

# JASPERDESIGN

work by Thomas F. Jasper  
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This portfolio depicts the knowledge I have immersed myself in, and skills that I have carefully fostered as a student of Clemson University's Architecture Graduate Program. It provides a brief outline of the character behind my design; derived from my philosophies, creativity and collaboration.

I bring to the table a diverse set of artistic skills, including music, photography, drawing, painting and modeling, and I incorporate these skill into my design process. A variety of occupations influenced my design: website development, graphic design, drafting, carpentry, landscape design and construction.

In May of 2012, I will be graduating with my Master's Degree in Architecture, and thereafter focusing my creative energies toward specific areas of more interest to me, seeking opportunities to broaden my experience and assert my architectural design philosophies within the urban environment.

Sincerely,



Thomas Jasper

EDUCATION CLEMSON UNIVERSITY  
Clemson, SC

Master's in Architecture [2012]  
GPA: 3.75

BA in Architecture, Fine Art Minor[2010]  
Cumulative GPA: 3.67

UNIVERSITAT DE POLITECNICA DE CATALUNYA  
Barcelona, Spain [2009]

EXPERIENCE Kinlin Rutherford Architects [2012-present]  
 Junior Architect  
 schematics, design development, construction administration of high end residential projects both single family and multifamily. Project management of an over four million dollar apartment renovation.

Kalashian Architecture and design [2012]  
 Junior Architect  
 led design development, managed construction documentation for restaurant and hotel renovations.

JT Design GROUP [2010-2012]  
 Chief Graphic Designer / Partner  
 led all design, creation, and coding phases of website and graphic development. Logo, billboard and other advertisement design for a variety of different companies up the east coast.

Freelance Design and drafting [2010-12]  
 Freelance Designer  
 design and development of over a dozen residential houses and apartment concepts for private developers. (Majesty Homes, Cypress Construction)

Clemson University Materials Lab Assistant [2010-12]  
 Lab Assistant  
 furniture build, machinery maintenance, inventory, and safety

SKILLS	Adobe Photoshop CS6	AutoCAD 2013
	Adobe Dreamweaver CS6	Rhinoceros 4.0
	Adobe Indesign CS6	Sketchup 8
	Adobe Illustrator CS6	Hand Illustration
	V-Ray Rendering Systems	Microsoft Office 2012
	Laser Cutting Systems	CNC Digital Fabrication

HONORS Carolina Ceramics and Artistry 2010 Design Competition 2nd Place  
 Physical model displayed at national EPA exhibits on Vertical Farming  
 Olivia Jackson McGee Endow Scholarship  
 Josie and Allen Wood Endowment  
 Homer Curtis Mickel and Leola Carter Mickel Endowment

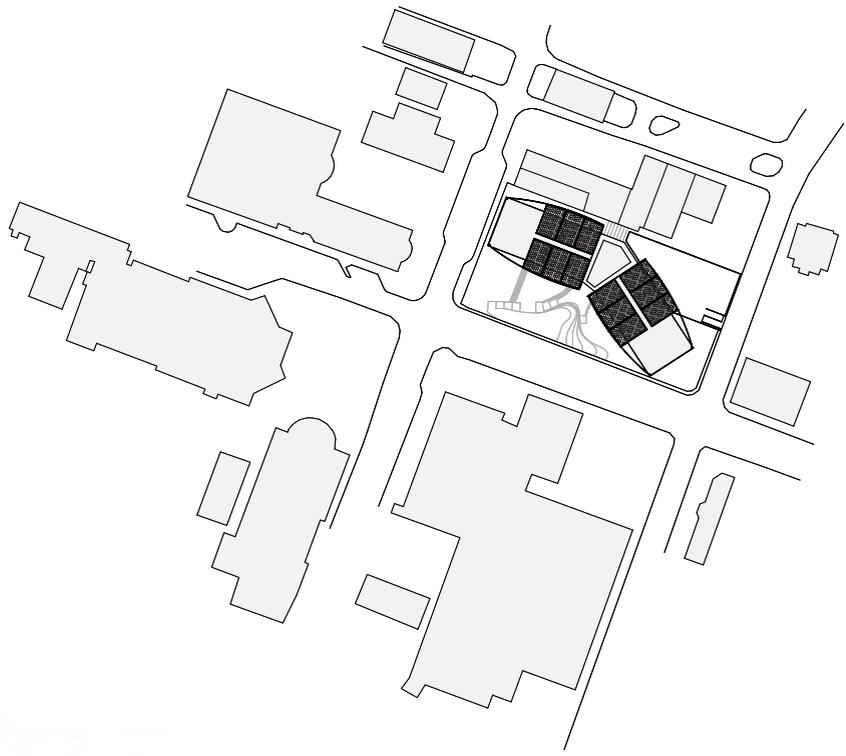
ACTIVITIES EPA granted Charleston Vertical Farm Charrette for the Clemson Institute of Applied Ecologies [2011]  
 AIA Greenville "Kids in Architecture" [2010]  
 Phi Delta Theta Fraternity [2007-2010]



# 0

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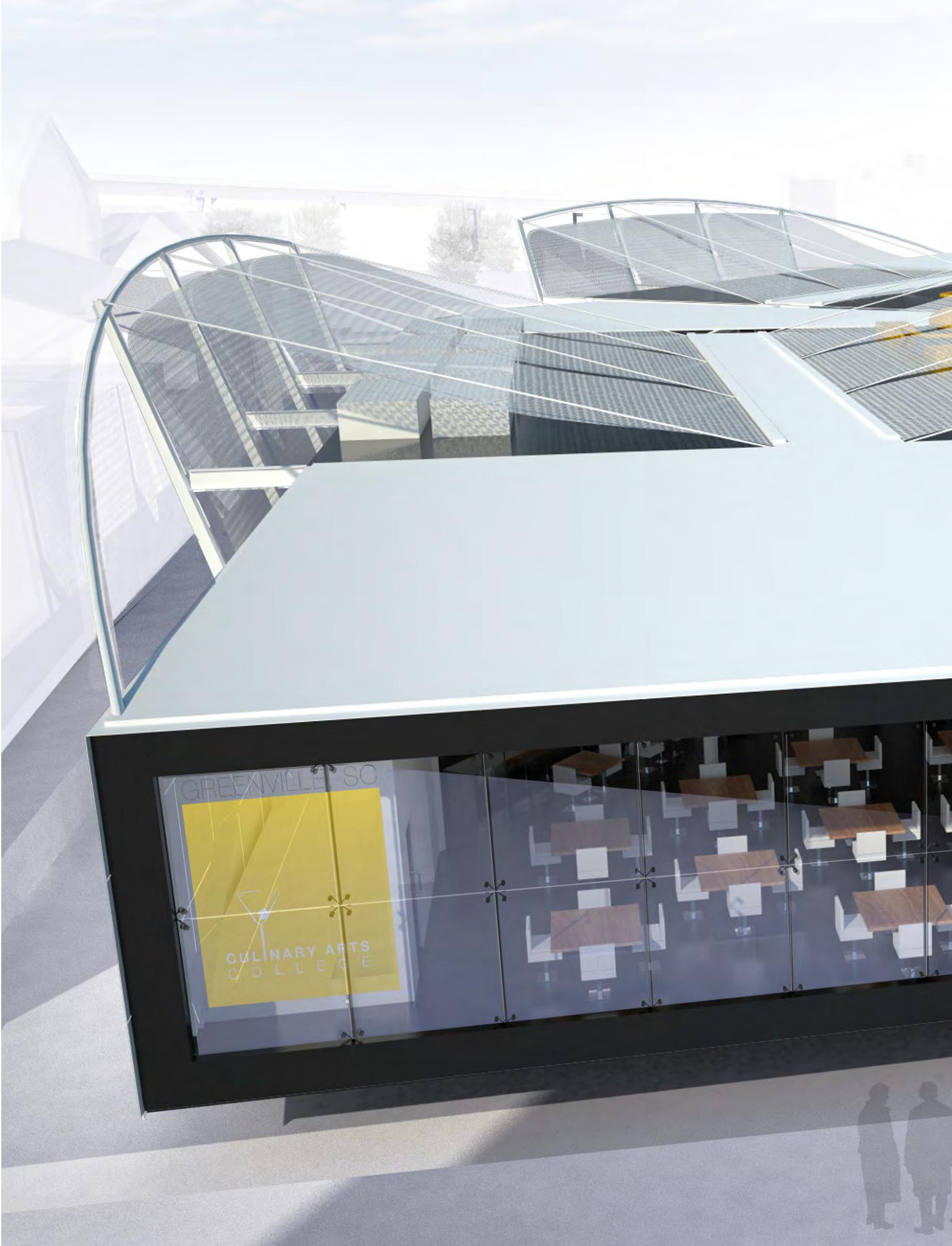
CULINARY ARTS  
COLLEGE

# 1

## Culinary Arts School

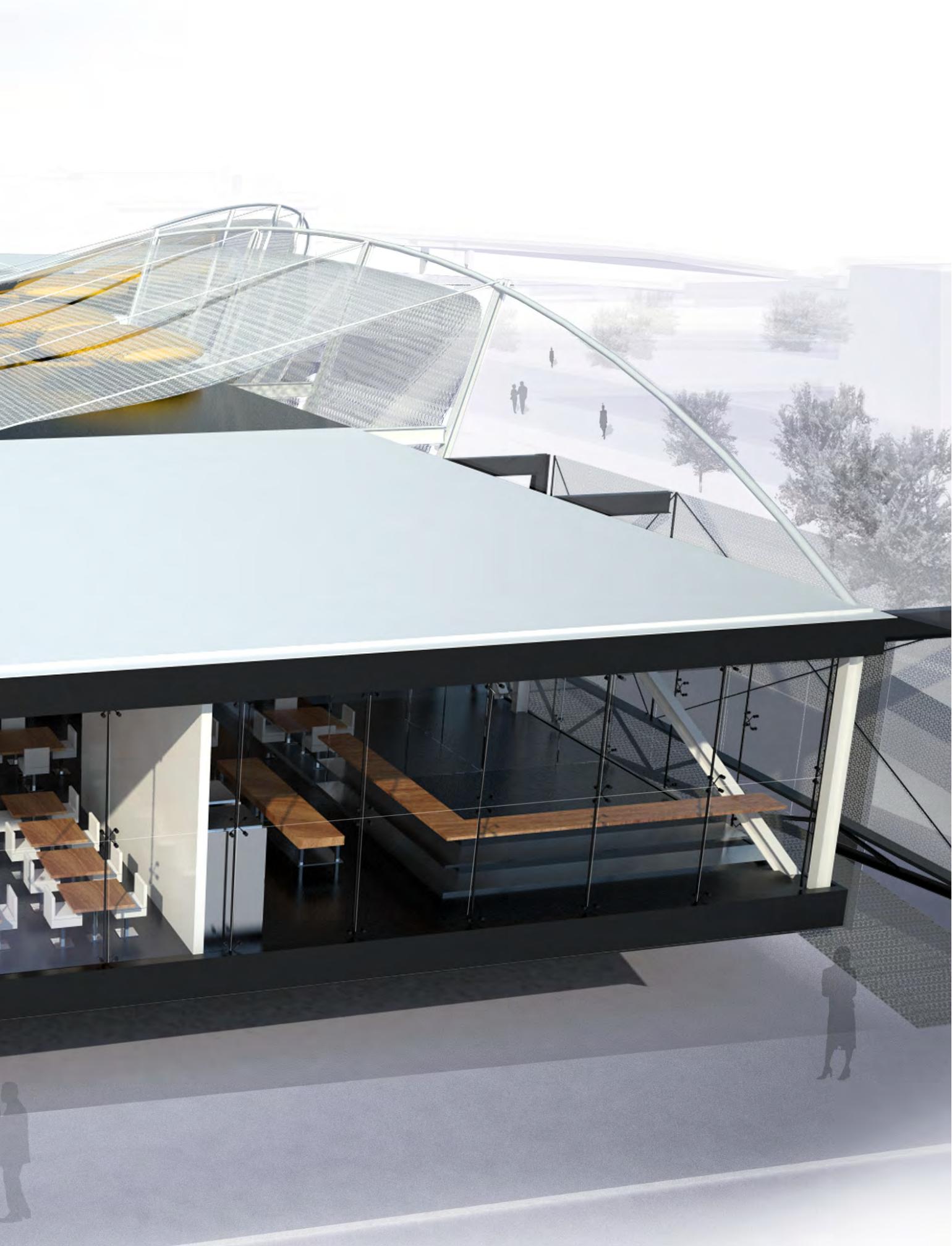
This project is presently underway in my final semester of graduate school. The proposal asks for a 40,000 sqft. culinary arts college with a commercial restaurant and public auditorium. Being a ASCA competition an innovative use of steel is necessary in the design concept of the building with a focus in long span steel systems.

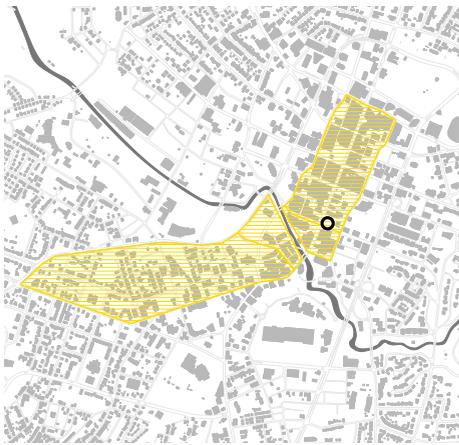
location *greenville, sc*  
program *culinary arts college*  
professor *julie wilkerson*  
duration *january 2012- may 2012*



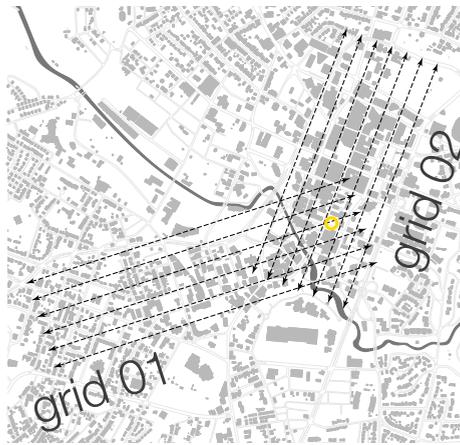
GREENVILLE SC

CULINARY ARTS  
COLLEGE

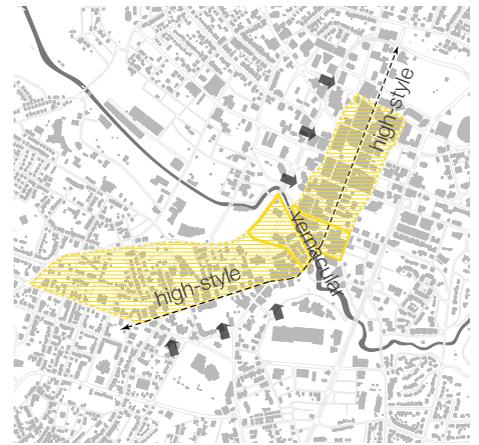




FIELDS + CONTEXT



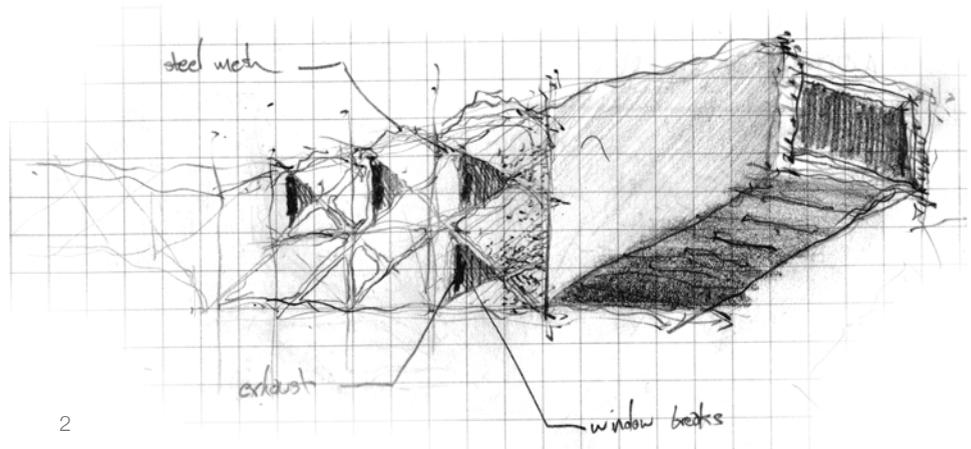
GRID INTERSECTION



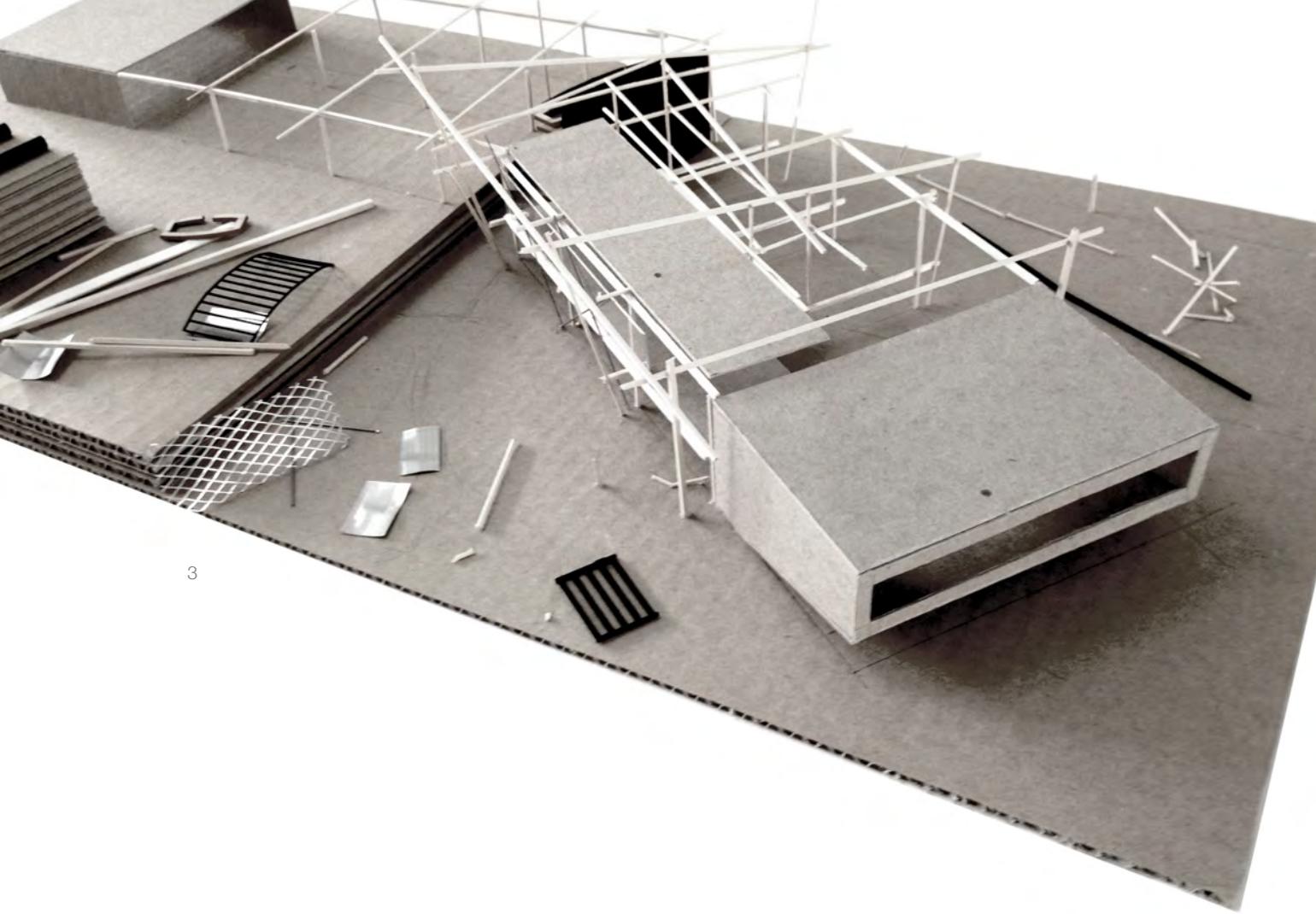
COLLISION

1

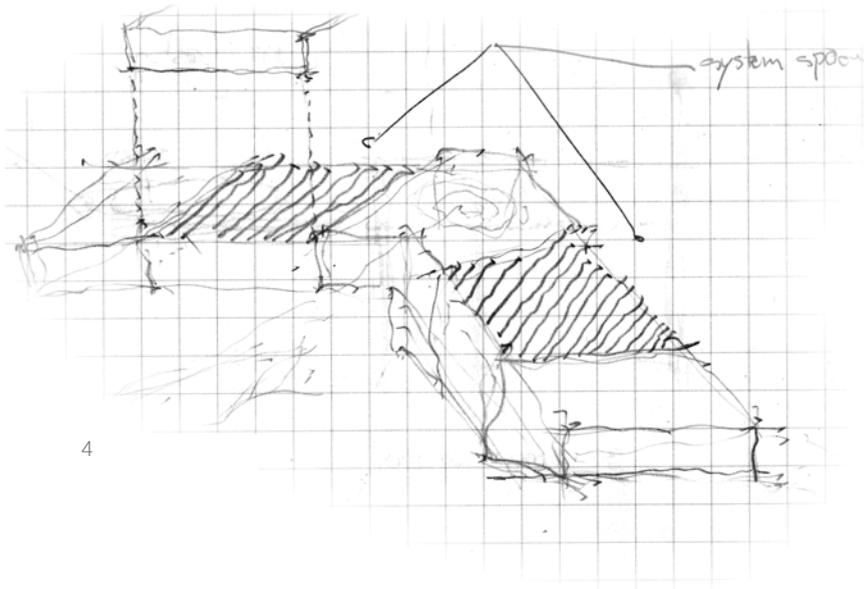
1 figure ground study driving concept of design 2 early sketch of envelope around auditorium 3 study model integrating structure and envelope 4 sketch expressing division of space from exterior views



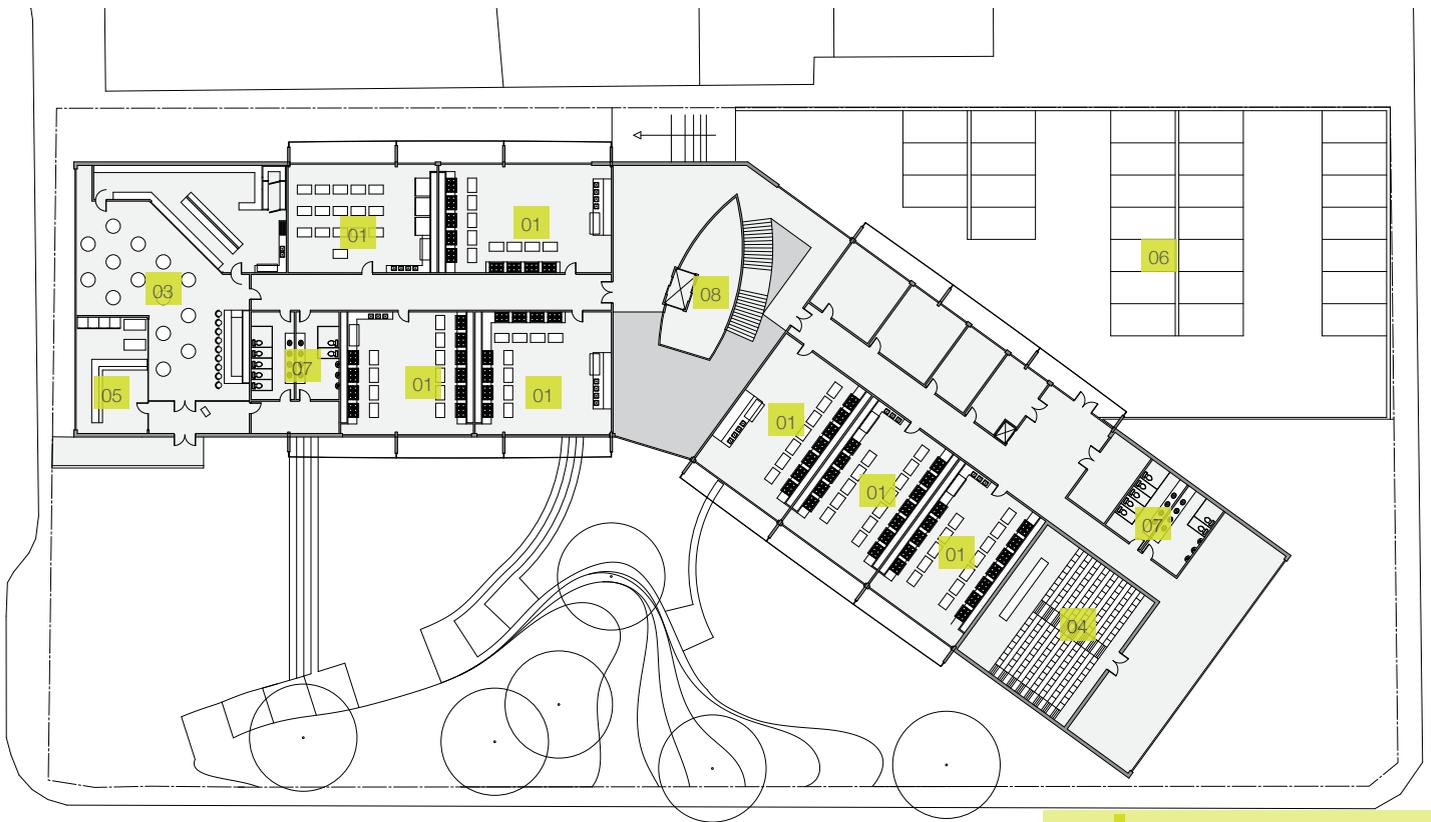
2



3



4



plan.01 ☺

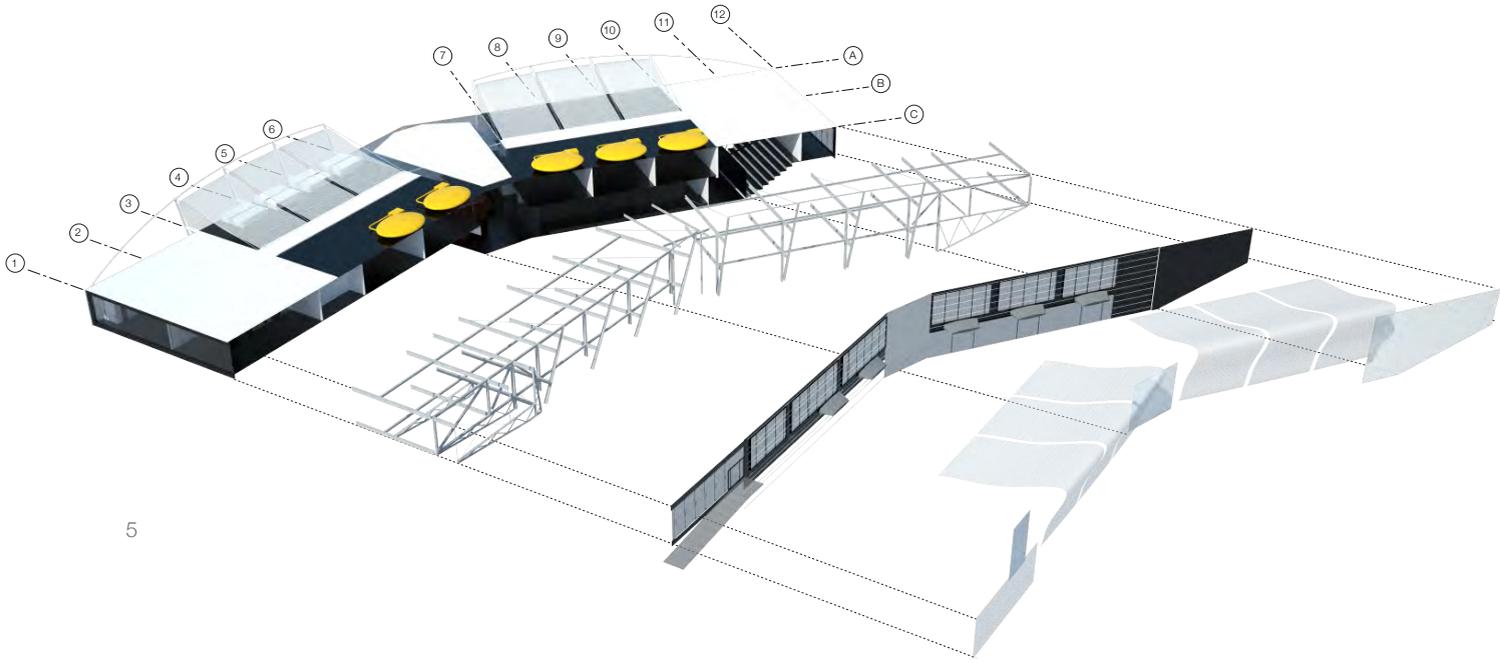


plan.02 ☺



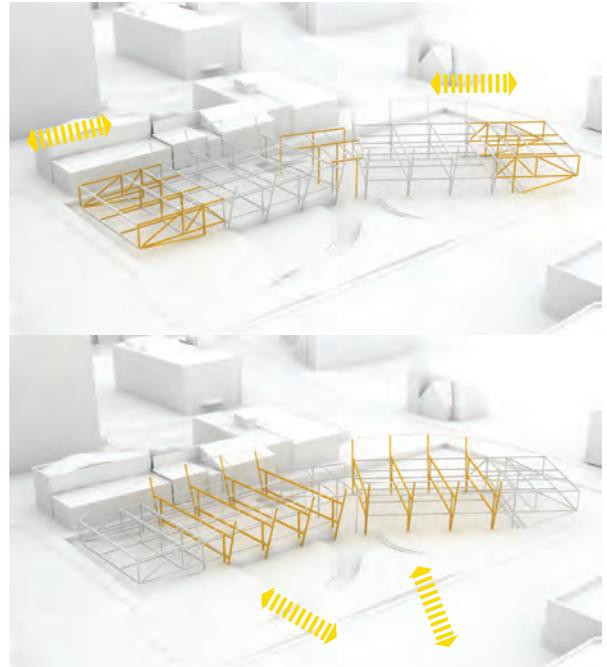
- |                     |                      |
|---------------------|----------------------|
| 01 teaching kitchen | 08 storage           |
| 02 pastry kitchen   | 09 admissions office |
| 03 restaurant       | 10 career office     |
| 04 auditorium       | 11 staff room        |
| 05 bakery           | 12 faculty area      |
| 06 parking          | 13 director's suite  |
| 07 bathrooms        |                      |

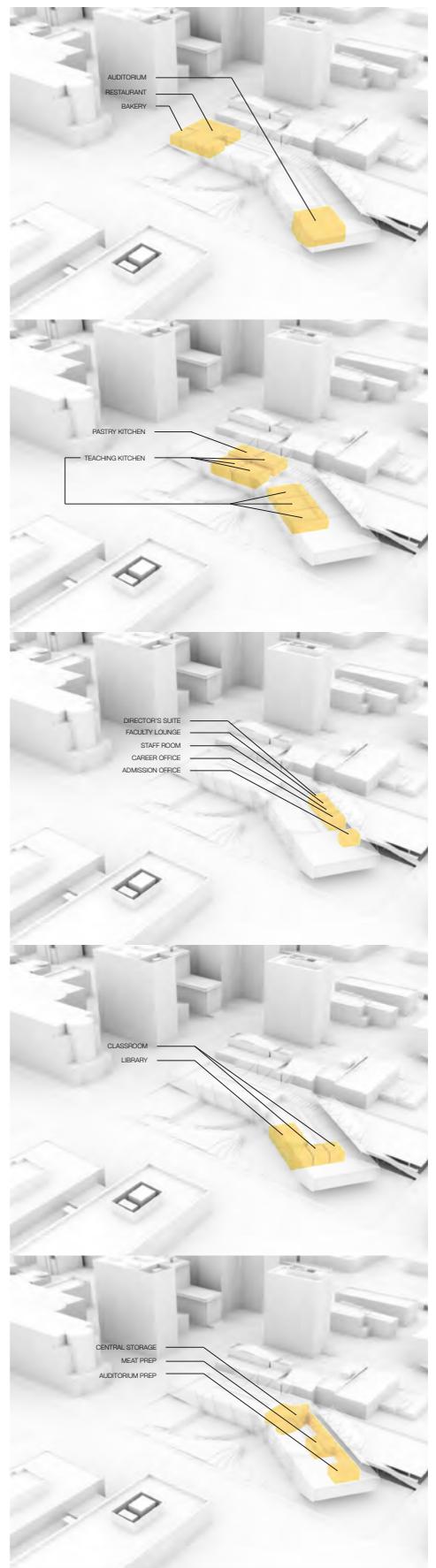
\* grid system begins to reveal the separation of the high order and the vernacular within the landscape.



5

6





**5** exploded diagram revealing the layering of the envelope system **6** two opposing structural systems work in tandem with programmatic elements **7** diagrams defining the break down of the program

7



CULINARY ARTS  
COLLEGE





# 2

## Conveyance Farming

This project represents the culmination of my architectural studies. Being our comprehensive design studio, all aspects of the building had to be covered and represented in the final documentation. The proposal was initiated by the EPA and the Institute of Applied Ecologies. It called for a vertical farm design in the city of Charleston, South Carolina, retrofit into an existing structure on one of three sites proposed by the EPA. During the design process three charrette's were held in the Charleston area, to provide a forum for experts in various disciplines, from music and food science to transportation engineering and microbiology, to participate in design decisions, including the choice of site.

The major challenge of this project was in offering an innovative and practical design within the constraints of highly restrictive building codes, which stem from the city's historical preservation covenants. Our proposal employed various cutting-edge technologies to optimize the production of consumable vegetation within an urban setting, proving the concept both economical and environmentally friendly.

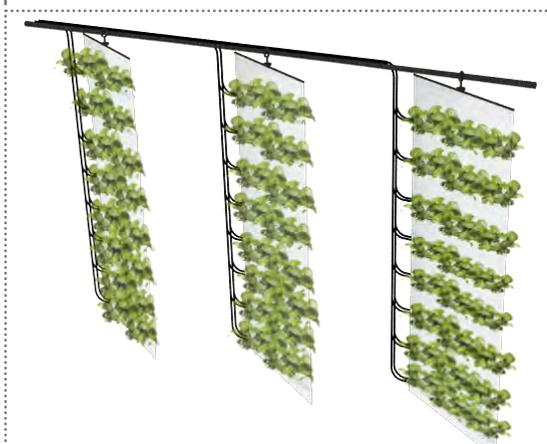
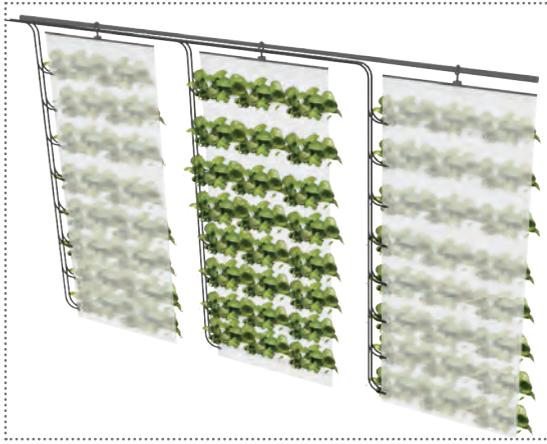
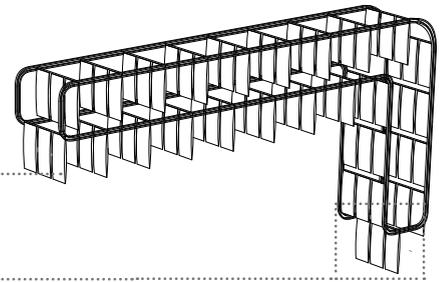
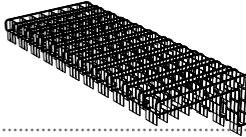
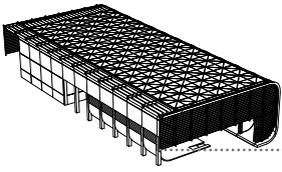
location *charleston*  
program *vertical farm*  
professor *dan hardin*  
duration *august 2011- december 2011*



CHARLESTON.com



community farming



*sheets rotate  
to maximize  
available  
sunlight*

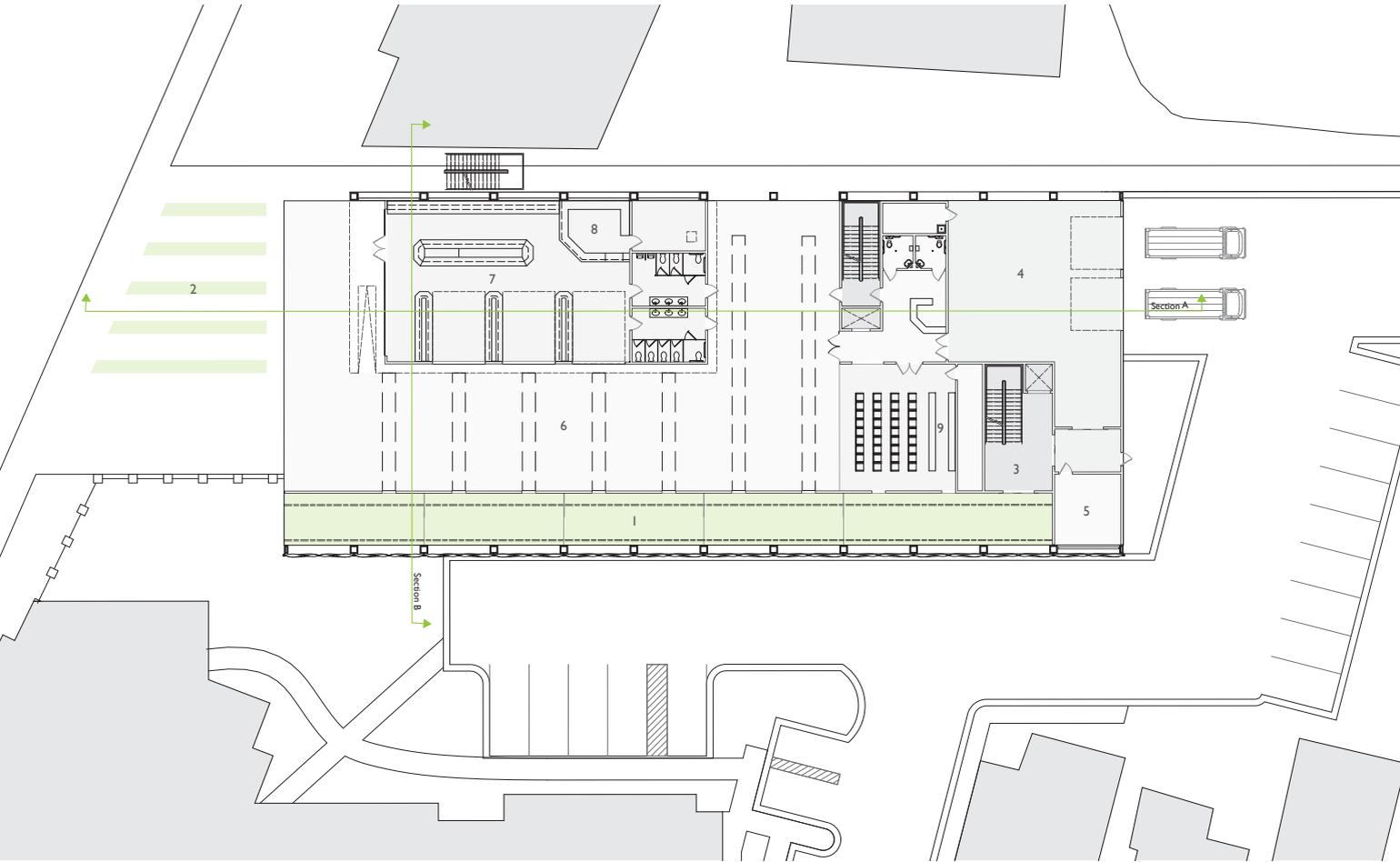
$$\begin{aligned}
 &20 \text{ plants} \text{ ---} \\
 &\quad \text{per row} \\
 &\times \\
 &8 \text{ rows} \text{ ---} \\
 &\quad \text{per side} \\
 &\times \\
 &2 \text{ sidest} \text{ ---} \\
 &\quad \text{per bag} \\
 &\times
 \end{aligned}$$

$$\begin{aligned}
 &26 \text{ bags} \text{ ---} \\
 &\quad \text{per conveyor} \\
 &\times \\
 &3 \text{ conveyors} \text{ ---} \\
 &\quad \text{per bay} \\
 &\times \\
 &1 \text{ bays} \text{ ---} \\
 &\quad \text{total} \\
 &\times
 \end{aligned}$$

$$\begin{aligned}
 &274,560 \text{ plants} \text{ ---} \\
 &\quad \text{total} \\
 &\div \\
 &10,000 \text{ plants} \text{ ---} \\
 &\quad \text{per acre} \\
 &= \\
 &27.5 \text{ acres}
 \end{aligned}$$

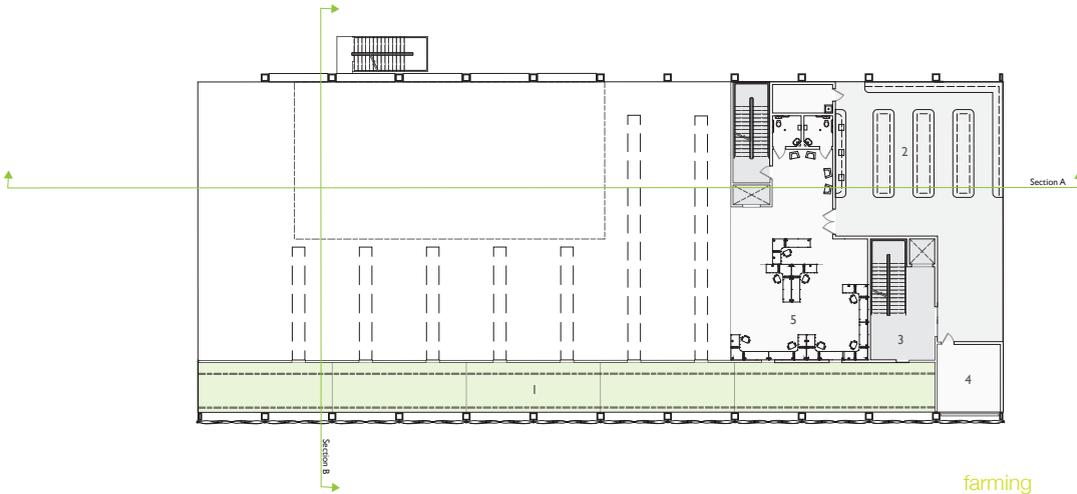


FLOOR PLAN GROUND LEVEL 01



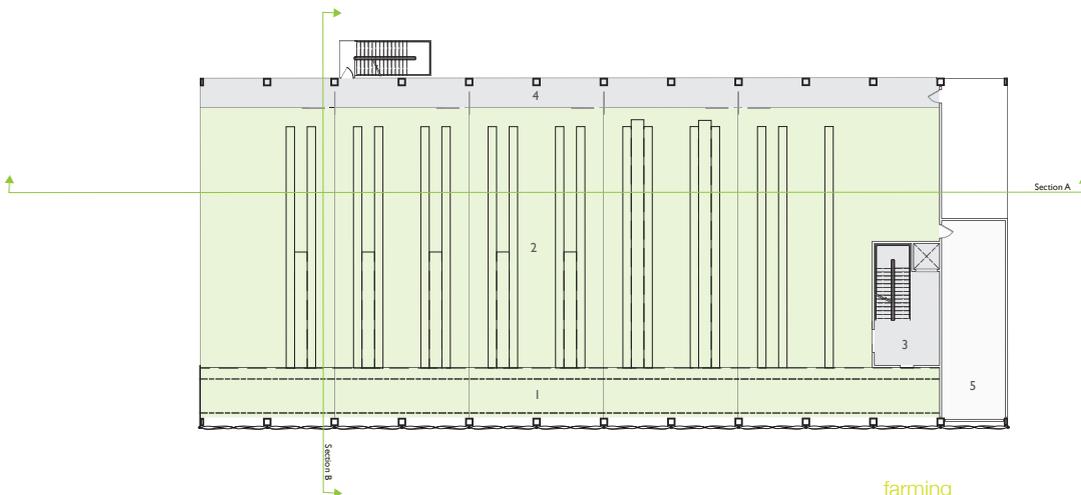
- farming
- production space 1
- community garden 2
- air lock 3
- processing 4
- mechanical 5
- public
- farmer's market 6
- daily market 7
- juice bar 8
- demo kitchen 9

FLOOR PLAN RESEARCH LEVEL 02



- farming
- production space 1
- research laboratory 2
- air lock 3
- mechanical 4
- public
- administration 5

FLOOR PLAN PLANTING LEVEL 03



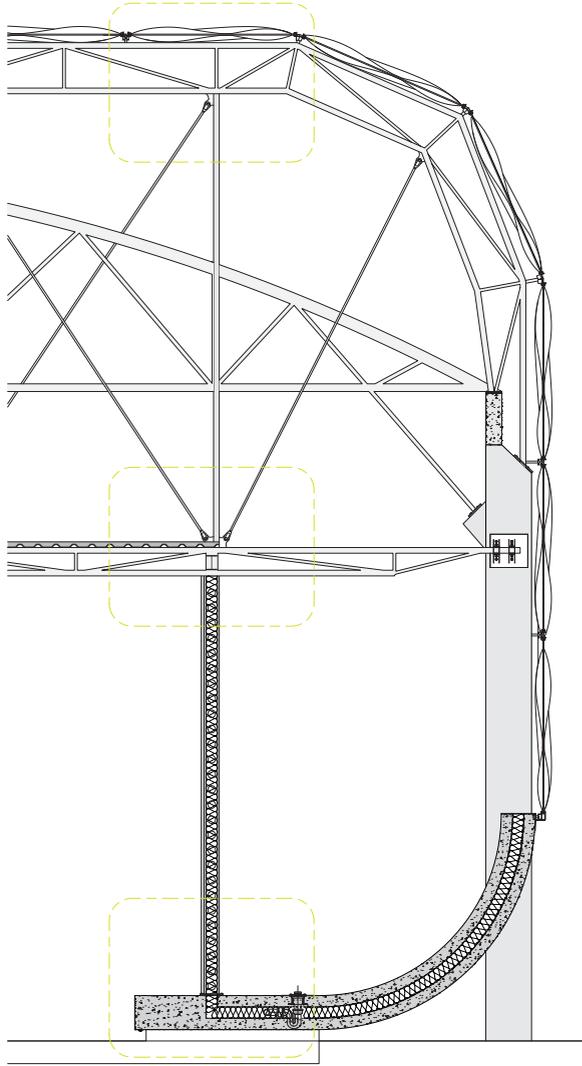
- farming
- production space 1
- seed germination 2
- air lock 3
- air lock corridor 4
- mechanical 5

Ethylene Tetrafluoroethylene (ETFE) Skin (R-Value

Air Pocket (R-Value: 5.5)

Aluminum ETFE Mounting Bracket with Rainwater

Steel Space Frame



Steel Column

1" Steel Cable Cross Bracing

Clevis Plate

Corrugated Metal Decking

Steel I-Beam

Batt Insulation

Wood Cladding

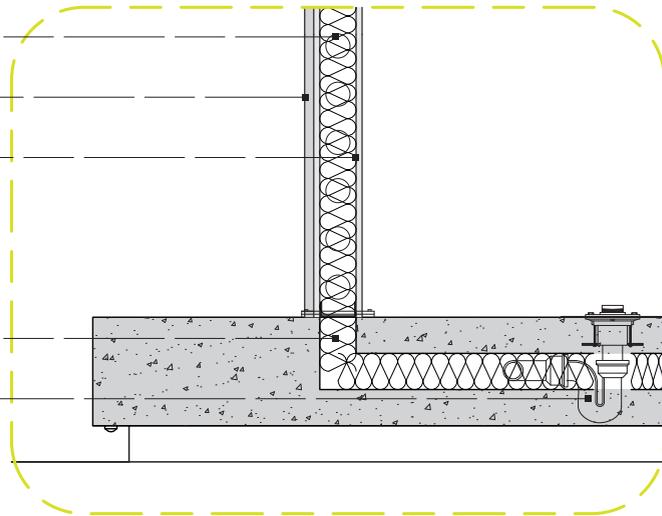
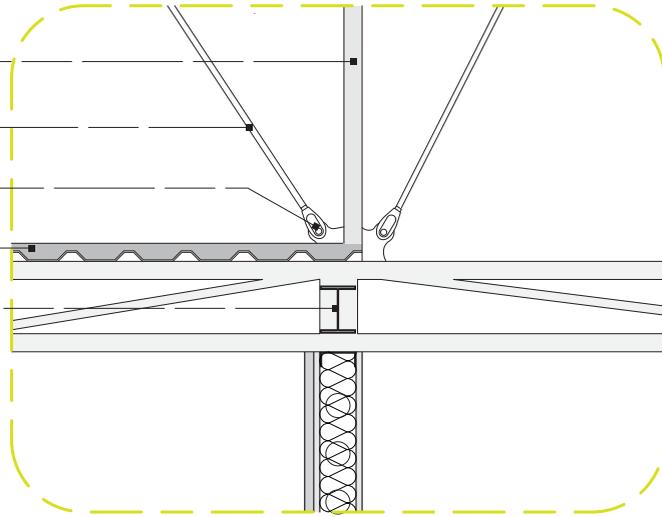
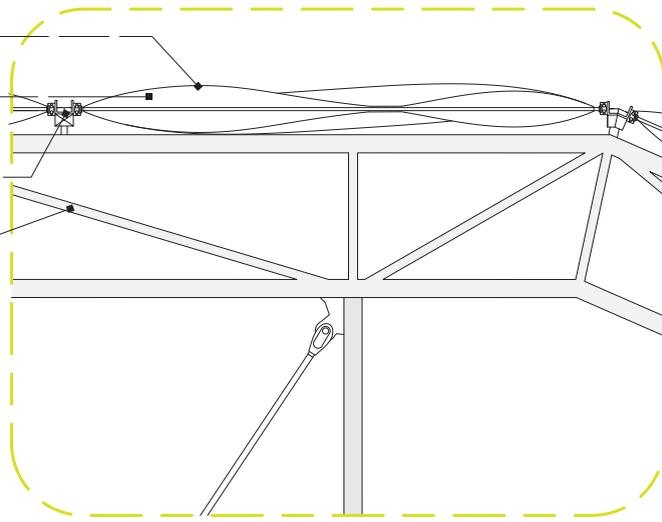
Steel Stud

18" Cast-in-Place Insulated Concrete Basin

Floor Drain

3.3 - Total ETFE Pillow R-Value: 20.9)

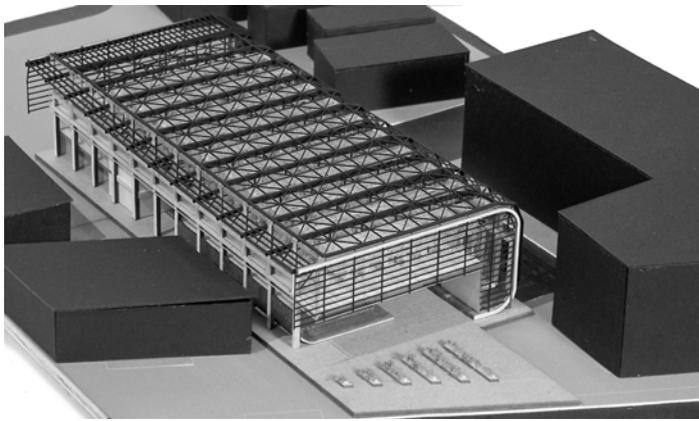
Channel



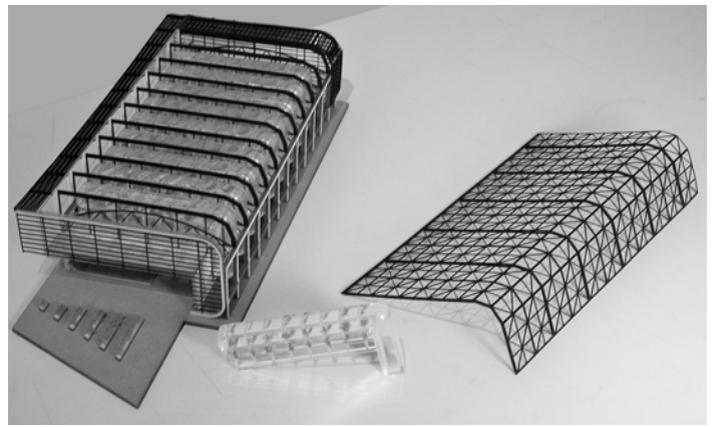


1

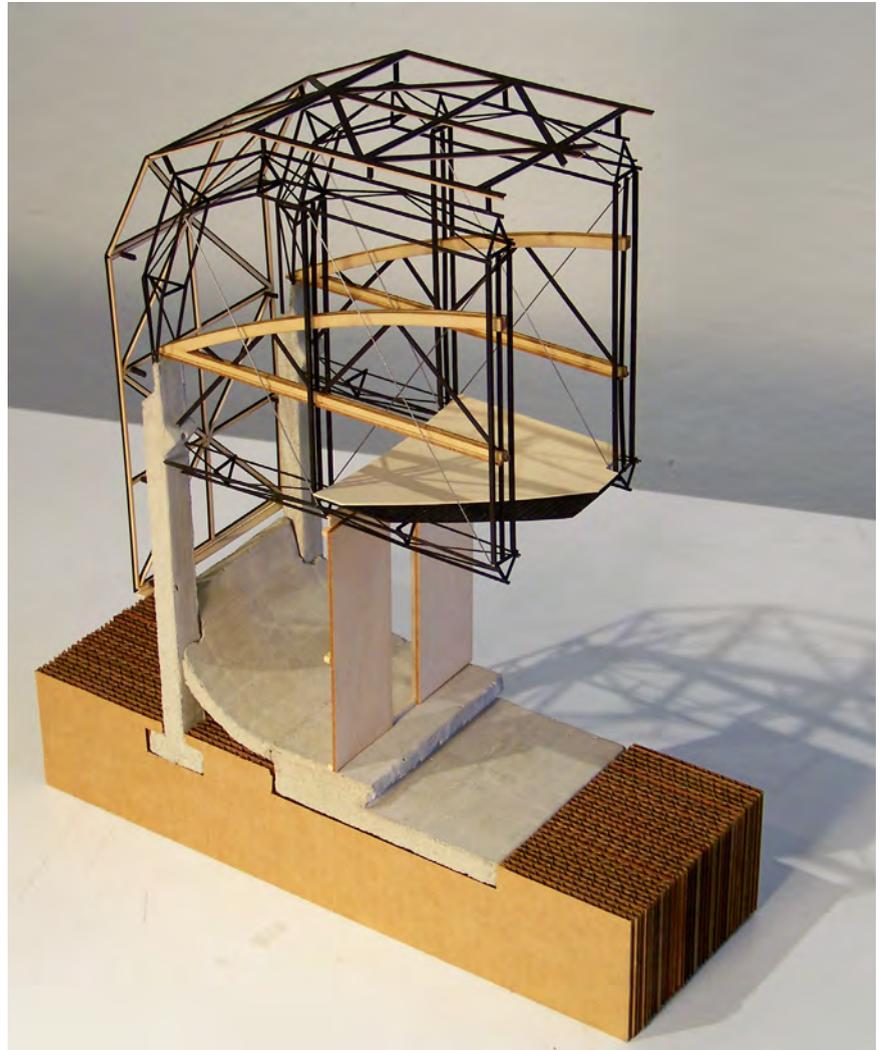
**1** front perspective exhibits west facade and main entrance from King St. **2** aerial perspective of north and west facade, **3** perspective of model broken down **4** structural section model



2



3



4



# 3

## Metabolizing Comfort

### DEFINING METABOLIC ARCHITECTURE THROUGH FURNITURE

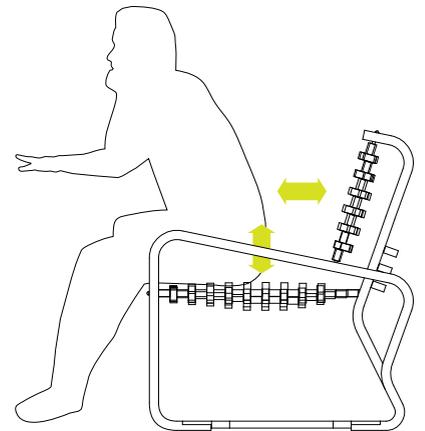
**DESIGN**, this projects was a reaction to the study of the metabolism movement within the modernism age of architecture. Studying works of Frank Lloyd Wright, Tadoo Ando also greatly influenced the more organic forms of this design and attracted a new aesthetic and function for the chair. The design focuses around two many ideals: adaptability and flexibility.

*site*    *n.a.*  
*program*    *furniture*  
*professor*    *yugi kishimoto*  
*duration*    *january 2011- may 2011*



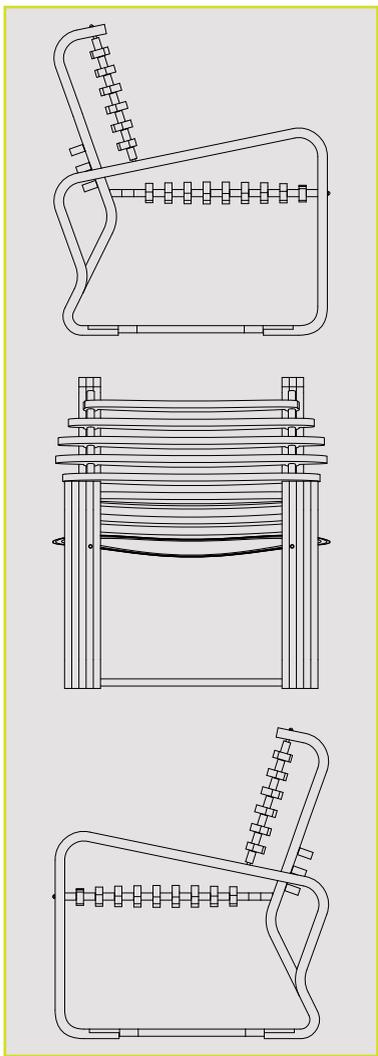
## no. 1 flexibility

This design focuses on one of the basic ideals of the Metabolist movement: the flexibility or adaptability to one's own unique desires and the changing fads of culture. It tuses flexibility in the literal sense, while adapting to the personal needs of its occupier.

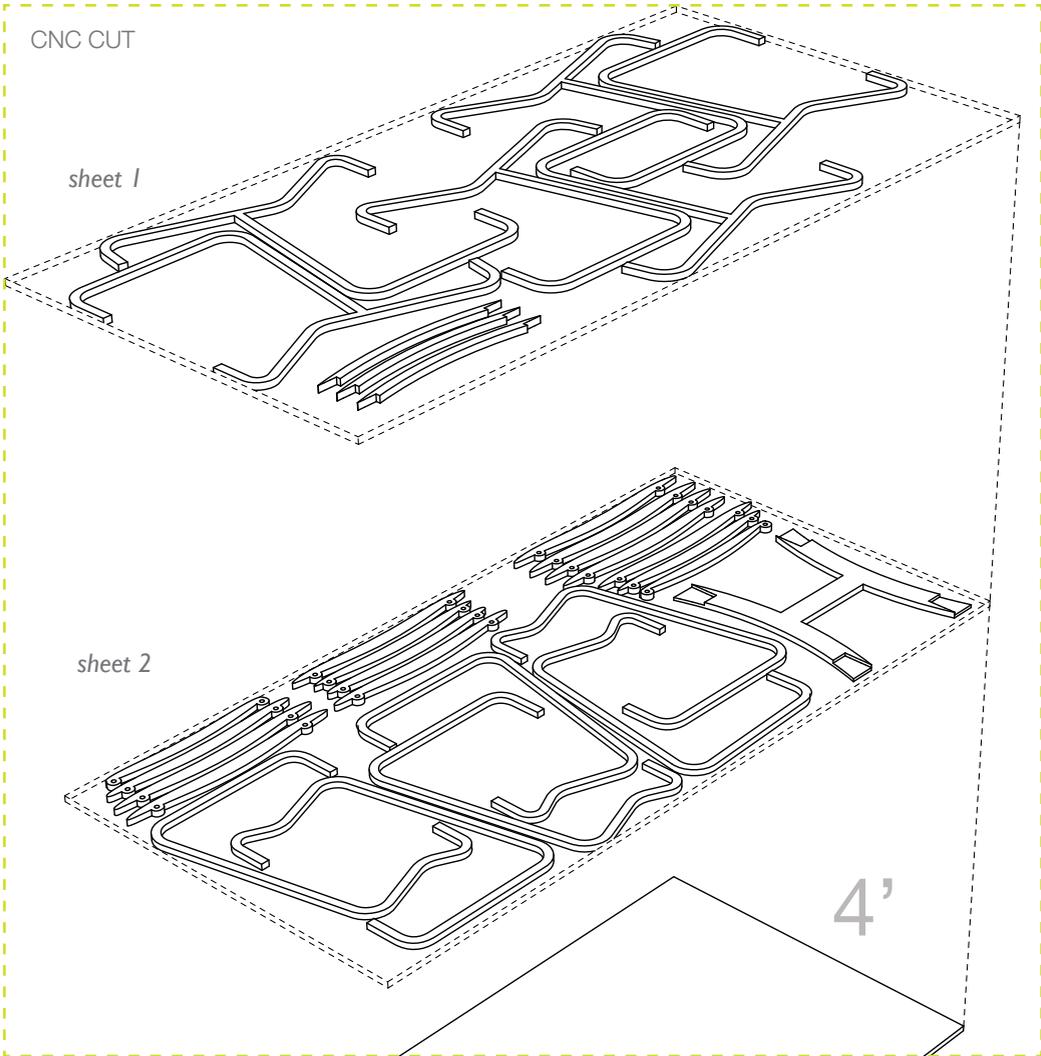


## no. 2 adaptability / interchangeability



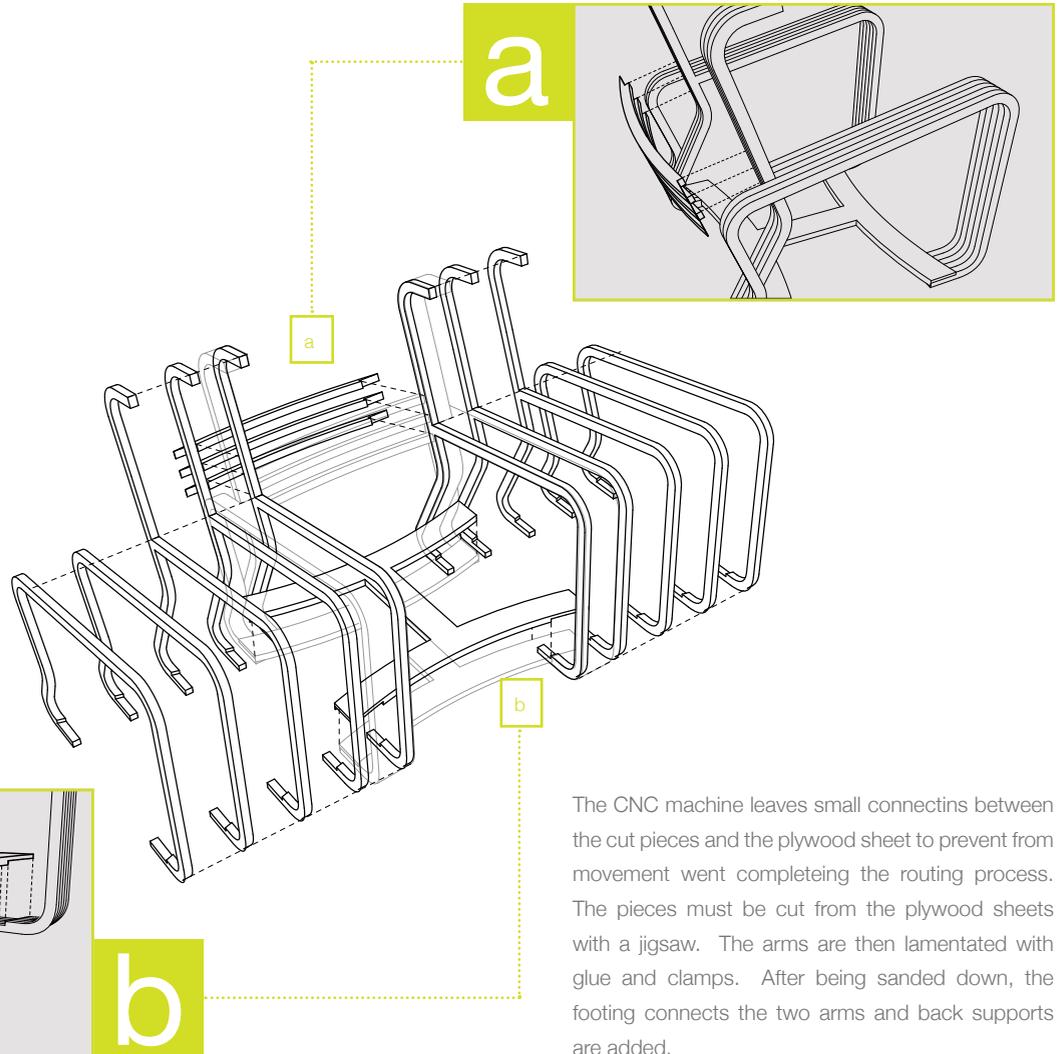
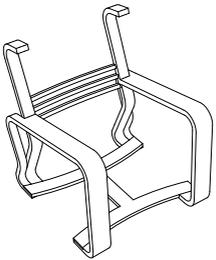


elevations



birch plywood

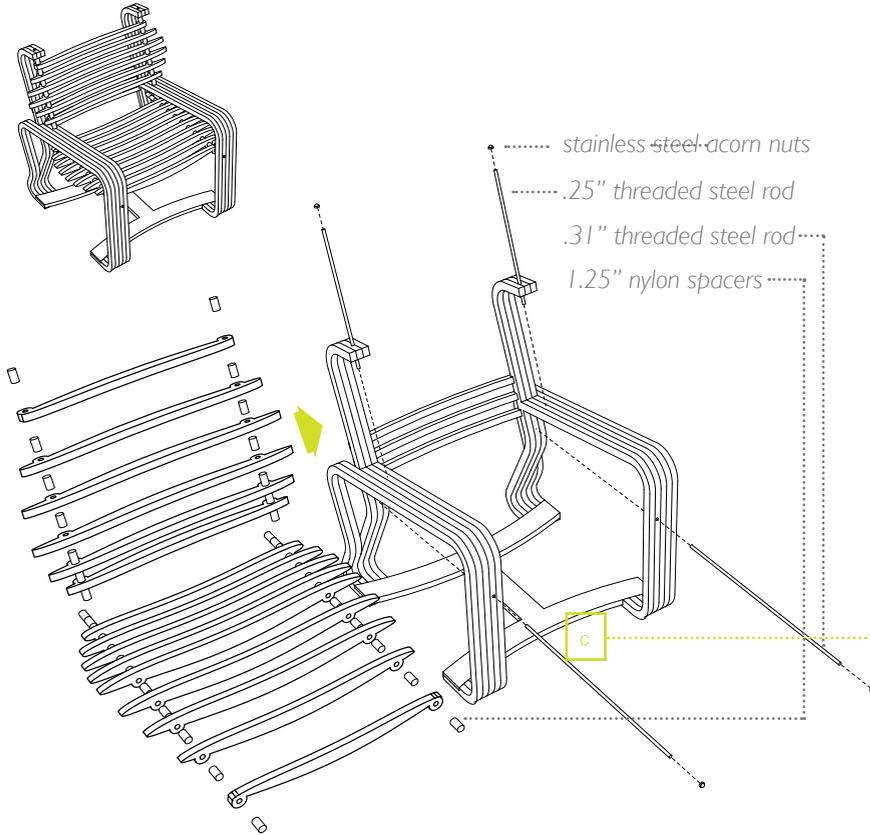
## FRAME ASSEMBLY



The CNC machine leaves small connectins between the cut pieces and the plywood sheet to prevent from movement went completeing the routing process. The pieces must be cut from the plywood sheets with a jigsaw. The arms are then lamentated with glue and clamps. After being sanded down, the footing connects the two arms and back supports are added.

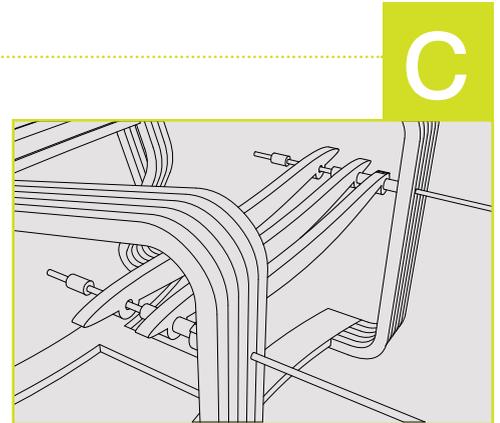
assembly is a major driver in the design and development of any furniture >

## SEAT ASSEMBLY



The seat and back ribs are sanded and precision drilled on a drill press to ensure proper hole alignment for the threaded rods. Holes (not Wholes) are then drilled through the frame for the rod ends. Before assembly, all wood parts are rubbed with several coats of tung oil.

All spacers are cut to ensure a minimum gap after final assembly, and each rib and spacer pair is placed on the rods one at a time. The end spacers are bias cut to match the angle of the frame. Acorn nuts are used to secure the threaded rods.









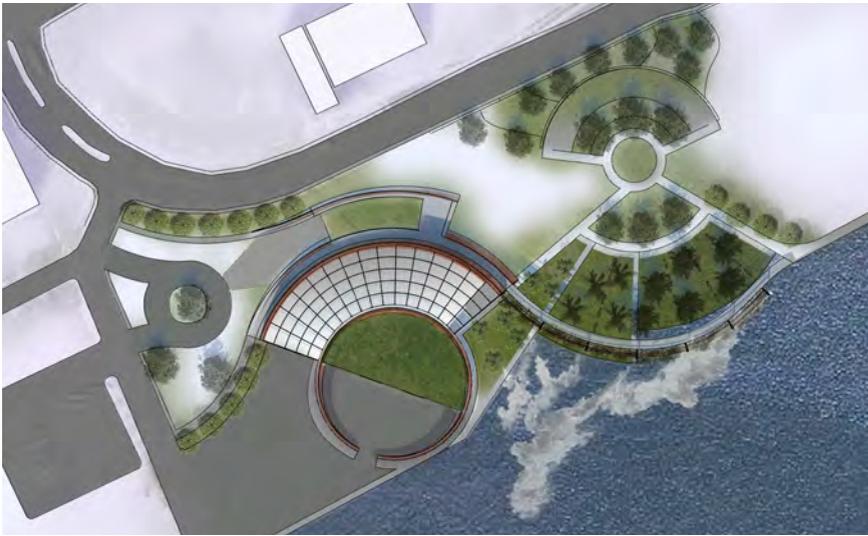
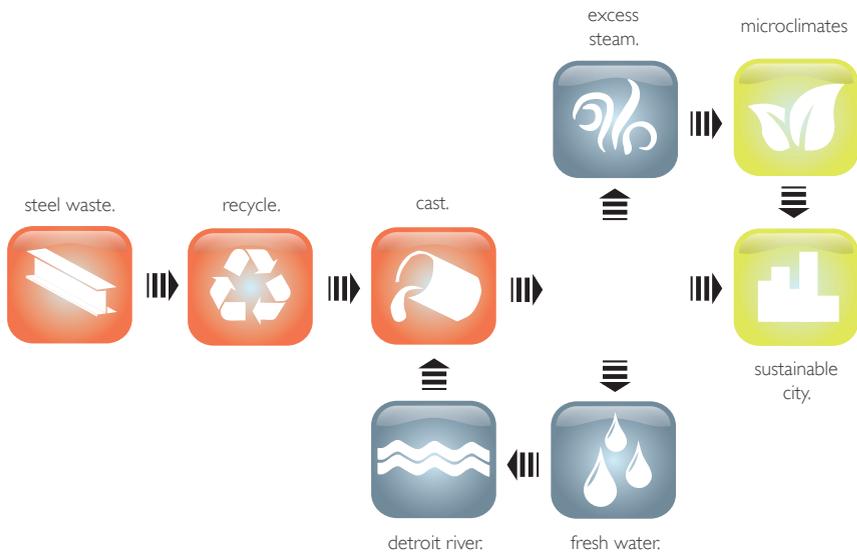
# 4

## [steel]ing Detroit

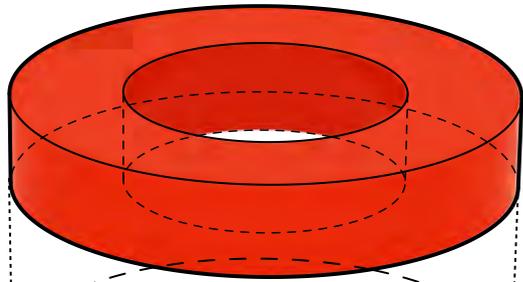
This project is an entry for the 2011 AISI Steel Competition. As one of the most commonly used and readily recycled materials, steel represents a high-value asset in the rehabilitation and upgrading of America's aging cities to sustainability. This steel recycling and milling facility was designed to provide new building materials for the city of Detroit.

One of the unique aspects of this design is its use of excess steam from the milling process. The conventional steel milling process uses water to quench the molten steel, producing large quantities of steam which is usually vented to the air. In this design the steam is funneled into a piping system (similar to that in radiant heating) and used to regulate the environment in an adjacent park and wildlife preserve, both saving energy and providing a public attraction that demonstrates a practical application of green technology.

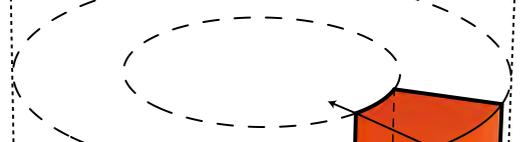
location *detroit*  
program *recycling + milling facility*  
professor *peter laurence*  
duration *january 2011- may 2011*



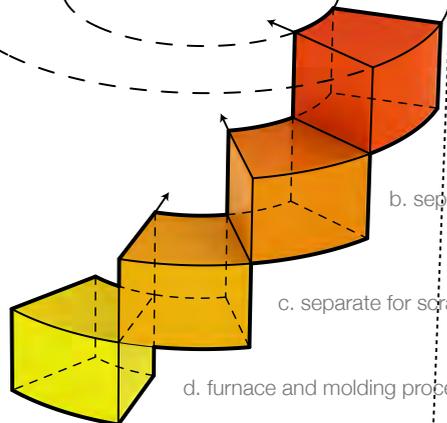
-  Climate Zone A  
150-300 ft from steam source  
Temperature Range: 35-50 F
-  Climate Zone B  
50-150 ft from steam source  
Temperature Range: 50-65 F
-  Climate Zone C  
10-50 ft from steam source  
Temperature Range: 60-75 F



NO. 1 Steel (A Cyclical Process)



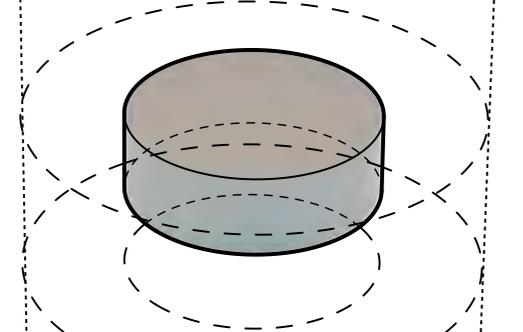
a. loading dock for recycled metals



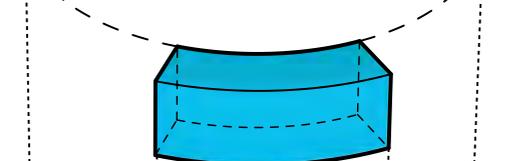
b. separate steel from metals

c. separate for scrap and milling

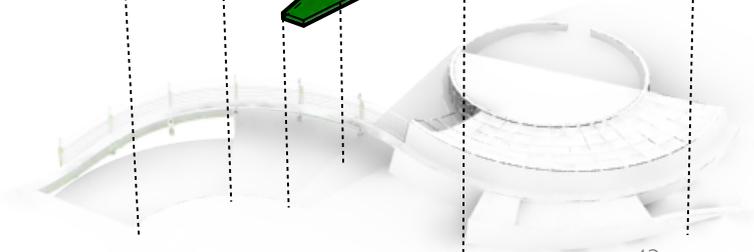
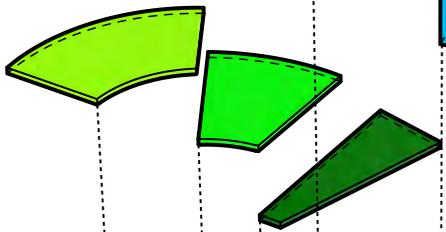
d. furnace and molding process



NO. 2 Storage

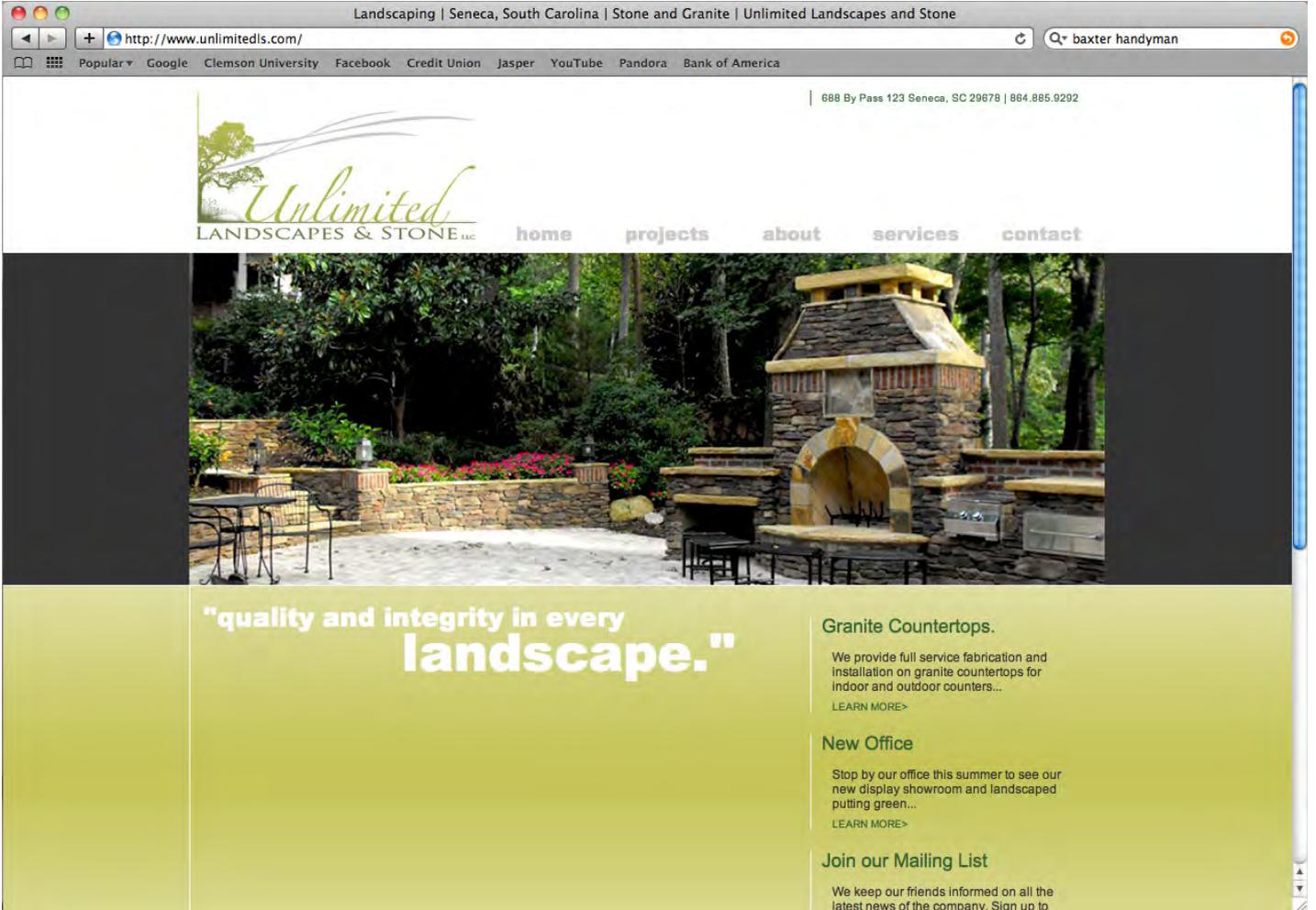


NO. 3 Public / Administration







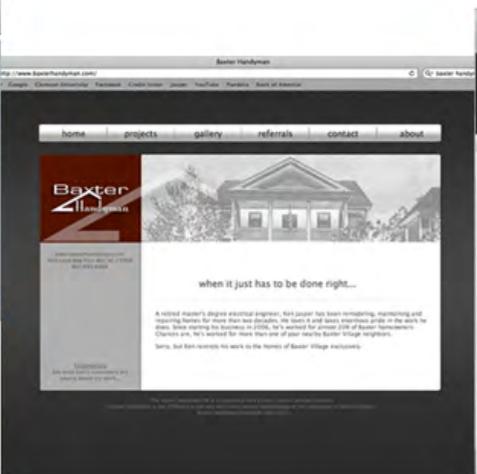


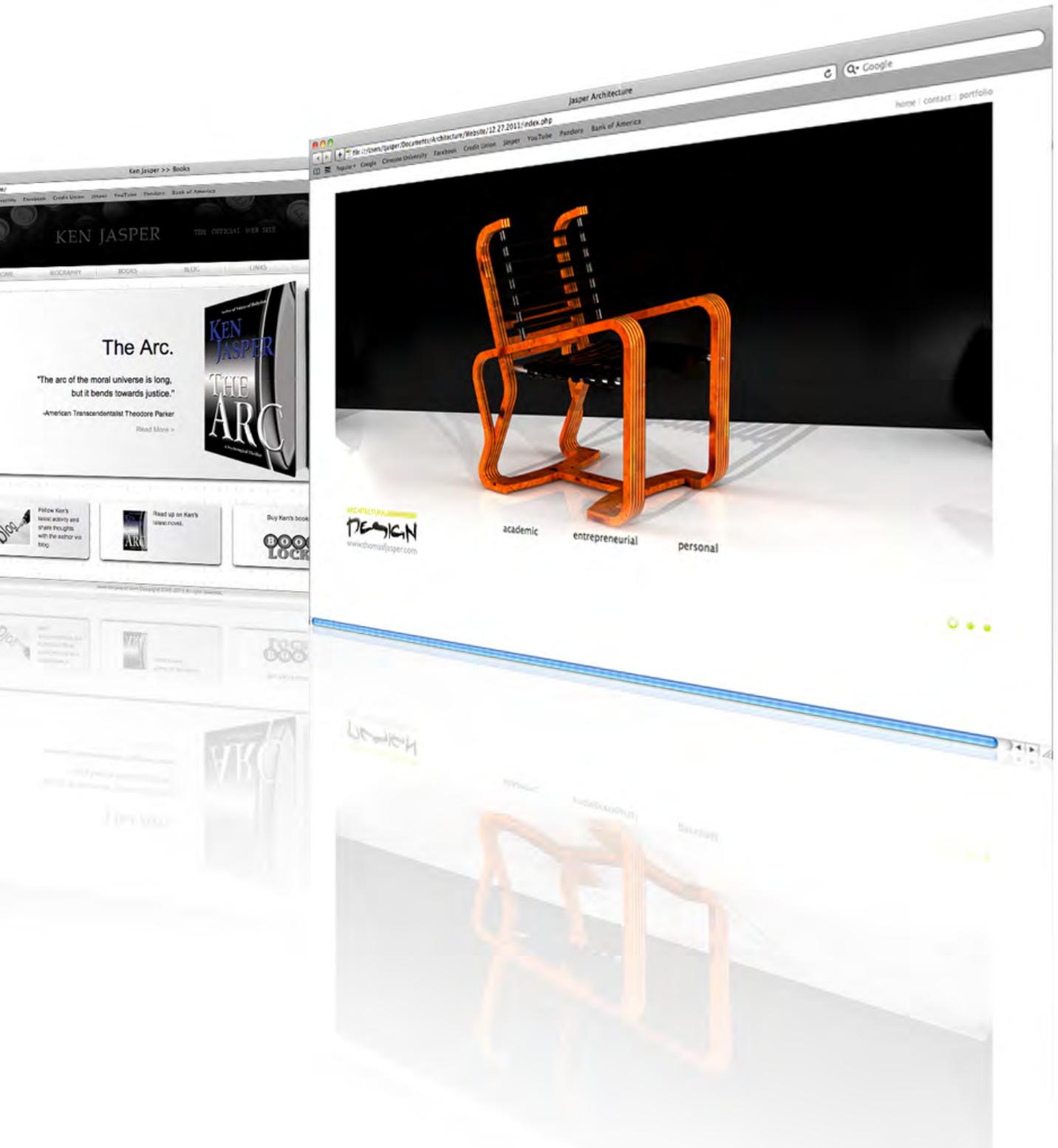
# 5

## J&T Design

**GRAPHICS + WEBDESIGN** together with a fellow graduate student in the Clemson Architecture School, I worked on several graphic and web design projects in the past year. We have done six websites, up to this point, as well as a few graphic overhauls with logos, business cards, etc. While I am trying to slow down much of this work to bring more of my focus back into the architecture field, this experience provided a great deal in learning the business behind design, which is applicable to any field.

location *Clemson, SC*  
partner *Jason Tenebaum*  
duration *january 2011-*  
*present*







# 7

## References

### Yuji Kishimoto

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National Director of Design | Partner

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### Al Williams

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