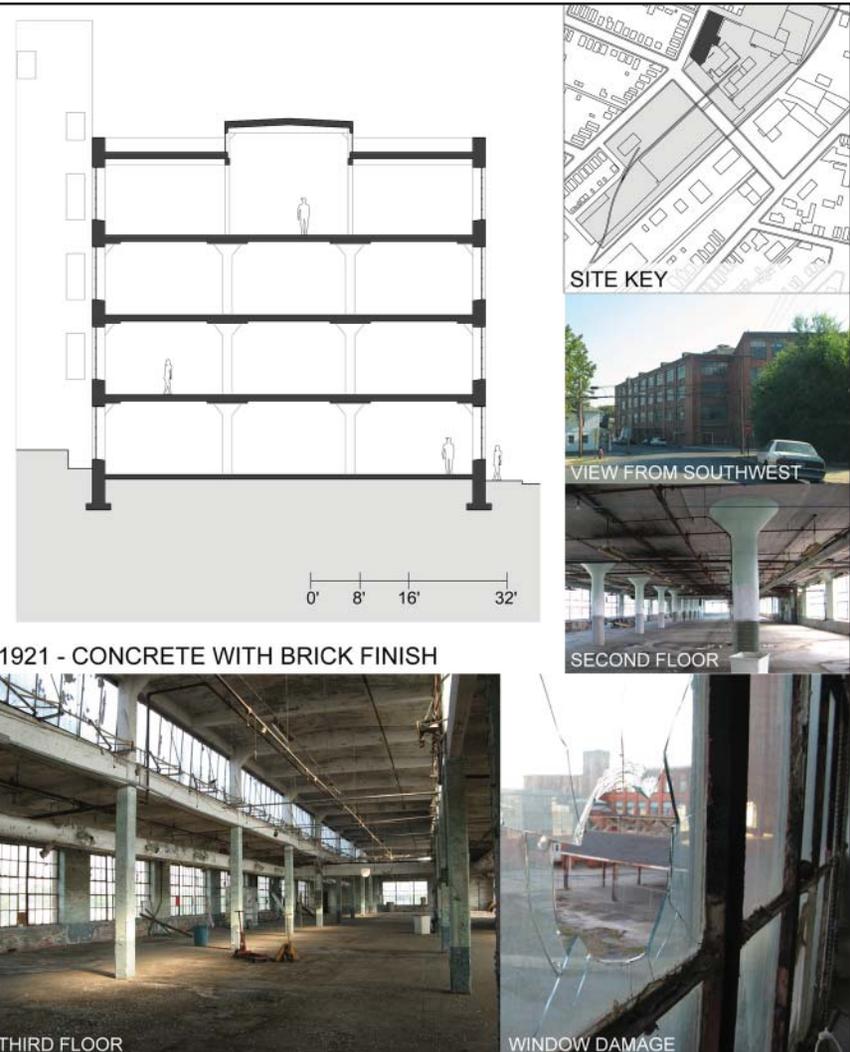


**Figure 86: Building 5 Section.** Above is the character of the textile weaving studios and parts of the library and administration spaces as depicted by the gestural drawing of Lin Mao. The icons at left indicate the floor-by-floor programming. [Image by author.]

## Building 6

Despite its connections to Building 5, the concrete frame and brick infill of this building give it a very different character. The interior spaces are much more open and are therefore suitable for larger work areas that could be defined by low shelving units or equipment. Those traits happen to be just right for quilting, and in addition the bright light provided by the clerestory of this building is very important for such a highly detailed craft.

The lower floors of this building contain administration and library functions that are continuous with Building 5. Because they do not connect horizontally to the rest of the complex this is a good area to concentrate the public areas of the complex. The basement level contains the administration areas that most visitors would need to access, and that leaves the first floor free for the library and archives.



**Figure 87: Building 6 Documentation.** This is the first building on the site to have a concrete structure. [Images and photographs by author.]

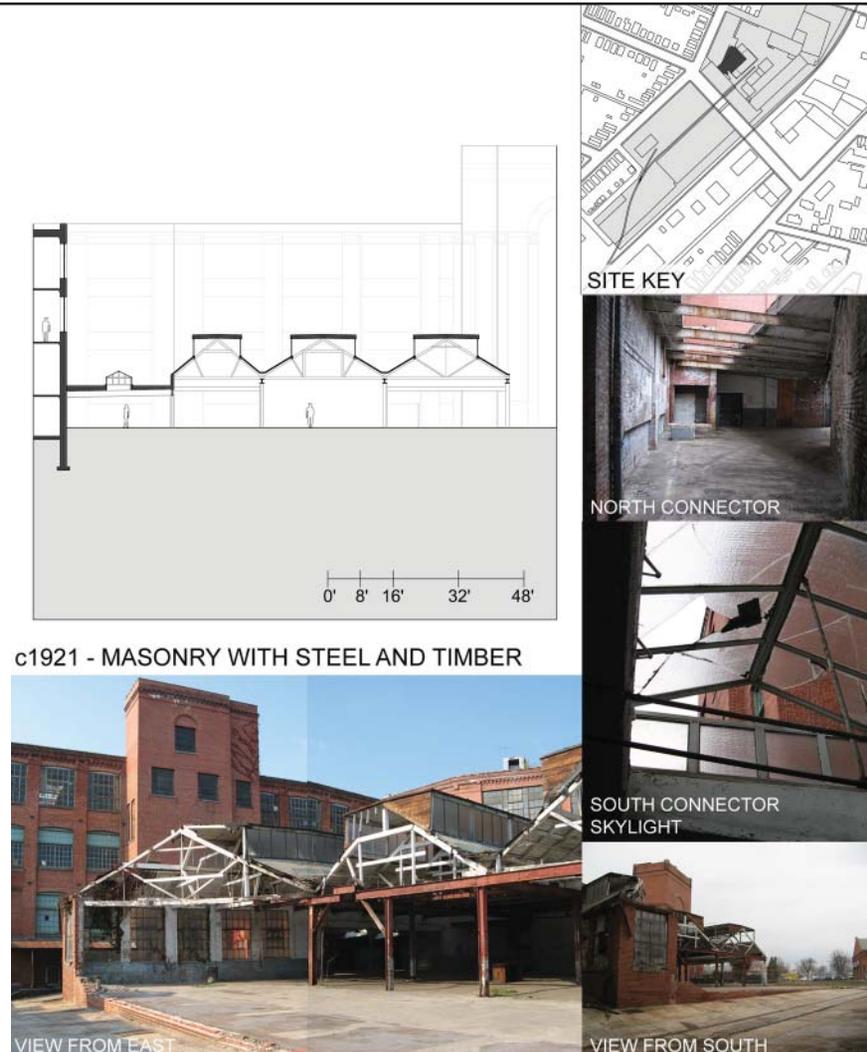
# BUILDING 6 - QUILTING, LIBRARY, AND ADMINISTRATION FACTORY BUILDING



**Figure 88: Building 6 Section.** Above is the character of the quilting studios in addition to the remaining library and administration spaces as depicted by the gestural drawing of Lin Mao. The icons at right indicate the floor-by-floor programming. [Image by author.]

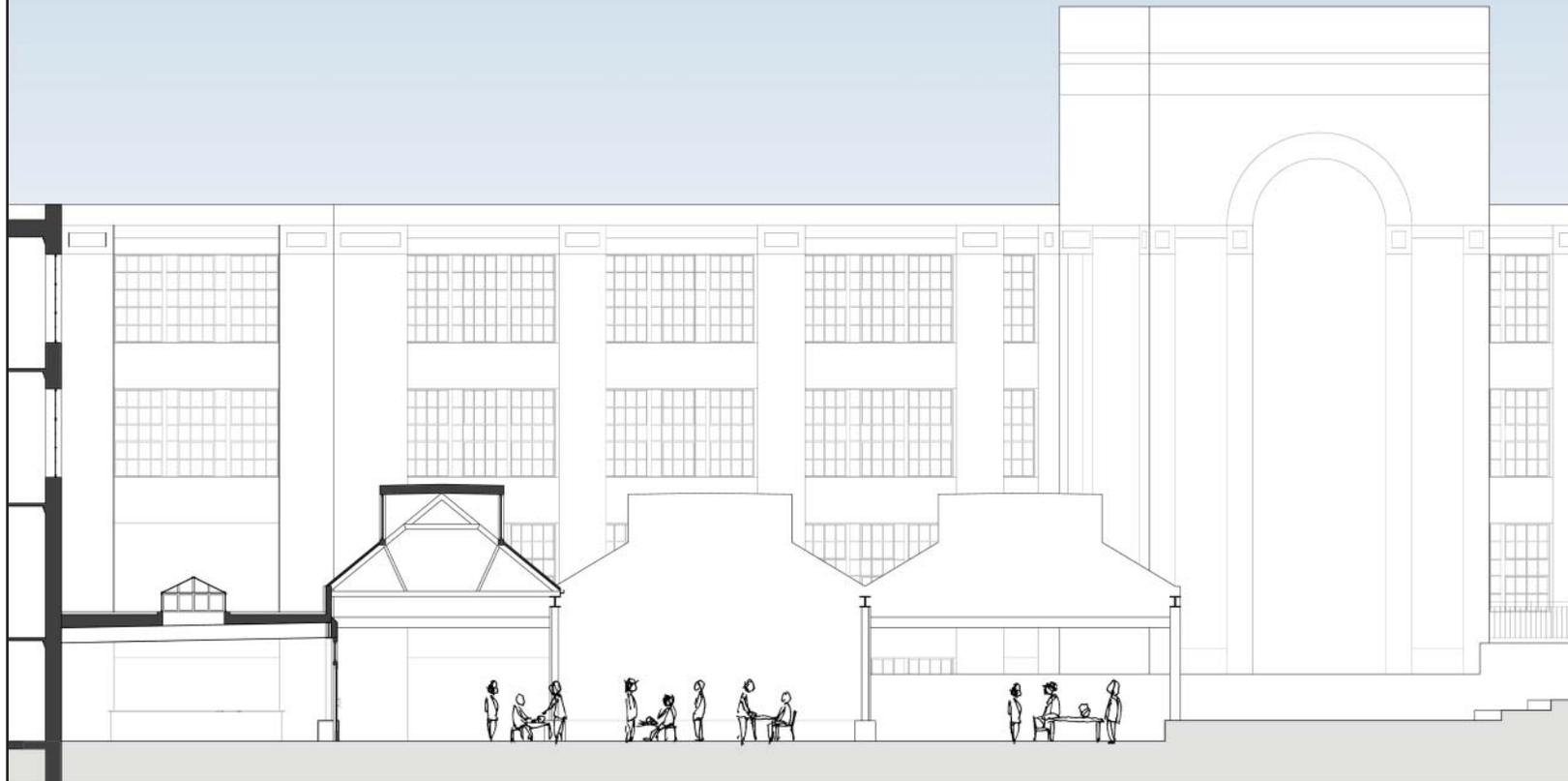
## Building 7

This building is a very unusual component of the site, and was selected as the focus of this thesis at the building scale. The structure is an undulating mixture of brick and steel below and timber with clerestory windows. Unfortunately this building is one of the most damaged, and parts have already come down. Some of the steel has been corroded by acid fumes from the dyes, and much of the wood has begun to rot without weather protection. Rather than try to reuse this structure directly, the design focuses on removing the damaged sections and repairing one to remain as an open loggia. The result is a courtyard that accesses the entrance to the main complex via Building 5 and the new Gallery and Sales Building that will wrap around the steel structure defining the courtyard. The new building will link old and new by using a mixture of contrasting materials and reclaimed materials from the current building.



**Figure 89: Building 7 Documentation.** This building is one of the most damaged and partially collapsed. [Images and photographs by author.]

BUILDING 7 - COURTYARD,  
GALLERY AND VISITOR CENTER  
DYE HOUSE

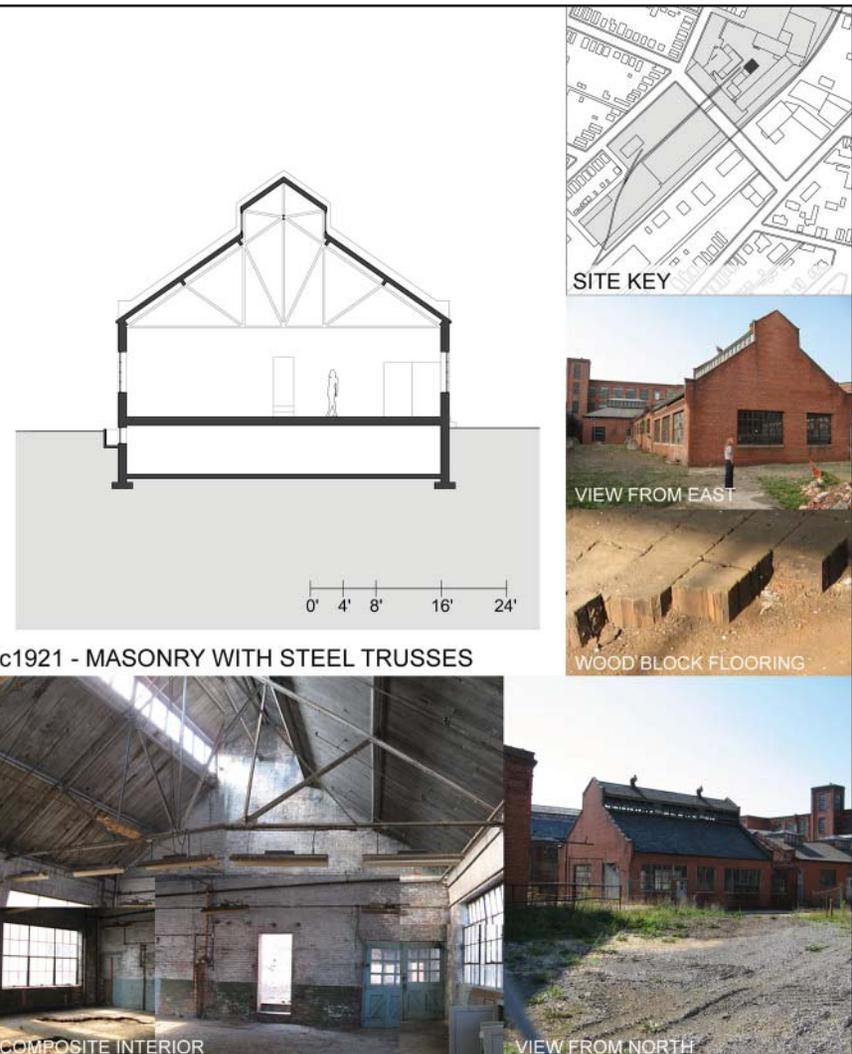


**Figure 90: Building 7 Section.** Above is the character of the courtyard of the gallery and visitor center for the Interwoven School of Crafts as depicted by the gestural drawing of Lin Mao. The icon at right indicates programming. [Image by author.]

## Building 8

Buildings 8 through 11 constitute a series of buildings which have been programmed together because of their similar scale. Within the context of the entire complex these appear to be rather small structures, especially when considered individually. In fact they have generous spaces with no interior structure and are therefore useful for flexible program at a more intimate scale. While several small retail functions could fit into these buildings, in this case a restaurant is ideal for serving both visitors and affiliates of the school.

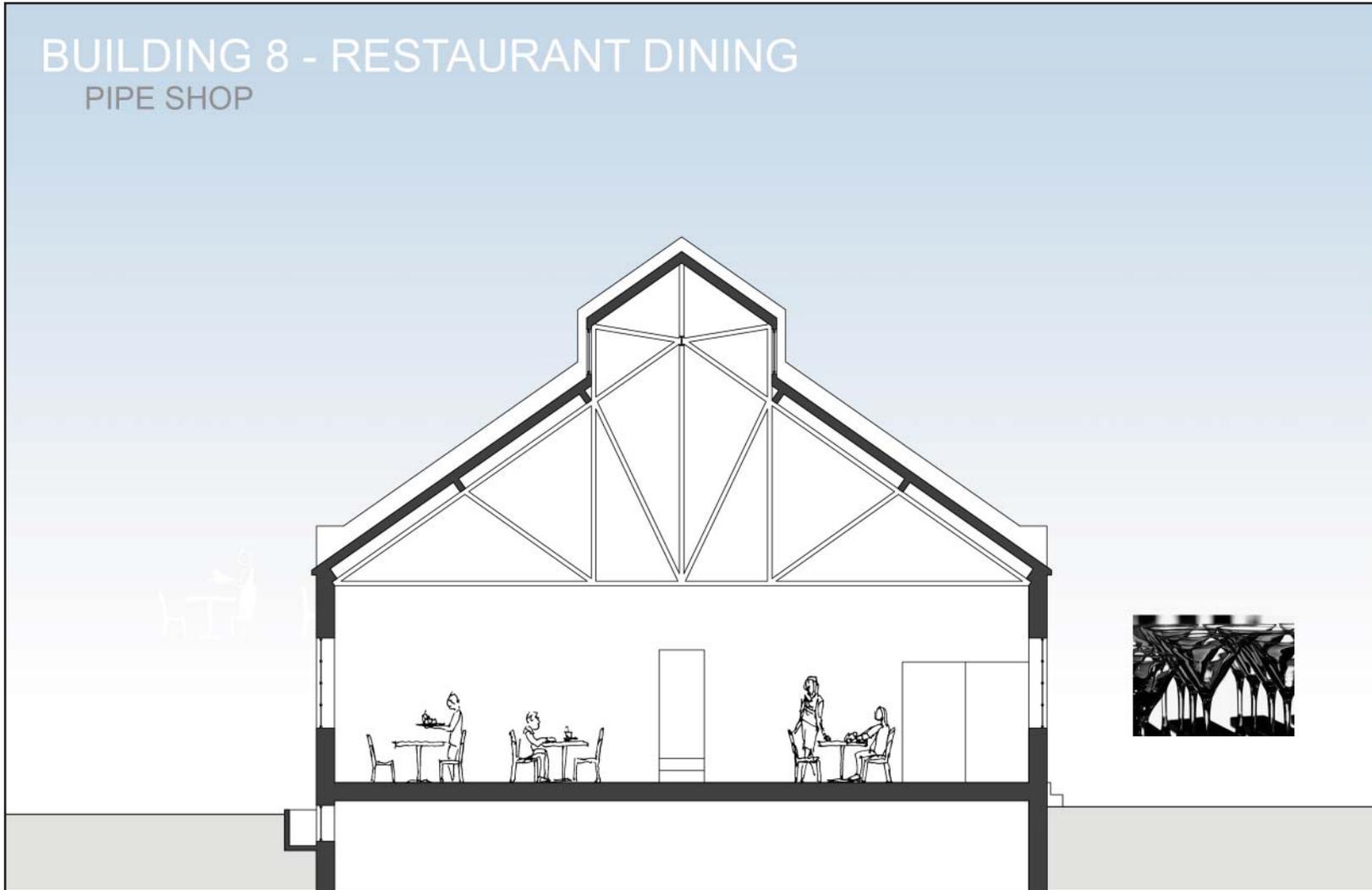
Building 8 is designated as the main dining room for this restaurant because of its prominent location. Being on one end of the set gives this building views in several directions, but allows it to be connected to the central circulation. The basement below is an additional space that could be used as a cellar room for special functions.



**Figure 91: Building 8 Documentation.** The scale of the site makes this building seem deceptively small. [Images and photographs by author.]

# BUILDING 8 - RESTAURANT DINING

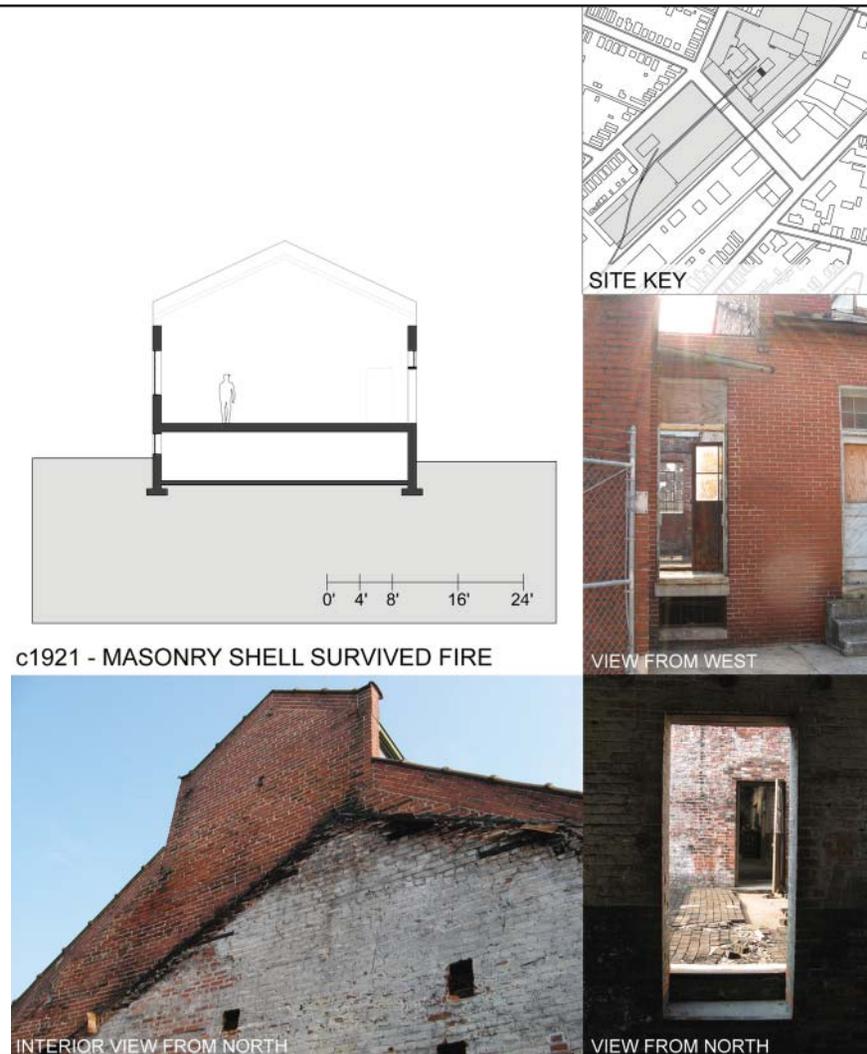
## PIPE SHOP



**Figure 92: Building 8 Section.** Above is the character of the restaurant's dining area as depicted by the gestural drawing of Lin Mao. The icon at right indicates programming. [Image by author.]

## Building 9

This is the other badly damaged building on the site, and its location makes it a good candidate for repair or limited redesign. A fire destroyed the roof and damaged the wood block floor, but despite the location sandwiched between two other buildings the fire did not spread. In essence the vertical structure is all there, so it would not be difficult to replace what has been lost. Given its central location and small size, it is logical that this will be the entry of the restaurant. In this area people would hang coats and wait to be seated on very busy days. All dining areas are accessible from here, and people could spend their waits in the adjacent exhibition kitchen. Perhaps the most interesting opportunity presented by the fire is that in the redesign of this building it will change from being an underarticulated portion of the group to being emphasized as the main entry of the restaurant.



**Figure 93: Building 9 Documentation.** This building is very small and fire damaged. [Images and photographs by author.]

# BUILDING 9 - RESTAURANT ENTRY AND COAT ROOM

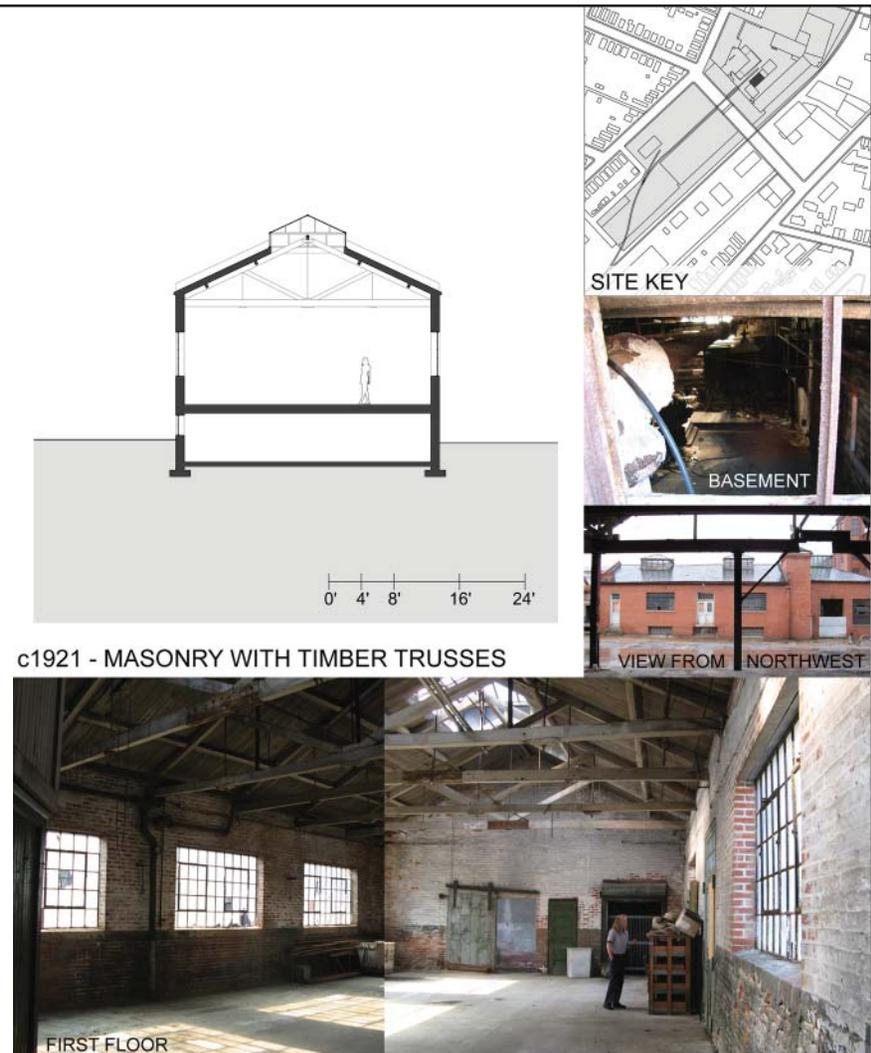
## TIN SHOP



**Figure 94: Building 9 Section.** Above is the character of the restaurant's entry and coat room as depicted by the gestural drawing of Lin Mao. The icon at right indicates programming. [Image by author.]

## Building 10

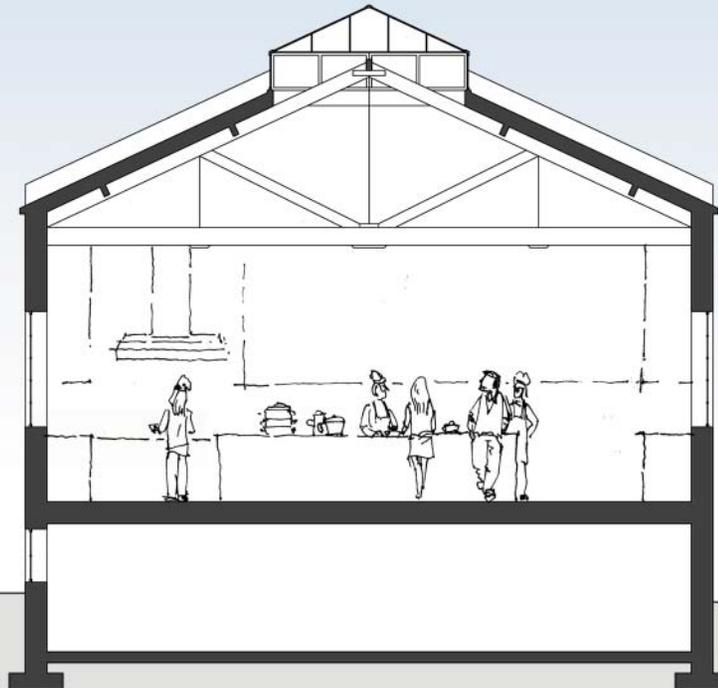
As a large, centrally located space, this is a natural place for the exhibition kitchen. With its linear connections and adjacency to the entry, there is an opportunity for people to engage the cooking process while waiting or moving to tables. This central location also means that when the bar is not open yet or the main dining area has already closed, the kitchen is still fully accessible. The only potential problem is that with this older building it may be difficult to update the space enough to maintain the standards of cleanliness that are necessary in a modern kitchen. Undoubtedly there are places where this has already been done, and they can be studied to develop a working plan for this building.



**Figure 95: Building 10 Documentation.** This building is a connector between similarly small buildings. [Images and photographs by author.]

# BUILDING 10 - RESTAURANT EXHIBITION KITCHEN

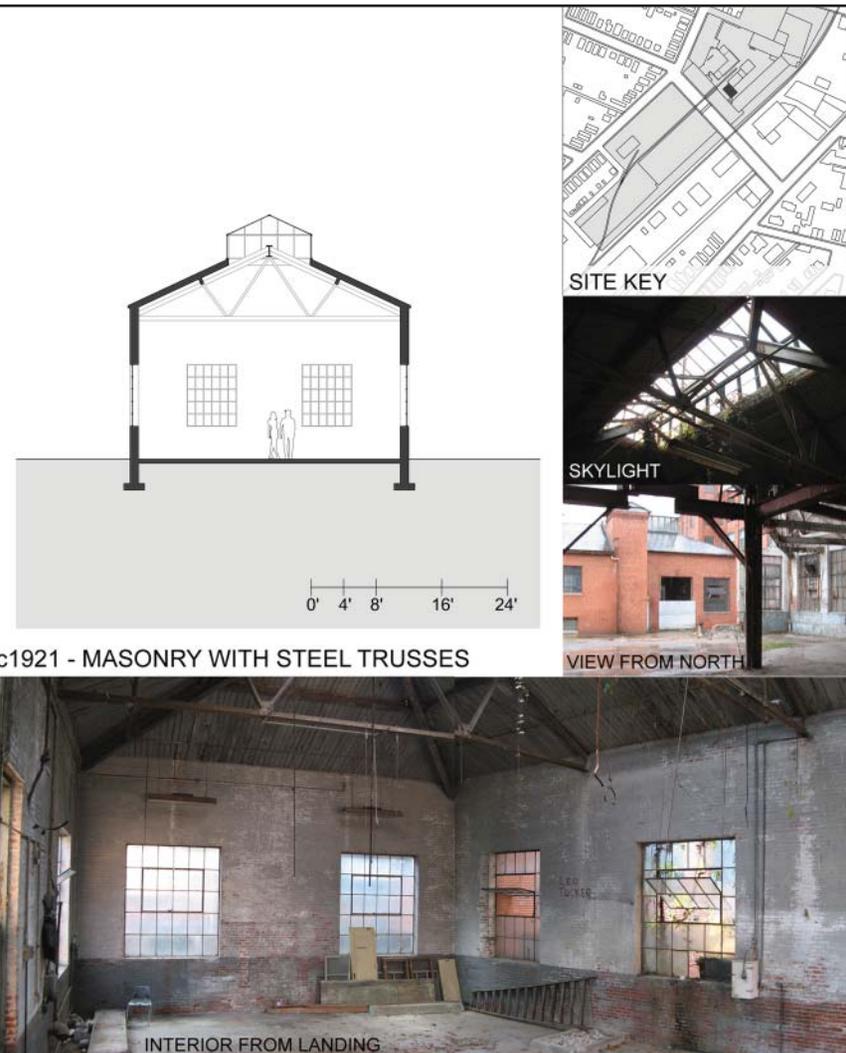
## SALT STORAGE



**Figure 96: Building 10 Section.** Above is the character of the restaurant's exhibition kitchen as depicted by the gestural drawing of Lin Mao. The icon at right indicates programming. [Image by author.]

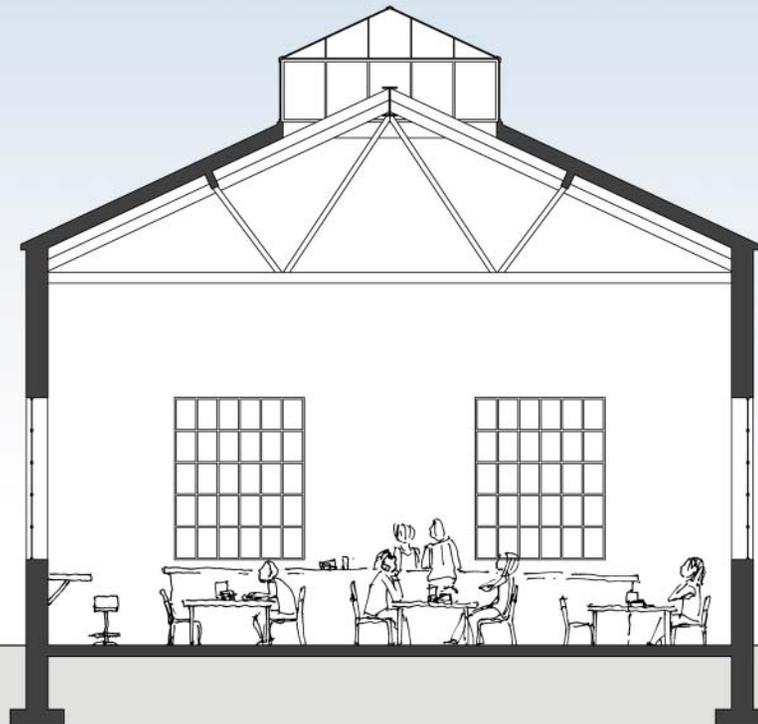
## Building 11

This building is spatially separated from the others of the set, and its location in the back of the complex makes this a good place for a more private function. A change in floor level separates this building from the others, and its high walls merge into the only hip roof on the site. Given the character of this building it would work well for a bar area that can be reserved for larger, private functions. The walls have ample room for the flat screen televisions for movies or sports, and there is floor space enough for a serving area and tables. Its exterior connections allow this building to utilize the east area of the courtyard as a private outdoor space, and the building can even be accessed independently from the other buildings after hours.



**Figure 97: Building 11 Documentation.** This building connects to the two areas of the courtyard. [Images and photographs by author.]

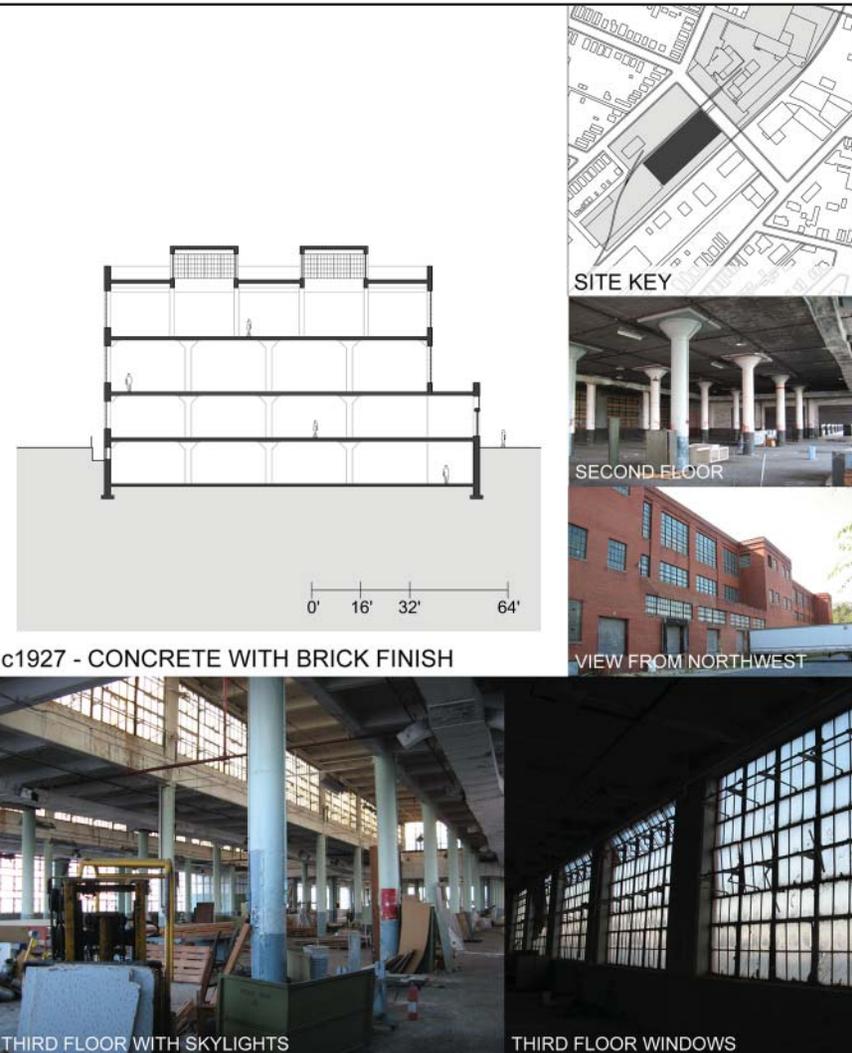
BUILDING 11 - RESTAURANT BAR  
FILTER HOUSE



**Figure 98: Building 11 Section.** Above is the character of the restaurant's bar area as depicted by the gestural drawing of Lin Mao. The icon at right indicates programming. [Image by author.]

## Building 12

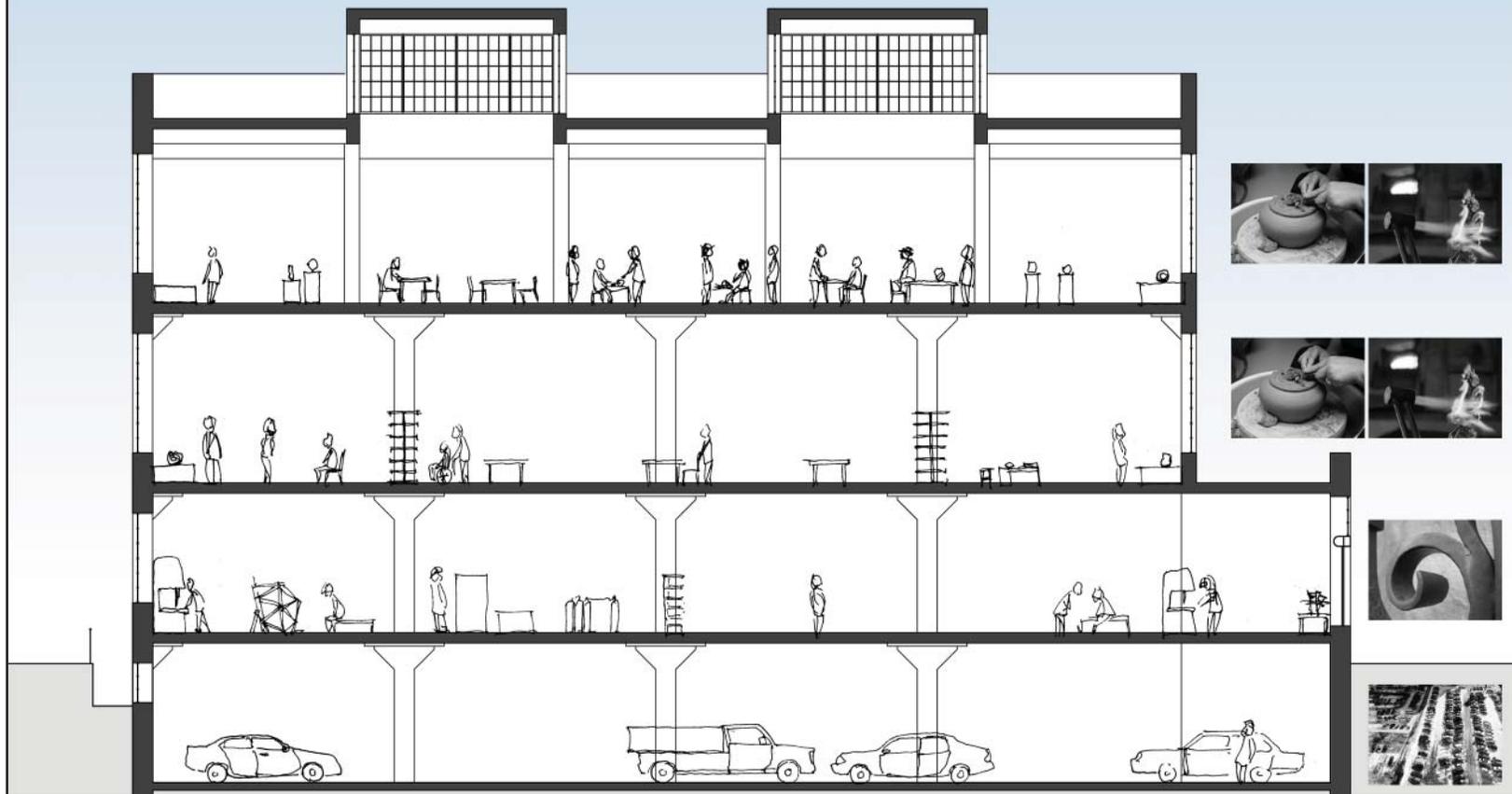
Being by far the largest building on the site and a concrete structure, this building is a natural place for crafts involving heavy equipment and fire hazards. With a freight elevator it will also be easy to move supplies to the floors and finished products out. Glassworking, ceramics, and metalworking all involve furnaces and kilns, and the high ceilings provide space for the excess heat to rise. Large, operable windows provide both ample natural light and ventilation in the warmer months. The lowest level of this building is designed to be able to drive into, and this will serve the need to have secure parking for the teachers and students of the institute. Secured indoor bicycle parking should also be accommodated within this space as well as some storage for larger items.



**Figure 99: Building 12 Documentation.** The scale of this building is very imposing and largest on site. [Images and photographs by author.]

# BUILDING 12 - CERAMICS, GLASS AND METALWORKING

## FACTORY BUILDING AND WAREHOUSE



**Figure 100: Building 12 Section.** Above is the character of the heavy industry building as depicted by the gestural drawing of Lin Mao. The icons at right indicate the floor-by-floor programming. [Image by author.]

## Building 13

The generator building is the only one that would be best suited to be refitted for its original purpose. Though it is currently filled with old equipment and asbestos insulation, the space is a soaring three stories without interior floors; it could essentially be returned to a clean slate that can be outfitted with modern equipment for cleaner energy generation and distribution.

Two of the underutilized features of the larger buildings of the complex are the flat roofs and towering heights. Outfitting solar panels is possible, but with the low efficiency of modern models there are likely better options for this situation. The fact that these buildings are much taller than the surroundings makes them good candidates for vertical wind turbines, and the generator building would be able to collect and distribute the energy collected.



**Figure 101: Building 13 Documentation.** Without any floors the interior scale of this building is impressive. [Image and photographs by author.]

## Building 14

This small garage building defines what will become a park space in the site development. It faces into an alley and is currently rented by residents living on the other side. Having the building continue with this purpose would be reasonable, or if needed it could be converted to private studios or storage for the craft school.



VIEW FROM EAST



SITE KEY



VIEW FROM NORTHEAST



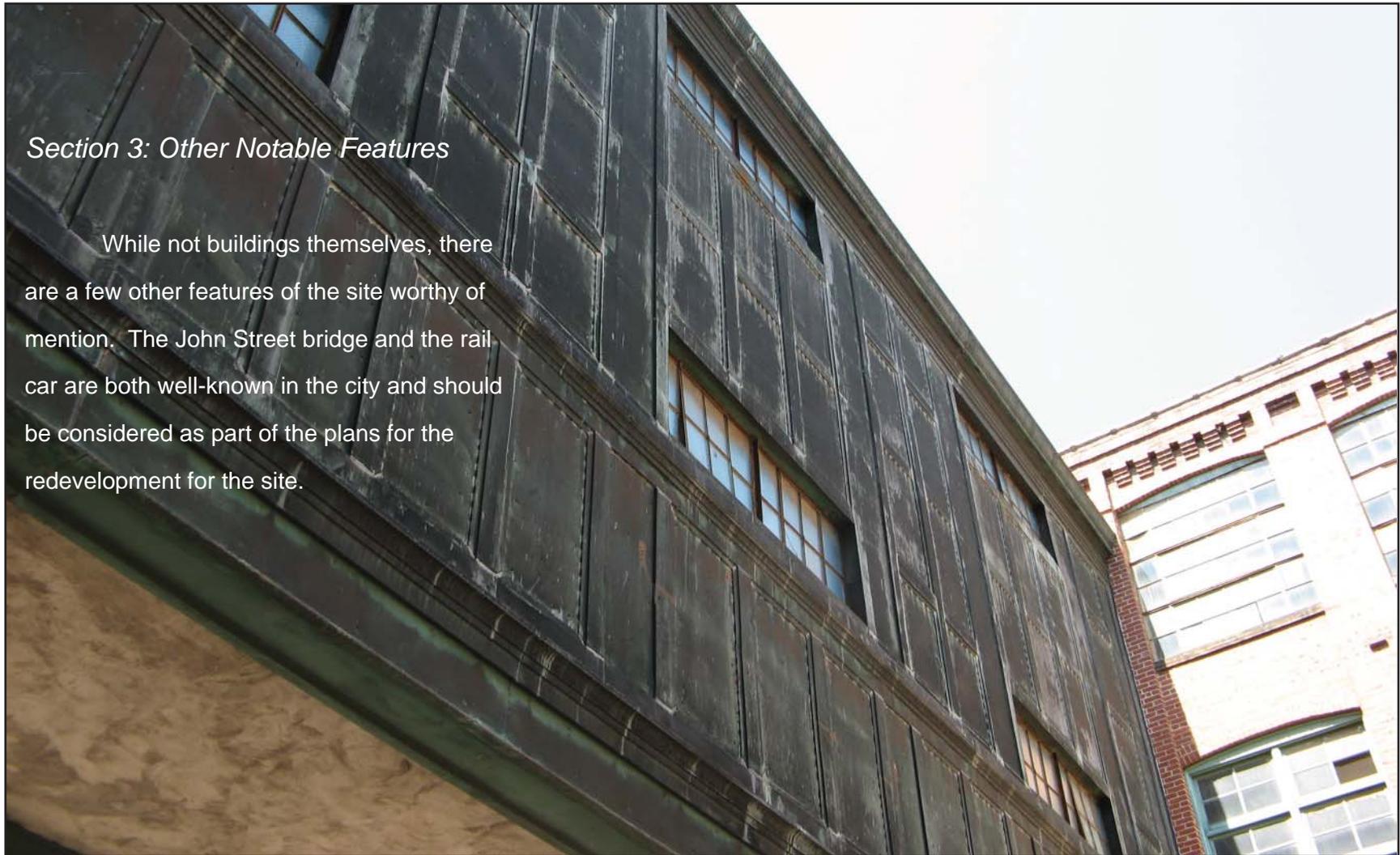
BRICK DETAIL

c1927 - MASONRY



VIEW FROM SOUTHEAST

**Figure 102: Building 14 Documentation.** For cars this garage is only accessible from a residential alley. [Image and photographs by author.]



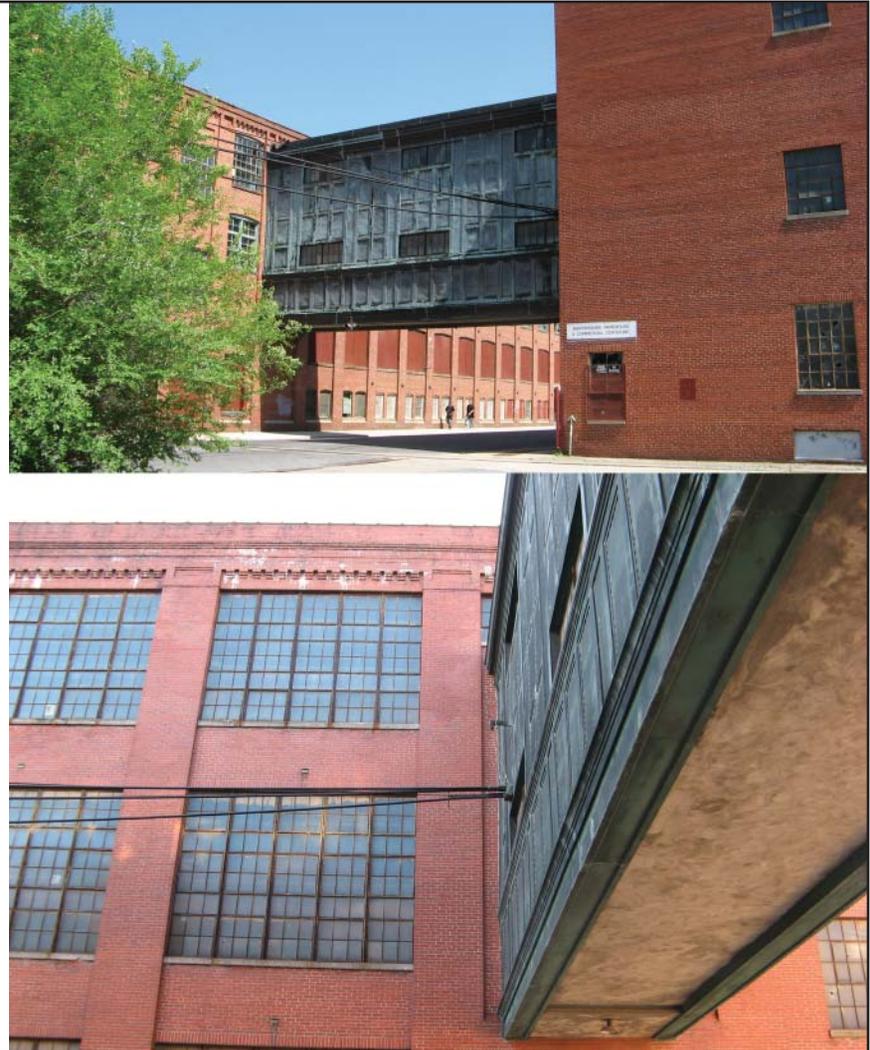
### *Section 3: Other Notable Features*

While not buildings themselves, there are a few other features of the site worthy of mention. The John Street bridge and the rail car are both well-known in the city and should be considered as part of the plans for the redevelopment for the site.

**Figure 103: Detail of the John Street Bridge.** The metal cladding of this bridge is striking from a distance, but the details can only be fully appreciated from up close. [Photograph by author.]

## The John Street Bridge

This bridge is an icon not only of the site but of the city; there is no other bridge with of this nature or with a similar character. When Building 12 was added to the site in the late 1920's this bridge was retrofitted to connect to Building 4, allowing workers and carts to safely move above the traffic of John Street. As with the buildings themselves, the bridge has operable windows for natural ventilation, but the metal cladding is unique to this structure.



**Figure 104: John Street Bridge.** These images show the bridge from the west and its connection to Building 12. [Photographs by author.]

## The Rail Car

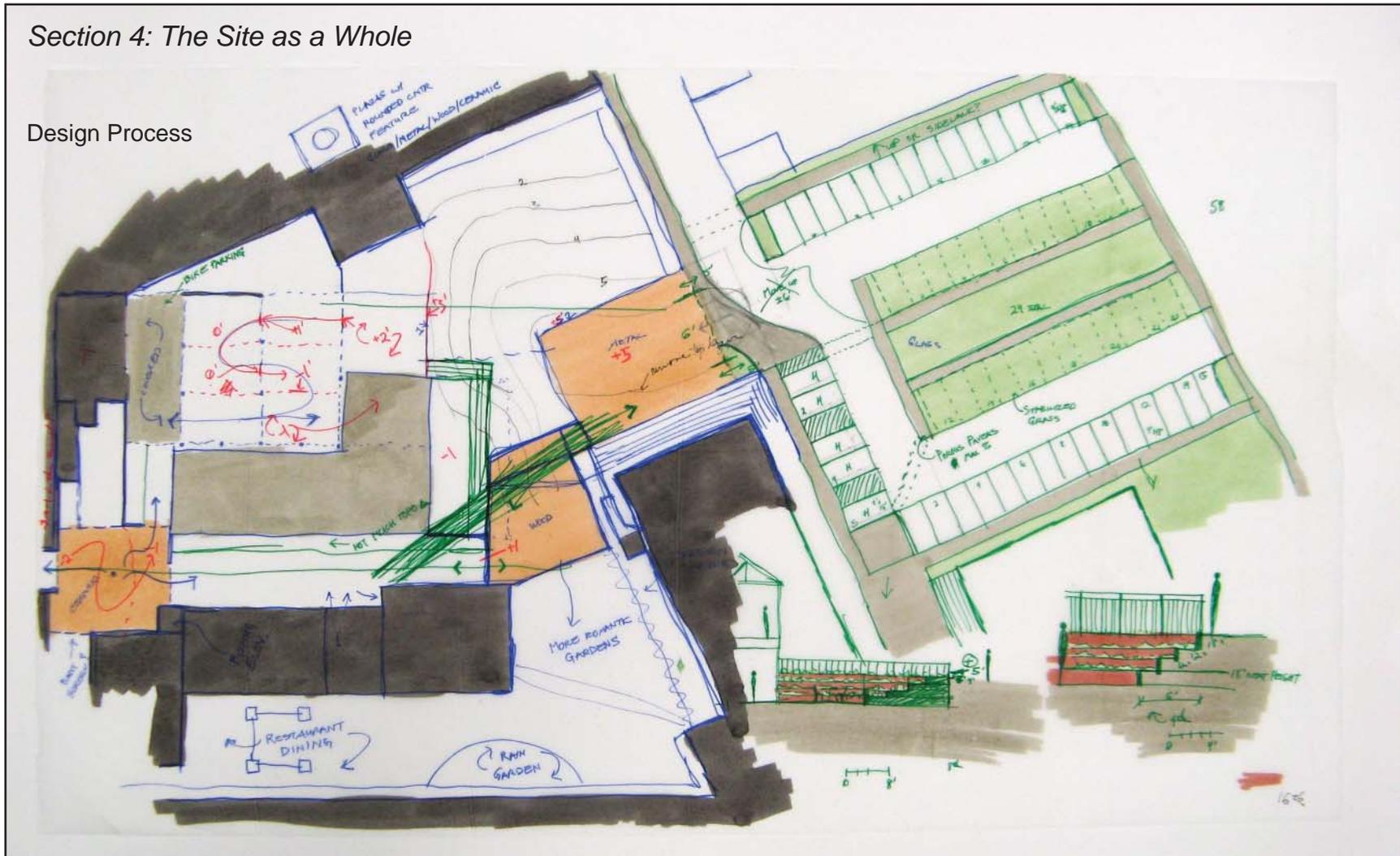
In the gap between the ground and first floors of Buildings 4 and 5 runs a set of railroad tracks which are currently occupied by a rail car. The future design of the site repurposes these tracks as a pathway, and so the car will move to be repurposed as well. As it appears to have been some sort of specialized shipping car, it could be restored to become a large scale exhibit piece in its new location.



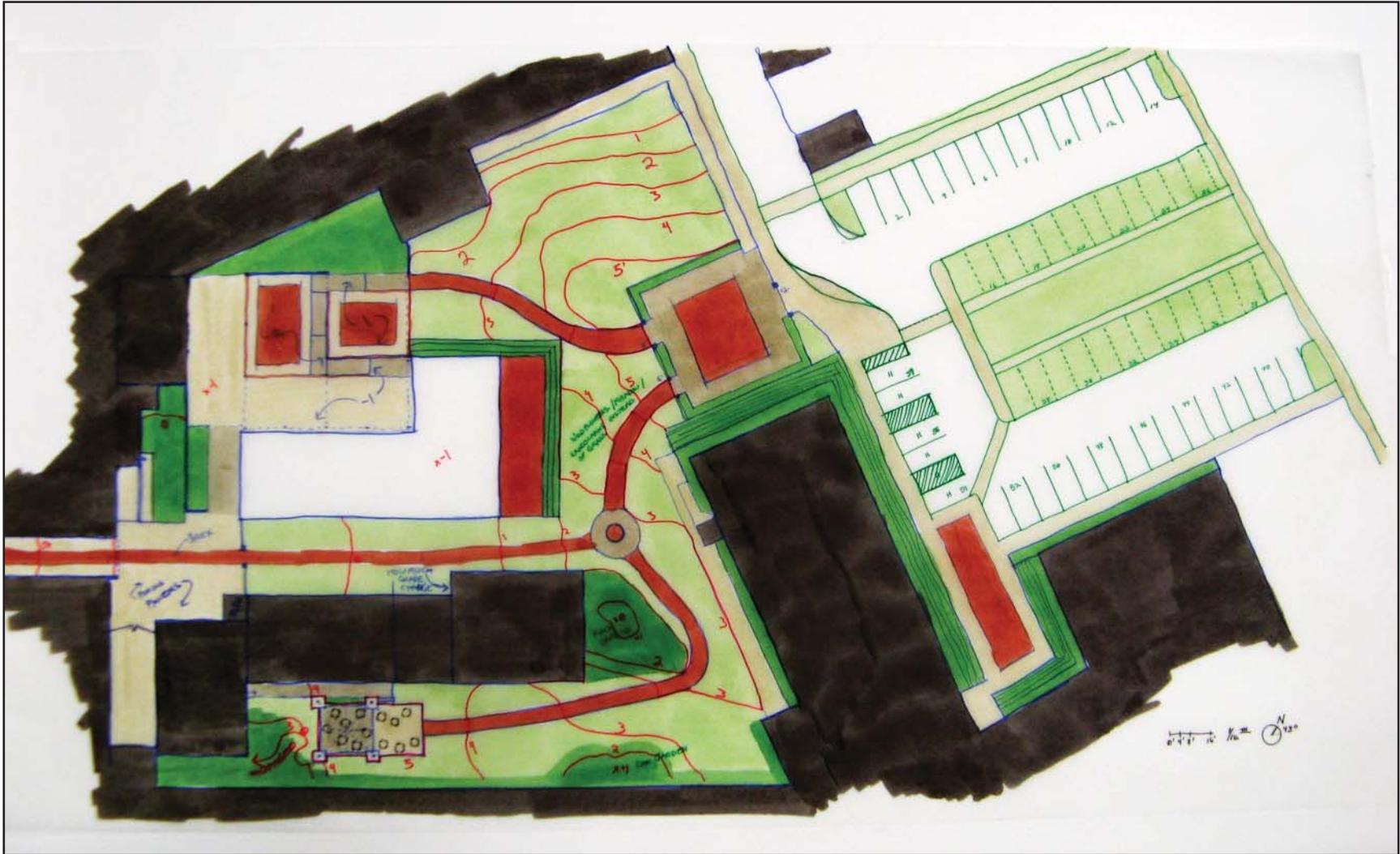
**Figure 105: Rail Car.** The rail car is most visible from the north where it can be seen in the context of the courtyard. [Photographs by author.]

## Section 4: The Site as a Whole

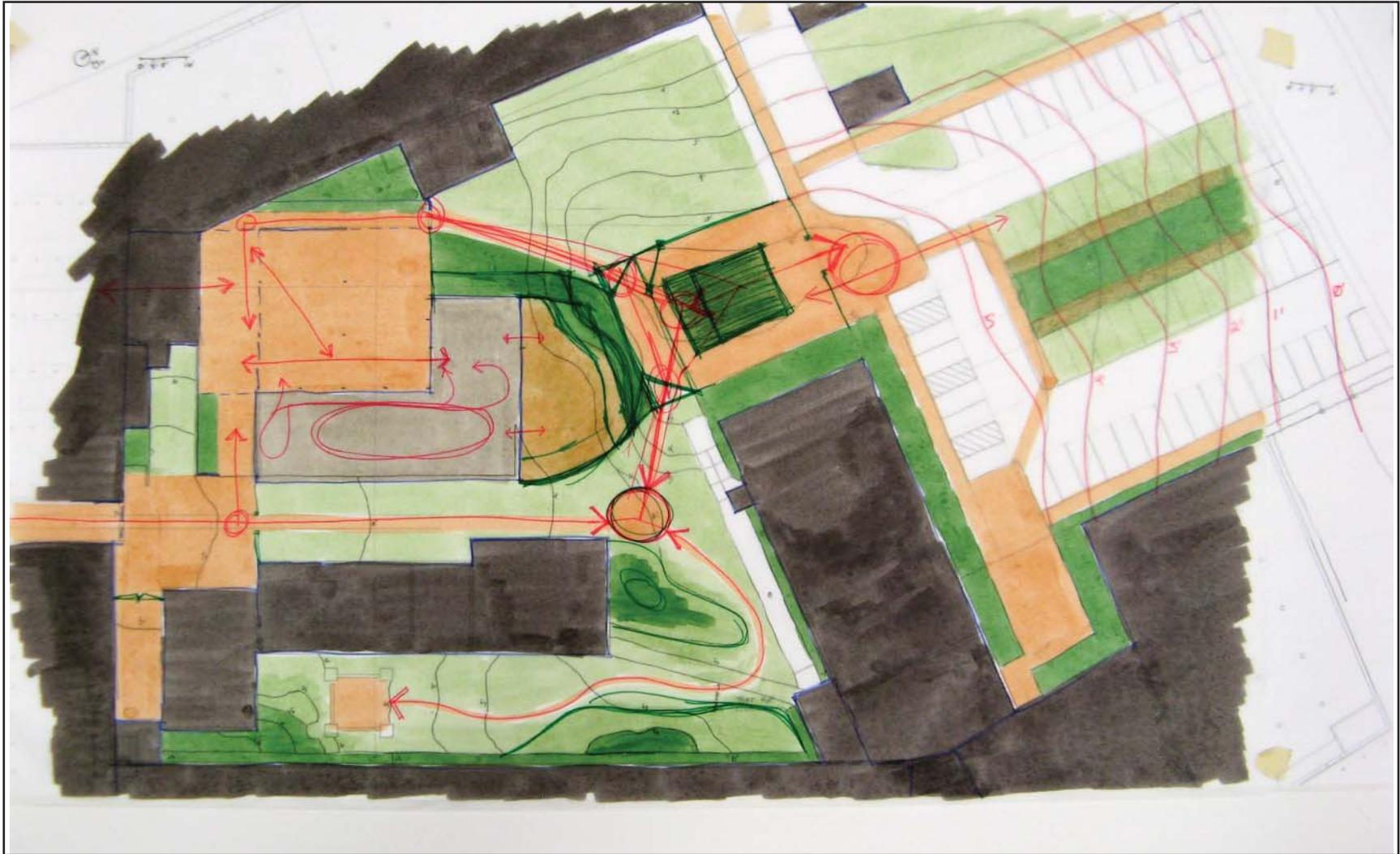
### Design Process



**Figure 106: Courtyard Design Process.** The site plan was designed concurrently with the gallery and sales building, and this is one of the earlier versions of the courtyard area in which different courtyards are themed to express different craft materials. [Image by author.]



**Figure 107: Courtyard Design Process.** In this version there are courtyards that provide transitions or focal areas at key points. The nature and character of the paths is matter of discussion when this is pinned up at a design meeting. [Image by author.]



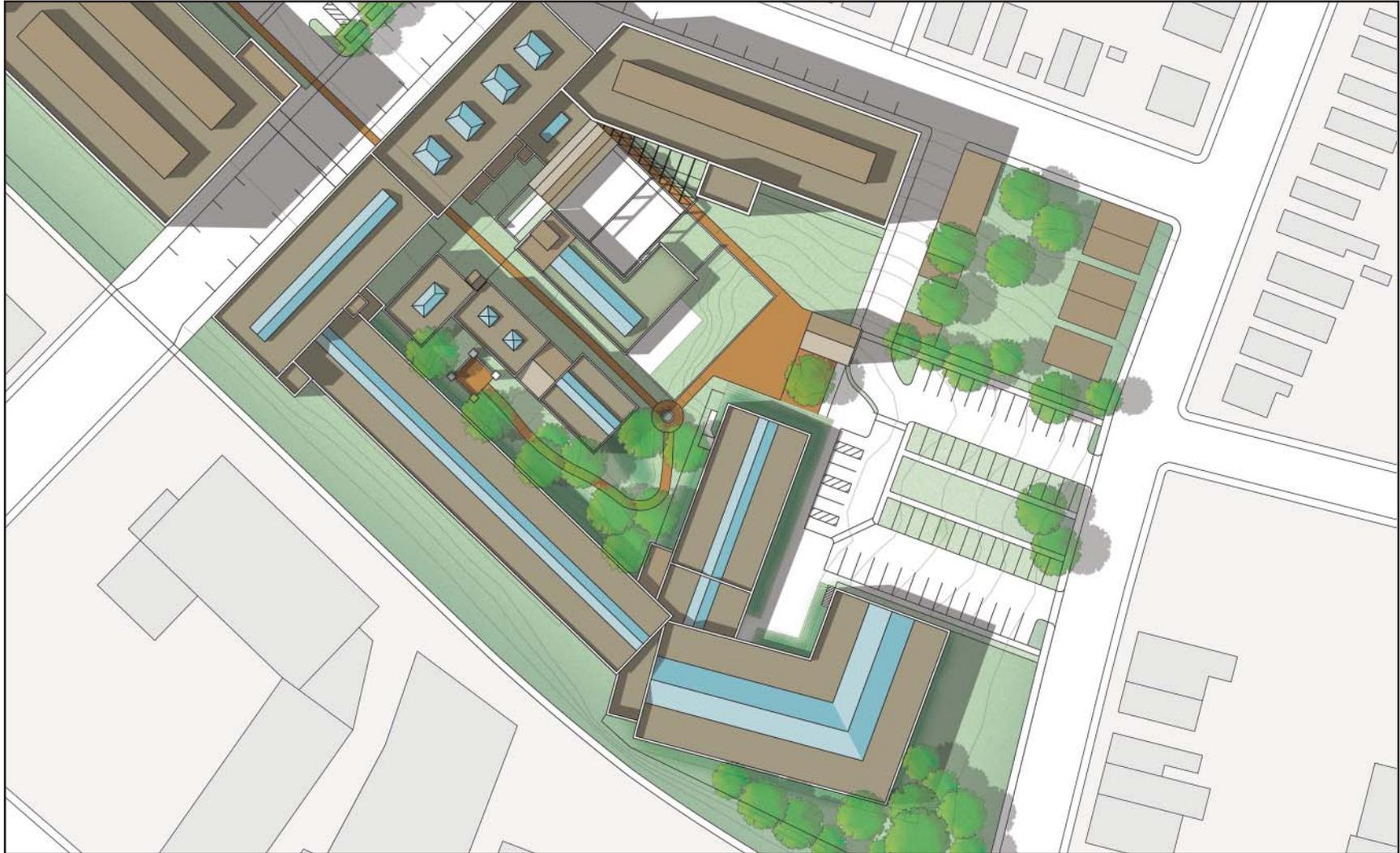
**Figure 108: Courtyard Design Process.** The process drawing with its diagramming overlay shows how the final design of the courtyard developed. Paths are now selectively straight or curvilinear to distinguish between more formal and natural spaces. [Image by author.]



**Figure 109: Public Review Site Plan.** The landscaping is an integral part of the site design, and it is most visible here on the graphics for the site plan. This image was rendered by Dan Lamp. [Image by author.]



**Figure 110: Public Review Site Plan - South Detail.** The park space near the garage building is clearly visible here as well as the feature that is made of the rail car in the parking garden. The basement parking level is accessed from the alley. [Image by author.]



**Figure 111: Public Review Site Plan - North Detail.** The main entry to the courtyard will be from the parking garden adjacent to King Street; the entry pavilion's courtyard directs visitors through the west connector and into the complex's entry courtyard. [Image by author.]

## Haptic Model and Development

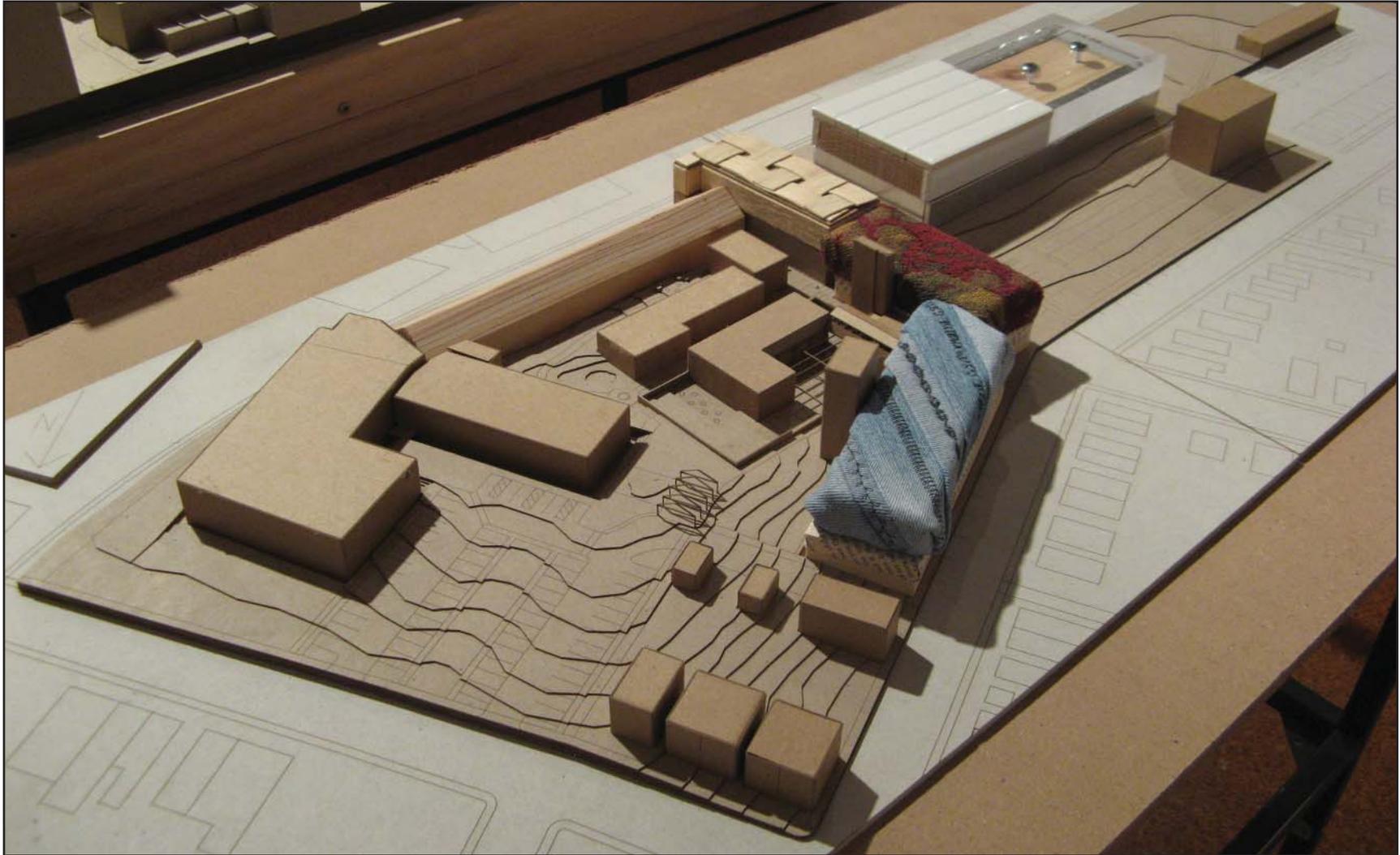
The physical model for this design is a visual and tactile means of communication wherein the textures convey both importance and programming. The idea for a haptic site model developed over the semester as a result of the author's participation in an architecture elective course titled "Architecture and the Senses" taught by Professor Peter Noonan. The "haptic board" project shown at right required both tactile and visual composition and was required to convey an idea about materiality—in this case how a single base material (apple wood) could produce a wide variety of expressions and sensations. This idea was reworked to create a model which would convey the most important programmatic elements of the site design. The intent is that the model function as both diagram and interactive graphic communication.



**Figure 112: Haptic Board Details.** These detail images show areas where different materials meet. [Photographs by author.]



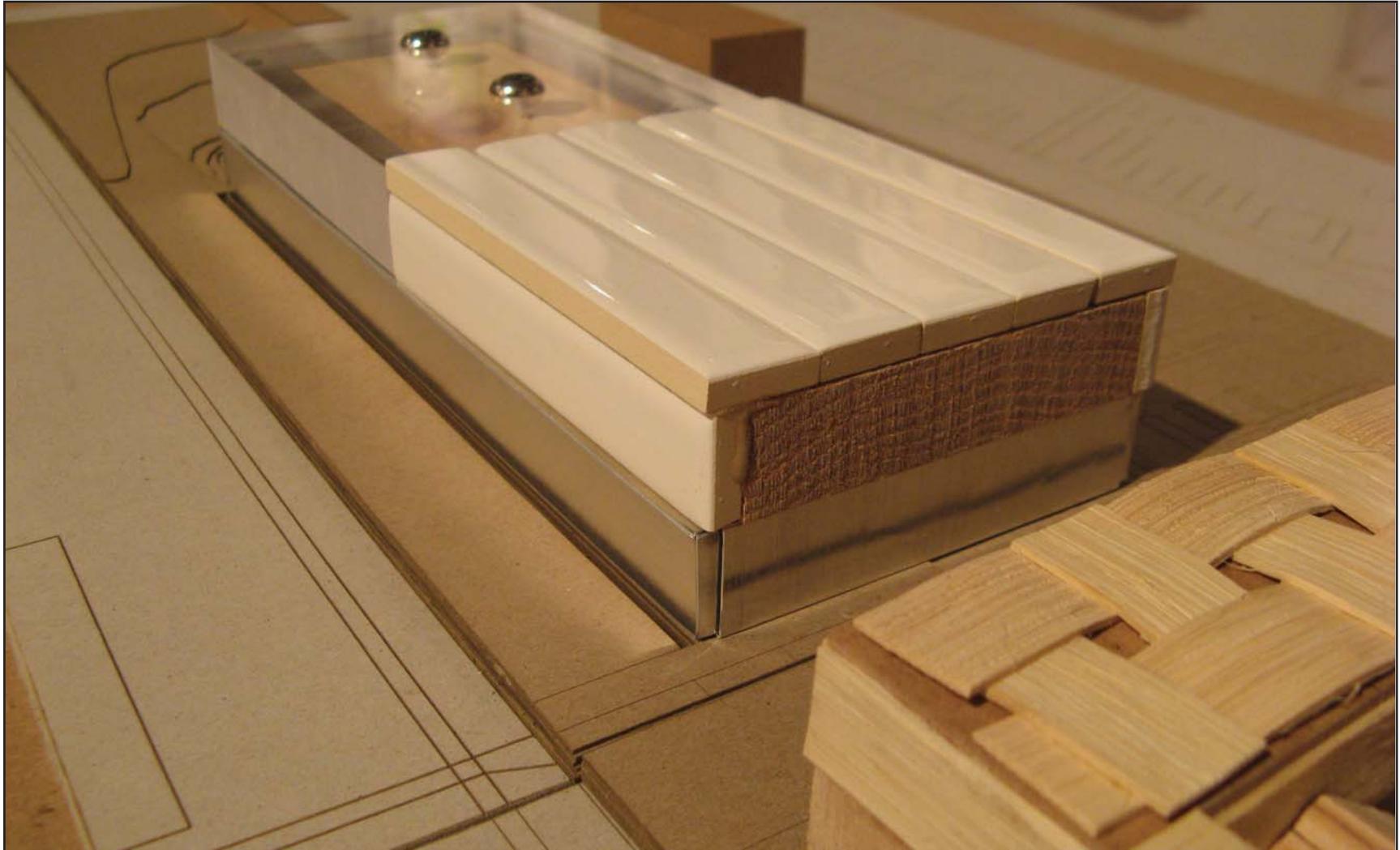
**Figure 113: Haptic Board and Details.** The author's haptic board project is shown on the left; details of three of the different textures are shown along the right side. [Photographs by author.]



**Figure 114: Haptic Model.** Each of the floors occupied by a craft studio is rendered in a material representative of the craft, and as the main scholarly resource for the school the library is also given a representative texture. [Photograph by author.]



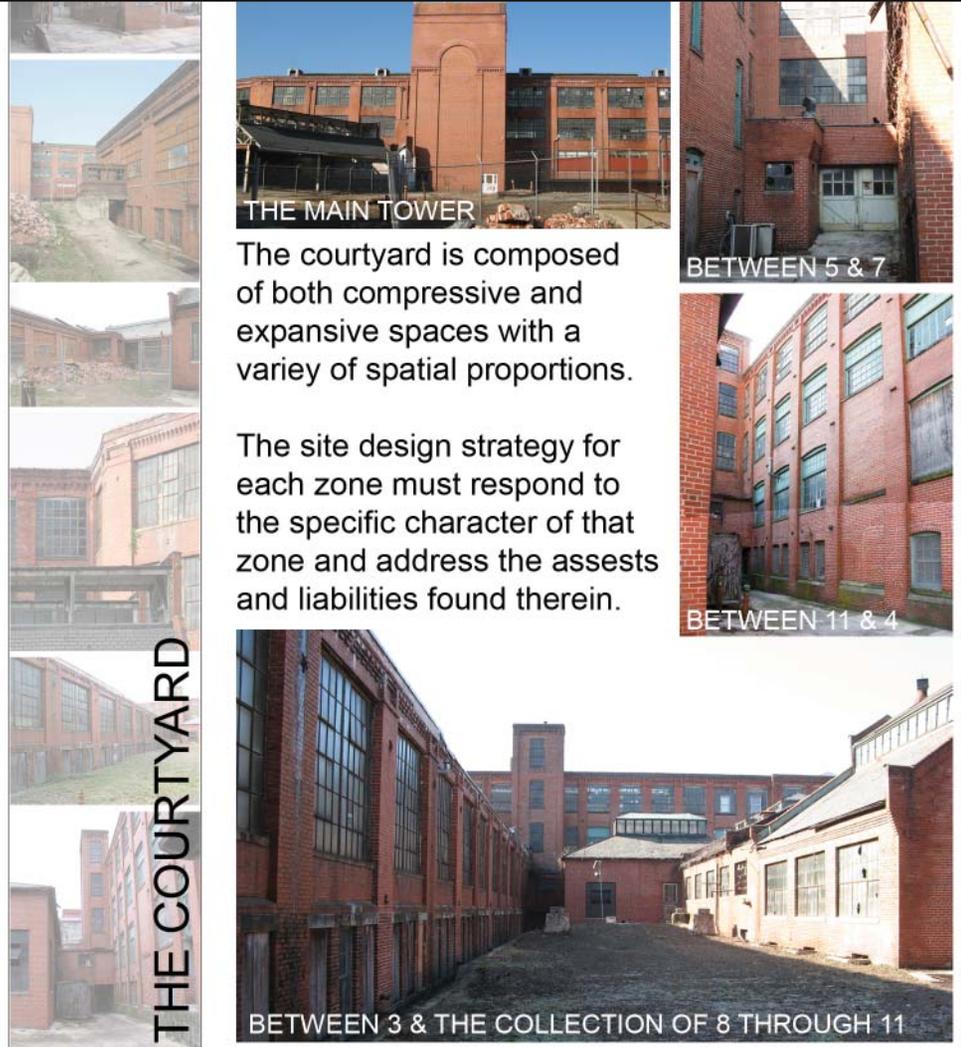
**Figure 115: Detail of Haptic Model's North Courtyard.** Starting from the lower left: Building 3 contains woodworking, Building 4 basket weaving, Building 5 textile weaving, Building 6 quilting, and the gallery and sales building is rendered in MDF. [Photograph by author.]



**Figure 116: Detail of Haptic Model's South Section.** The top two floors contain ceramics and glassworking studios while the first floor is reserved for metalworking. The basement and the John Street bridge are not visible. [Photograph by author.]

## Chapter 6: The Design Process

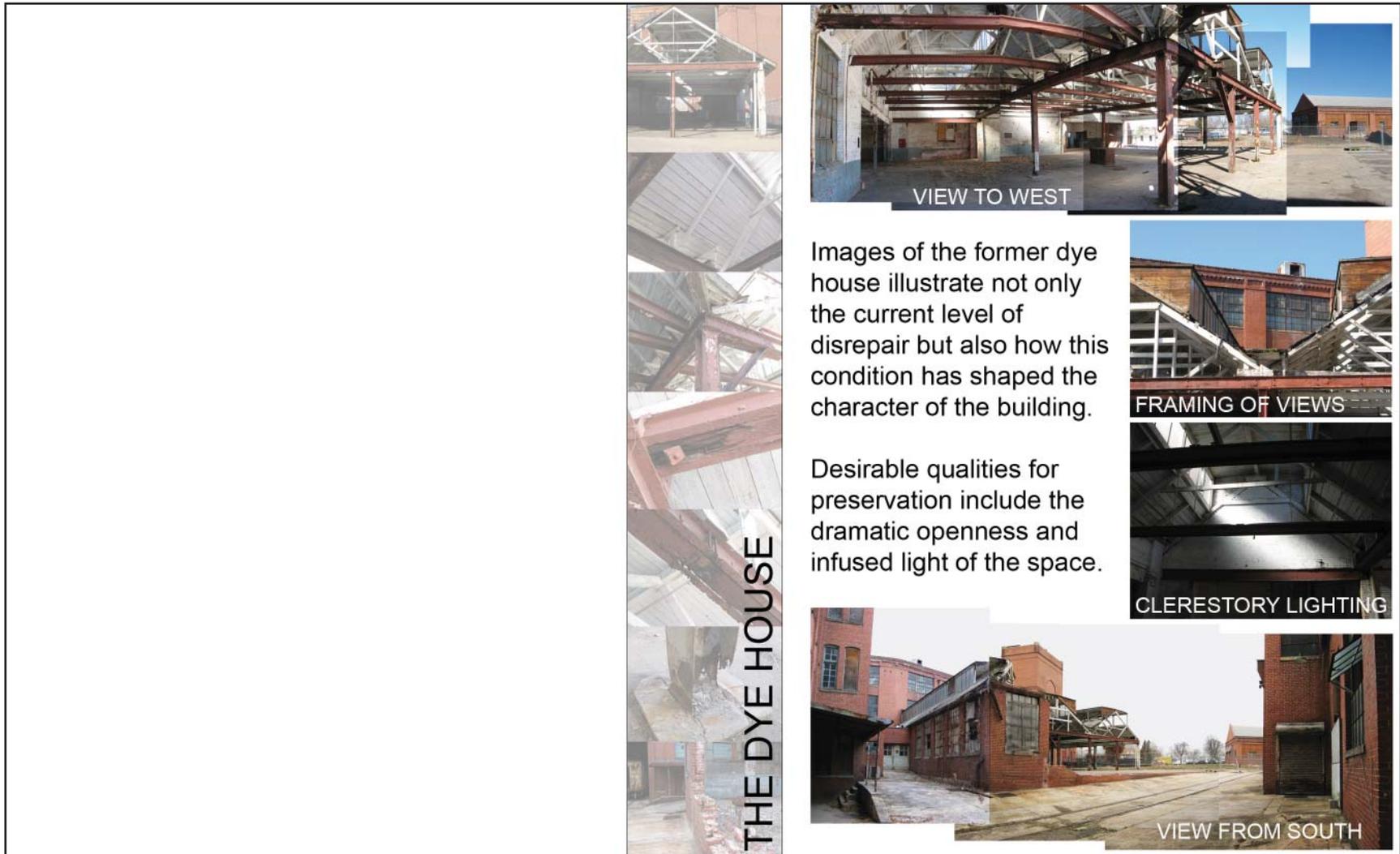
### Section 1: Building 7 Documentation



**Figure 117: The Courtyard.** This is a modified version of the site documentation which was used throughout the design process and presented at the public review. [Photographs by author.]



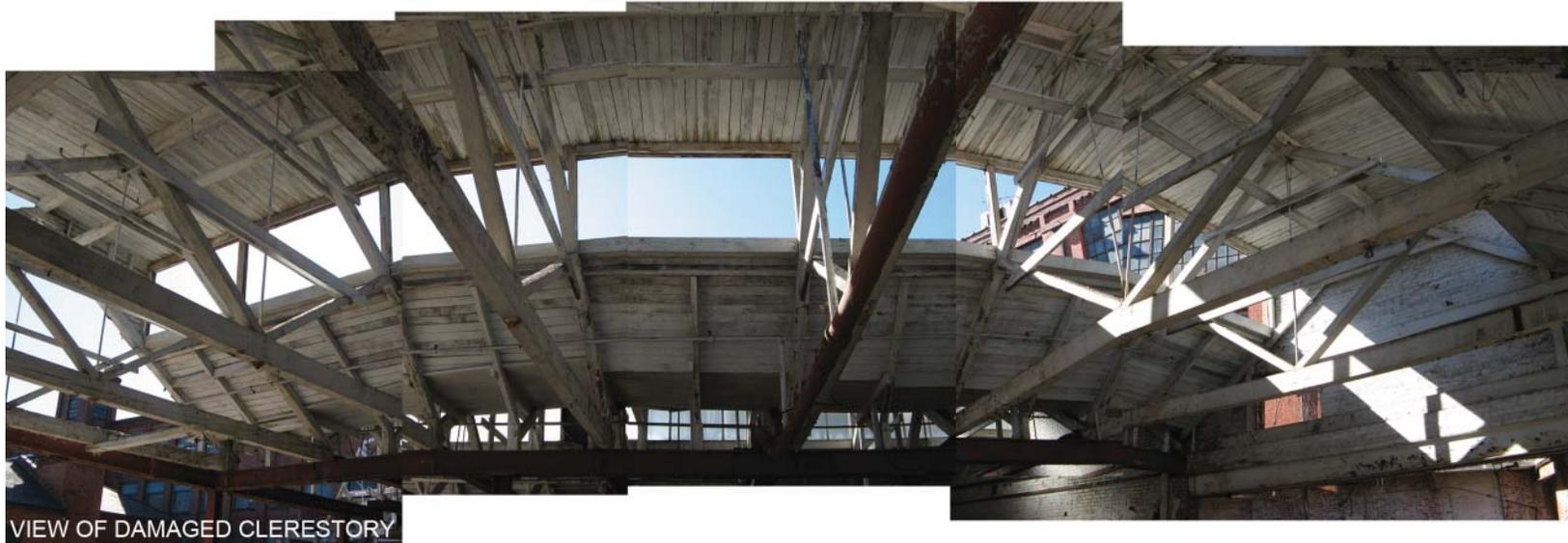
**Figure 118: The Courtyard.** This is a modified version of the site documentation which was used throughout the design process and presented at the public review. [Photographs by author.]



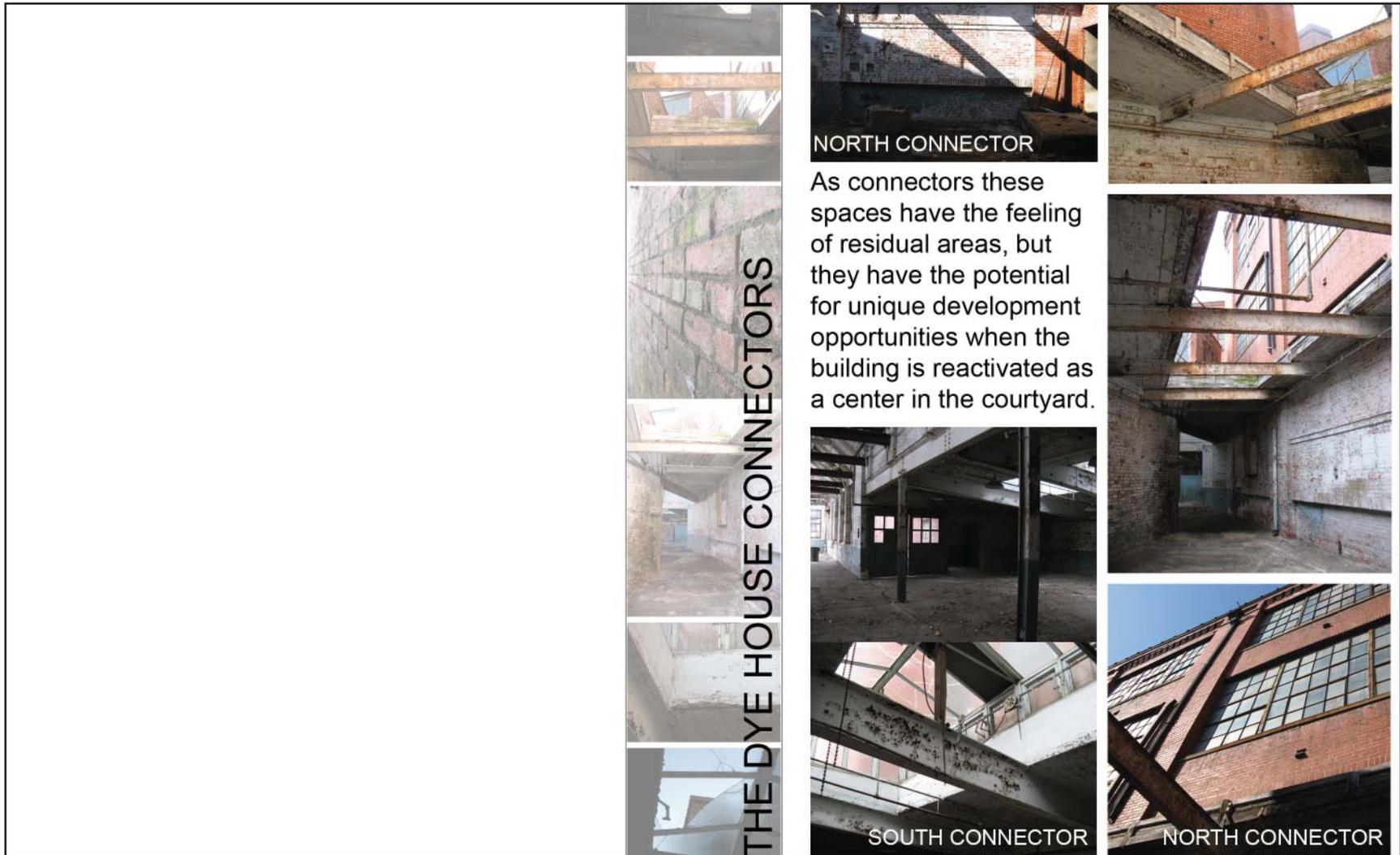
Images of the former dye house illustrate not only the current level of disrepair but also how this condition has shaped the character of the building.

Desirable qualities for preservation include the dramatic openness and infused light of the space.

**Figure 119: The Dye House (Building 7).** This is a modified version of the site documentation which was used throughout the design process and presented at the public review. [Photographs by author.]



**Figure 120: The Dye House (Building 7).** This is a modified version of the site documentation which was used throughout the design process and presented at the public review. [Photographs by author.]



**Figure 121: The Dye House Connectors.** This is a modified version of the site documentation which was used throughout the design process and presented at the public review. [Photographs by author.]



THE WEDGE-SHAPED NORTH CONNECTOR TO BUILDING 6



MISSING NORTH CONNECTOR SKYLIGHT



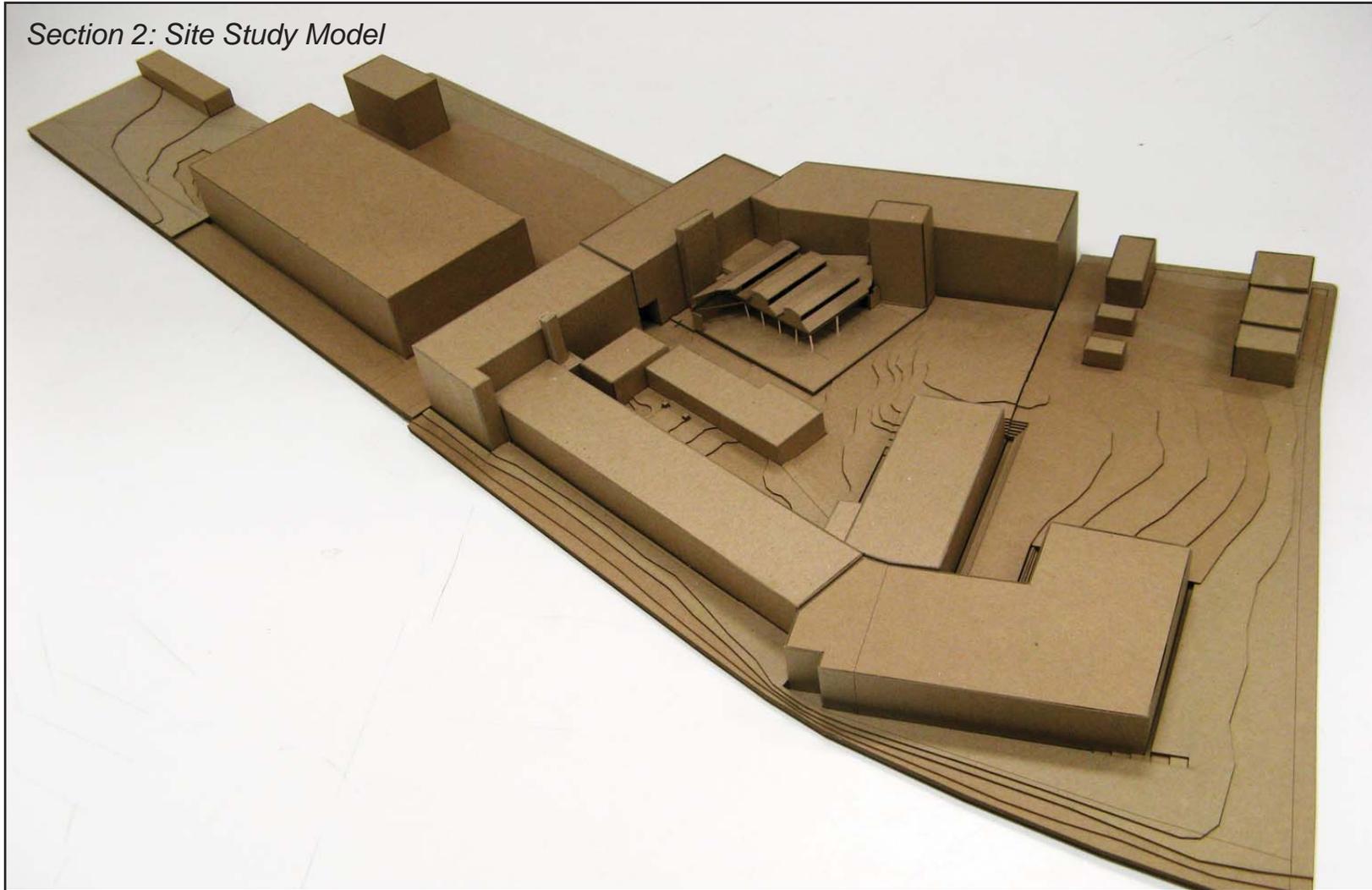
THE SOUTH CONNECTOR TO BUILDING 5



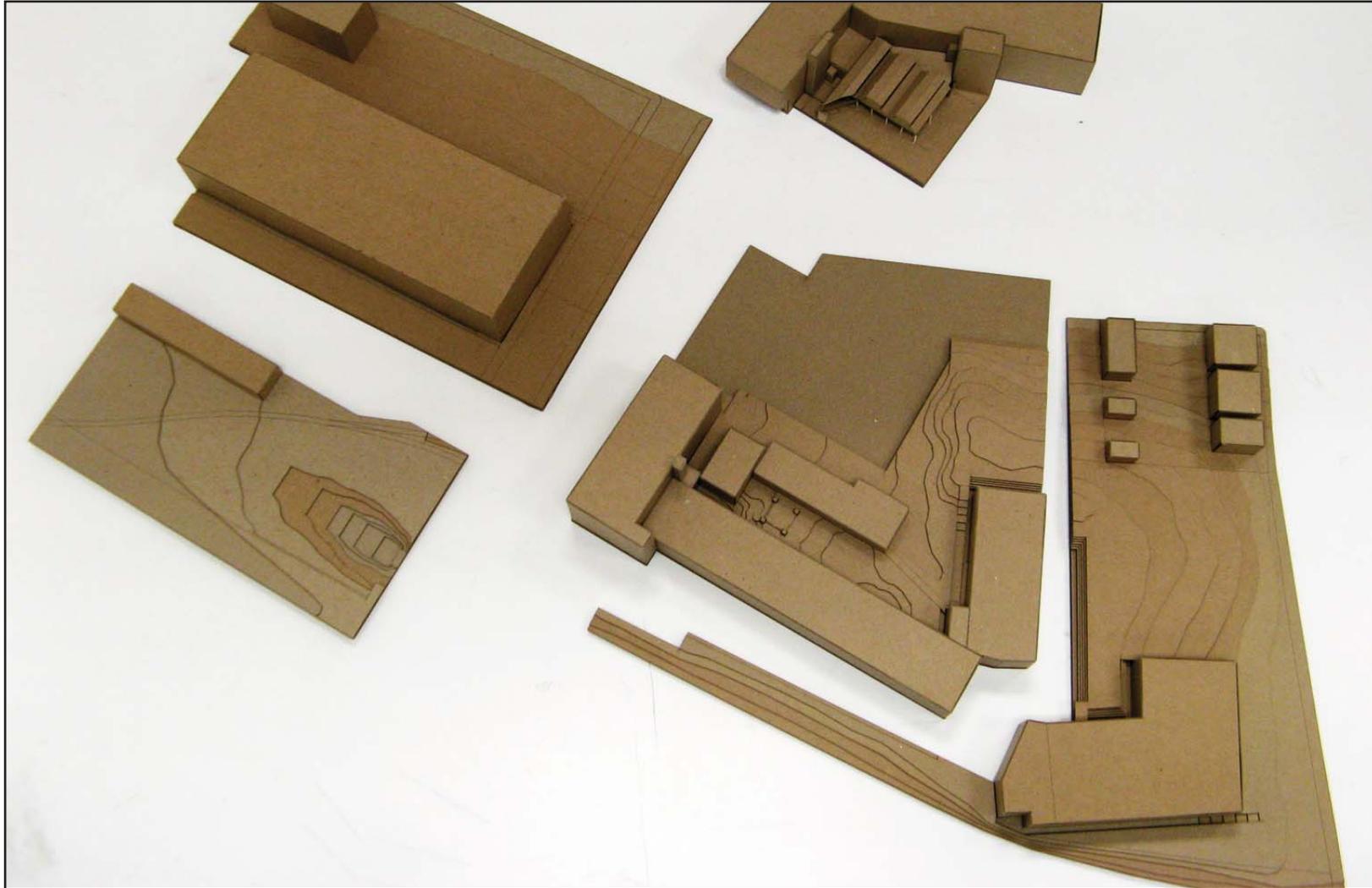
BROKEN SOUTH CONNECTOR SKYLIGHT

**Figure 122: The Dye House Connectors.** This is a modified version of the site documentation which was used throughout the design process and presented at the public review. [Photographs by author.]

*Section 2: Site Study Model*



**Figure 123: Site Study Model, Assembled View.** This model was constructed to be disassembled and components exchanged in order to explore different versions of designs. The portion containing Building 7 and its context has the most iterations. [Photograph by author.]



**Figure 124: Site Study Model, Exploded View.** The various components of this model are separated here to illustrate the flexibility of the model. [Photograph by author.]

Section 3: Levels of Intervention

1

This level maintains the original structure and calls for its repair and reutilization. Minimal intervention would work to preserve the existing characters of the plinth and courtyard as they exist currently. New construction could be contained within the structure or an exterior/interior integration.

2

This version removes additional portions of the building and retains the sound elements. The skylights, roof, and most of the trusses are eliminated because they have a significant amount of decay and damage. The red areas must be replaced for the remaining portions to be structurally sound.

3

The median version removes all pieces of the wooden trusses and pares the building down to the steel structure and connectors. The south connector is sound and requires only skylight repair, however the triangular roof of the north connector would be removed or replaced due to damage.

4

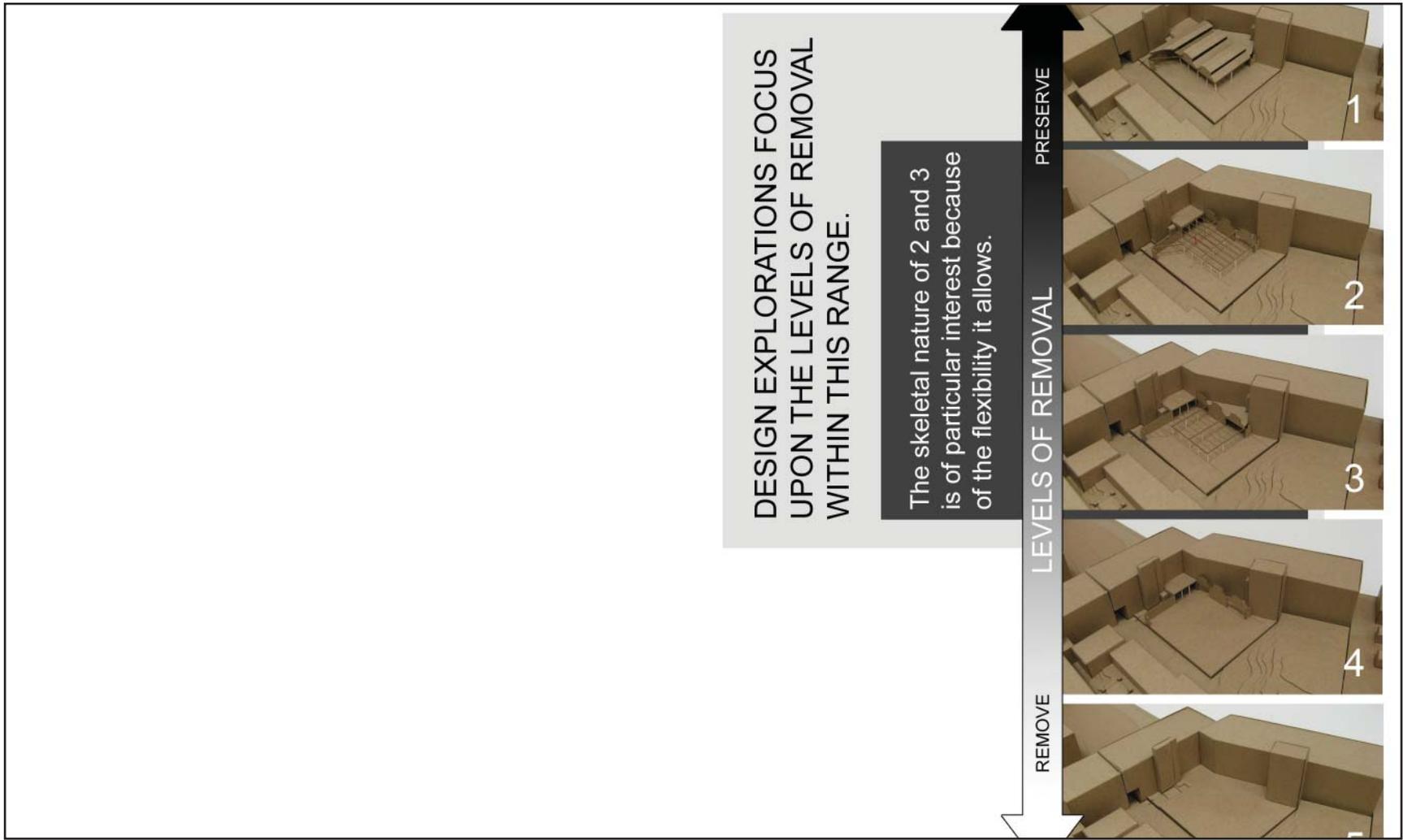
This level eliminates all significantly damaged portions of the building from the plinth, but would perhaps leave the impressions of those elements on the ground plane. Without existing structure in the way these impressions could occupy either interior or exterior space as it fits into the new design.

5

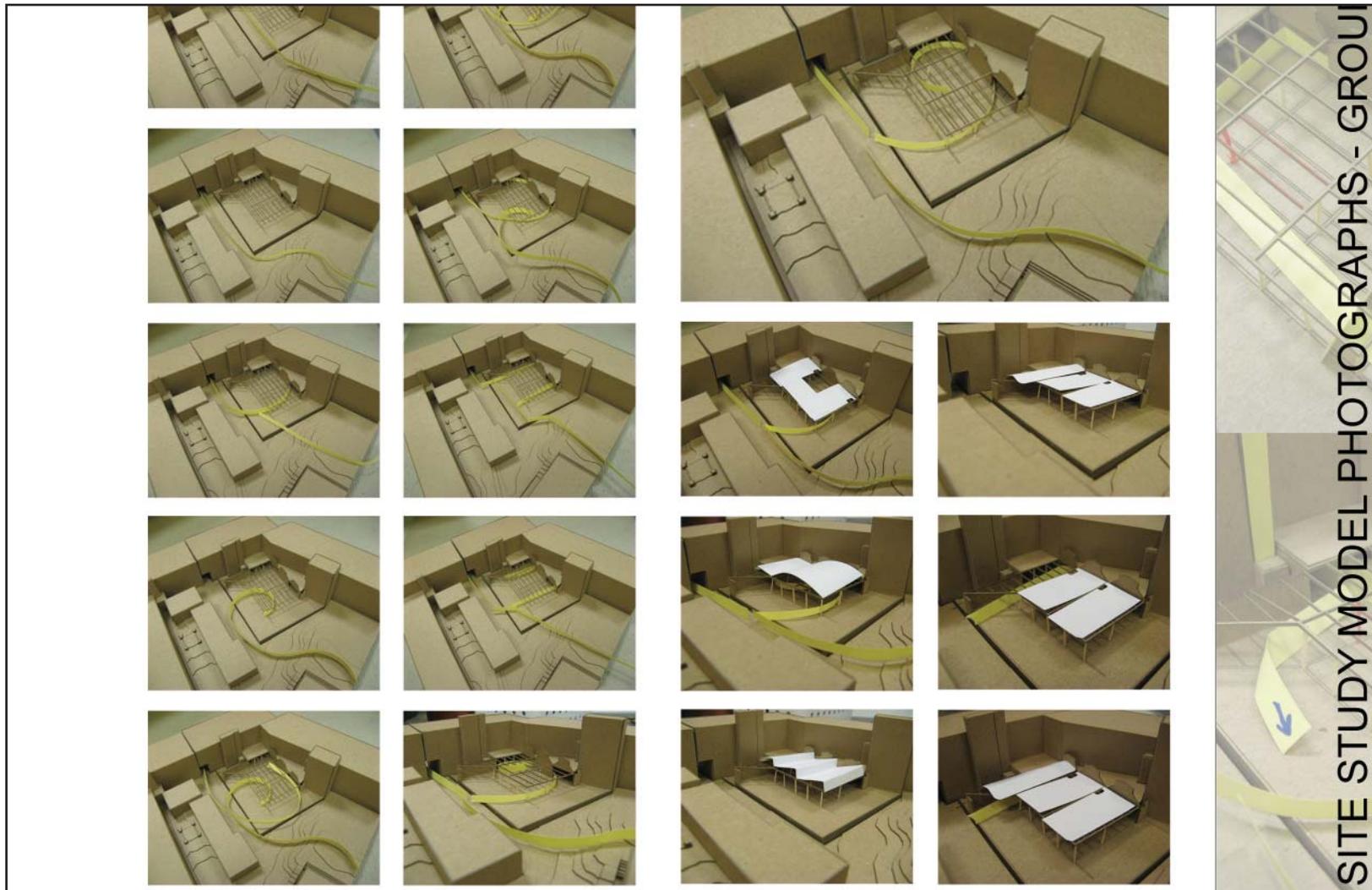
Removal to this degree would essentially constitute wiping the slate clean. Building 7, the connectors, and any traces that the building had been there would be removed from the plinth. Unless there are very serious and unforeseen structural problems this is probably excessive.



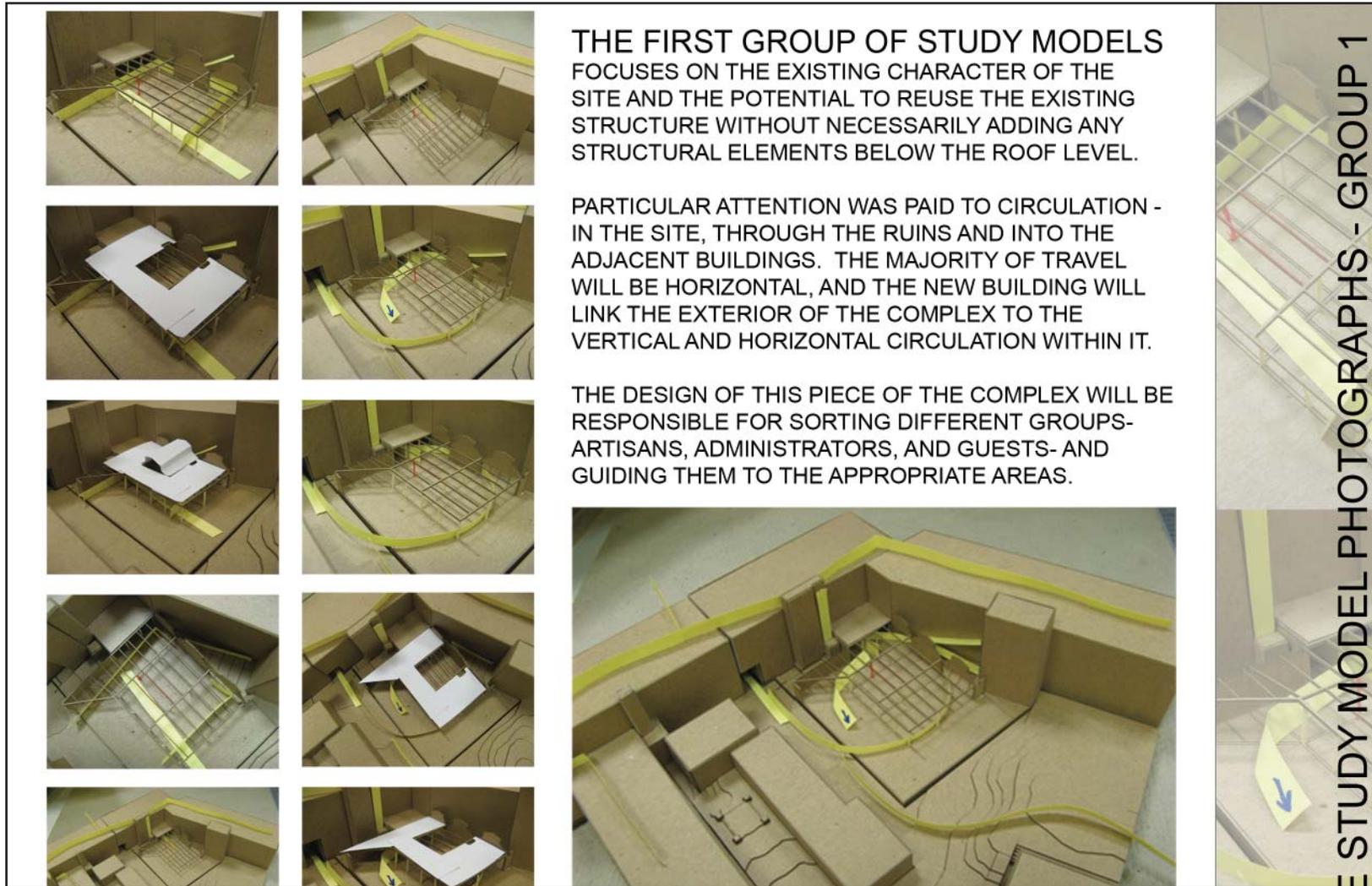
**Figure 125: Levels of Removal.** This diagram shows the range of levels of removal from repair and preservation to complete removal. Each of these stages is evaluated for its impact and appropriateness within the context of the site. [Image by author.]



**Figure 126: Design Exploration Focus.** This diagram shows two levels of focus, both of which involve more preservation. [Image by author.]



**Figure 127: Site Study Model Photographs - Group 1.** This is a modified version of the documentation which was used throughout the design process and presented at the public review. [Image by author.]



### THE FIRST GROUP OF STUDY MODELS

FOCUSES ON THE EXISTING CHARACTER OF THE SITE AND THE POTENTIAL TO REUSE THE EXISTING STRUCTURE WITHOUT NECESSARILY ADDING ANY STRUCTURAL ELEMENTS BELOW THE ROOF LEVEL.

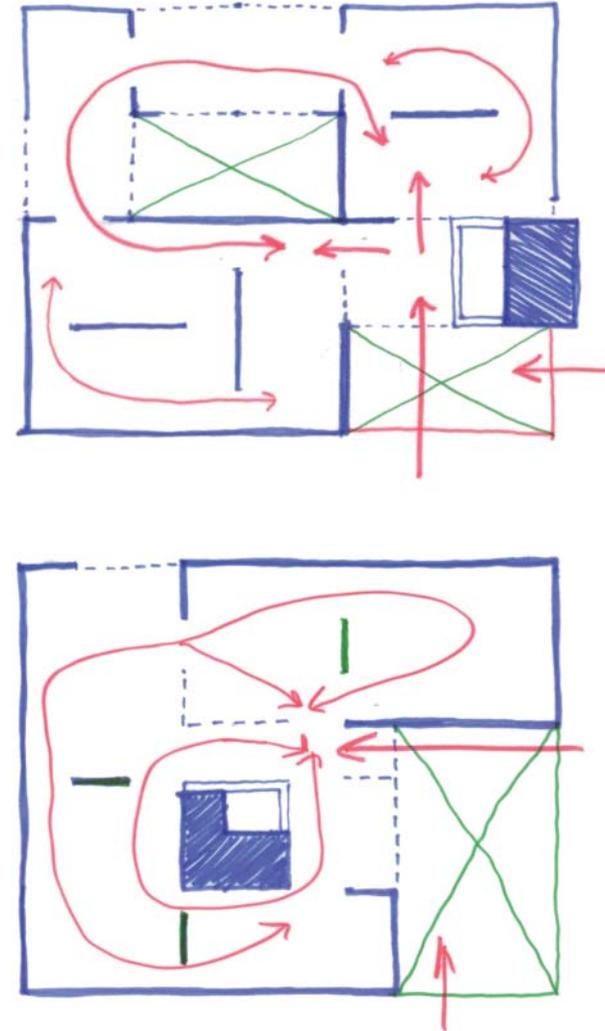
PARTICULAR ATTENTION WAS PAID TO CIRCULATION - IN THE SITE, THROUGH THE RUINS AND INTO THE ADJACENT BUILDINGS. THE MAJORITY OF TRAVEL WILL BE HORIZONTAL, AND THE NEW BUILDING WILL LINK THE EXTERIOR OF THE COMPLEX TO THE VERTICAL AND HORIZONTAL CIRCULATION WITHIN IT.

THE DESIGN OF THIS PIECE OF THE COMPLEX WILL BE RESPONSIBLE FOR SORTING DIFFERENT GROUPS- ARTISANS, ADMINISTRATORS, AND GUESTS- AND GUIDING THEM TO THE APPROPRIATE AREAS.

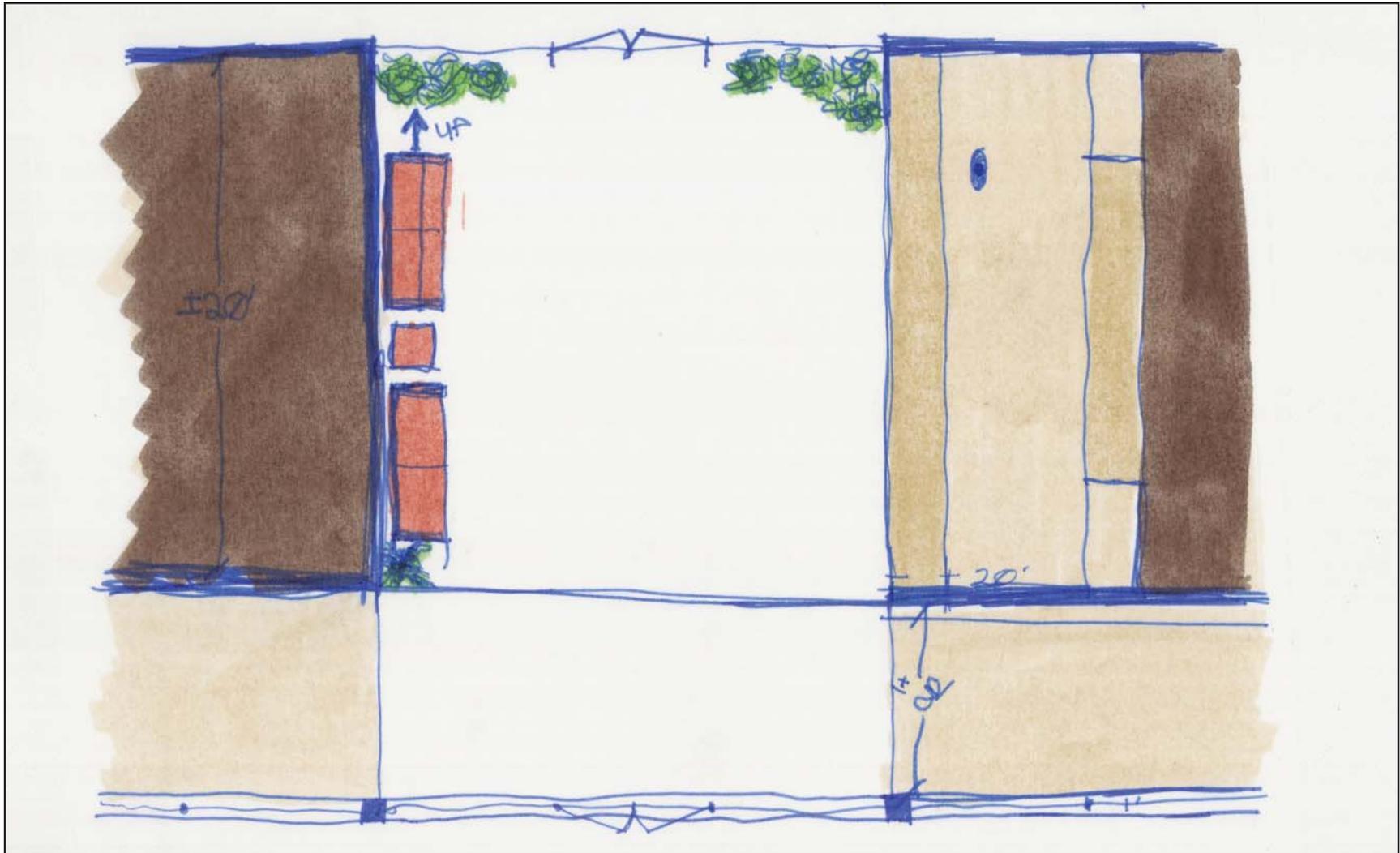
STUDY MODEL PHOTOGRAPHS - GROUP 1

**Figure 128: Site Study Model Photographs - Group 1.** This is a modified version of the documentation which was used throughout the design process and presented at the public review. [Image by author.]

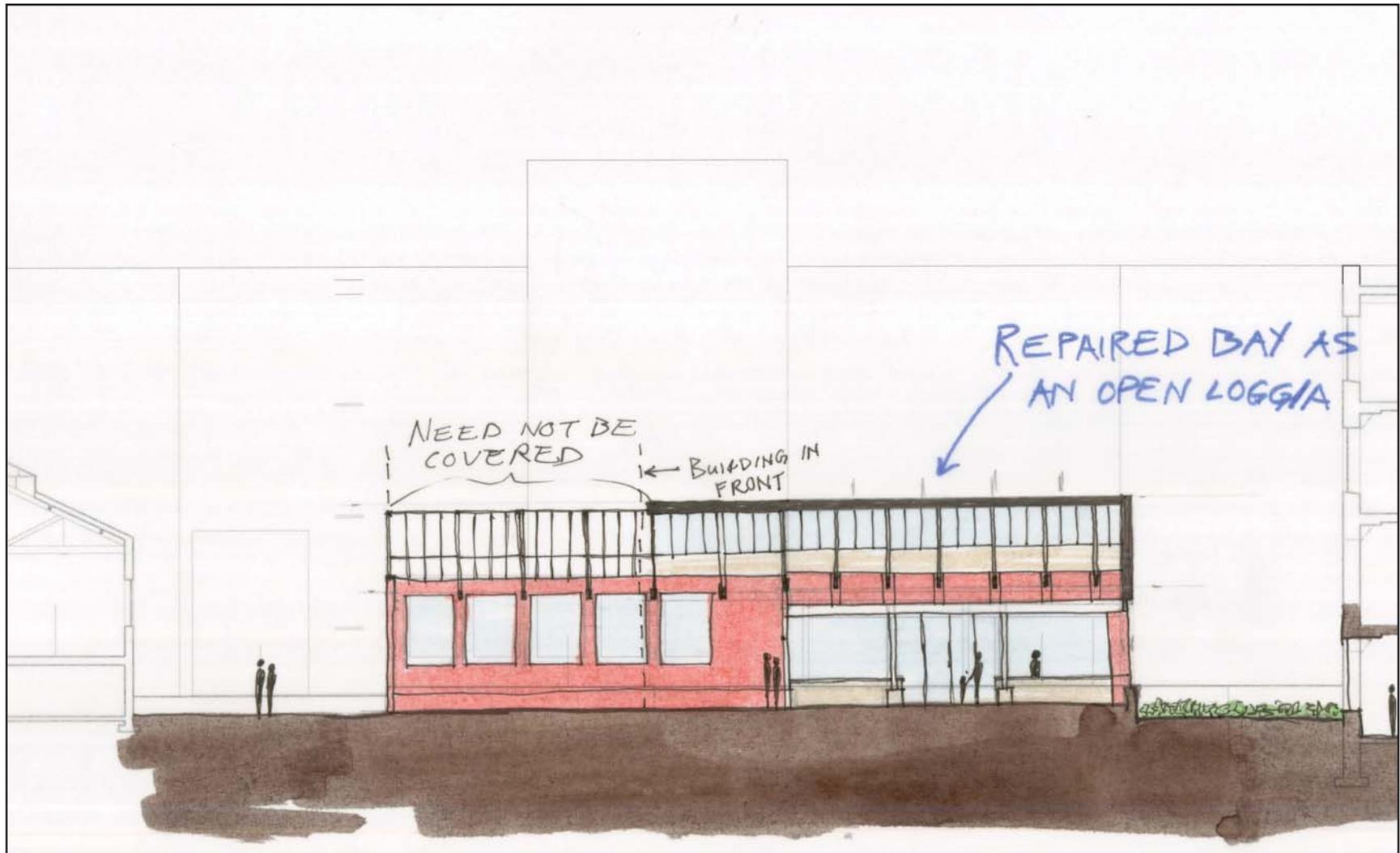
Section 3: Ideals



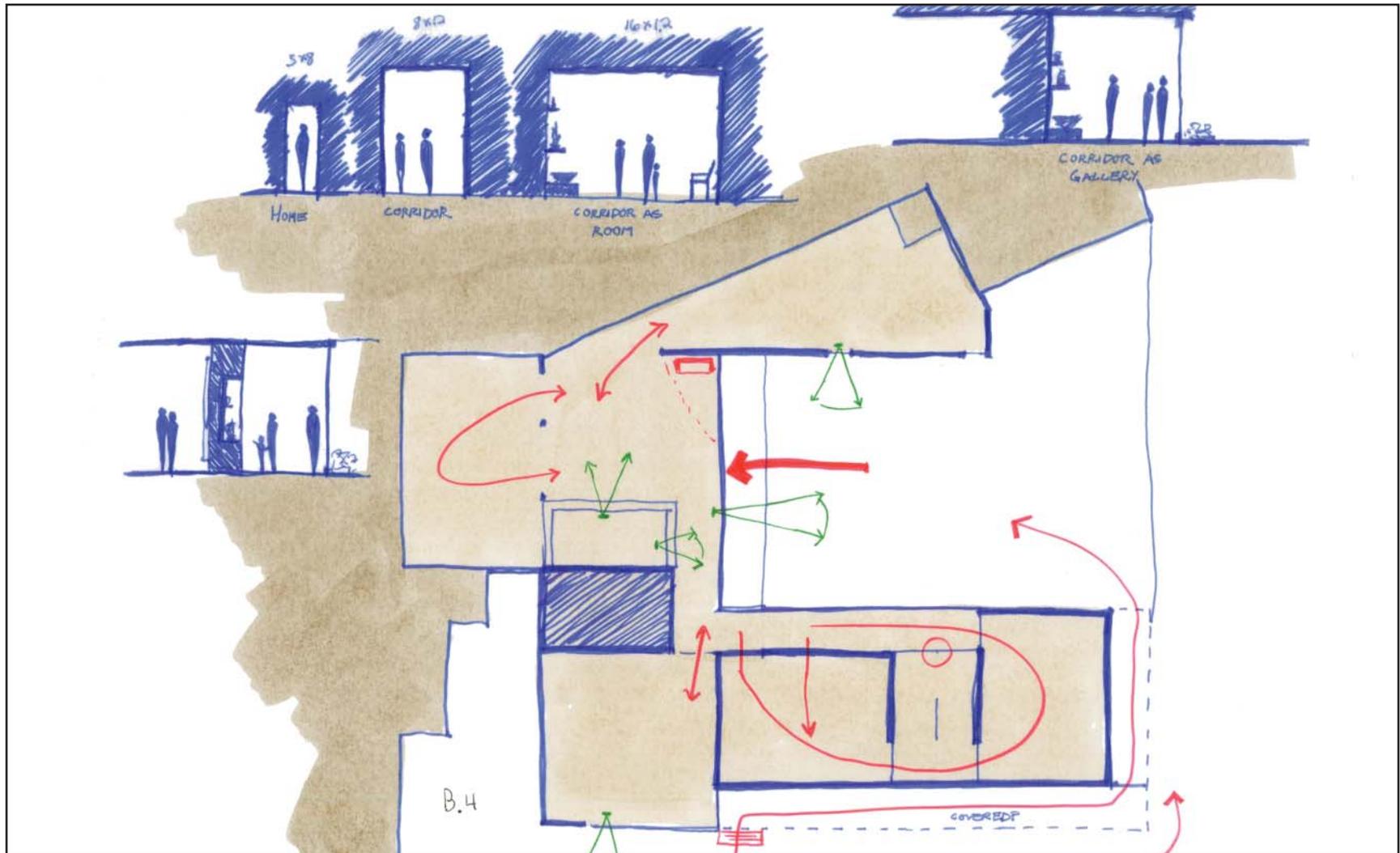
**Figure 129: Idealized Plans.** These are two of the plans from a series of idealized, compact plans for the gallery. [Image by author.]



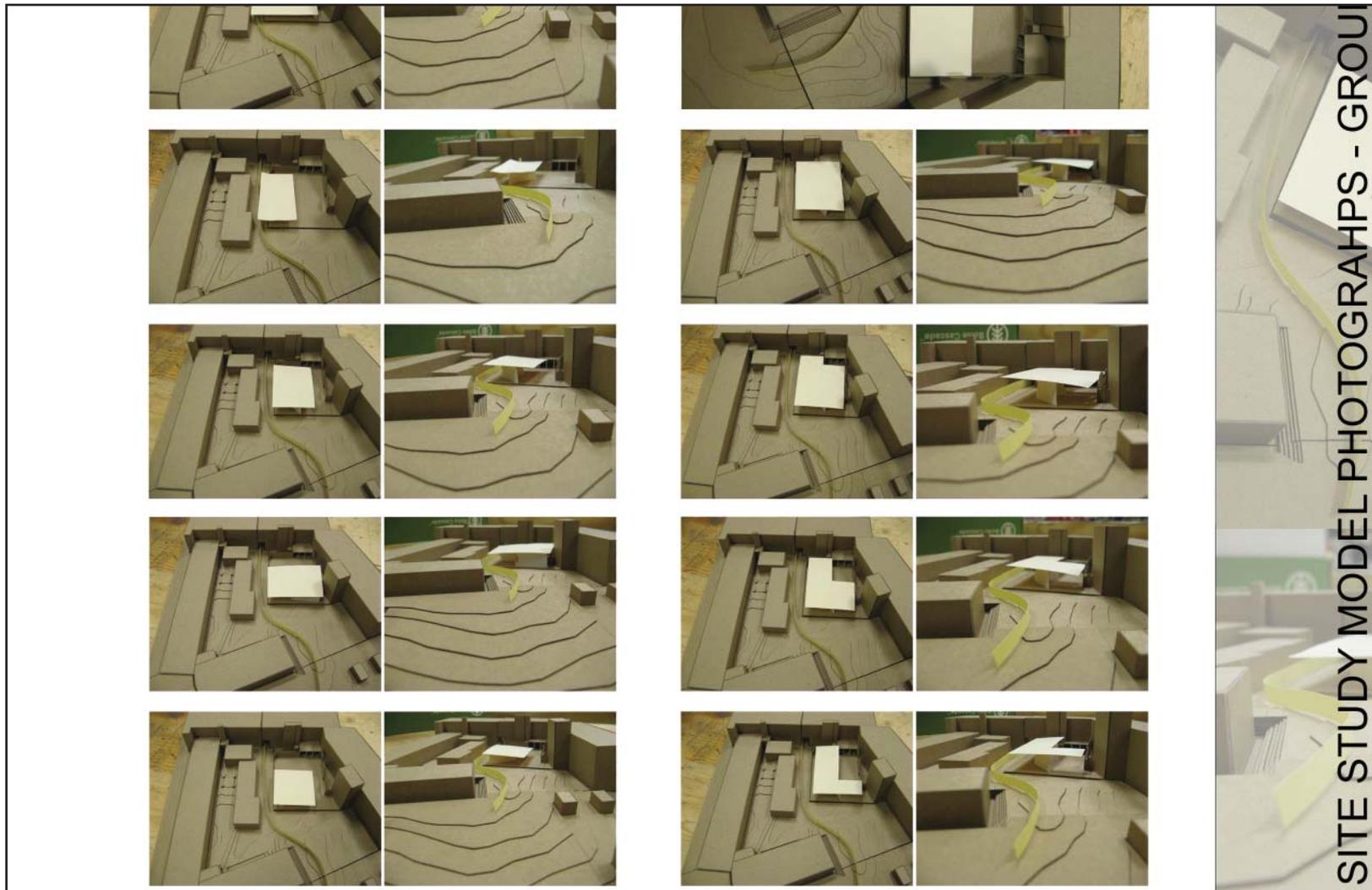
**Figure 130: Idealized Entry.** This entry type creates a lobby that is a control point. Everyone enters and exists by the information and sales desk, and there is space for four groups to gather or party members to wait. [Image by author.]



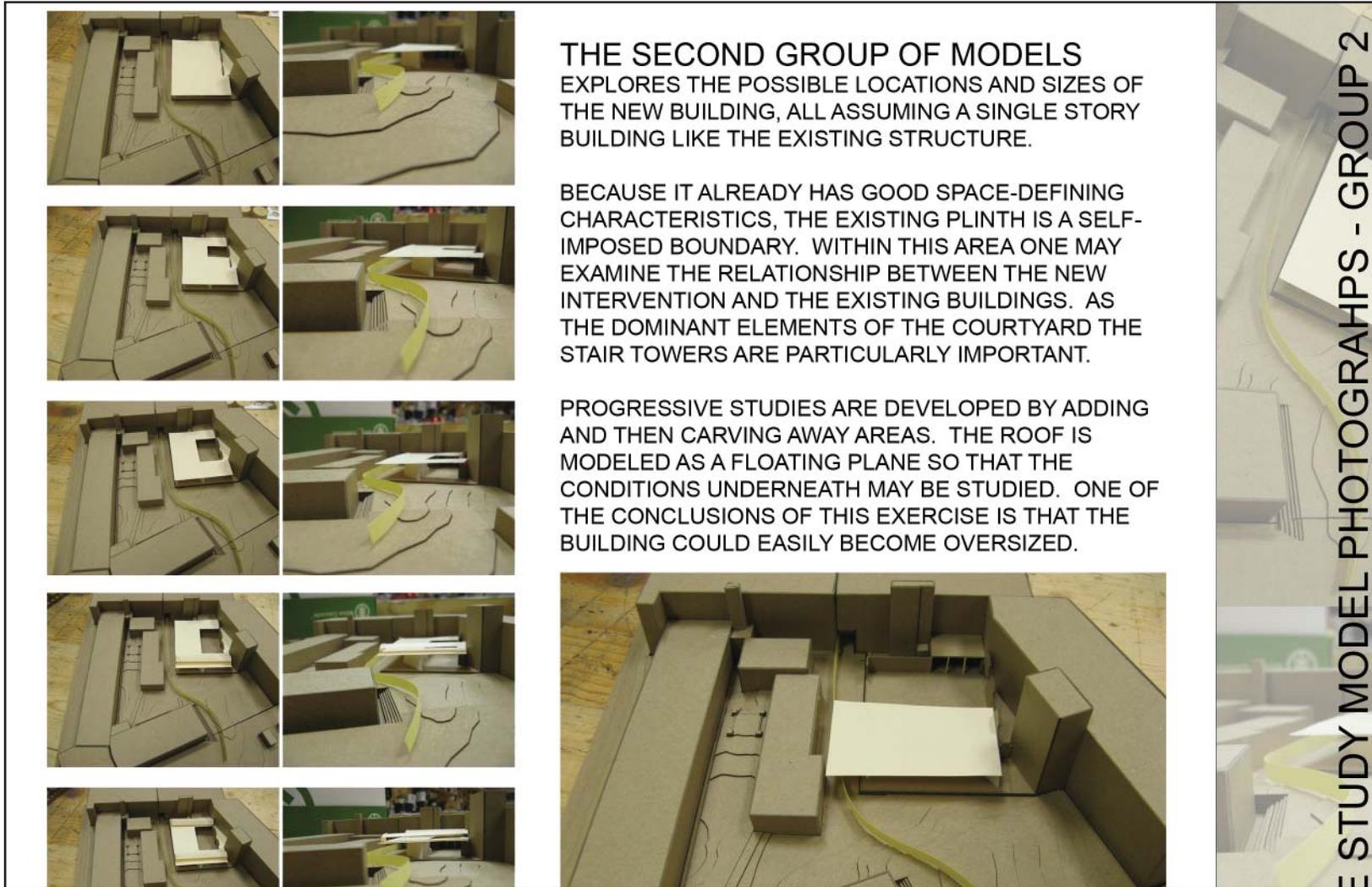
**Figure 131: South Bay Loggia.** This diagram explores how to reuse the south bay as a loggia for the main entry to the complex and the gallery and visitor center courtyard. [Image by author.]



**Figure 132: Corridor Study on a Parti Diagram.** This is from a series of parti studies exploring how different partis would fit onto the plinth. Questions about the size and character of the corridor grew into a study in the margins. [Image by author.]



**Figure 133: Site Study Model Photographs - Group 2.** This is a modified version of the documentation which was used throughout the design process and presented at the public review. [Image by author.]



## THE SECOND GROUP OF MODELS

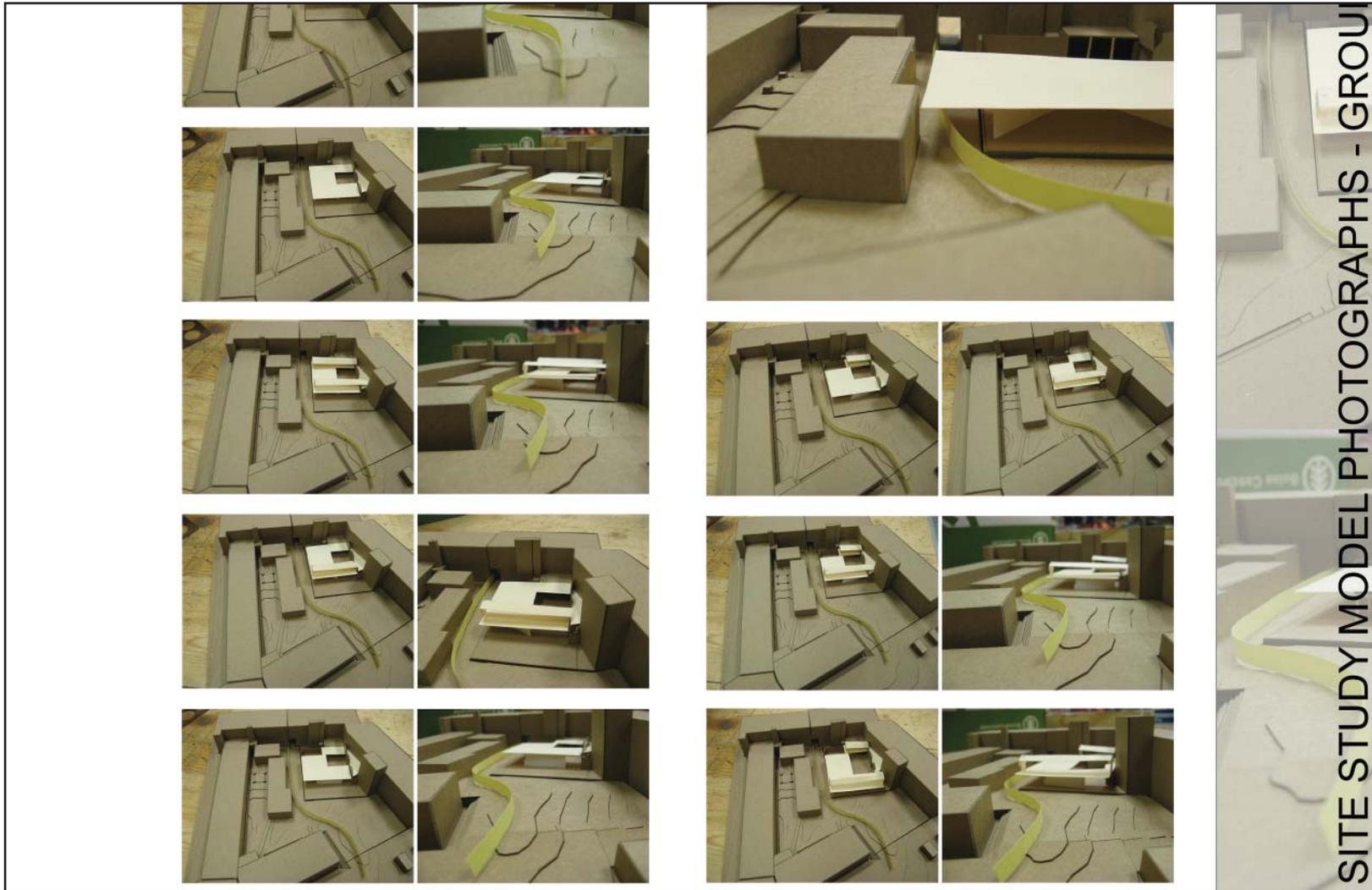
EXPLORES THE POSSIBLE LOCATIONS AND SIZES OF THE NEW BUILDING, ALL ASSUMING A SINGLE STORY BUILDING LIKE THE EXISTING STRUCTURE.

BECAUSE IT ALREADY HAS GOOD SPACE-DEFINING CHARACTERISTICS, THE EXISTING PLINTH IS A SELF-IMPOSED BOUNDARY. WITHIN THIS AREA ONE MAY EXAMINE THE RELATIONSHIP BETWEEN THE NEW INTERVENTION AND THE EXISTING BUILDINGS. AS THE DOMINANT ELEMENTS OF THE COURTYARD THE STAIR TOWERS ARE PARTICULARLY IMPORTANT.

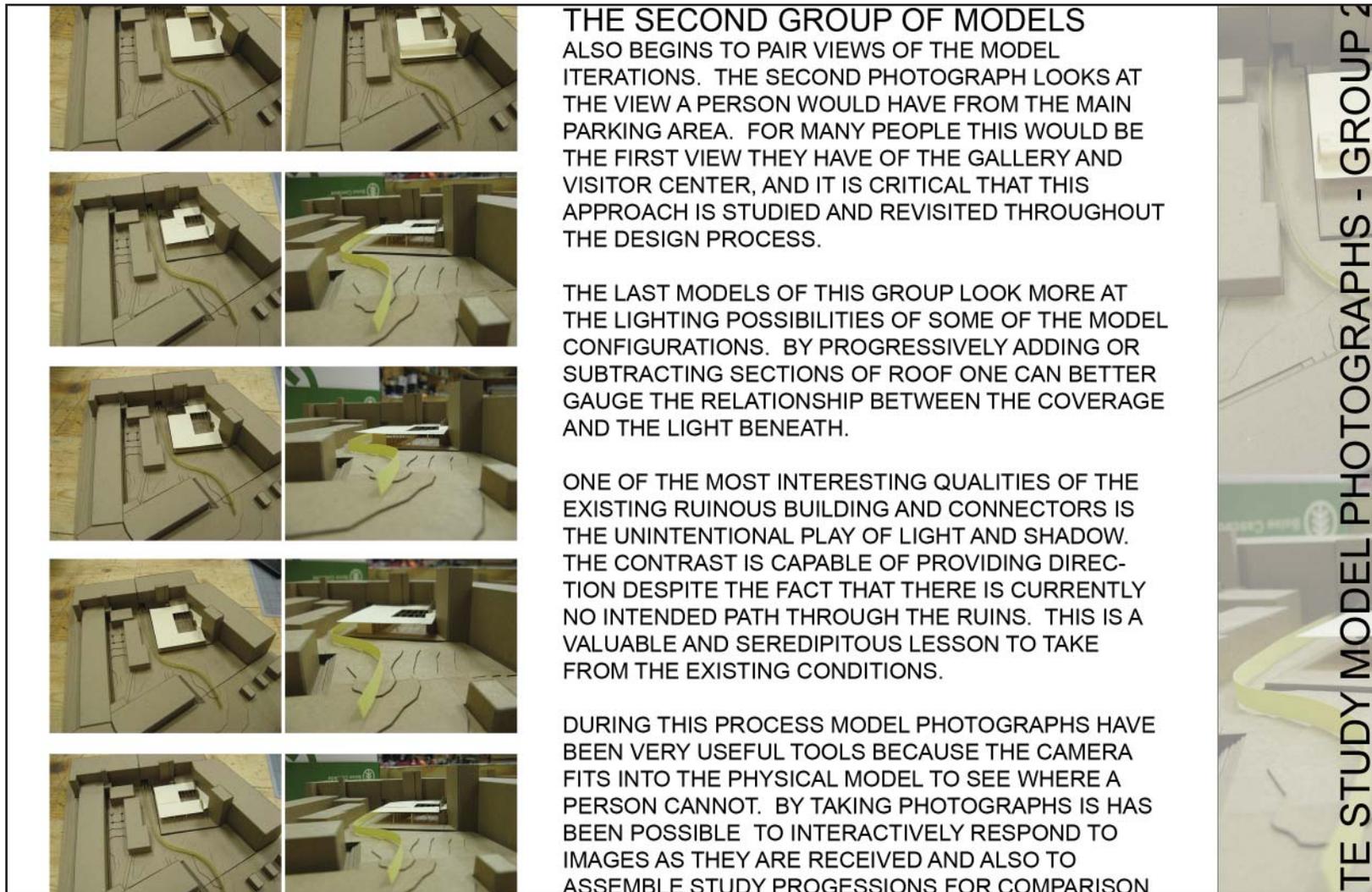
PROGRESSIVE STUDIES ARE DEVELOPED BY ADDING AND THEN CARVING AWAY AREAS. THE ROOF IS MODELED AS A FLOATING PLANE SO THAT THE CONDITIONS UNDERNEATH MAY BE STUDIED. ONE OF THE CONCLUSIONS OF THIS EXERCISE IS THAT THE BUILDING COULD EASILY BECOME OVERSIZED.

E STUDY MODEL PHOTOGRAPHS - GROUP 2

**Figure 134: Site Study Model Photographs - Group 2.** This is a modified version of the documentation which was used throughout the design process and presented at the public review. [Image by author.]



**Figure 135: Site Study Model Photographs - Group 2.** This is a modified version of the documentation which was used throughout the design process and presented at the public review. [Image by author.]



## THE SECOND GROUP OF MODELS

ALSO BEGINS TO PAIR VIEWS OF THE MODEL ITERATIONS. THE SECOND PHOTOGRAPH LOOKS AT THE VIEW A PERSON WOULD HAVE FROM THE MAIN PARKING AREA. FOR MANY PEOPLE THIS WOULD BE THE FIRST VIEW THEY HAVE OF THE GALLERY AND VISITOR CENTER, AND IT IS CRITICAL THAT THIS APPROACH IS STUDIED AND REVISITED THROUGHOUT THE DESIGN PROCESS.

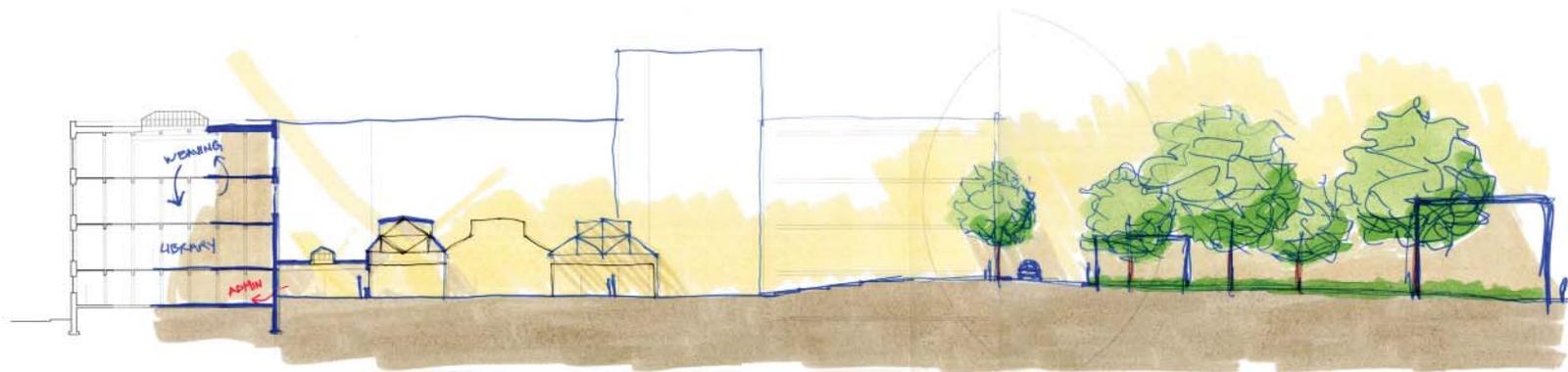
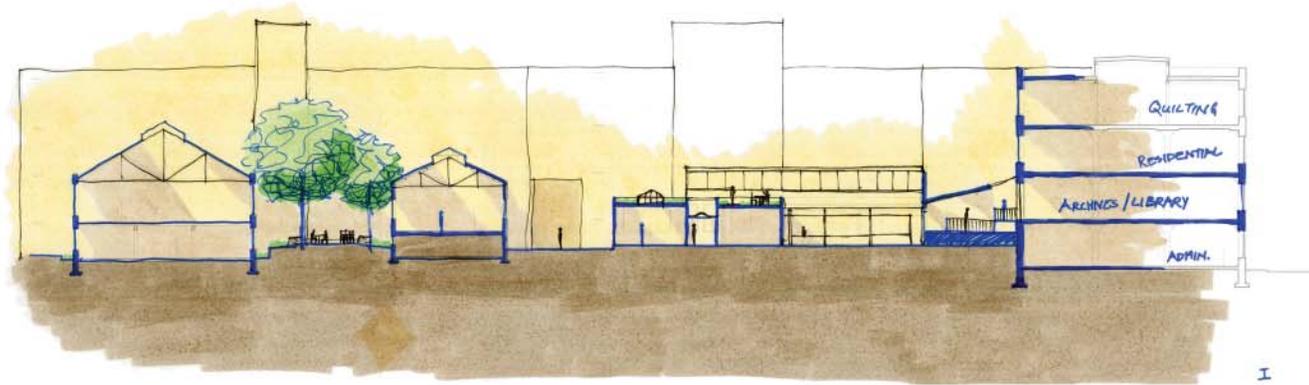
THE LAST MODELS OF THIS GROUP LOOK MORE AT THE LIGHTING POSSIBILITIES OF SOME OF THE MODEL CONFIGURATIONS. BY PROGRESSIVELY ADDING OR SUBTRACTING SECTIONS OF ROOF ONE CAN BETTER GAUGE THE RELATIONSHIP BETWEEN THE COVERAGE AND THE LIGHT BENEATH.

ONE OF THE MOST INTERESTING QUALITIES OF THE EXISTING RUINOUS BUILDING AND CONNECTORS IS THE UNINTENTIONAL PLAY OF LIGHT AND SHADOW. THE CONTRAST IS CAPABLE OF PROVIDING DIRECTION DESPITE THE FACT THAT THERE IS CURRENTLY NO INTENDED PATH THROUGH THE RUINS. THIS IS A VALUABLE AND SEREDIPITOUS LESSON TO TAKE FROM THE EXISTING CONDITIONS.

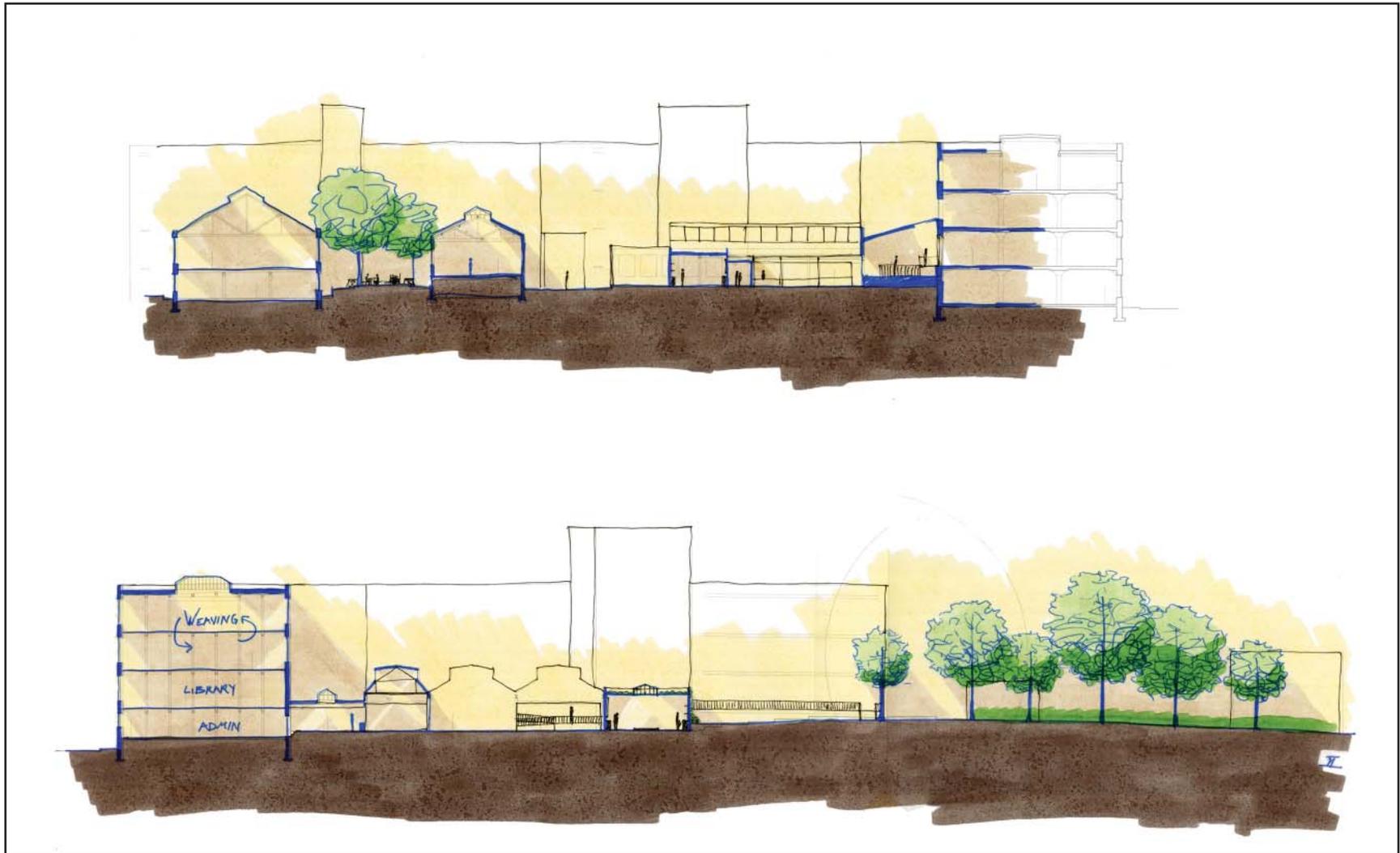
DURING THIS PROCESS MODEL PHOTOGRAPHS HAVE BEEN VERY USEFUL TOOLS BECAUSE THE CAMERA FITS INTO THE PHYSICAL MODEL TO SEE WHERE A PERSON CANNOT. BY TAKING PHOTOGRAPHS IS HAS BEEN POSSIBLE TO INTERACTIVELY RESPOND TO IMAGES AS THEY ARE RECEIVED AND ALSO TO ASSEMBLE STUDY PROGRESSIONS FOR COMPARISON

**Figure 136: Site Study Model Photographs - Group 2.** This is a modified version of the documentation which was used throughout the design process and presented at the public review. [Image by author.]

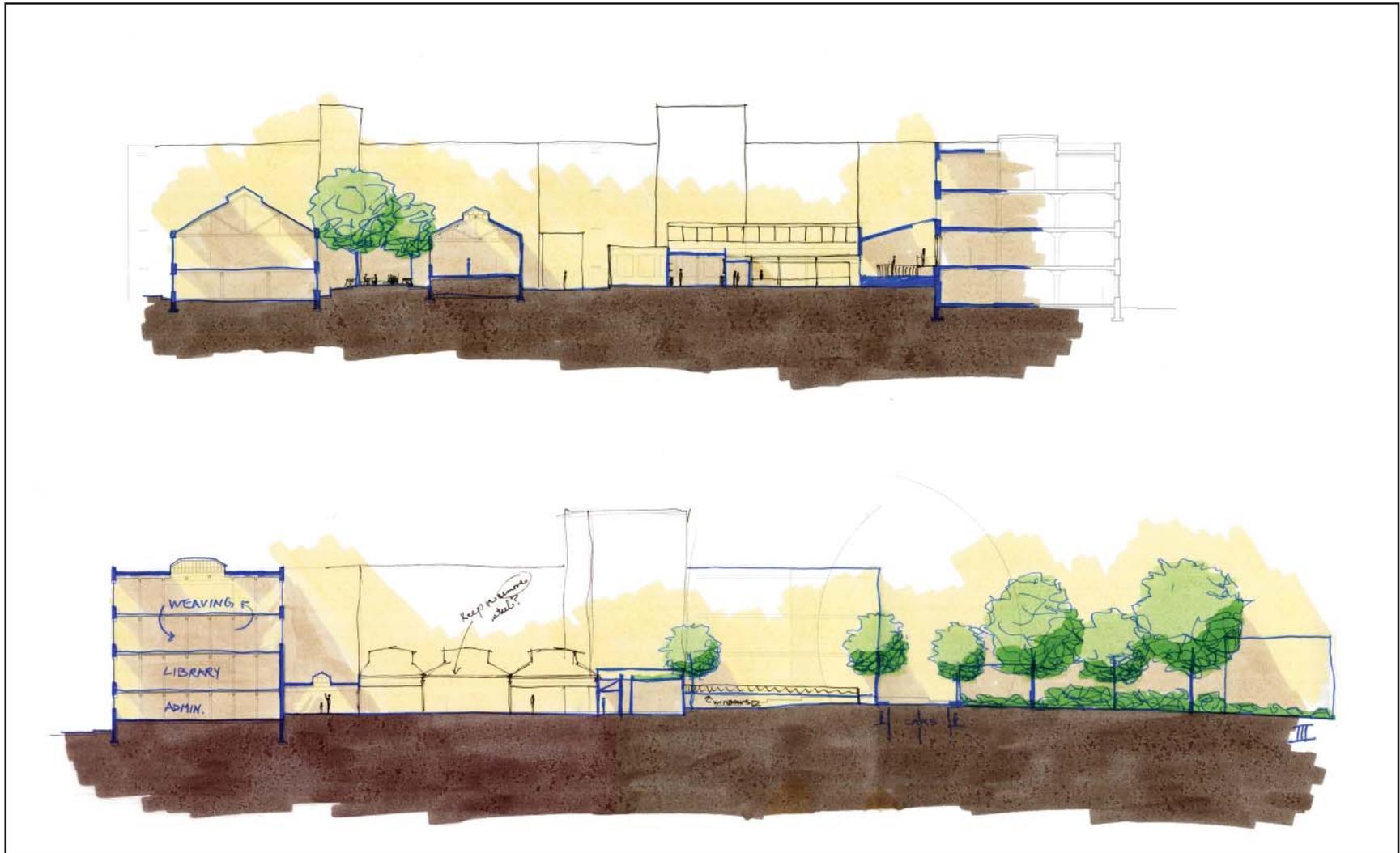
Section 4: Sectional Studies



**Figure 137: Sectional Light Studies 1.** This series explores the implications of a few different schemes in terms of promenade and natural lighting; this set of drawings keeps one section of structure in skeletal form and another as enclosed building. [Image by author.]



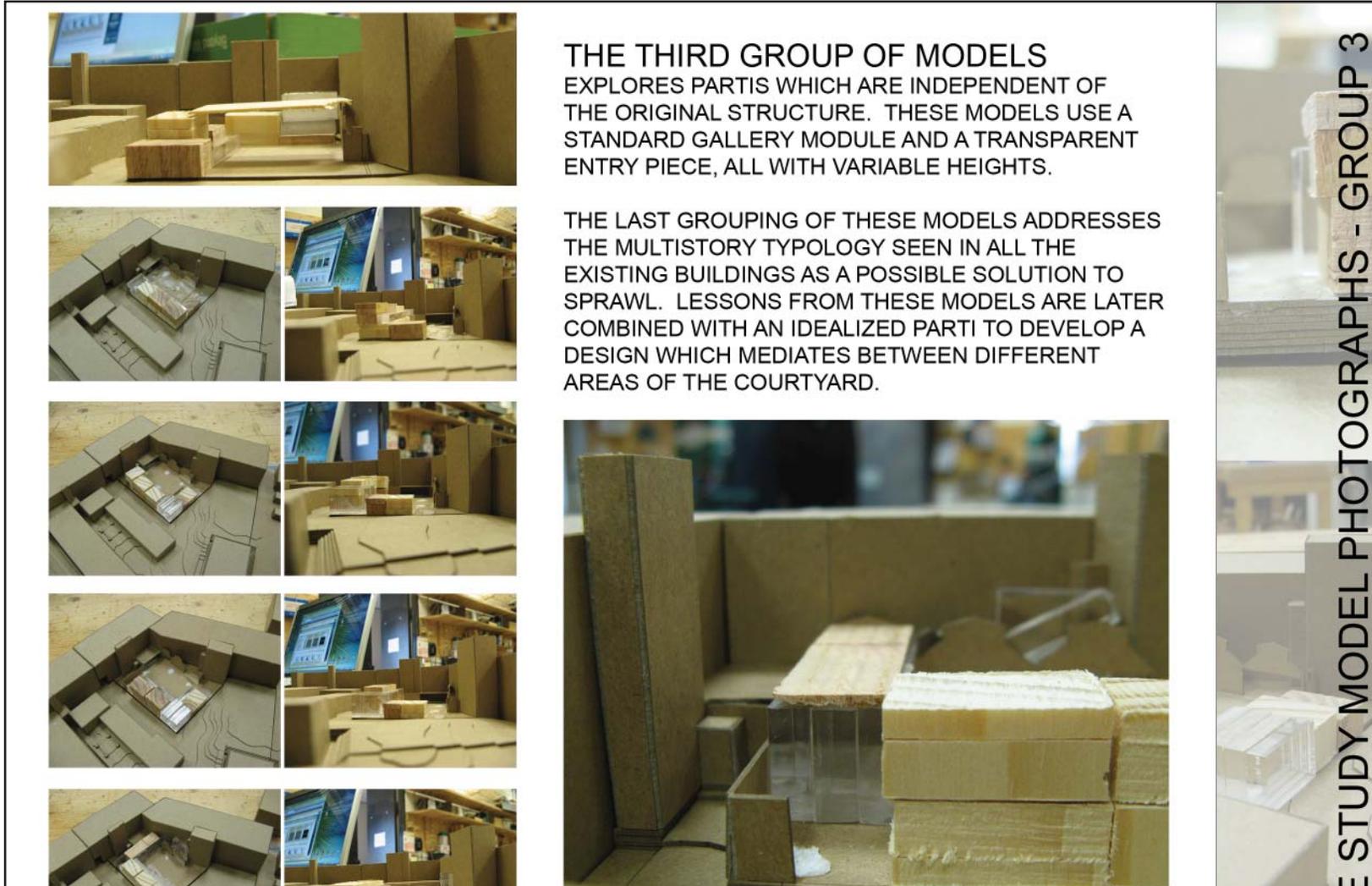
**Figure 138: Sectional Light Studies 2.** This set of drawings replaces the skeletal piece with enclosed building to create a courtyard and reduces the building's size in the other direction. The west connector is vertical circulation to access the library directly. [Image by author.]



**Figure 139: Sectional Light Studies 3.** This series maintains one of the same sections while altering parts of the other. Layering of progressive spaces are explored here, and all Building 7 above the steel is removed to look at the lighting impact. [Image by author.]



**Figure 140: Site Study Model Photographs - Group 3.** This is a modified version of the documentation which was used throughout the design process and presented at the public review. [Image by author.]



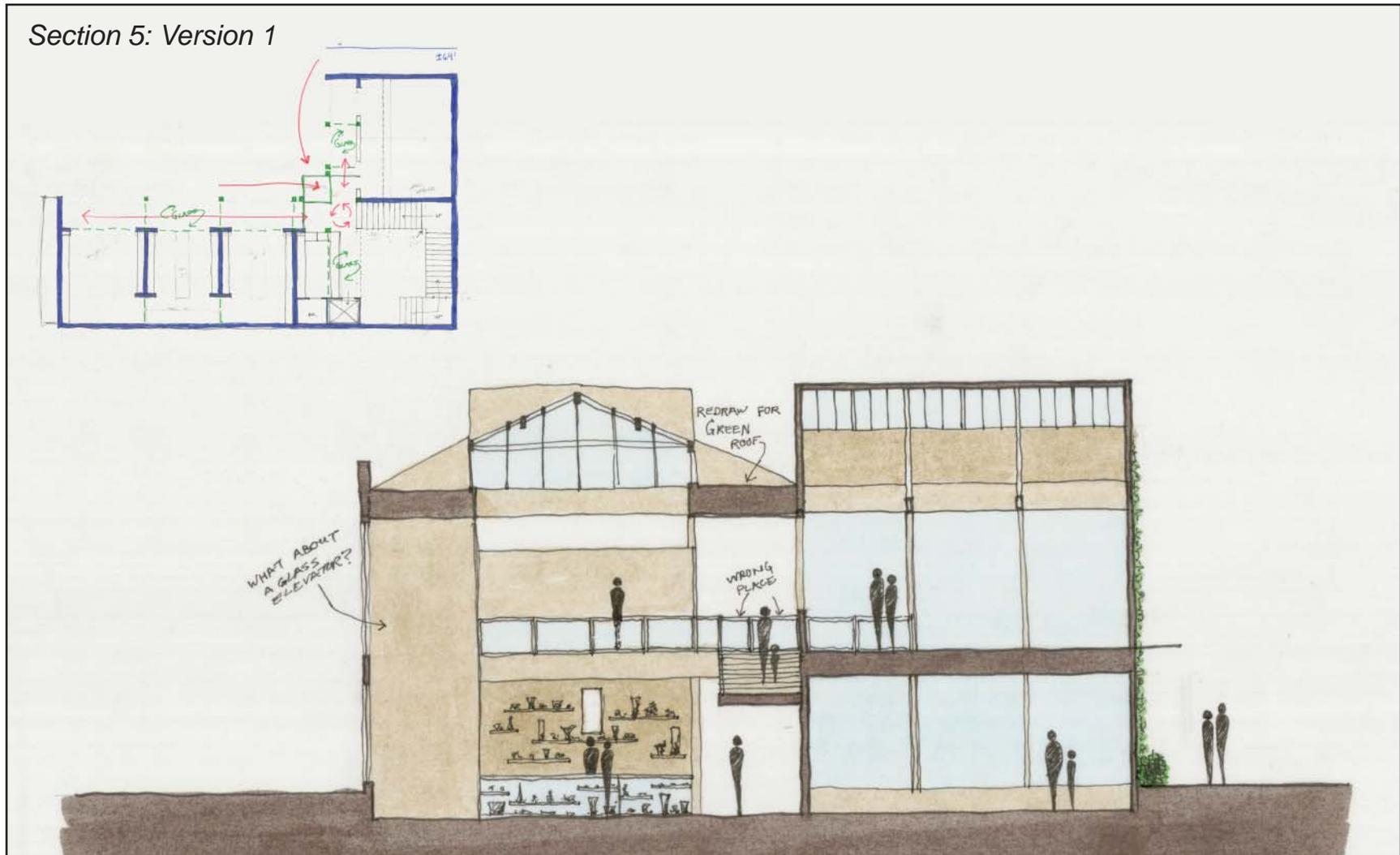
### THE THIRD GROUP OF MODELS

EXPLORES PARTIS WHICH ARE INDEPENDENT OF THE ORIGINAL STRUCTURE. THESE MODELS USE A STANDARD GALLERY MODULE AND A TRANSPARENT ENTRY PIECE, ALL WITH VARIABLE HEIGHTS.

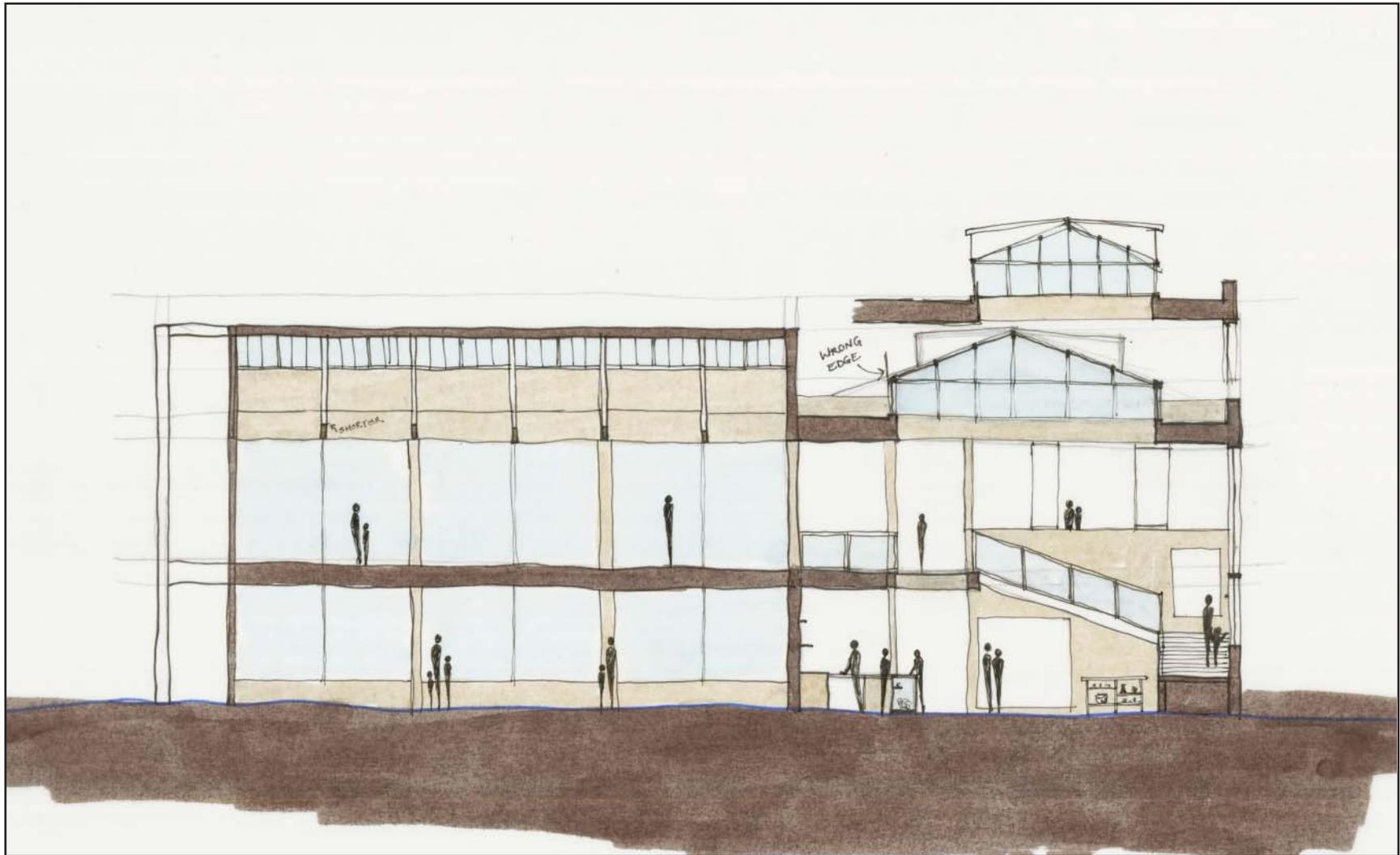
THE LAST GROUPING OF THESE MODELS ADDRESSES THE MULTISTORY TYPOLOGY SEEN IN ALL THE EXISTING BUILDINGS AS A POSSIBLE SOLUTION TO SPRAWL. LESSONS FROM THESE MODELS ARE LATER COMBINED WITH AN IDEALIZED PARTI TO DEVELOP A DESIGN WHICH MEDIATES BETWEEN DIFFERENT AREAS OF THE COURTYARD.

E STUDY MODEL PHOTOGRAPHS - GROUP 3

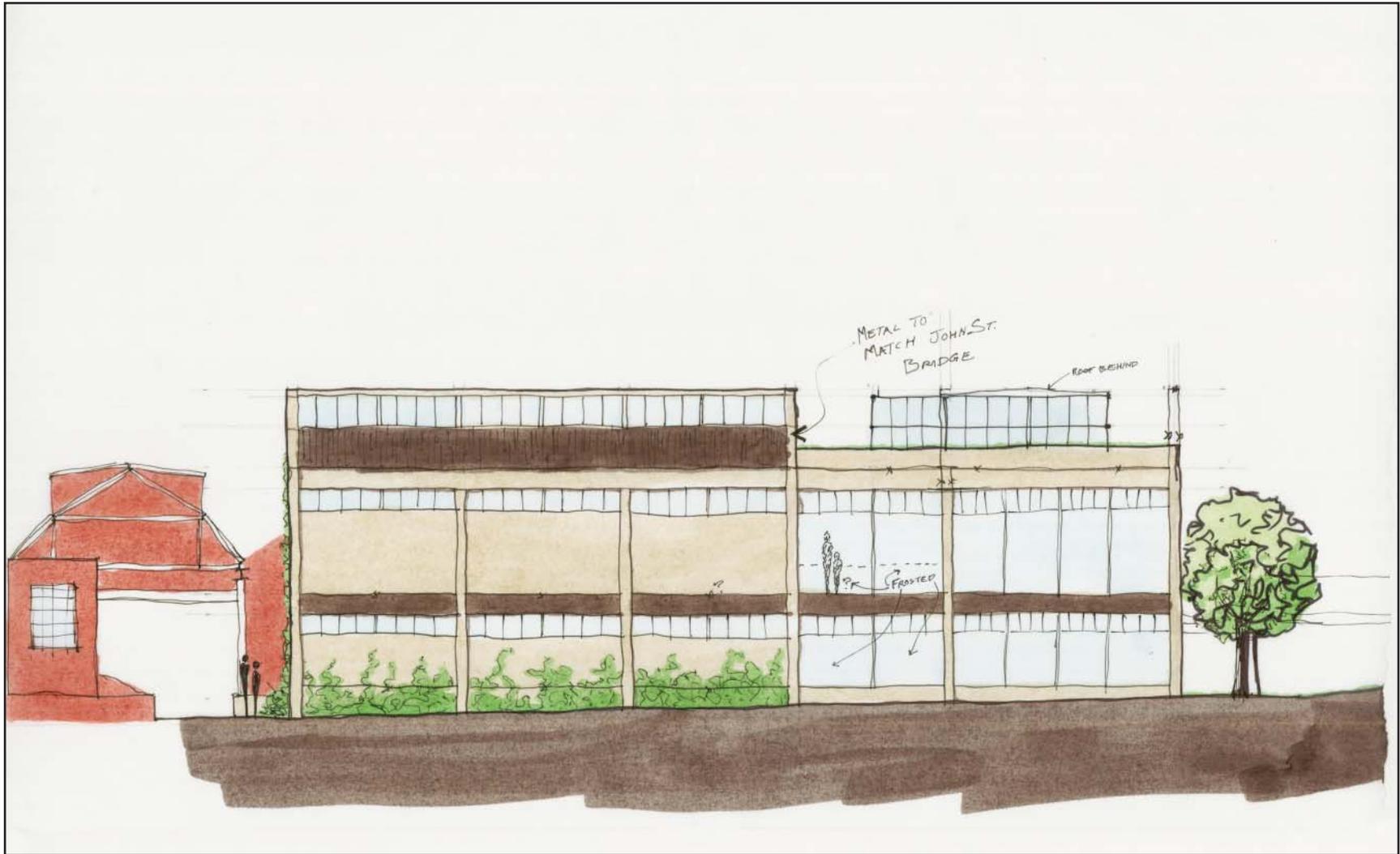
**Figure 141: Site Study Model Photographs - Group 3.** This is a modified version of the documentation which was used throughout the design process and presented at the public review. [Image by author.]



**Figure 142: Plan and East-West Section of an Early Scheme.** This early take on an L-shaped building used a corner entry and lobby with wings for gallery space. The corner entry was problematic and later abandoned for a more straightforward entry. [Image by author.]



**Figure 143: North-South Section of an Early Scheme.** In this section the use of glass to allow natural light to filter into the building is evident; even the stairs have glass treads for this purpose. [Image by author.]



**Figure 144: East Elevation of an Early Scheme.** The entry and lobby area was always intended to have a more transparent character than the gallery spaces; many different versions of the elevation were explored. [Image by author.]

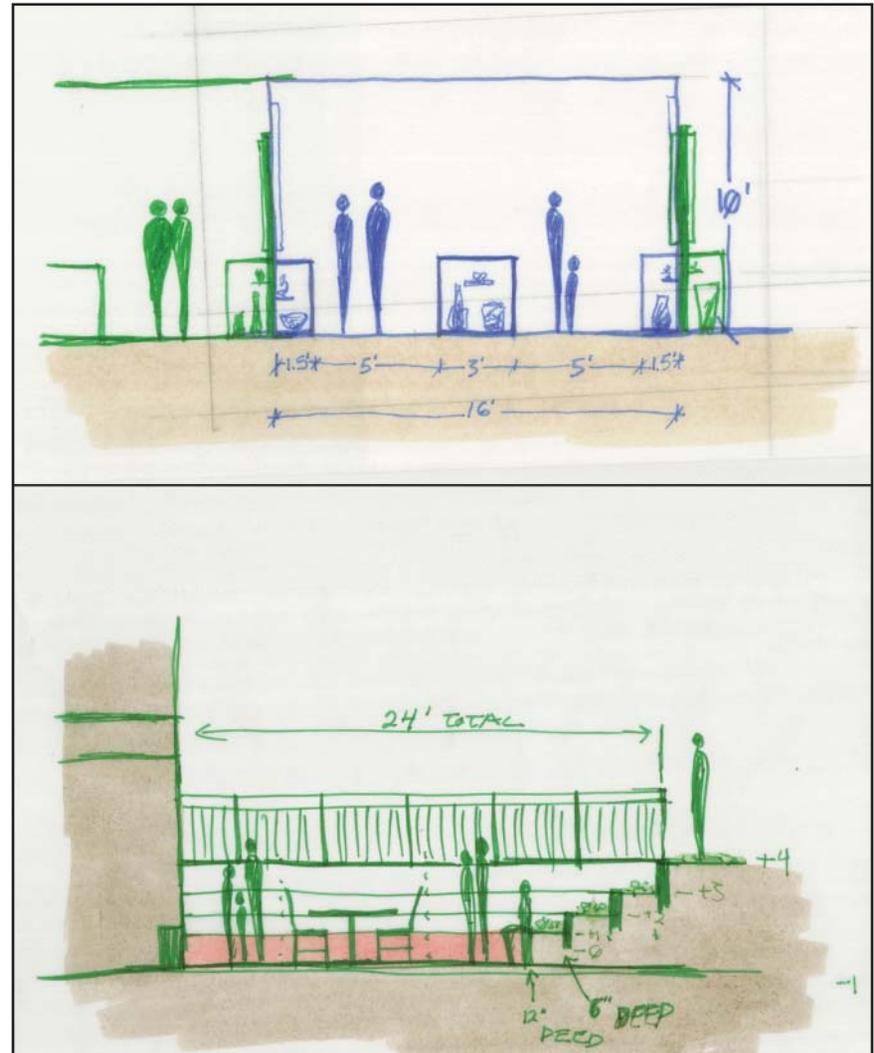
*Section 6: Version 2*



**Figure 145: East-West Site Section.** This was a section that remained on the wall for most of the last few months of design; integration of landscape elements is a matter of particular importance as the define much of the character of outdoor spaces. [Image by author.]



**Figure 146: Sectional Light Study.** This sketch shows some of the interior character of the building and the way in which natural light impacts the spaces. [Image by author.]



**Figure 147: Dimensional Studies.** These studies look at proportions of gallery and outdoor spaces. [Image by author.]

Section 7: Final Images



**Figure 148: East-West Site Section.** This section shows the character of the final section. [Image by author.]



**Figure 149: Detail of the Courtyard's East Area.** This area is a more park-like area for quiet activities. [Image by author.]



**Figure 150: Path along the Rail Tracks.** This is the main circulation path through the courtyard. [Image by author.]



**Figure 151: East-West Section of the Gallery and Sales Building.** In this section one can see gallery display methods. [Image by author.]



**Figure 152: East-West Courtyard Section.** This image shows the character of the courtyard on a day when there are artists selling work in the courtyard. [Image by author.]

## Chapter 7: Conclusions



**Figure 153: Public Review.** This image shows part of the presentation for the public review. Less visible portions of the presentation include the study models on the front bench and the craft examples on the right bench. [Photograph by author.]

## Section 1: Public Review

The main point that came out of the public review was a lack of balance between analysis and design. Verbal and graphic presentations for the analysis were strong, but the tone of the design itself indicated that it was much less developed than the analysis had been. Clearly disparate amounts of time had been spent on the two bodies of work, and there was less comfort with the design portion.

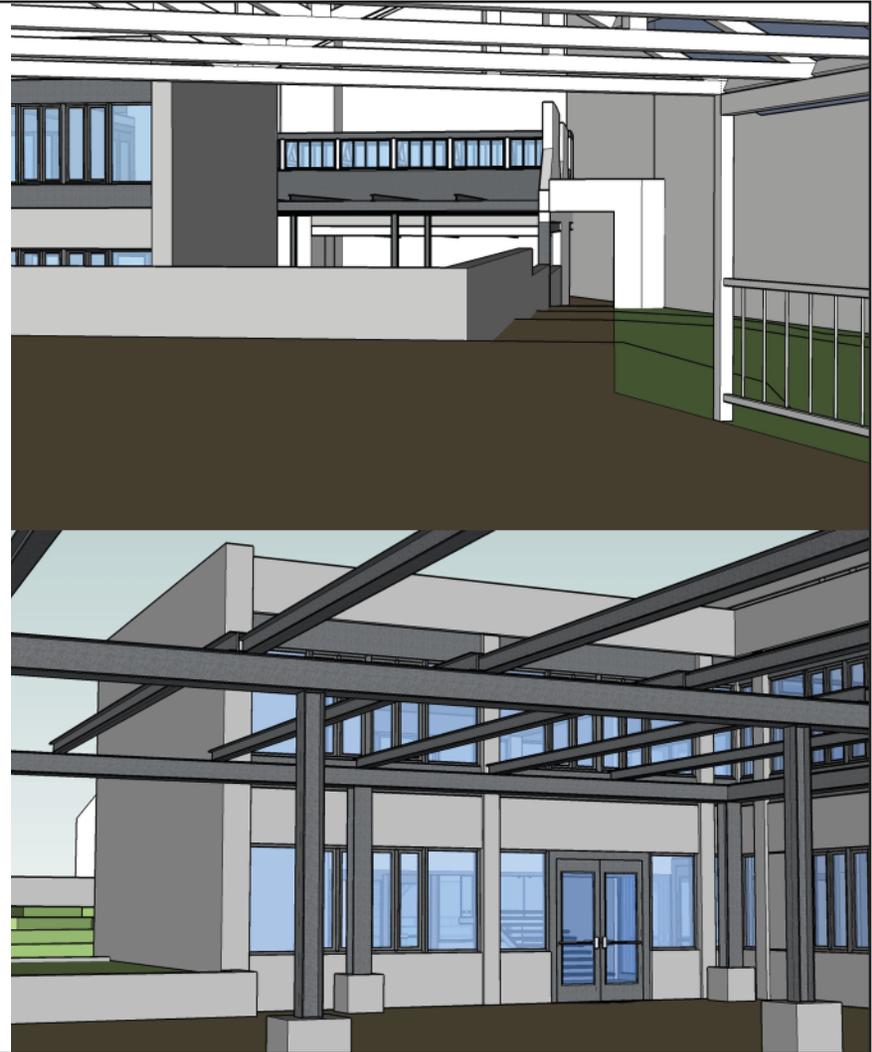
Reviewers asserted that more time was needed to bring the design up to an equal level of detail and consideration. Additional diagrams were necessary to give the design the same clarity as the analysis; those diagrams should also be equivalent in graphic style for ease of comparison. Existing images needed to reach the same level of graphic communication.



**Figure 154: Public Review.** This image shows the tactile elements of the presentation. Given the importance of the physical interaction of hand-crafts, tactile interaction was considered an integral part of the presentation. [Photograph by author.]

## *Section 2: Revisions*

Additional work focuses on the development of media that will better convey the character of the design. A 3-dimensional computer model has been progressed in order to be able to better convey the experiential qualities of the building as well as materiality and construction. Some key images have been further detailed in order to illustrate spaces within the building and courtyard.



**Figure 155: Exterior Perspectives.** Views from the entry pavilion and from the west courtyard entrance. [Images by author.]

Following comments about the site plan reading poorly, two alternative means of representation have been developed. The physical model is a visual and tactile means of communication wherein the textures convey both importance and programming. The derivation of this idea is further described in the design chapter, however the intent is that the model function as both diagram and interactive graphic communication.



**Figure 156: Haptic Model.** Unique materials on some of the buildings reflect the program on the related floors. [Photograph by author.]

One of the sections has also been updated and more fully rendered to convey the tectonics of the building as well as the interior character of the space.



**Figure 157: East-West Section Facing South.** This section has been updated and rendered to illustrate the use of the site and building as well as materiality and the display of the crafts. [Image by author.]

### *Section 3: Reflections*

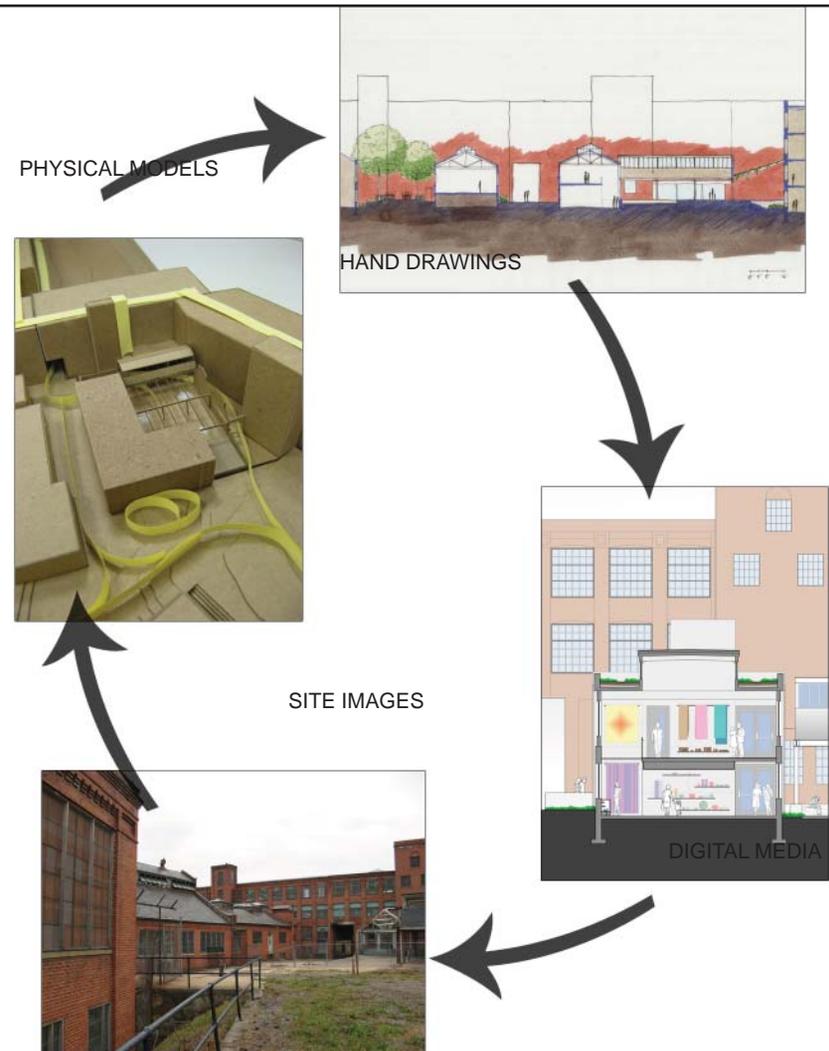
There are a few issues that have required considerable reflection throughout the life of this thesis, and they should be mentioned here again. Integrated design approaches, the ideal approach to an adaptive reuse intervention, and the idea of what it means to do an adaptive reuse thesis have all been evolving in the background. Exploration of these ideas has resulted in as many questions as answers.



**Figure 158: Sideview Mirror.** The hour and a half drives between College Park, Maryland, and Martinsburg, West Virginia, have provided times for contemplation and decisions about the future of this thesis. [Photograph by author.]

## On Integrated Design

Striving for an integrated design approach as discussed in earlier portions of this document has achieved various levels of success. It is the belief of this author that several modes of working are essential for good design, however a helpful level of integration is sometimes challenging to achieve. Cultivation of the transitional fluidity that is demonstrated in the best of design practices is difficult in the face of very methodical work habits. The question of how to better integrate methods—how to easily put one down and pick up another—is not one which can be answered. It must be learned with practice, and this has been just one project of many that will be spent working toward that goal.

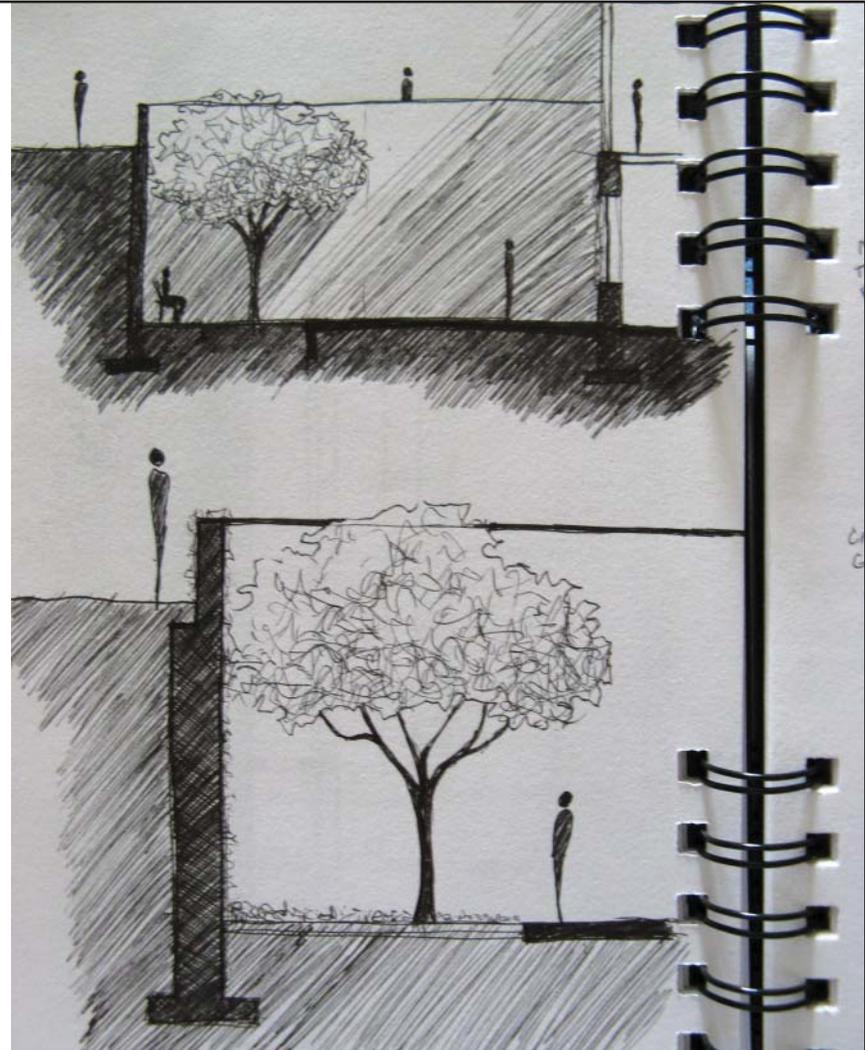


**Figure 159: Integrated Design.** This is a smaller version of the diagram featured in Chapter 4: Design Guidelines. [Image by author.]

## On Aggression

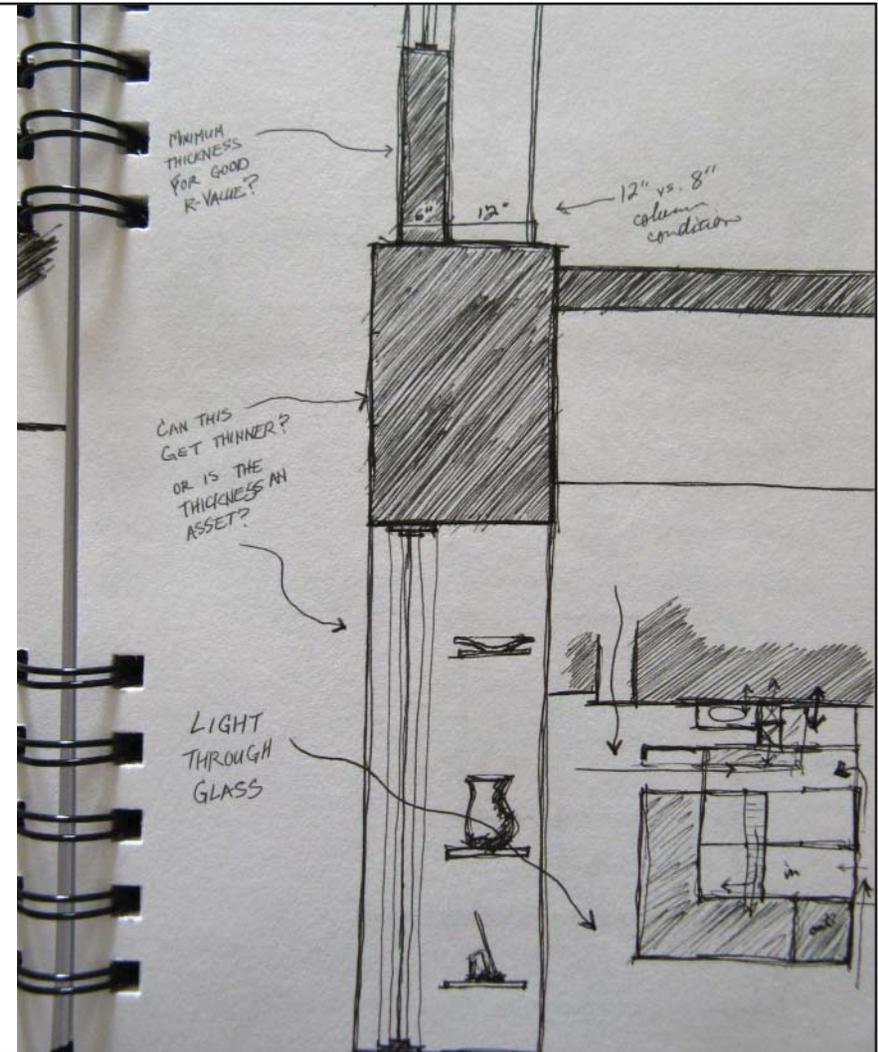
There will always be questions about the ideal level of intervention for an adaptive reuse project, and the development of this thesis has been a good way to learn that there is no easy or definite answer. Extensive documentation of the site led to an apprehension of altering the character despite a conscious knowledge that this site can and should be reused. Surely there is a way to occupy the site without losing all of the things that make it wonderful, but where is the balance point?

Despite continued concerns that the current design could be too aggressive, the public review showed that it may not be aggressive enough. During the following several days a body of sketches developed that investigated an approach that was simultaneously more aggressive while potentially appearing more subtle.



**Figure 160: Sketch of Alternate Design.** This design would reuse the existing structure of Building 7 more aggressively. [Image by author.]

This scheme pushes down into the area below Building 7 and the plinth to make a building that can act as a gallery and sales building as well as an entry to the complex. Is this alternative too aggressive? Perhaps, but one needs to explore options which are both “not enough” and “too much” to find one that can be “just right.”



**Figure 161: Sketch of Alternate Design.** This design would reuse the existing structure of Building 7 more aggressively. [Image by author.]

## On Adaptive Reuse Theses

Does undertaking an adaptive reuse thesis automatically mean taking on too much? Does it necessarily matter? When the prospect of thesis was first discussed the point was made that a thesis must be interesting enough to survive almost a year of interaction and still hold interest. After more than two decades of fascination the Interwoven site seemed like a sound choice. Perhaps the most important thing about this site and this thesis is that it has never ceased to be interesting, and with a greater knowledge and understanding this place has only become more so. End goals aside, all of the work may well be worth it to discover that despite the pitfalls adaptive reuse may very well become an enjoyable career.



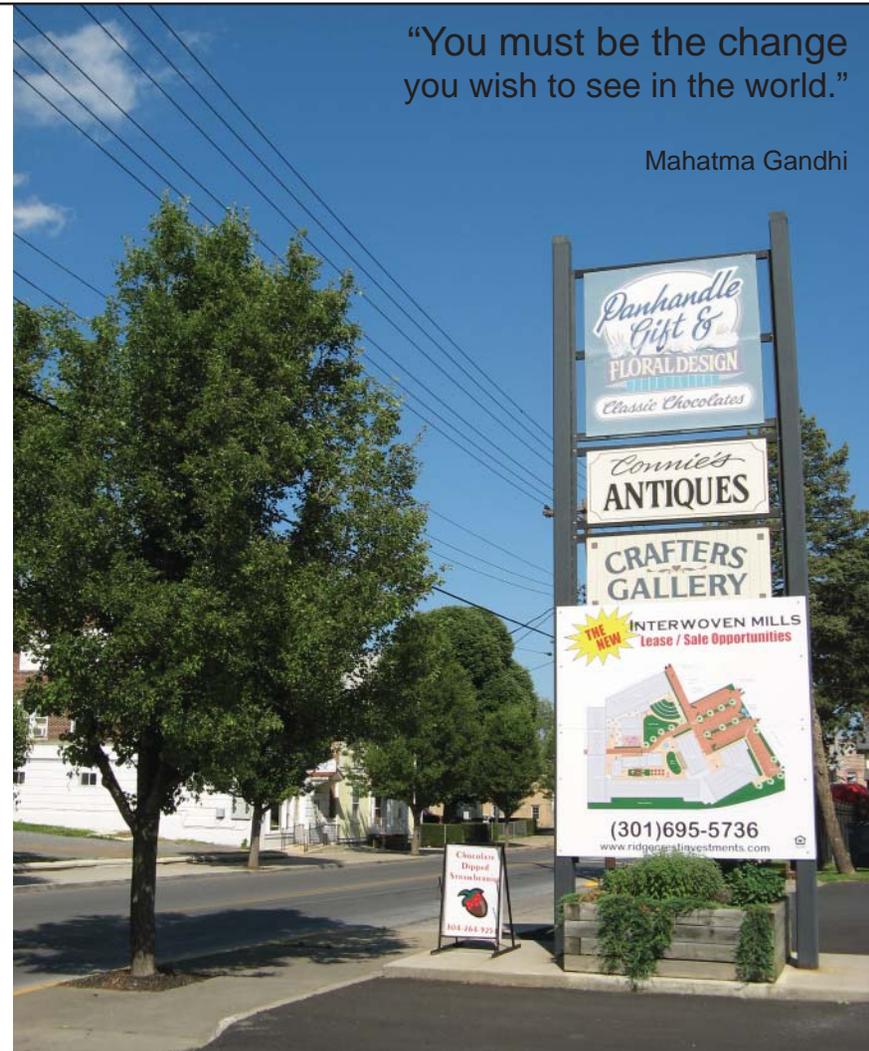
**Figure 162: Building Reuse in Downtown Martinsburg.** These are a handful of the buildings in downtown Martinsburg that have been repurposed; old banks and showrooms are now occupied by businesses like restaurants and bookstores. [Photograph by author.]

#### Section 4: Life After Thesis

Perhaps the most valuable thing about this thesis is that a body of publicly-accessible information has been created in an area that is sorely lacking. Despite being less than half a mile away, the Martinsburg-Berkeley County Public Library has very little information about the site or Interwoven Stocking Company. Internet and newspaper research turns up little more, and the generation of people who worked in this place is waning. Most people know the buildings but very little about them, and so it is important that this document be shared and utilized through the Public Library and the Berkeley County Historical Society. The current owners and developers, the city of Martinsburg, and any locals with an interest will have access to the work that has been done. Hopefully some of the ideas explored will affect the future of the site and the appreciation of its history.

“You must be the change you wish to see in the world.”

Mahatma Gandhi



**Figure 163: Interwoven Mills Signage.** Developers are sharing their vision for the complex's future with the public. [Photograph by author.]

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