


PORTFOLIO

arch. 2016 | kwanpo cheng



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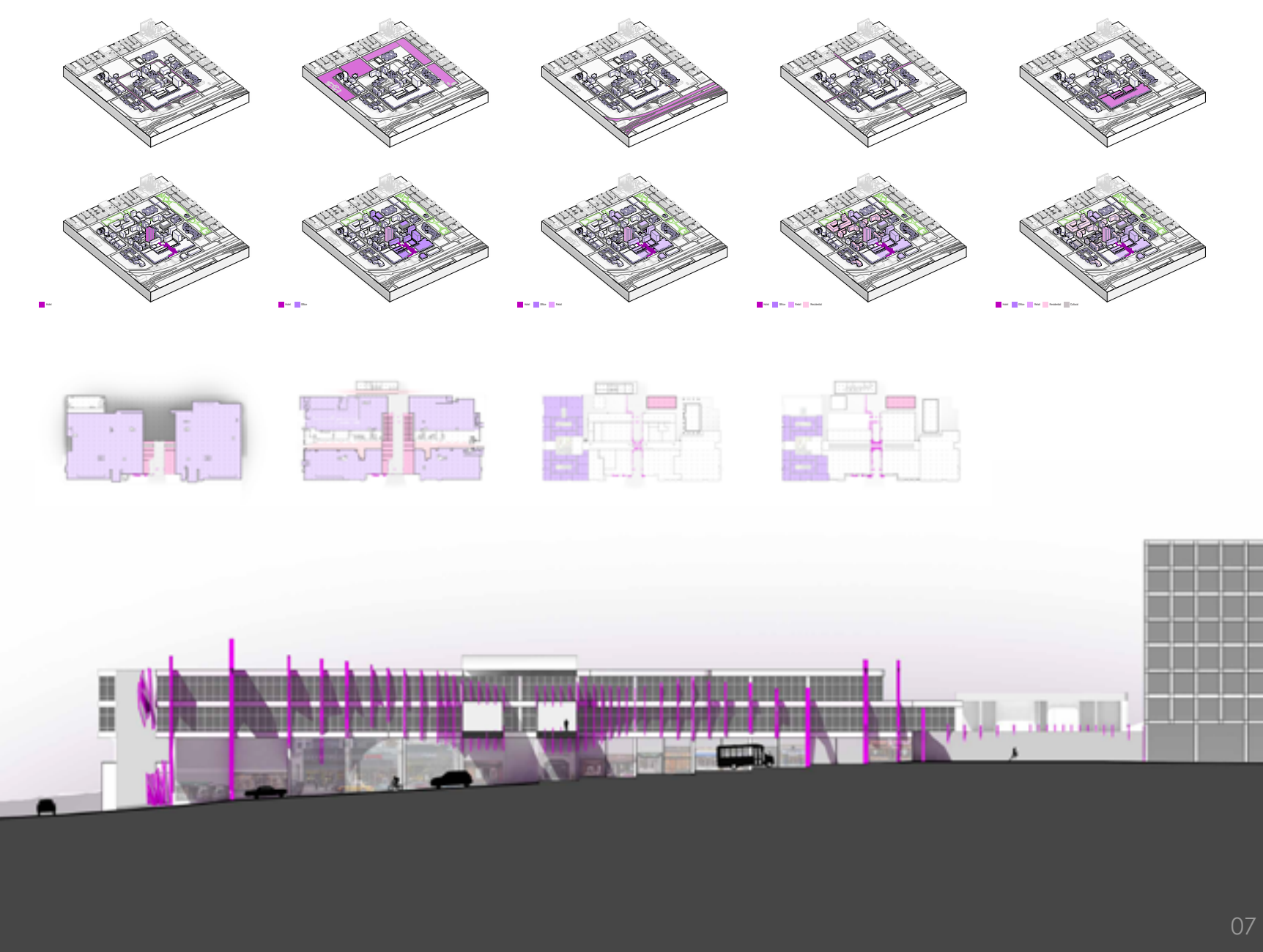
INTERSECT

Academic | Fall 2015 | Rami el Samahy
— with Horace Hou, Sabrina Estudillo,
and Liz Madigan

Team Intersect was founded around a singular idea of reconnecting human users to their built environment. The looming threat of monoliths, inhumanity, and oppressive architecture should be addressed at a theoretical and physical level from an intrinsically-intertwined economic and design standpoint. As our team attempts to tackle these issues with careful design and consideration, we hope our combined efforts adds to the future in advancement of human-oriented urban design.

However, the project reflects more than simply the necessity of approachable urban design scales; it speaks to the reality of the situation in which we need to undo previous failures and build upon its framework within the constraint of an outdated context. Urban design concerns not only new development, but the need and ability to adapt the old with the new. Ultimately, the future of Allegheny Center begins here, having taken the first step towards a second chance at life.







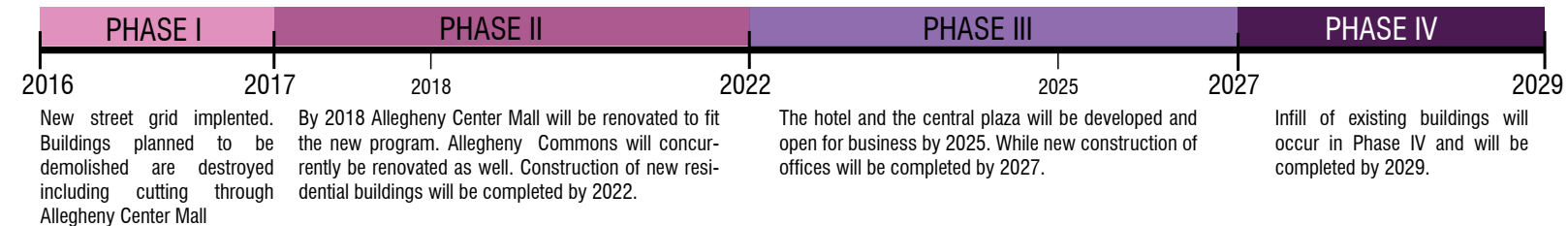
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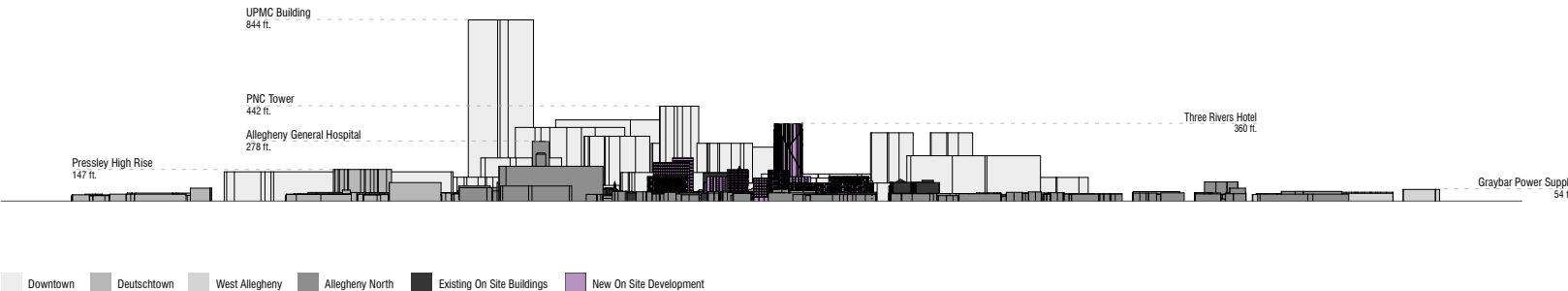
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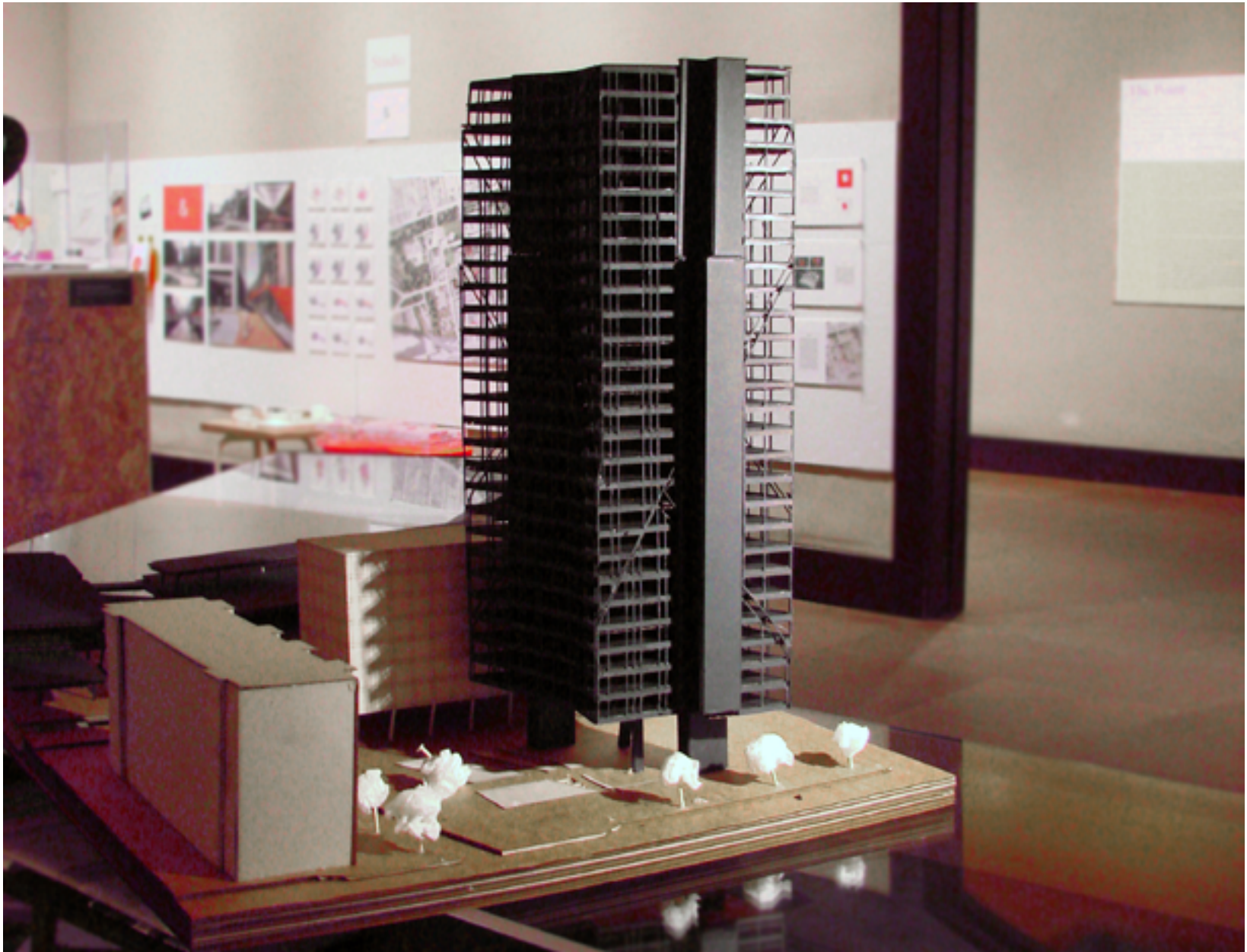
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1. Hotel Render
2. Phasing Diagram
3. City Height Diagram
4. Federal Street Render



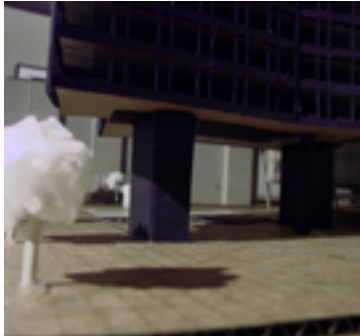
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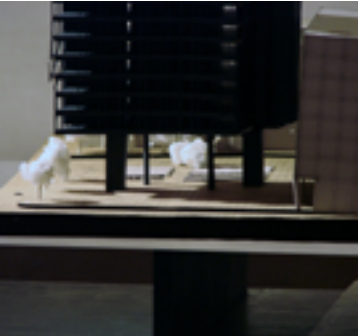


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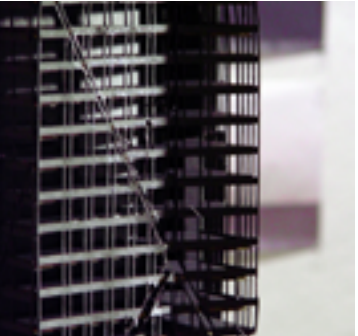
1. Hotel Model
2. Model Details of Ground Conditions
3. Model Detail of Mullions
4. Site Model
5. Exhibition Room



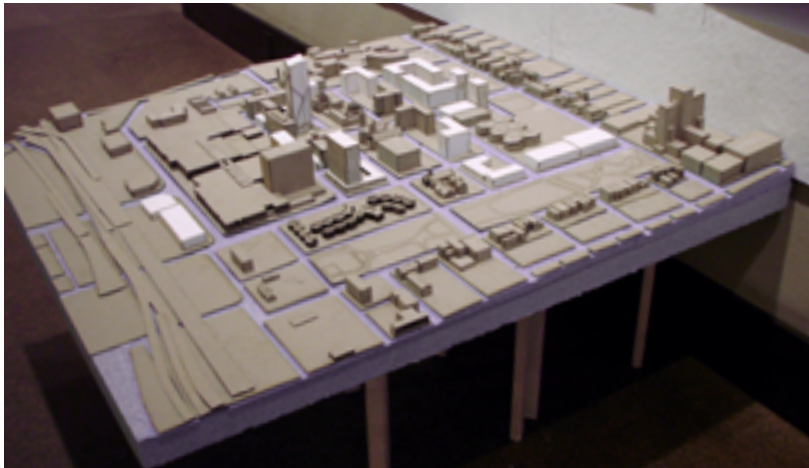
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The studio was a part of an exhibit called HACLab, developed by the Carnegie Museum of Art. All work was displayed for an entire year, garnering feedback from visitors, museum curators, community figures, transit authorities, the property developer, and interested architects.



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STEAMBOX

Academic | Spring 2015 | Vivian Loffness

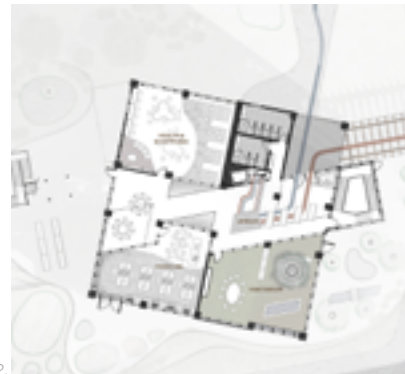
This project introduces a building addition that teaches, for supports, and furthers a high school's STEAM education program. Instead of traditional classrooms, internal spaces support broad concepts like World Hunger or Environment to integrate various fields and subjects. Rooms also promote the exciting and multi-disciplinary nature of the STEAMbox through proximity, visual connectivity, and fun displays of systems and concepts.





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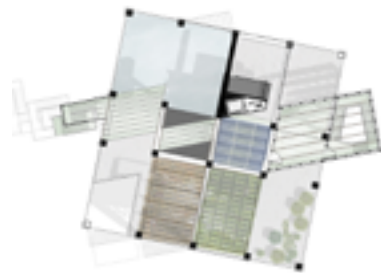
1. Exterior Render
2. Ground Floor Plan
3. Second Floor Plan
4. Third Floor Plan
5. Roof Floor Plan
6. North Elevation



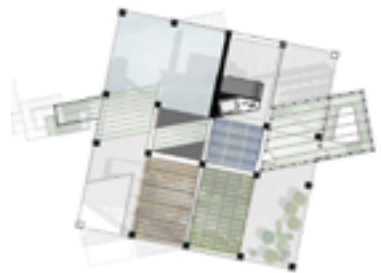
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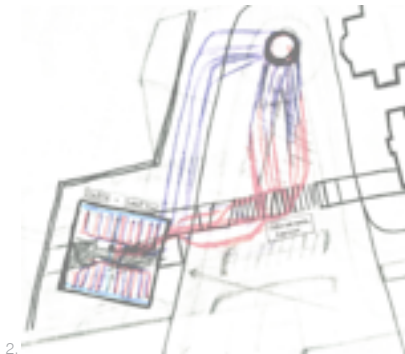


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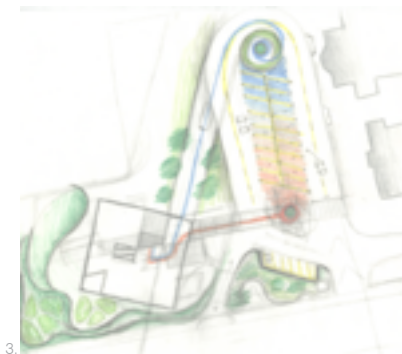


1.

1. Atrium Render
2. Geo-thermal Systems Diagram
3. Site Integration Diagram
4. Classroom Sketch
5. Classroom Sketch
6. Parking Lot Design



2.



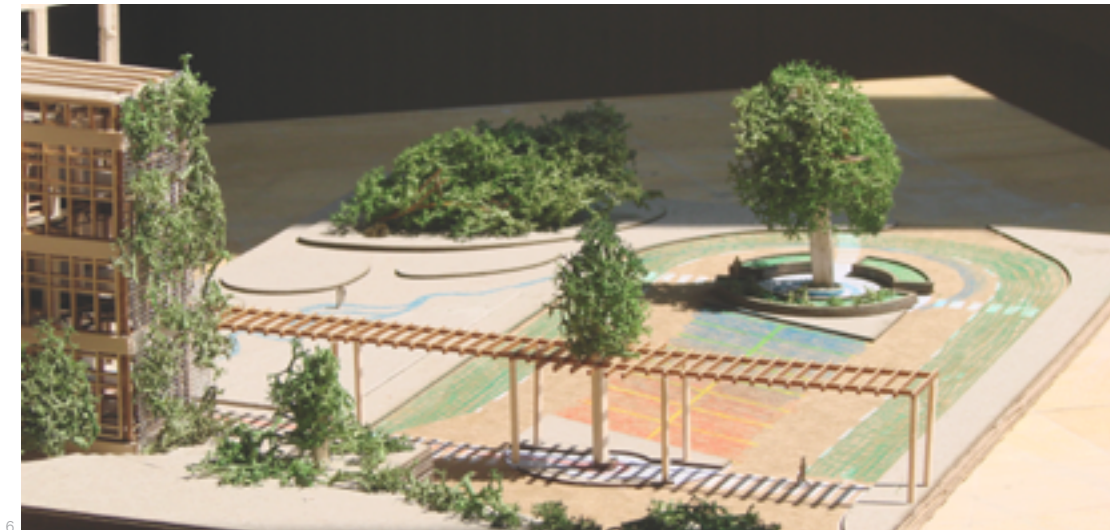
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The skin of the building reveals the classrooms and pulls curriculum outside. The makershop displays robots and projects on the balcony; the food facade uses grains and other foods for shade and display. The building also functions as a teaching tool: the geothermal exchange parallels the circulatory system and natural circulation and the air and HVAC systems parallels the respiratory system.



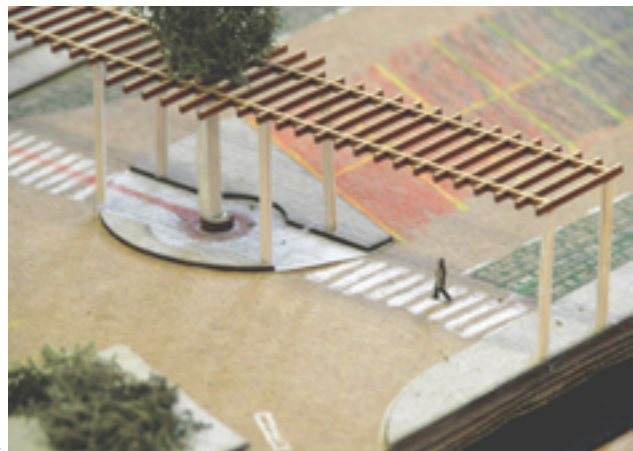
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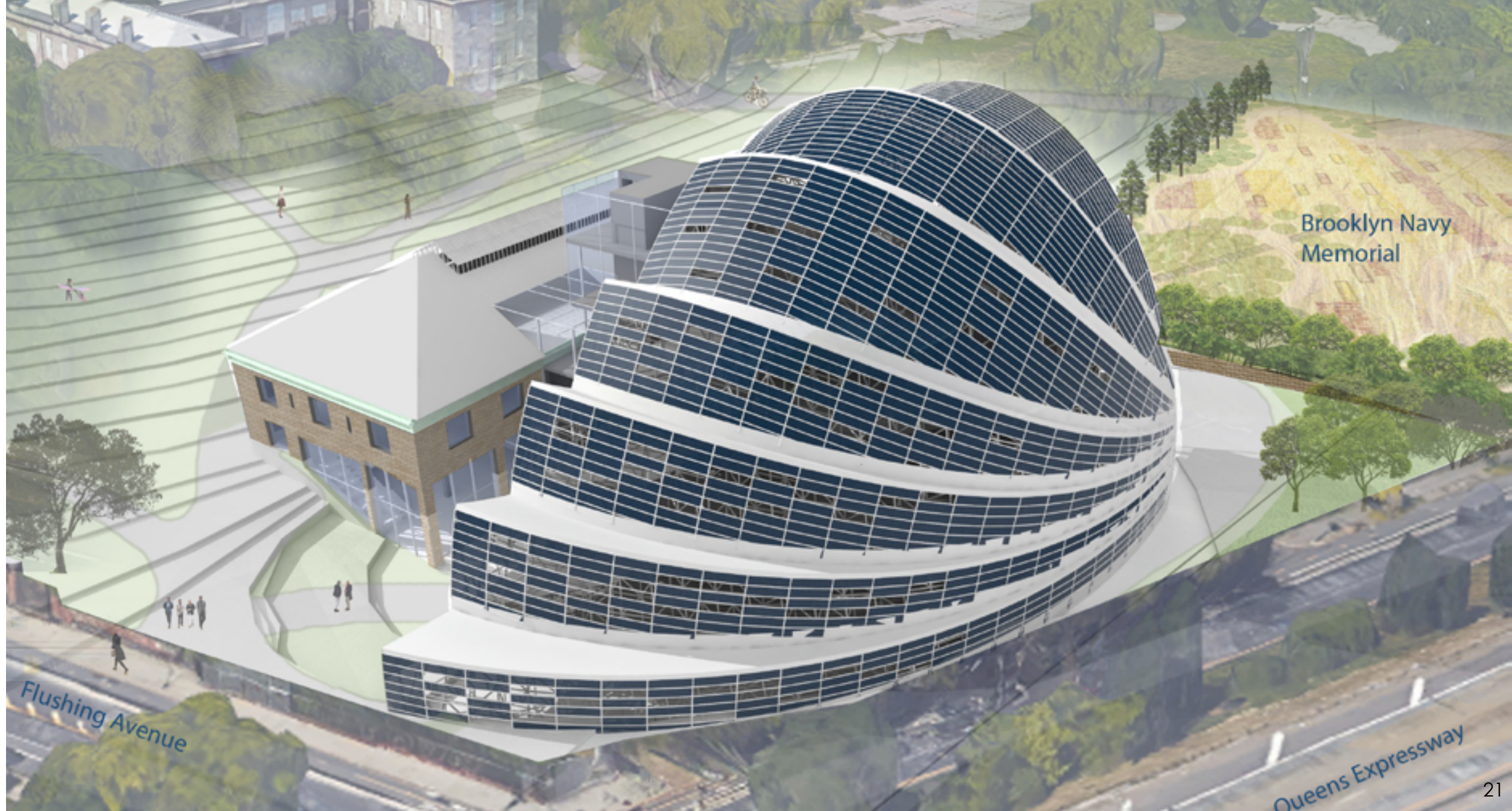
- 1. Physical Model
- 2. Learning Roof
- 3. Garden
- 4. Crosswalk

HAYES HALL

Academic | Fall 2014 | Hal Hayes

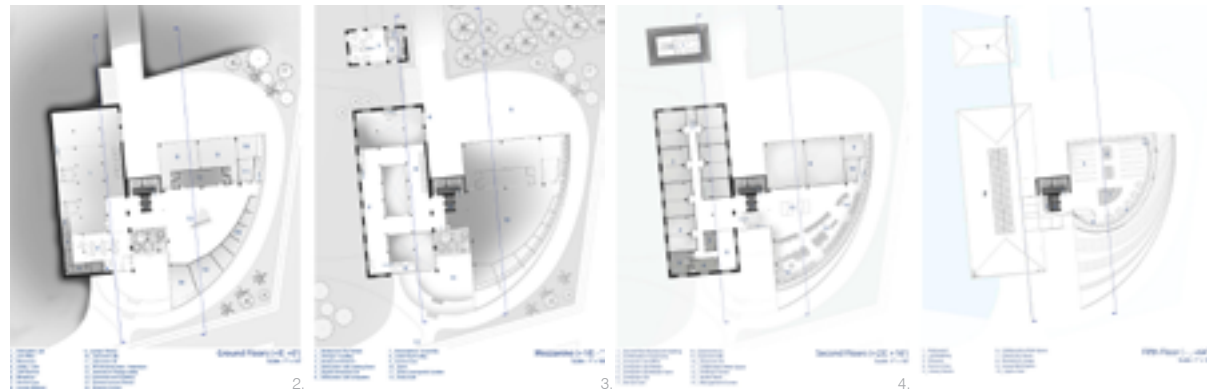
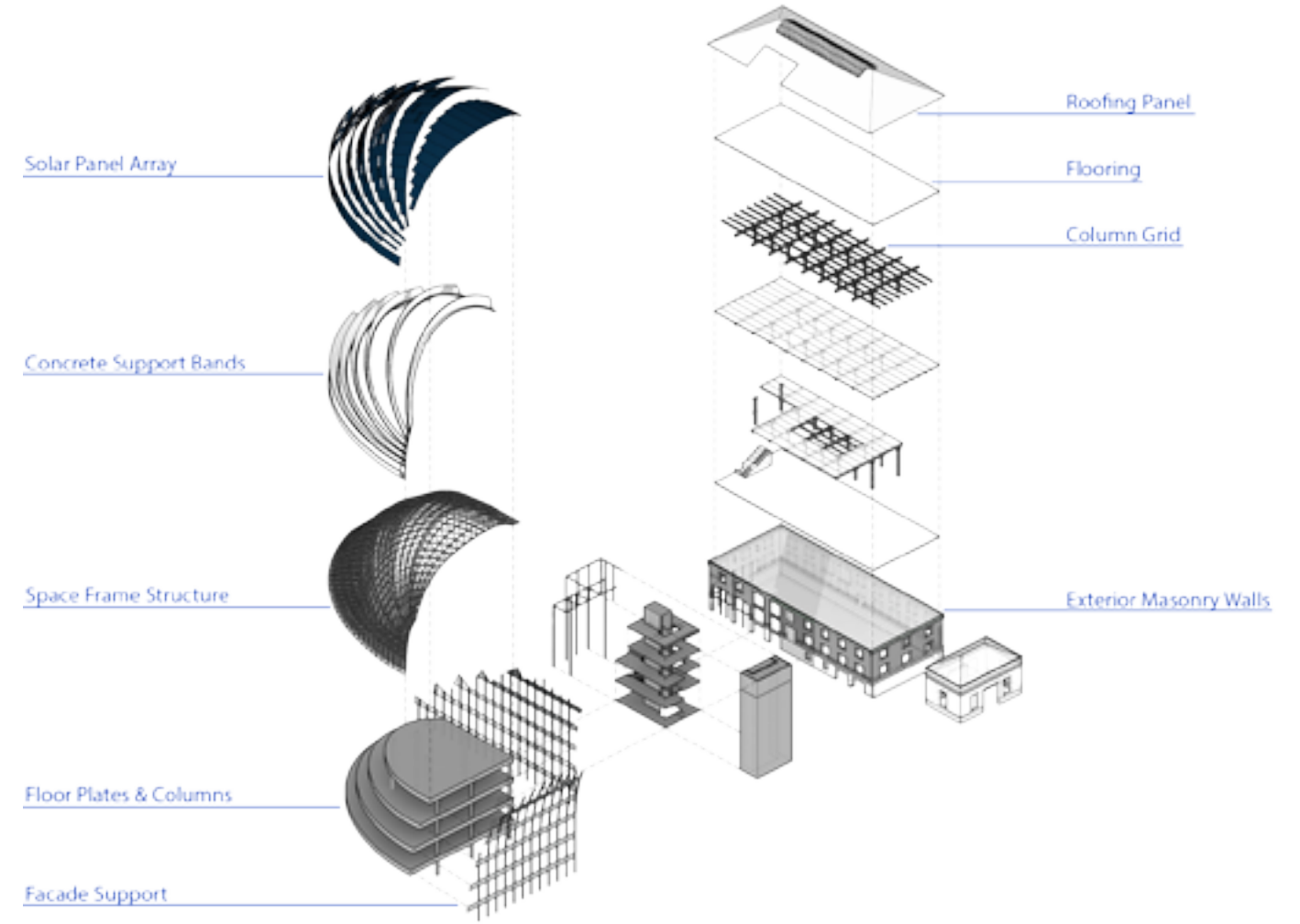
Steiner Studios' new emerging media campus attempts to return New York back into the production limelight. The key focus was the intersection of ideas between producers, professionals, students, and the community - for the strength of creativity is the feedback obtained from others. Social "attractors" such as food or unique resources enables collaboration; their placement promotes cross-pollination. These were crucially arranged at the city, site, building, and human scales.

The form is derived from an optimization of solar gain and energy. Each row of solar panel is operable and self-orienting towards the sun while simultaneously promoting cross-ventilation. The spaceframe structure creates beautiful interiors at the top level for the library attractor.





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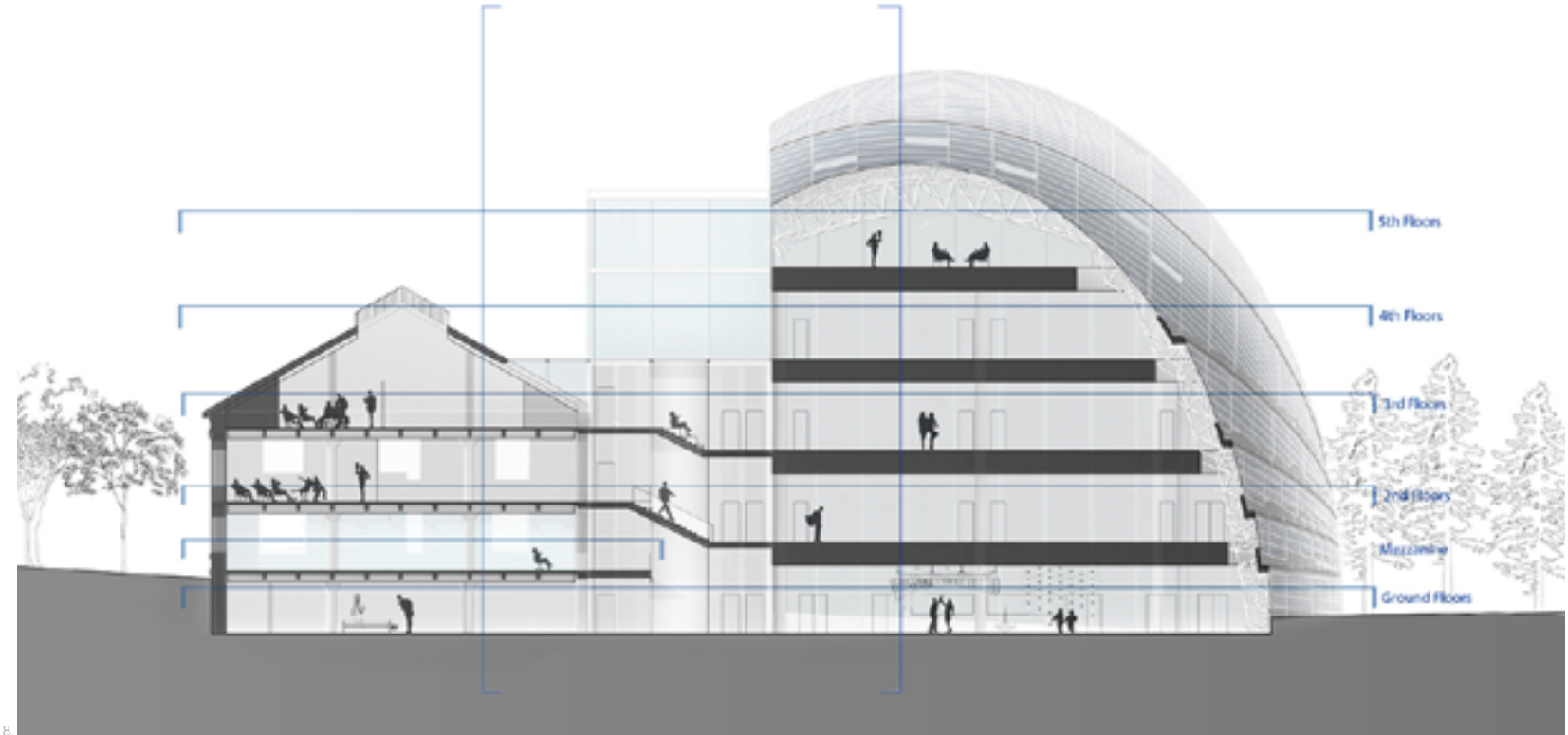
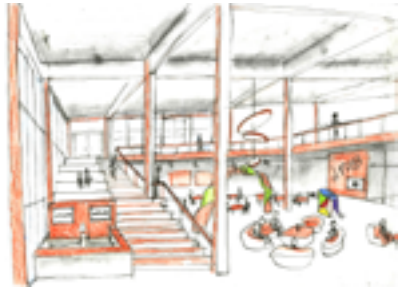
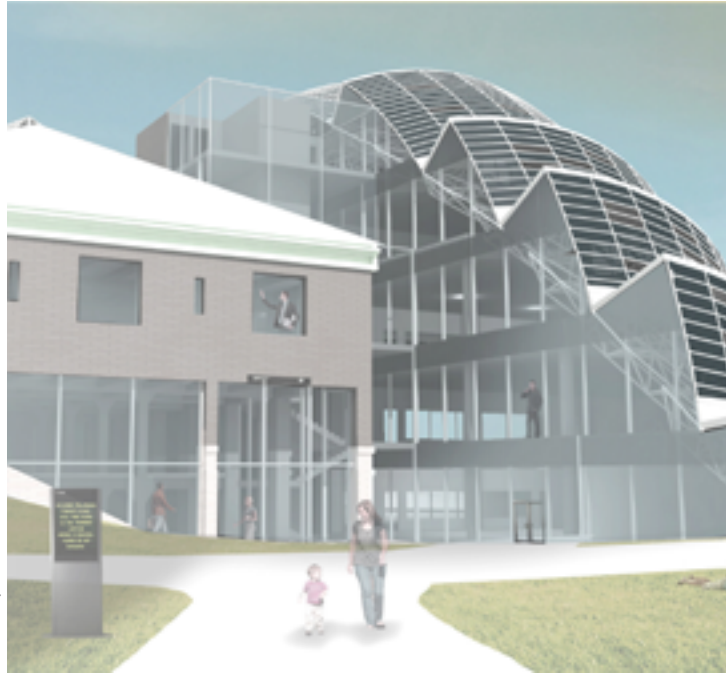
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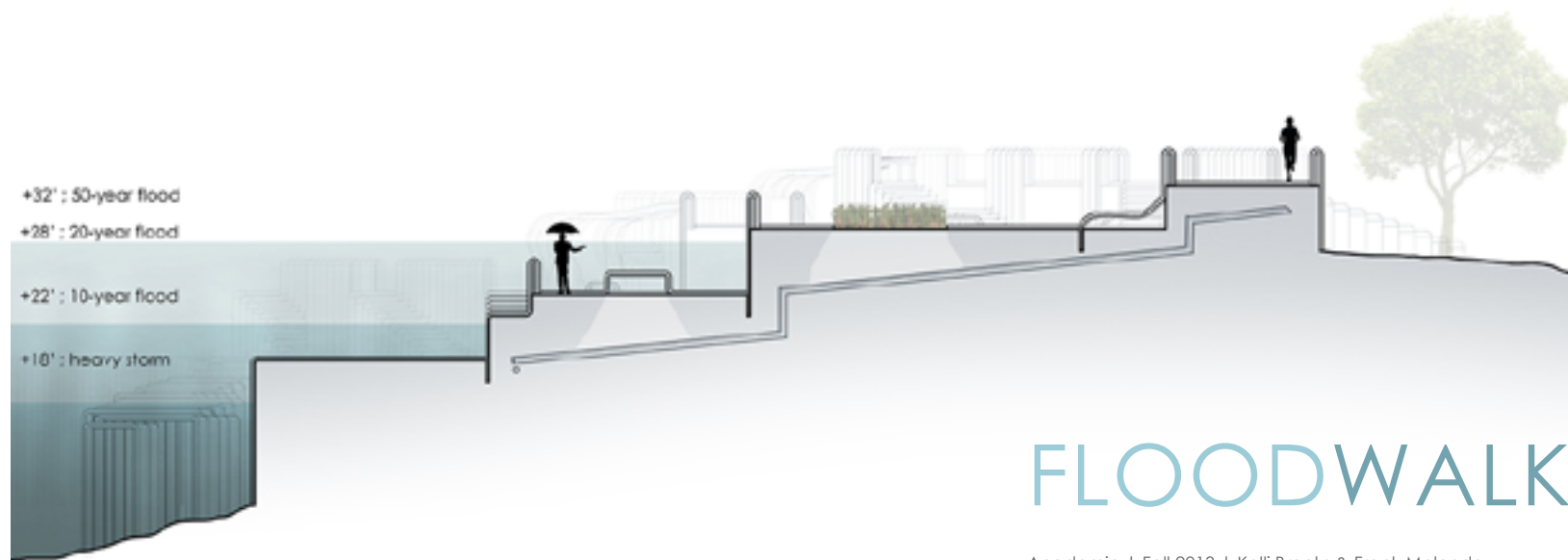
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1. Lobby Render
2. Ground Floor Plan
3. Mezzanine Floor Plan
4. Second Floor Plan
5. Fifth Floor Plan
6. Structural Systems Axon



1. Entry View Render
2. Studio Render
3. Interior Sketch
4. Model Detail - Classrooms
5. Model Detail - Studios
6. Full Model
7. Model Detail - Old Lobby
8. Section



FLOODWALK

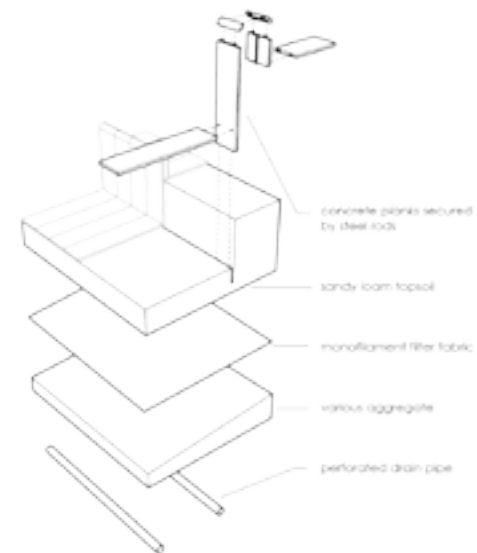
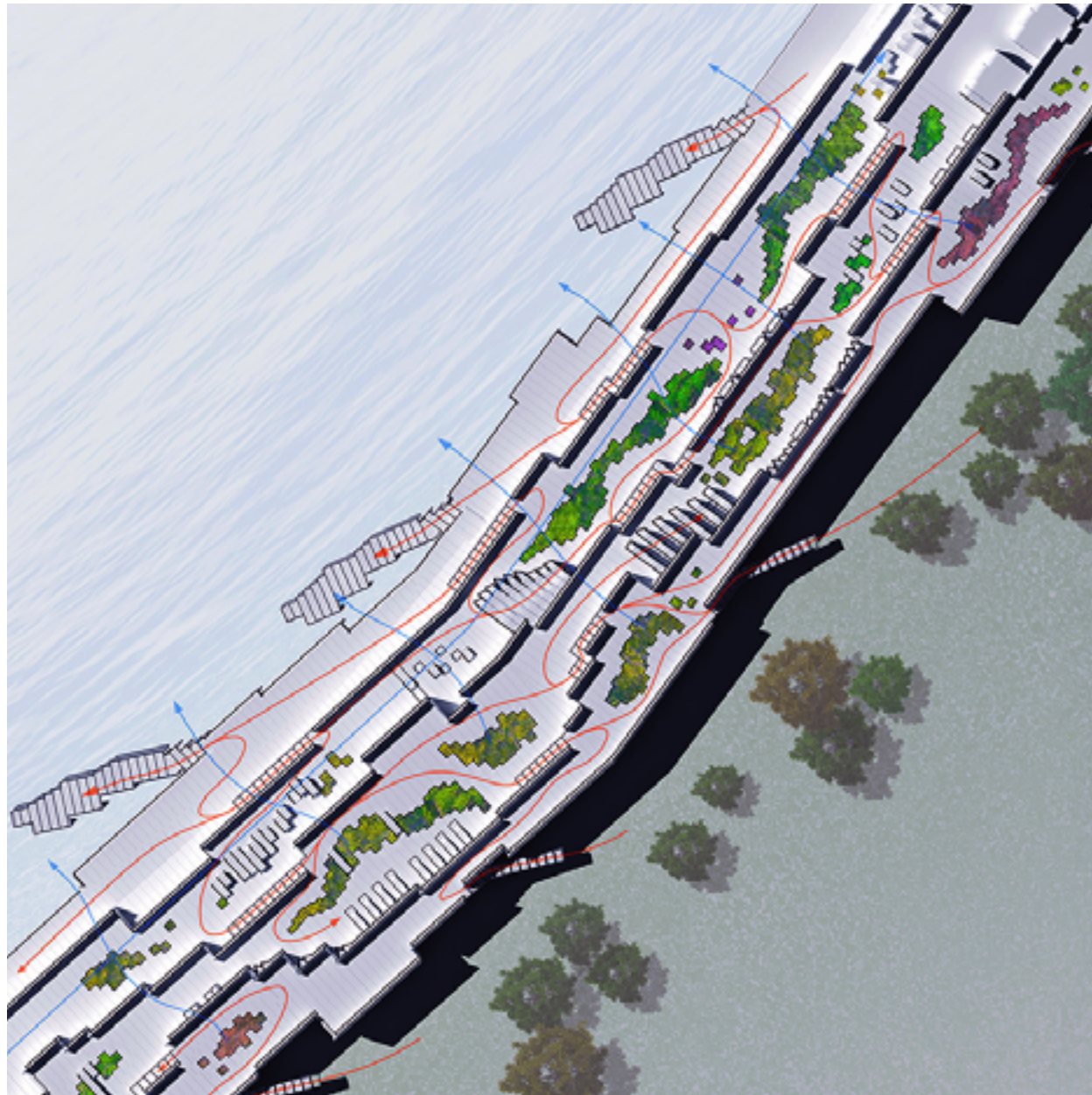
Academic | Fall 2013 | Kelli Brooks & Frank Melendez

The Floodwalk draws from the background and function of a boardwalk. It was envisioned as a structure that would examine, emphasize, and inhabit the boundary between the earth and water.

The system of levees and walls prevent and protect against rising water levels during storms. The space stretches along the shore of the Strip's waterfront, creating spaces of public use and revitalizing what used to be an empty part of the Strip. The restaurant is located at one end of its length, existing as either the final destination of a journey or the focal point of a beginning. The remainder of the stretch includes markets, sunbathing areas, and shaded rest areas.



1. Plan
2. Concrete Band Typologies
3. Preliminary Models
4. Concept Model
5. Exploded Axon

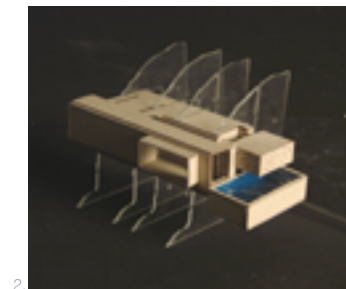


SACO LAKE BATH HOUSE

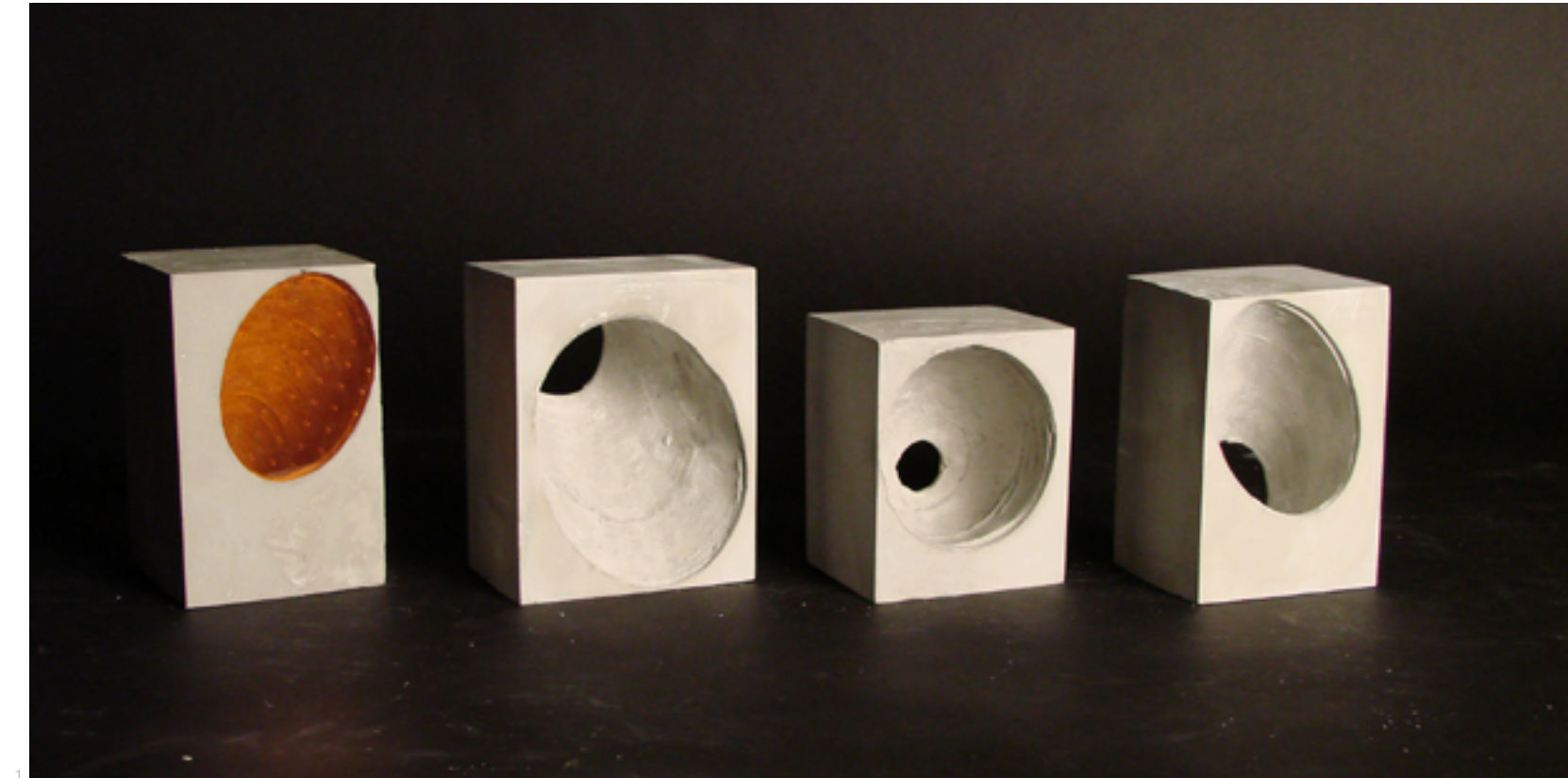
Academic | Spring 2013 | Josh Bard
— with Leah Wulfman

Situated on the side of a mountain, the Bath House becomes the threshold between earth, water, air, and light. The building cuts deep into the earth and exposes the layers of rock and soil. Permeable walls filter air and water, carrying the elements through the house.

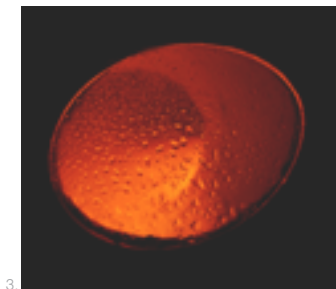
The main feature is the permeable concrete wall, parts of which were formed in detail. The process involved constructing a mold around which concrete could be formed. The negative concave forms not only deposit scents, but also refracts light in from one side to the other. Colored acrylic bring sensualities to the forefront.



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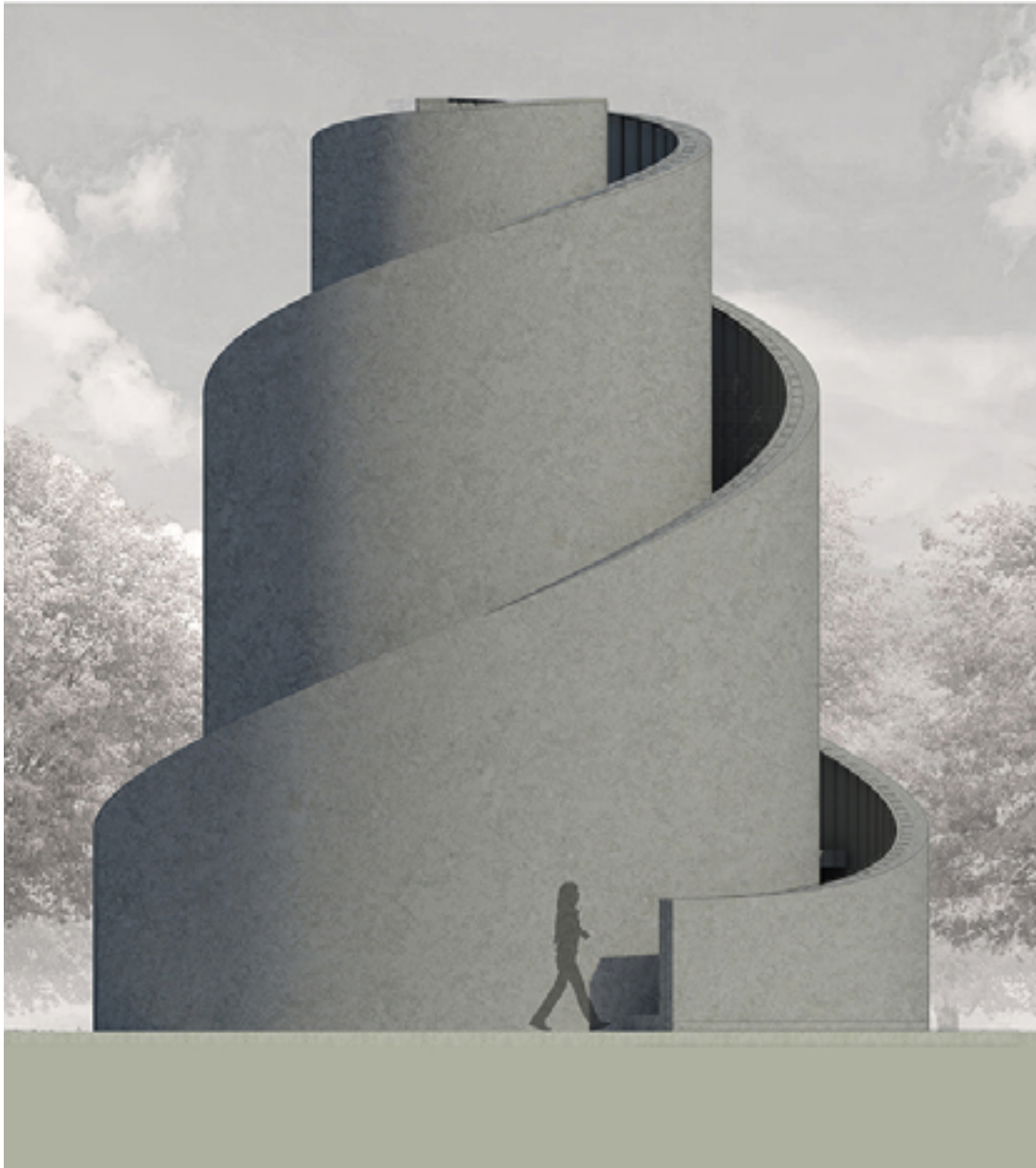
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Far Left: Section
Upper Left: Plan

1. Concrete Study Models
2. Representative Model
3. Vapor Study on Acrylic
4. Wooden Negatives
5. Light Study Models



LUME

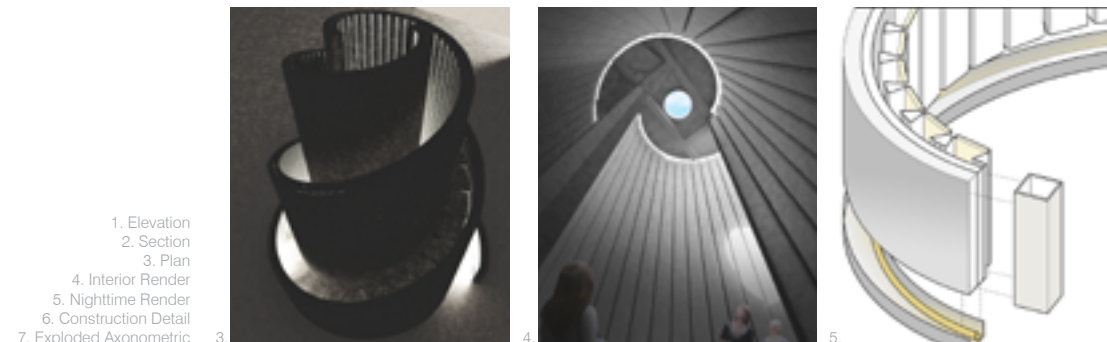
Competition | Spring 2014
— with Shivani Jain | Honorable Mention

This folly was designed and produced as part of a three-day competition hosted by EPIC Metals. The rules simply required their metal decking material be creatively re-used.

The folly's form is derived from duality. The spiral form creates experiences that ultimately clash at the focal center. Light and dark serves as the primary contrasting principle behind the two paths; while one ascends into light, the other remains cold. Metal decking material emphasizes this contrast with its acoustic properties by maintaining silence inside the shell. Users are ultimately able to interact with each other across the small threshold.



2.



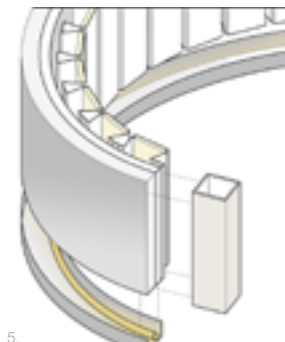
- 1. Elevation
- 2. Section
- 3. Plan
- 4. Interior Render
- 5. Nighttime Render
- 6. Construction Detail
- 7. Exploded Axonometric



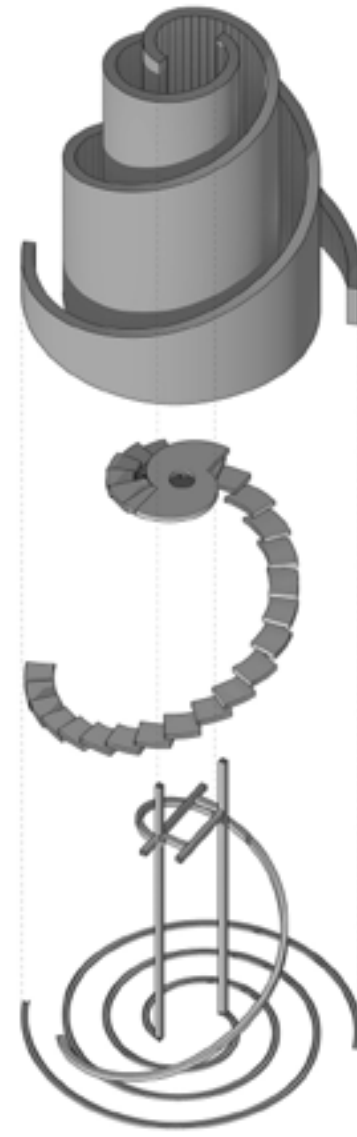
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THE FEAST

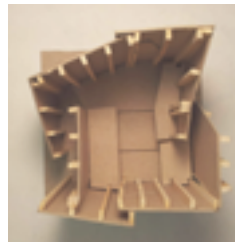
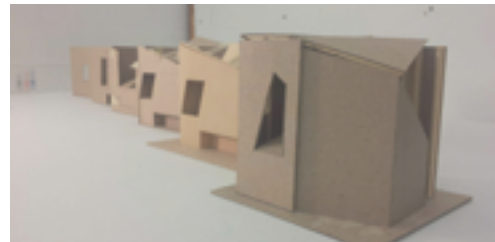
Academic | Fall 2012 | Mary-Lou Arscott
— with Nouf Aljowaysir, Christopher Ball, Erica Chan,
— Avantí Dabholkar, and Samantha Gao

This feast shelter was designed using the given concept of Hiding. Jagged plywood panels become intimidating walls to the exterior, but cozy barriers for the interior. Small gaps in the facade admit transfuse light and allow “spying” through to the exterior. When not in use, the furniture folds away to accomodate space.

The shelter was given a limited budget, time, and materials. Through several iterations, the goal was ultimately met and constructed in a week. As celebration, the entire studio held a feast across the shelters.



1. The Team
2. Evolution of Study Models
3. Shelter Completed



2.





1. Shelter Pieces
2. Shelter Construction
3. Shelter Interior
4. Shelter in Construction
5. Shelter Interior
6. All feast shelters



2.



3.



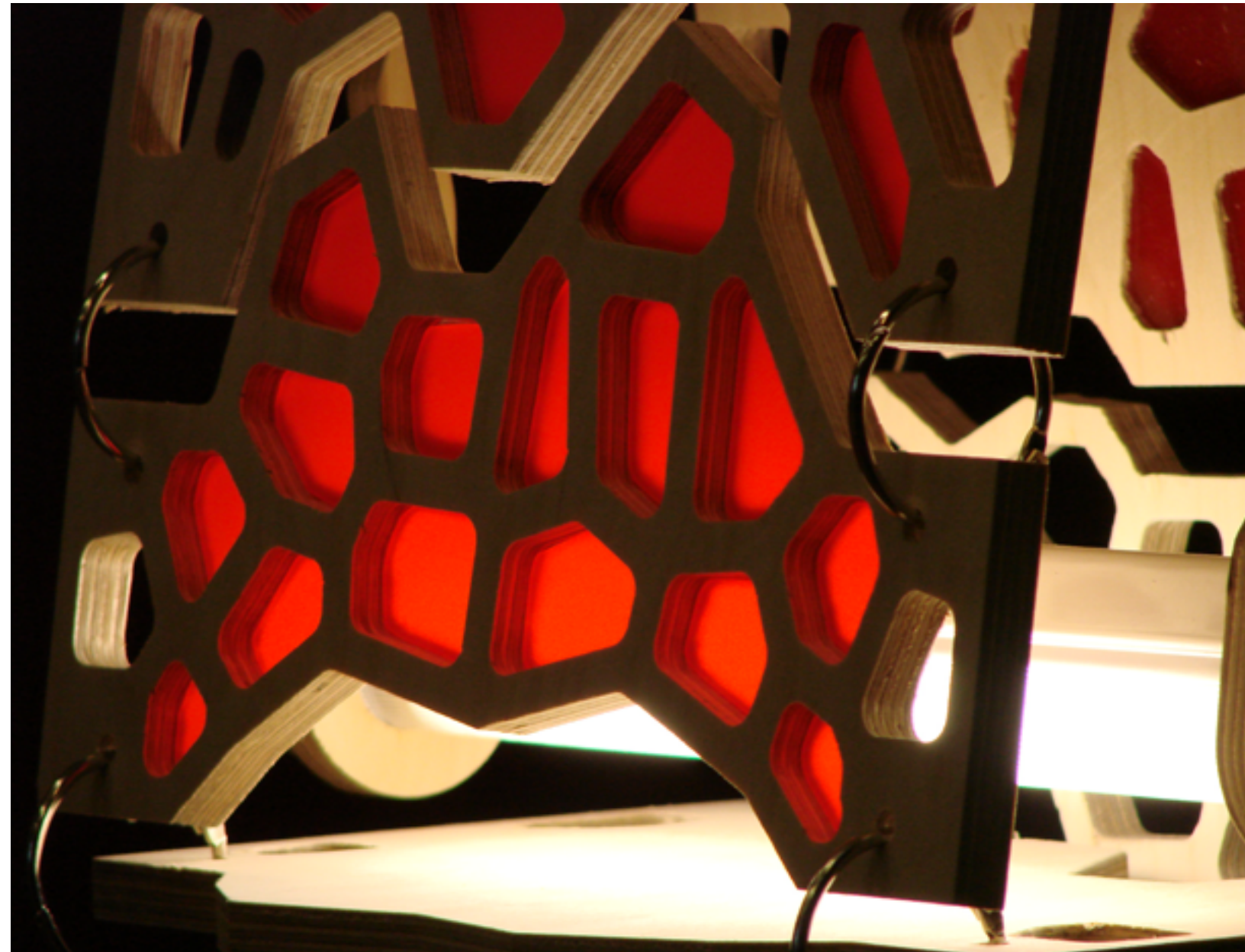
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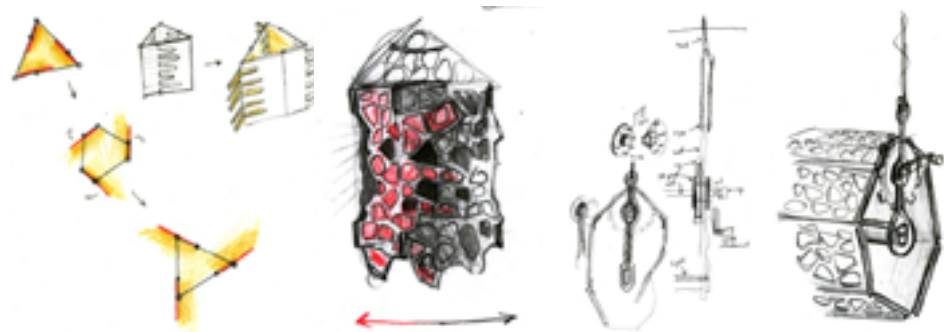
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LAVA LAMP

Academic | Spring 2015 | Richard Tursky

The focus of this lamp was the exploration of various digital fabrication strategies, including the laser cutter, the CNC mill, 3D printer, and vacuum form. A secondary focus was the completion of a design construction across physical and temporal constraints with an emphasis on problem-solving and alternative material methods. For example, this lamp utilizes binder rings as a hinge joint and a 3-D printed spacer for the LED light. The lamp was milled out of plywood at varying levels, creating a gradient of shadow and light.





HIVE

Art | Personal

This reproduction of this popular game draws on minimalism and digital experimentation. The focus is on the planning and creation of a legible design.

Each piece was traced in Rhino and cut by laser on white illustration board and black matboard. After the ash was cleaned away, the burn marks were carefully sanded off the white pieces. The black pieces still sport their gold burn marks. These layers were then carefully glued in layers.

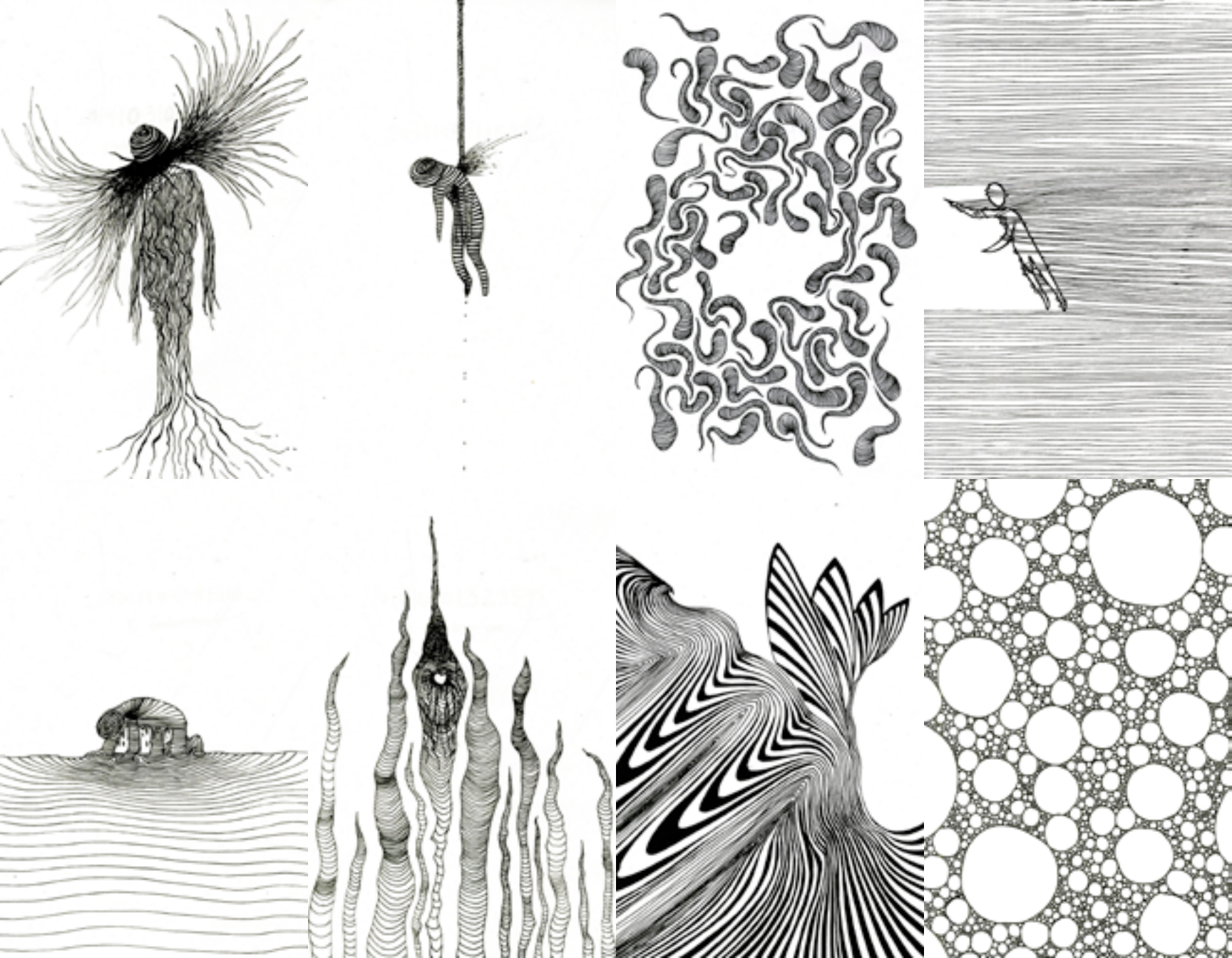


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"HIVE is a bug-themed tabletop game, designed by John Yianni and published in 2001 by Gen42 Games. The object of Hive is to capture the opponent's queen bee by completely surrounding it, while avoiding the capture of one's own queen. Hive is an abstract strategy game."





SPIRAL

Art | Personal

This is an ongoing series that explores the meditative and adaptive aspect of art. Using only a permanent pen, I examined my emotions and thoughts by integrating forms and space-filling principles. When a mistake has been made, the mistake evolves and becomes a part of the piece.

This series requires patience and an open mind. Each line is carefully measured to its immediate context, producing unique textures and shade.

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