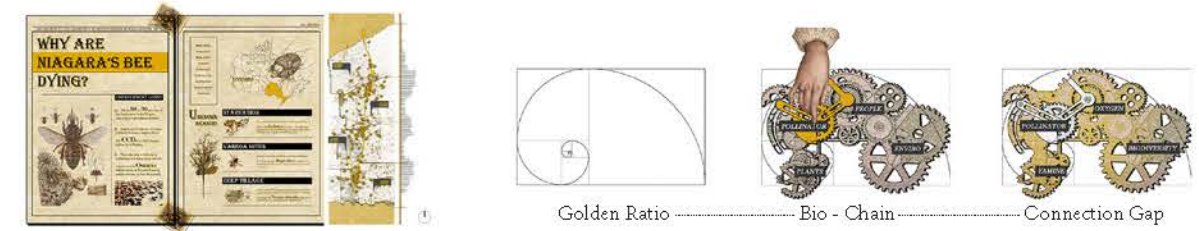


Background - Niagara Beeway

The site is a national park located within the boundary of Niagara Beeway formed by seven years of bee study. Bees suffered enormous losses during the past seven years. Feral swarms which were historically common throughout Niagara have been decimated, except within 2 km on each side of the St Lawrence Seaway, the Welland Canal section that runs from c to Port Colborne.

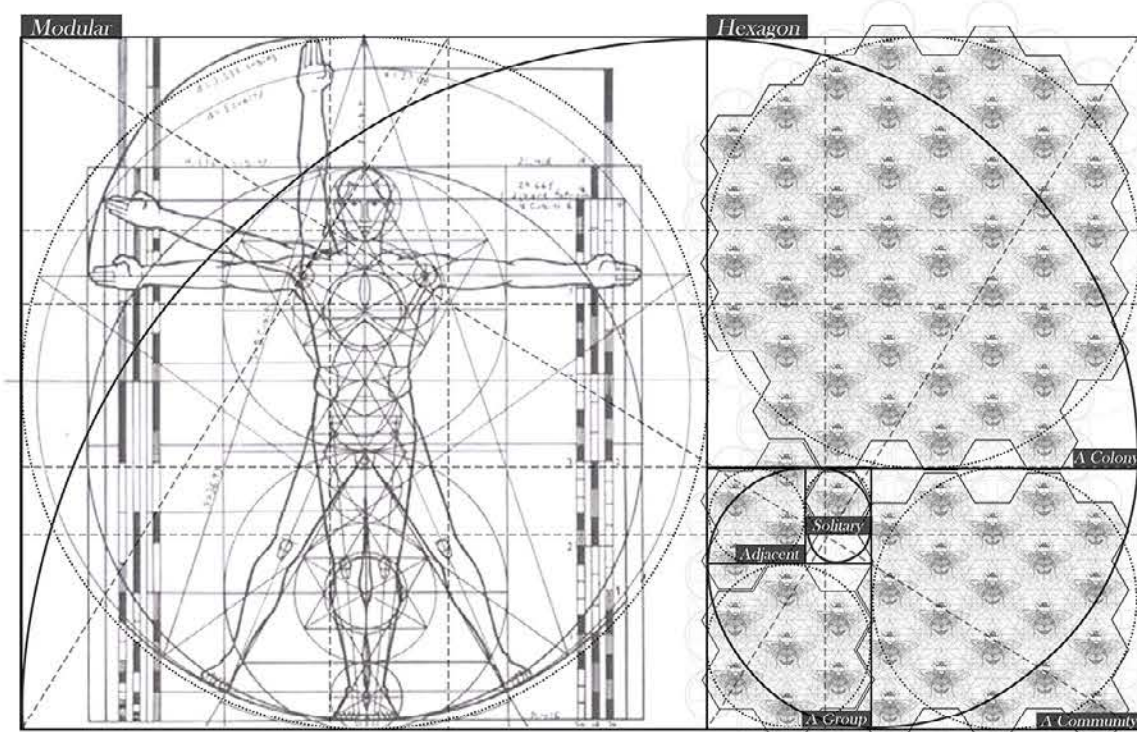
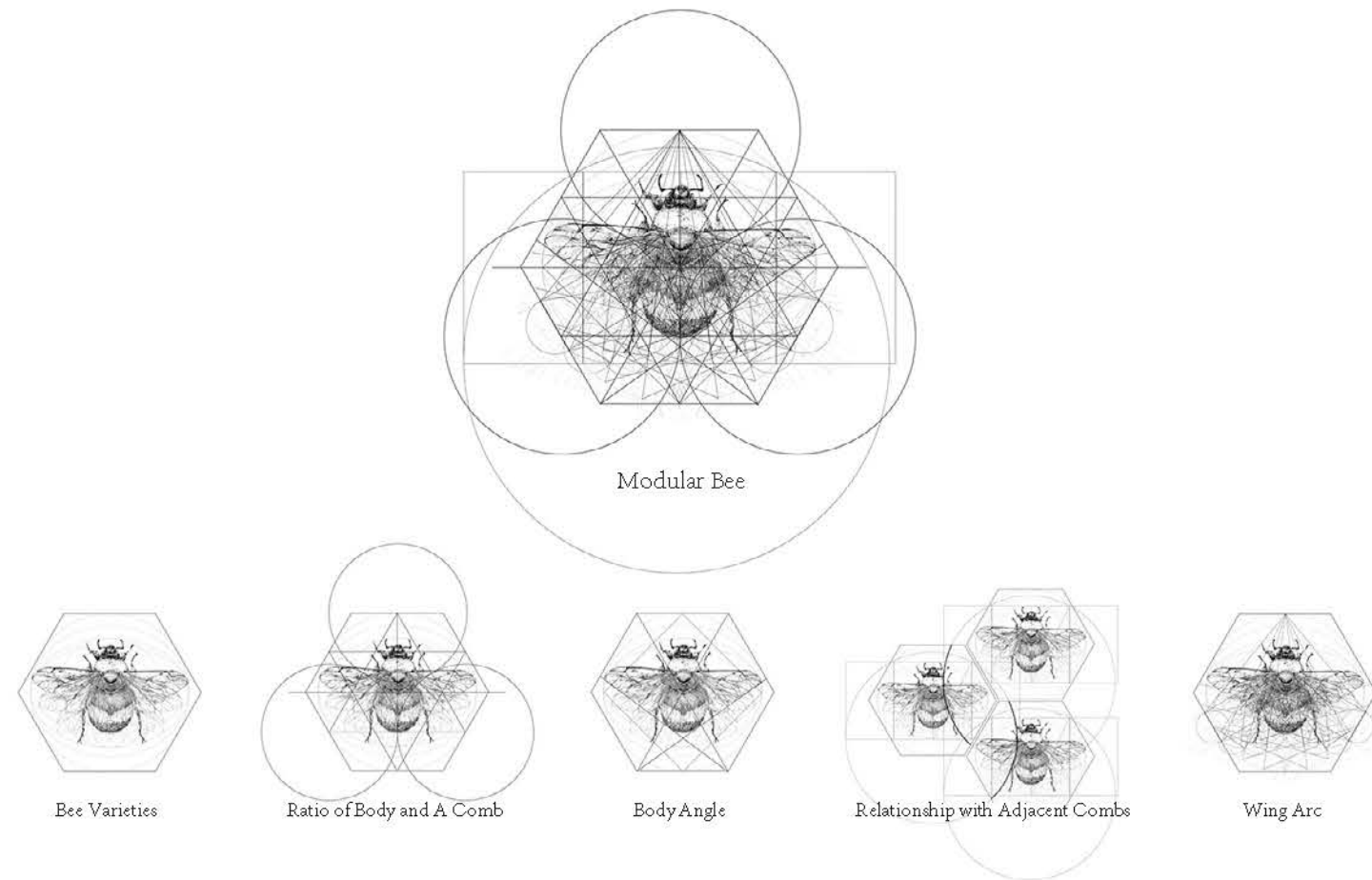


BEERONOI

Project Type: Niagara Bee Research Center(Solo)
Duration: Jun. 2018 - Jul. 2018
Instructor: William Galloway



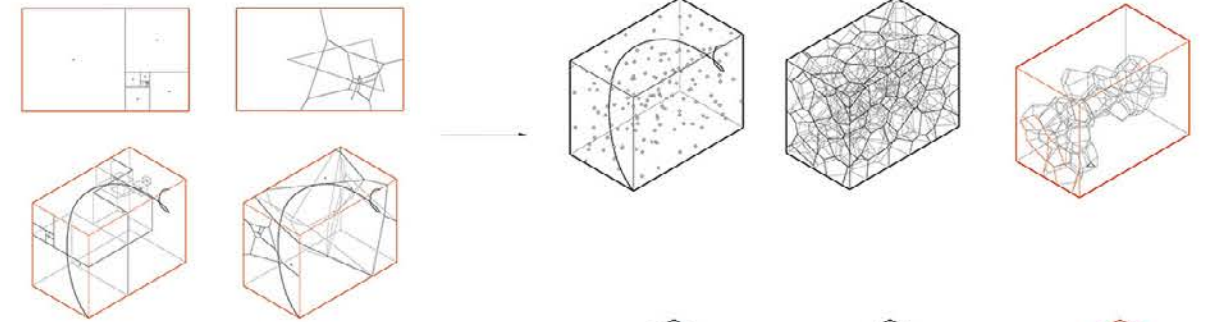
Concept - Modular Bee



Form - Optimization

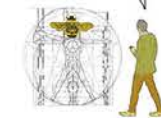
CULLED

Change Space
Division Rule!



SCALED

Different
Living scale?



Source: 100 points

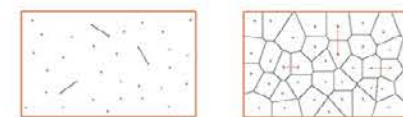
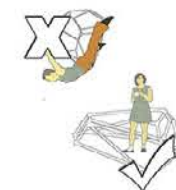
Power X: 25
Power Y: 25

Power X: 0
Power Y: 25

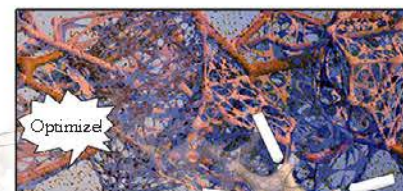
Power X: 25
Power Y: 25

Flatten Ratio: 25% 40%

FLATTEN



SKELETON



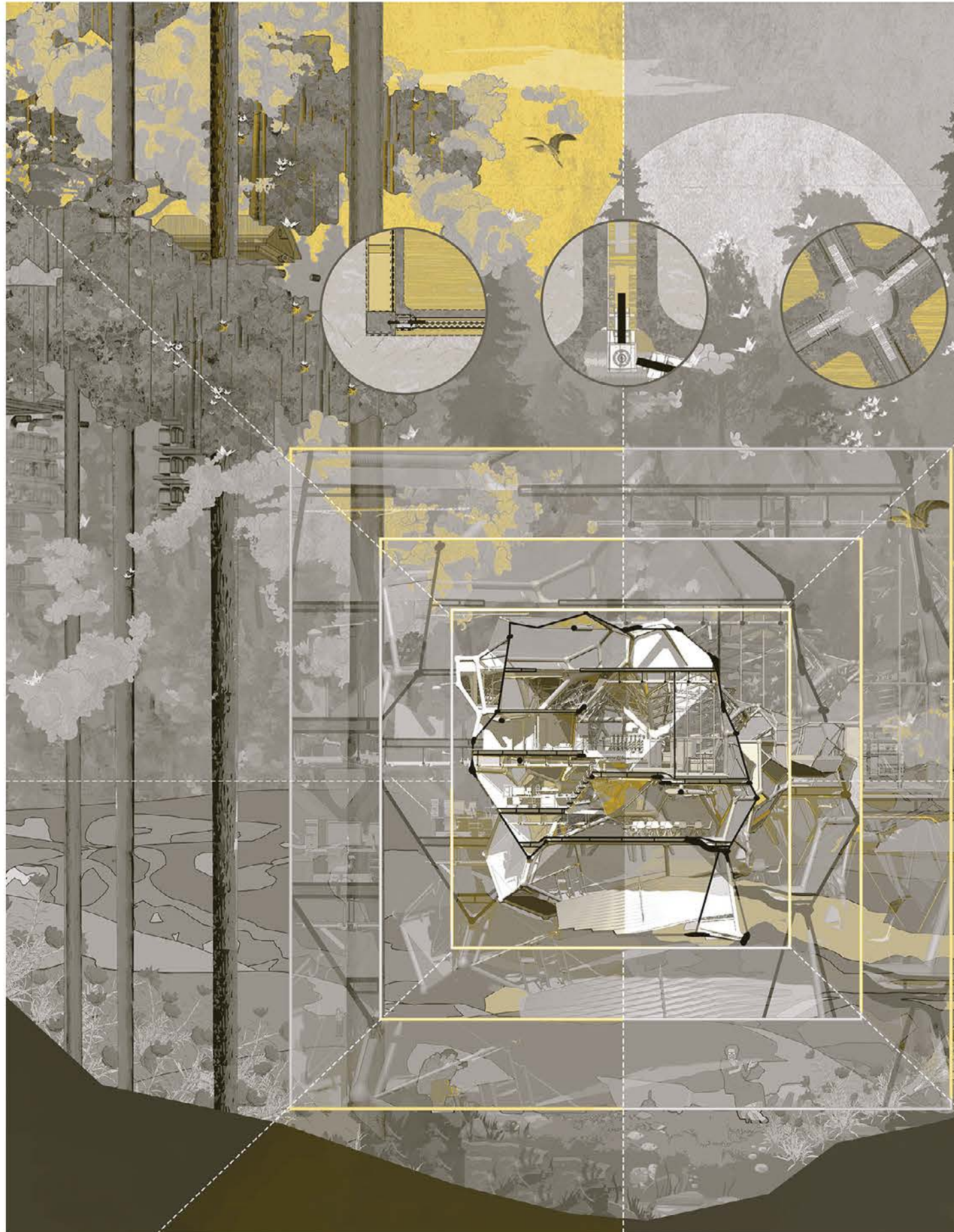
Optimize!

Rough Pipe

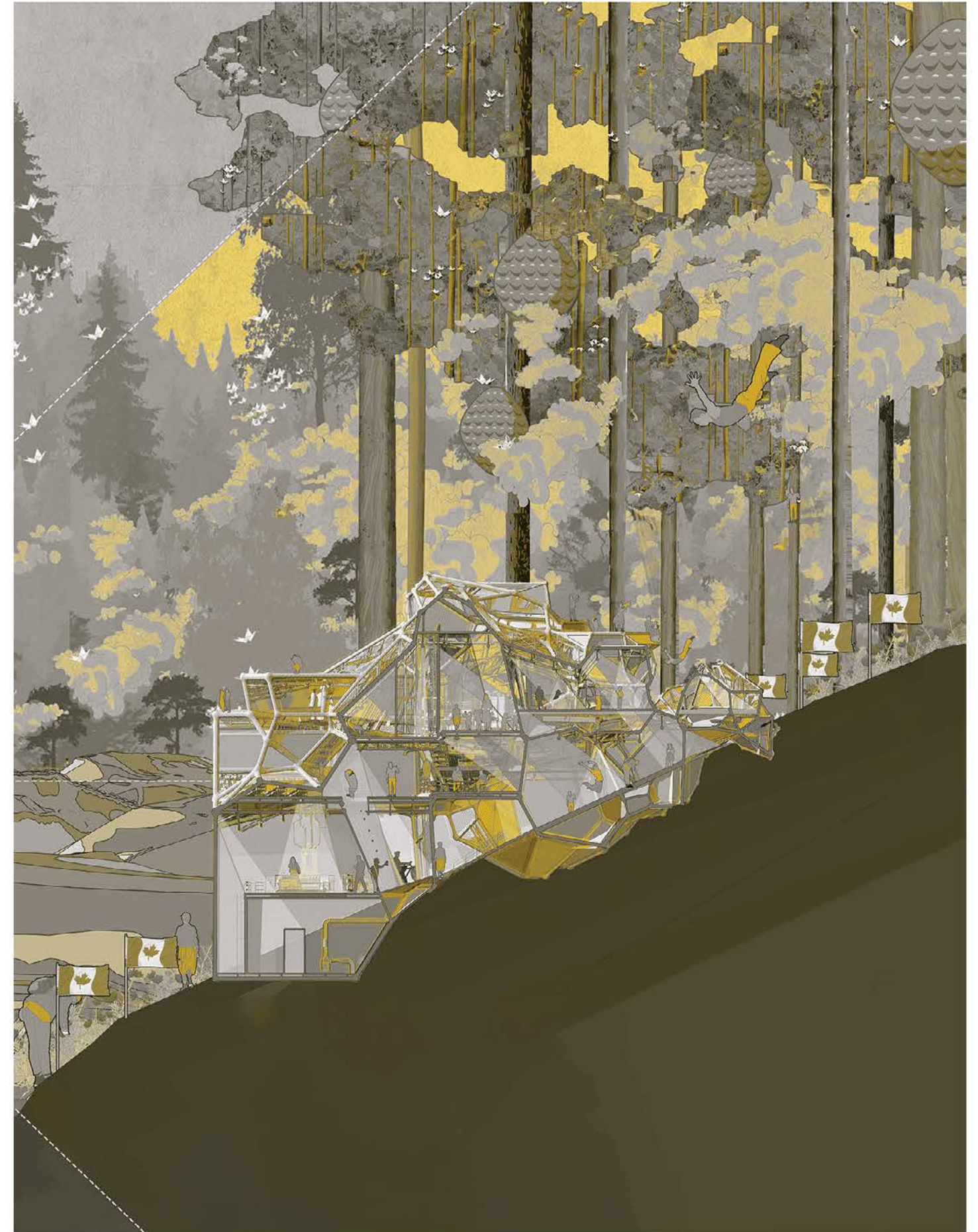
Smooth Skeleton

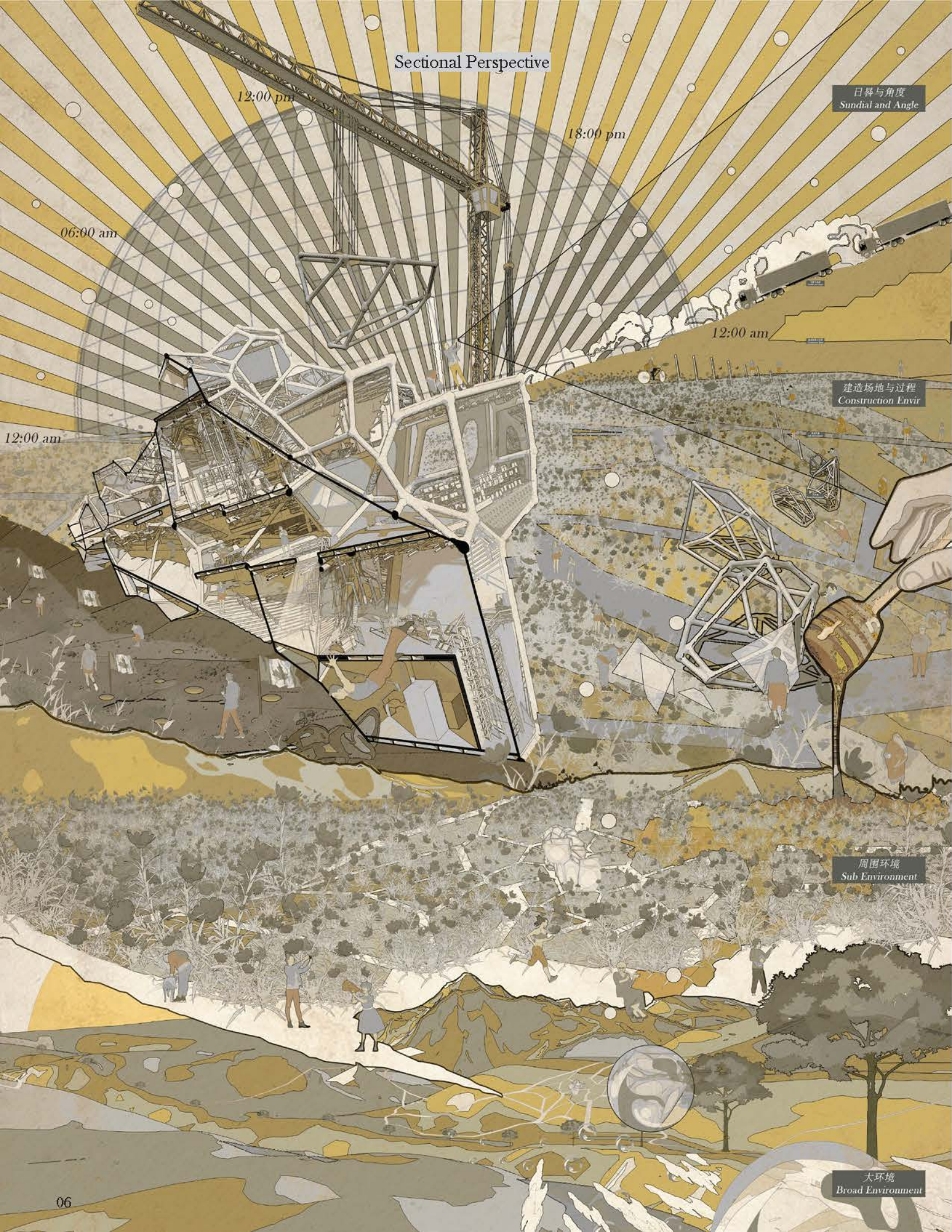
Controlled Radius

Section - North

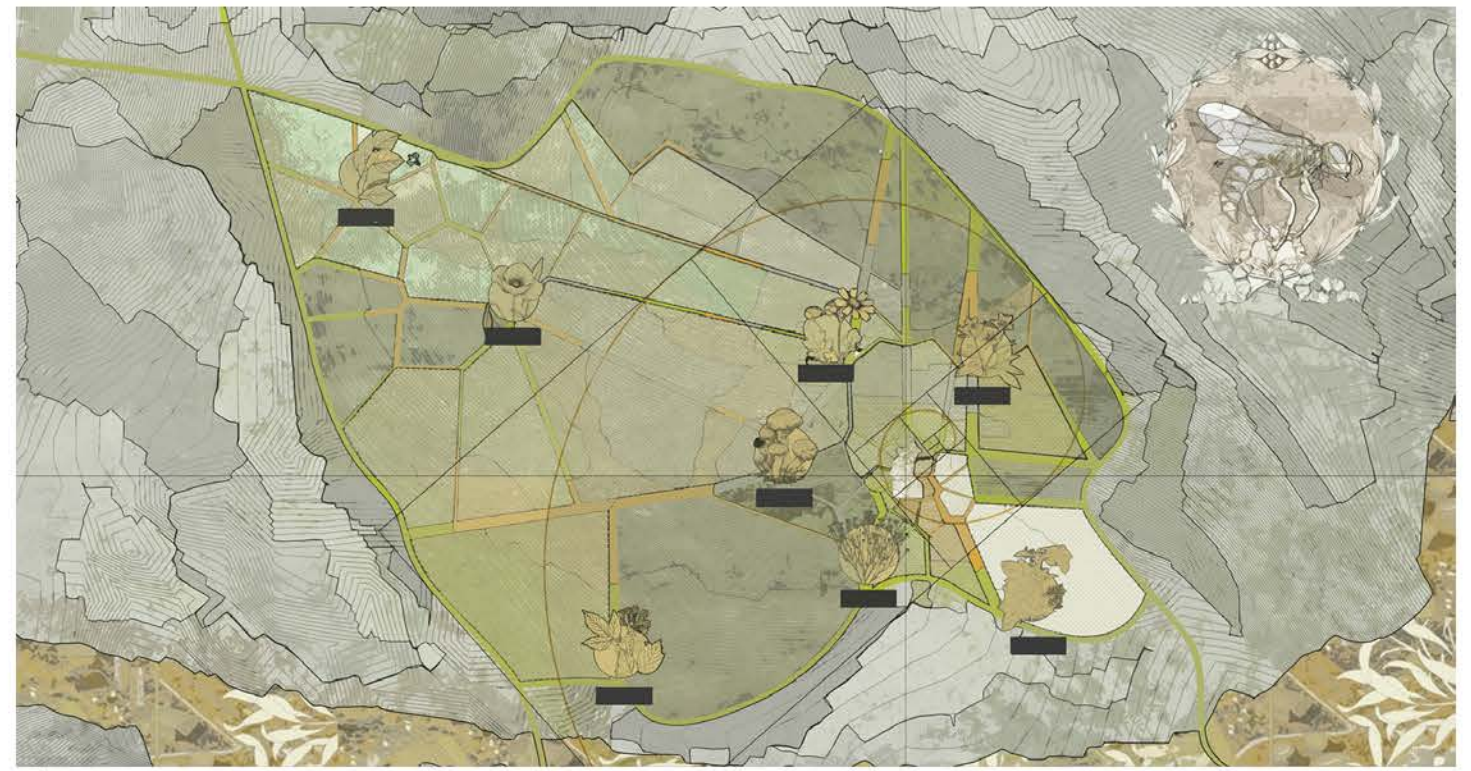


Section - East

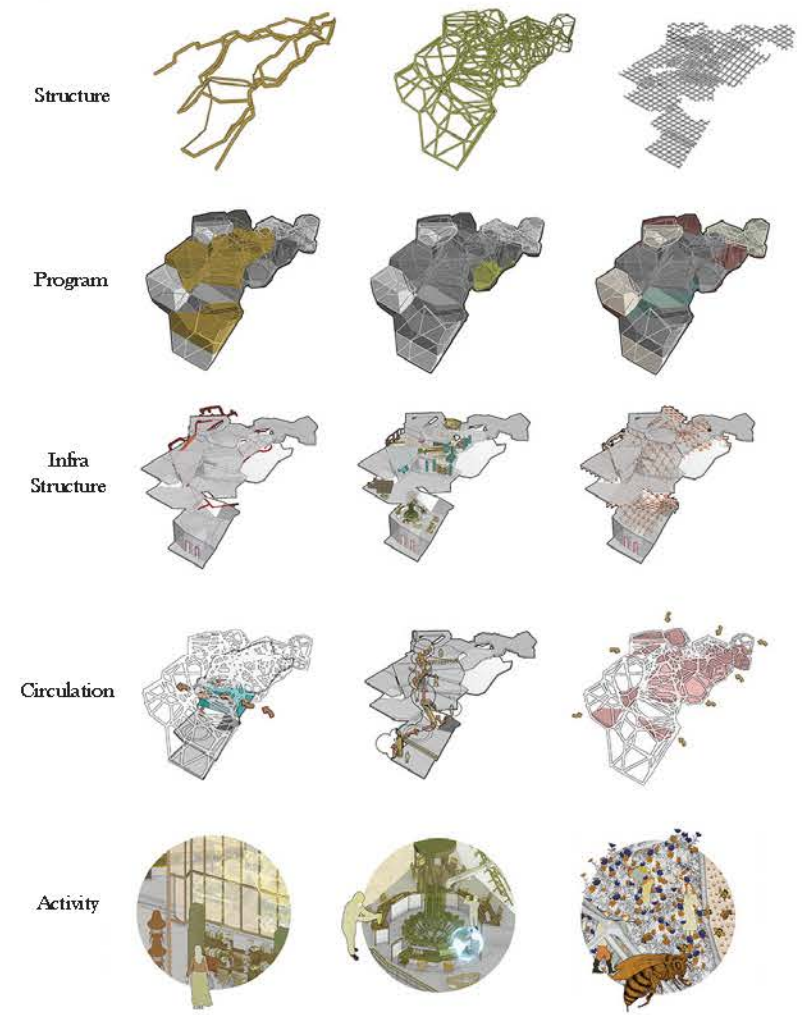




Master Plan & Exploded Analysis



① Black Walnut Trail ② Scout Camp Road ③ Beenoroi Trail

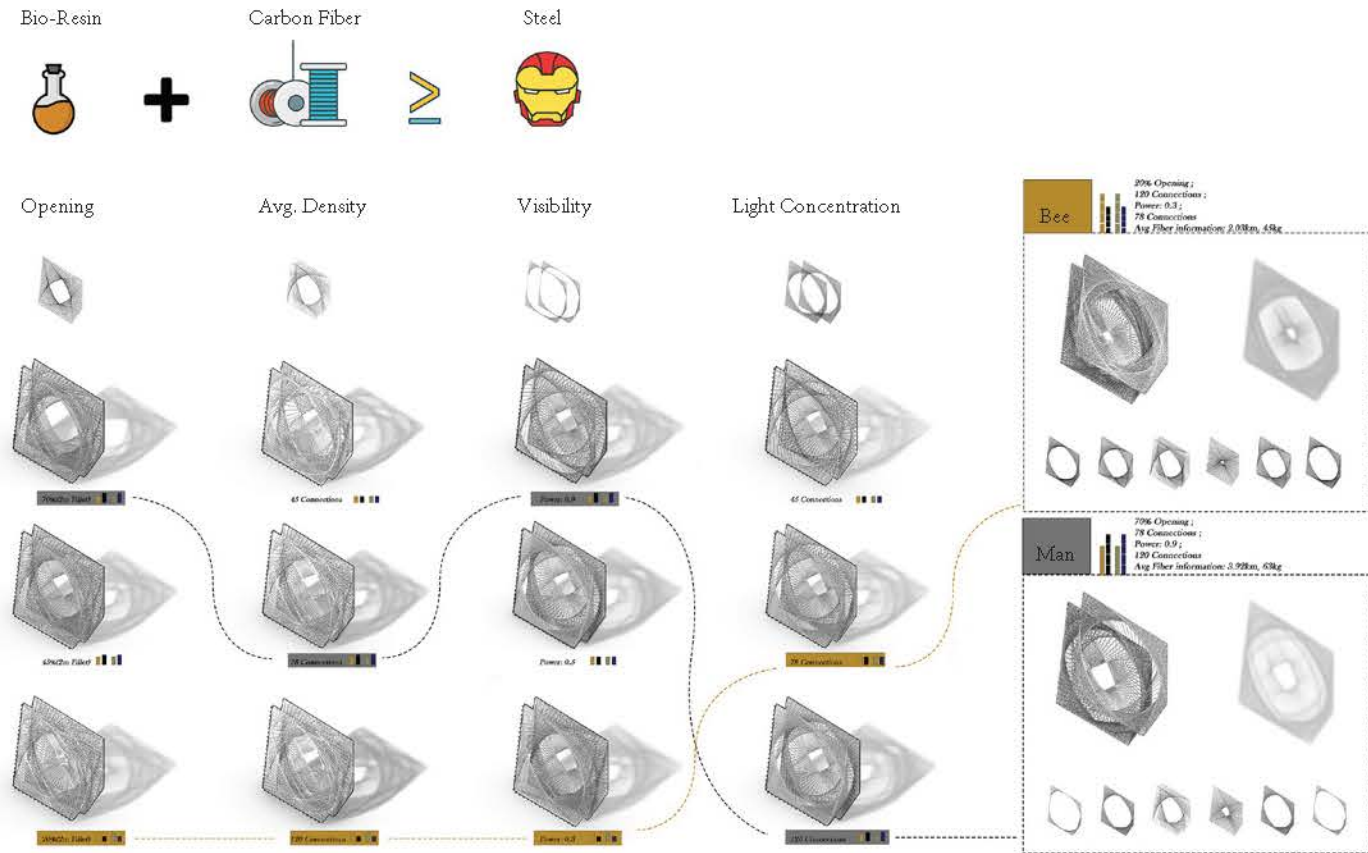


Fungi Protection

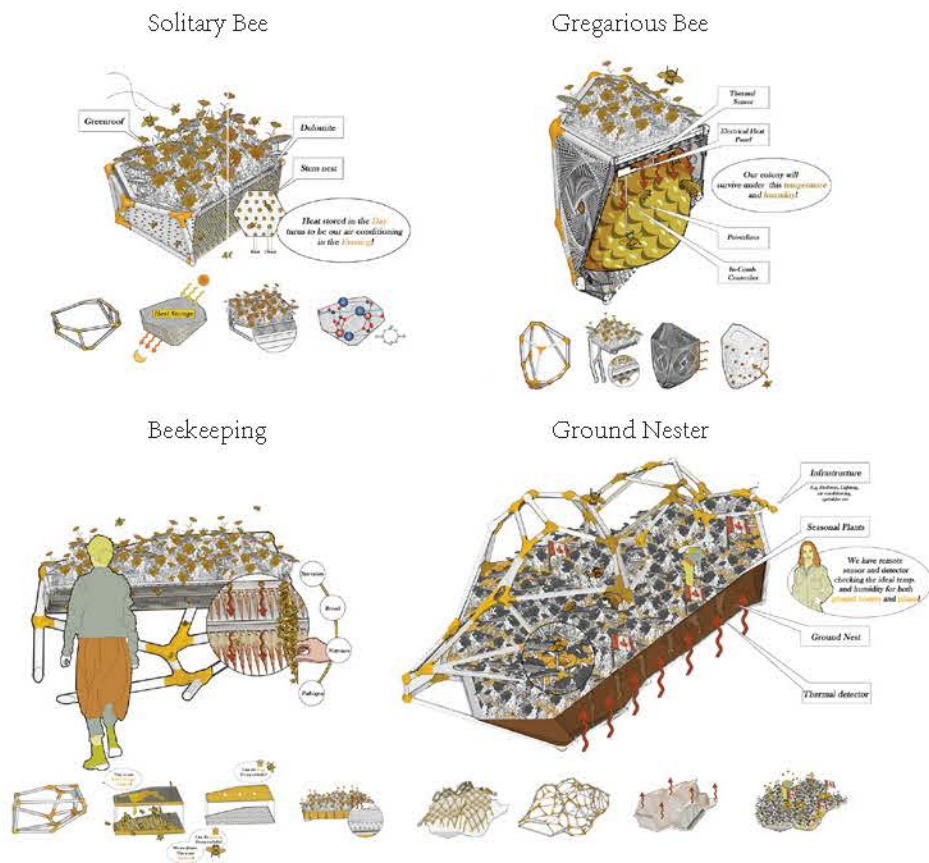
Research shows that there is a kind of extract of fungi called meta-rism preventing bees from getting infected with pathogens. I compared the staircase (human circulation) winding on the framework of the building to the stalk of fungus, the floor to the leaf of fungus. The bees returning to the nest flew back from all directions (Bee Circulation) and hide in the ideal nest set for them, as if they were under a protective umbrella.

Facade & Unit Typology

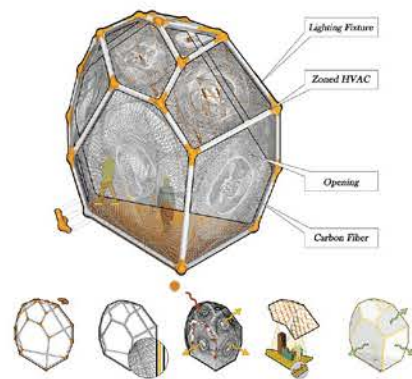
Adjustable Facade System



4 Types of Beehives and Human Activity Space



The four beehives are designed for diverse bee species and are scattered in the spare corners of the building. This design gives priority of making the nest humidity and temperature environment at ideal states either using active or passive methods. Environmental sensors are used for real-time monitoring and research.



The facade is like a breath lung exhausting air out of the building to adjust indoor and outdoor environment conditions.

Interior & Exterior

