



Jeff Cook

CAD Designer, System Administrator, 3D Prototyper

jecook.arch@gmail.com

<http://jecook.info>

(310) 292-5595

Qualifications

Versatility: Experience with architecture, construction, prototyping, programming, network design, modeling, 3D printing, training and some electrical and mechanical engineering

Technology: Computer expertise with multiple operating systems, computer languages, and design suites

Communication: Manager for multiple teams, provided Revit/AutoCAD training, designer of CAD and project standards involving documentation, on-boarding, maintenance and implementation

Dependability: Perseverance to see a project through, despite challenging clients or difficult construction

Experience

The Hettema Group <http://thehettemagroup.com/> (626) 683-9876
CAD Designer, 3D Modeler, manager, working on One World Observatory in 2013-Present
New York, Aon Center Observatory in Chicago, as well as theme parks, dark rides, museums, and more. Developed and maintained CAD standards and scripts.

Vanos Architects (310) 280-0193
Project manager, designer and coordinator for multiple complex projects from 2012-2013
large scale residences to dense and complicated small lot developments.

Jeffrey Rome and Associates (949) 760-3929
Project manager/job captain for a small team, with many projects in 2012
different stages and with a variety of challenging planning requirements.

Independent, Multidiscipline Design and IT Consultant (310) 292-5595
Collaborated with architects, designers, contractors on training, design, 2011-2012
modeling, scripting and large scale IT systems.

CAD Research Center <http://www.cadrc.calpoly.edu/> (805) 756-6566
Designed a complex network architectural solution and managed multiple servers. 2010-2011

Skills

Design: Blue-sky conceptual through construction documents, diagrams, program analysis, renderings, presentations in addition to logo development, website design/implementation and printed prototypes.

Computer Systems: System administration for several large projects, design and development portfolio websites, and rigorous use of complex software packages/scripting for architecture and other disciplines.

Digital Experience: 3D Modeling and design in Revit, AutoCAD, Rhino, SketchUp, and others.

Model Building: Construction experience in PLA/ABS/HIPS, concrete, plaster, wood, metal and more.

Achievements

Academics: Graduate summa cum laude with a Master of Science in Architecture and Bachelor of Architecture from California Polytechnic State University at San Luis Obispo

Completed Projects: Integral part of the architecture and design team responsible for One World Observatory (New York 2015), Aon Center Observatory (Chicago 2020), along with others yet to open

Scholarship: Earned the 2010 Herbert E. Collins scholarship for "achievement, industriousness, and fine overall character" in the CAD department

Construction: Managed and completed design, demolition and rebuild of a residential renovation

Other

Systems Administration: Designed and maintained advanced network solutions for a development group with almost zero down time and no loss of functionality for a Boeing subsidiary

Engineering: Designed electrical, mechanical and programming solutions for over three years

Japanese: Studied Japanese for four years and lived in Japan for 3 months studying architecture

Programs





One World Observatory

Observation Deck at One WTC - New York, New York

Story-driven observation deck, emphasizing of the rise, rebuild and the “resilience of the human spirit” after tragedy. One of the most popular tourist attractions in NYC with over 2.3 million visitors in the first year of operation.

Concept Design through CDs/RFI
3D Modeling and Design
Millwork and Detailing

Overall



Interior Views Lower Levels





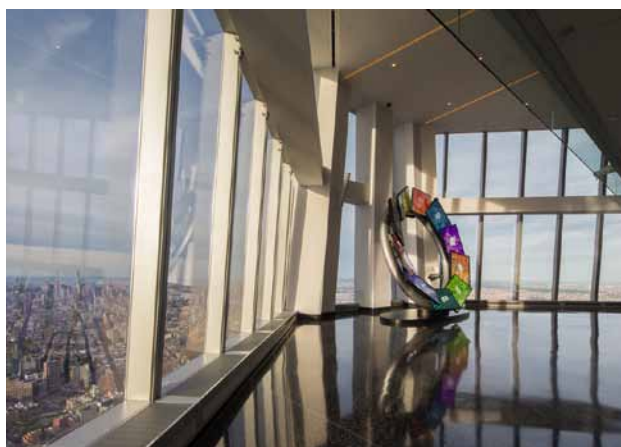
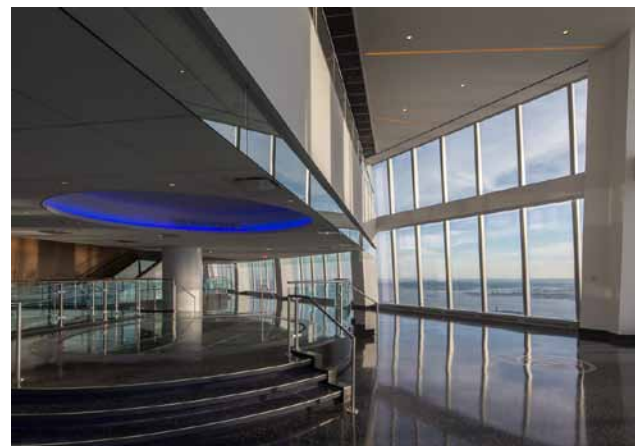
One World Observatory

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Concept Design through CDs/RFI
3D Modeling and Design
Millwork and Detailing

Interior Views Elevator & Upper Levels







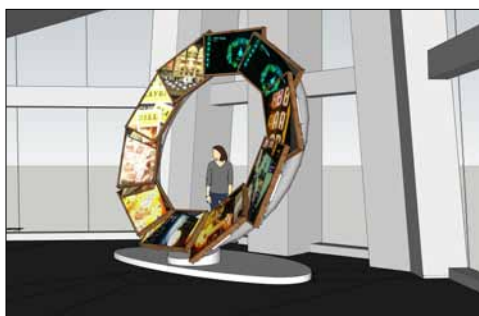
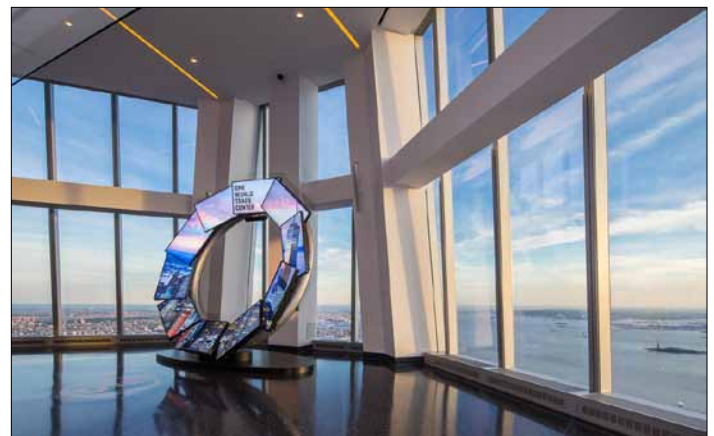
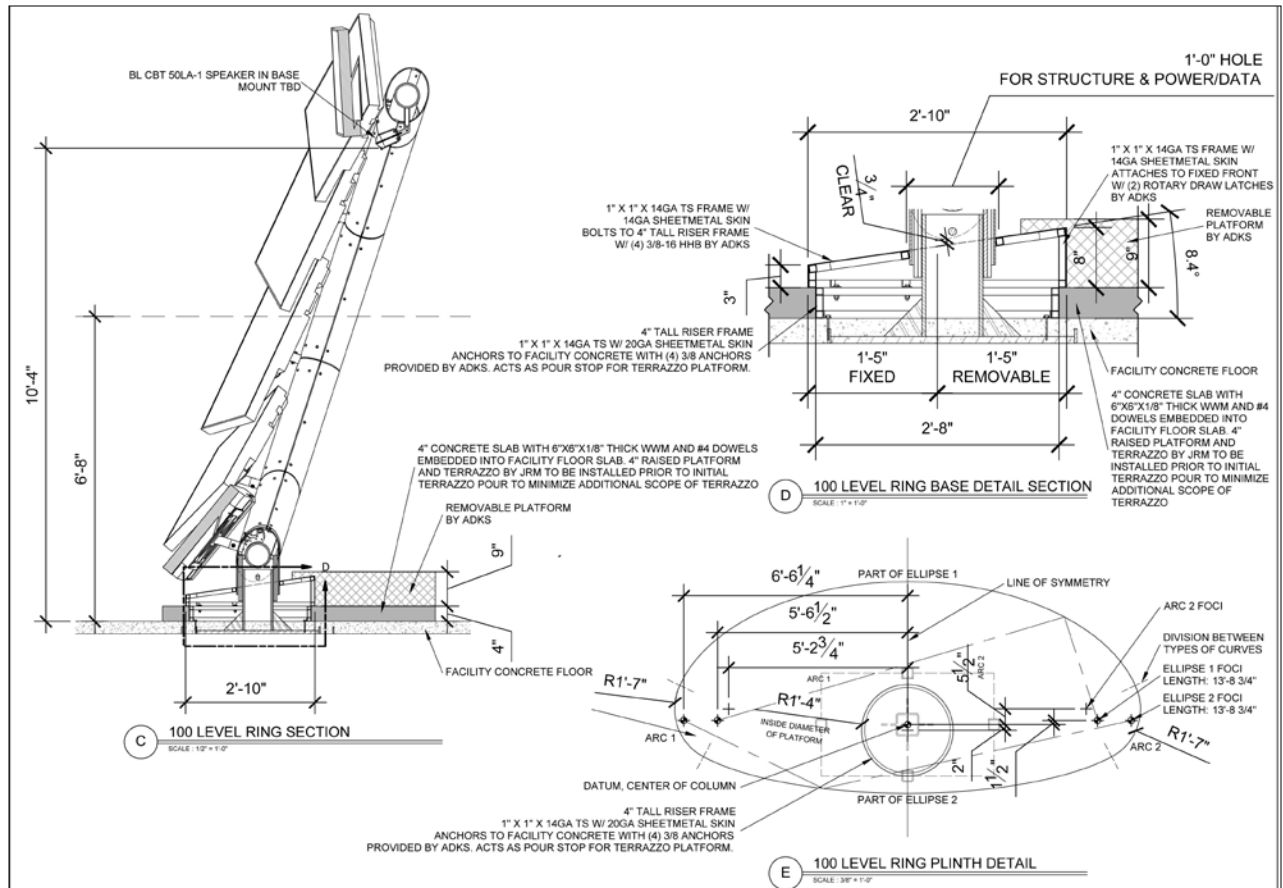
One World Observatory

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Concept Design through CDs/RFI
3D Modeling and Design
Millwork and Detailing

Design





Aon Center Observatory

Observation Deck at Aon Center - Chicago

Observation deck scheduled to open in 2020 that will tell the story of Chicago, highlighted by a multimedia experience and the country's largest and fastest external elevator as a unique skyscraper renovation.

Concept Design through DDs
3D Modeling and Design
Millwork and Detailing
AutoCAD, Rhino, SketchUp

Interior Renderings





Marcheeta Residence

West Hollywood Hills - Los Angeles

Residence located on a 26,000 sf site above West Hollywood, focused on maintaining an open plan with a blend between interior and outdoor spaces. Emphasis was also put on maintaining privacy with complicated, existing site conditions.

Schematic Design through CDs
Coordination and Permitting
Design Documentation
AutoCAD, Revit

**Overall
Outdoor
Conceptual
Image**



**Additional
Outdoor
Views**



**Additional
Indoor
Views**





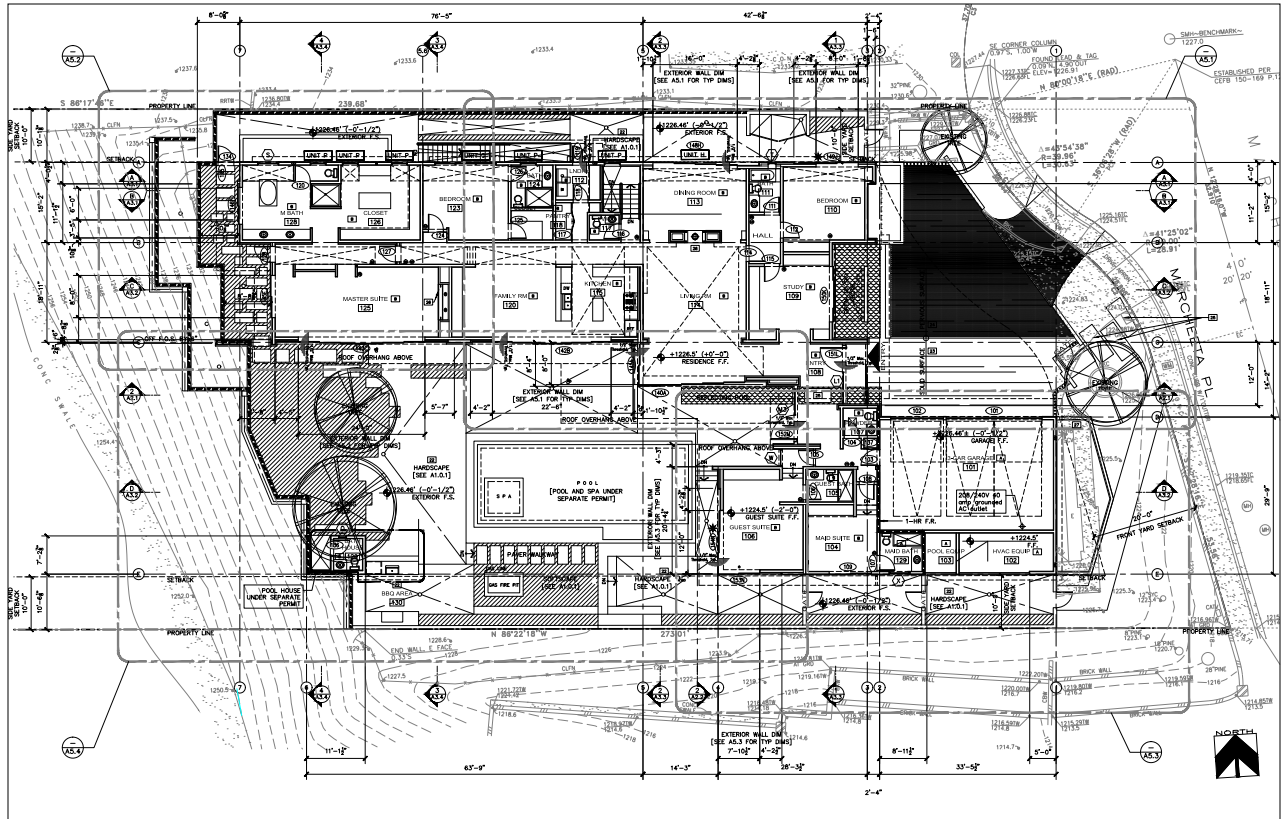
Marcheeta Residence

West Hollywood Hills - Los Angeles

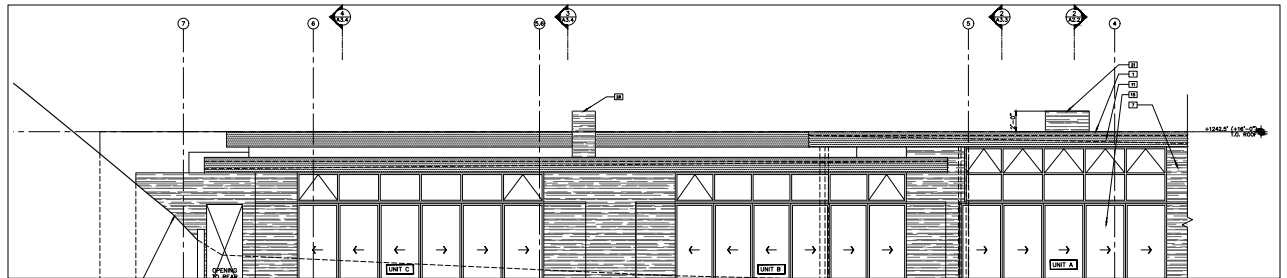
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Schematic Design through CDs
Coordination and Permitting
Design Documentation
AutoCAD, Revit

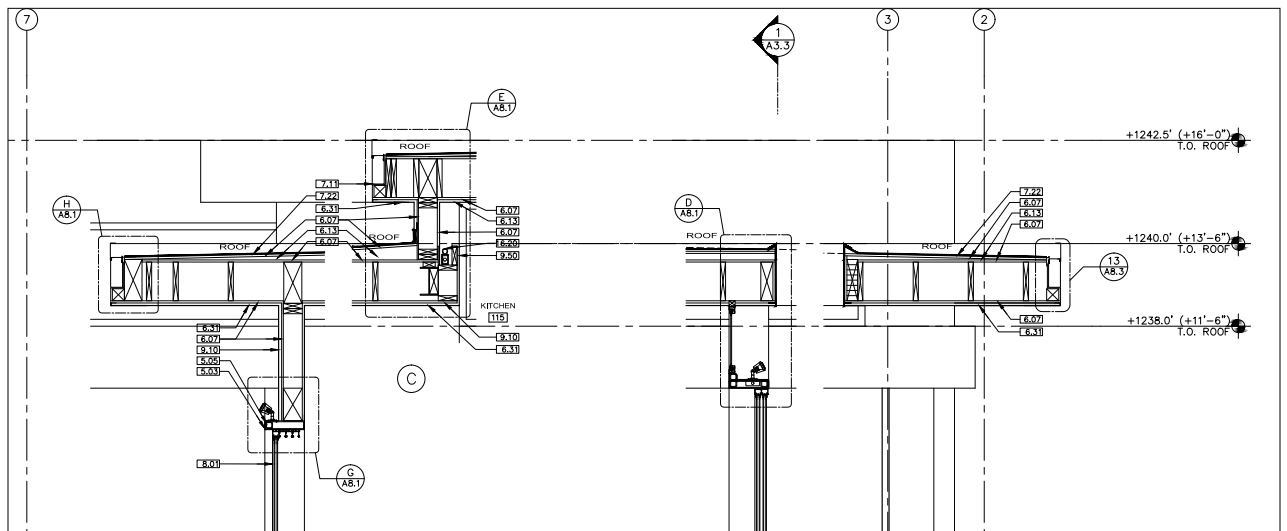
Overall Plan



Enlarged Elevation



Partial Detailed Sections





Bowmont Residence

Santa Monica Mountains - Los Angeles

Residence located in the Mulholland inner scenic corridor. This project was designed to entertain guests with a 2 story parking garage, theater and boasts a 300 degree view through a curved, 3 story bay window and from the infinity edge pool.

SD through CD (Renovation)
Coordination and Permitting
Design Documentation
Revit

**Overall
Conceptual
Image**



**Construction
Progress**



**Conceptual
Section**



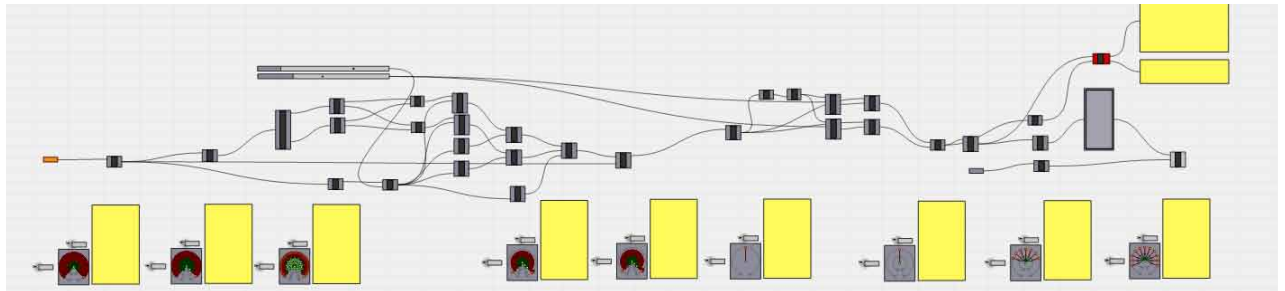


Grasshopper

Script for Font Development

This script was written to develop a series of lines that inscribe and define the shape of text. This script generates random points within a box depending on area of each letter, projects these points on to the surface edge and then connect them. These lines are then projected onto the surfaces creating the implied letters. The major inputs are the letters, number of points and number of lines.

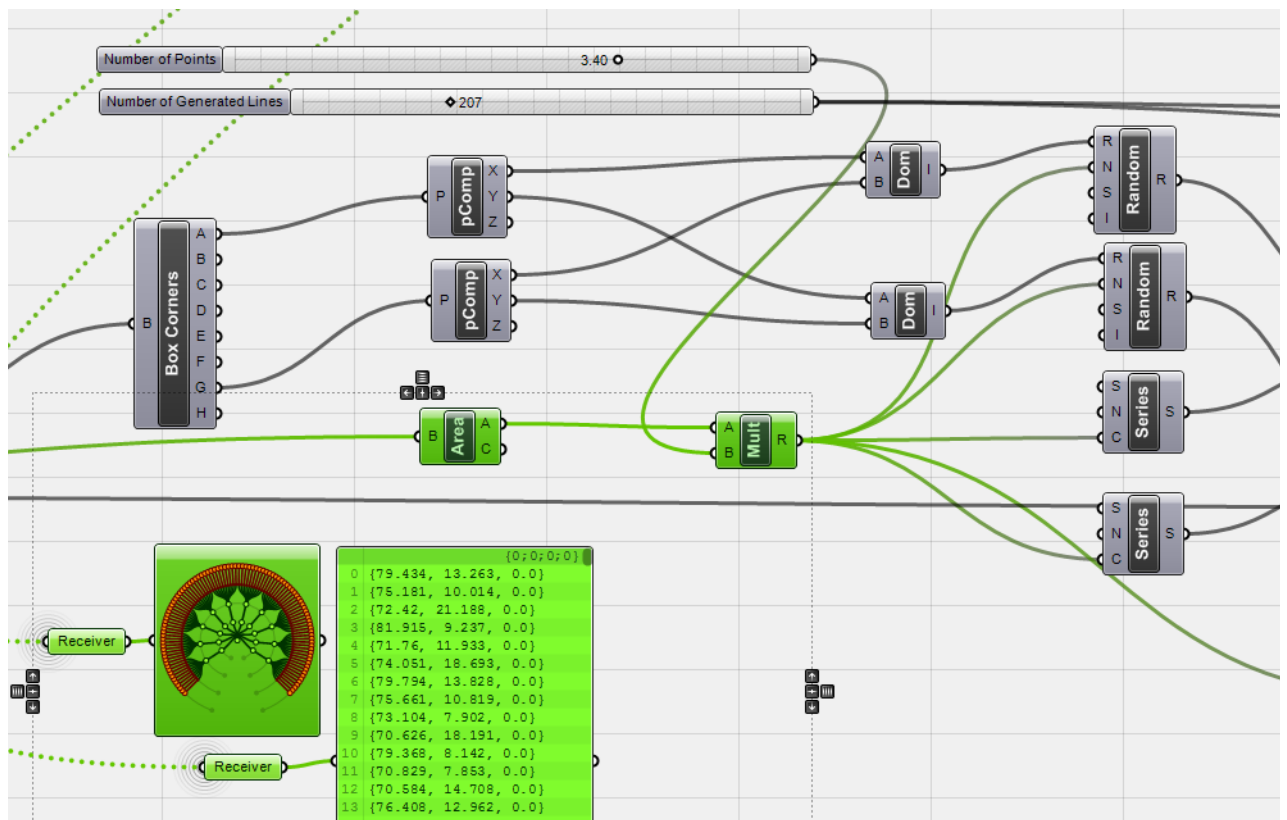
Overview of Code



Different Outputs of the Code



Close Up, Highlighting Information on the Data Tree and Inputs



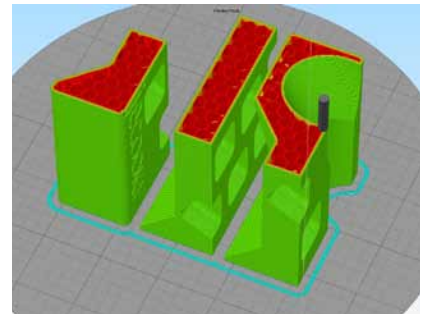
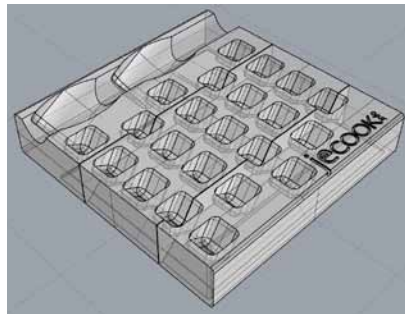
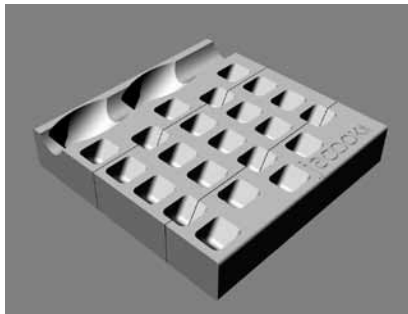
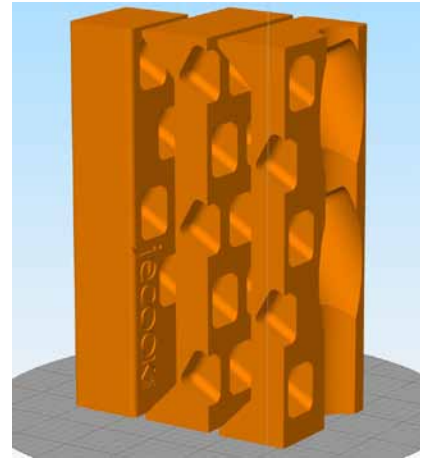


3D Prototyping

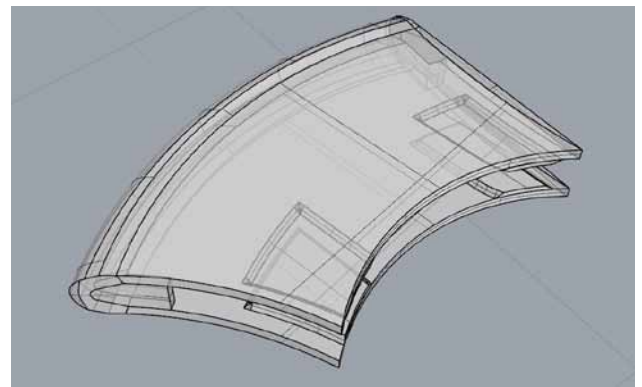
Custom Designed and Constructed Products

Rhino to 3D print development process, typically with minimal mock-ups/redesigns and featuring high resolution (0.1-0.2mm layer height) usable parts in ABS, PLA or HIPS based on specific application and use. All parts were fabricated on a custom built delta 3D printer, designed specifically for vibration resistance, high resolution and speed.

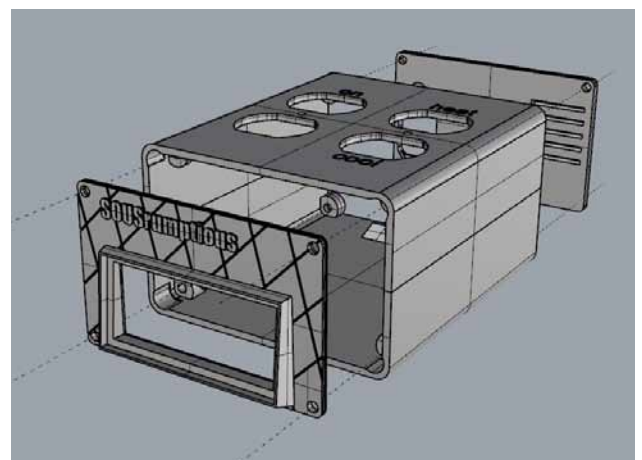
Product
Modification
- Storage
Container



Prototype
- Hatchet
Cover



Production
- Sous Vide
Controller



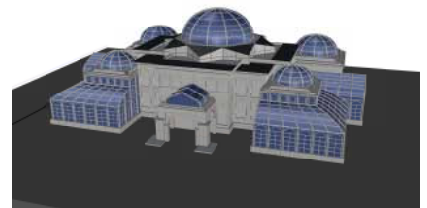
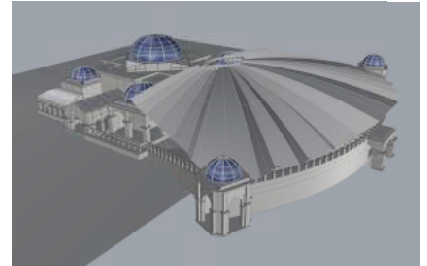
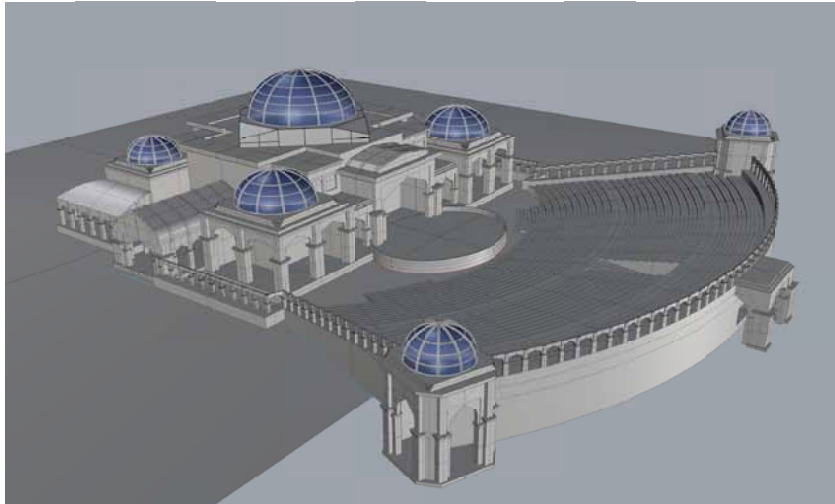


3D Design

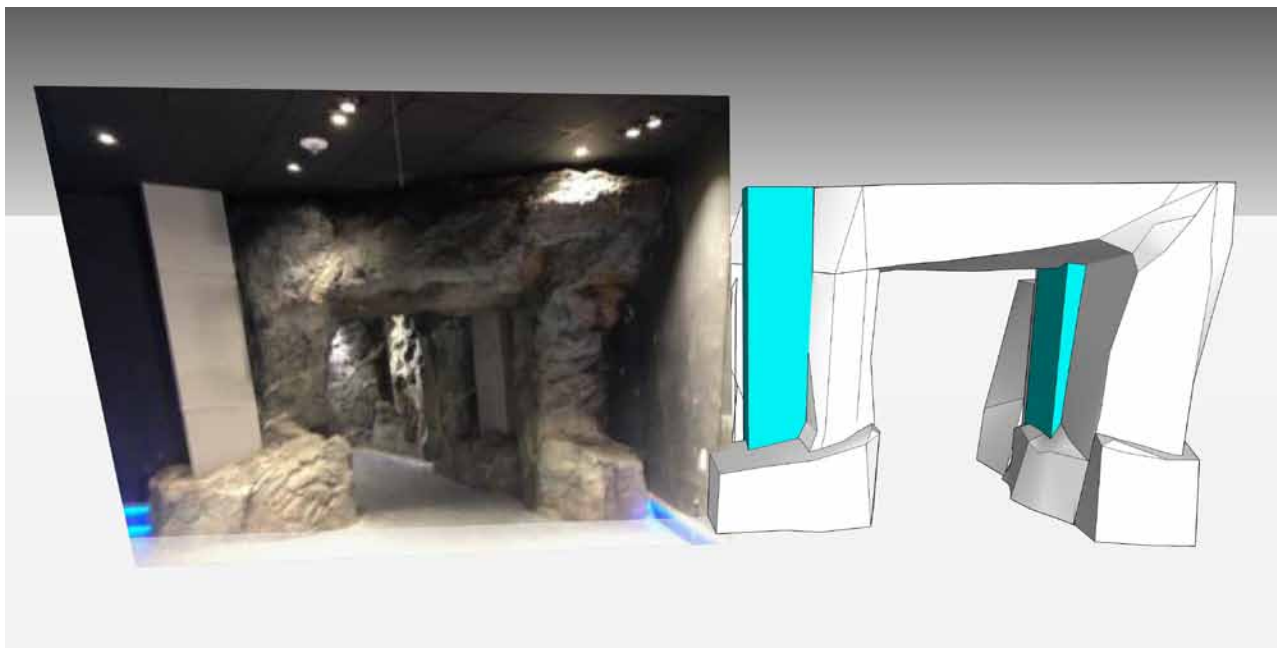
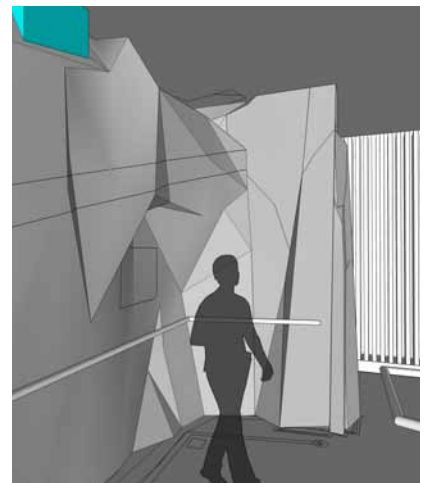
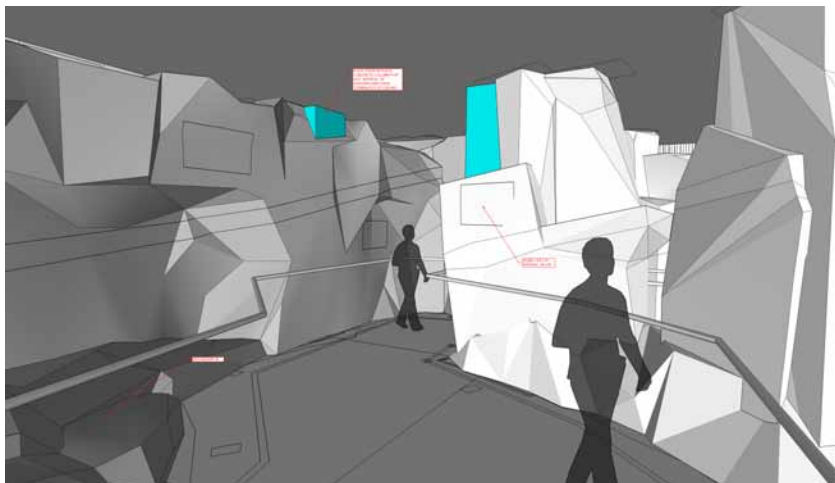
Various Projects

Design focused primarily on concept development and constructability for envisioned spaces. Development ranges from blue-sky art direction modeling to usability studies and conflict resolution with preexisting conditions.

Building
Massing
- Rhino



Rockwork
-SketchUp



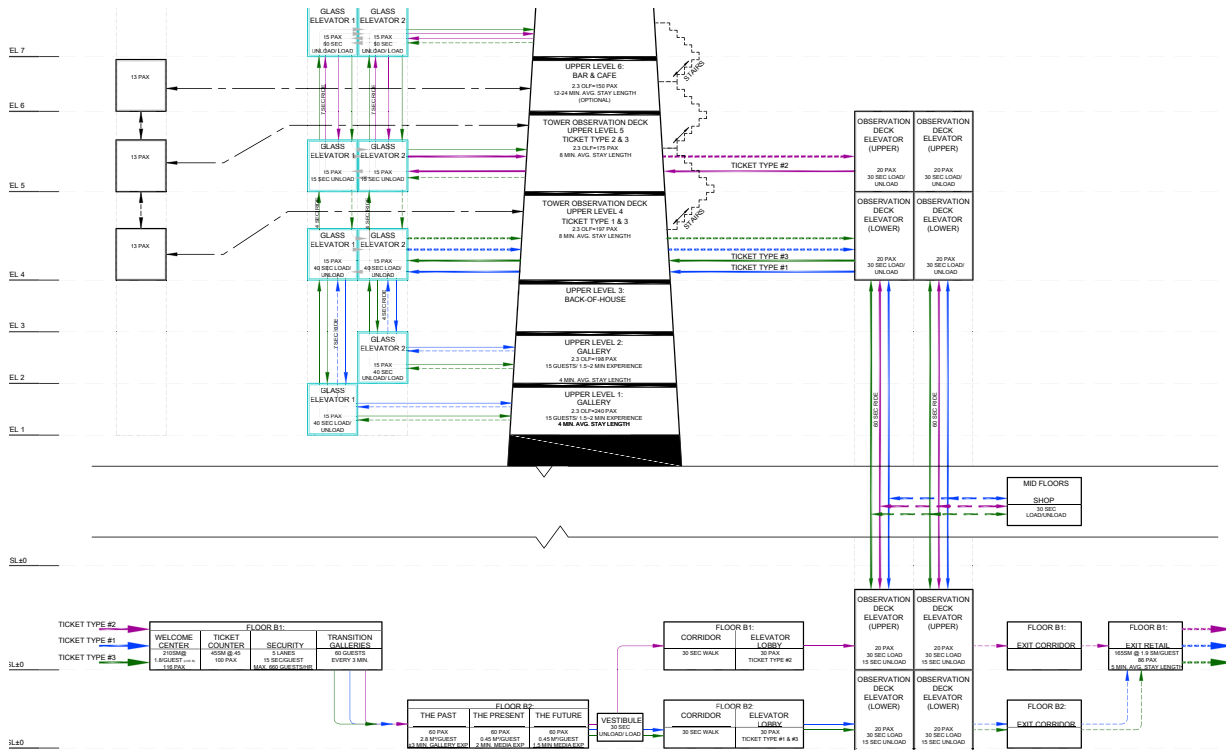


Design Analysis

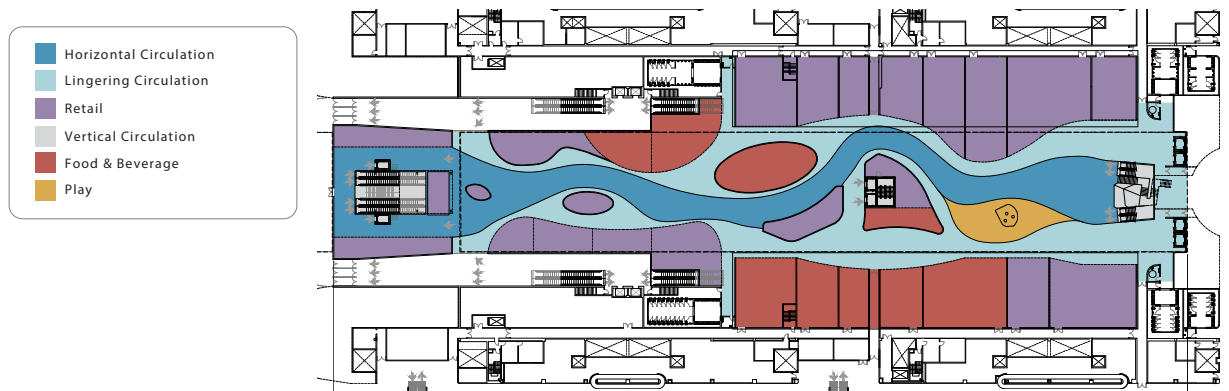
Various Projects

Critical analysis of guest circulation, theoretical hourly capacity and other critical project factors. Massing and overlay's done in AutoCAD and Adobe Illustrator primarily.

Circulation Analysis



Program Plan



Program & Circulation Overlay





Expenditure: Renderings

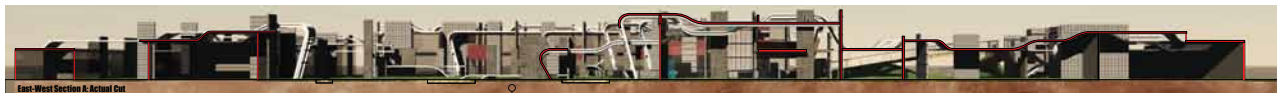
A Post Consumerism Paradigm Shift

This nine month project was an exploration on reusing existing abandoned shopping malls more appropriately in a down economy. This was done by turning this vacant center into a mixed use project aimed at the micro-environment surrounding the complex site.

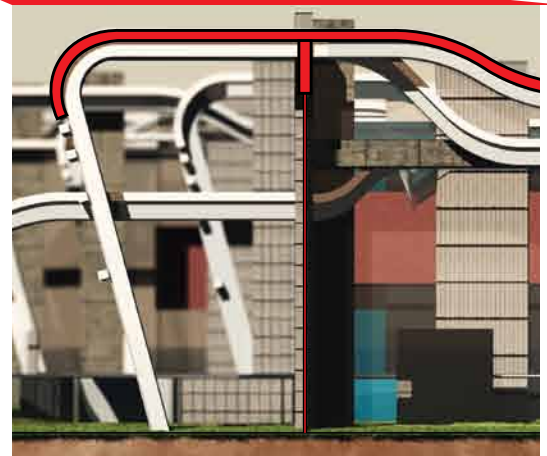
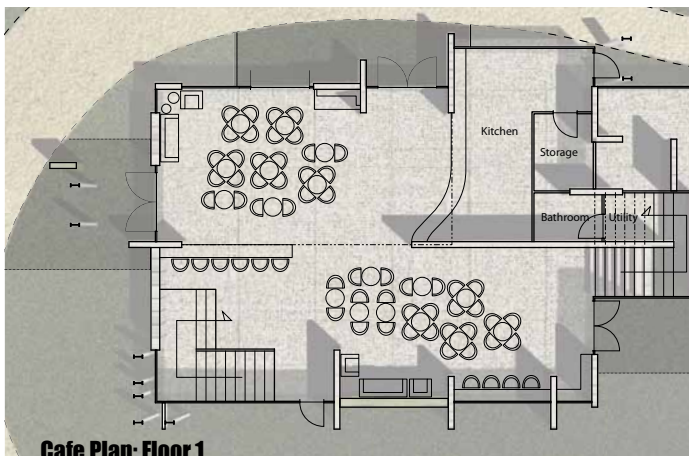
Perspectives



Site Section



Floor Plan



Sensory Section



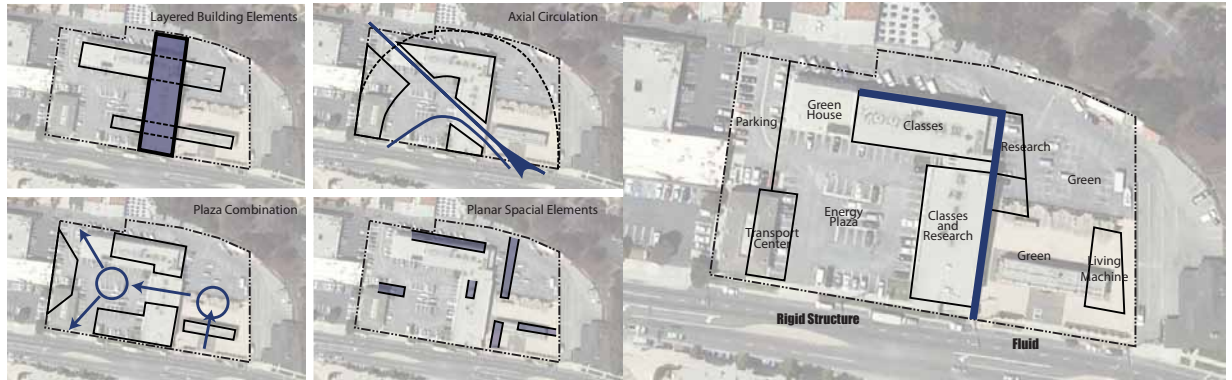


Expenditure: Analysis

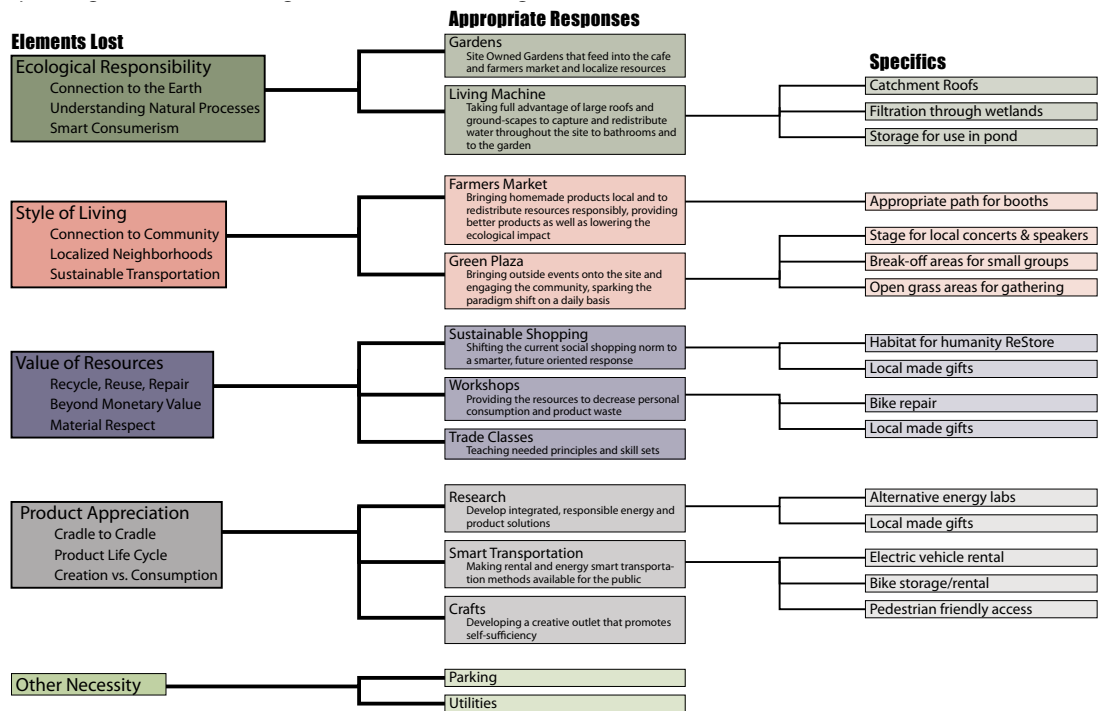
A Post Consumerism Paradigm Shift

In developing this project, many options were explored in regards to the existing structure. Also which a complex site and surroundings, much work was put into the program development and water conservation on site to remain sustainable.

Analysis Sketches



Programing Analysis

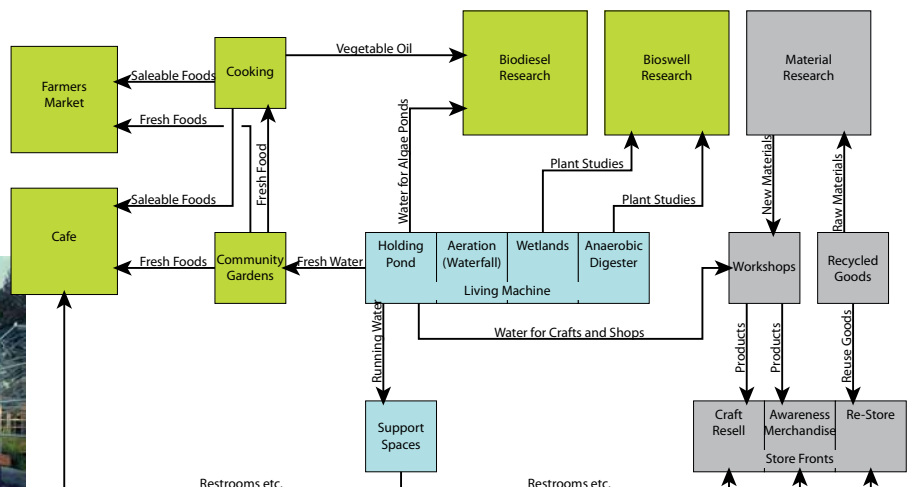


On-Site Water Diagram

Intentions and Application

Designing the project as a neighborhood
Self sufficient system of production
Responsible consumerism
Cradle to cradle mentality and understanding
Giving life to a unique community

Closed system:



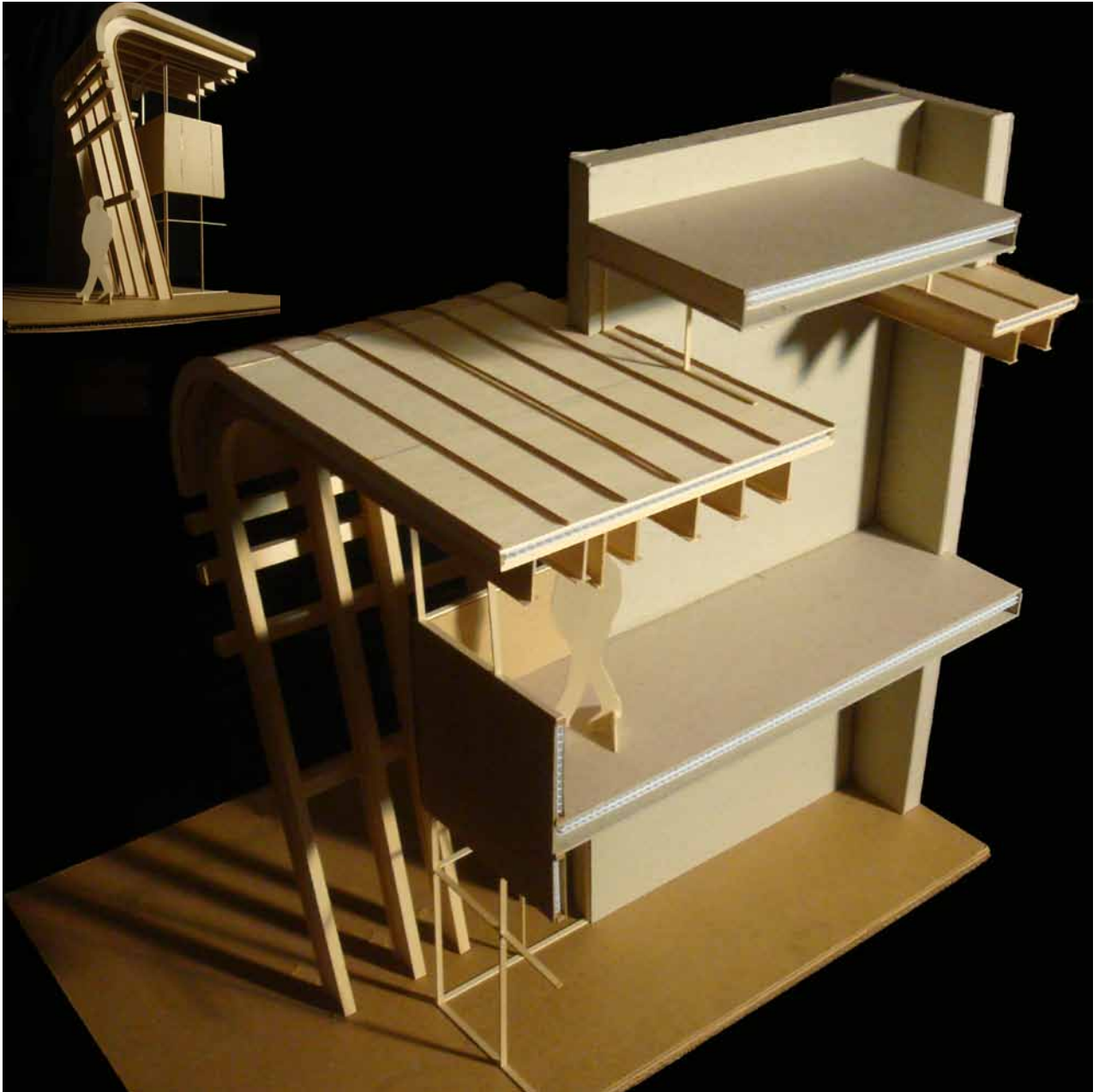


Expenditure: Model

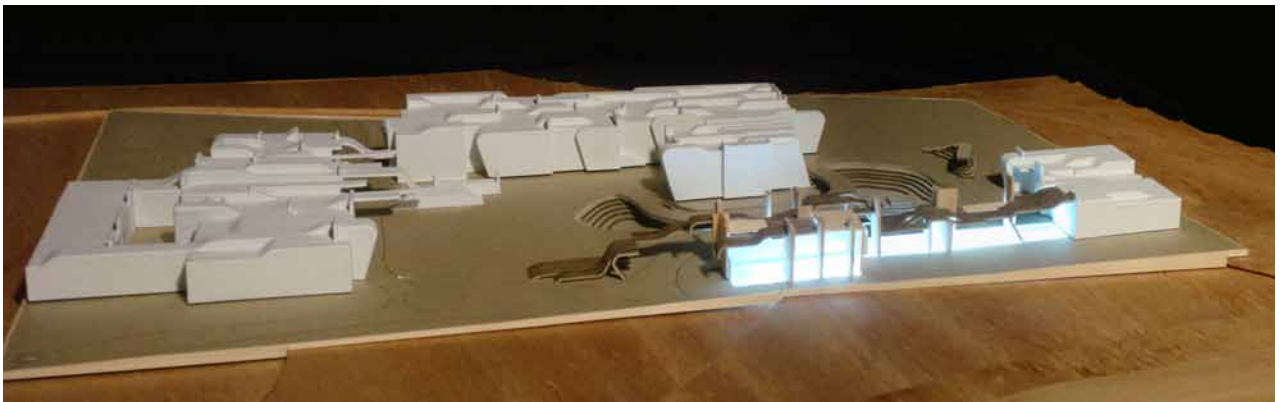
A Post Consumerism Paradigm Shift

For this development, efforts were taken to sustainably reuse existing structure (generally emphasized in the rendering with their rectangular nature) and implementing a new roof skin to engage and tie in different functions. This ribbon and rectangular dichotomy allowed for more sustainable movements for better resource management and energy efficiency.

Cafe Detail
Model



Site Model





Water Conservation: Analysis

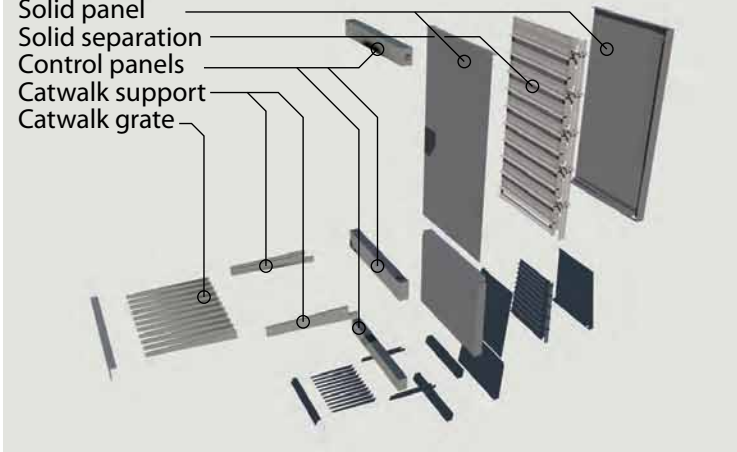
Vertical Skin Water Treatment

This water conservation project was aimed at exploring the ability to treat water in a dense urban environment where traditional off-site methods might not be applicable. The project was modeled after the living machine method of water treatment, catching water on the roof level and then engaging the vertical skin for water treatment to minimize impact on precious urban real estate.

Rendered
Component
Details

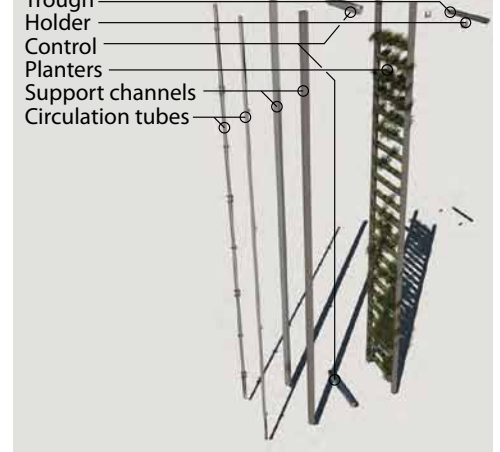
Solid Axonometric

Solid panel
Solid separation
Control panels
Catwalk support
Catwalk grate

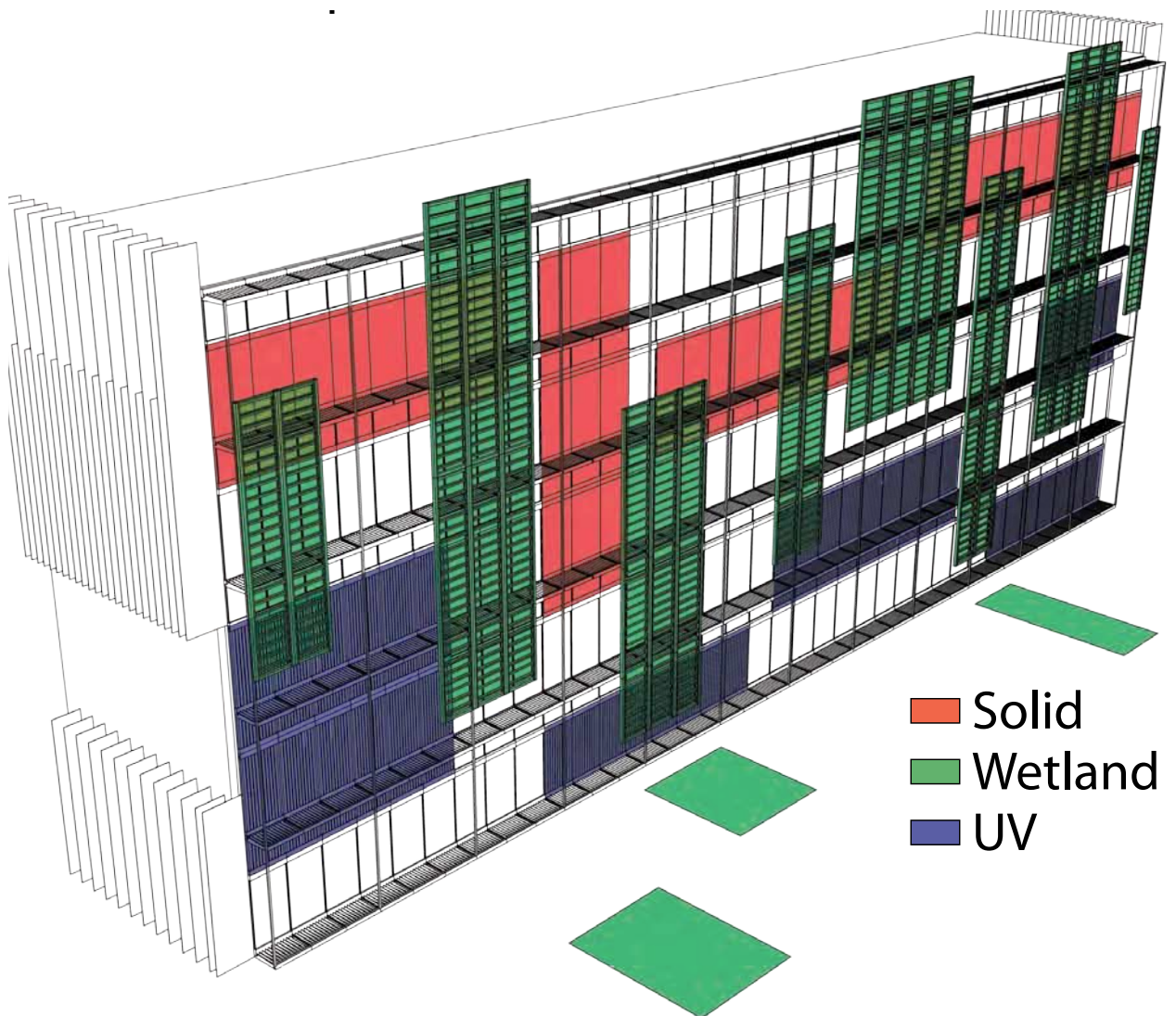


Wetland Axonometric

Trough
Holder
Control
Planters
Support channels
Circulation tubes



Skin Facade
Diagram



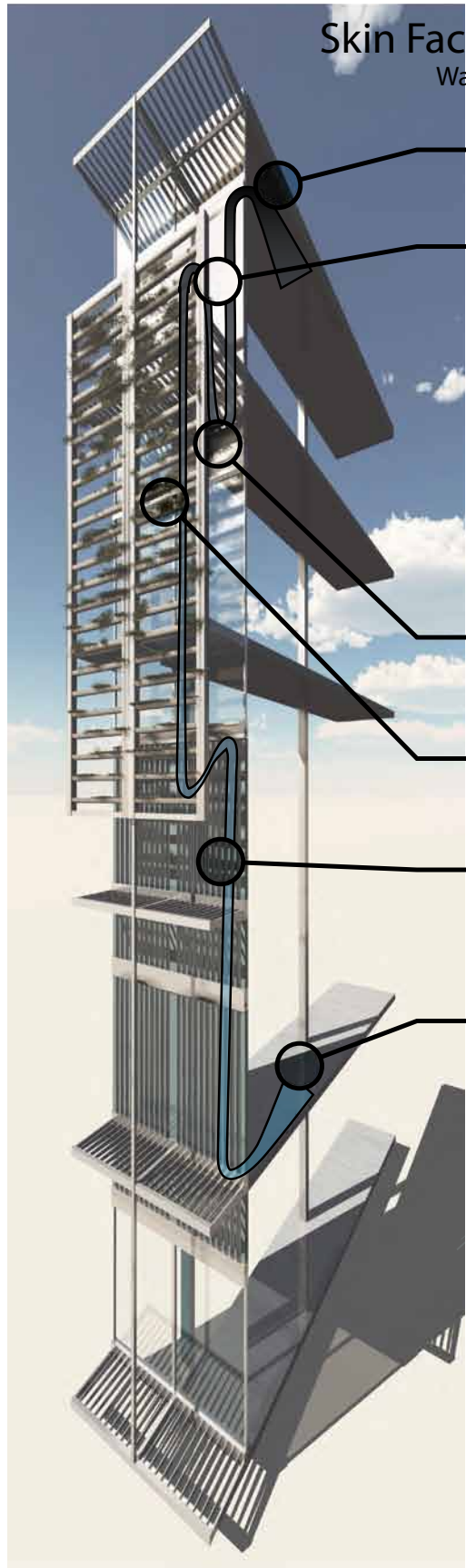


Water Conservation: Detail

Vertical Skin Water Treatment

This detailed strip shows the water flow through the skin facade overlaid on a rendering. Using existing living machines as a standard for development, 3 primary sections of skin were developed to mimic the different areas as highlighted below. Each section (solid treatment, wetland and ultra violet) serves an integral part of the water treatment for the building.

Exterior
Skin Grey
Water Flow



Skin Facade Water Treatment

Water Filtration in a Building Facade

Rainwater Catchment

Harnessing the roof to gather natural water abundant in New Orleans

Solid Separation

Using the skin to separate solids from slow moving water using natural sediment and secondary filters



Anaerobic Reactor

Below the solid separation section there is an anaerobic reactor using microorganisms to digest solids

Wetland Section

Most of the filtration happens in the wetland section, mimicking natural wetland processes

UV Treatment and Storage

This stage is crucial for human use as it uses UV to remove microorganisms that could potentially be harmful or cause damage to the system

Water Reuse

The remain water is usable as non-potable grey water; primarily in toilets and for landscaping. The water can also be treated further with reverse osmosis to be made potable.



Water Conservation: Model

Vertical Skin Water Treatment

This model was built at 1/4" scale as a section through the Southwest corner of the facade. The system highlights the 4 different sections of skin and the secondary skin system on the west side. From this model you can also see the panel construction for the curtain wall that can be installed as single multi-story sections before plants and water are added to the system.

Skin Section
1/4" Model

