

# CRAFTING AN ARCHITECTURAL PORTFOLIO

IIT ACADEMIC RESOURCE CENTER

HANNAH ROSENTHAL

FEBRUARY 2012

# INTRO

This workshop covers the basics of creating an architectural portfolio that will not only get you noticed by schools and firms, but will neatly display your work to people without architectural backgrounds.

- Purpose and content
- Print vs. Digital vs. Online
- Software
- Using Text
- Example IIT Undergraduate Portfolio
- Resources

# PURPOSE AND CONTENT

## WHY?

Architectural portfolios are requested by firms and educational institutions to **predict applicant success** within their company or program.

## WHO?

Before considering what to include in your portfolio, the first question to answer is **“who is my audience?”** If you want to work for a firm that specializes in a particular building type or architectural methodology, make sure to show work that demonstrates your familiarity with or interest in that area.

## WHAT?

Every student will graduate with dozens of studio projects, drawings, and design pieces that demonstrate their creativity. Try your best to filter through your work and display **your best 5 projects**. Make sure they fit together as a whole to demonstrate flexibility in programs and problem solving.

# PRINT VS. DIGITAL VS. ONLINE



In the past, students have compiled **double-sided, bound booklets** to present their work. This is generally requested by institutions in an 8-1/2" x 11" or 11" x 17" format. However, page size and binding can vary depending on how you want to express your work.

## DIGITAL PDF

In recent years, architecture firms and students alike have been switching from paper portfolios to **digital presentations**. After assembling a pdf portfolio in Adobe Acrobat, you can easily e-mail that to firms and institutions.

## ONLINE

Nearly every firm today has a website to display their past projects.

**BIG:** <http://www.big.dk/>

**SOM:** [http://www.som.com/content.cfm/www\\_projects?sort\\_by=FW](http://www.som.com/content.cfm/www_projects?sort_by=FW)

Students have also begun to create websites with online portfolios.

<http://www.alexhogrefe.com/architecture/undergraduate-portfolio/>

# SOFTWARE

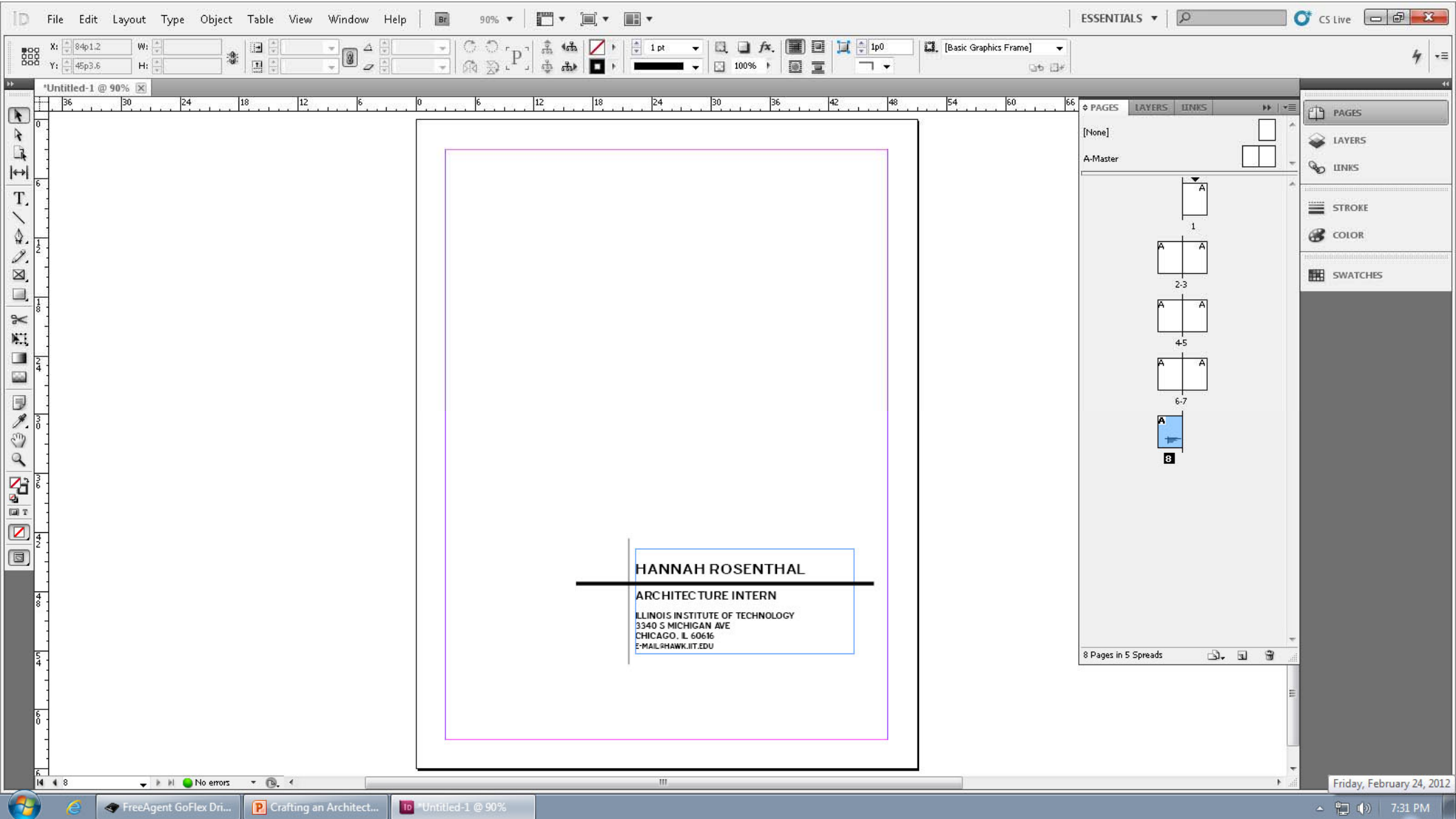
## ADOBE INDESIGN

Adobe InDesign is the best program by Adobe for compiling a multi-page document like an architectural portfolio. You can set up two-page spreads to view your work as if it were printed, automate page numbers, implement font and character styles so it is easier to change fonts later in the process, and “link” your images, which keeps your file size manageable for the average desktop.

## ADOBE ILLUSTRATOR AND PHOTOSHOP

Many students also like to use Illustrator and Photoshop to compile their portfolio. Though these programs have their advantages, it is best to use them to edit drawings, diagrams, and images which can then be placed into an InDesign document.

You can download **free** trials of these programs on the Adobe website:  
<http://www.adobe.com/downloads/>



## PREZI

A new type of digital presentation has emerged that disregards convention and creates a more interactive experience for the audience. This online tool could be a great way to compile and express your architectural work.

Sample presentation: [http://prezi.com/9zi\\_tyve4dyb/how-to-change-education](http://prezi.com/9zi_tyve4dyb/how-to-change-education)

### Features



#### Pan and Zoom

Zoom around the prezi canvas to visualize your ideas.



#### Import Media

Insert images, videos, YouTube videos, PDFs, or other media.



#### Full Toolset

Choose a template and/or theme to customize your prezi.



#### Present Online and Offline

Present online or download and show your prezi offline.



#### Work Together

Collaborate in real-time, across the room or across time zones.



#### Add Storyline

Use frames and a path to create a cinematic journey.

The best part? It's **free** for students!

PREZI

Create Learn Explore

### Student/Teacher licenses

	Public	Edu Enjoy	Edu Pro
<b>Create prezis online</b> Login to prezi.com from any online computer to create, show and share prezis.	✓	✓	✓
<b>Present offline</b> Download finished prezis so you can present offline. <sup>(2)</sup>	✓	✓	✓
<b>Make content private</b> <span>?</span> Choose if a prezi is private, published, or shared with selected individuals.		✓	✓
<b>Your logo, instead of Prezi's</b> <span>?</span> Help people recognize your organization. <sup>(3)</sup>		✓	✓
<b>Prezi Desktop – work offline</b> <span>?</span> You can create prezis offline with a Pro license.			✓
<b>Premium Support</b> Get support responses directly from Prezi employees within 1 business day			✓
<b>Storage space</b> available on prezi.com.	100 MB	500 MB	2000 MB
This license is valid only for active students and teachers. <a href="#">Go Back</a>	Free	Free	First 30-days Free \$59/year <sup>(4)</sup>
		<a href="#">Get</a>	<a href="#">Buy</a>



# USING TEXT

A f l s

Sans serif

A f l s

Serif

## LESS IS MORE

Because architecture is a visual and spacial art, your pictures, renderings, and diagrams will always be more important than your text. Do compliment your images with **a few sentences about each project** though, so you can give the viewer clues about the design problem, your process, and the final solution. Remember, no one will appreciate your work if they cannot understand it.

## HOW MANY FONTS?

To give your various projects a sense of cohesion, stick with two or three font styles. Adobe programs offer flexibility on letter stretching, underlining, italicizing, shadowing and more so you can jazz up those few styles. Be creative but keep it clean. You want a potential employer to analyze your work not your fonts.

You can download **free** fonts from dafont.com: <http://www.dafont.com/>

# EXAMPLE PORTFOLIO

FROM AN IIT UNDERGRADUATE

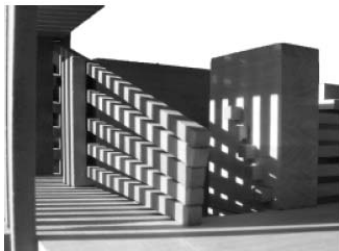


**HANNAH ROSENTHAL**

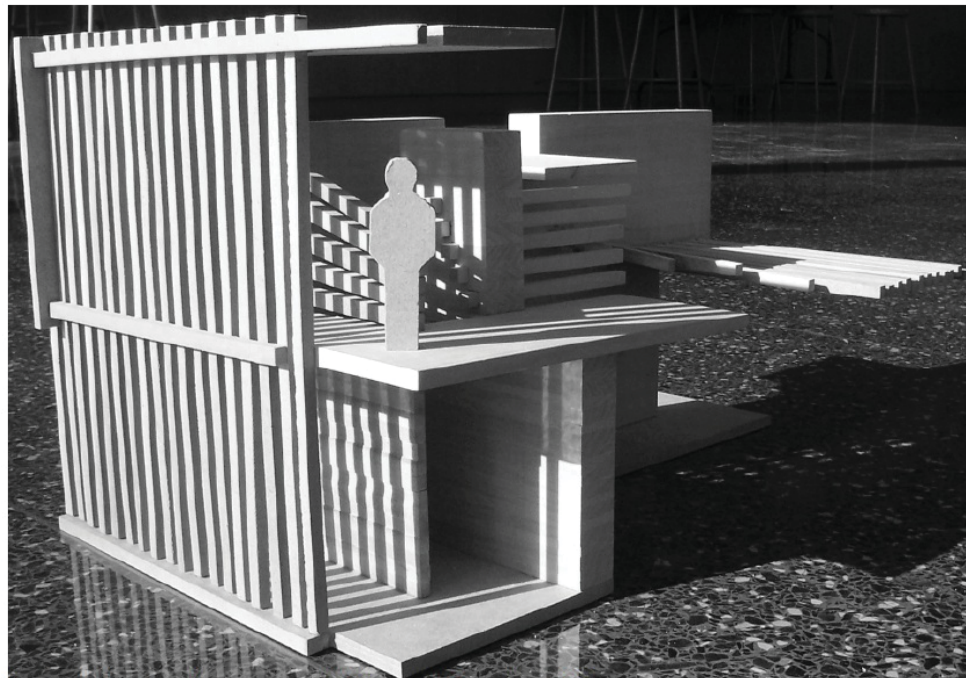
ILLINOIS INSTITUTE OF TECHNOLOGY  
ARCHITECTURE INTERN  
3340 S MICHIGAN AVE  
CHICAGO, IL 60616

# PLANE TO PLANE TRANSITION

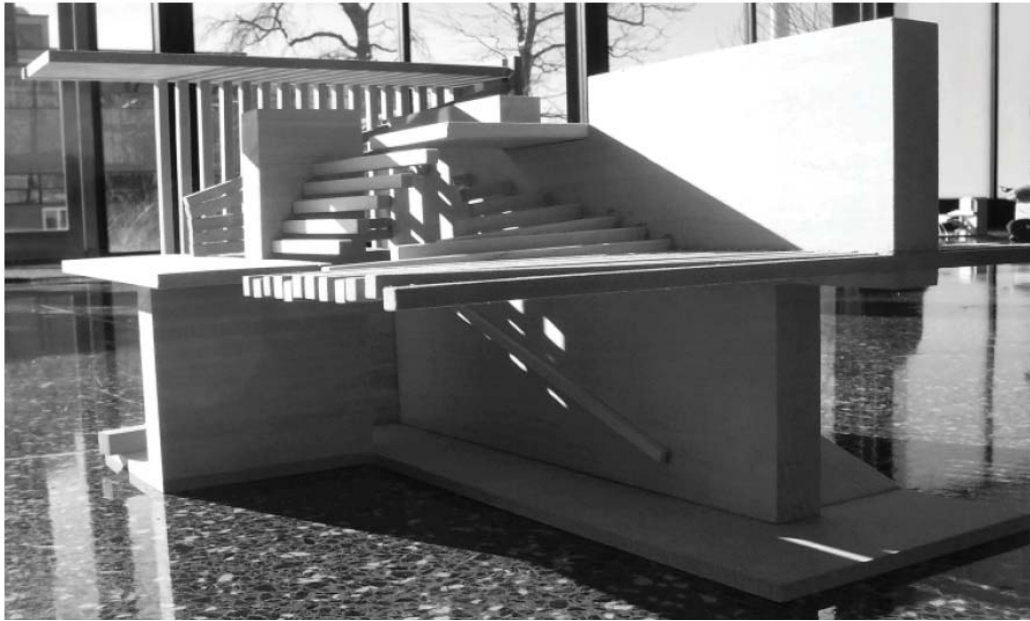
This transition from vertical to horizontal plane explores the multiple relationships between light, dark, expansive, and compressed space. The path fluctuates between compressed, dark areas and expansive, light areas, crescendoing into the most light, expansive space at the horizontal plane. Various objects penetrate surfaces along the path to invoke mystery and pull occupants along the spiraling transition. The size of each individual object was based on a pre-determined kit of parts.



*Detail on upper-level of southeast elevation.*



*Southeast elevation of basswood and MDF model. (December 2007)*



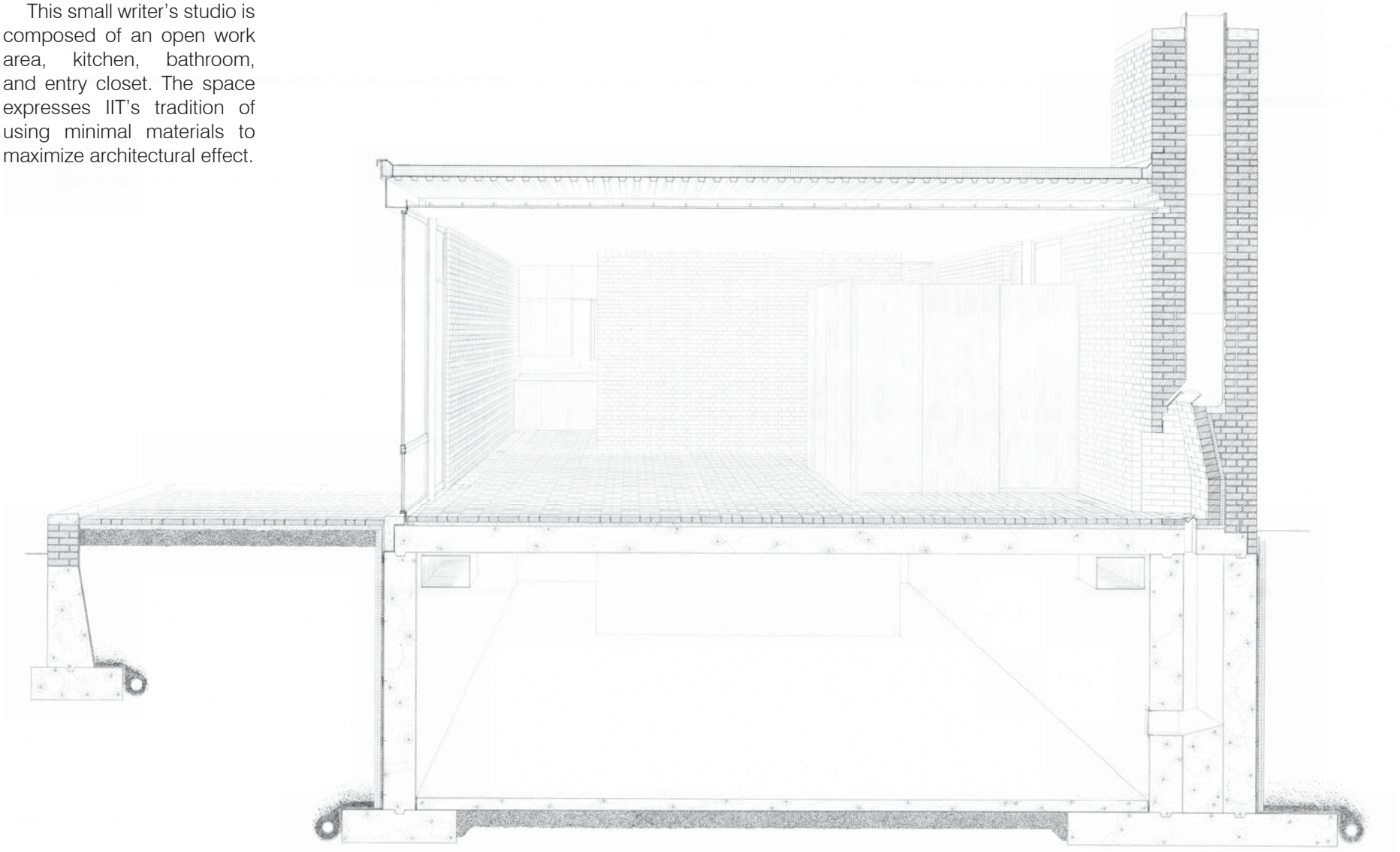
*Northeast elevation*



*Northwest elevation*

# LAKE MICHIGAN WRITER'S STUDIO

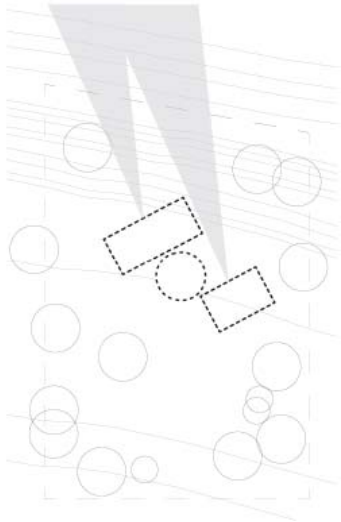
This small writer's studio is composed of an open work area, kitchen, bathroom, and entry closet. The space expresses IIT's tradition of using minimal materials to maximize architectural effect.



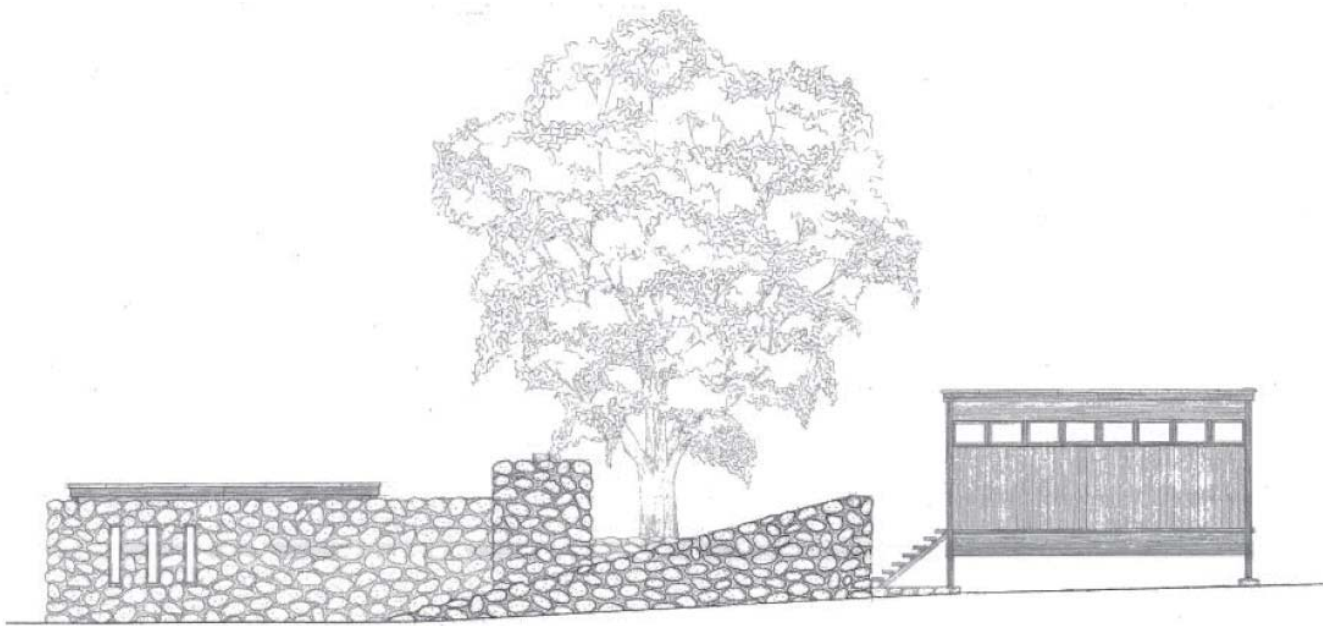
*Hand-drafted graphite on Strathmore board. (November 2008)*

# LAKE MICHIGAN SUMMER RESIDENCE

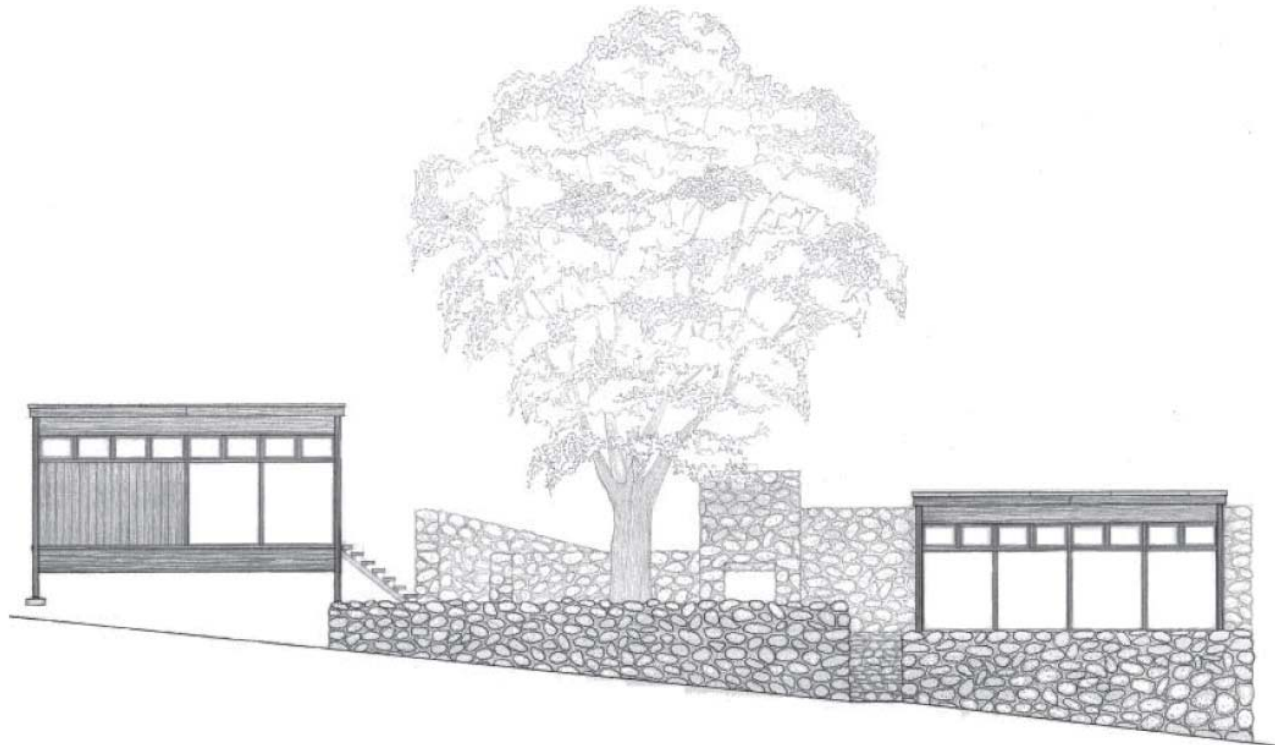
This summer home blurs the line between interior and exterior spaces. The division of the public and private spaces into distinctive units creates multiple lakeshore views and preserves the Beech tree in the middle of the property. The tree is incorporated into the design as a natural umbrella for the courtyard, which is centralized to serve the family's private unit and the public unit intended for large gatherings.



*View of central courtyard looking toward hearth in basswood, acrylic, and cork model. (May 2009)*

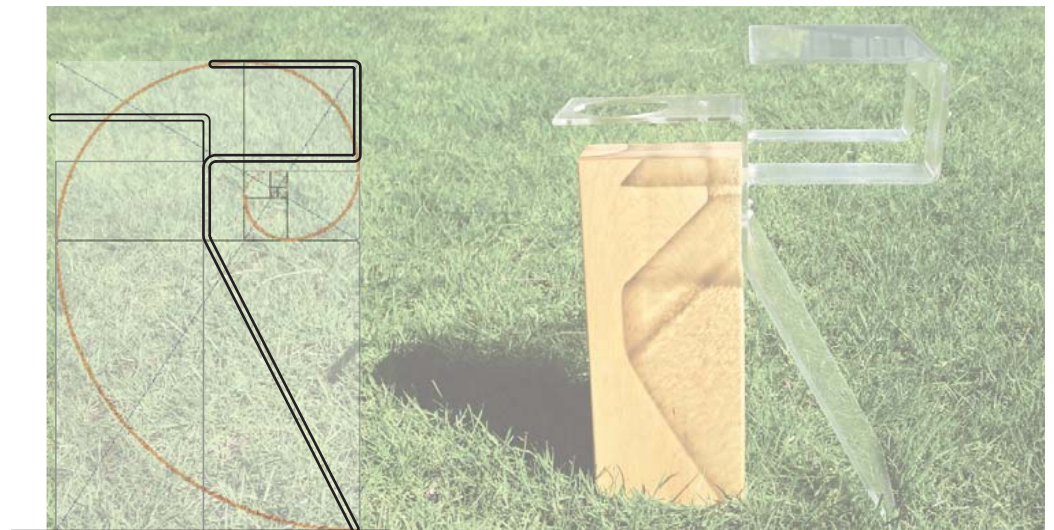
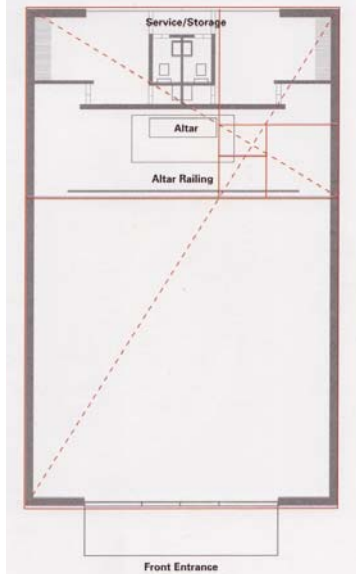
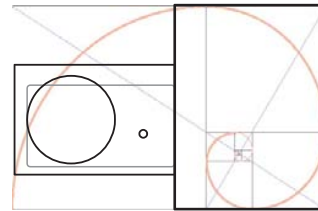
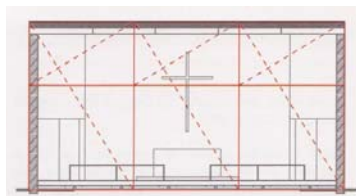






# LOUNGE CHAIR TABLE

This table was inspired by Mies' Carr Chapel, located on the IIT campus in Chicago. The small form of Carr Chapel is derived from the golden rectangle, using the perfect proportion in both section and plan. This table is also proportioned according to the ideal ratio. It is designed to complement a lounge chair such as Mies' Barcelona Chair, originally designed in 1929. The table is also area-specific. The dimensions of the piece directly correspond to a standard moleskin sketchbook, a typical drinking glass, and a pencil. The table consists of a laminated Poplar base and folded acrylic appendage.





# MEXICO HOUSE BUILDING

I've traveled to Juarez and Acuña, Mexico three times in the past seven years to build homes with Casas por Cristo. During the summer of 2010 I realized that the most sustainable way for poor families to live in safe, well-constructed environments is by teaching them to design and build like architects and engineers.



*Construction team in front of a completed home in Acuña. (July 2010)*



*Applicant (front) and her sister preparing to move lumber. (June 2006)*

# PARIS HOMELESS SHELTER

The site for this shelter is adjacent to the Parc de Belleville, where many homeless people sleep in tents or on public benches. The shelter is comprised of four, two-story blocks that each contain a public bathroom, public living room, semiprivate kitchen area, and private bedrooms. Arranging these facilities into a block integrates the external and internal communities, creating relationships between rent-paying residents that sleep in the bedrooms and their homeless neighbors who use the public facilities. In combination with a chapel and programs hosted in the administrative building, these relationships are intended to help meet the spiritual, physical, social, and intellectual needs of the homeless.

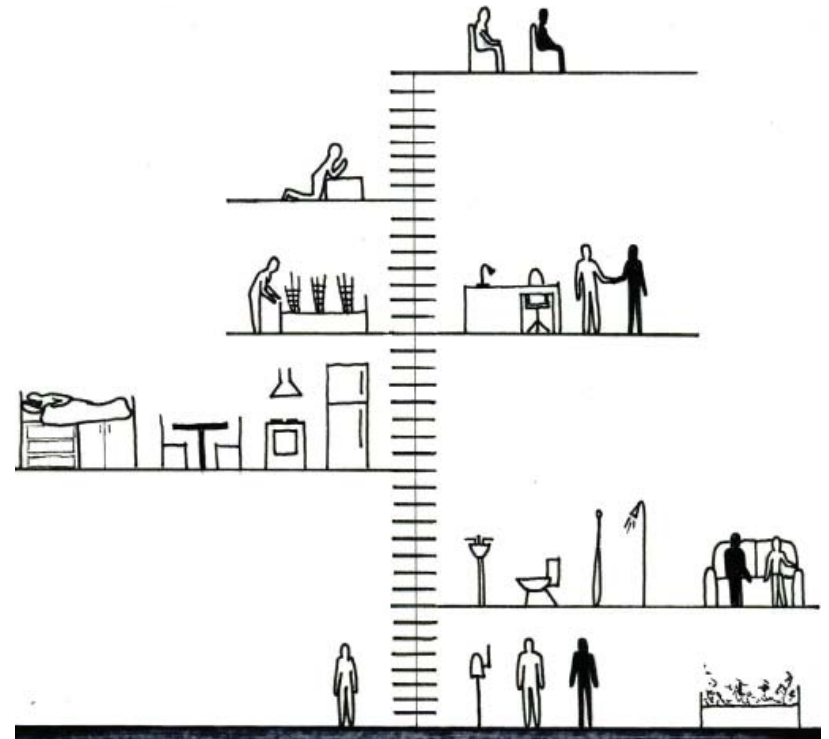
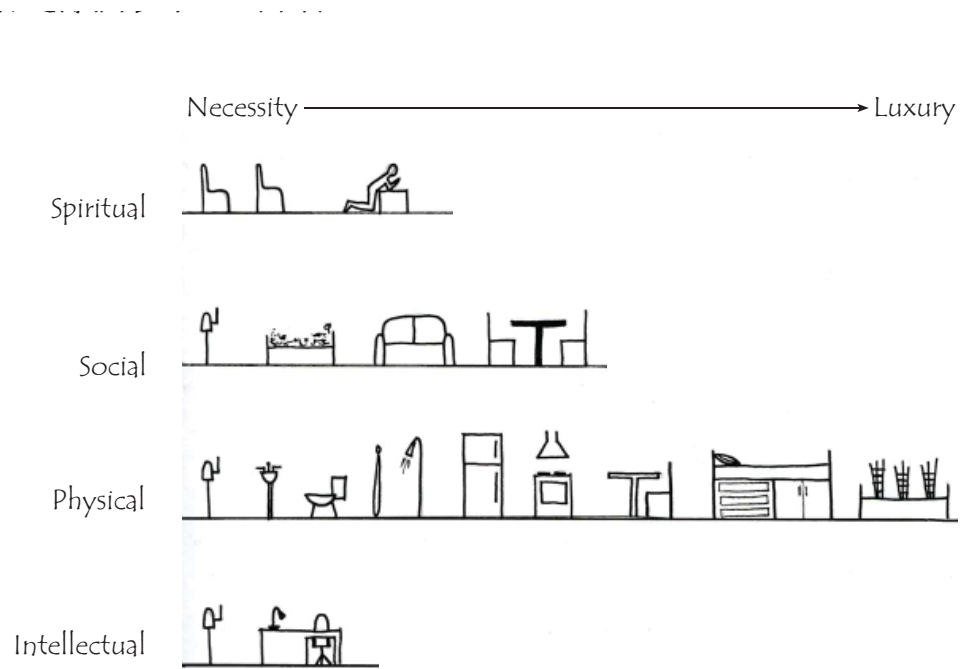


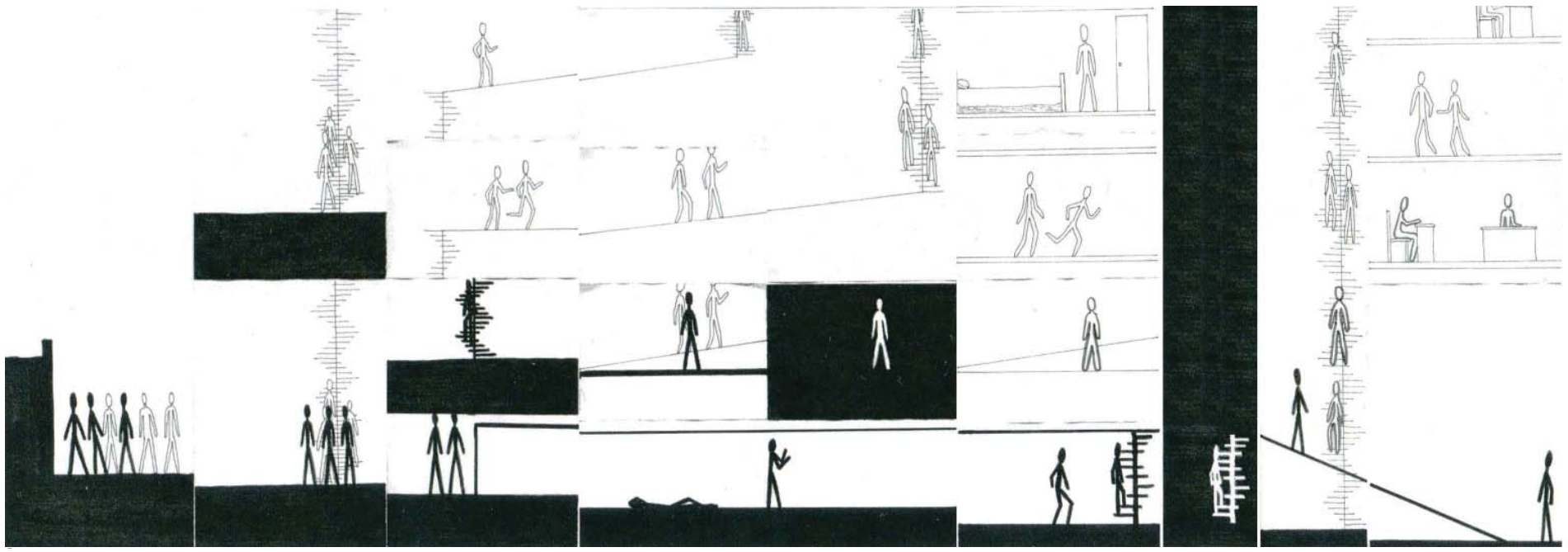
*A homeless man sleeping on a bench in the Parc de Belleville. (September 2010)*



*Baby-sitting for the daycare at the Foyer de Grenelle, a homeless shelter in central Paris. (October 2010)*

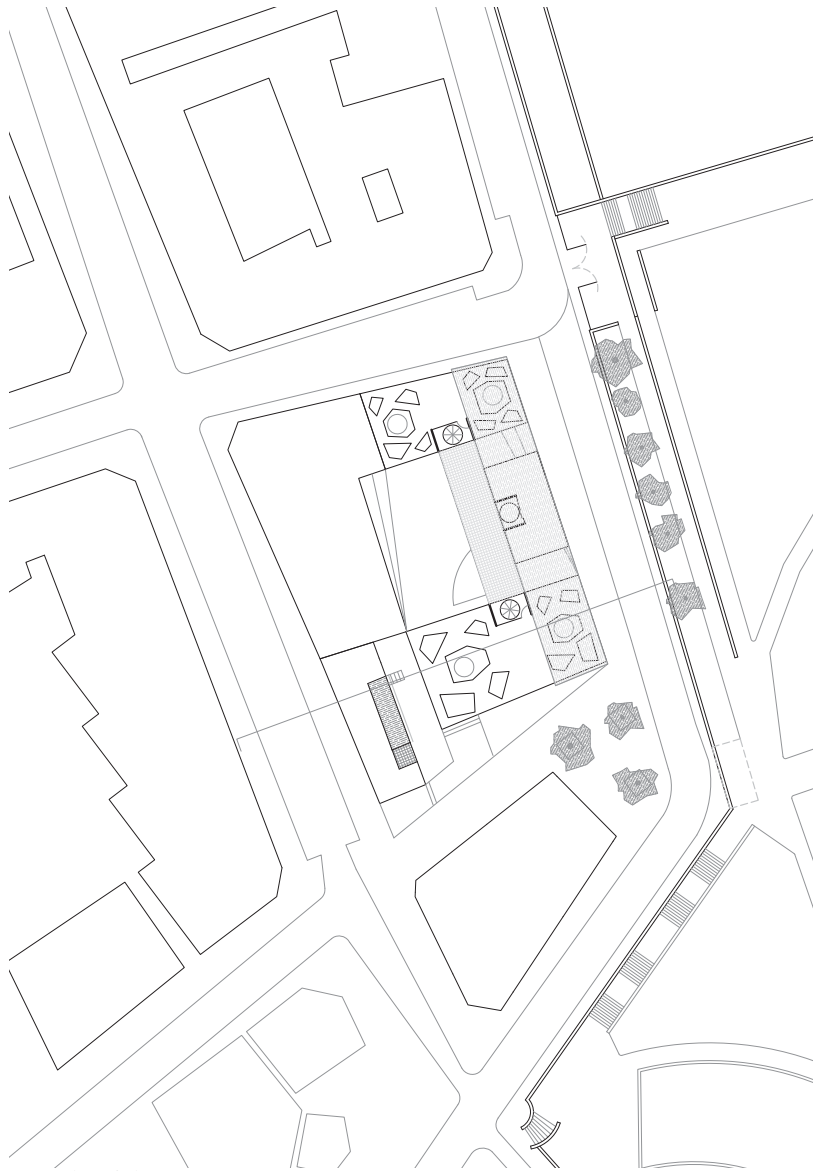
# PROGRAM DEVELOPMENT



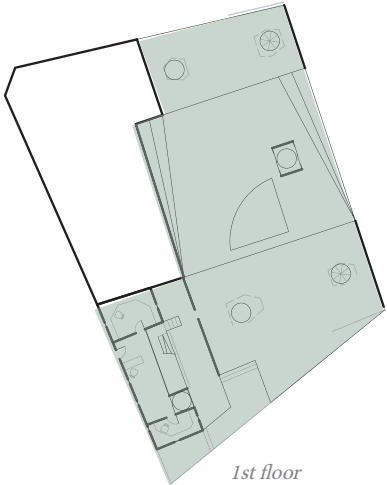


Conceptual cartoon demonstrating external integration through building circulation.

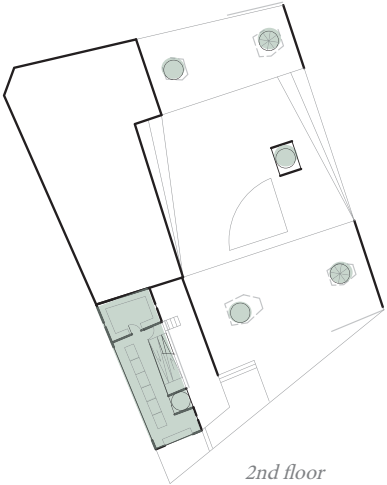
 INTERNAL
  EXTERNAL



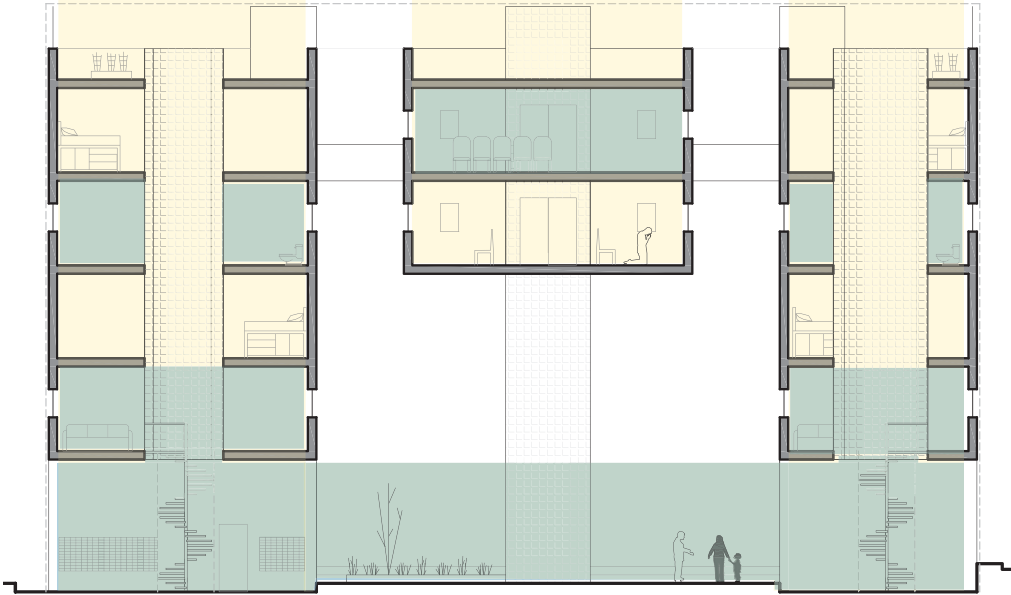
Site and roof plan



1st floor

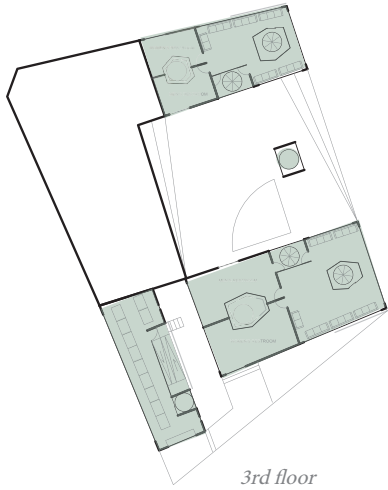


2nd floor

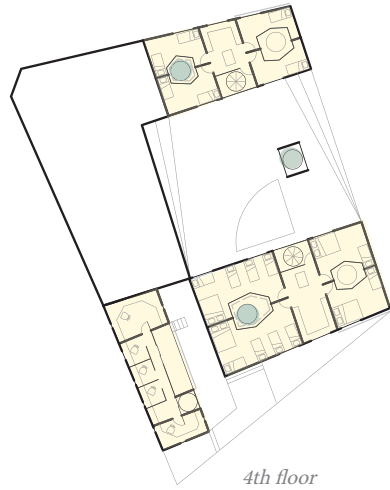


Latitudinal section through both blocks, elevated chapel, and central courtyard.

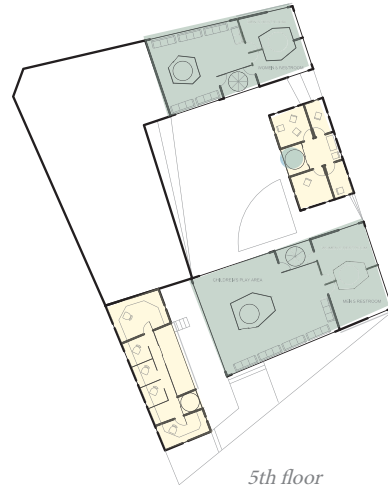




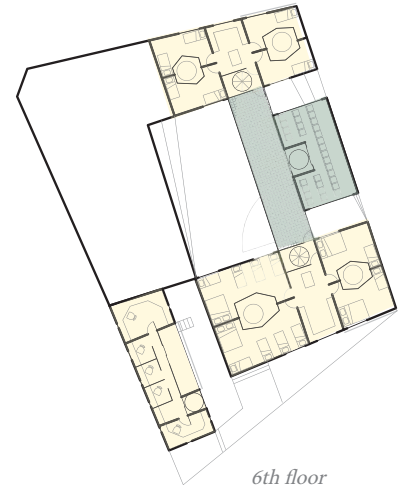
3rd floor



4th floor



5th floor



6th floor

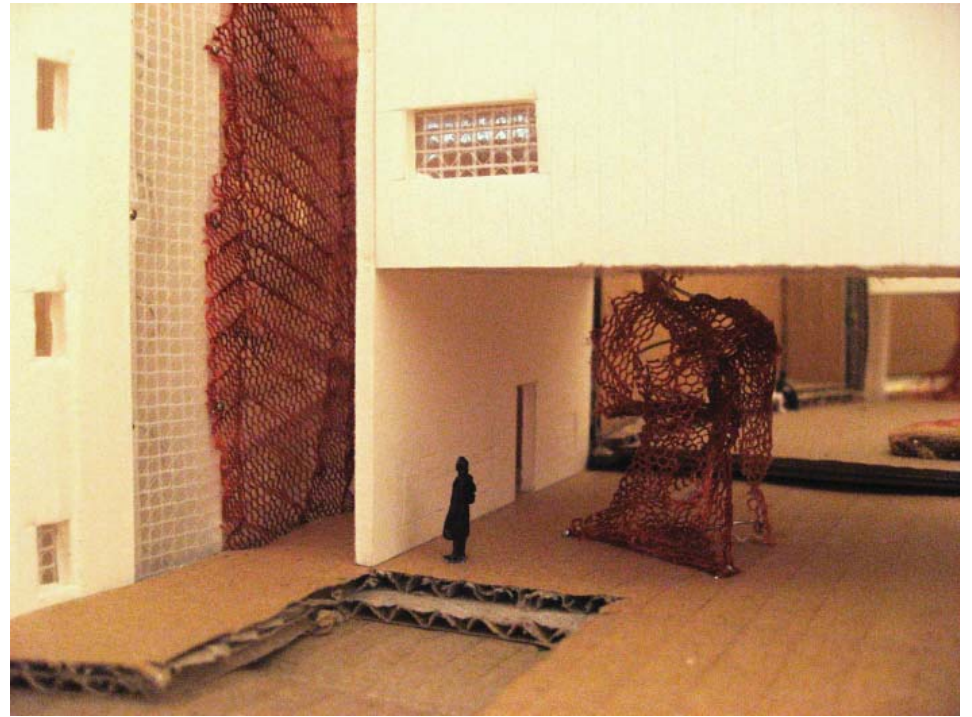


Longitudinal section through both southern blocks and the administrative building..

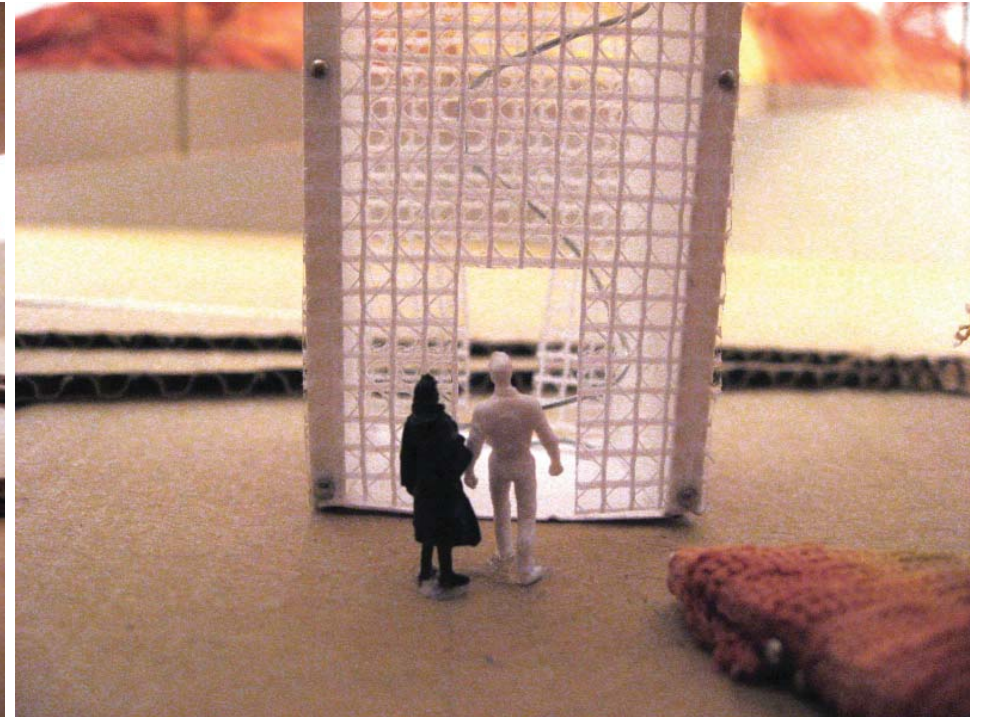
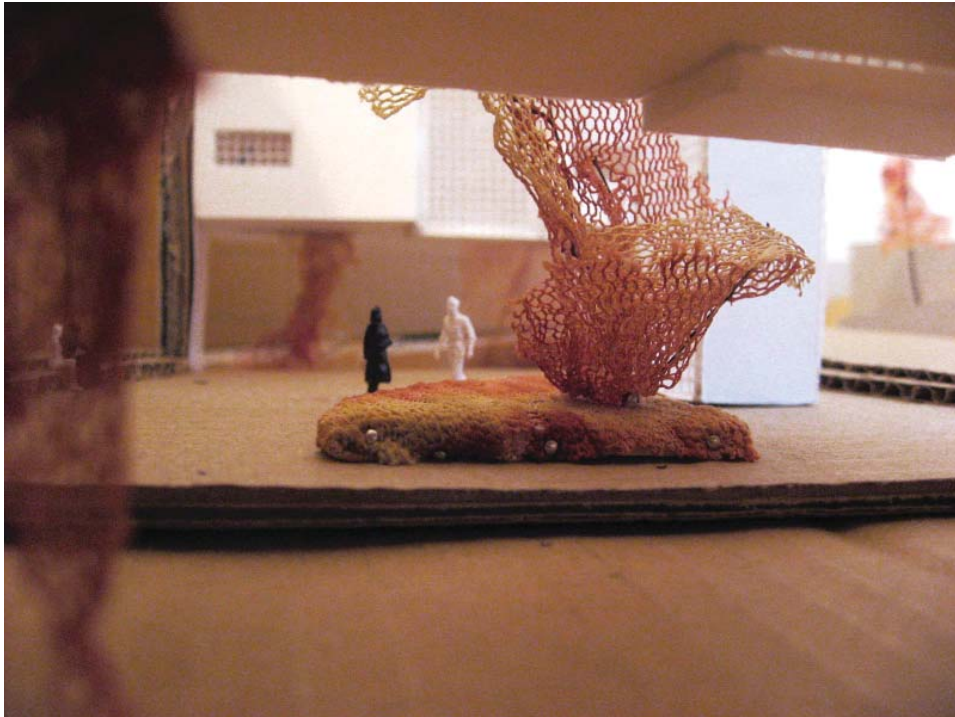
## ALTERNATIVE PATH TO PARC DE BELLEVILLE ENTRANCE



*View of administrative building facade and courtyard entry from the main street.*



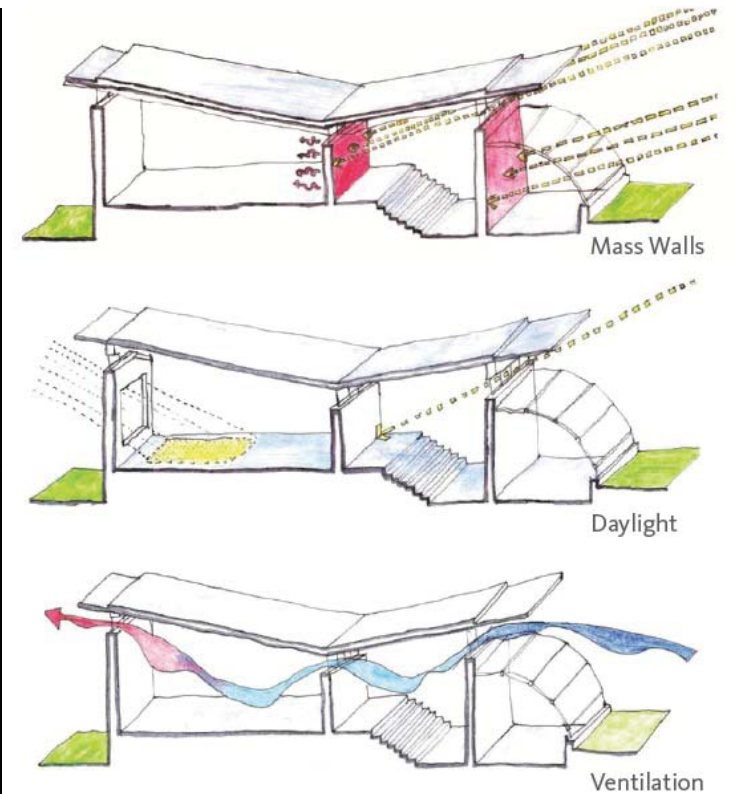
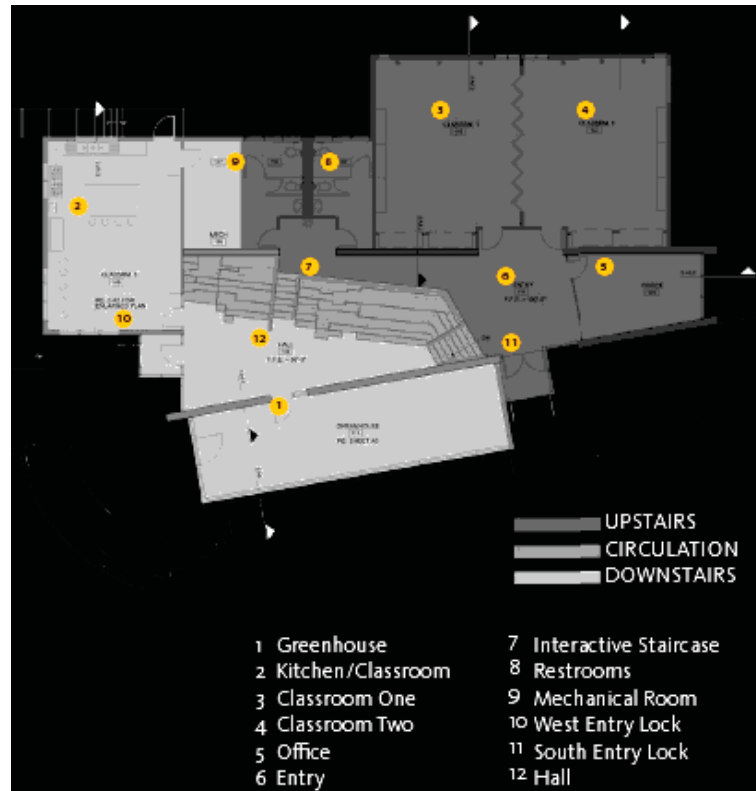
*View of external passerby checking for mail at her mailbox.*

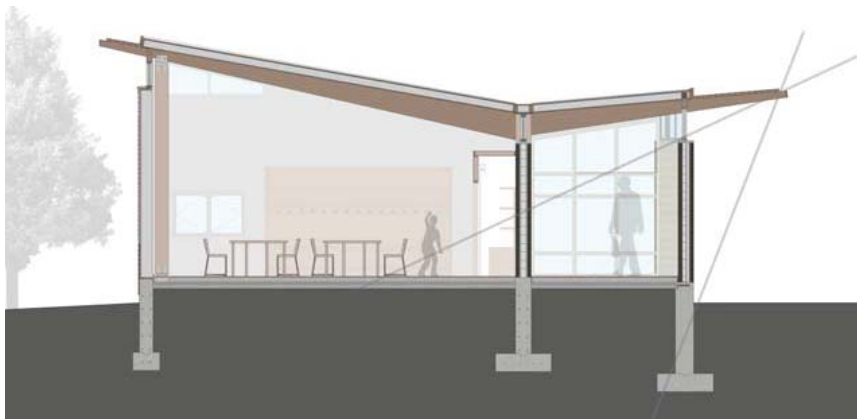


*View of passerby meeting an internal resident in the central courtyard. The park entrance is seen in the background. View of external and internal persons deviating from the path to the park and entering the chapel elevator together.*

# EDGE: ELLIOT DONNELLY GARDENING ECO-CENTER

A team of IIT students and faculty designed this project for an empty lot adjacent to the Elliot Donnelly Youth Center in Chicago in Spring 2011. The team created this three classroom sustainable learning center to serve as an educational tool for the youth and community at large. The building promotes environmental literacy by implementing passive design strategies such as solar thermal heating, natural ventilation, rainwater cisterns, PV panels, rain gardens, a green roof, raised beds for gardening, an orchard, and two masonry, thermal mass walls that also guide the building organization. The team worked with Architecture for Humanity representatives and the clients at the youth center to produce a full set of construction documents and a publication for potential donors.





*Section through classroom and entry area.*



*Section through bathroom, lobby, and greenhouse.*

# EDGE: INTERACTIVE STAIR

## What A Wonderful World

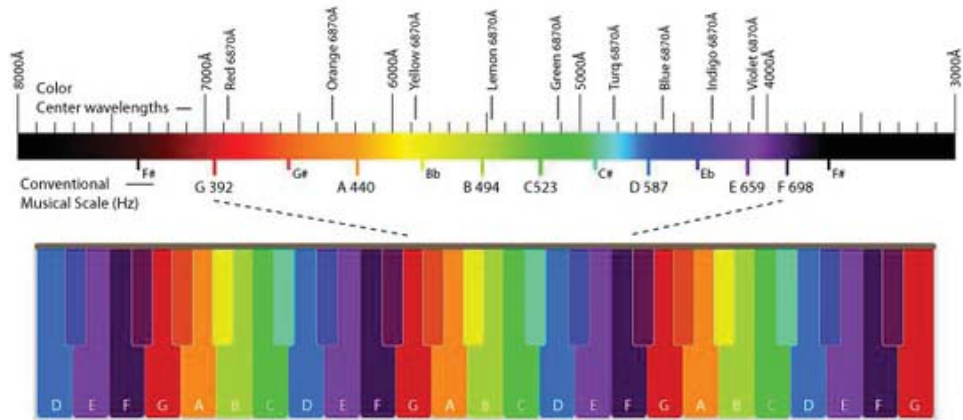
Arr. by Hannah Rosenthal

Composed by Louis Armstrong

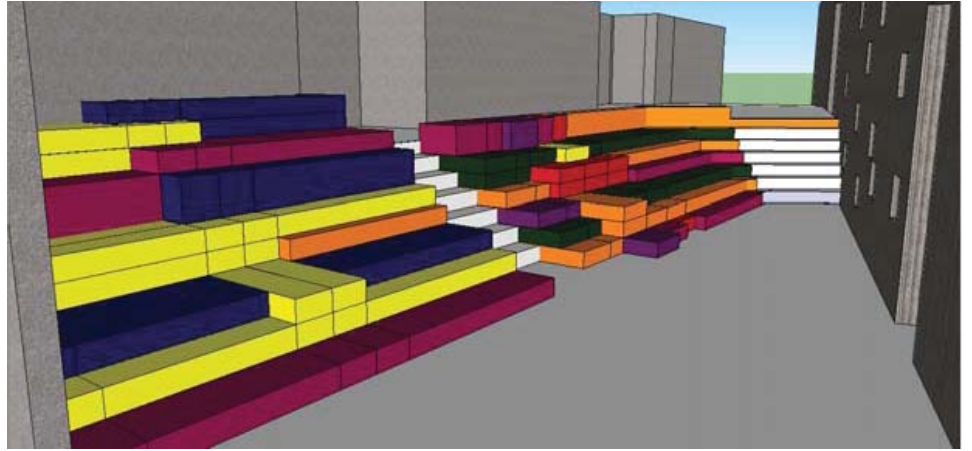
The image displays a musical score for the song "What A Wonderful World" arranged for a 12-level interactive staircase. The score is organized into two columns. The left column contains 12 musical staves, each labeled "TREAD" from 12 at the top to 1 at the bottom. Each staff shows a melodic line with notes and rests, and includes the lyrics: "I think to my-self." on tread 11 and "I think to my-self. what a won-der-ful world." on tread 6. The right column contains 12 corresponding staves, each with a horizontal bar representing the tread's path. These bars are color-coded to match the notes in the musical score, showing the sequence of colors for each level. The colors used include yellow, pink, blue, orange, purple, green, and red.

My most significant contribution to the group project came from designing the interactive stair component in the central lobby. Research of the Bronzeville neighborhood in Chicago revealed an undeniable influence of jazz music on the culture of the community. Louis Armstrong, one of the most innovative jazz musicians who ever lived, worked and performed regularly in this neighborhood. To celebrate the rich heritage of the Bronzeville community and allude to the beauty of the natural environment, the form of these stairs was transcribed from the melody of Armstrong's piece "What a Wonderful World." The cork steps are intended to be used as a gathering place for students or tour-groups, with concrete paths interspersed for circulating between levels.

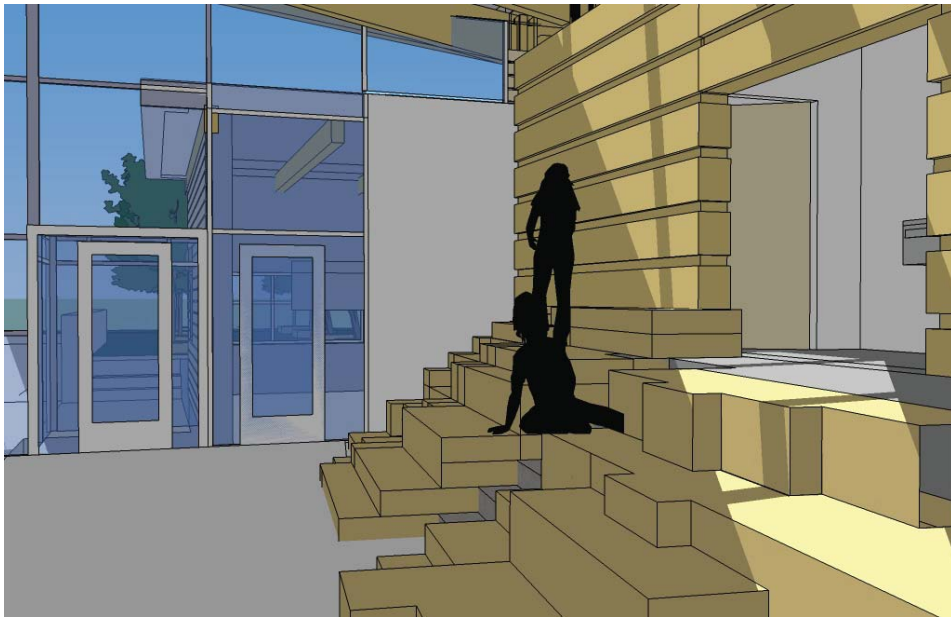
MUSICAL NOTES-COLOR CORRESPONDENCES IN THE VISIBLE SPECTRUM OF LIGHT



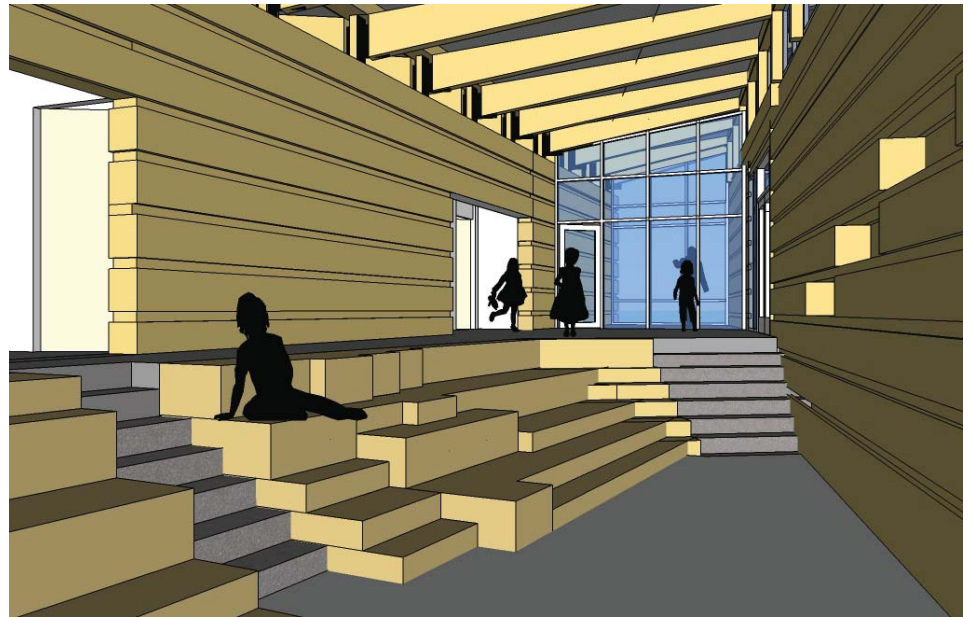
Newton's theory of color was used to transcribe audible frequencies into visual frequencies.



The musical phrases were stacked into stairs according to the overlapping of notes in each part.



Interior rendering of Google Sketch-up model looking westward.

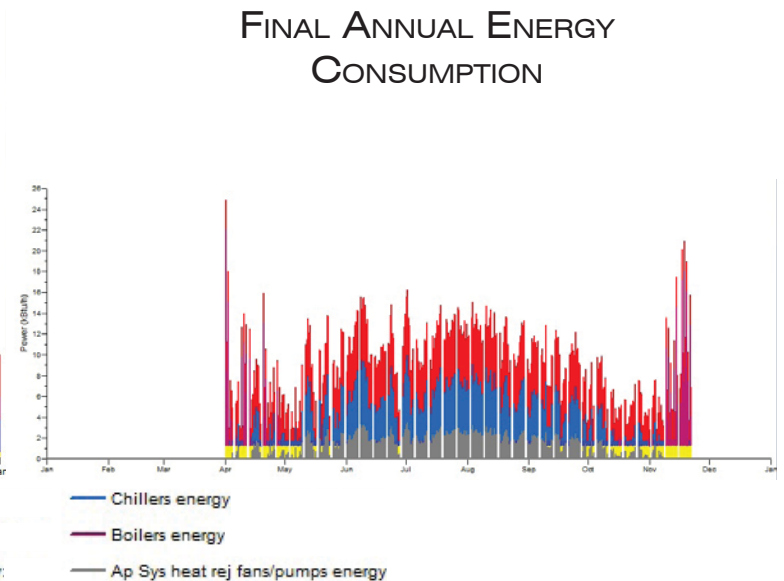
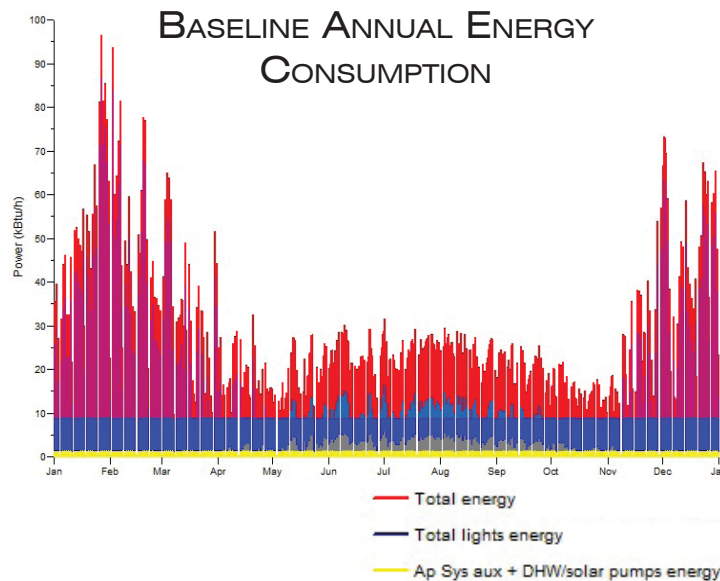
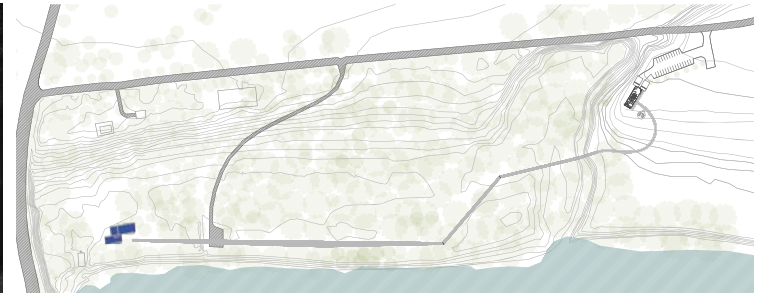


Interior rendering of Google Sketch-up model looking eastward.

# BARNSWORTH EXHIBITION CENTER

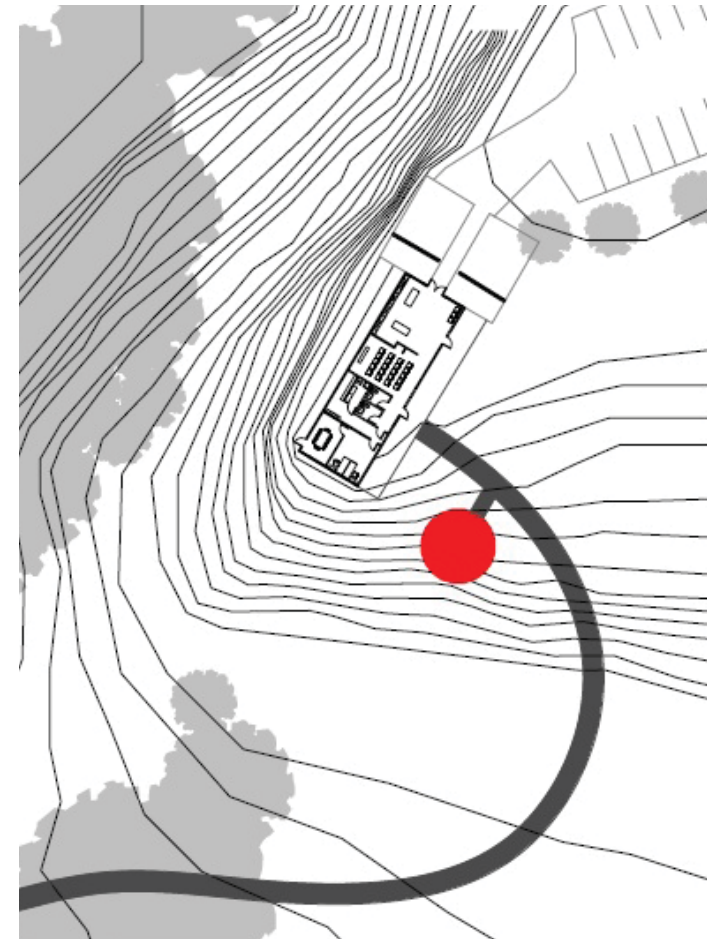
Built in Plano, IL between 1945-51, Mies van der Rohe's well-known house for Dr. Farnsworth is visited by hundreds of architects and tourists each year. With hopes of attracting more visitors, a 500 SF exhibition space was designed to compliment the existing visiting center, which is located a mile walk from the home. IIT faculty and students worked collectively to design and construct the "Barnsworth" Exhibition Center to fit with the agricultural backdrop of rural Illinois, mimicking the traditional form of a silo.

My most significant contribution to the project was an energy reduction analysis conducted in a program entitled Integrated Environmental Solutions (IES). Using Energy Star's Target Finder and the IES software, energy reduction goals were established and five energy-saving design strategies were measured. All five strategies were combined in the final model, which successfully reduced energy usage by nearly 76%. Closing the building during the winter and adding a lantern for day-lighting proved to be the most effective, applicable strategies.





Energy Conservation Measure	Energy (Mbtu)	Energy Use Intensity	Percent Reduction
Baseline	54.8	123.2	0.0
Seasonal Schedule	29.9	67.2	45.4
Upgraded Roof Insulation	53.8	120.9	1.9
Rainscreen	52.2	117.3	4.8
Day-lighting	30.6	68.9	44.1
Natural Ventilation	46.6	104.8	14.9
Final	13.3	29.9	75.8



Chart(1): Fri 01/Jan to Fri 31/Dec

Output Analysis Help

	Boilers energy (MBtu)	Chillers energy (MBtu)	Ap Sys aux + DHW/solar pumps energy (MBtu)	Ap Sys heat rej fans/pumps energy (MBtu)	Total lights energy (MBtu)	Total energy (MBtu)
	barnsworth	barnsworth	barnsworth	barnsworth	barnsworth	barnsworth
Date						
Jan 01-31	0.000	0.000	0.000	0.000	0.000	0.000
Feb 01-28	0.000	0.000	0.000	0.000	0.000	0.000
Mar 01-31	0.000	0.000	0.000	0.000	0.000	0.000
Apr 01-30	0.290	0.199	0.243	0.070	0.347	1.149
May 01-31	0.000	0.619	0.243	0.217	0.347	1.427
Jun 01-30	0.000	1.169	0.243	0.409	0.347	2.169
Jul 01-31	0.000	1.385	0.252	0.485	0.361	2.484
Aug 01-31	0.000	1.289	0.243	0.451	0.347	2.330
Sep 01-30	0.000	0.886	0.243	0.310	0.347	1.787
Oct 01-31	0.012	0.346	0.252	0.121	0.361	1.093
Nov 01-30	0.368	0.054	0.168	0.019	0.241	0.851
Dec 01-31	0.000	0.000	0.000	0.000	0.000	0.000
Summed total	0.671	5.948	1.889	2.082	2.699	13.289

Difference from Baseline    -96%    -39%    -35%    -39%    -96%    -76%



# PRIVATE RESIDENCE RENNOVATIONS

WITH ROHRBACH ASSOCIATES PC

Since the summer of 2008, I have worked alongside professionals at Rohrbach Associates, PC in Iowa City, Iowa on three private residences. My role in the schematic design was minimal, but I sat in on client meetings, made physical models, developed digital models in Google sketch-up, and helped produce construction documents. I have also helped produce owner manuals, sketch-up models, and construction documents for numerous other projects for the firm.



Curry Residence - Iowa City, Iowa  
*Northwest view of basswood model built at 1/8" = 1'-0" (June 2008)*



*Google sketch-up model of Smith residence (August 2008)*



*Existing north facade of Schmedeke residence*



*Google sketch-up model of Schmedeke porch addition (July 2010)*

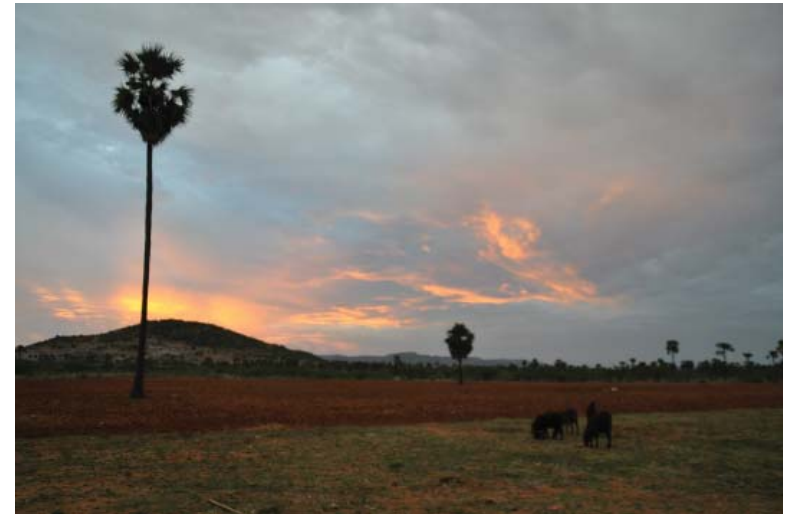
# INDIA ORPHANAGE AND CHURCH

WITH ENGINEERING MINISTRIES INTERNATIONAL

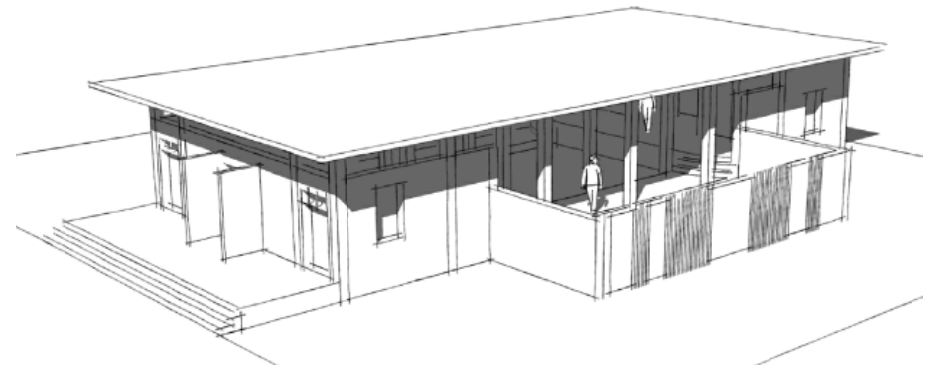
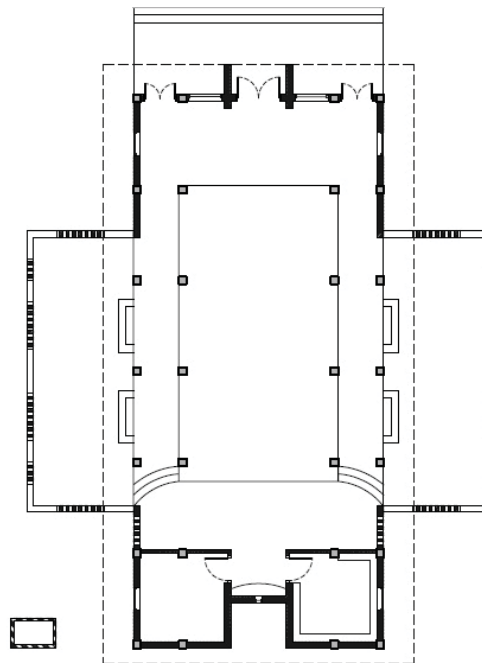
For six weeks during the summer of 2011, I had the privilege of volunteering as a project intern with Engineering Ministries International in Musoorie, India. We completed a project for a non-profit Christian ministry in a small village outside of Hyderabad. Our team, consisting of four architects and three civil engineers, spent a week with our client completing conceptual design work for a new orphanage for 100 children and a church building for 300 people. The project was designed to be installed in multiple phases, the last of which will consist of a primary school. The initial phase of construction documents and fund-raising materials were completed during the latter half of the internship after returning to the company office.



*Existing orphanage facilities in Guttapal, India. (June 2011)*



*View from existing facilities of the grazing area and hills to the west.*



*The church building implements traditional brick jali walls and open-air courtyards for natural ventilation.*



**HANNAH ROSENTHAL**

UPDATED DECEMBER 2011

# RESOURCES

Portfolio Creation

Alex Hogrefe

<http://www.alexhogrefe.com/portfolio-creation/>

Adobe Downloads

<http://www.adobe.com/downloads/>

Prezi

<http://prezi.com/>

Dafont.com

<http://www.dafont.com/>

Serif vs. Sans-Serif Fonts

<http://alexpoole.info/which-are-more-legible-serif-or-sans-serif-typefaces>