





Render by Rose Tabassi

# I

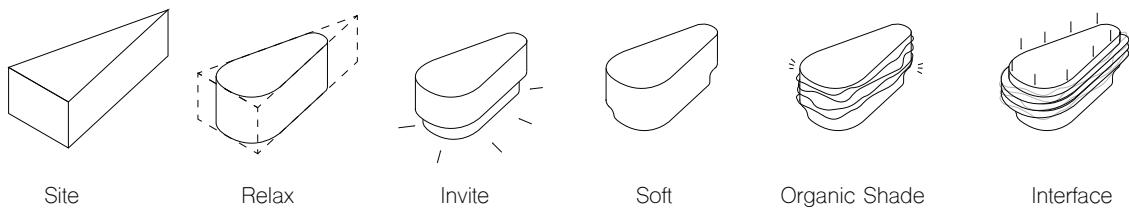
## Vistula Library

*Shortlisted Competition Entry*  
Team: Rose Tabassi, Nico Gomes  
*Fall 2019*

The very first learners were explorers. The ones who dared to venture out in unfamiliar land, fueled by their innate desire to expand their consciousness. Vistula library seeks to channel in us this explorative energy, pushing each individual to challenge their preconceived notions of the world, while providing a nurturing environment for those new thoughts to flourish.

In a world where information is digitized, filtered, and curated, we are able to find what we are looking for faster than ever before. However, the effectiveness of these search algorithms comes with a bitter after effect. Because we are fed more and more of what we like and what we seek, we are pushed deeper and deeper into our own, personalized reality, and drawn away from any contradictory content. Though technology has brought us closer to that and those we love, it has also brought us away from the unfamiliar. More than ever before, we need a space that allows for serendipitous encounters, free exploration, and human connection. This is the new definition of the library.

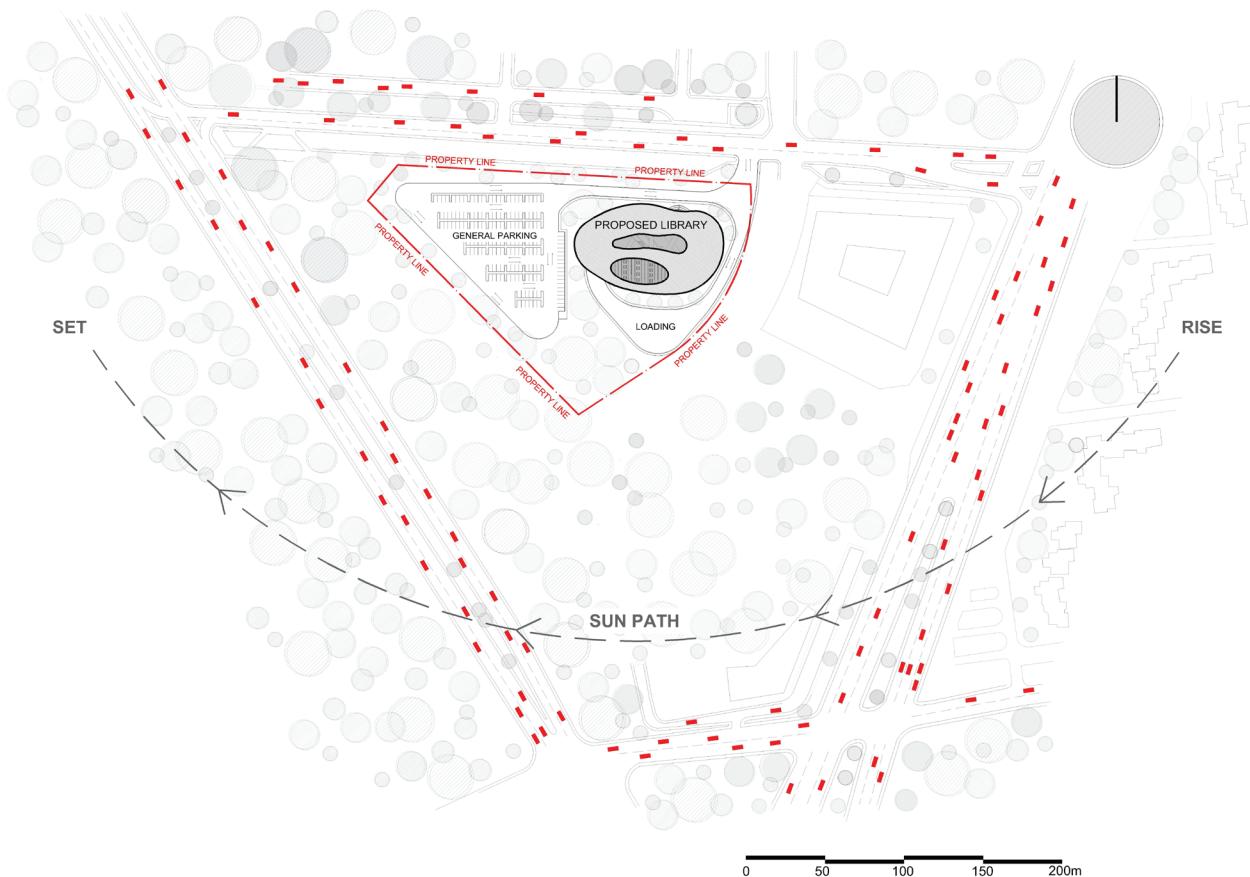
## Morphology



## Organization

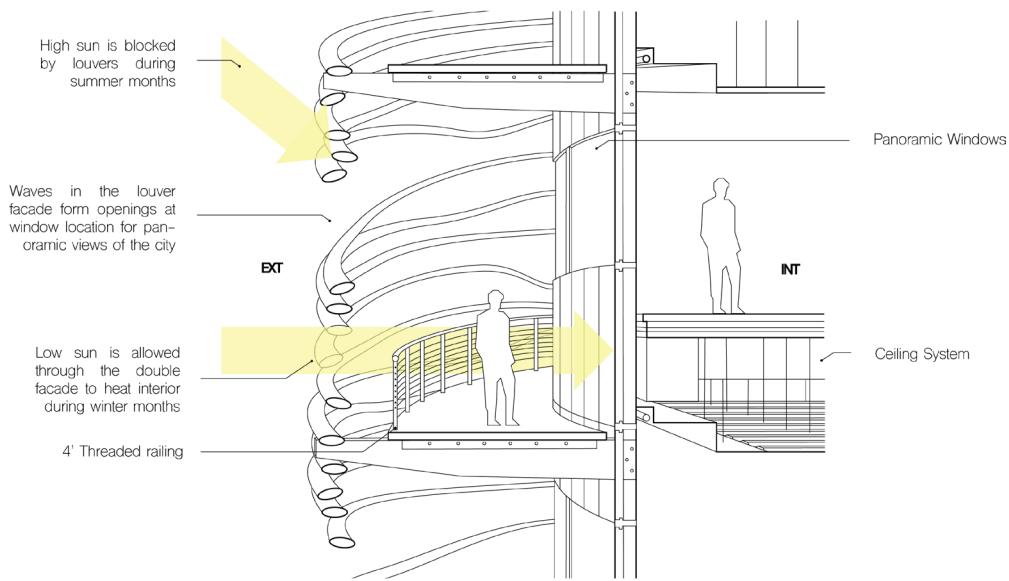


## Site Plan

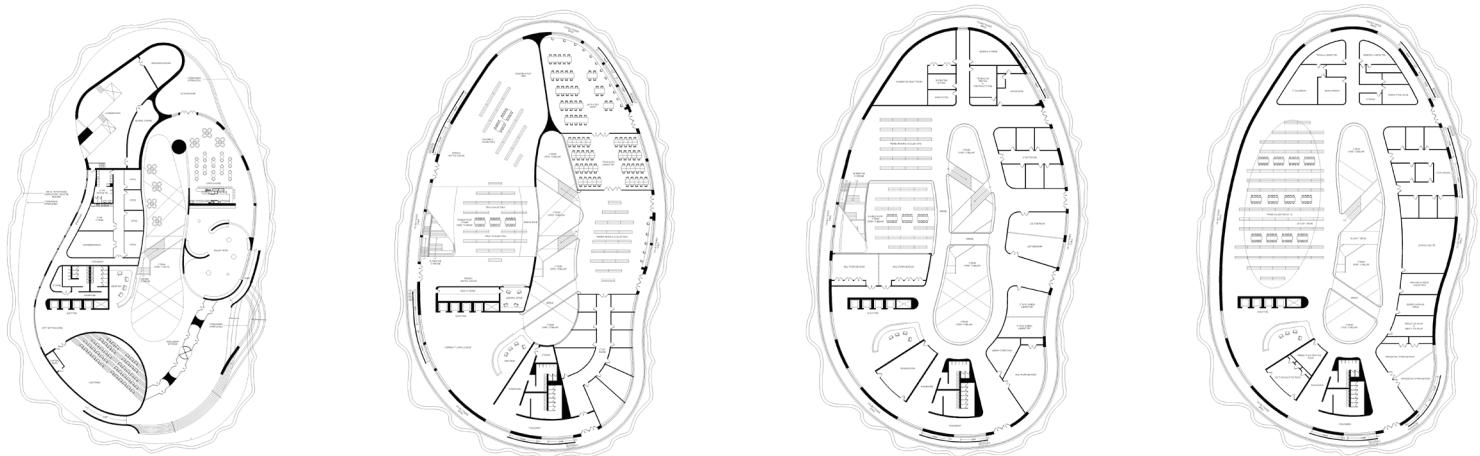


Site Plan Drawing by Nico Gomes

## Double Facade Perspective Section



## Floor Plans



Floor Plan Drawings by Nico Gomes

## Technological Integration

### Artificial Intelligence

Public data is used to identify trends, gauge public interests on certain topics, and create heat maps of library usage, in order to inform decisions on space programming, workshops, forums and other events.

### Bluetooth

Bluetooth Indoor Positioning Systems (IPS) will allow users to use their personal devices to locate the exact position of a room, book or other resource down to the centimeter.

### Biometrics

Expensive and wasteful library cards have been replaced by biometrics. The library keeps track of what you've rented out, what your interests are, what rooms you have booked, and what conferences you registered for, all through your fingerprint.

### Augmented Reality

Headsets are available for rent in the library's TechHub, which can be used in meetings or study sessions to enhance collaboration.

### Virtual Reality

Dedicated rooms for virtual reality experiences allows for a safe environment in which one can be fully immersed in educational games and creative worlds.

### Digital Twin

The library is equipped with a multitude of sensors, allowing custodians and managers to keep track of the physical condition of the library, its energy usage, as well as its inventory.



Render by Patrick Angkiriwang

## II

### Aura Pavillion

*Term 1B Final Project  
Team: Molly Zang, Patrick Angkiriwang, Sarah Furtado  
Summer 2019*

#### **City of Waterloo Strategic Plan**

"Waterloo is world-recognized for discovery, built on the strengths of our people and centred on entrepreneurship and opportunity, creating a vibrant, sustainable, welcoming and prosperous community."

City of Waterloo Community Vision, 2015-2018 Strategic Plan

#### **Design problem**

Creating a pavilion that reflects Waterloo's spirit of entrepreneurship and community building.

#### **Concept**

Creating a hyper flexible space for sharing new ideas.

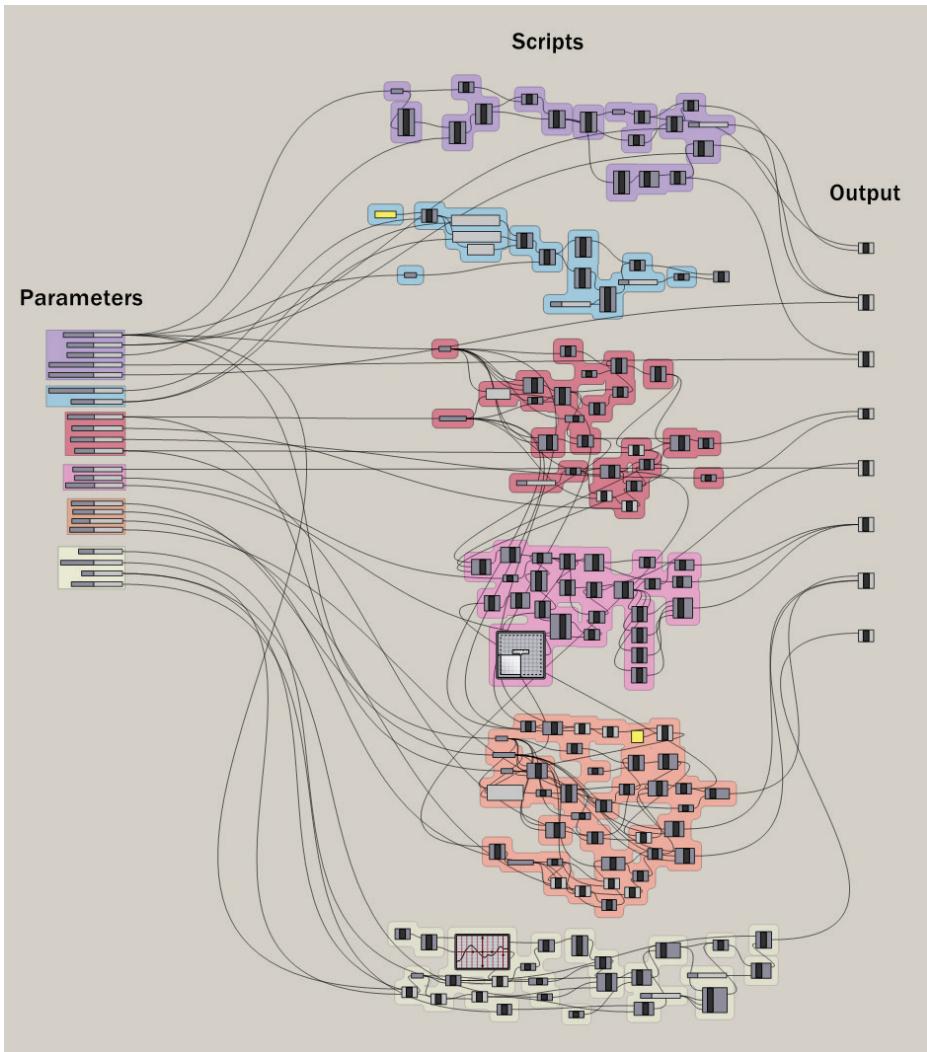
Vibrant - Aura will be composed of two separate parts. One is the permanent, self-supporting metallic truss, and two is an interchangeable facade that can be removed, or personalized for any purpose. This creates a vibrant, ever changing, personalized space that will revitalized its surroundings.

Entrepreneurship - Companies and organization will be able to rent out Aura through the city of Waterloo, and clad it's structure with the facade of their choice, creating a personalized, immersive experience for the community, while increasing the company's social presence.

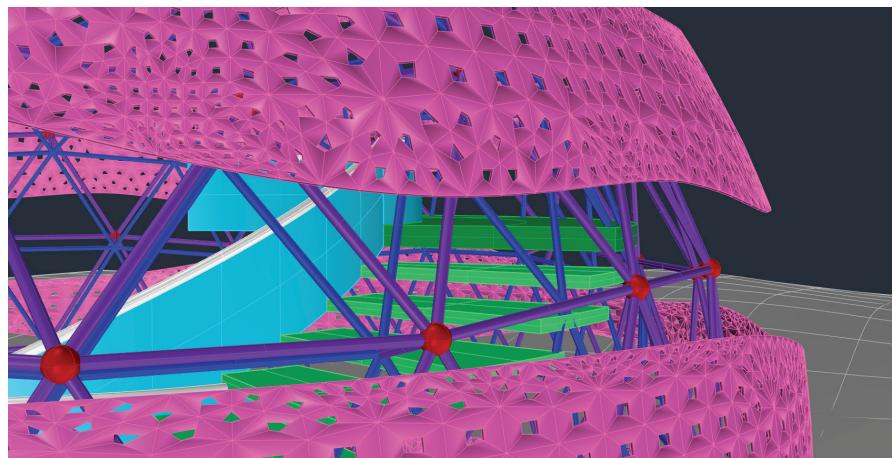
Sustainable - Aura aims to be carbon neutral through the use of recyclable building materials.

Welcoming - Though requiring a lot of structure, Aura is able to accomplish a feeling of lightness through a double layered triangular truss system which allows for thinner members. Additionally, the porosity of Aura's default facade adds to the structure seeming transparency. These features allow the dome shaped pavilion to sit gently on the ground and feel more welcoming.

## Fully Parametric Definition

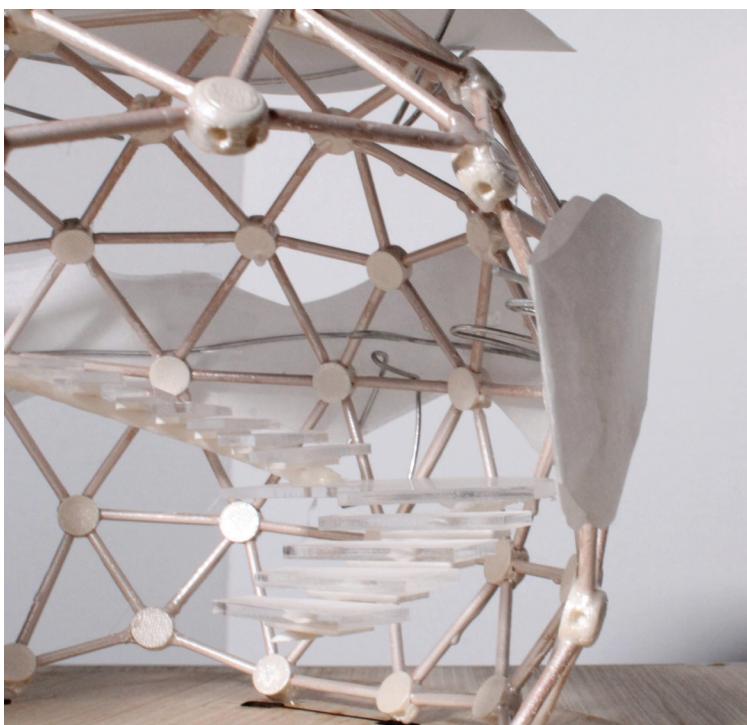


Grasshopper script I wrote that generates the entire pavillion from a set of parameters.



Parametric elements generated by the GH script colored for easy visualization.

## 1:50 Physical Model



3D printed joints derived from parametric model

Laser cut acrylic glass steps and landings also from parametric model



### III

## Sway

*Term 1A Final Project  
Team: Augusta Li, Vincent Clement, Harry Jiang  
Fall 2018*

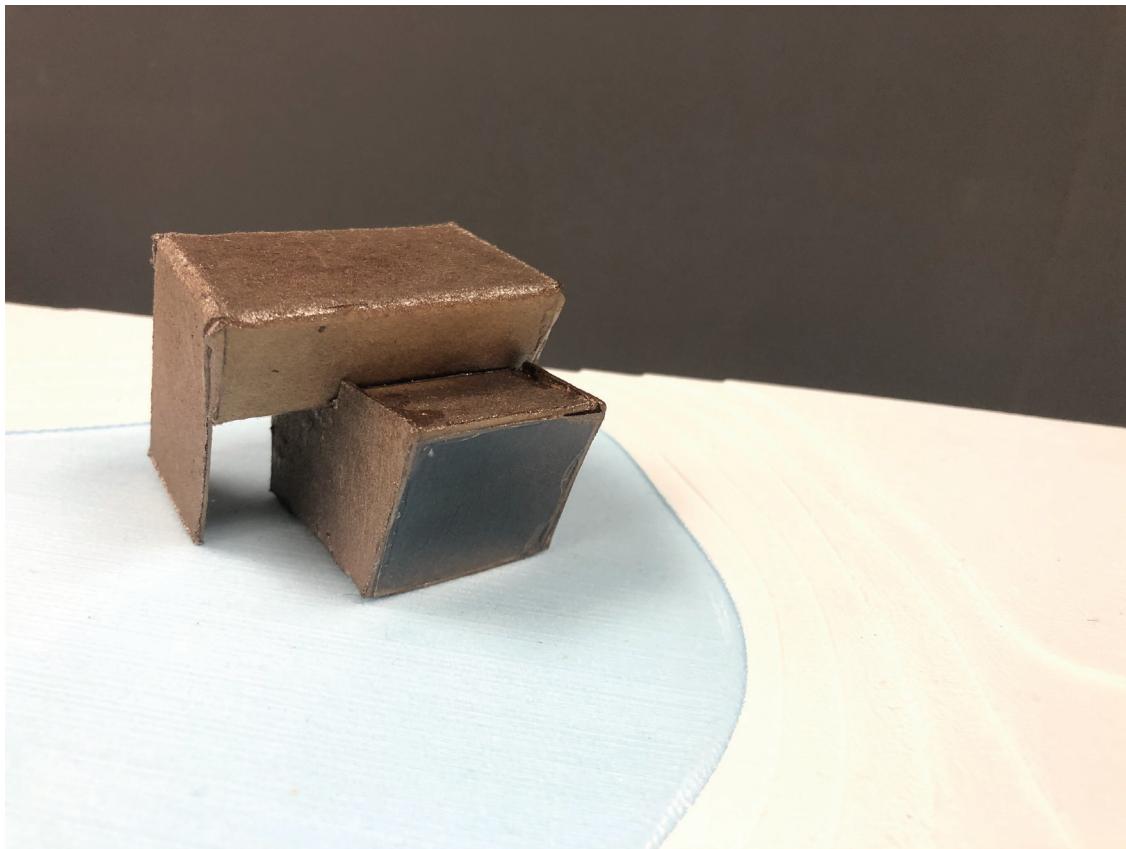
*As you walk along the gravel path of the trans-Canada trail with your bike one your side, you instantly feel protected by the large overhanging branches on the side of the trail. As you gaze across what seems to be an endless sea of tall grass, you notice an almost imperceptible dirt trail. You take it. Long grass surrounds you from all sides, softly swaying with each breath of the wind, creating mesmerizing light streaks on your bare arms. You are lost, but you feel at peace. Suddenly, the columns of grass split open wide, and the view of the lake leaves you awe-struck.*

Building in an environmental reserve is paradoxical. How, then, do we go about building shelter while respecting the reserve's natural beauty? SWAY seeks to embody the principle of continuity and congruence in all aspects of its design. The protective overhang of the trees is embodied in the sheltered mudroom. The mystery of the approach is continued with a wood partition partially concealing the entrance of the hut. Finally, the sway of the tall grass is captured by the tilted frame of the entire structure. Sway creates an intimate resting space for travellers, while valourizing the reserve's inherent grace.

**1:10 Physical Model**



**1:100 Physical Model**





## IV

### Atlas

*Term 1B Project  
Team: Augusta Li, Vincent Clement, Harry Jiang  
Summer 2019*

#### An open concept playground

##### *Imagination - Adventure - Open Play*

A playground consisting mostly of open area, with clusters of components evenly dispersed throughout the play area, leaves room for the kids to roam freely and encourages exploration and curiosity. These themes shaped the salient feature of our playground, as one composed of many different "sections", each with their own distinct characteristics. Extrapolating this idea further, we began to imagine the playscape as a map of some fantastical world, with kingdoms beholding their own exciting adventures. A comment of a student envisioning the playground as a cross-section of the earth, with all of its different layers as pieces of the structure, lead to the idea of each kingdom representing a fundamental element: Earth, Fire, Water, Air. We named our playground *Atlas*.

#### An Inclusive space

##### *Socialization - Thrill*

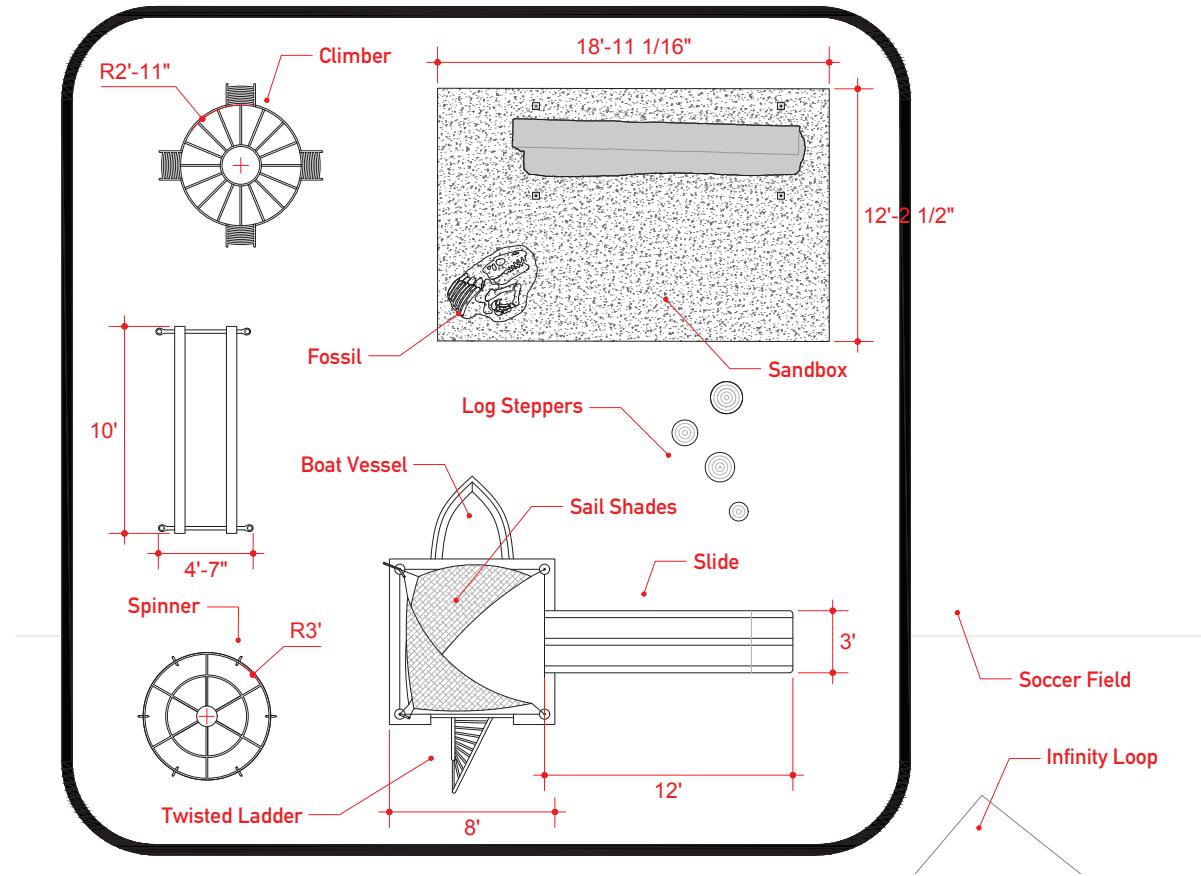
One opinion, mentioned explicitly or implicitly by all clients, was that having fun is best accomplished with friends. This pushed us to incorporate components that were both thrilling, and required a group to operate. The overhead spinner we included in our final design is a perfect example of how a component can embody both thrill and inclusiveness. Colloquially referred to as the "umbrella" by EZ students for its hemispherical top supported by a post, this highly requested component invites up to 4 children to grab on to its extremities and run around its axis until their feet are off the ground. Not only does the umbrella require multiple children to operate, but it in fact becomes more pleasurable as friends join in and increase the momentum.

#### Progressions

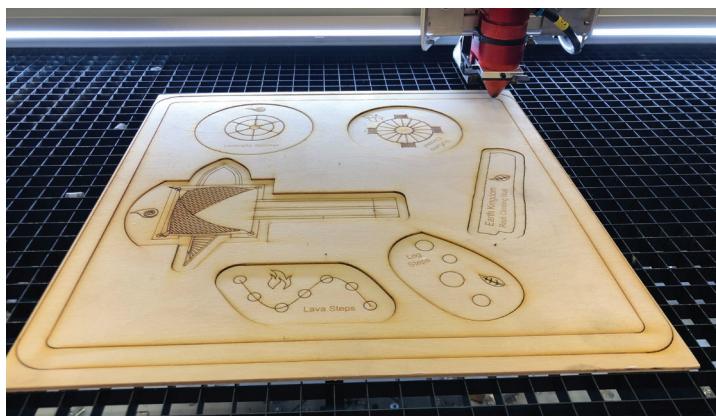
##### *Competition - Safety*

How does a playground be both challenging and safe? For this to be accomplished, it was clear to us from the early stages that alternatives must be available to accommodate for children of different physical aptitudes. This way, the less advanced will have be able to start of with easier paths with steppers, straight ladders, balancing rails etc., and slowly work their way up to more challenging components, such as 90 degree twist ladders, spherical grip monkey bars, and the volcano climber. Having elements of varying difficulty prolongs path to mastery, and consequently, the "enjoyment lifespan" of the playground, all the while giving children of all levels of athleticism, equally fun, and safer alternatives.

## Site Plan



## Puzzle Game





# V

## Photography

This is where it all started. Ever since I began looking at the world through the lens of a camera, I became passionate with our natural and built environment. Photography is a medium through which someone's reality can be visually expressed for others to see and empathize with. I find this notion intrinsically linked with the process of architectural design. Throughout my projects, I make a concerted effort to reflect the building's environment and the culture of its people in the structure itself.

