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A Terminal Project
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Adaptive Value

DESIGN FOR CHANGING ECONOMIES

ABSTRACT

ADAPTIVE VALUE: DESIGN FOR CHANGING ECONOMIES

The intent of this thesis is to better understand how architects can increase the value of under utilized sites amidst changing economies. Initial explorations of material reuse, reconstruction, deconstruction, and adaptive reuse have culminated in a better understanding of the value of architecture.

Inherent to any building design is the initial program for its construction. These programs help define the building and set up parameters upon which architects base their designs. The problem that often arises is that nothing happens to these spaces once the programs have changed. This thesis looks to examine how an adaptive reconstruction process can take an abandoned building and through a series of alterations over a period of time, change the building to adapt to a radically different program. This strategy begins to address principles of adaptive reuse, life cycle building, sustainability, material waste, deconstruction, and building construction techniques.

The first stage of the project recognizes that the existing Lincoln Steel site is in a light industrial area near downtown Lincoln. It also became apparent in the studying of this site that there was a large amount of vacant properties in close proximity to the site. What used to be a historically strong auto retail location has now become a series of vacant used car dealers and construction industry tenants. This relatively large quantity of vacant properties will help support a new program of an Eco-stores architectural salvage. As the site changes over time it is important to understand how this specific building changes with it. Speculating that the continued decline of the surrounding context leads to an increasing number of vacant properties, the site can adapt to this new resource by capitalizing on its proximity and thus, an Urban farm is developed. This change is facilitated through a common core of program that remains through out the buildings life cycle.

This common core become crucial to the future value of the building. Containing the critical element of many building typologies, this core helps facilitate the adaptive value process. As the value of the site begins to change again, this project again forecasts a dramatic change in the context. Looking much further into the future, it is again speculated that as a new community begins to develop around this site, a potential community center develops. Again, this site can change to adapt to the new program with little trouble. This process is then repeated as the building needs of the site change over time. As the downtown grows and economy changes, different programs will find the site attractive and through this process of creating value through adaptation, the long term value of the building increases as well.

Over the long term development of this site, different architectural solutions can be used to help increase its value, thus increasing the role of architectural design in the construction process.

TABLE OF CONTENTS

INTRODUCTION	1
ANALYSIS	6
MATERIAL WASTE	
BUILDING PROCESS	
BUILDING LIFE CYCLE	
PRECEDENTS	14
BIG DIG HOUSE	
LOBLOLLY HOUSE	
KRAANSPOOR	
URBAN OUTFITTERS	
SITE ANALYSIS	24
VALUE ANALYSIS	
HISTORICAL GROWTH	
SITE CONDITIONS	
SITE MODEL	
PHOTOGRAPHS	
DESIGN PROCESS	58
DESIGN PROPOSAL	66
5 YEAR - ECO-STORES	
20 YEAR - URBAN FARM	
50 YEAR - COMMUNITY CENTER	
REVIEW MATERIAL	98
BIBLIOGRAPHY	104
ACKNOWLEDGEMENTS	106

HOME OF THE
LIFETIME
PRICE GUARANTEE



INTRODUCTION

As I began to think about what a thesis should be interested in exploring I started to question what role architecture plays in the average person daily routine. This made me think about the places I frequent and how little concern architecture as a profession seems to have with these places. These places become purely manifestations of an economic model that values cheap and efficient design.

I began to ask myself how I might begin to deal with these spaces. As I researched these spaces in areas that I was familiar with, specifically Lincoln and Omaha, Nebraska, I found that the severe lack of design energy invested in these spaces creates very limited uses for them once they outlive their intended use. What happens to my barber shop once my barber no longer is making any profit and has to close his doors? Do we just forget about what the existing use was and start fresh or can we begin to design in a way that facilitates future uses?

It was these questions that drove my research throughout the first semester. As the semester progressed, issues brought up in books such as Alan Berger's "Drosscapes" and Paul Lukez's "Suburban Transformations" really began to resonate with what I wanted to investigate with this thesis. Both of these books talk a lot about changing conditions affecting the built environment and ultimately both propose ways in which architects can begin to address these issues. This thesis looks to expand on those thoughts.



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For me, it really became about how architecture begins to deal with change. As economies change, buildings need to change. In our current society, we have become very used to this idea of a “throw away” mentality however, this notion that things have such a limited lifespan doesn’t work well with architecture. Research led me to begin to realize that the value in these sites that most people frequent in their everyday lives really is a result from that site’s ability to adapt to economic changes.

Material reuse and building reconstruction was what I originally thought to be a solution to this need for adaptation. Buildings designed to facilitate their own deconstruction and repurposing would have increased value as their surrounding site changed and could then adapt to meet these changing needs. However, as I continued looking into this idea of how buildings could adapt to changing economies, what I began to realize was that the value of a building was not solely derived from its materials. The value of a building also came from its physical location, cultural value, environmental value, and historical value.

Ultimately, three proposals were created that began to look at how value can be created through architecture in response to changing economies. I wanted to understand how even as the site changed over time, this proposal might still address different needs. This thesis provided me with a better understanding of how, if architects take advantage of undervalued sites, they might be able to create a competitive advantage facilitating future design opportunities. The following work attempts to document and present this project.



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wildstream

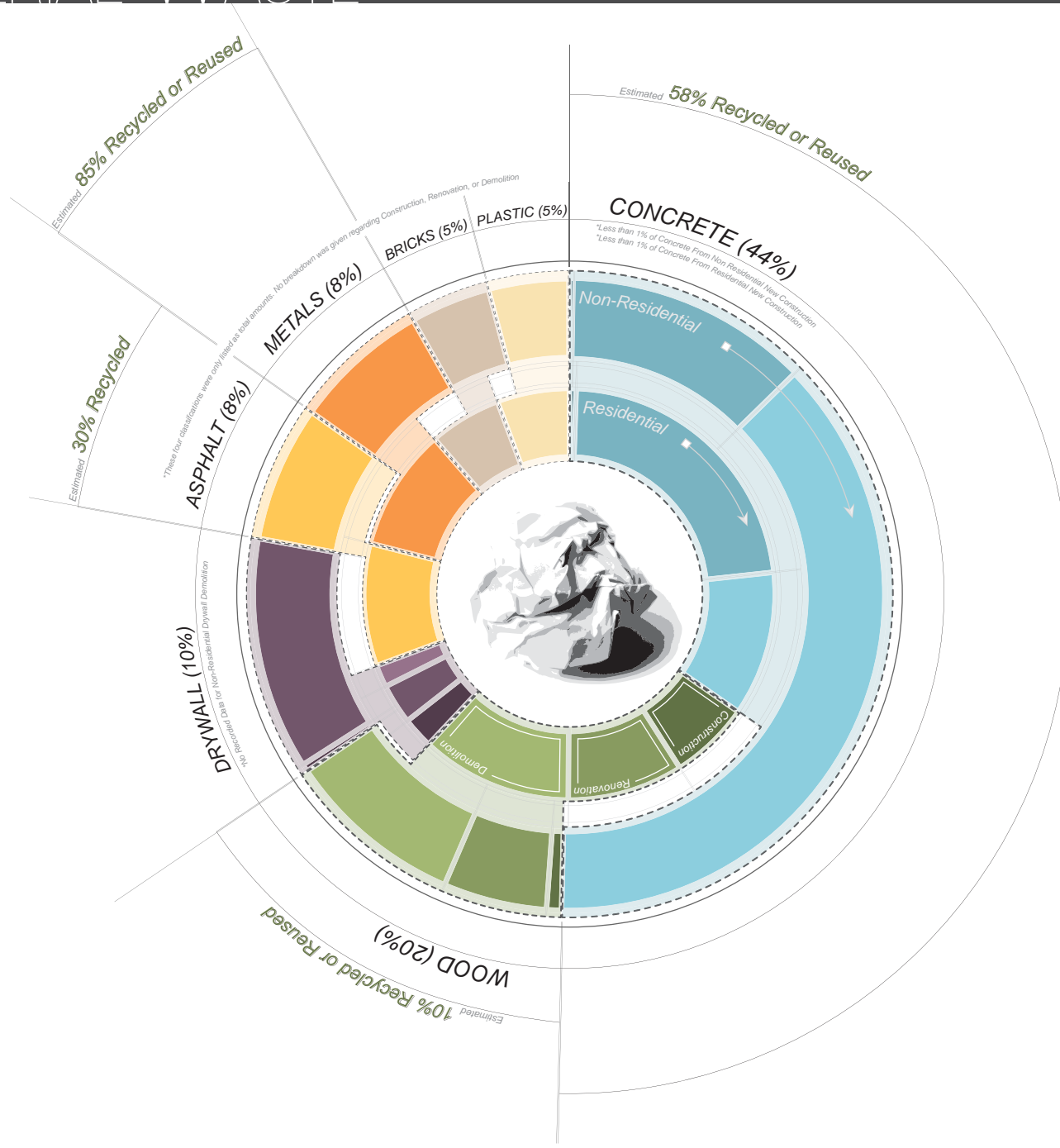
“Most of us live and work in environments that have received little consideration beyond that of economic necessity.”

Chris Krager. *Expanding Architecture: Design as Activism.*



ANALYSIS

MATERIAL WASTE



136

Million Tons of C and D waste is produced in the US each year.

170

Thousand commercial buildings are built in the US each year.

44

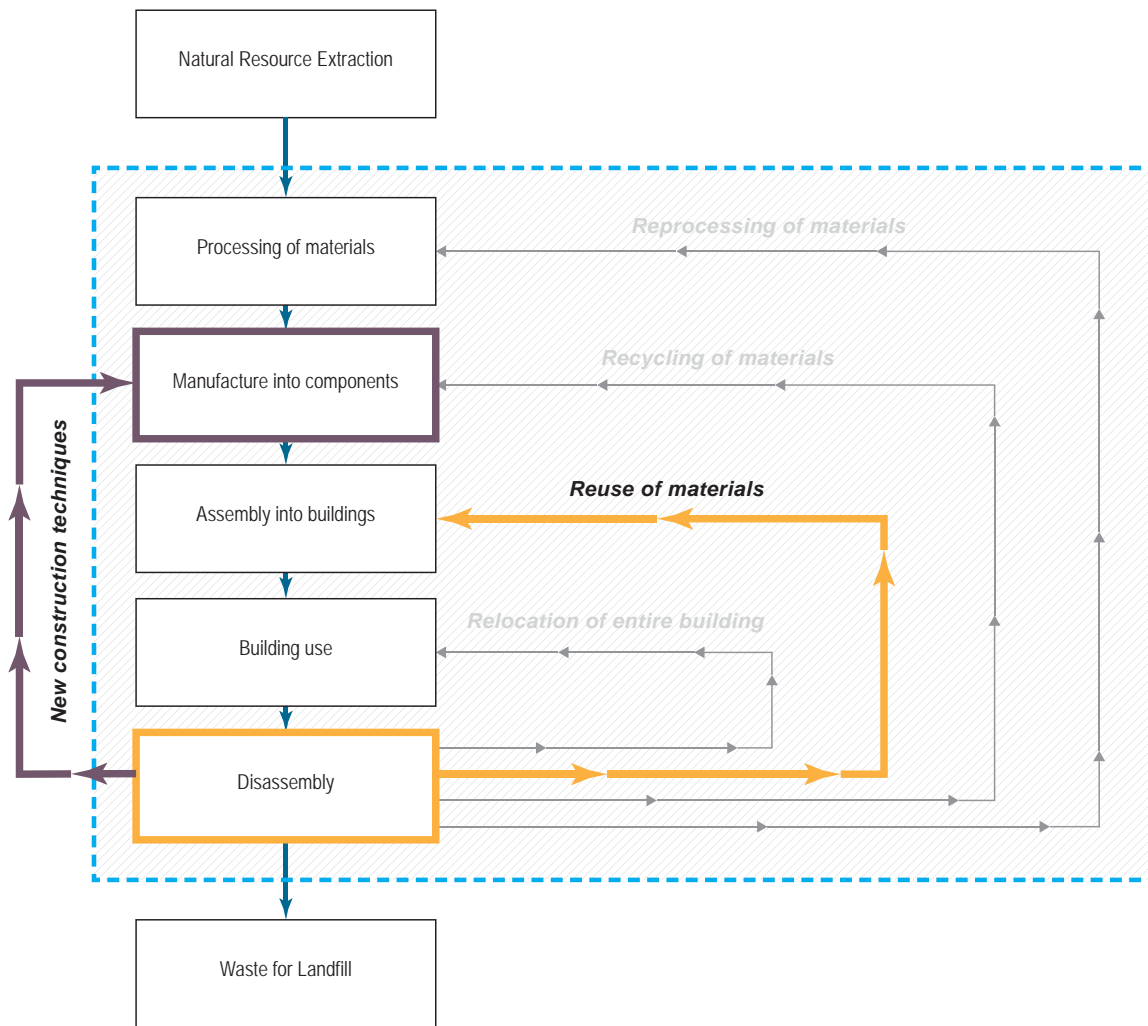
Thousand commercial buildings are demolished in the US each year.

In researching how value can be created in architecture, material reuse become a topic of interest. Buildings make up a large majority of the United States annual waste production with a majority of that coming from demolition of abandoned buildings. If there is a way for a building to be designed and built that anticipates its own deconstruction and reconstruction, perhaps the value of that building can be improved.

The accompanying graphic illustrates what comprises this massive amount of waste as well as the percentages of what is the result of new construction versus demolition. It also highlights what types of construction create the most types of waste, separating residential from non-residential construction. What is surprising in this graphic is that concrete creates nearly 44% of the waste generated but only 58% of that is recycled. Where as metals create only 8% of the waste which is a direct result of the fact that 85% of all metals are recycled.

These findings help illustrate the importance of building sustainably in order to increase the value of an architectural proposal. If a building begins to consider its own material reuse then its long term value might be increased. When adapting to changing economies this becomes an important design issue.

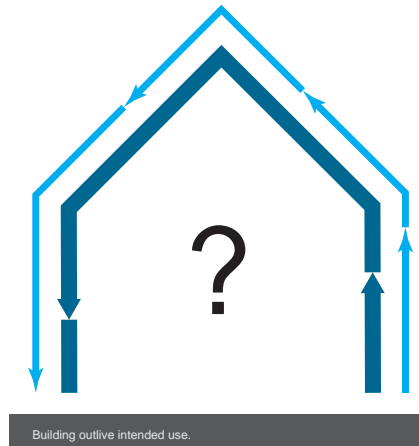
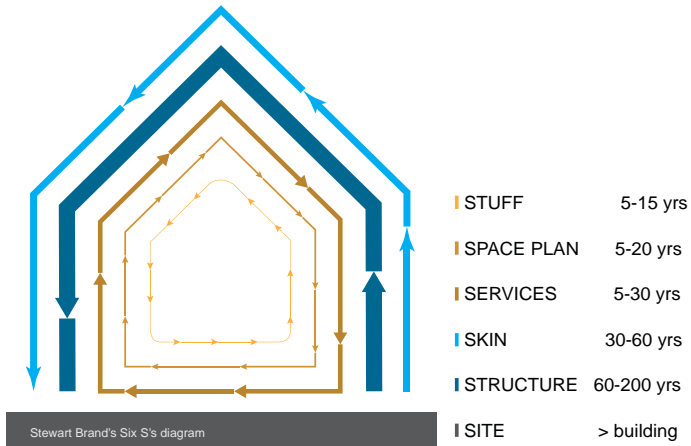
BUILDING PROCESS

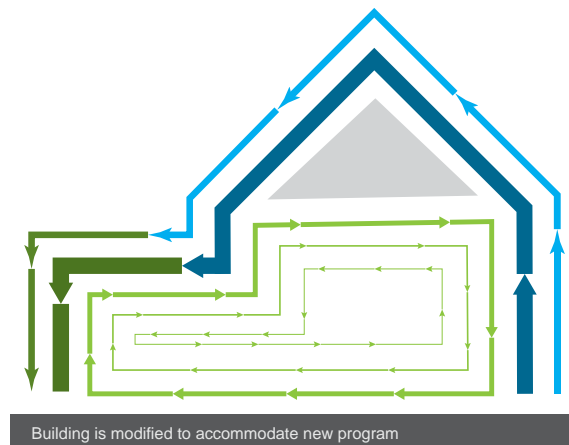
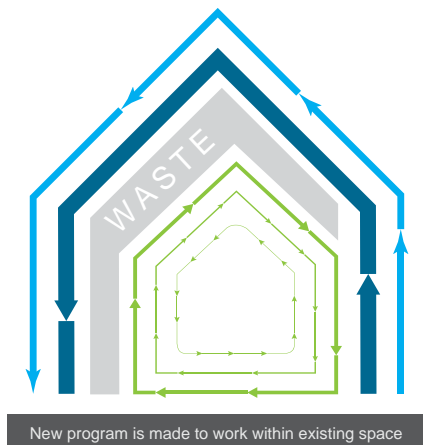


There is potential to change the typical building material process when thinking about the adaptation of buildings in response to changing economies. If instead of thinking of the process as a linear thing but rather as cycle then there is potential to improve a feedback loop that happens in the building process. The design of one building can, when that building's life cycle is completed, be set up so that it facilitates the deconstruction and reuse of materials which can impact a new building.

This process can also help inform new construction techniques that over time, begin to make a more efficient and valuable building system. If the entire system of construction can be rethought, then the flexibility of that construction has potential to be increased, further facilitating this adaptation to changing economies. Being able to easily physically adapt a building is important to the sustained adaptation of that site to changing economies.

BUILDING LIFE CYCLE





Traditionally buildings are designed around the “stuff” inside. This includes the stuff, space plan, and services which all have a relatively short life span when compared to the skin, structure, and site that actually make up the physical construction. The problem arises when that “stuff” changes. This is where the core to this thesis is interested. How do you design a building to deal with change? Currently the issue is changing economies and it is this notion of designing for changing economies that the ultimate thesis attempts to address.

PRECEDENTS

BIG DIG HOUSE



SINGLE SPEED DESIGN. 2006



The Big Dig House creates value in that it reuses material salvaged from another project. Rather than build entirely new construction, the Big Dig House capitalizes on pieces of discarded infrastructure and uses them in a new and creative way. The house does not come close to stressing the strength of these massive supports but it does take advantage of a found object.

The inherent value in these found supports help to reduce the overall cost of the new construction and provided the architects more opportunities in other areas of the house. In addition to the new design opportunities, the reuse of materials create unique design challenges that in this case provide a more provocative architectural solution. As economies change, being able to take advantage of found conditions and found objects will facilitate an improved architectural value of the site.



LOBLOLLY HOUSE



KIERAN TIMBERLAKE. 2010

The Loblolly house really capitalizes on the value of material after a building has outlived its useful life. Designed in a way that considered its own deconstruction, this house looks into issues of sustainability and building life cycle costs. Taking this long term approach forced the designers to create a better building in the present.

Buildings that consider their own deconstruction offer greater value over the course of their use and as a result, should offer the designer more opportunities. In dealing with changing economies, buildings like the Loblolly house provide examples of how a building can adapt once its use is no longer needed.



- 01 DETACH exterior steel stair.
- 02 DETACH cedar rain-screen from east, north and south walls; UNCLIP prefabricated screen units from each wall
- 03 REMOVE all wall cartridges: UNBOLT from structural scaffold (wall cartridges contain no building systems).
- 04 DISCONNECT building systems: UNPLUG systems from service spine in roof, second floor and first floor.
- 05 REMOVE roof cartridges: PEEL OFF TPO membrane and XPS insulation, UNBOLT roof cartridges from structural scaffold.
- 06 REMOVE 2nd floor block (master bathroom; UNBOLT three scaffold members from service spine of the 2nd floor and HOIST bathroom block to truck with crane.
- 07 REMOVE interior stair: UNBOLT stair and HOIST stair to truck with crane assist.
- 08 REMOVE 1st floor blocks (guest bath/mechanical room and kitchen): UNBOLT three scaffold members at southeast corner of 2nd floor and HOIST each block to truck with crane.
- 09 REMOVE hangar doors: UNBOLT exterior horizontally folding hangar doors from tube steel frame comprising west wall.
- 10 REMOVE Nanawall™. UNBOLT interior vertically folding hangar doors from tube steel frame comprising west wall.
- 11 DETACH tube steel frame: UNBOLT u-clips between the west wall's tube steel frame and structural scaffold, HOIST away frame.
- 12 REMOVE all floor cartridges, and floor
- 13 DISASSEMBLE structural scaffold: UN frame column, beam and cross brace sections, sort and pile.
- 14 DISASSEMBLE structural sub-framing UNBOLT timber beams from the pile

ROOF CARTRIDGES	WEST WALL GLAZING	WALL CARTRIDGES	FLOOR CARTRIDGES	SCAFFOLD	FOUNDATION
371 lbs. TPO 255 lbs. rigid 7,776 lbs. plywood 1,568 lbs. BATT 1,425 lbs. joist *Kcal TPO 3,504,360 Kcal rigid 10,528,704 Kcal plywood 4,928,028 Kcal BATT 558,844 Kcal joist *lbs. TPO 5,240 lbs. rigid 4,632 lbs. plywood 2,446 lbs. BATT -1,653 lbs. joist	2,000 lbs. steel 1,369 lbs. acrylic 22,356 lbs. nana wall™ 4,854,000 Kcal steel 13,588,512 Kcal acrylic 33,914,052 Kcal nana wall™	2,862 lbs. glass 12,159 lbs. birch 2,882 lbs. PU foam 715 lbs. cement board 6,672 lbs. wood studs 4,340,999 Kcal glass 16,733,620 Kcal birch 881,520 Kcal PU foam 735,884 Kcal cement board 2,616,683 Kcal wood studs	2,284 lbs. BATT 2,463 lbs. bamboo 238 lbs. cedar 2,576 lbs. veneer 2,850 lbs. joist 7,176,580 Kcal BATT 398,850 Kcal bamboo 93,187 Kcal cedar 40,226,176 Kcal birch 1,117,388 Kcal joist	8,349 lbs. aluminum 1000 lbs. steel 177,000,000 Kcal aluminum 2,427,000 Kcal steel	11,402 lbs. piles 5,300 lbs. timber 4,471,743 Kcal piles 2,000,110 Kcal timber

KRAANSPOOR



OTH. (1952)2007



This project really is a good example of the potential architecture can have on its surrounding site. Located in on an abandoned ship building crane, this office building capitalized on an undervalued site while offering a view of the surrounding ocean that no other building can match. The Kraanspoor office building has helped to further instigate office development in the region and the entire area has made a gradual transition from manufacturing to retail and office space.

Taking advantage of existing infrastructure provided unique opportunities for the architects to create spaces that are unlike any other. The entire project was able to reuse existing stairways and structural members reducing the cost and allowing the architects to focus their design energy in other areas. The project greatly increased the value of the existing site while reusing an existing piece of abandoned infrastructure.



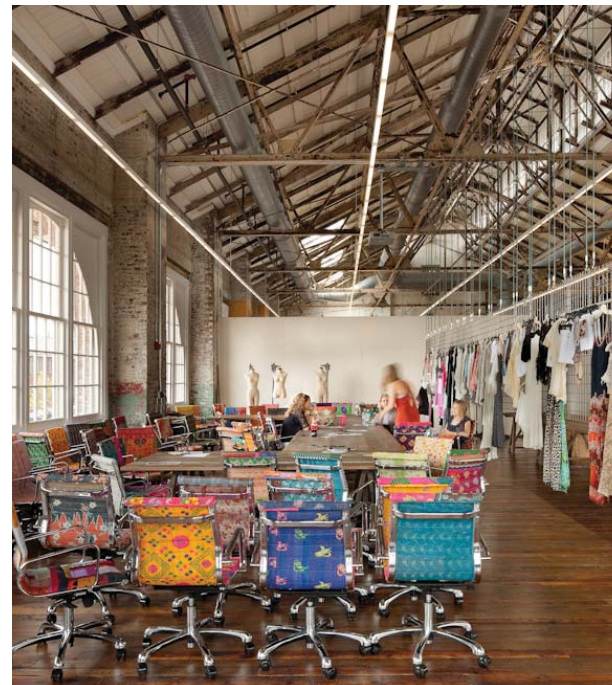
URBAN OUTFITTERS CORPORATE CAMPUS



MEYER SCHERER & ROCKCASTLE. 2006

Urban Outfitters, a clothing company, purchased these abandoned buildings previously used to build ships. They were the first non-ship manufacturer in the location. Through an intense process of renovation, they were able to take these dilapidated buildings and create a well lit space to house their corporate headquarters.

This project helped to inform the thesis in its use of abandoned buildings. The architects of the project were critical of art, culture, the environment, and the economy to develop a solution that worked with all four. The value of the site was greatly increased and the project helped transition the site from an economy of manufacturing into one focused on retail and office needs.



SITE ANALYSIS

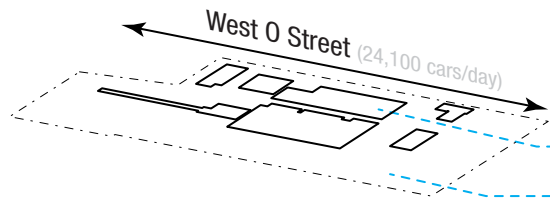
VALUE ANALYSIS

Site

Built Sq Ft.

Property Sq Ft.

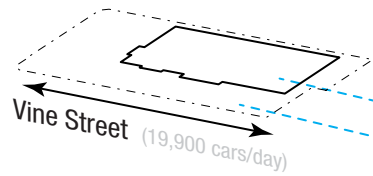
(year built - year vacated)
Built Timeline



1937

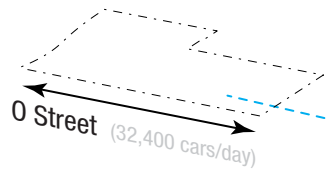
97,407

487,872



101,000

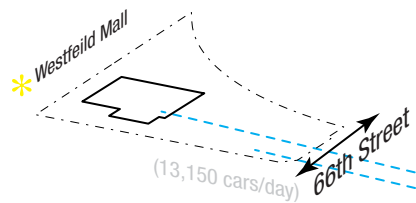
267,156



NA

198,280

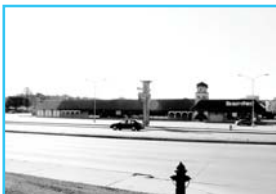
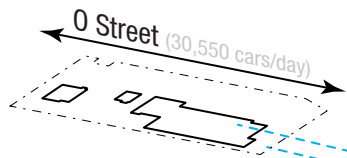
1967



41,056

249,000

1973



38,812

210,340

1977



Understanding that potential exists for architects to greater influence the built environment in areas that otherwise under utilized, an analysis of potential sites in Lincoln, NE was completed. Looking at the size, previous use, estimated property value, built time line including abandonment, and location helped to narrow down potential site selections.

Ultimately the Lincoln Steel site was selected as it offered the greatest possibilities for improvement. Its large size, close proximity to downtown, extended abandonment, and low value made it a great site for an architect to potentially develop. This site, in contrast to the others on this page, does not appear to be a good development opportunity for a traditional developer. Changing economies of the region make it a challenging site to begin to speculate what should be developed on it.



1 year

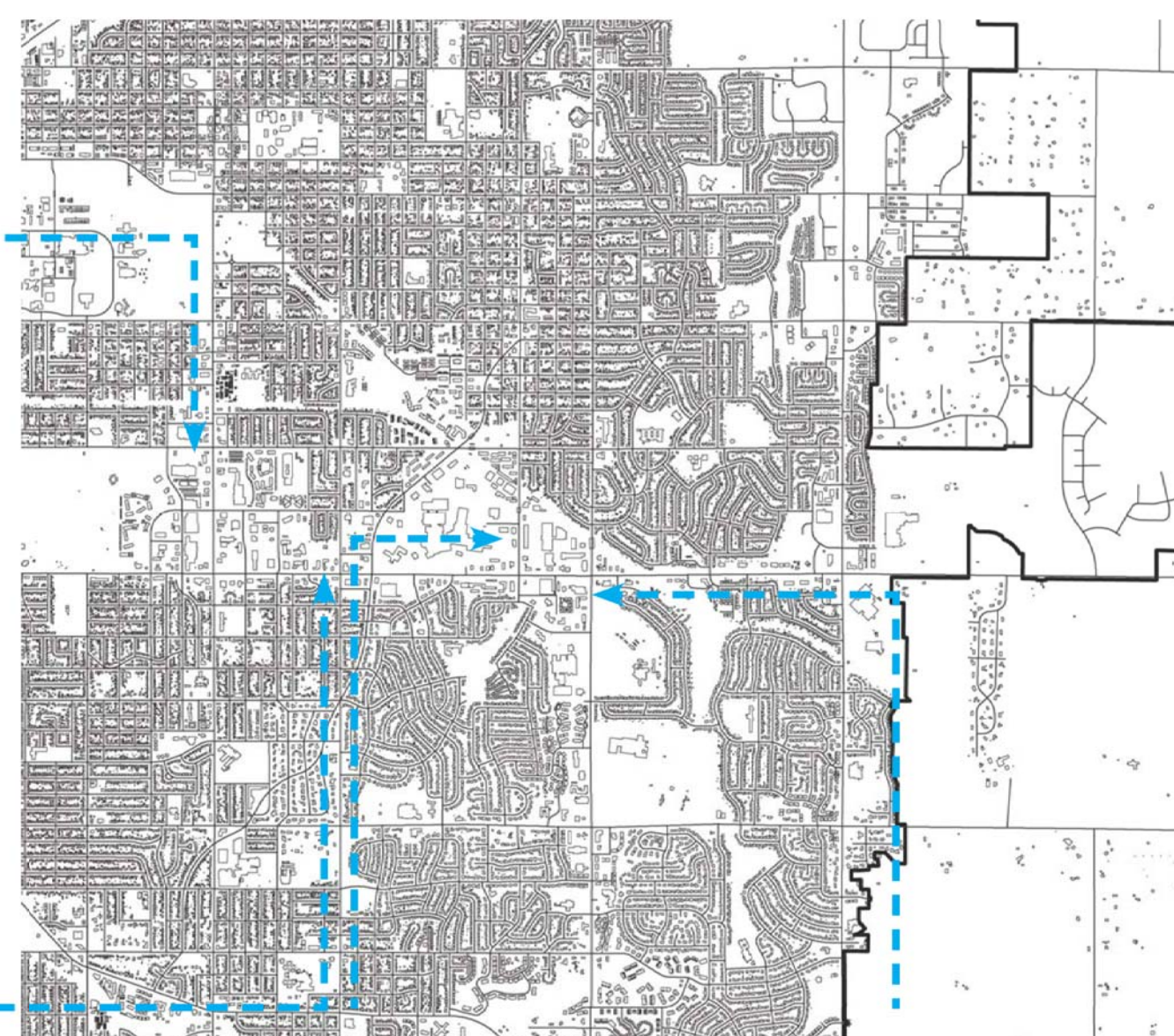


3 years



8 years

Again the Lincoln Steel site was chosen as it offered the most possibilities for an architect to create value in an otherwise undervalued location. The site is located on the far left side of the drawing. Having been abandoned for 8 years creates a challenge in that traditional development practices have not seemed to offer a solution to this site.

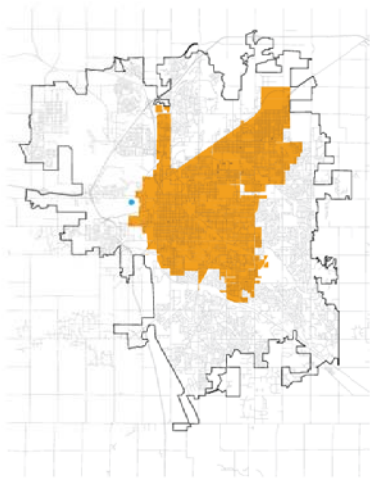


1 year

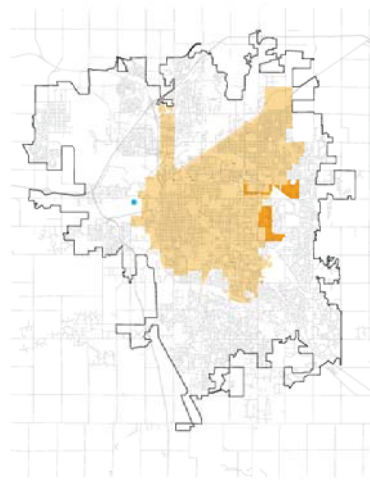


3 years

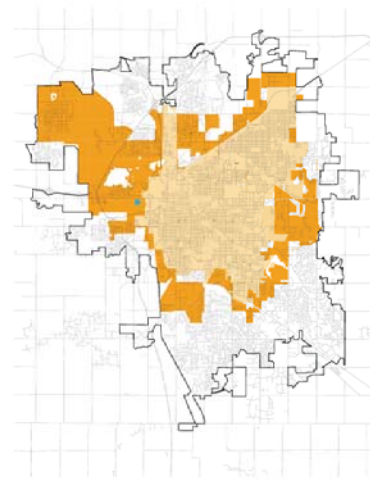
HISTORICAL GROWTH



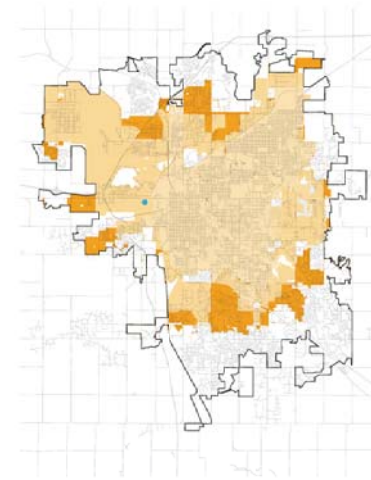
1950



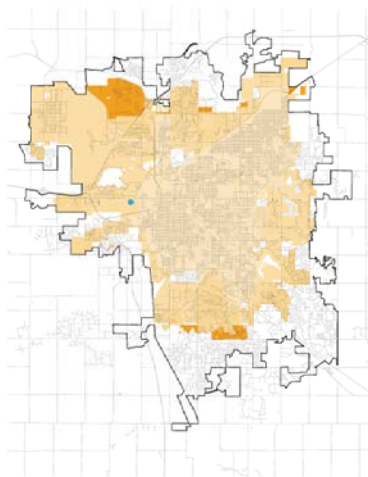
1960



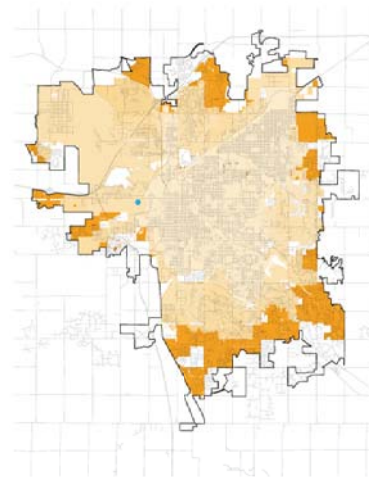
1970



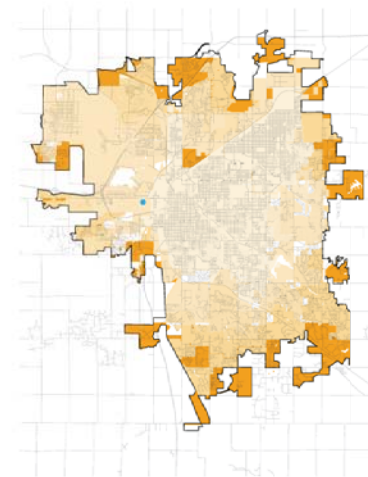
1980



1990



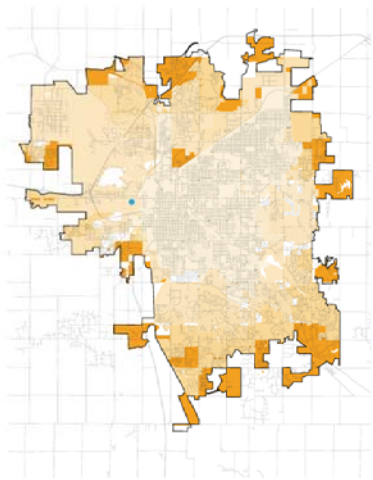
2000



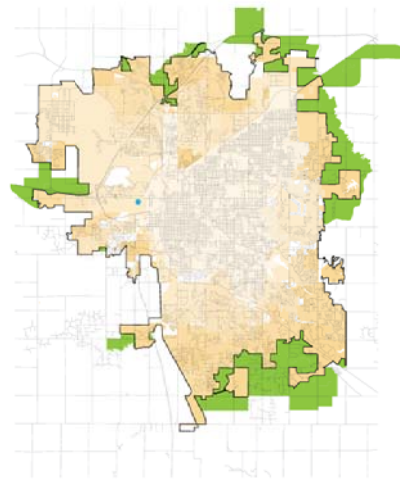
Present

Historically Lincoln has grown east as well as south. This series of drawings examines this growth and it becomes apparent that while there has been some growth towards the west, most of that happened in a 20 year time period. What is interesting is that Lincoln is not like most midwestern cities in that although it faces seemingly no physical limitations regarding where it grows, the city does not grow west. Downtown Lincoln is almost located on the far west side of town. This presents an opportunity for a close proximity to the densest part of town while still being located on the periphery.

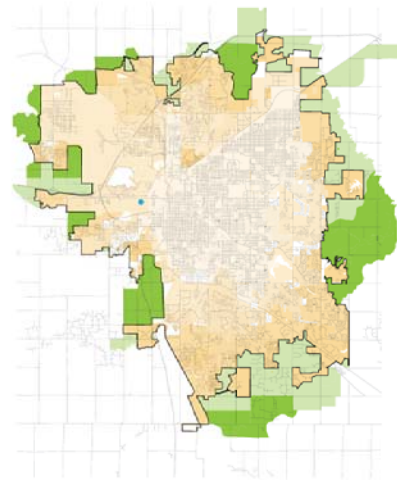
FUTURE GROWTH



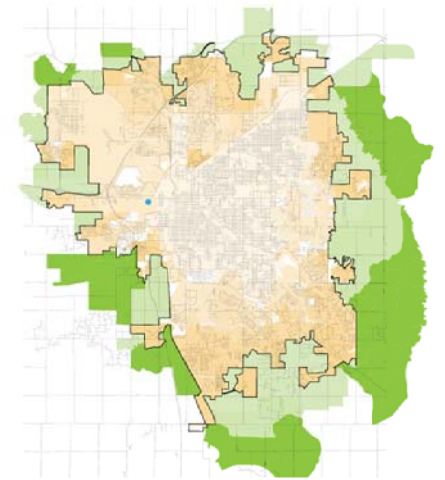
Present



2025

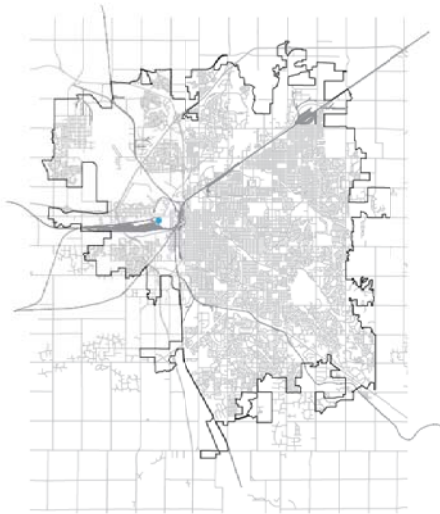


2040

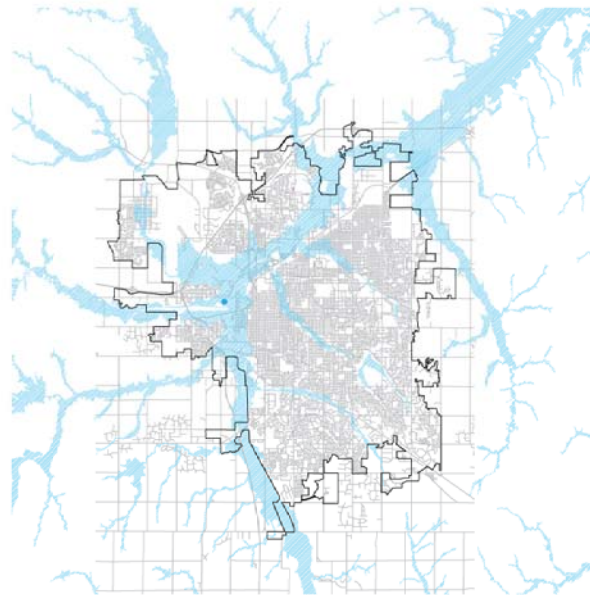


2060

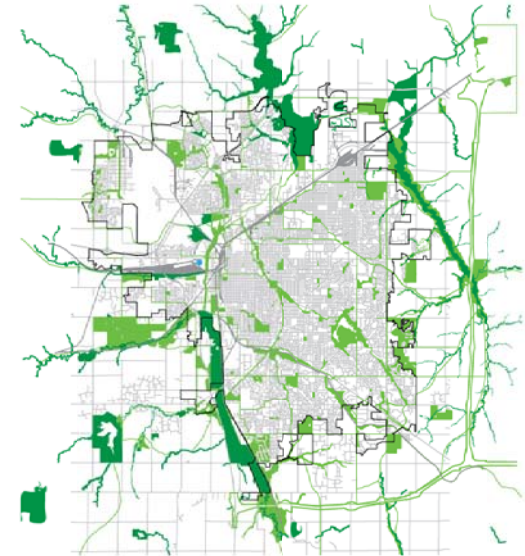
In looking at the future growth potential of Lincoln, it is projected that it will continue its trend of growing towards the south-east. This growth occurs along the I-80 and Highway 2 corridors. The trend further strengthens the argument that the existing steel site will continue to lie in an underdeveloped area and see its surrounding context continue to degrade.



Transportation Network



Flood Plains



Green Zones

The site is impacted by several regional networks. One is the series of transportation paths that intersect near the site. Rail, Highway, Bus, and trails all have some connection to the site making it an easy destination for any person. In addition the site is impacted by the floodplains surrounding Lincoln. As the city has grown, it has begun to encompass these floodplains and as a result there are large swaths of land that are underdeveloped. This site happens to fall in on of the largest areas while still remaining close to downtown.

SITE CONDITIONS

Lakeview Elementary School

Capitol Beach Neighborhood

- * Less than 1000 residents
- * Average 10 min commute
- * Mainly composed of middle class
- * Large young professional demographic

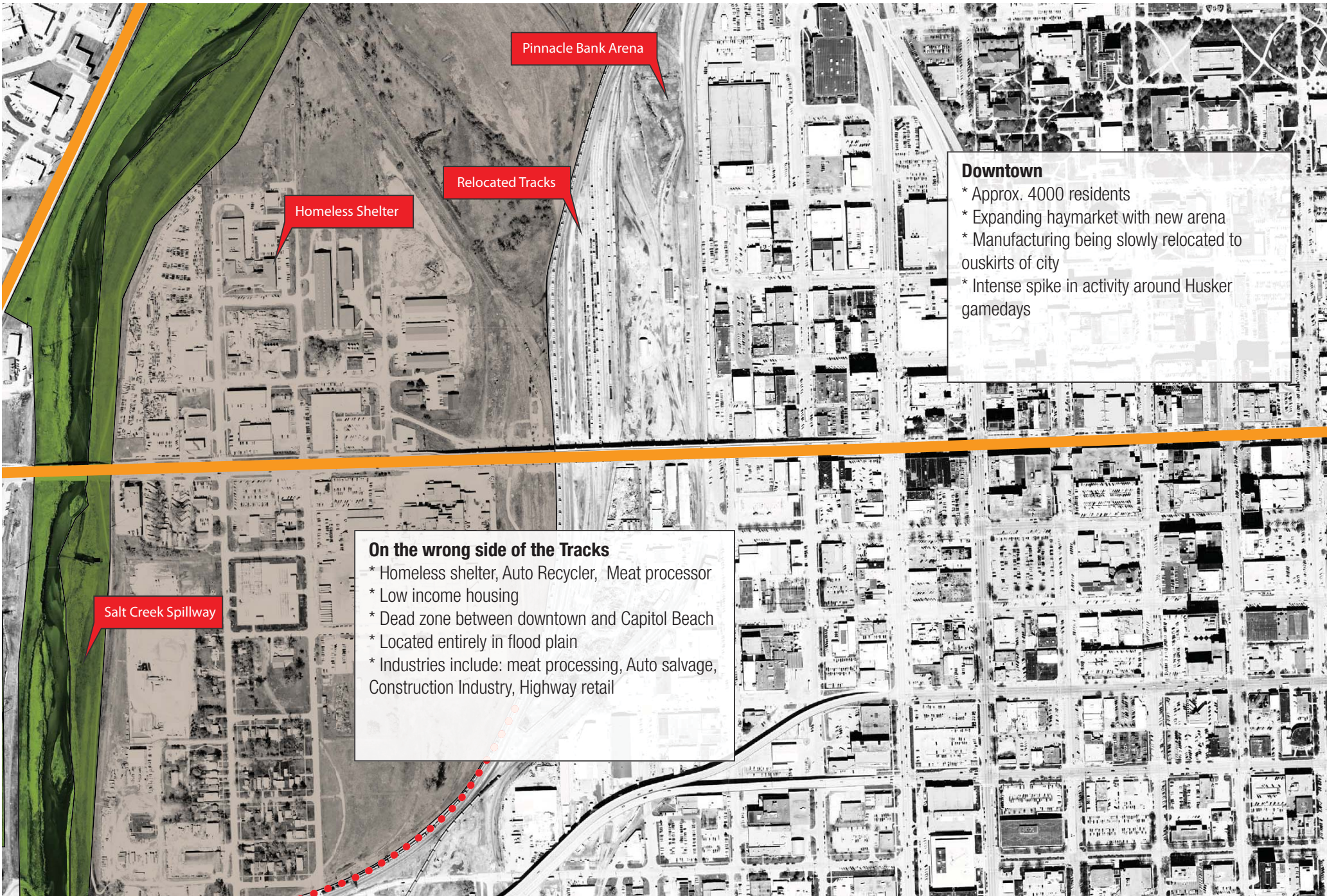
Light Industrial Park

- * Mostly Construction Industry businesses
- * Major tenant is Speedway Motors
- * Located primarily in a flood plain
- * Steel site is only one of a couple properties with rail access
- * Underdeveloped, high vacancies

BNSF Hobson Yard

- * Average 70+ trains a day
- * Routes to Wyoming (Coal), Denver, Kansas City, and Chicago (thru Omaha)
- * Takes on average 2+ days to ship from Lincoln to Omaha
- * Not a major shipping yard, mostly switching operations take place

BNSF Hobson Yard



Pinnacle Bank Arena

Relocated Tracks

Homeless Shelter

Downtown

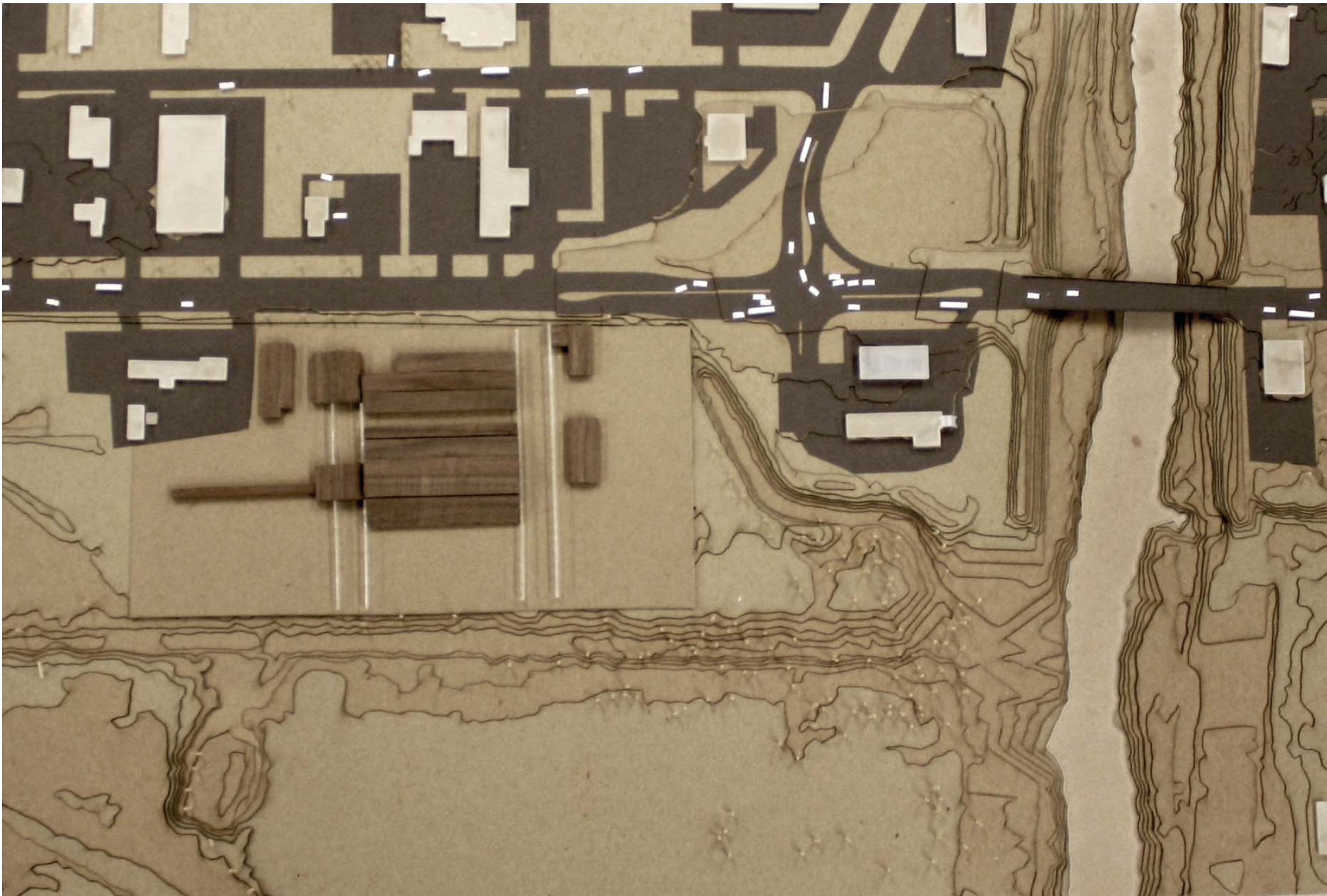
- * Approx. 4000 residents
- * Expanding haymarket with new arena
- * Manufacturing being slowly relocated to outskirts of city
- * Intense spike in activity around Husker gamedays

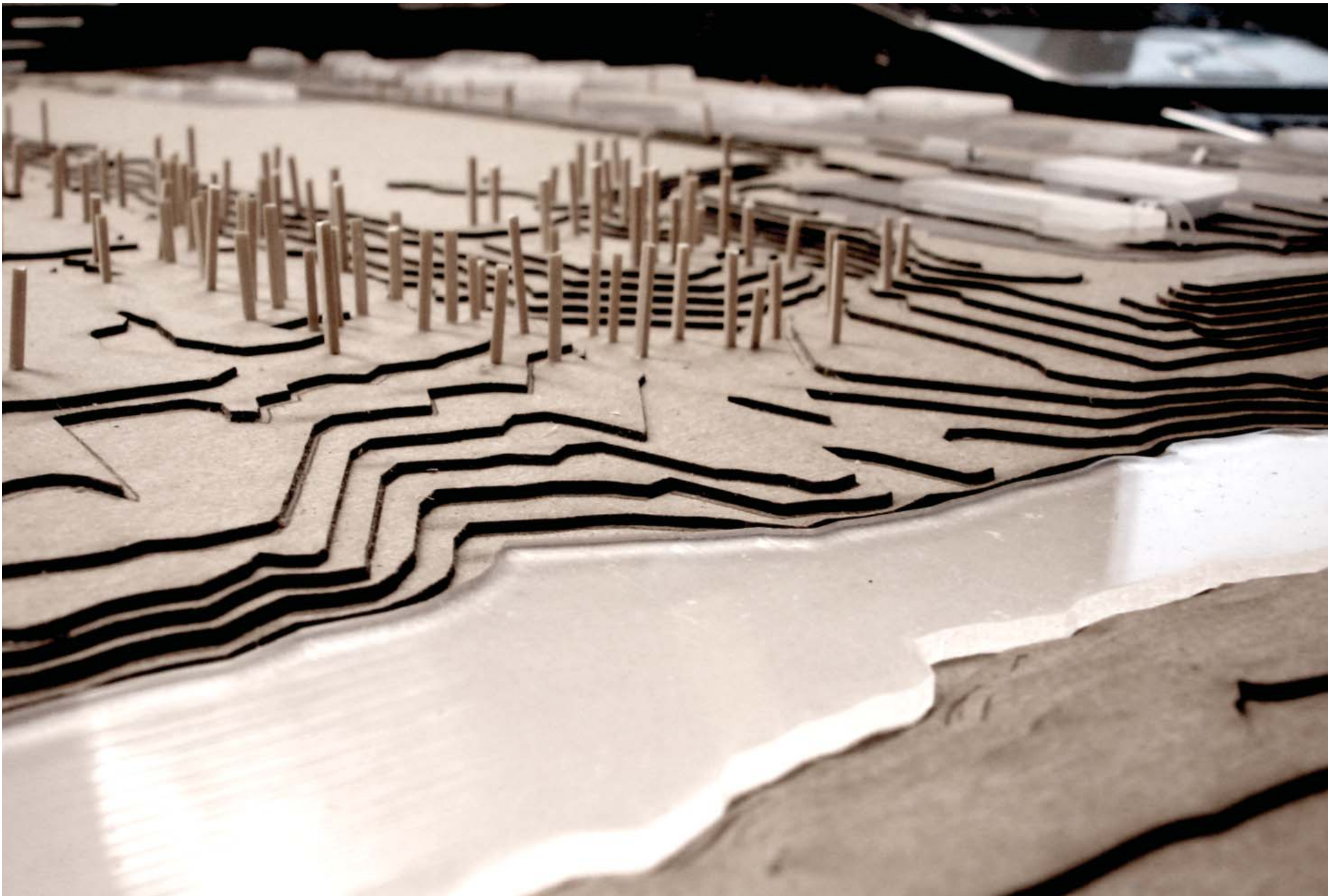
Salt Creek Spillway

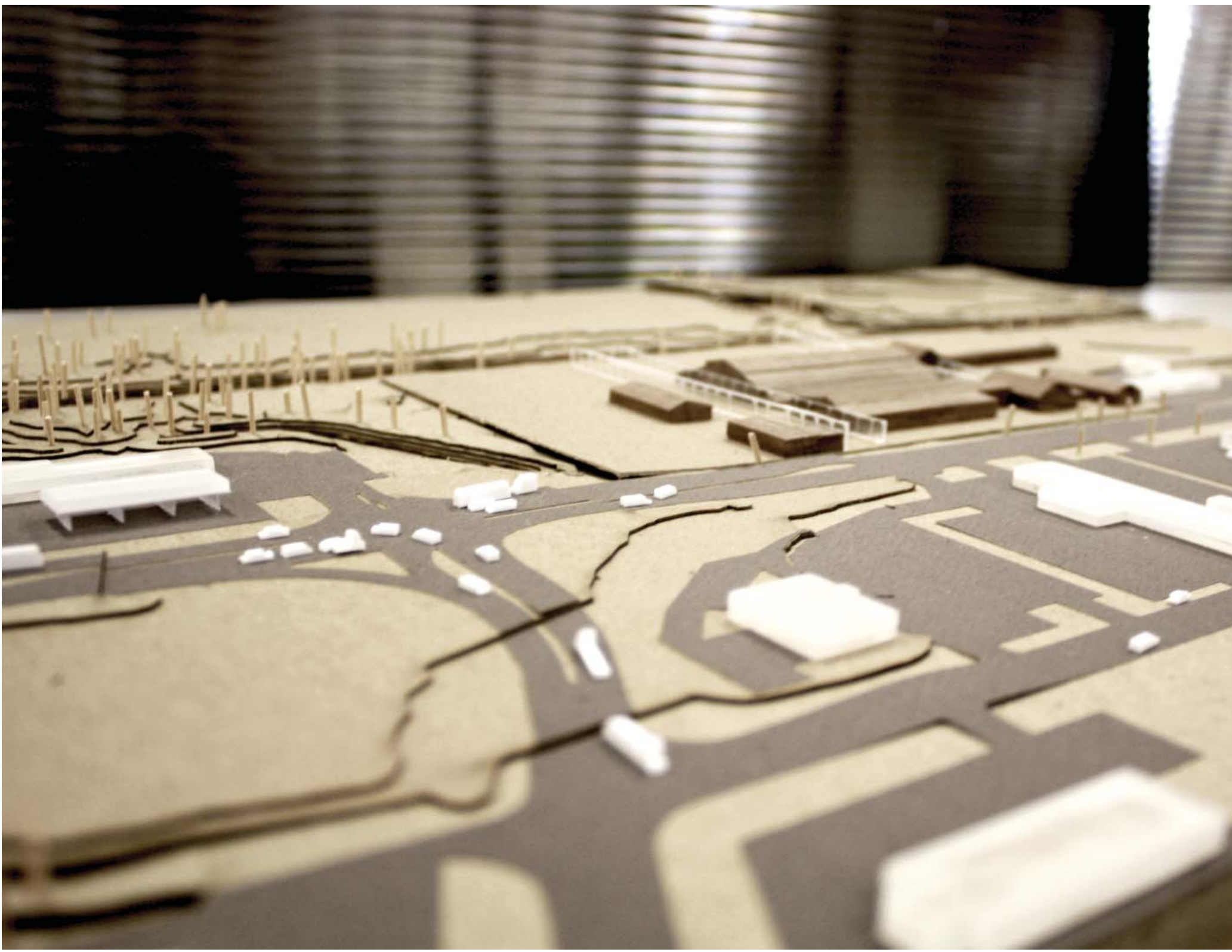
On the wrong side of the Tracks

- * Homeless shelter, Auto Recycler, Meat processor
- * Low income housing
- * Dead zone between downtown and Capitol Beach
- * Located entirely in flood plain
- * Industries include: meat processing, Auto salvage, Construction Industry, Highway retail

SITE MODEL









SITE INVENTORY



Buildings to be Reused

Buildings with inherent existing value. Suitable for existing practices of adaptive reuse.



Gantry Cranes

Specialty Steel Structure. Gantry Cranes made to support more than 15 tons. Structural and cultural potential.



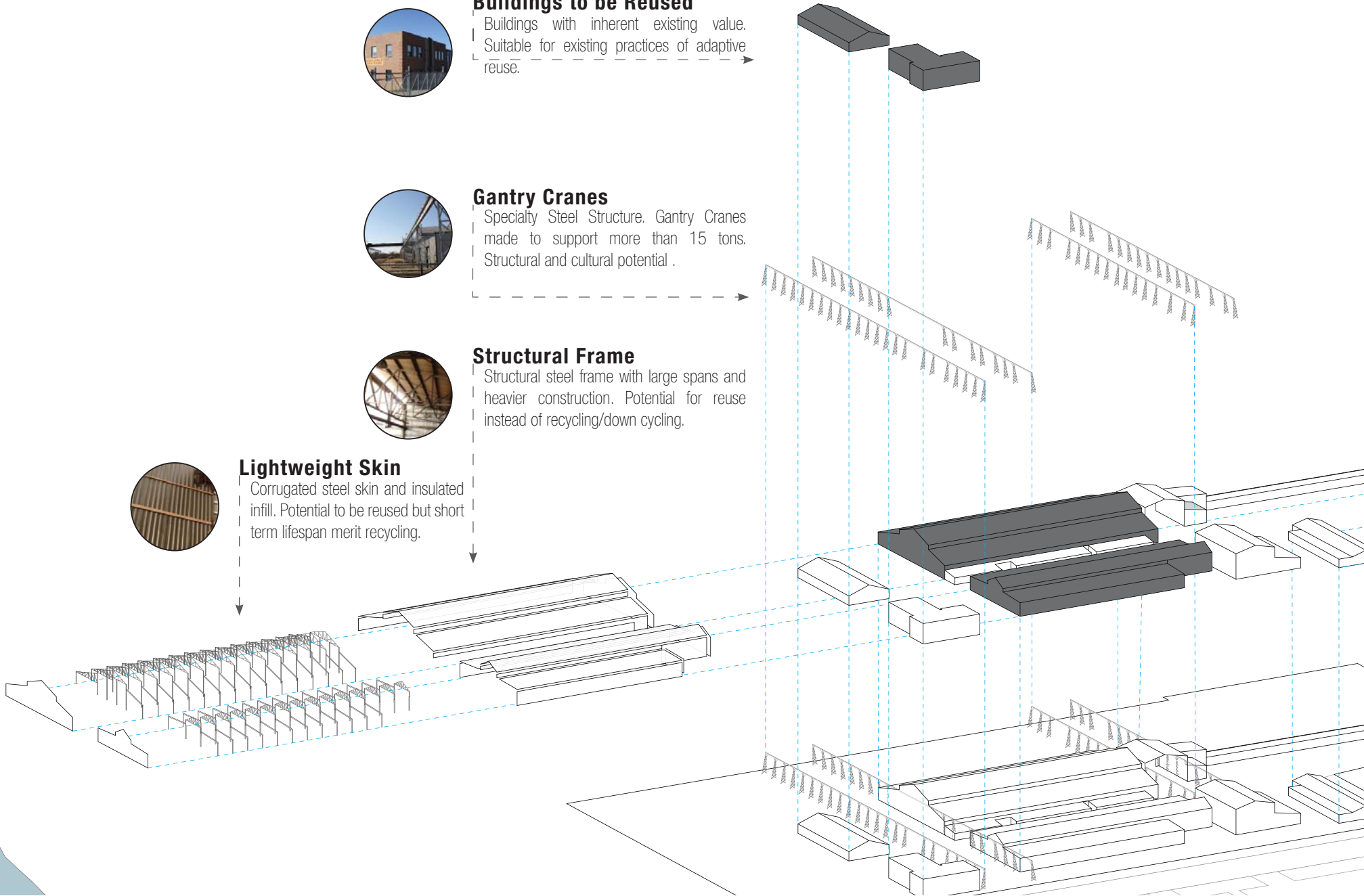
Structural Frame

Structural steel frame with large spans and heavier construction. Potential for reuse instead of recycling/down cycling.



Lightweight Skin

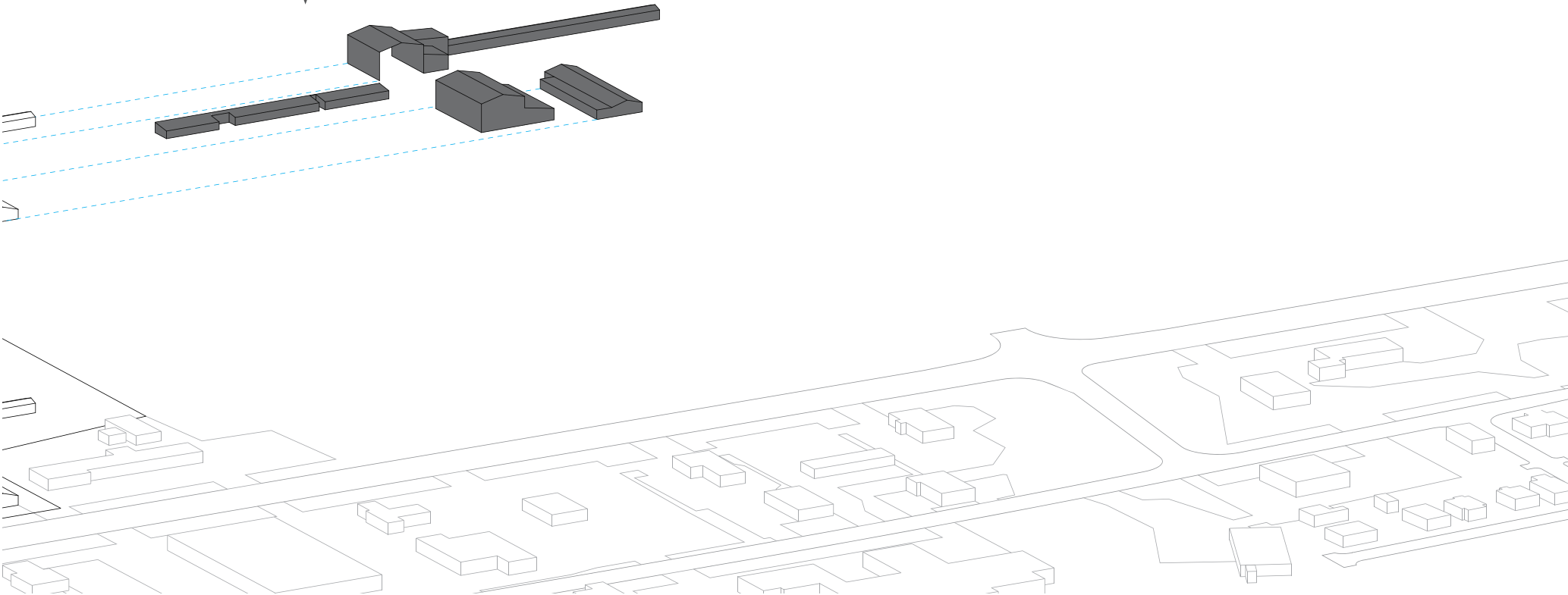
Corrugated steel skin and insulated infill. Potential to be reused but short term lifespan merit recycling.





Low Value Construction

Existing buildings that are quickly made with materials that are either too small to practically be reused or with materials that have very short term life spans. Buildings can be disassembled and sold for other less intensive uses.



SITE PHOTOGRAPHS

























BMF

45

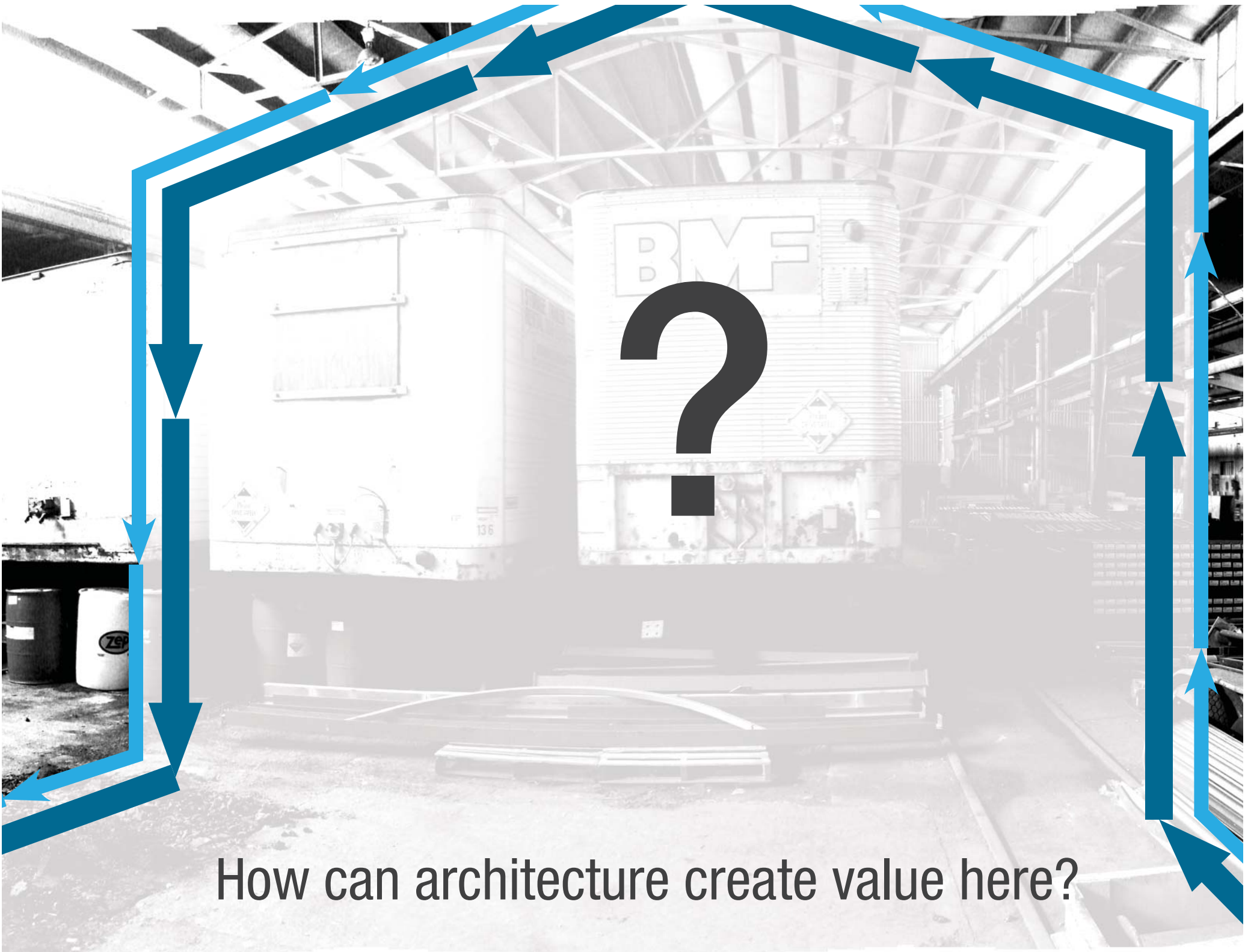
Please
DRIVE SAFELY

136

136

ZEP





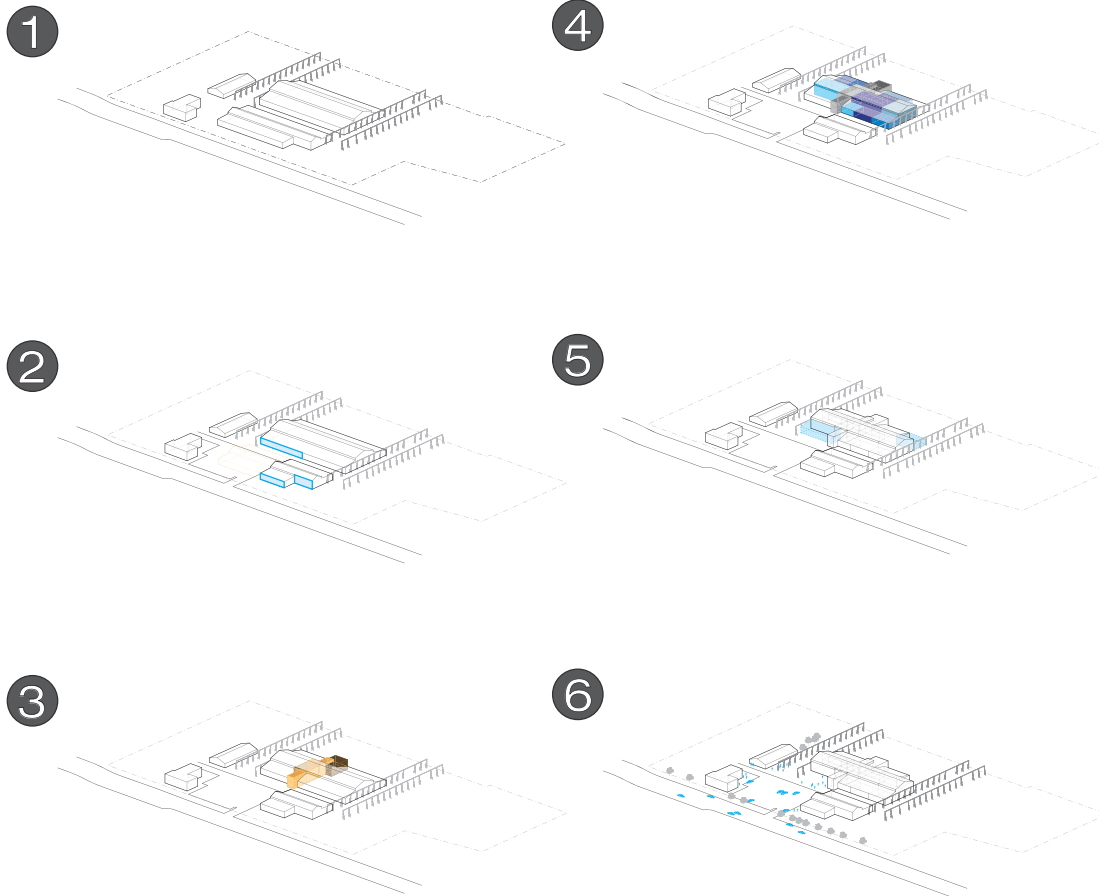
How can architecture create value here?





Can a design approach that considers the long term flexibility of a building bring value to an otherwise undervalued site?

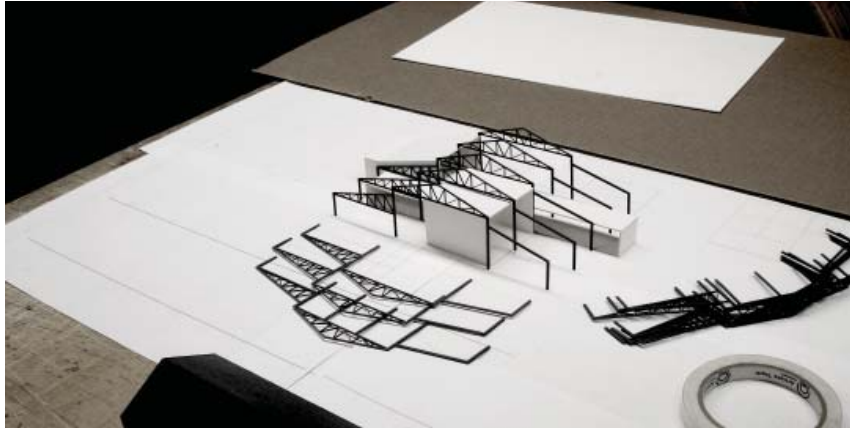
DESIGN PROCESS

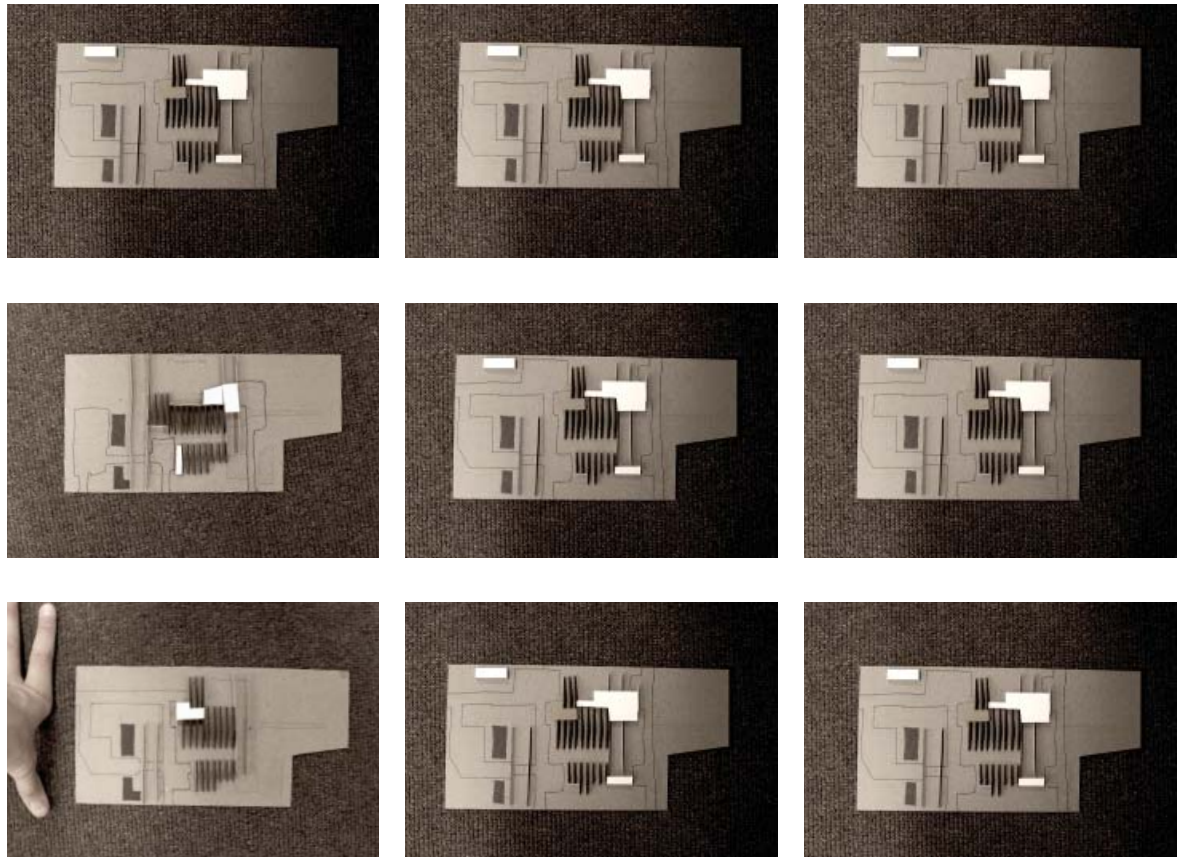


- 1 Identify **Existing** Condition
 - 2 Establish Clear **Entrance**
 - 3 Inject **Core** Elements
 - 4 Insert Viable **Program**
 - 5 **Adapt** Building
 - 6 **Occupy**
- Repeat as needed

After analyzing a series of precedents it was found that most building types contained a set of core program that remained the same no matter what the program. These bathrooms, storage areas, entrances, offices, and other service functions were often located in a core of program that fit amongst the other more site specific program.

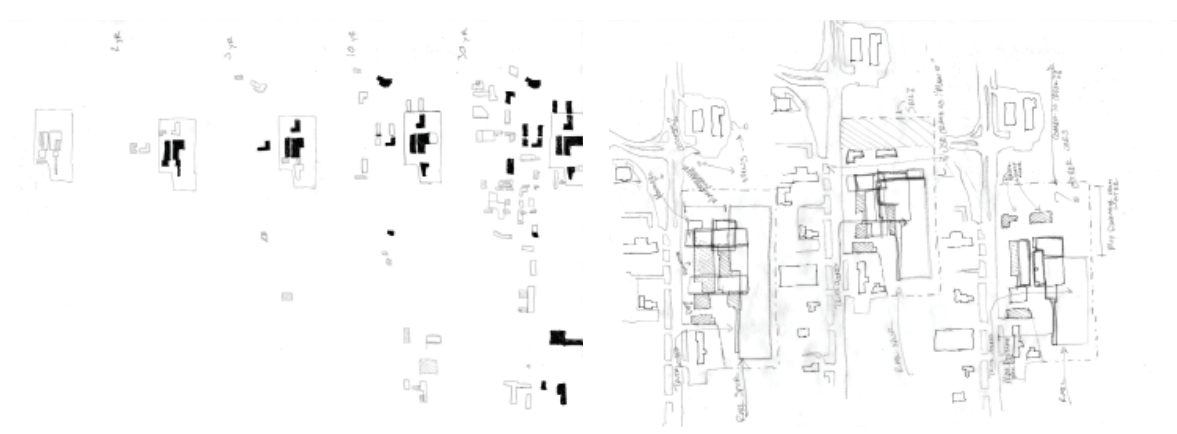
In addition to this core of program, the precedents almost always had a clear entrance that helped delineate private verse public space. By adapting the existing site conditions to create this public entrance, the site immediately has a very different character. The buildings are no longer isolated from the street and new uses can already be envisioned.





Throughout the course of the project, it evolved from a look into how the building could reconstruction itself over the site throughout time, into a how the site could deal with changing economies. An iterative series of sketch models was done to explore these ideas and then these were placed within the larger site model to help determine programmatic and site specific relationships.

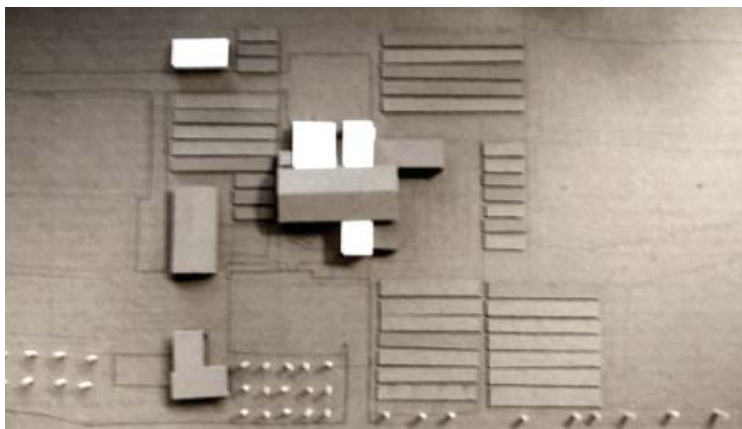
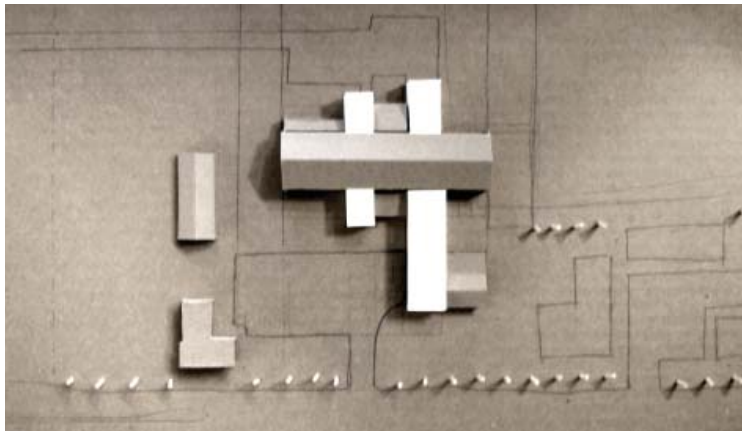
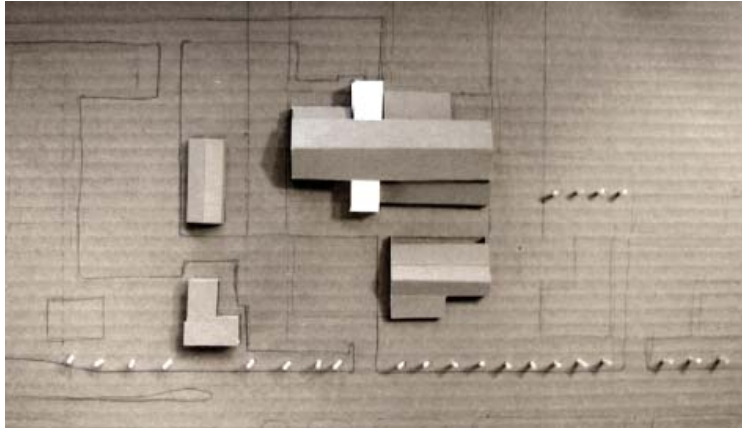
A larger mock up was also used to explore more detailed issues associated with the main building on the site. These quick studies helped define relationships of program as well as how the new program would interact with the existing structure. Throughout the entire design process, there was an emphasis on making sure that there was a minimal amount of editing done to the existing structure.



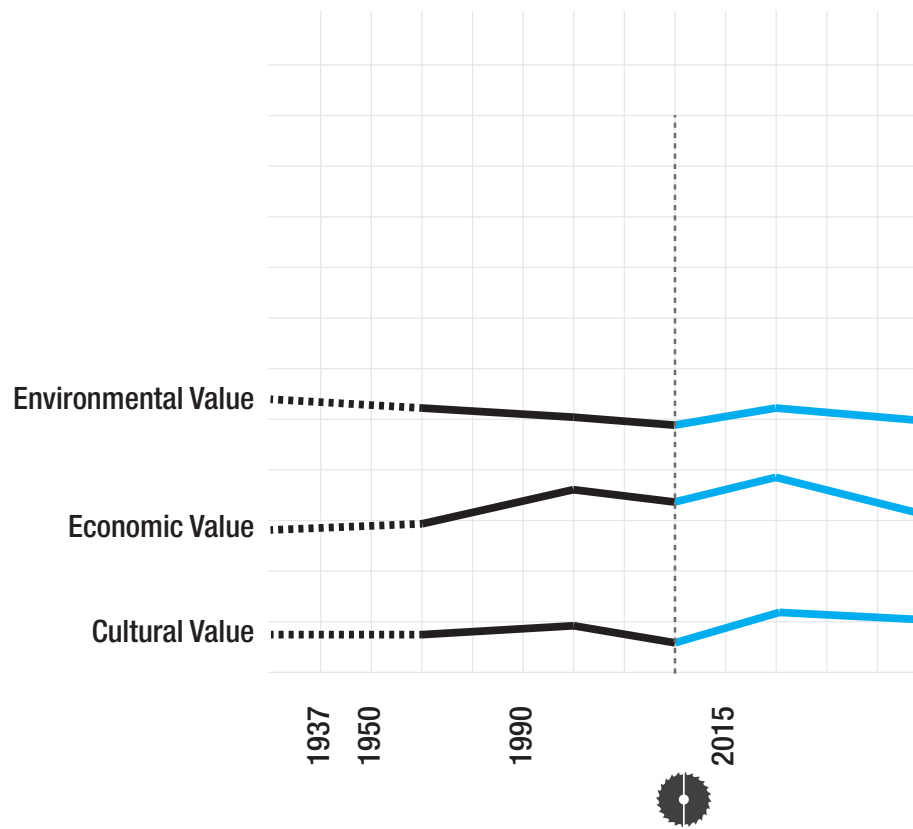


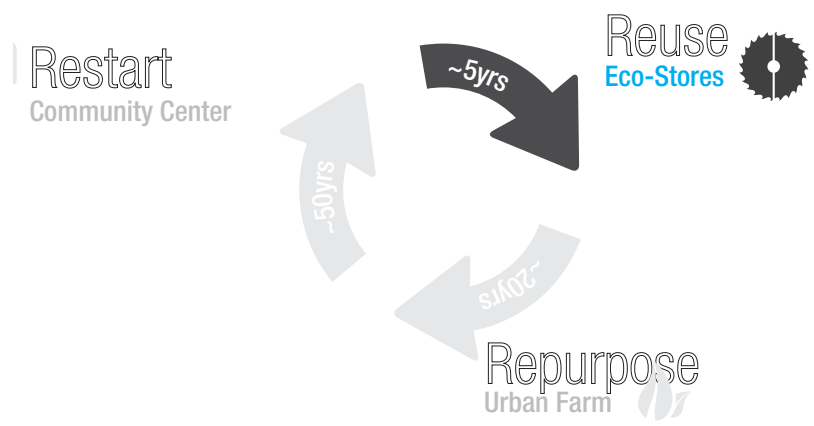
After a general idea was established regarding the approach to how to deal with the existing building, a series of images were generated looking at how new program might work within these existing spaces. These images helped inform future material choices as well as future programmatic relationships.

More study models were also constructed narrowing down the formal changes happening to the site over time. What remained consistent was this idea of a fixed core of program that could be utilized by each of the changing program. Again it was important that the entire project was looked at through three different time periods to see how this project facilitated that adaptation of the building to changing economies.



DESIGN PROPOSAL

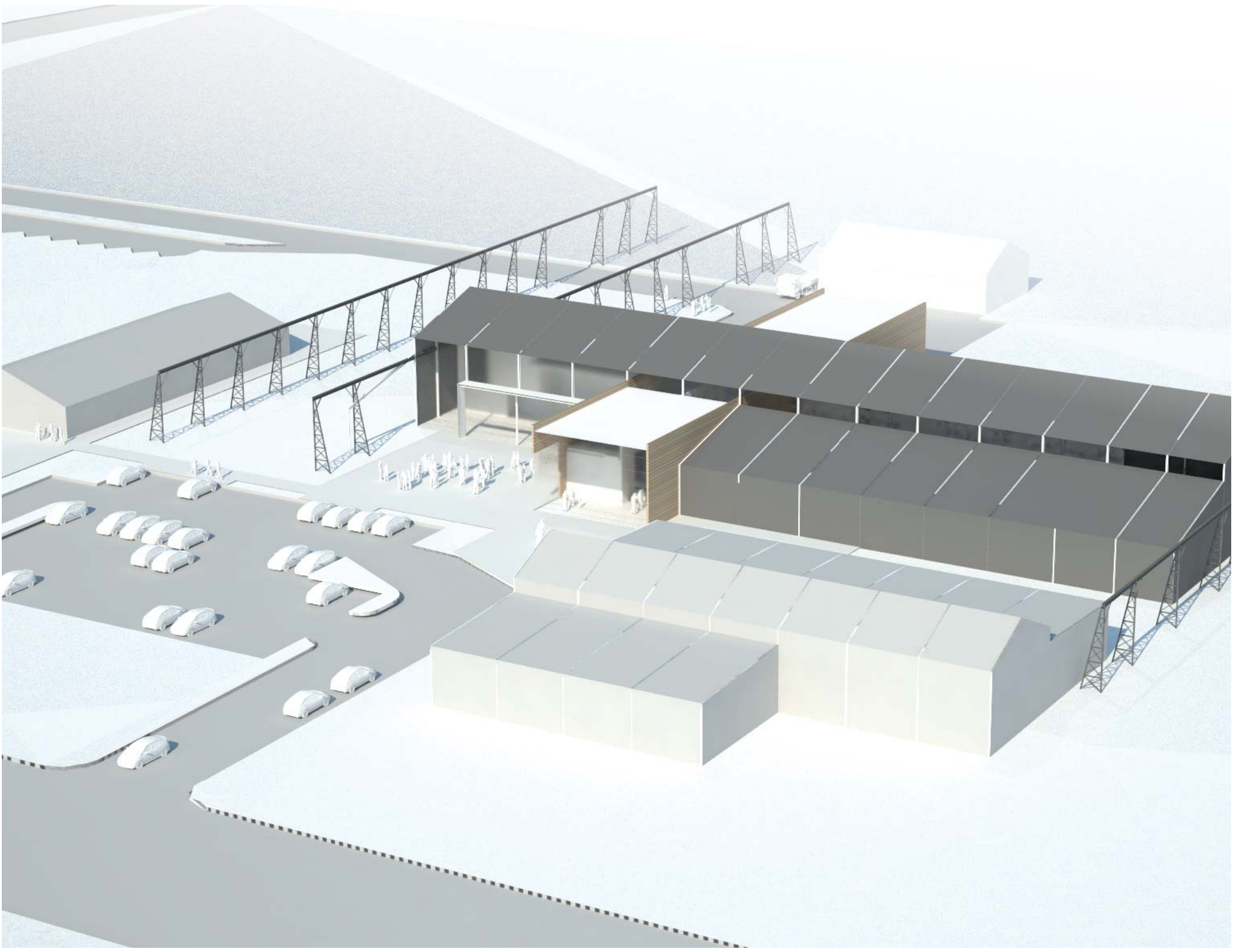




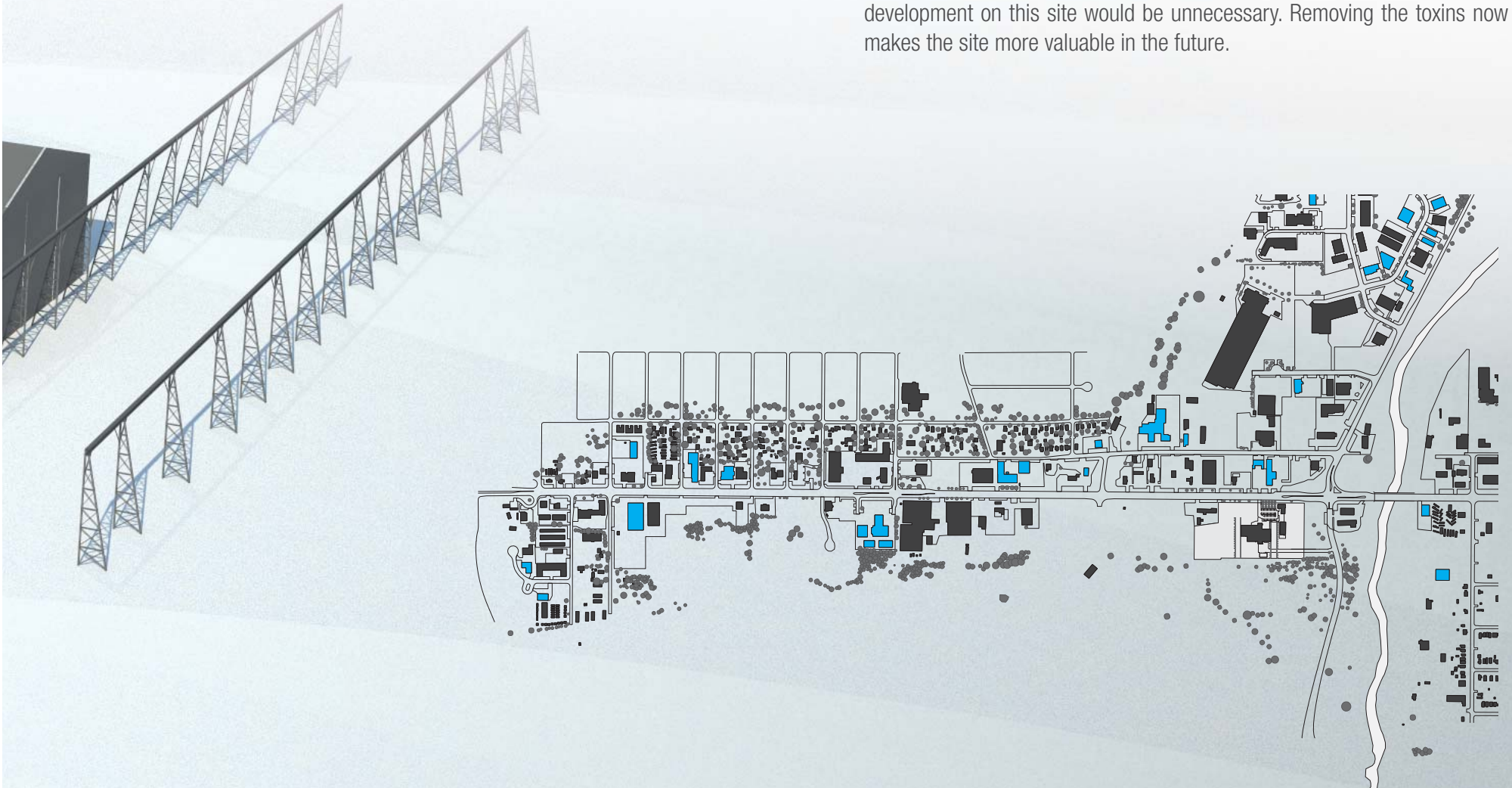
The first stage in developing the site comes in the form of the relocation of Eco-stores. Eco-stores is a used building material store and offers a wide range of materials for projects. This move benefits Eco-stores in that they now have expanded street frontage on one of the busiest roads in Lincoln. In addition they are afforded to possibility of expanding their offering beyond material resale. They additional space facilitates the growth of a design office, education program, and artist studio in conjunction with Eco-stores. This increase breadth of program located on the single site will bring more foot traffic to all of the business located in this region.

There is already a strong manufacturing presence and Eco-stores capitalizes on that by continuing to offer its services and products to the area. This cluster of businesses focused around the construction industry remain the main anchor tenants in a decaying region of Lincoln. What once was a location containing many auto dealers, has now changed into a more light industrial use.

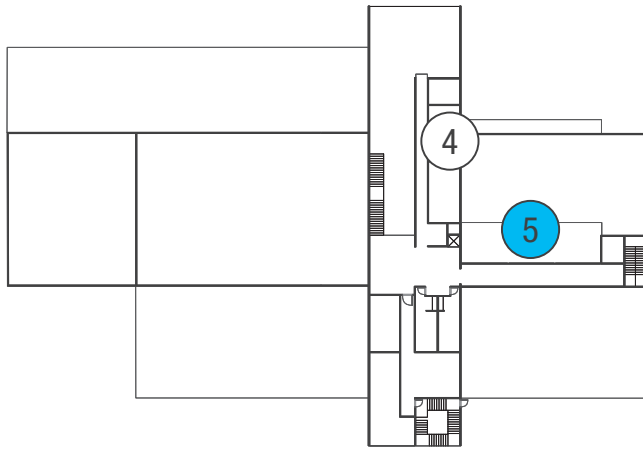




Being that the existing site is already heavily contaminated with toxins from its previous uses, this initial phase of development looks to remediate those through a passive plant process. Rather than invest in a physical heavy cleanup, planting large plats of sunflowers will aid in this process. The surrounding context is not developing and thus, further development on this site would be unnecessary. Removing the toxins now makes the site more valuable in the future.







1 Entrance

2 Conference

3 Checkout

4 Meeting Room

1 Retail Floor

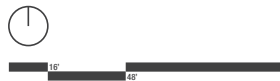
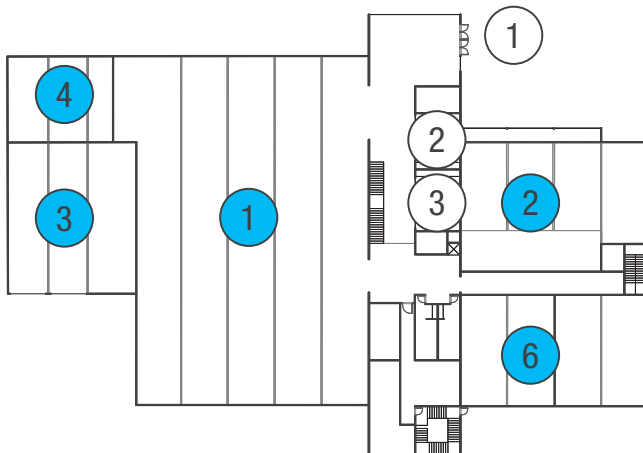
2 Design Office

3 Shop

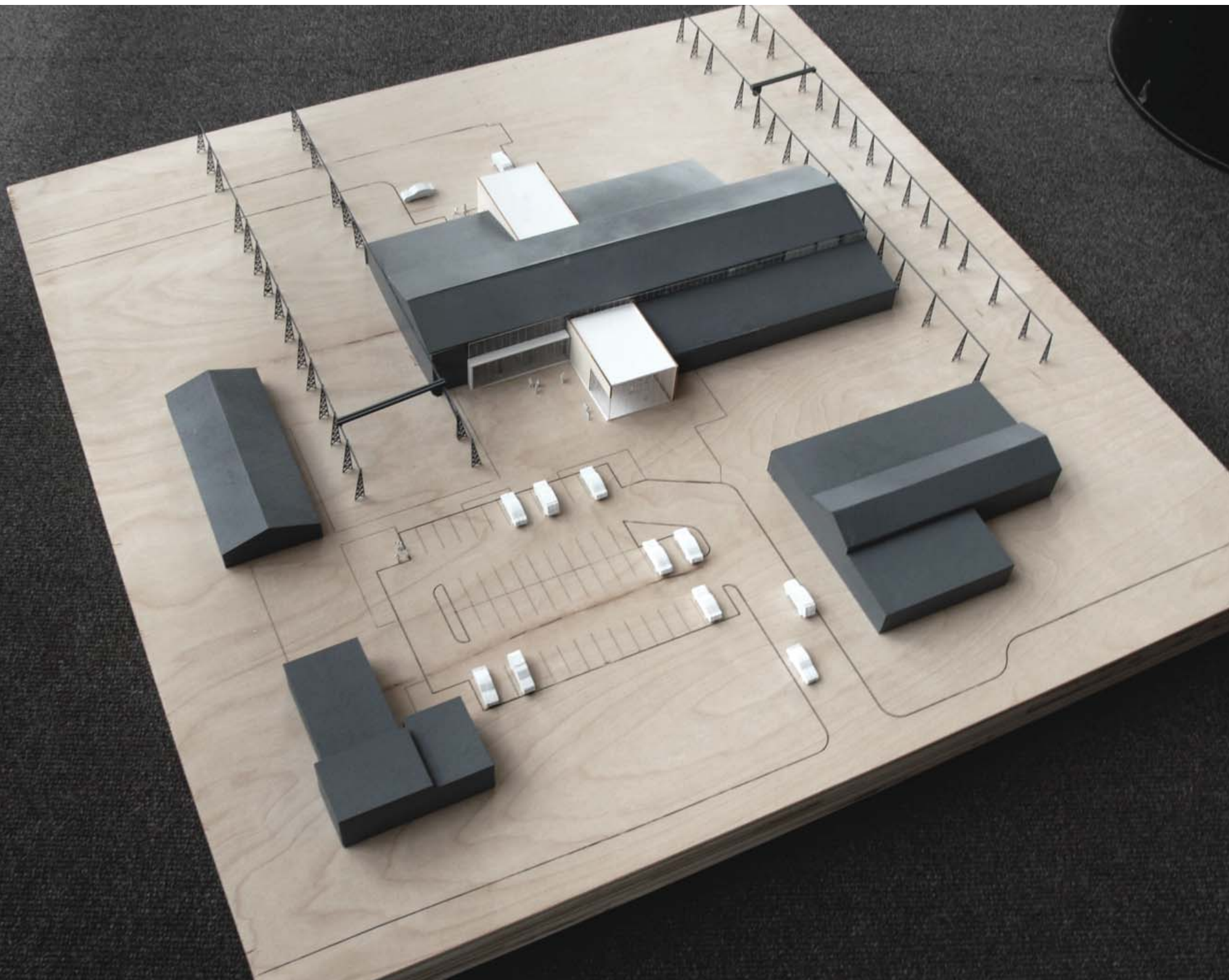
4 Storage

5 Artist Studio

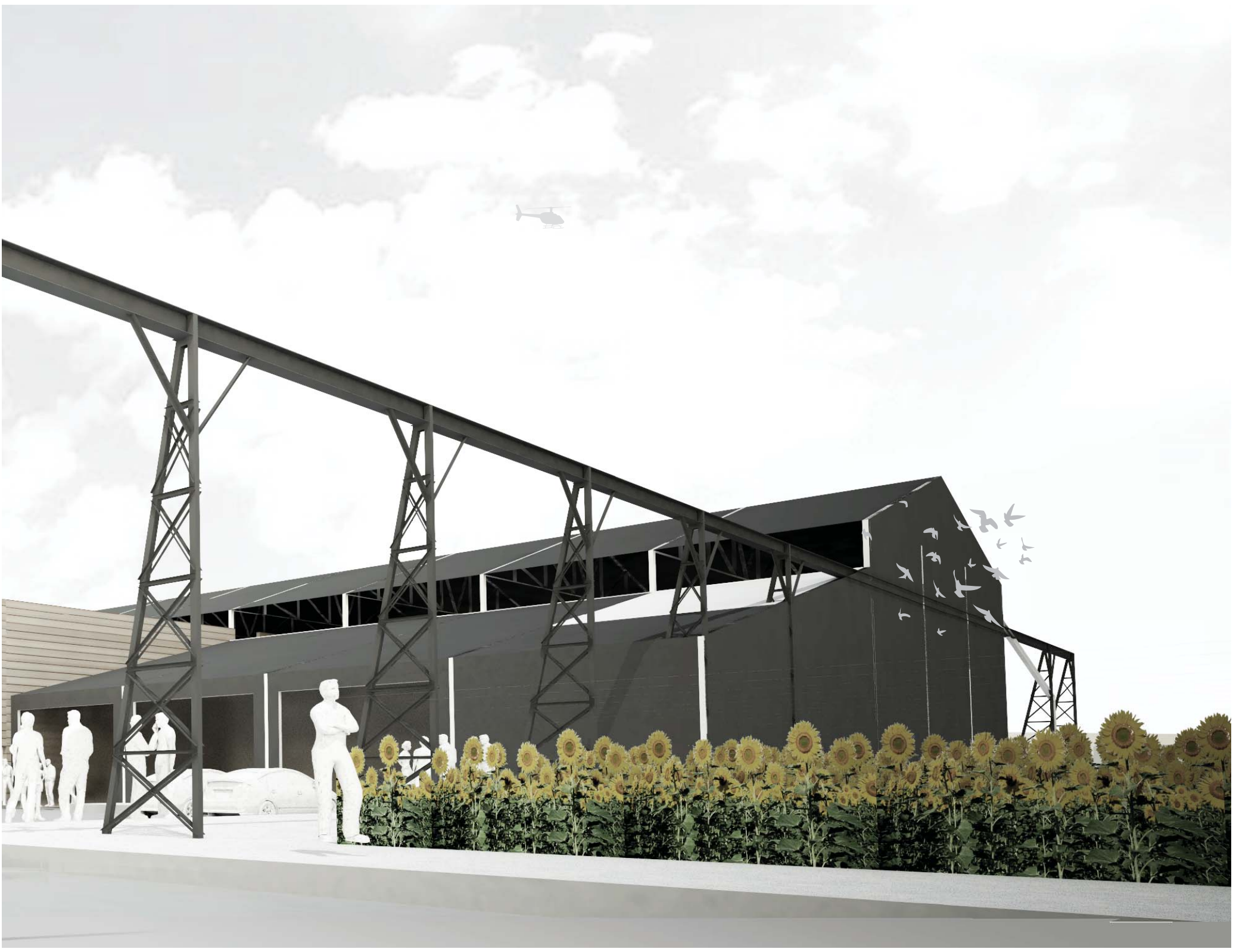
6 Classroom

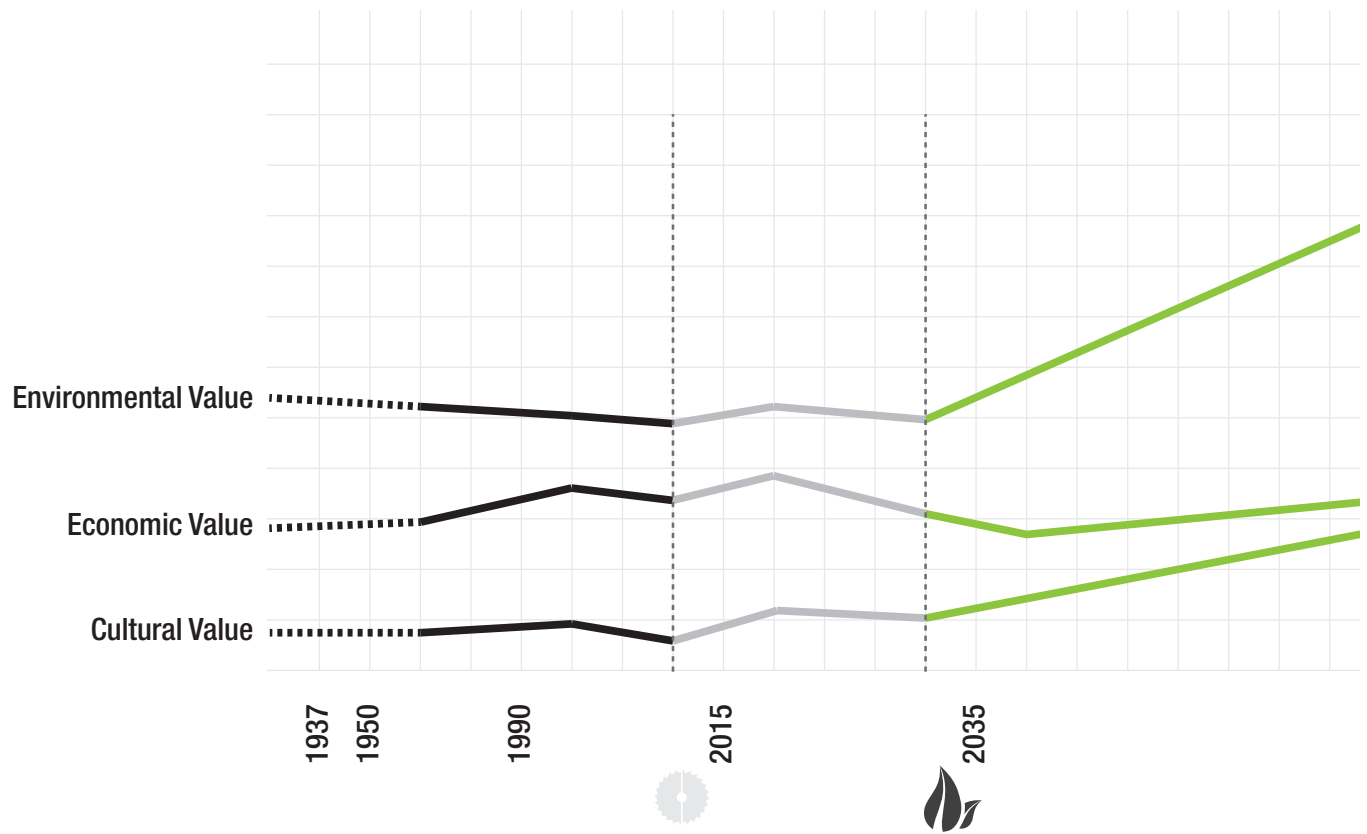


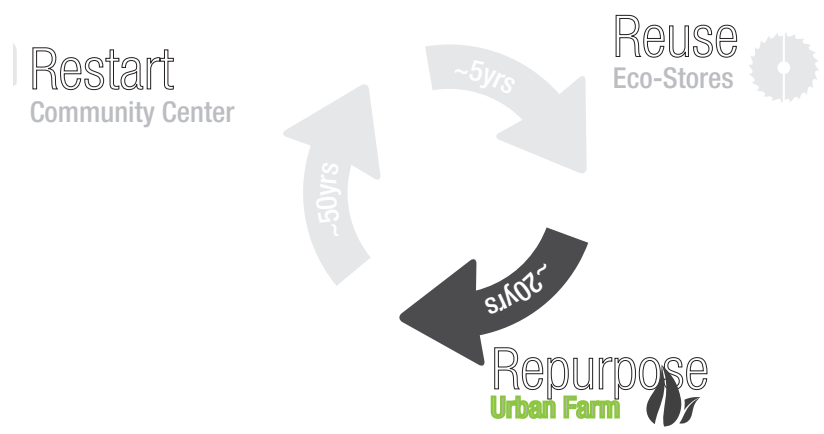








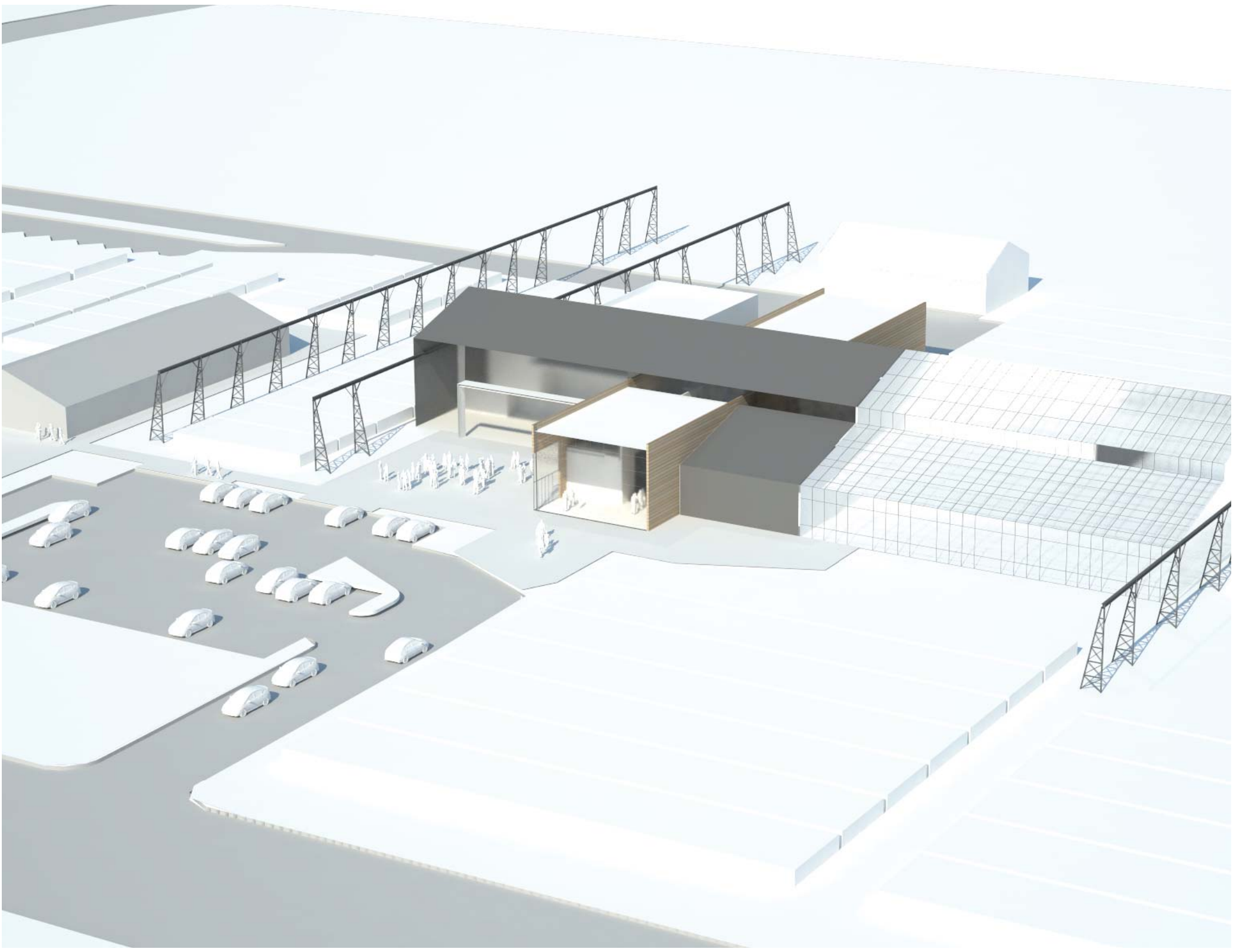




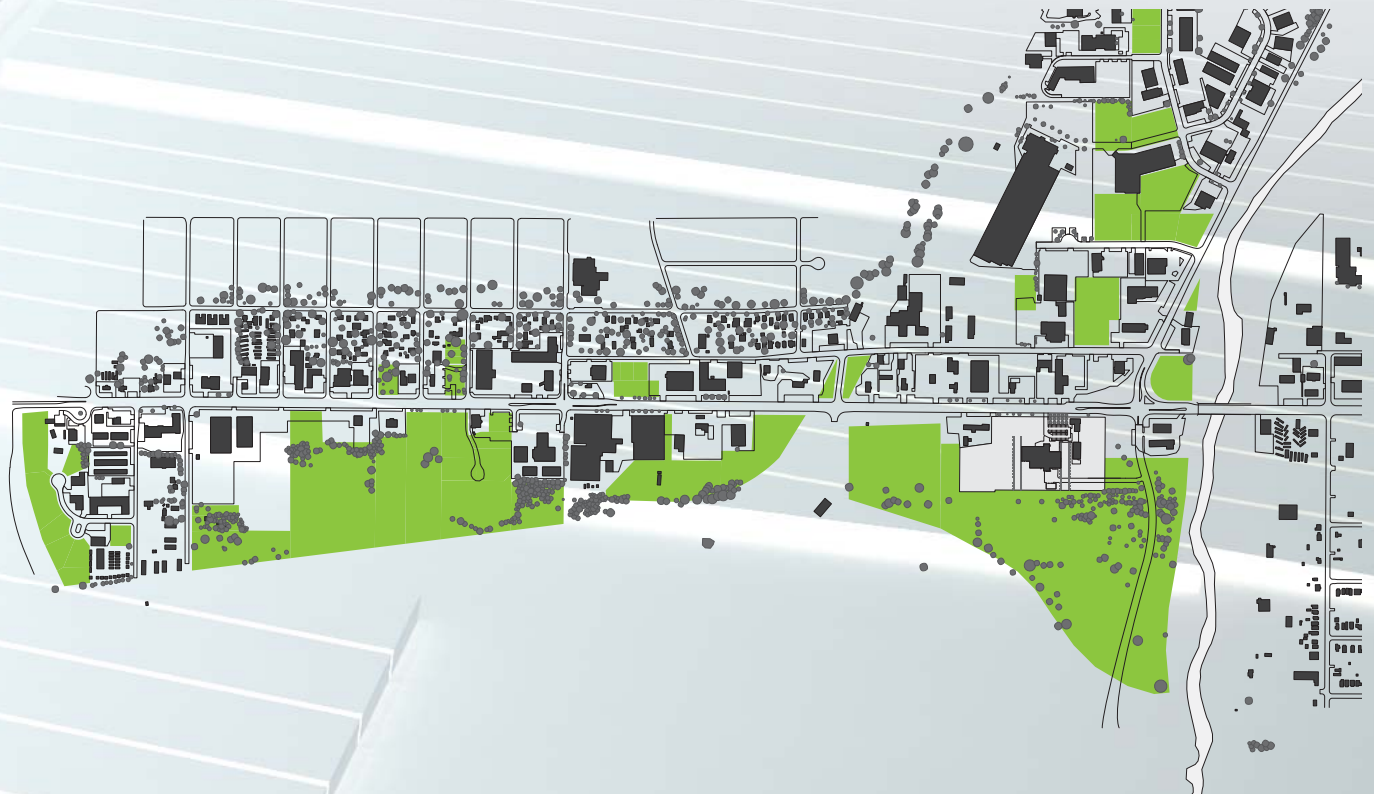
Forecasting into the future, the surrounding site continues to degrade. Assuming the worst, local business have moved out and an increasing number of vacant lots continues to grow. This trend is already happening with the movement of major auto dealers to the North 27th street location. These swaths of land, have an under utilized potential that can be capitalized on by this project. Projecting that Eco-stores has moved out of the building, a proposal is developed in which the site transitions toward an Urban Farm.

The ever increasing cost of transportation, growing downtown population, increasing land prices, and just general concern over having fresh produce creates a demand for this program. Adapting the building to contain a fresh foods market, automated greenhouse, processing and cleaning areas, as well as community gardens helps it fill this need.





In developing the site to contain community gardens, there is an increased presence of ownership on the site. While not actually “owning” the land, individuals begin to have a vested stake in the site and as a result, the overall community value increases. Maintaining these gardens and this fresh food facilitates further development in the region and eventually land can be once again repurposed into new program. The program developed on the site over the course of time are not meant to be permanent solutions but rather program that facilitate future adaptations depending on the economic, cultural, and environmental conditions.





Estimote Form
Lexington, Ky

ELSONA
MUSCOT

SONO
KANTERA

ESTINA
2.00
40

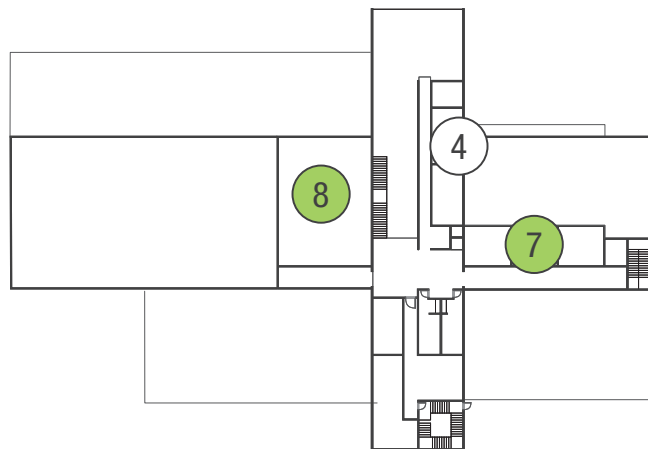
3.00

1.00

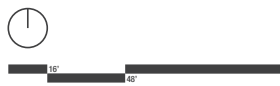
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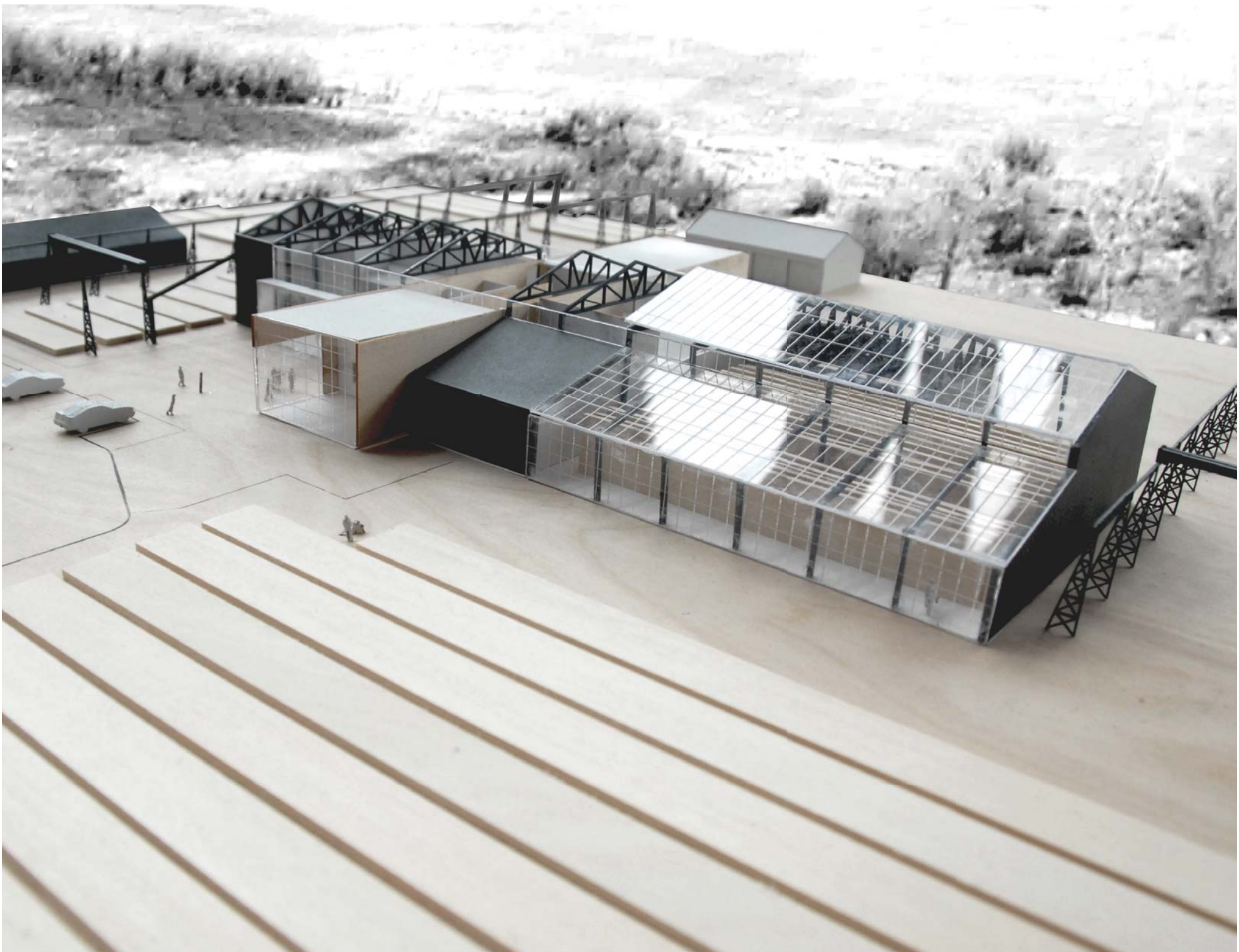
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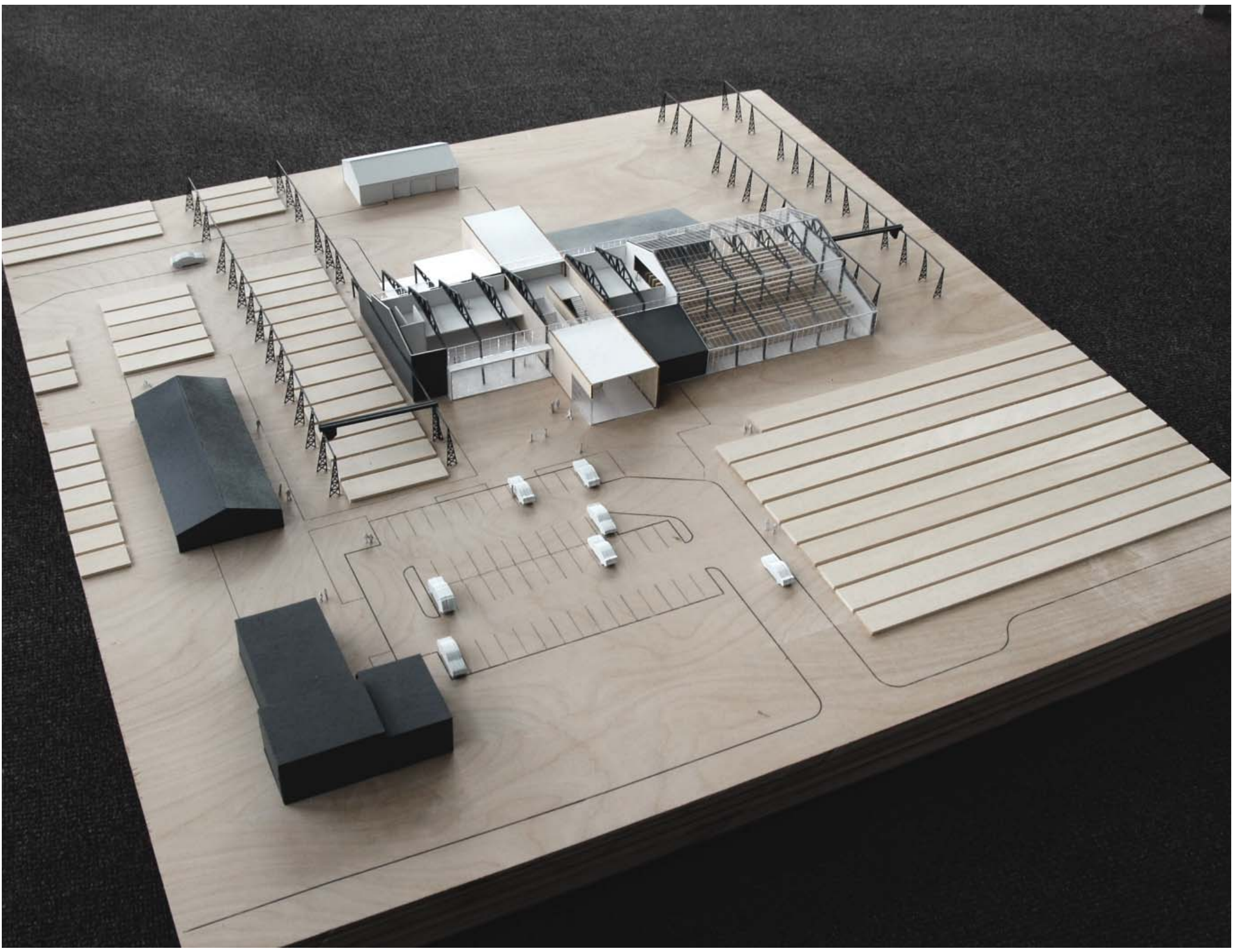
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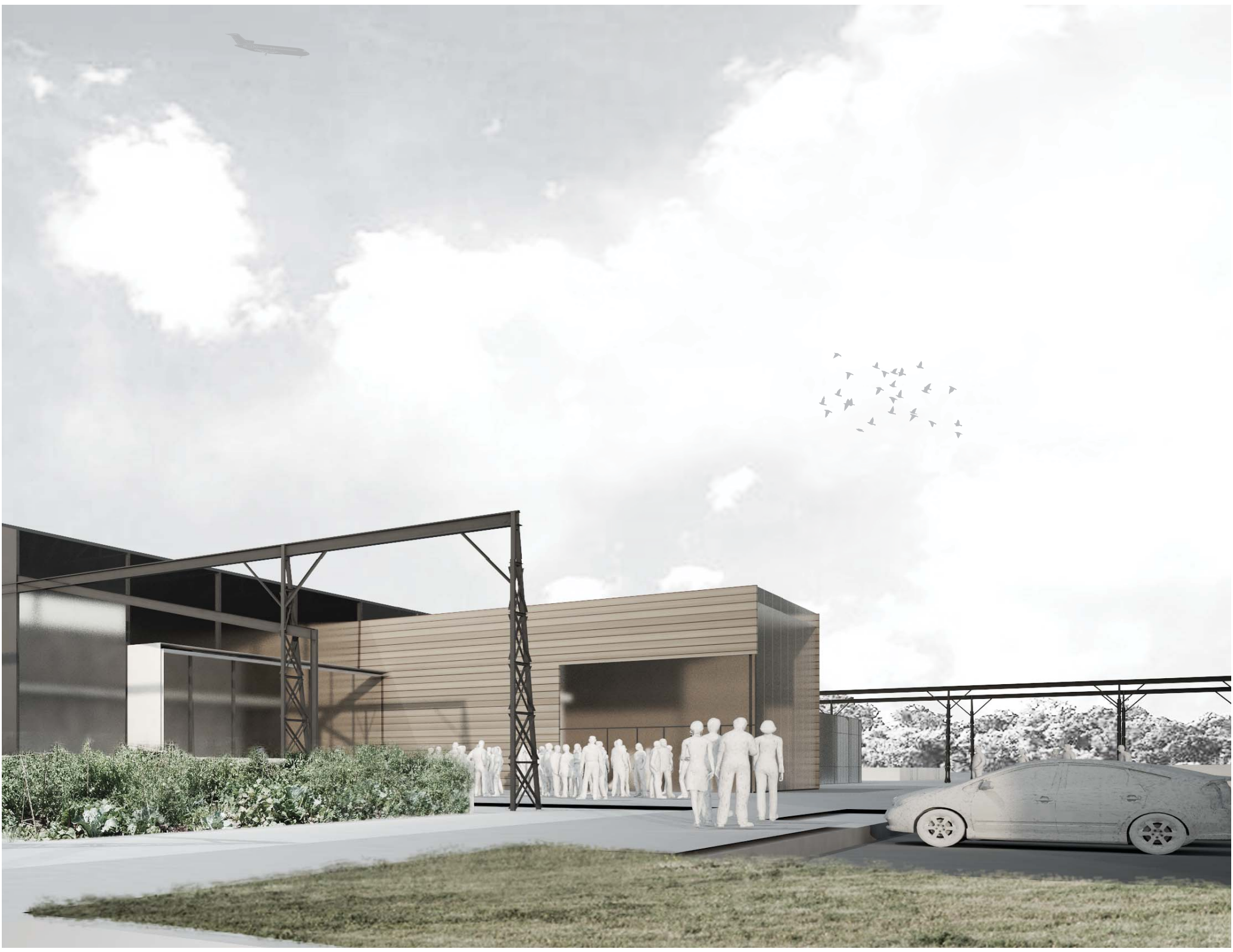
- ① Entrance
- ② Conference
- ③ Checkout
- ④ Office
- ⑤ Greenhouse
- ⑥ Market
- ③ Packaging
- ④ Processing
- ⑤ Classroom
- ⑥ Storage
- ⑦ Meeting Room
- ⑧ Control Room

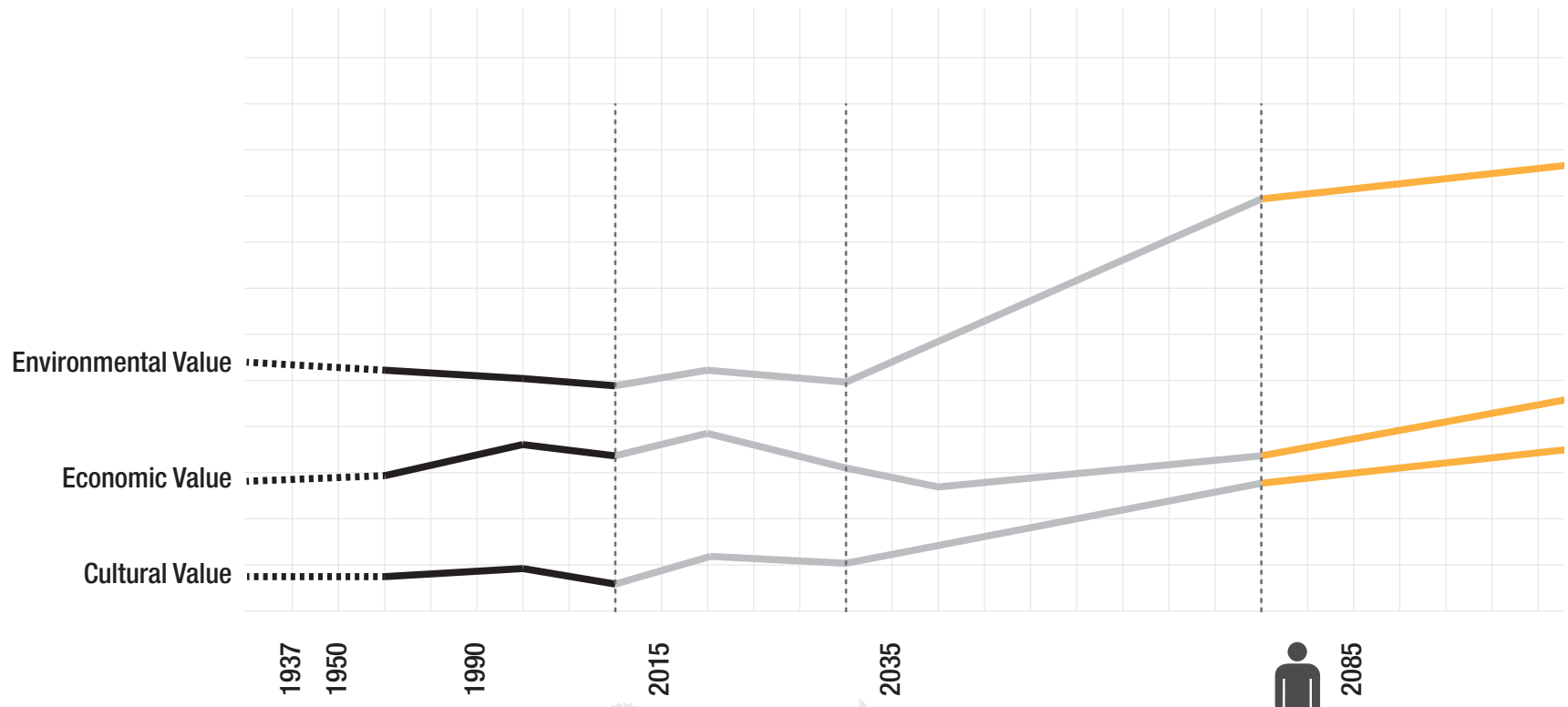


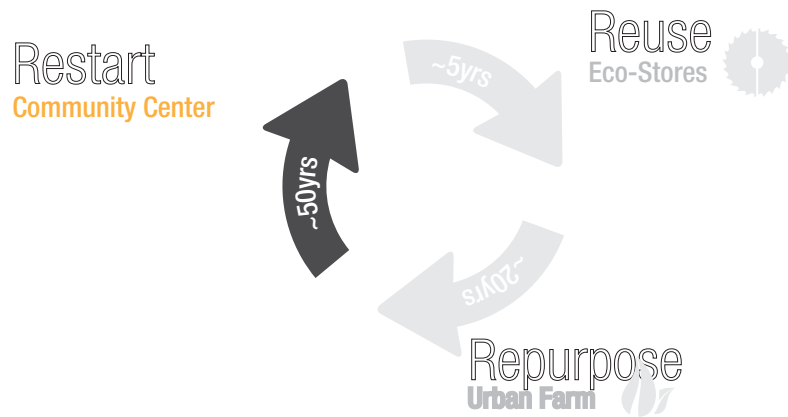












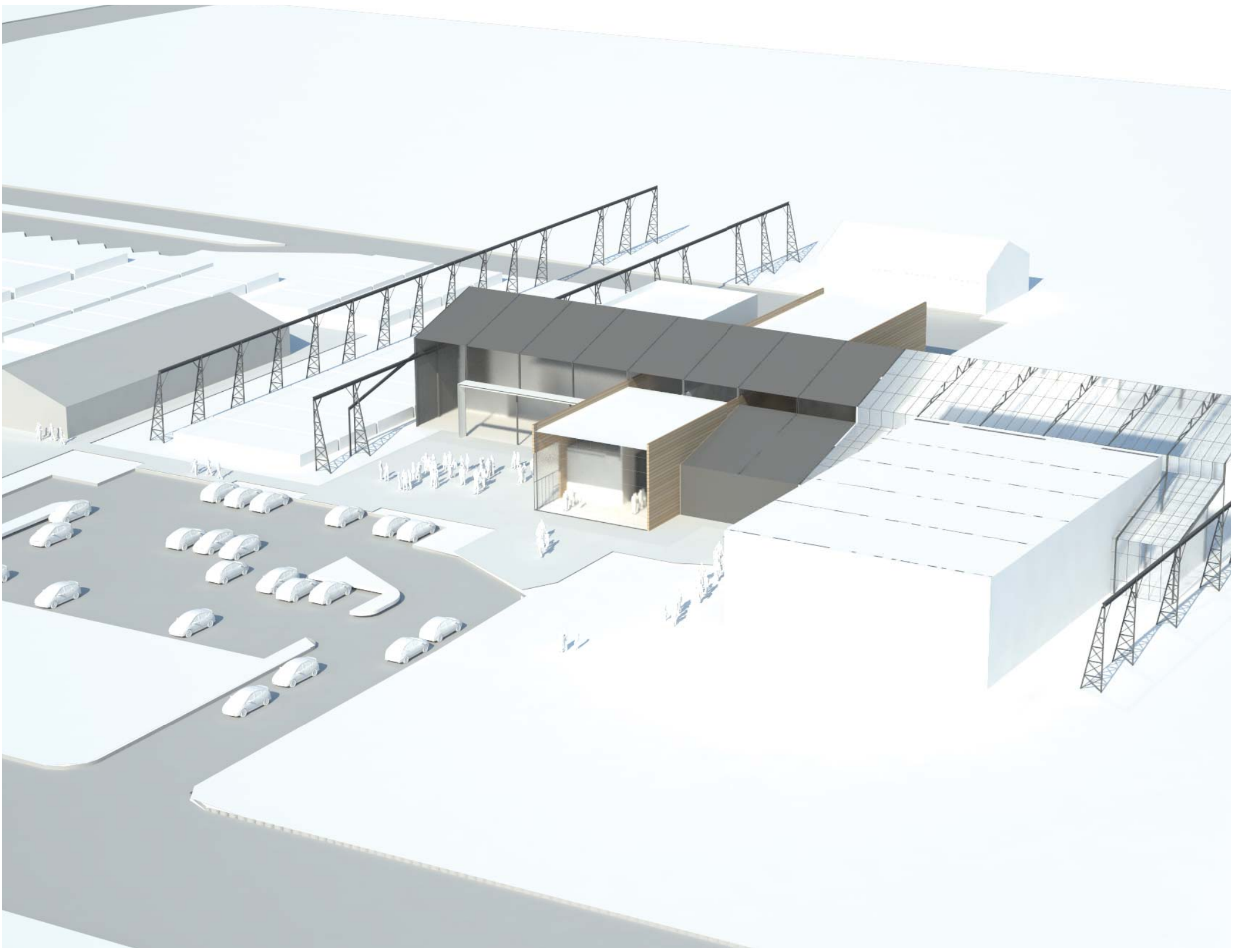
Again projecting into the future, the project speculates that with the increase in community ownership of the site, there becomes an increasing demand for a community center. Once again, this potential program can be implemented into the building as it adapts to meet the new needs of the time. Minimizing the amount of changing elements that get repeated in the series of buildings helps to maintain this adaptability.

The community center not only provides for the existing community in the region but also helps to spur new growth of a surrounding community. No longer seen as an industrial zone, the site becomes a prime location for a near downtown residential community.

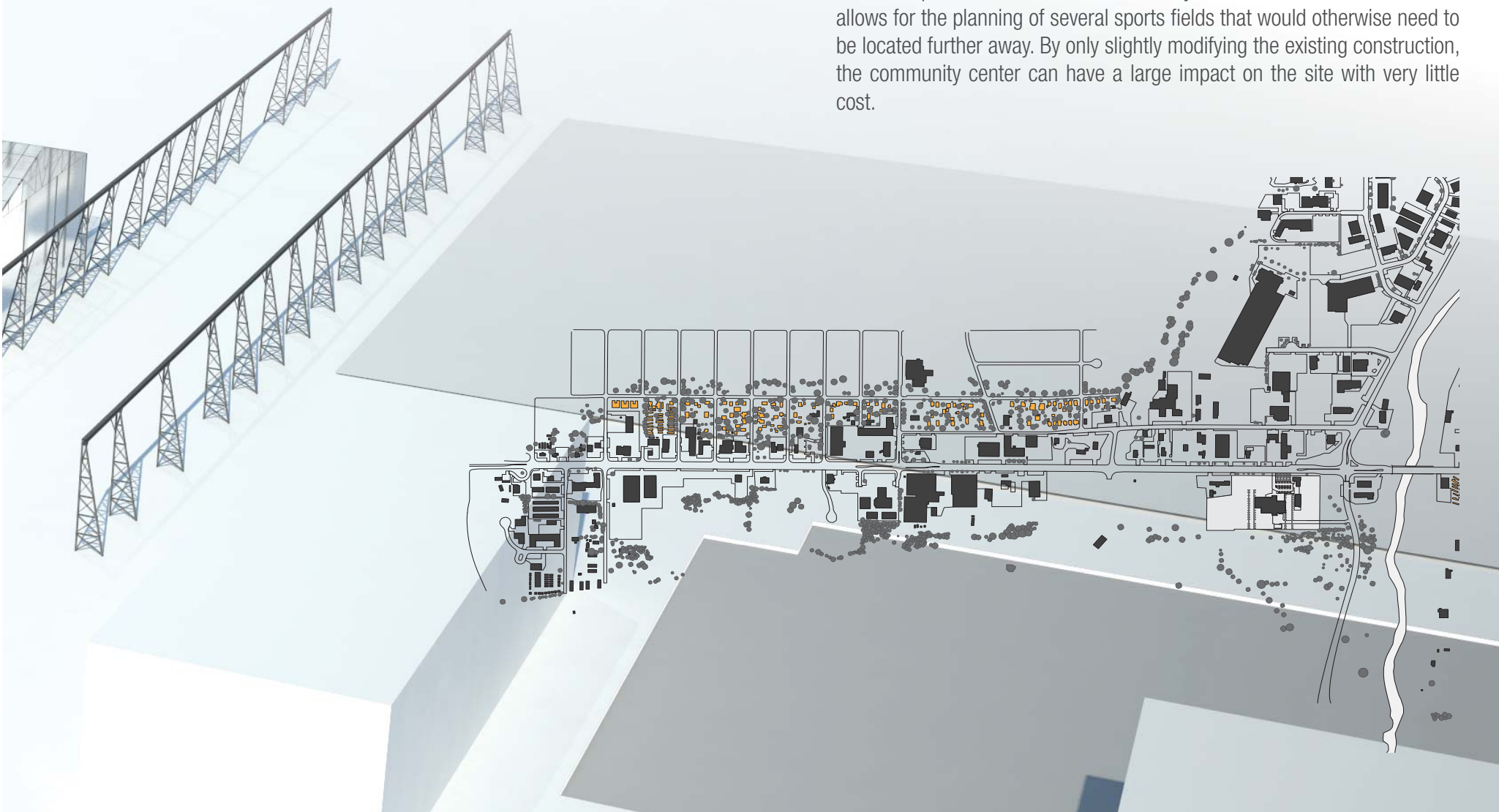
The community center not only helps to increase the cultural value of the site but through its program it can help to facilitate more sustainable ways of living, thus having an environmental impact as well. Economically, the site generates value through its ability to facilitate the growth of residential. This becomes an ideal location to direct the redevelopment of this region in anticipation of continued changing economies.



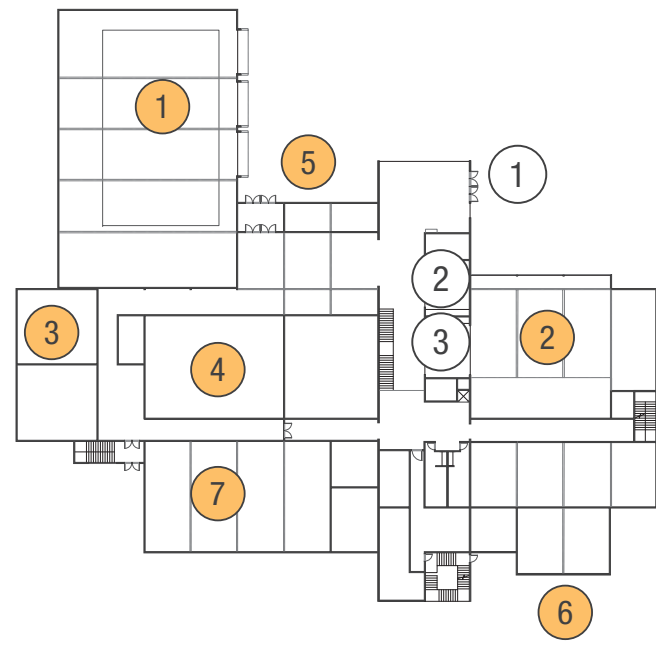
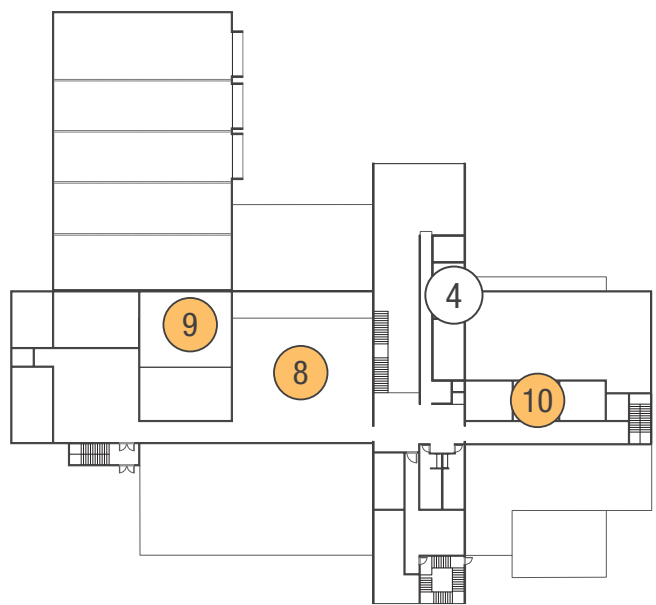
Restart
Community Center



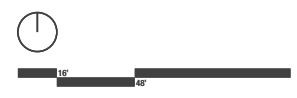
The site's impact is not only felt by its local neighborhood but also on downtown Lincoln as well as the other surrounding neighborhoods. Its near proximity to downtown and easy access to Lincoln's extensive trail network make it a perfect location for a community center. The size of the site also allows for the planning of several sports fields that would otherwise need to be located further away. By only slightly modifying the existing construction, the community center can have a large impact on the site with very little cost.

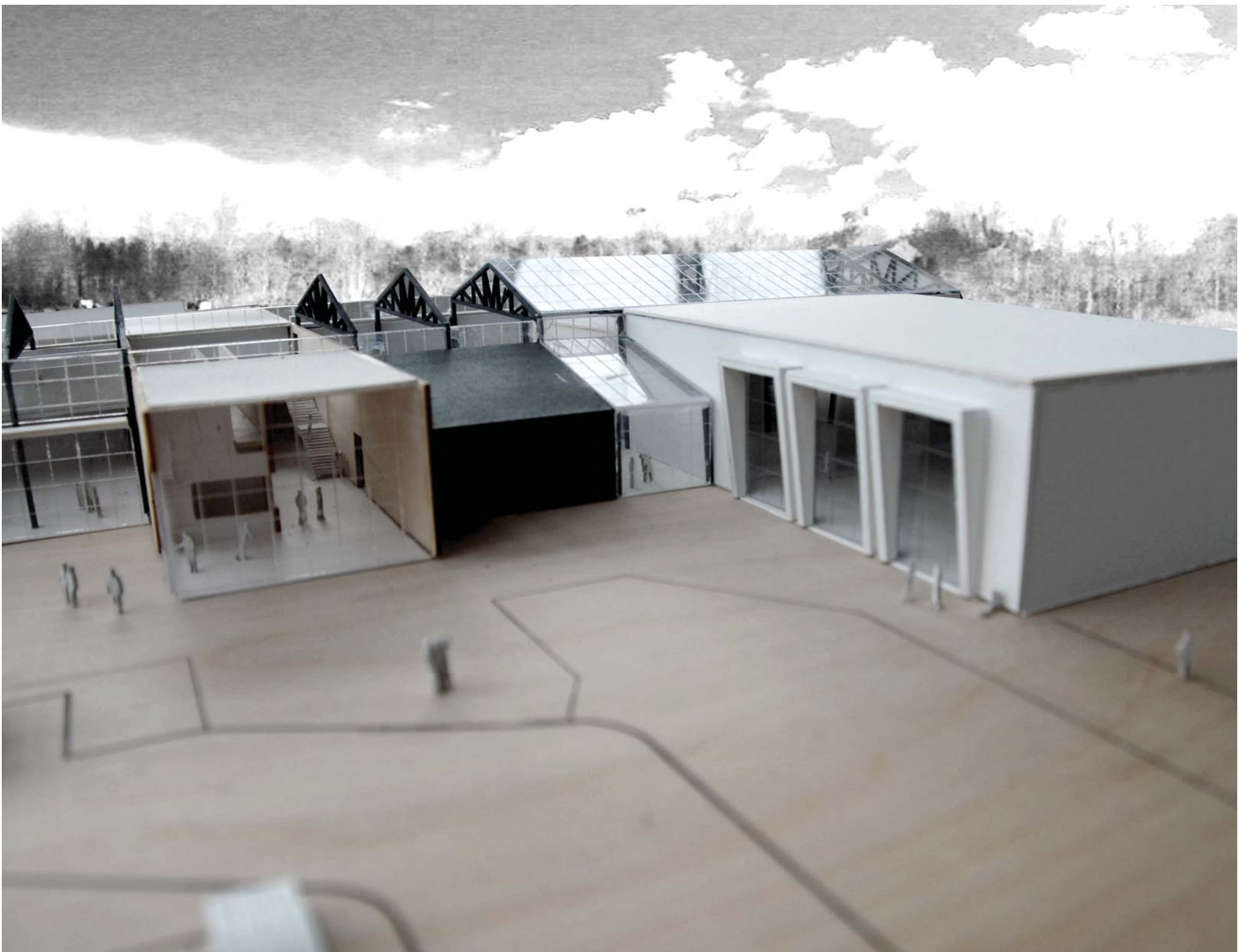


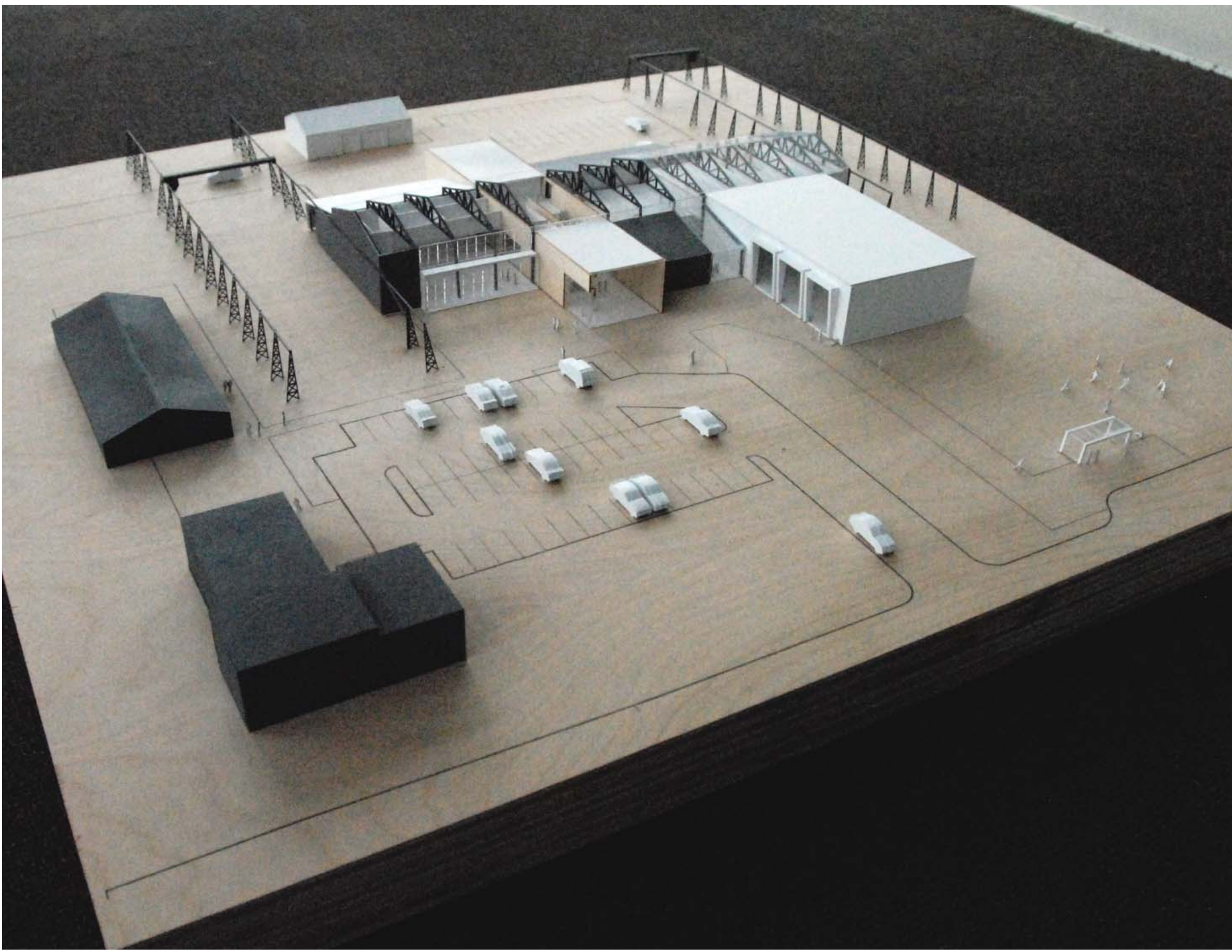


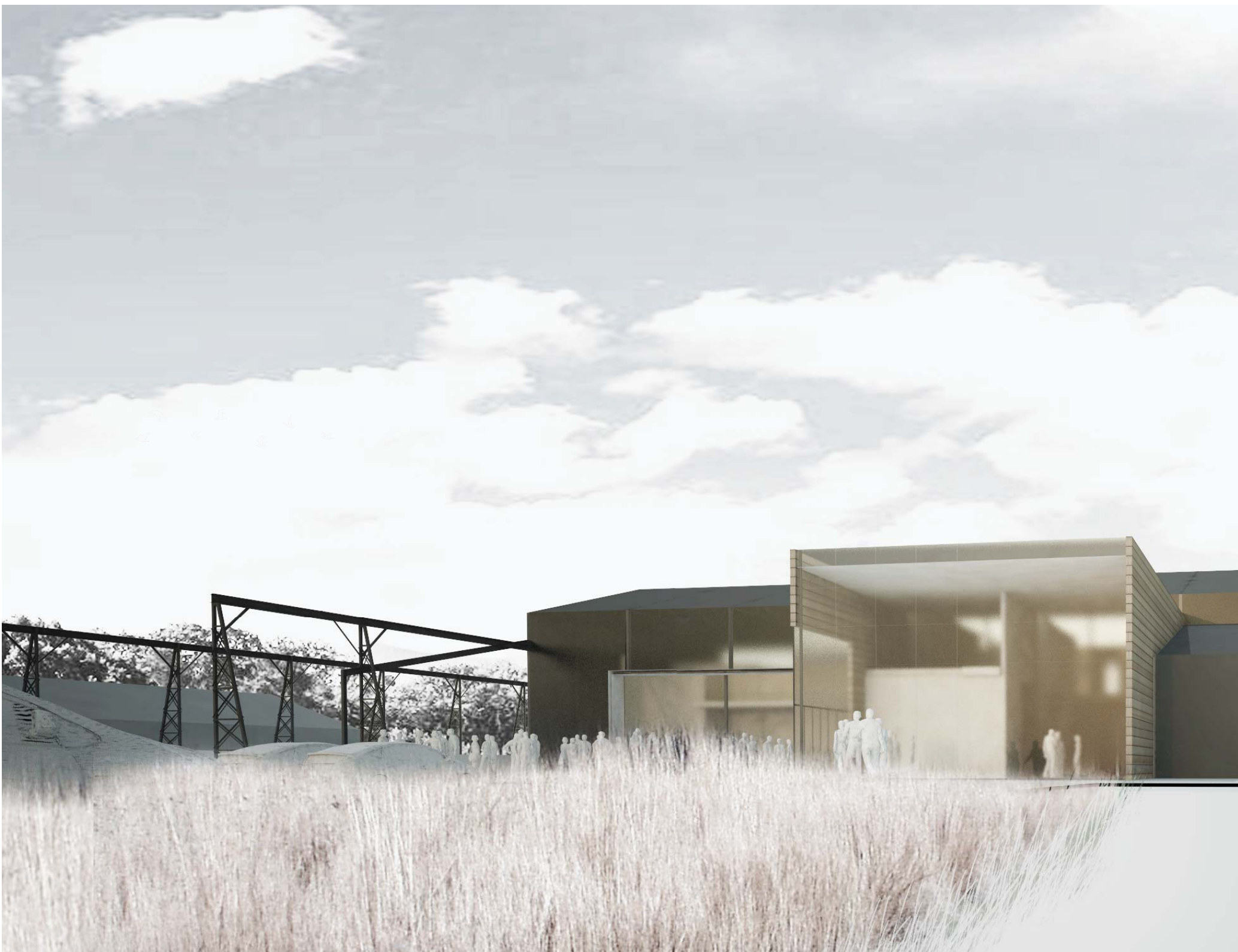


- ① Entrance
- ② Conference
- ③ Artist Exhibit
- ④ Office
- ① Gym
- ② Ballroom
- ③ Locker Rooms
- ④ Fitness Rooms
- ⑤ Food Service
- ⑥ Recycling Drop-off
- ⑦ Community Garden Service
- ⑧ Public Space
- ⑨ Flexible Space
- ⑩ Meeting Room











REVIEW MATERIAL

SEMESTER REVIEW

Designing for Reconstruction

ADAPTING BUILDINGS IN CHANGE

Instead of THIS
FOR THIS
THIS IS THIS

"Most of us live and work in environments that have received little consideration beyond that of economic necessity." - Frank Gehry, *Exploring Architecture*, George and Barbara

"Connect the architect and planner: by slight adjustments to the conventional elements of the landscape, existing or proposed, presents significant offsets" by modifying or adding conventional elements to suit other conventional elements they use, by a twist of context, gain a maximum of offset through a minimum of means. - *The Architecture of the City*

"Not I just connect the roads, I connect the users." - *Urban Morphology*, Gordon and Grier

136 Million Tons of C & D Waste is produced by the US each year.
170 Thousand Commercial buildings are built in the US each year.
44 Thousand Commercial buildings are demolished in the US each year.

Site Considerations

Potential City Analysis

Precedents

Material Issues

Adaptive Structures

Health Buildings

5 YEARS
Reactive Re-use: Cultural Base Center

10 YEARS
Proactive Expansion: Building @ Community @ Community

15 YEARS
Adaptive Reconstruction: BEE Spreading Grounds

In the semester review, the premise of the project really stemmed from the idea of reconstruction. The project was focused on the idea that if materials could be salvaged in a building, the ultimate value of that building would be increased. This received somewhat harsh criticism and required a deeper examination into what the thesis was really about.

While the eventual project still looked at three schemes changing over time, this proposal looked into how at 5 years the site could be reused, how at 10 years the site could begin to pro actively expand, and then how at 50 years the site could adapt to new changes in a much more flexible way. The proposal ultimately become to interested in the material value of a building rather than how the site could deal with changing conditions.

Material value really become only one of several ways in which a building could maintain, or increase, its value over time. Flexibility, cultural significance, and specific programmatic conditions could also influence the value.

FINAL REVIEW

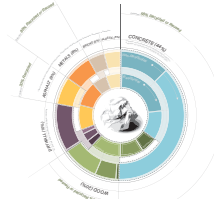
In presenting at the Final Review for this project, a major critique was that perhaps, this real thesis question for this project was how architecture can deal with changing economies. Previously it had been presented as a way of developing a flexible architecture that dealt with any change. This critique really provided some much needed clarity for the overall proposal and is reflected in this book.

These presentation boards were accompanied by both a digital presentation as well as respective models for each scheme.

Adaptive Value DESIGNING FOR CHANGE



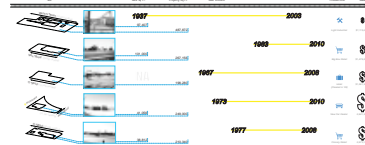
Can a design approach that considers the long term flexibility of a building bring value to an otherwise undervalued site?



Drivers of Value

Quality
Cultural Impact
Sustainability
Flexibility

- 1 Identify Existing Condition
- 2 Establish Clear Entrance
- 3 Select Core Elements
- 4 Develop Value Program
- 5 Integrate



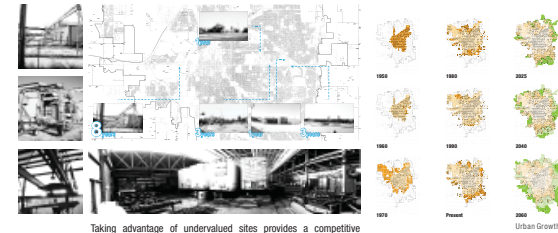
Material Reuse



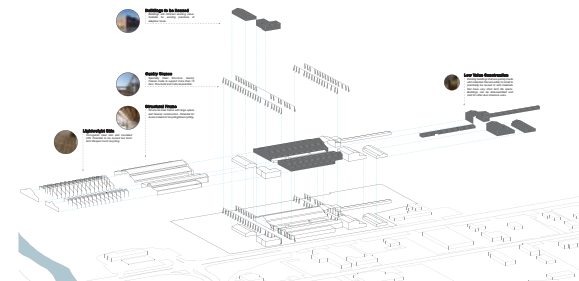
Adaptive Structures



Flexible Buildings



Taking advantage of undervalued sites provides a competitive advantage for architects seeking to maximize design possibilities



32

8,000
25,000
12,000
24,100

23,000
55

5 years

Reuse
Eco-Stores

2
5000
15
>50

3500
55
2

20 years

Repurpose
Urban Farm

128

>100,000
42
-5,000,000
-4,500

15
22,000
>60

50 years

Restart
Community Center

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I would like to thank everyone who helped me become the person that I am today, this project would not have been completed without your help. Thank You.