

BLOCK 271, Reviving an Industrial Artifact

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Finally to my mother the designer, and my father the builder; it's all coming together.

ABSTRACT

Vacant industrial sites are scattered throughout our cities all across the country. These sites, these remnants of industry, are occupied by a very interesting category of buildings. They are artifacts from an industrial era that served very unique and specific functions. These service buildings suffered programmatic failure and have lost their vitality. They have entered a form of hibernation, waiting for the post-industrial epoch to wake them up.

The building stock under investigation makes up a large portion of the city's structures. Identifiable by their heroic scale, clean articulated lines and tendency to be vacant, these service buildings raise arguments for both historic preservation and demolition.

The framing of the thesis identifies the environmental opportunities and cultural benefits of salvaging these buildings in the post-industrial city. In the supporting section, architectural tactics are used as filters to examine preservation as it pertains to the material form of industrial artifacts, the culture and heritage of an industrial place, and the evolution of these topics in contemporary times. The investigation focuses on how to assess the value of the artifacts' material, function and historical significance. This system will suggest answers to the question of how to revitalize these industrial artifacts.

The site for the project is the Produce Terminal Building in Pittsburgh, Pennsylvania. Originally a produce yard organized to the function of the railcar, the site evolved to a wholesale distribution center for the entire city. The 1533 linear foot Produce Terminal built to support distribution is considered by some to be a preservation worthy, architectural spectacle in the Art Deco style; by others it is seen as a hard edge in the urban fabric that is preventing development from reaching the waterfront.

To further complicate the site, the building is located in a neighborhood that is currently pursuing Historic District status, which creates tension for prospective developers, newly elected politicians and the residents of the city.

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PART 1 FRAMING



Fig. 01 - Forge Department
Source: William J. Gaughan Collection



Fig. 02 - Worker Housing
*Source: Pittsburgh & Lake Erie RR
Company Photographs*

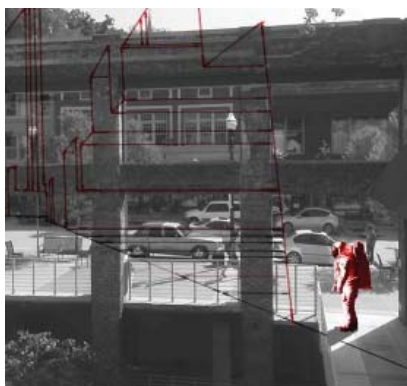


Fig. 03 - Exploring Remnant Spaces
Source: Author

Preface



Fig. 04 - Penn Station - Demonstrating the beauty and elegance of industrial architecture from the 20th century.
Source: Bergeron, 184

This thesis will investigate why and how we should reuse the remaining artifacts from the industrial city.

Many of the factories and warehouse buildings that were constructed to support the boom of the industrial revolution sit vacant within key points of our cities. Their locations were selected based on the proximity to rivers and railroad lines in order to increase efficient transportation of goods and ensure steady production.

These sites and structures influenced development patterns in the past, and they continue to affect how the city grows in the current post-industrial era.

Deindustrialization resulted in the abandonment of these peculiar architectural typologies. They were once economic generators, but now these remnant service buildings exist in blighted landscapes as hard edges in the urban fabric, hindering the growth of neighborhoods. The structures are difficult to categorize, but exist marginally between the attitudes of preservation and demolition. This identifies a unique characteristic about these structures. They are not usually valued as individual industrial service buildings, but as a group they contribute to the overall character of the district. These neighborhoods are often designated historic districts and represent a significant socio-cultural establishment within a region.

Often characterized by the immense open volumes of space they defined, these structures were built for specific utilitarian functions. Industrial architecture rapidly advanced the building industry by implementing new materials and construction methods. Architects such as Albert Kahn were on the front lines of a movement that “fostered research and experimentation” (Bergeron, 184). This resulted in the construction of specialized industrial structures that housed the massive machines of industry.

In most cases, the functional use of the buildings disappeared with deindustrialization, rendering the buildings obsolete. The same characteristics that made these industrial service buildings so unique and special becomes the largest point of contention for redesign.

By reinvesting in these sites and revitalizing these industrial artifacts, the cultural character of place is strengthened and they can become catalysts for the long overdue environmental remediation to take place. The anonymous, vernacular architecture of these artifacts provides opportunity to juxtapose the old with the new and to demonstrate continuity in the built environment. Potential also exists for post-industrial environmental interventions that would create healthier cities by connecting to greenway and park infrastructures.

How can we maximize the potential of these structures? Should we find ways to restore and reuse the industrial spaces in the same way they once were, as industrial manufacturing, warehousing and distribution? Does the site call for an adaptive use that juxtaposes new building elements in support of new functions? Or does the site call for various degrees of transformation to redefine a place?

The investigation will test how adaptable these industrial artifacts are, and how they can benefit the neighborhoods they're located in from being reused, adapted, or redefined.

I will elaborate on issues of environmental and cultural sustainability associated with these sites and structures in order to justify and provoke revitalization. These topics will suggest tactics of design intervention that can be implemented in a thesis proposal, and will inherently provide answers to the question of why and how to remove/replace, introduce, modify and preserve. The investigation will conclude with an assessment of the value of an industrial artifact in the urban core.

Environmental Sustainability - Landscape

The industrial revolution advanced our technologies, culture and economy relatively quickly. It also carved into our landscapes, scarring them at an alarming rate. As the surge of the industrial revolution retreated, we were left with brownfields and industrial wastelands. These polluted landscapes are leaching heavy metals and industrial by-products into our watersheds, affecting the already damaged ecosystems in the urban environment.

Industrial wastelands give a severe negative connotation to the health of an area. Urban blight and decaying industrial sites are synonymous with each other. I would argue that observers are too quick to associate the structures on the site with the dirt and pollution around them. By remediating the pollution of the industrial landscape, a site can escape the imagery associated with dirty industry. Remediation of these brownfield sites offers instant benefits to the land value and neighborhood as an economic and cultural stimulator.

Design intervention of these sites can use the landscape to engage the indirect users of a neighborhood. Indirect users are by and large pedestrians, tourists or people passing through. Their experience is a product of the curb appeal and characteristics at the street level. To the indirect users, the buildings and public space can become cultural spectacles.

In the post-industrial city, leisure and recreation are paramount. An asset of typical industrial sites is their proximity to water. Low Impact Development (LID) provides opportunities to extend the environmental effectiveness of a well-designed open space beyond a site's property lines. What if all of the vacant industrial sites in the cities were retooled to manage our stormwater? These large swaths of land have the potential to become stormwater treatment parks, filtering pollutants before they hit our major waterways, or even water harvesting parks that could provide clean water to irrigate community gardens or sports fields.

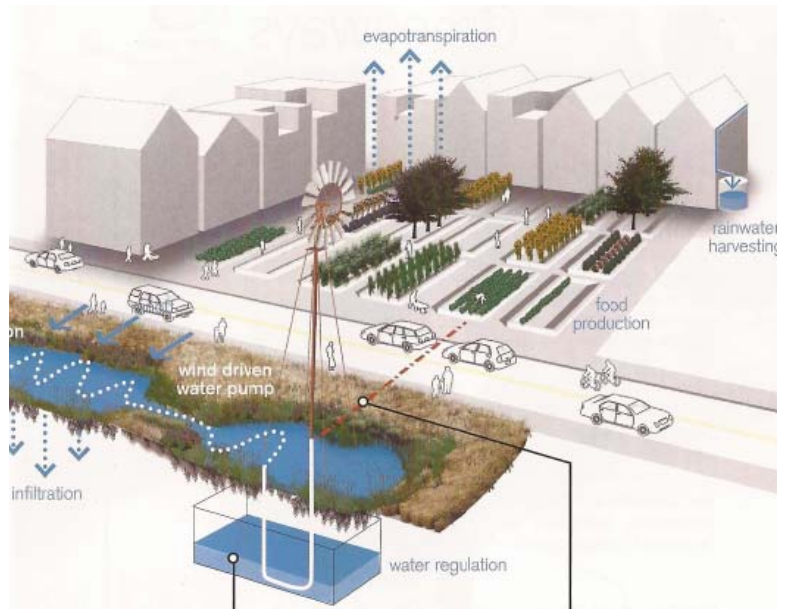


Fig. 05 Water Harvesting Park
Source: Low Impact Development

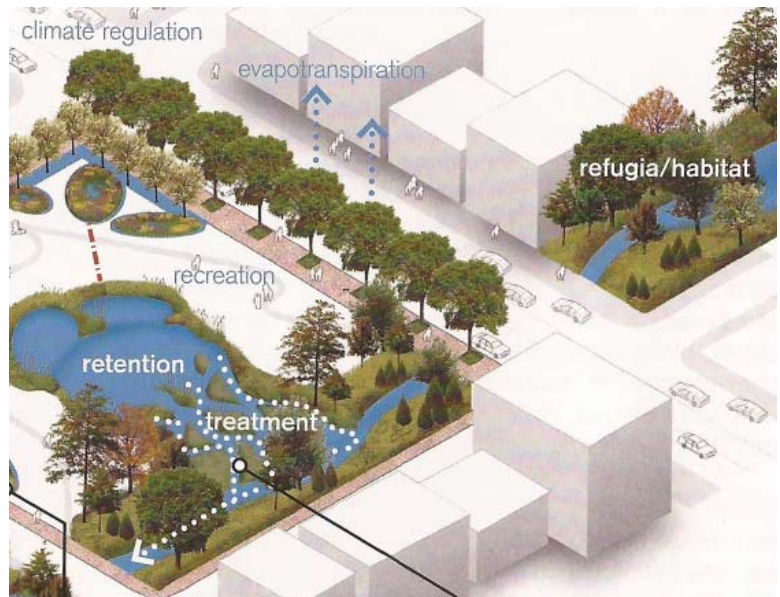


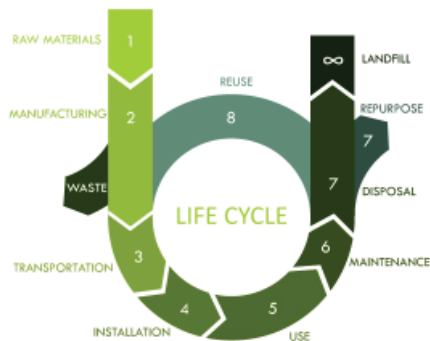
Fig. 06 Stormwater Management Park
Source: Low Impact Development

Environmental Sustainability - Buildings

The unusual industrial buildings that occupy the sites were efficient forms, meant for a very specific purpose. They were often dedicated primarily to the storage, distribution or manufacturing of a certain process, one that no longer exists or doesn't keep pace with today's production requirements (Jevremovic).

Old buildings have educational benefits for the design and construction industries. These structures utilized natural daylighting and passive ventilation strategies as primary systems. Too often in today's buildings those sustainable practices are not given enough consideration. One could argue that these artifacts are some of most sustainable buildings in our cities.

Finding a way to extend the lifecycle of these artifacts maximizes the potential of their embodied energy. Reuse is an opportunity to provide new development at a fraction of energy and capital costs. The embodied energy that exists in these structures could be treated as an existing asset and salvaged accordingly.



The other side of the argument is that by adapting or redefining the building, the energy savings over time could be substantially greater than the energy expenses incurred over its lifecycle without changes. This energy savings would include new insulation and cladding associated with contemporary building methods. The updated skin and thermal characteristics minimizes the amount of unwanted heat loss and heat gain, and over time could surmount the savings of a plain reuse / restoration.

Fig. 07 A lifecycle analysis diagram demonstrating the opportunity for reuse and recycling, rather than demolition.
Source: clemson.edu

Cultural Sustainability

"This stripped down architecture responded to the desire of industrialists to have inexpensive, flexible workspaces, but also to the spread of a new aesthetic, one that represented a culture of modernity, efficiency, applied science and trust in new materials. Hence, the seemingly generic architecture of industrial buildings in the 20th century created objects of cultural significance that resulted from the changes that had come about in trade, architecture and technology."

*Louis Bergeron + Maria Teresa Maiullari-Pontois
(Bergeron, 202)*

There is already an established connection between these existing service buildings and the surrounding context because industrial sites were magnets for development. People lived within walking distance of the places they worked. With the establishment of a factory came workforce housing and stores.

Industrial communities have a rich cultural heritage. The labor force in the factories was made largely of immigrant workers. These ethnic groups settled into their communities and established unseen lines in the overall geography of the city. In Pittsburgh, Pennsylvania these latent lines established namesakes for today's neighborhoods. Places like Polish Hill or Deutschtown (a national historic district) refer to the original ethnic enclaves.

Today, given the surviving attachment to existing infrastructure and culture, a little goes a long way in redevelopment. The industrial heritage and the cultural heritage of a neighborhood are one in the same. They provide obvious and significant connections to the cultural character of a place.

The memory of a place is largely an ephemeral quality that is preserved through the physical existence of its buildings. Giving a second life to these buildings invokes a sense of history and utilizes the vernacular architectural characteristics to define

the place. Responding to an artifact establishes continuity in the built environment and creates a rich and perceptible atmosphere for a neighborhood.

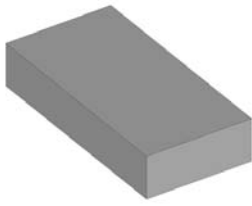
In the neighborhoods the artifacts are in the form of old buildings. These vessels of memory should be appreciated as direct connections to their history. These are the places that physically connect us to the past. They tell us where we came from. I would argue it is important that we do not get stuck living in the past, less we are victims of nostalgia. To advance socially, it is critical that these buildings be analyzed without being overly romantic. Rem Koolhaas keenly acknowledges the risk that “in many cases, the past becomes the only plan for the future” (Cronocaos). Koolhaas’ statement is framed within an argument dealing with extreme preservation or extreme demolition, but none the less it is appropriate within the two poles.

An old, ordinary service building is not significant in and of itself. Individually they are banal objects. At the scope of a neighborhood, many of these buildings work together to contribute to the identity of a place. Often these groups can provide a strong argument for the designation of a historically significant district, because collectively they represent an era of cultural establishment and growth.

The continuity of an idea or theme in the built environment can be expressed in many different ways. A building has the potential to signify a point of departure from the old ways of preservation. This idea of continuity through time can only be expressed when there is a conjunction of two things. By themselves, the buildings remain banal.

Change gives these relics new life and the temporal qualities enhance the neighborhood. This value builds a desirable and permanent layer of character into the urban core while adding a spark of newness. The result can have a profound impact on the identity of a place.

PART 2 SUPPORTING

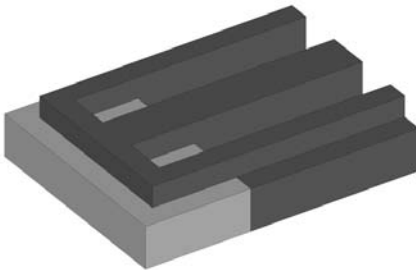


re•use

use again or more than once.

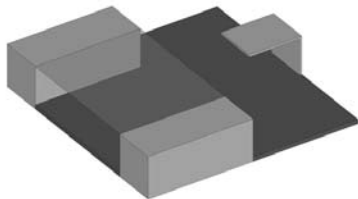
There are a variety of tactics used to transform industrial artifacts. Derived from a lecture presented by the Spanish architect Inaqui Carnicero titled “Second Hand Spaces,” transformation can be categorized by three strategies: reusing, adapting or redefining (Carnicero, 2013).

His interpretation of these strategies is based on European principles, and it is my goal to reinterpret them as they pertain to American industrial artifacts.



a•dapt

make suitable for a new use or purpose; modify.



re•de•fine

define again or differently.

Fig. 08 Reuse, Adapt, Redefine Form
Source: Author

re•use use again or more than once.

The principles I will outline for the tactic of reuse of industrial artifacts align with historian and art critic John Ruskin's view on [extreme] preservation. Ruskin (1819-1900) was emphatic about preserving architecture as we find it, in order to preserve the memory it embodies. He said "we may live without her, and worship without her, but we cannot remember without her" (Ruskin, 178). His statements signify an important motivation to formally preserve the memory of a place and are deeply rooted in nostalgia and his idea of Parasitical Sublimity.

"Parasitical Sublimity, i.e. a sublimity dependant on the accidents, or on the least essential characters, of the objects to which it belongs; and the picturesque is developed distinctively exactly in proportion to the distance from the centre of thought of those points of character in which the sublimity is found" (Ruskin, 189).

Authentic

Do not let us deceive ourselves in this important matter; it is *impossible*, as impossible as to raise the dead, to restore anything that has ever been great or beautiful in architecture.

John Ruskin, 1849



Fig. 09 OMA Cronocaos Exhibit,
Ruskin's attitude toward preservation
Source: designboom.com

I believe this idea of parasitical sublimity constitutes the incidental erosion and degradation of form over time and identifies architecture as a ruin. The characteristics of these ruins are the "fractures, or stains, or vegetation, which assimilate the architecture with the work of Nature, and bestow upon it those circumstances of colour and from which are universally beloved by the eye of man" (Ruskin, 193). This resulting patina washes over the buildings and enforces the memory of a particular time.

Preservation, in the mind-set of John Ruskin, implies that there are to be no changes to the building and that it will be preserved in its original authentic condition, honoring the spirit and craftsmanship of a particular time, until it deteriorates. This form of preservation has its value in certain instances, but in regard to the industrial service buildings it is flawed because it monumentalizes artifacts and to a large extent, prevents us from revitalizing them. Ruskin's theory restricts any structural or technological upgrades, but leaves the city to admire the building for what it is, a ruinous shell that encompasses the memory of the spirit of the past.



Fig. 10 Landschaftspark I
Source: landezine.com, Jane Sebire

A well known reclamation project is the Landschaftspark in Duisburg Nord, Germany. Through a phased remediation, a derelict industrial site is transformed into a public asset.

The design by Latz + Partners uses “the aesthetic juxtaposition of nature and built artifacts” to frame views on the site. These ruins can be characterized as the parasitical sublimity that John Ruskin wrote about. There is an inherent beauty associated with the decay of these massive objects in a natural landscape.

The artifacts only function is to remain a folly in the landscape. Because of their utilitarian function, and incredible scale they become monuments that evoke a sense of nostalgia. Under the tactic of reuse, buildings are:

“viewed merely as an artistic statement representing its historical moment, rather than a living, changing, artifact of human use, its manipulation by succeeding generations becomes a matter of historical interpretation as well as architectural design. History, in a sense, imprisons the building, causing its value as a monument to supersede other values.” -Mark Alan Hewitt (Hewitt, 198)



Fig. 11 Landschaftspark II
Source: landezine.com, Christa Panick

a • dapt

make suitable for a new use or purpose; modify.

Adapting a building confidently states that there will be changes made. This strategy provides flexibility for design intervention to adjust the form of the building, and the program to occupy it.

As a response to the decay brought on by the appreciation and desire of ruins, Eugene Emmanuel Viollet-le-Duc began a siege of restoration. Viollet-le-Duc believed: "To restore a building is not to repair it, nor to do maintenance or to rebuild, it is to reestablish it in an ultimate state that never existed before" (Viollet-le-Duc, 1855). His controversial restoration projects violated the principles outlined by Ruskin and replaced the memory and spirit of the past with an artificial version.

The late Ada Louise Huxtable summarized professional opinion of his intent: "Viollet-le-Duc overreached, undeniably, and his confidence in his ability to re-create the past, to recapture the irretrievable, was boundless and naive" (Huxtable, 92).

In order to negotiate the complexity of restoration, the National Park Service has a published list of standards for restoration which for the most part align with Ruskin's ideals for preservation of craftsmanship and memory.

Viollet-le-Duc's tactic for preservation is what Mark Alan Hewitt defines as the conjunctive theory (Hewitt, 199). By definition, a conjunctive approach is to join or connect two objects. Viollet-le-Duc's failures were within the projects' inability to discern the difference between the old and the new. This conjunction of work from different periods was criticized because "the original is often trivialized by an inept replication of its elements; distinctions between old and new may be so blurred as to make future restoration difficult" (Hewitt, 199).

Hewitt presents the conjunctive theory as an opposing theory to the disjunctive theory, both of which I still classify as adaptive tactics. The disjunctive theory is one in which "[the architecture] will be rendered complete and frozen as of the moment of the new intervention and will be set apart forever by the clear break between the parts" (Hewitt, 199).

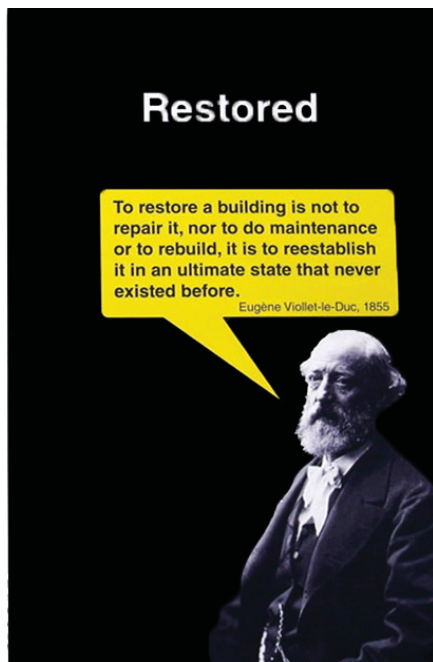
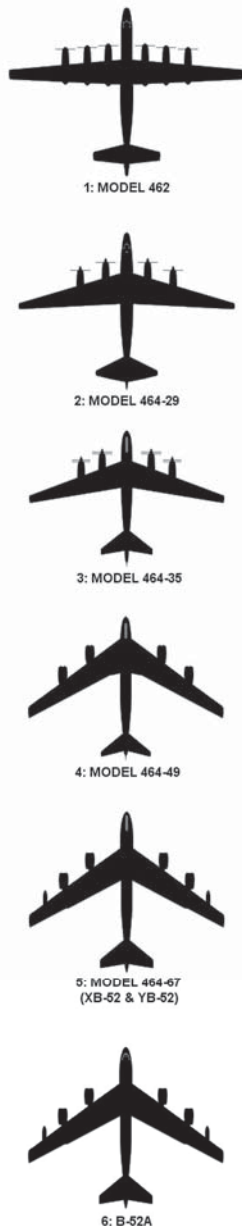


Fig. 12 OMA Cronocaos Exhibit, Viollet-le-Duc's attitude toward preservation
Source: designboom.com



The disjunctive theory introduces an apparent gap, or what Hewitt identifies as the lacunae, between the old and the new. This provides contrast and demonstrates a clear intent to preserve the past as what it was, while providing for the new with a contemporary attitude toward building.

Hewitt associates the disjunctive theory with tendencies in modernist architecture. The motivation to isolate the new from the old is brought to light through contrasts in scale, structure, and proportion of building elements that are inherently associated with modern building technologies (Hewitt, 200). I would characterize these strategies under the tactic of “adapting,” because there is a new architectural form being integrated into the design.

The image to the left demonstrates the adaptability of the American made B-52 Stratofortress. The last frame for the B-52 was fabricated in 1962, yet they remained active through many missions in Vietnam, the Gulf War and Kosovo. In 1962 there was a sufficient quantity of these aeronautical machines, and the engineers maintained progress by adapting the carcass with the newest technologies so they could remain functional.

These adaptive methods implemented in the restoration of the B-52 demonstrate the flexibility of a design and can be used as a filter to see the potential of industrial service buildings. While maintaining the condition of a shell, new technologies are embedded into it to create an object that can function the same way it was originally intended to. This strategy provides flexibility for design intervention to adjust the form of the building, and the program to occupy it.

Fig. 13 - Evolution of the B-52 - The frame of the B-52 Stratofortress has been adapted over the span of its life to include the current technologies associated with each time period. Models shown are from 1946 - 1952.

Source: en.wikipedia.org/wiki/Boeing_B-52_Stratofortress



Fig. 14 Interior of the Ecotrust Building
Source: dominekarch.com

The Ecotrust Building, probably better known as the Jean Vollum Natural Capital Center is the nation's first instance of a historic restoration that achieved the LEED Gold rating. The Portland, Oregon renovation project was designed by Holst Architecture.

"The design merges the Ecotrust's mission of forest stewardship with the historic integrity of the structure. Design elements include seismic upgrade, reuse and recycling of existing brick and timber materials, one of Portland's first eco-friendly commercial roofing systems, and storm water filtration and retention system."

Holst Architecture, holstarc.com

The project adapts an artifact by introducing the steel frames shown along the side of the original building, and the penthouse addition rising from the center. This disjunctive, adaptive use project is a clear demonstration of new elements contrasting with the older building. Because of the disjunction of the penthouse addition, the National Park Services did not grant the full 20% tax credit, instead it was only given the 10% (Roberts).



Fig. 15 Ext. View of the Ecotrust Building
Source: naitodevelopment.com

re•de•fine define again or differently.

Keeping within the outline of Hewitt's essay, a more progressive stance on preservation is to de-objectify the buildings on the site and "view each architectural intervention as an intermediary, a kind of in-between fabric to be knitted into the pre-existing environmental order" (Hewitt, 200). By addressing the task in an abstract way the preservation of form doesn't seem quite as prolific, rather it is manipulation of form in order to enhance relationships to context that has the greater effect.

In the case of the industrial artifact, we're presented with a design problem of reintegrating a defunct building into its context. We can assume the context of the place is the pulse of the neighborhood and the design intervention is to be done without killing the patient. That is the risk, and the architecture is contingent upon the latent forces of the neighborhood.

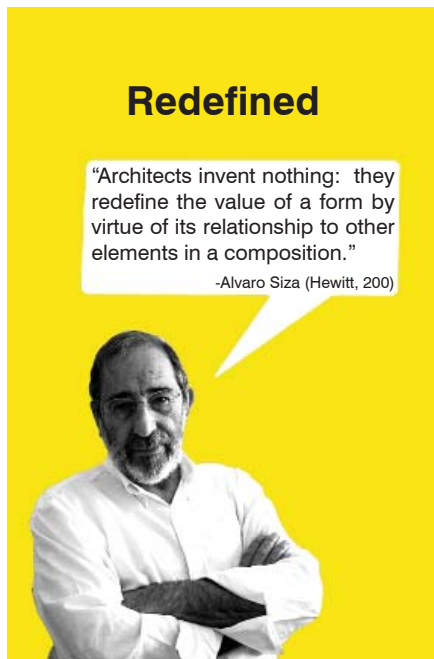


Fig. 16 Alvaro Siza on Architecture
Source: Author

In his essay on abandoned industrial parks, Hugh Hardy explores the unique typologies of the industrial artifacts and concludes that "each site must also be considered on its own merits. Since no two communities view conversion the same way, no two projects can achieve the same result. And because of their variety, there is no uniform method for reconstruction" (Hardy, 32). Each site is loaded with social expectations and cultural context of a post-industrial city. These communities are a unique set of demographics that have a collective memory associated with them, which makes the old industrial building a collective artifact.

Aldo Rossi's introduction to "The Architecture of the City" derives the meaning of a collective artifact through *la fabbrica della città*, which he characterizes as "man's construction as it continues over time" (Rossi, 18). This idea that the form of the city is always under construction, and the relationships between the objects are constantly being transformed, reinforces the view that any design intervention should reach out to its surrounding context. It does not suggest we take on urban projects as a *tabula rasa*, or blank slate.

re•de•fine

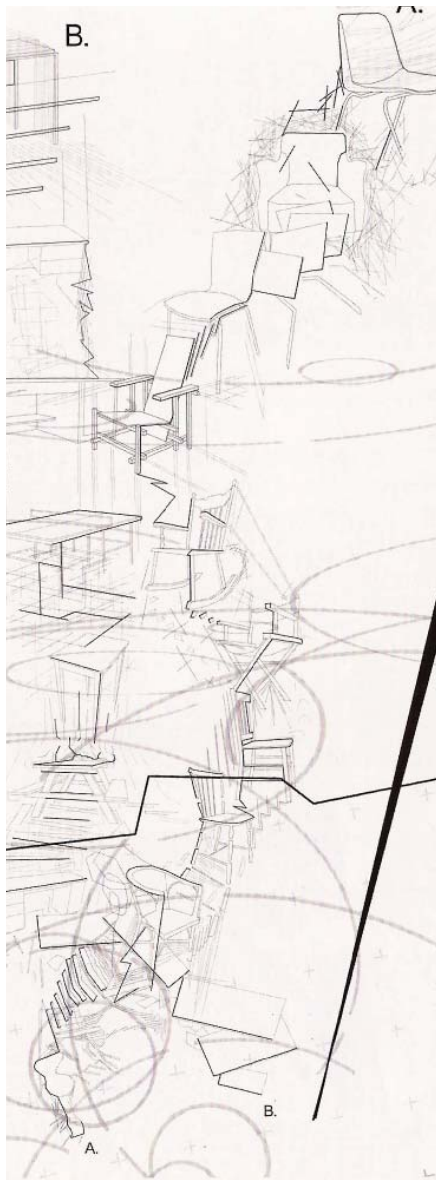


Fig. 17 Choreographic Mapping
Source: Resilience, 18

The design firm Status demonstrates how proposals for design intervention at a post-industrial site can test the resilience of a place. They use the term resilience to classify objects by “how alterable [they] are while maintaining the qualities that define it” (Craig, 10). There is an inherent dismissal of the *tabula rasa* in the focus for design intervention tactics, because of the abundance of contextual information.

The project by Status shows how redefining is like a reliquary that protects traces of the place. It suggests that a project can preserve the social and culturally significant aspects of a place, without necessarily preserving the entire form. Selectively removing pieces and layers of a building can result in a method of recording history and events overtime. Buildings can document change, similar to an ancient palimpsest. The projects use fragments of the artifact to maintain the identity of place, while simultaneously redefining its form.

In a sense, redefining is a tactic that could be used to encode the history into the site, rather than “preserve” it. I believe the industrial service buildings provide an excellent project to test this tactic because of the significance of the activities that occurred on the site, the inherent modular spaces of the buildings, and the fragments contained within them.

*This project engaged material traces, specifically a chair and table found in the otherwise apparently empty space, unwanted remnants of an intermittently thriving studio...Tape markings on the floor chronicled a hidden choreography of the objects, suggestive of why they had been abandoned in such a specific arrangement. It was the damage - the wear and tear - of the surface that was investigated. A mapping was produced that analyzed the chair and table in terms of their capacities to damage the tape, while simultaneously reintegrating them into the families of objects to which they belonged. The mapping began to suggest past events, arrangements, and potential reasons for their abandonment. As the mapping developed, it explored the possibilities of the inherent narratives related to these objects. **It also revealed how these narratives, through exaggeration and manipulation, could become dominant over the material traces left behind, and start to act as a controlling force or script for movements.***

Excerpt from Resilience (Craig, 17-18)

re•de•fine Referencing - The High Line



Fig. 18 The High Line I
Source: archdaily.net, Iwan Baan

“The High Line, which is under the jurisdiction of the Department of Parks & Recreation, was the former West Side industrial railway. It is a 1.45 mile-long elevated, steel structure built in the 1930s for freight trains; the last train ran on it in 1980.”

Karen Cilento (Cilento, “The New York High Line”)

James Corner Field Operations and Diller Scofidio + Renfro designed the High Line in New York City. The original railway was a mode of transportation that moved freight back and forth through the city. The High Line as it stands today is a continuation of that theme through time. The project redefined an industrial artifact as a linear park system that connects the neighborhoods.

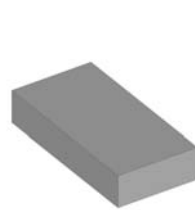
Fragments from the original artifact, like the rails shown below, were organized to codify the essence of the place. “As each piece of rail was removed, it was marked and mapped so that later, it could be returned to its original location as an integrated planting piece” (Cilento, The New York High Line).



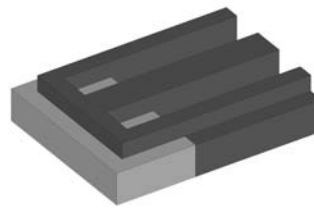
Fig. 19 The High Line II
Source: archdaily.net, Iwan Baan



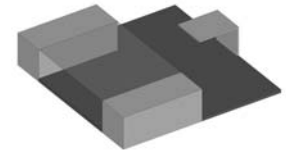
Fig. 20 The High Line III
Source: archdaily.net, Iwan Baan



re•use



a•dapt



re•de•fine

Site Ecology			
Restore			
Conjunctive Materials			
Disjunctive Materials			
Palimpsest			
Use Embodied Energy			
New Function/Program			
Addition			
Subtraction			
Parasitical Sublimity			
Past Memory			
Memory of New			
Adaptable for Future			
Fragment			
Context			
Historical Context			
Preserving Form			
Eroding Form			

Table 01 A matrix organizing opportunities within the tactics of reuse, adapt, and redefine
Source: author

PART 3 SITUATING

"The chief distinction of Pittsburgh is not smoke, and it never was. There has been no major smoke in Pittsburgh for thirty years, and even when smoke hung thick over the city for a century it was accepted stoically and almost affectionately as the life-sign of its prosperity. Instead, the chief distinction of Pittsburgh is work. As surely as Paris represents glamor, Dallas wealth, and Rome the dolce vita, so Pittsburgh stands for industry and production."

*Franklin Toker, PITTSBURGH An Urban Portrait
(Toker, 1)*



Fig. 21 Global Location, USA
Source: author



Fig. 22 Location, PA
Source: author



Fig. 23 Regional Location, Allegheny County
Source: author

The Strip District is literally a 300 acre “strip” that extends out of the downtown area. Its inherent linear shape and proximity to the river made it prime real estate for early industry in Pittsburgh.

Once occupied by three separate rail lines and freight yards, the area defined the potential for the assembly line (Toker, 189). The Strip District was home base to several iron and steel foundries, the Armstrong Cork Company, machine shops, and brick plants. In 1868 James Parton was looking down at the Strip District when he likened Pittsburgh to being “Hell with the lid off.”



Fig. 24 District Location, Pittsburgh
Source: author

Development in the Strip District has been picking up in recent years. The Produce Terminal has been making headlines because of its questionable status as an architecturally significant service building.

This quarter-mile long building industrialized the way food was distributed to the city of Pittsburgh. Trains would come to a stop on one side and every car could be efficiently unloaded into the building.

The Produce Terminal now sits, largely vacant, as a resilient edge, preventing pedestrian and vehicular traffic from reaching the riverfront.



Fig. 25 Terminal Location, Strip District
Source: author

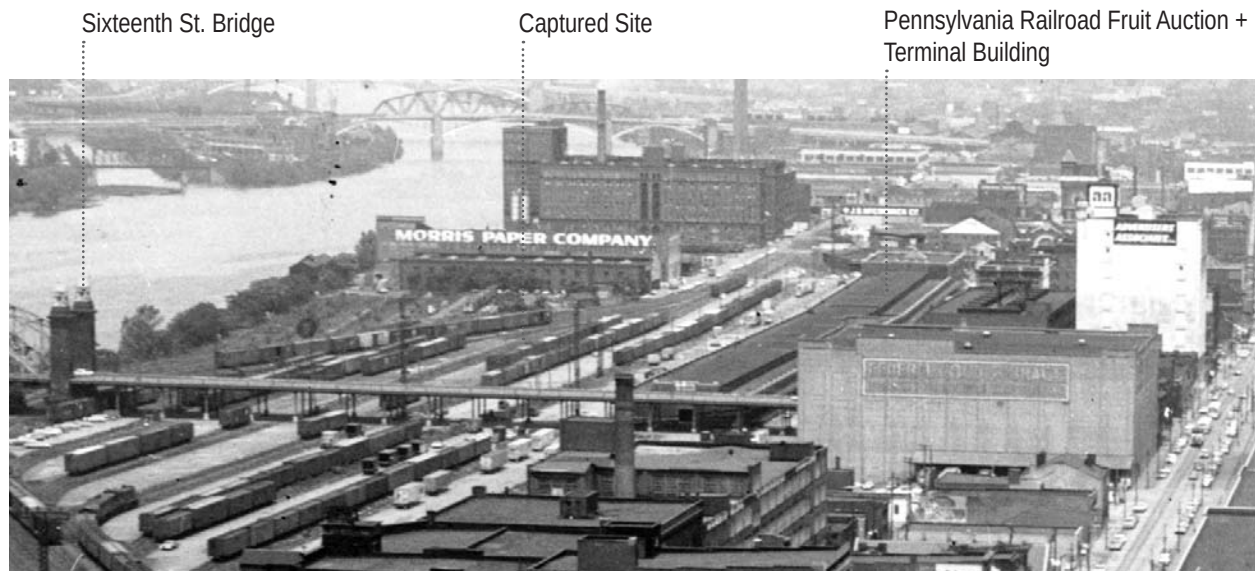


Fig. 26 Aerial view of Terminal Site, 1951
Source: Harold Corsini



Fig. 27 Working in the Terminal Building, 1951
Source: Harold Corsini

Transformation of the Terminal Site

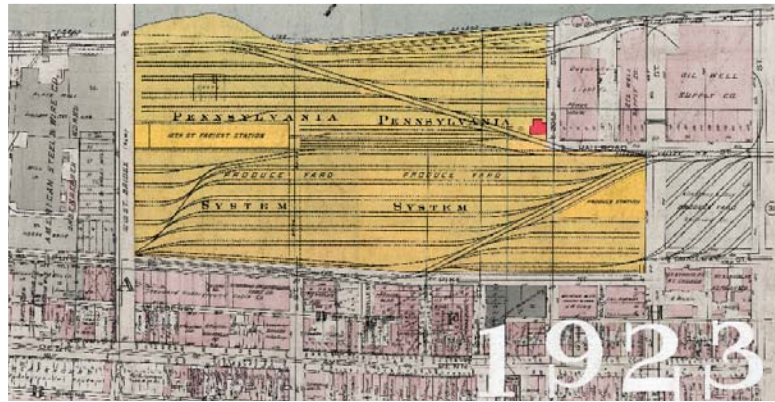


Fig. 28 1923 Map
Source: G.M. Hopkins & Co.

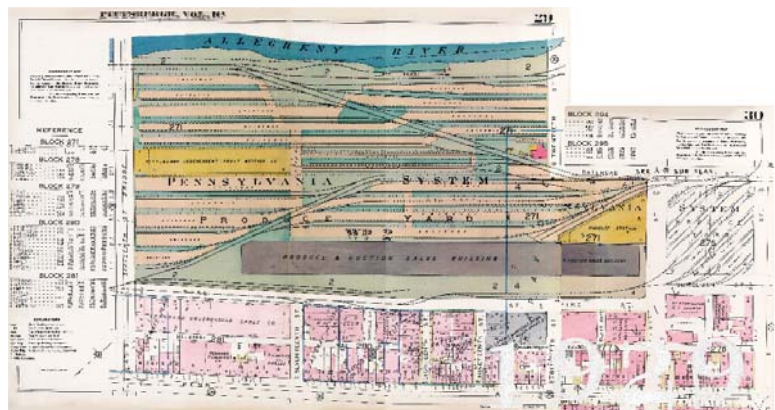


Fig. 29 1929 Map
Source: G.M. Hopkins & Co.

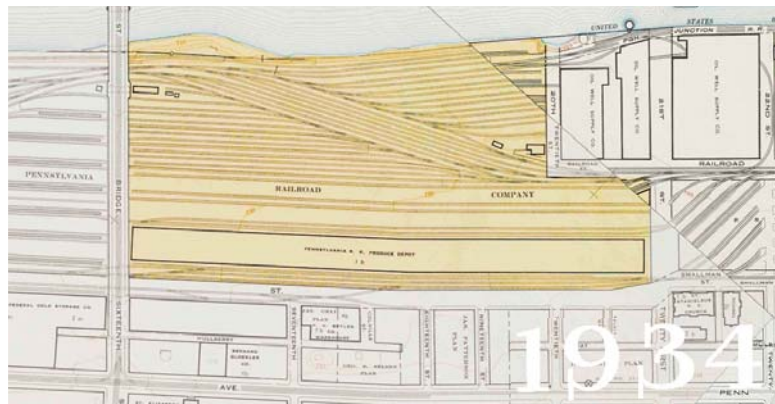


Fig. 30 1934 Map
Source: Dept. of City Planning, Pgh.

Assets and Constraints of Terminal Building

Constraints

There is a significant datum change at both sides of the Terminal Building. The awning is pitched toward the building and as a result the masonry is plagued by water issues.



Fig. 31 Existing Conditions, Smallman Street
Source: author

Assets

The Terminal Building has an existing infrastructure in place. The loading docks and wide driveways at the rear of the building provide an opportunity to inject a unique urban program into the structure.



Fig. 32 Existing Conditions, Loading Docks
Source: author

Analysis Diagrams

The Three Rivers Heritage Trail is a 24-mile nonlinear system that runs along the many river banks in Pittsburgh. The Strip District segment connects Lawrenceville to the downtown, running along the Allegheny River.

Opportunities to plug a node into this system exist on between the trail and the Produce Terminal building.

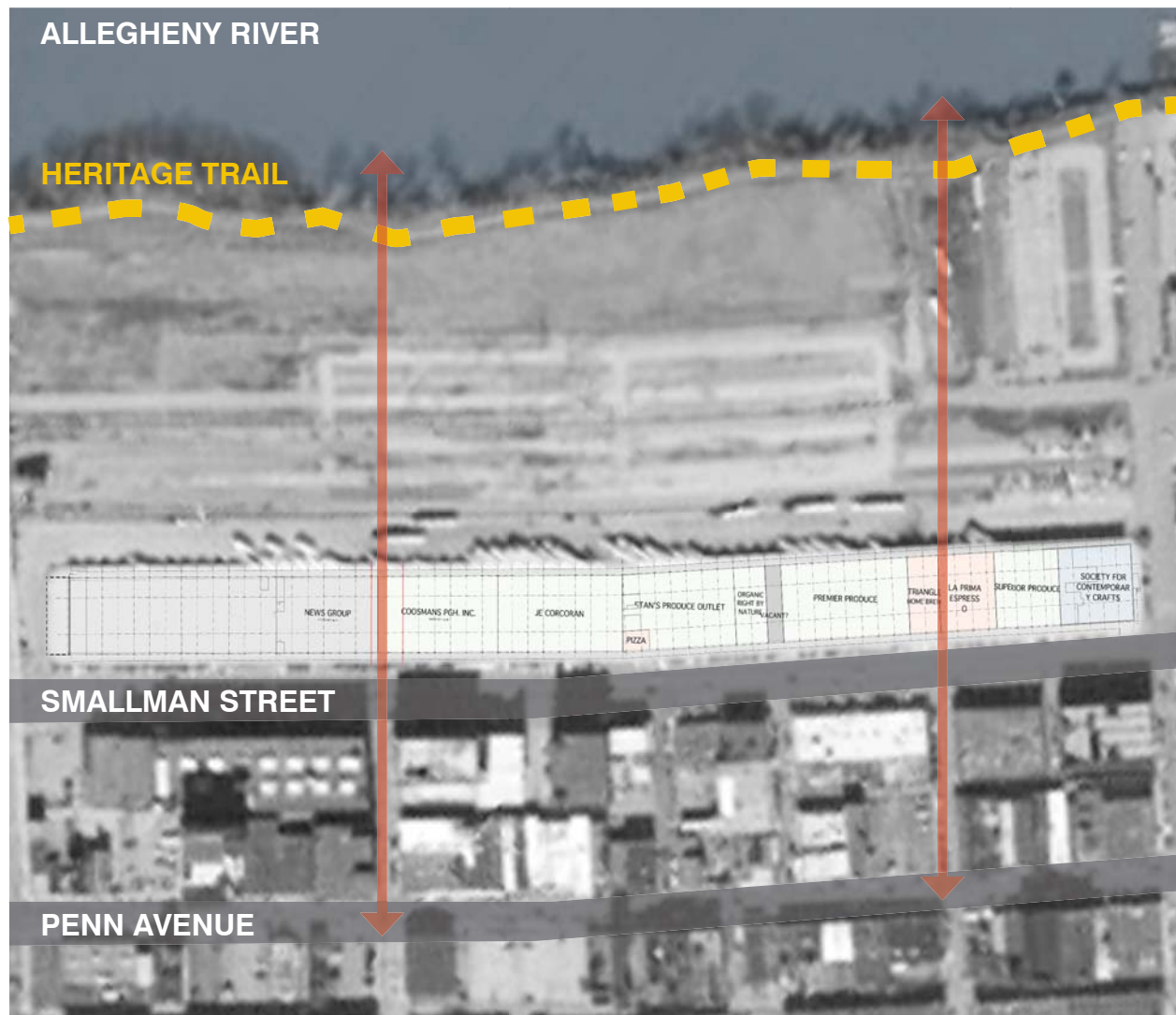


Fig. 33 Diagramming Connections
Source: author

Natural Edges

Block 271 is a flat site between the Allegheny River and the Hill District. These natural edges forced the development of the district to take on a linear form.

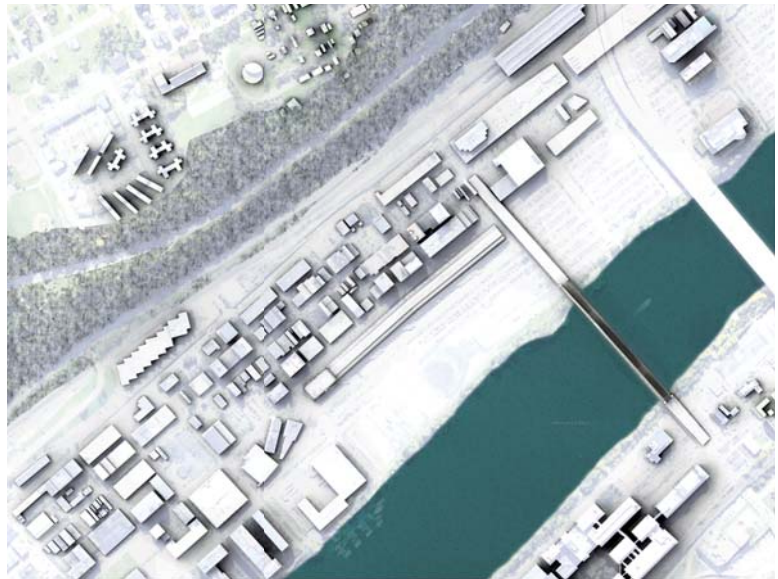


Fig. 34 Natural Edges
Source: author

Existing Figure Ground

The Pennsylvania Railroad Produce Terminal is over 1500 feet long. The building was constructed in the spirit of the railroad. The length of the building maximized the efficiency of the train yard and allowed the workers to unload several freight cars at once. In today's context, the building is a hard edge that is blocking access to the riverfront. Block 271 is prime real estate in the heart of the Strip District, and currently the Terminal Building is prohibiting access to it.



Fig. 35 Existing Figure Ground
Source: author

Existing Arteries

Because of the natural boundaries, the development pattern has taken on a linear form. The entire district bottlenecks at Block 271, just before one would reach downtown Pittsburgh. Keeping consistent with the infrastructure of the district, it becomes apparent where the next access road needs to be cut in.



Fig. 36 Existing Arteries
Source: author

Site Response

The site response is to make the river accessible to all the transverse roads in the district. The main axis coming through the site is an extension of Railroad Street, which connects the neighboring district. Reactivating transit connects Block 271 to the city. The site response proposes a connection to the Busway (running just at the bottom of the Hill District), a funicular up to the Crawford-Roberts neighborhood, and an accessible connection to the Sixteenth Street bridge.

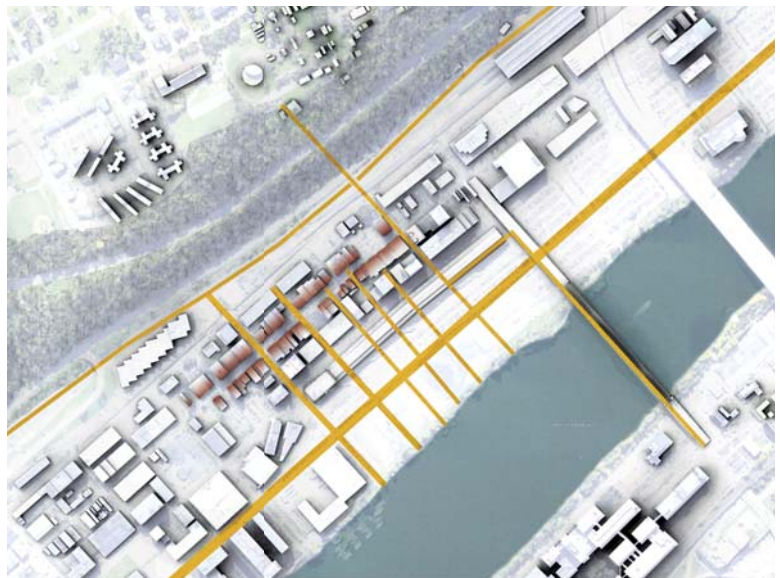


Fig. 37 Site Response
Source: author

PART 4 PROGRAMMING

"The Visigoth, the medieval monk, and the modern archaeologist have all stood in front of the same classical building with wildly divergent proposals for the future, ranging from a good sacking to iconoclastic exorcism to careful excavation; each one of the approaches represents a commentary, if not necessarily an improvement, upon the attitude it has inherited."

Edward Hollis

"Adaptive reuse - The alteration of a given structure from one use to accommodate another for which it was not originally designed" (Praxis, 105).

The challenge of programming for adaptive reuse projects is that the process is really inverted from a typical architectural design. In my experience, program is seen as a brief to organize space and form, thus form can follow function. When the form has already been defined, such is the case for adaptive reuse projects, then the question becomes what can we fit into the given space? There is a shift away from design of a finished form and toward the design of the program. What forms can be introduced to promote activity in the existing space?

These industrial structures are perfect examples of *form follows function*, taken to the extreme. The original industrial use of the space has expired or been aborted, leaving the structures in programmatic failure.

John McMorrough defines programmatic failure as the situation "when the needs of the user can no longer be accommodated and overtime the building becomes obsolete" (Praxis, 106). The user of the terminal building was originally wholesale distributors, the WalMarts and Sam's Club of today.

"When a project or a form is not utopian or abstract but evolves from the specific problems of the city, it persists and expresses these problems both through its style and form as well as through its many deformations. These deformations or alterations are of limited importances precisely because architecture, or the fabbrica of the city, constitutes an essentially collective artifact and derives from this its characteristic features."

Aldo Rossi (Rossi, 18)

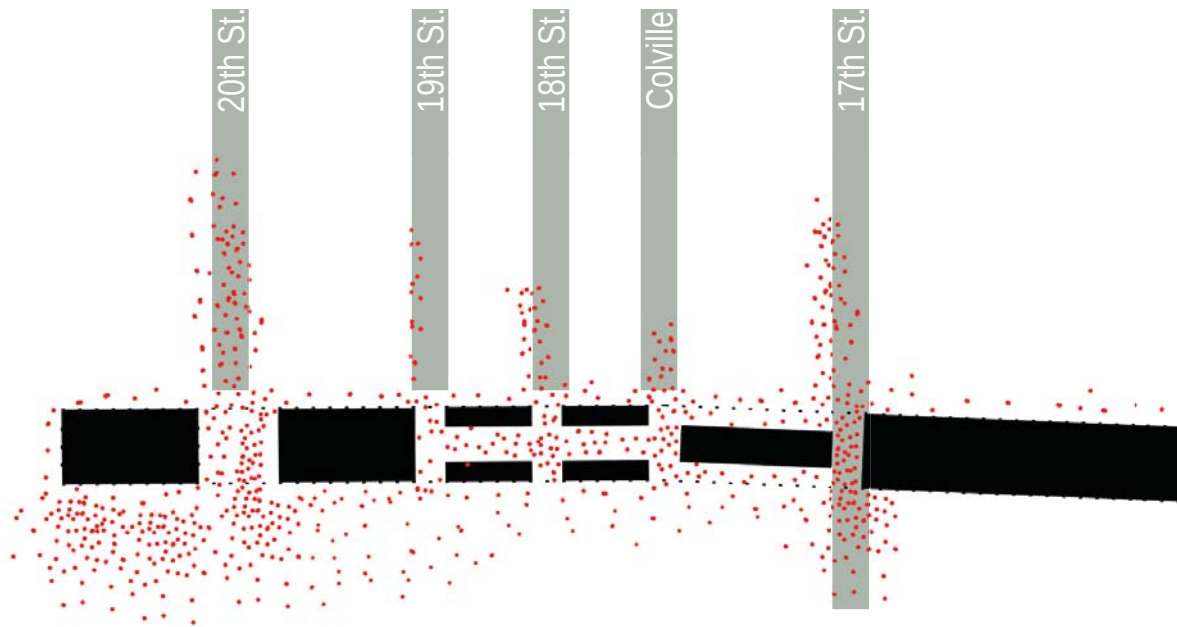


Fig. 38 Proposed Activity Zones
 The proposal uses the existing pattern of the city grid to punch through the building. Openings are located at all streets from 17th-20th. 17th Street also allows for vehicles to pass through.
 Source: author

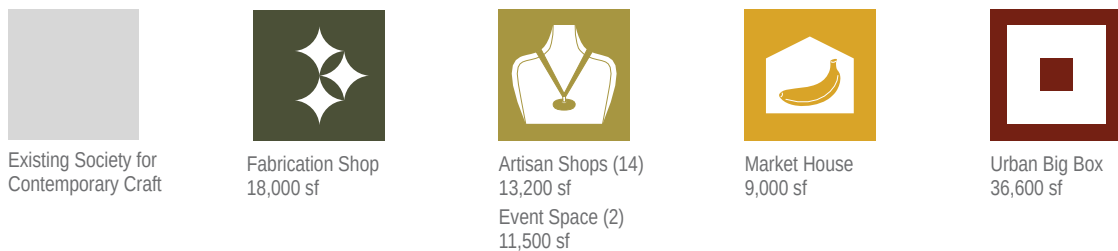


Fig. 39 Proposed Program Types
 The proposed tenant types were selected based on the past uses of the space; a wholesale big box store and a produce market. The Strip District's Artisan Market would be upgraded and relocated to the Terminal Building, and Fabrication Shop would create a cultural dialogue with the existing Society for Contemporary Craft.
 Source: author

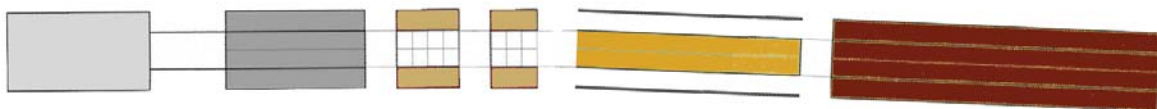


Fig. 40 Proposed Program Zones
 Source: author

PART 5 FORMING

Existing Conditions

Since Pittsburgh started expanding into the suburbs, there has been little success for tenants in the Produce Terminal Building. These industrial structures are perfect examples of *form follows function*, taken to the extreme. Since the original industrial use of the space has expired or been aborted, the masonry structure is left in programmatic failure.

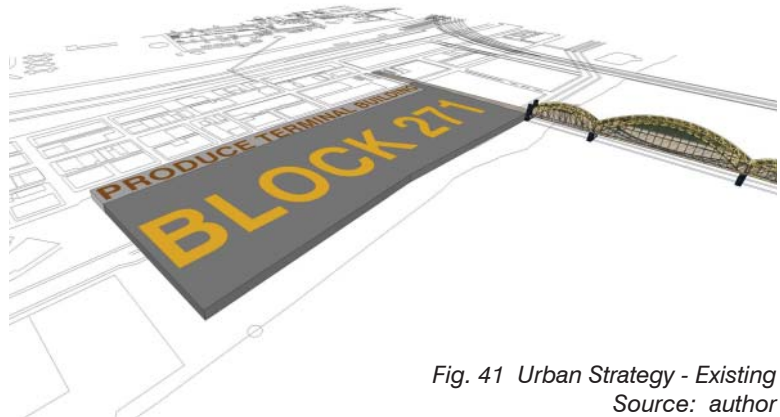


Fig. 41 Urban Strategy - Existing
Source: author

Green Boulevard

In order to reconnect Block 271 to the surrounding neighborhoods, a Green Boulevard (conceptualized by the city) carves through the longitudinal axis of the site. Utilizing Railroad street as an entry point, the Green Boulevard follows the original circulation path of the rail system. This gentle curve through the site creates a moment of pause as commuters pass through, and also pulls views of the river into the heart of Block 271.

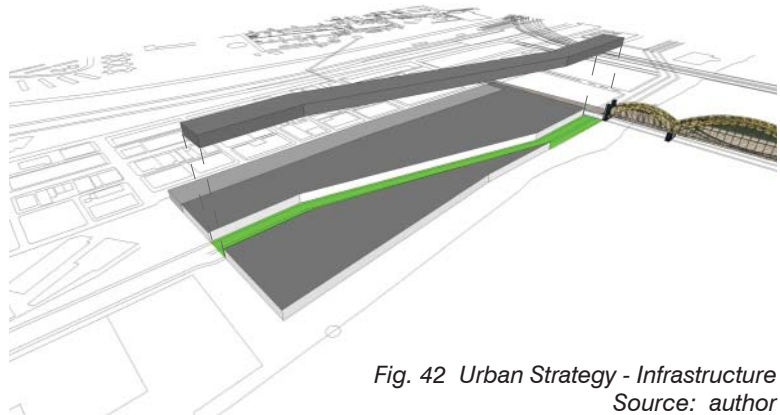


Fig. 42 Urban Strategy - Infrastructure
Source: author

Extend Urban Corridors

Bays of the Terminal Building are strategically dissolved to allow visual access through the structure. These portals are based on the existing urban grid and the pattern continues all the way to the Allegheny River.



Fig. 43 Urban Strategy - Corridors
Source: author

Preserve View of Terminal Bldg.

The iconic typology of the freight terminal is preserved through an urban massing move. The move embraces the tremendous length of the building, and conserves a large section of land which will be used as a public space.

Program

The new infrastructure of the Green Boulevard creates an opportunity for an urban commercial corridor. These retail stores and restaurants are identified in red. Because the close proximity to the convention center, a boutique hotel is to be located adjacent to the 16th St. Bridge (in yellow). The buildings on the river side of the Boulevard are to be mixed use. These hybrids orient residential units to take advantage of the views to the river, views to downtown, and views of the Hill. Parking is contained in a multi-level garage with basketball courts on the upper deck.

Amenities + Stormwater

The primary amenity is the sculpture park located alongside the Terminal Building. The sculpture integrates the Society for Contemporary Craft into the new urban spaces by providing a rich cultural destination for the district. The “head piece” of the Terminal Building extends to the river through the introduction of a public plaza.

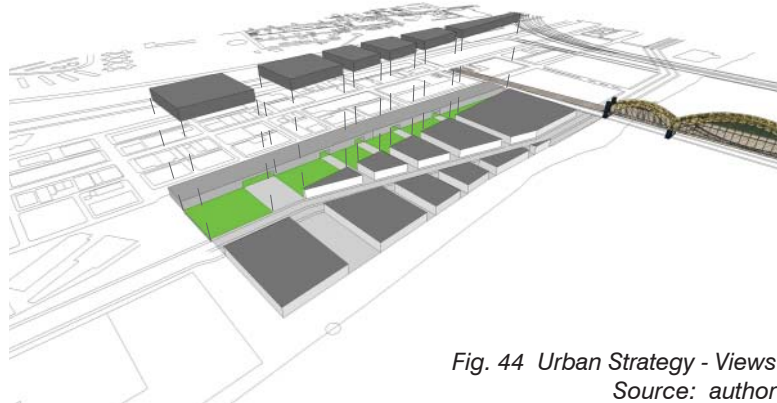


Fig. 44 Urban Strategy - Views
Source: author

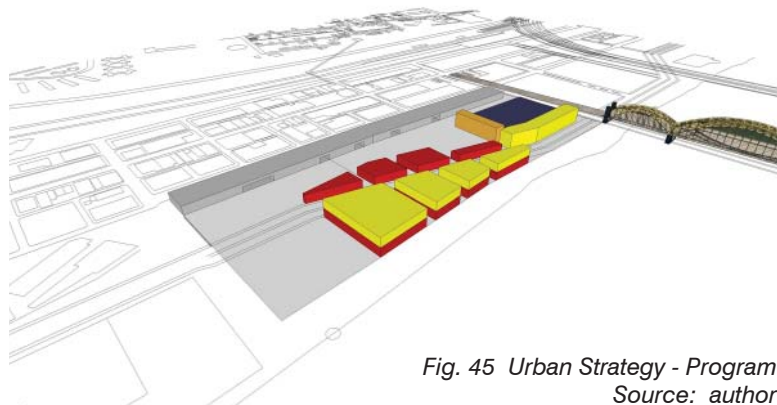


Fig. 45 Urban Strategy - Program
Source: author



Fig. 46 Urban Strategy - Amenities
Source: author



A linear sculpture park is introduced to bridge between the new and the old. The Society for Contemporary Craft (SFCC) is an existing program that takes up the “head piece” of the Terminal Building, shown in the above plan on the far left. The proposal uses the SFCC as a catalyst and introduces Fabrication Shops with spaces for Resident Artists. The works completed by these artists are the objects that will populate the sculpture park.

Intersecting the street grid with the building allows people to flow back and forth from the new to the old. The connections to the river would provide an infrastructure for boaters to access the markets in the Strip District. At the same time, the shoppers and tourists who come to the markets in the Strip District have the opportunity to visit the river, and the riverfront Heritage Trail.

The Terminal Building becomes a threshold between the new and the old, the river and the city, and between the art and the artist.

*Fig. 47 Proposed Plan of
Terminal Building
Source: author*

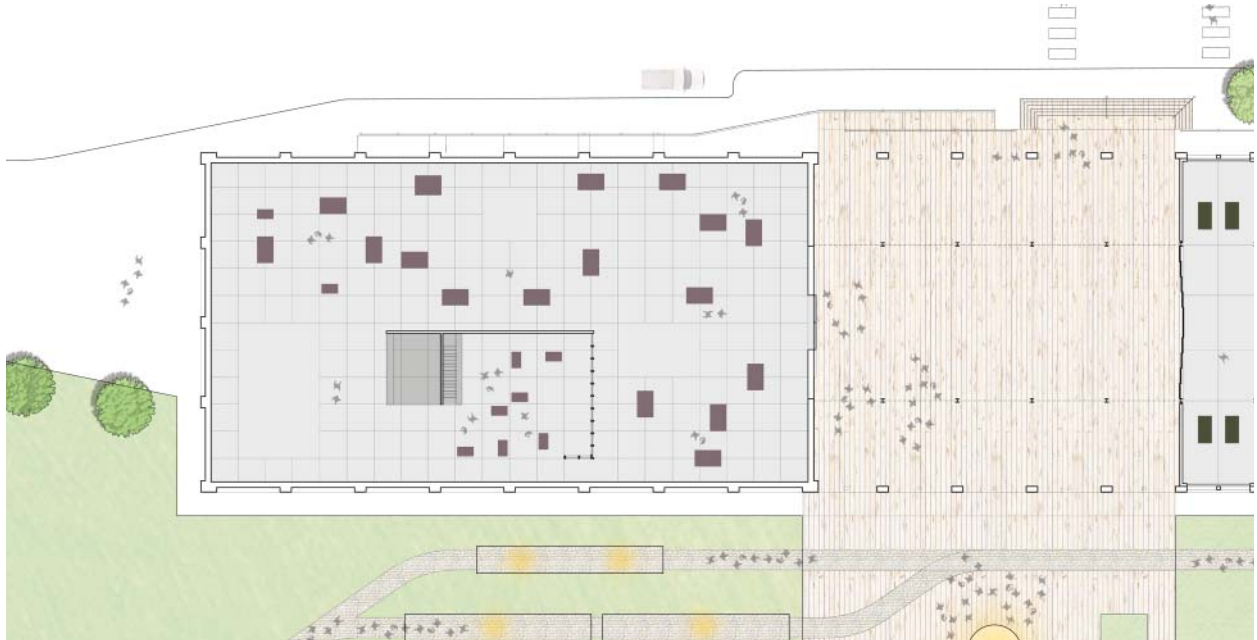


Fig. 48 Existing Plan of the Society For Contemporary Craft
Source: author

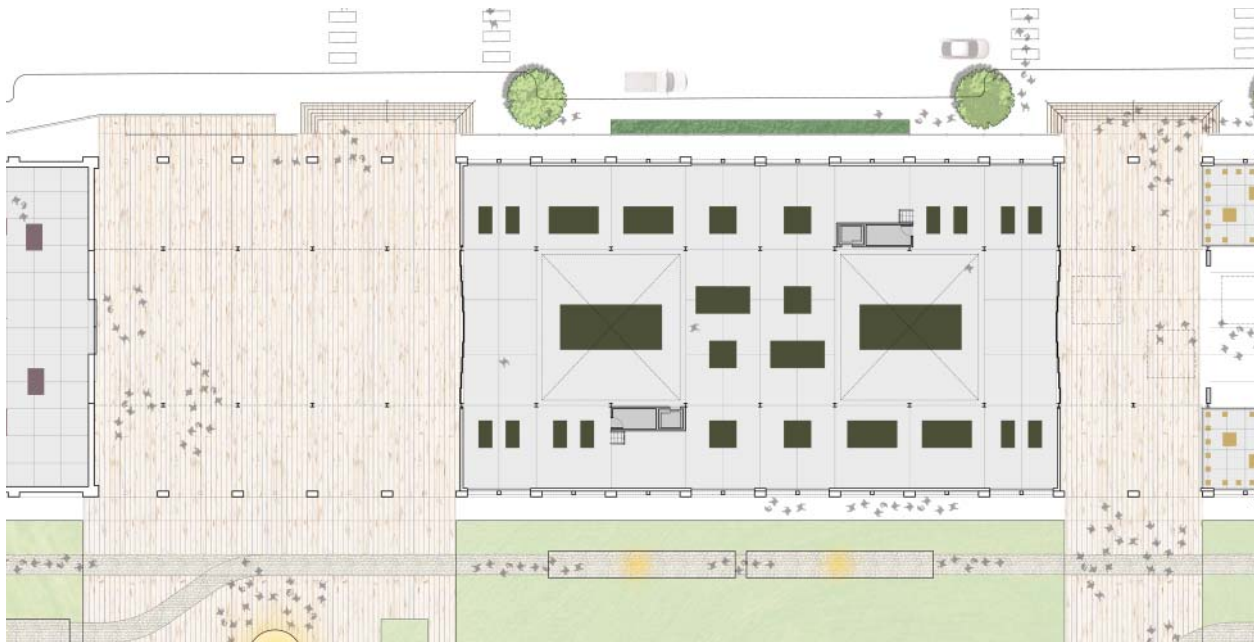


Fig. 49 Proposed Plan for the Fabrication Shops
Source: author



Fig. 50 Proposed Plan for the Artisan Market and Event Spaces
Source: author



Fig. 51 Proposed Plan for the Market House
Source: author



Fig. 52 Proposed Plan for the Urban Big Box
Source: author

PART 6 REFERENCING



Fig. 53 Cutflower Trusses
Source: Kate Schuster

Pittsburgh Cutflower

There's an abandoned factory site in Gibsonia, Pennsylvania where my brother and I would ride through on horseback. I remember that it was rarely meant to be our initial destination, but never the less we always seemed to pass through it during our trail rides. The place was interesting- it was a magnet.

There used to be endless rows of greenhouses. Imagine city blocks, only made completely of glass structures. All that's left now are the spalling red brick buildings, still contributing, still holding the steel trusses in place, still defining the same spaces they had been for countless years before anyone I knew had visited the place. It was quiet- a hollow shell. One day everyone left work and went home, but they never came back.



Fig. 54 Cutflower Industrial Plant
Source: Kate Schuster

The place previously described is the former site of Pittsburgh Cut Flower. Like so many other industrial relics, it was only a matter of time before someone saw potential in redefining the site.

The concept was developed by Moore Design Associates and it illustrates the much desired post-industrial overlay to the place. The industrial site becomes a recreational park with athletic fields, deck hockey rink, and a field of photovoltaic panels garnished with sunflowers.

It consists of approximately 150 acres of meadows, pond and woodlands which will be permanent green space, and nearly 30 acres of abandoned buildings and greenhouses which are currently being demolished to make the property safe and available to be recycled for an economic development use.

AlleghenyLandTrust.org

Conceptual Master Plan



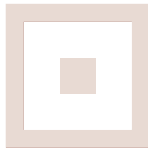
Fig. 55 Moore Design's Proposal for Cutflower
Source: author

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APPENDIX

Fabrication Shops



This segment of the Terminal Building is a fabrication shop for invited artists. The large open space at the main level is utilized as a place for crafting large objects that will later populate the adjacent sculpture park. This segment considers the current program of the Society of Contemporary Craft as a catalyst and builds on the idea that art plays a significant role in identifying a cultural center in the city.

The upper level houses four dwelling units so the artists can live onsite and draw inspiration from their experiences in the district. The proximity of the units would allow for unique collaborations between artists and the materials they work with.



Fig. 56 View of Fabrication Shops from Sculpture Park
Source: author



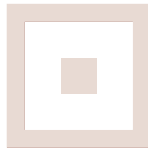
Fig. 57 Fabrication Shops - Penthouse Adaptation
Source: author



Fig. 58 Fabrication Shops - Interior Architectural Response
Source: author



Artisan Market and Event Spaces



The Artisan Market provides a place to buy specialty crafted goods. The program currently exists in a shell of a building at the edge of the district. The proposed shops would allow artisans to display their goods at all hours of the day. They might have a few shelves in one of the shops, and take turns working the counter.

The architecture of the infill panels is comprised of glass and steel, maximizing transparency into the shops. The central nave of the Artisan Products segment oscillates between a pedestrian mall and event space in the evening. Gala events and fundraisers would be the primary types of events.

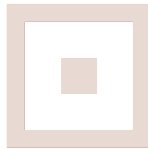


Fig. 59 Artisan Market - Interior View
Source: author



Fig. 60 Artisan Market - Reused Spaces
Source: author

Market House



The roof on the smaller bays of the Produce Terminal are peeled back to reveal a hidden space. A glass facade has cedar planks layered on the outside to filter daylight and provide a bright atmosphere.

The Market House program speaks to the history of the site. The Produce Terminal is reactivated as a place to get the freshest fruits and vegetables. On summer days, the side bays would be occupied with farmers market tables.

The signage, railing, and lighting are held off the main structure and attached to the concrete plinth.



Fig. 61 Market House - View from Street
Source: author



Fig. 62 Market House - Peel Back Layer
Source: author

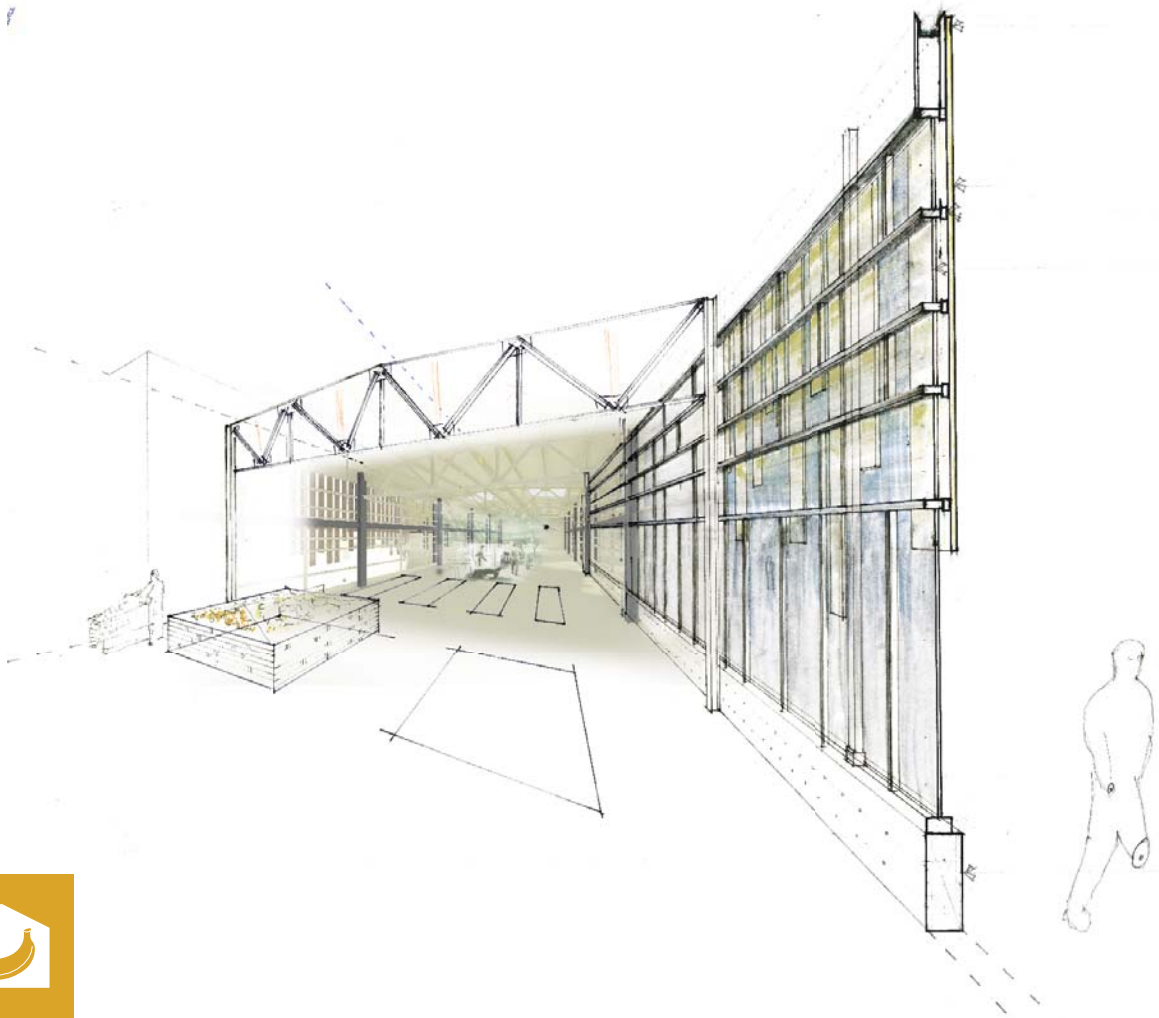
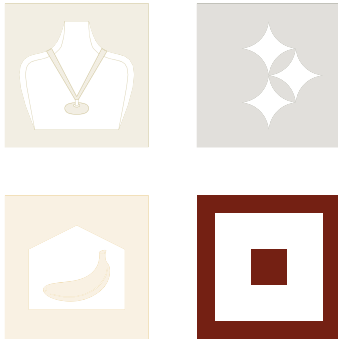


Fig. 63 Market House - New Layer
Source: author

Urban Big Box Store



The Produce Terminal was the original big box store. Train cars brought large quantities of goods into the city, and they were distributed at wholesale prices to local vendors. In the 1950's the wholesale market started to suffer due to the expanding suburbs. As people are returning to the city, it's time we bring the Urban Big Box Store back as well. Big Box Store's across the country are currently trying to find their way into the city. Lumber stores are providing delivery services, and general stores are making more efficient use of their shelf space.

The architectural tactic is to preserve the loading docks, and reconnect to the urban fabric. An adjacent six level parking garage provides support for the store.

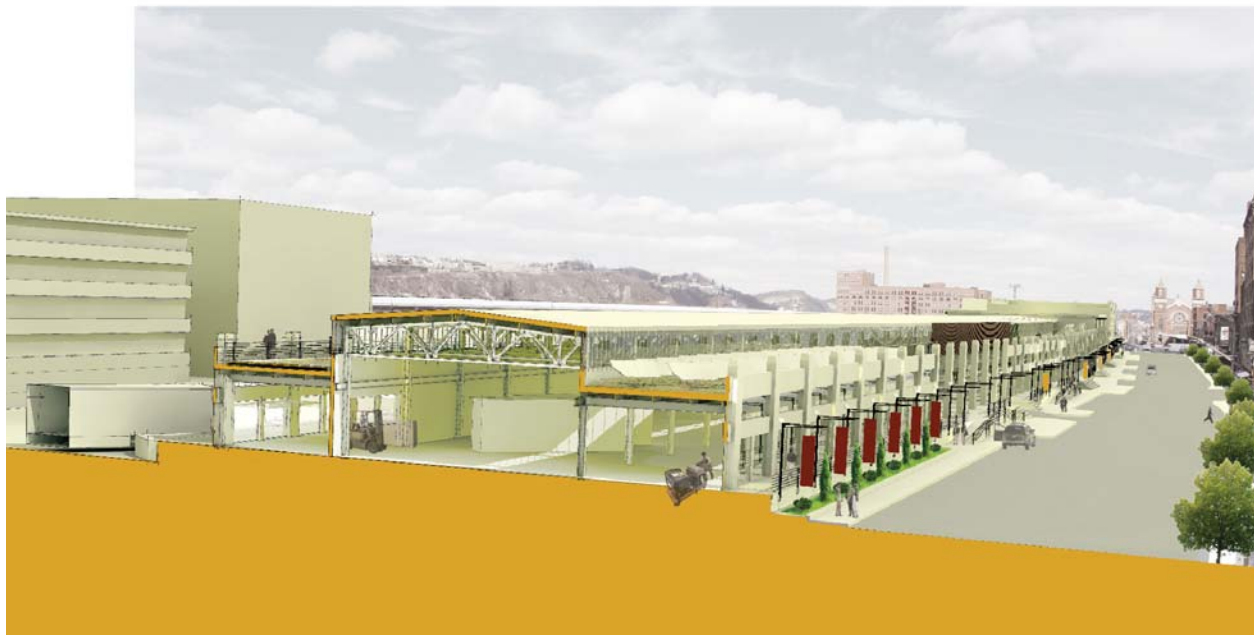


Fig. 64 Urban Big Box - Site Section
Source: author

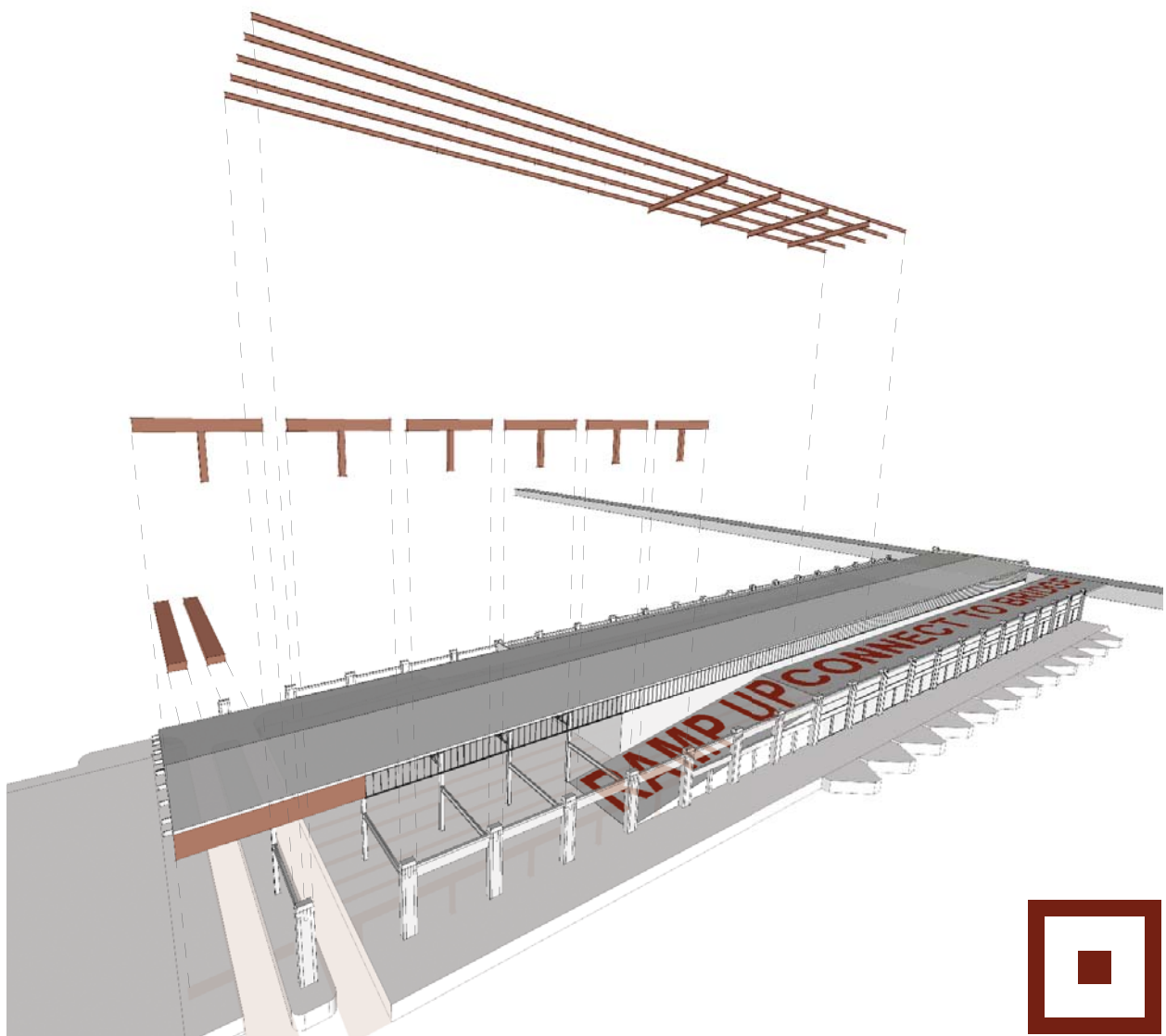


Fig. 65 Urban Big Box - Redefined
Source: author

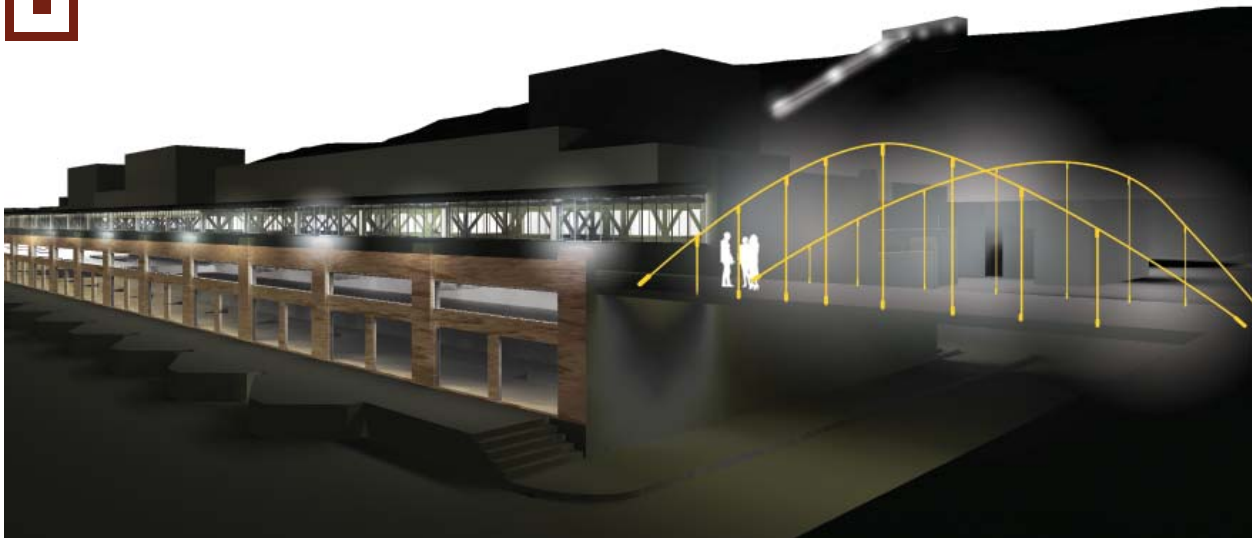


Fig. 66 New Connection to 16th St. Bridge
Source: author



Fig. 67 View of Artisan Market and Market House
Source: author



Fig. 68 Perspective View of Proposal
Source: author



Fig. 69 Urban Plan of Proposal
Source: author

VITA

During his studies at the University of Tennessee, Jared Pohl was an appointed Graduate Research Assistant with the Design Build Evaluate Initiative (DBEI) for two academic years. He worked under the guidance of Professor Tricia Stuth to help support the Evaluate phase of the New Norris House, assist with grant proposals and maintain a strong outreach through awards submissions.

His current research interests are focused on environmentally sustainable building design. His work with the DBEI inspired a self-directed research proposal examining the quantifiable benefits and of green roofs and vegetated building surfaces. This academic exercise resulted in field trips to Chicago and Nashville to document examples of different green roof systems.

His passion for sustainable architecture was the deciding factor in selecting his thesis topic, which is the adaptive reuse for a post-industrial site in his hometown of Pittsburgh, Pennsylvania. The thesis focuses on minimizing waste and maximizing existing resources while preserving the culture and character of the neighborhood.