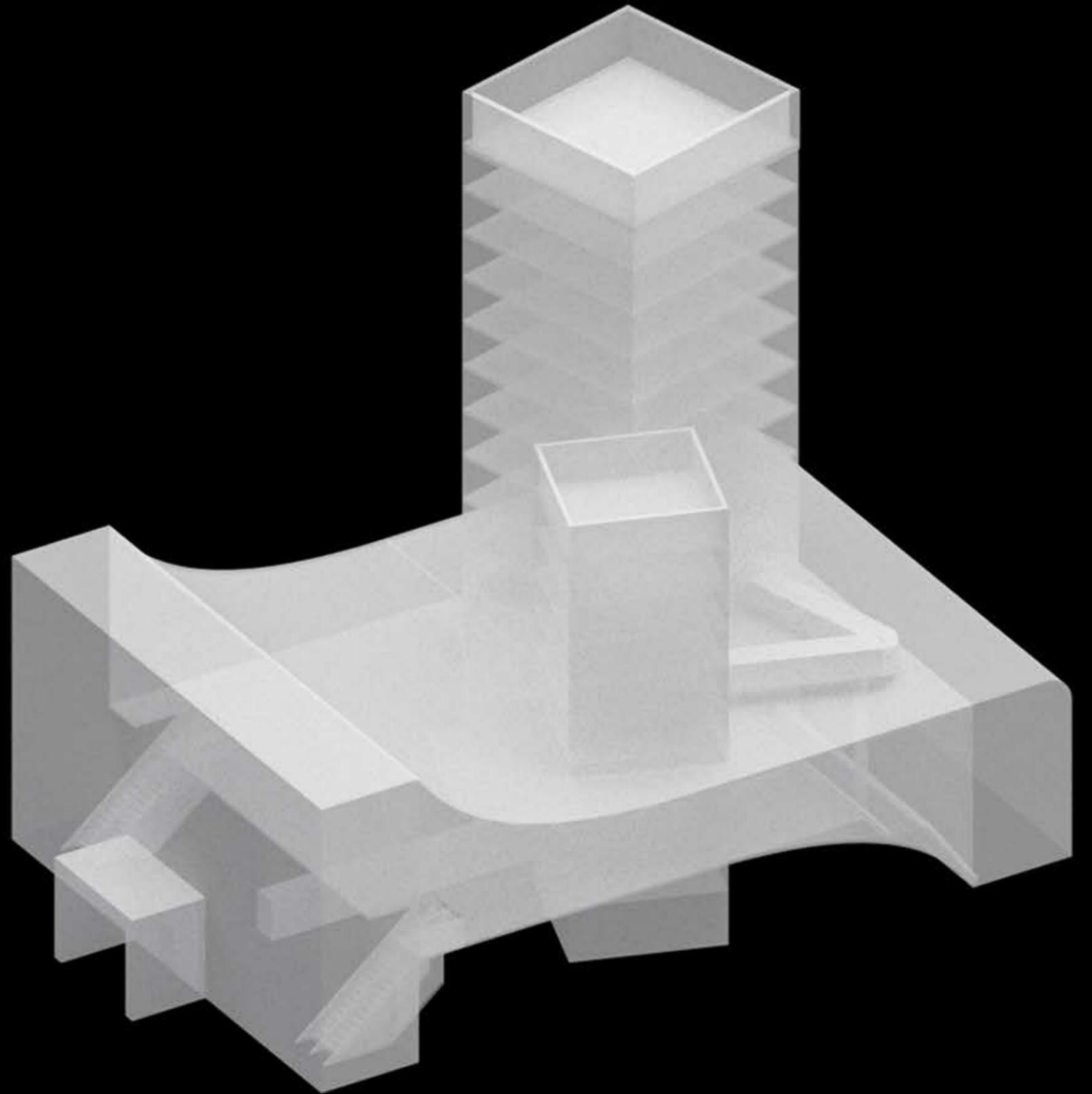# TONY TAO

48105 DIGITAL MEDIA II / ASSIGNMENT 1 MODELING

Cite De l'Ocean (2011)
Steven Holl Architects
Avenue de la Plage, Biarritz, France

The building has a geometry developed from overlapping two right trapezoids in a symmetric form, so that the proportion seems rather harmonic. By curving the upper surface of the buidling and add the cubic architectures between the two trapezoids, the Cite De l'Ocean looks good on the section appearance. The innerspace becomes more flexible and divergent because of that geometry, and overall it is a good composition of straight and curve lines.
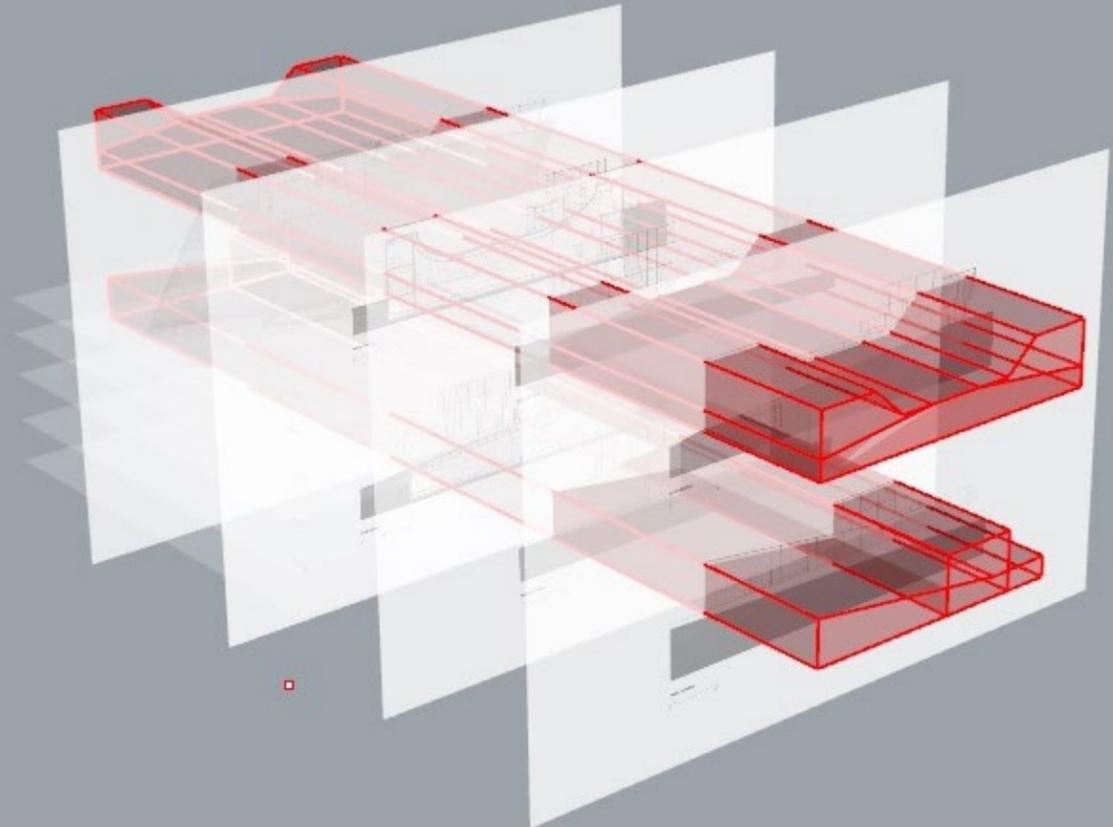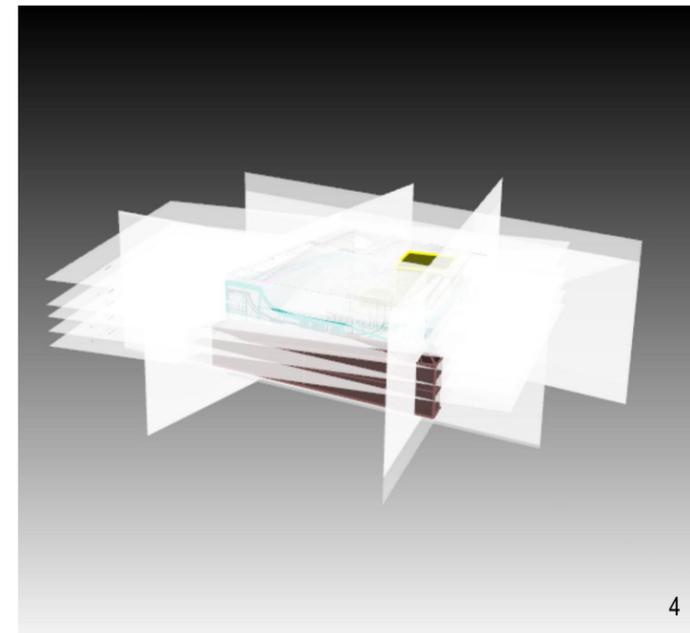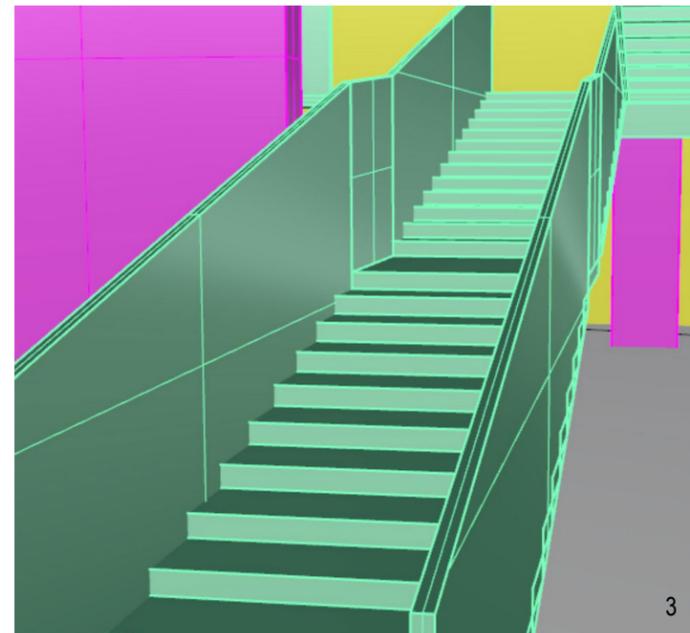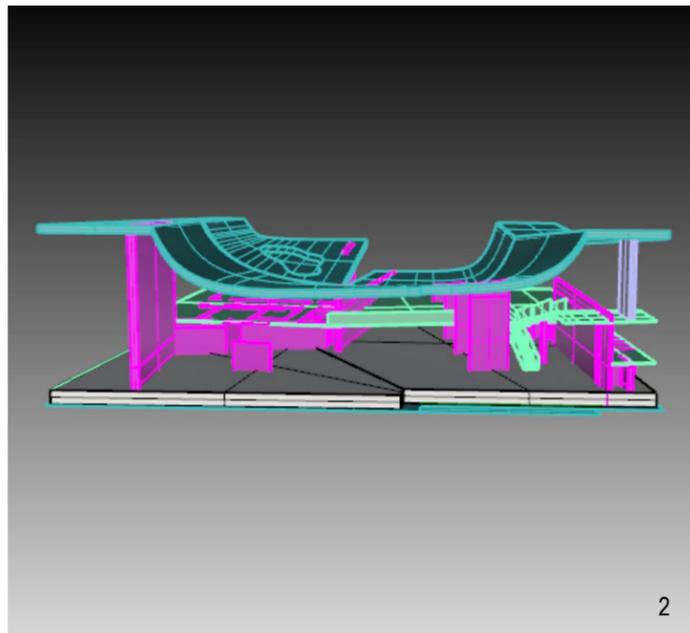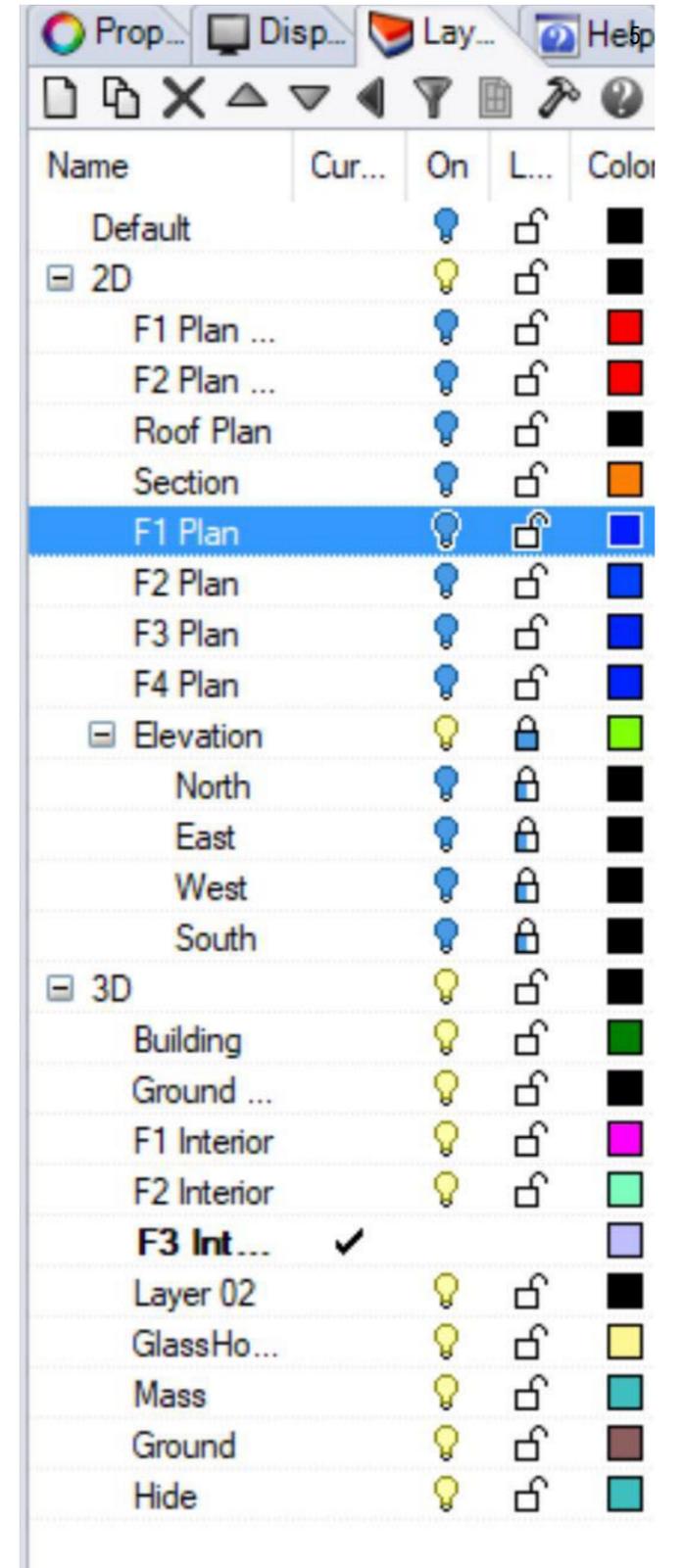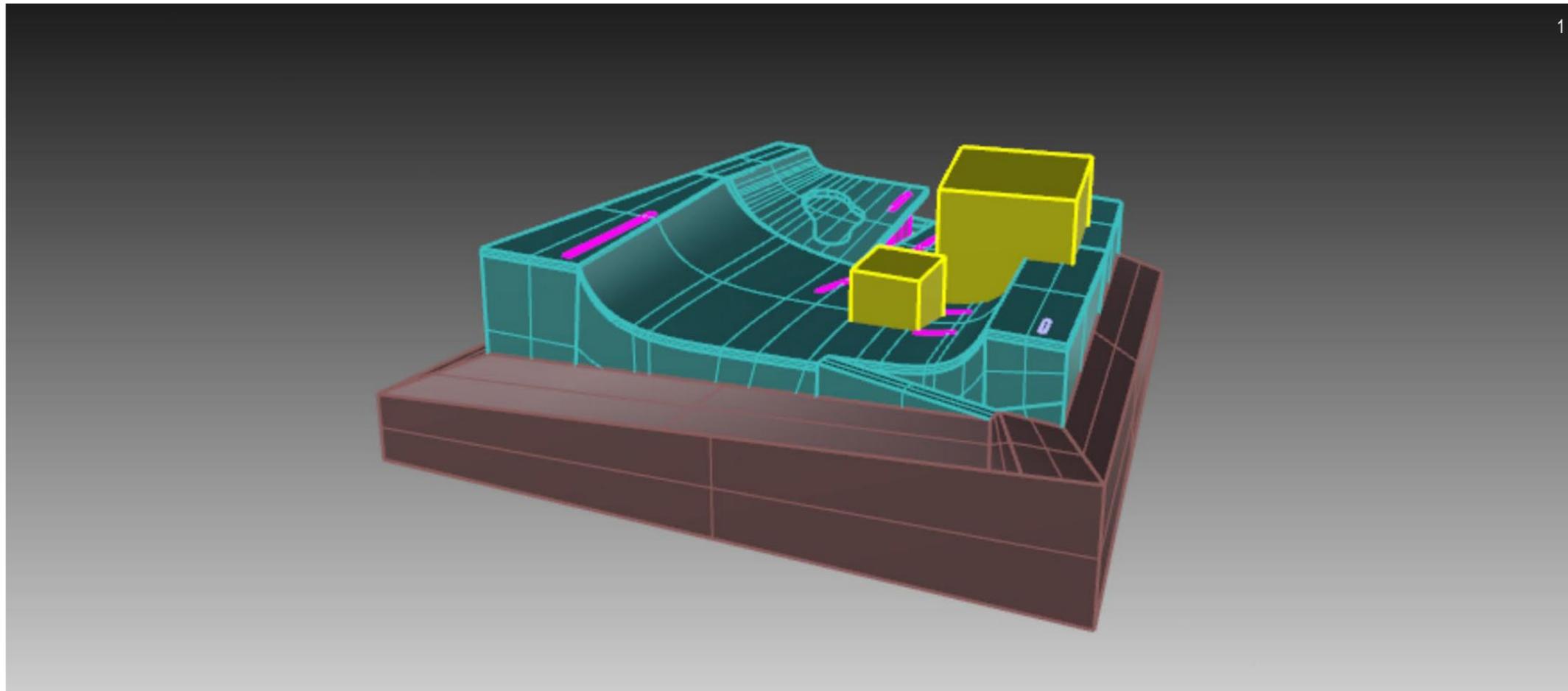
1

2
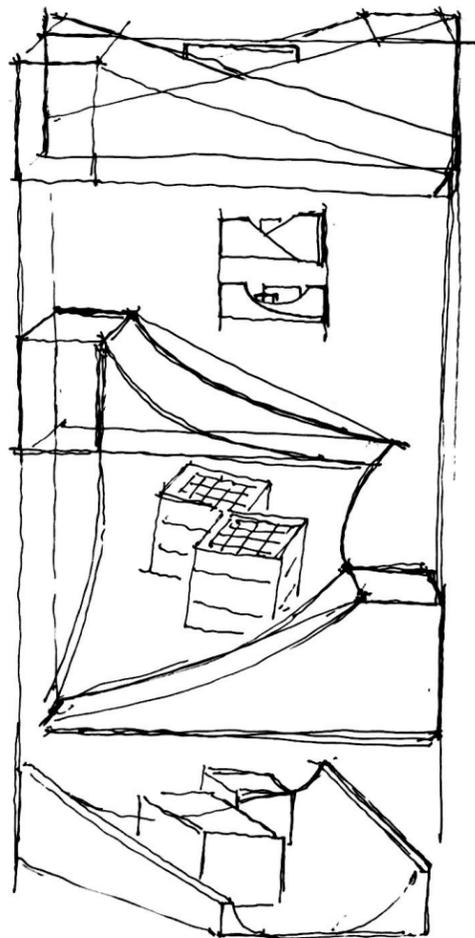
1. Composition of the building, sketch
2. 2D drawing laid out in 3D
3. Massing and structure model

3

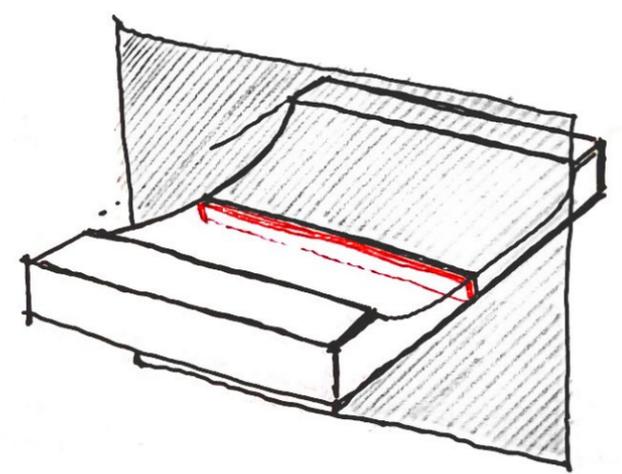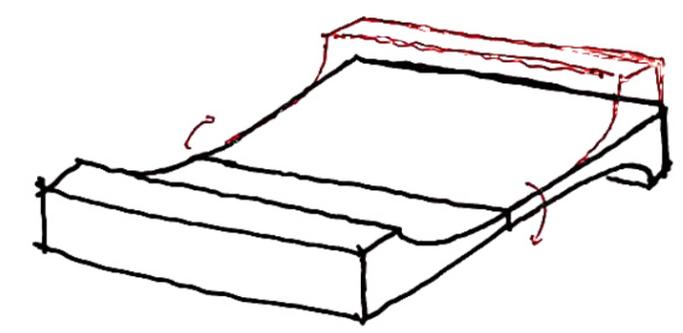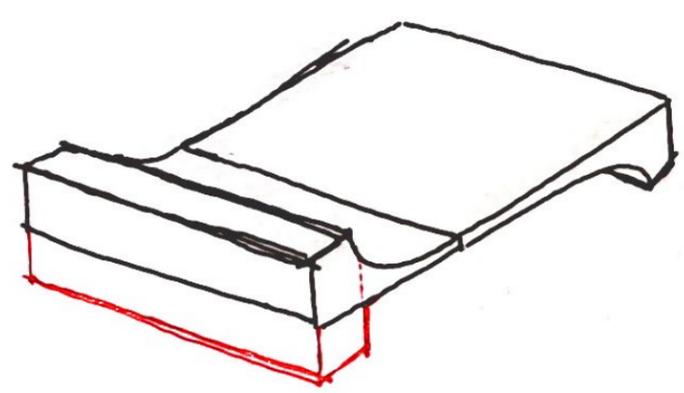1. Exterior / 2. Structure / 3. Interior / 4. Detail / 5. Layer
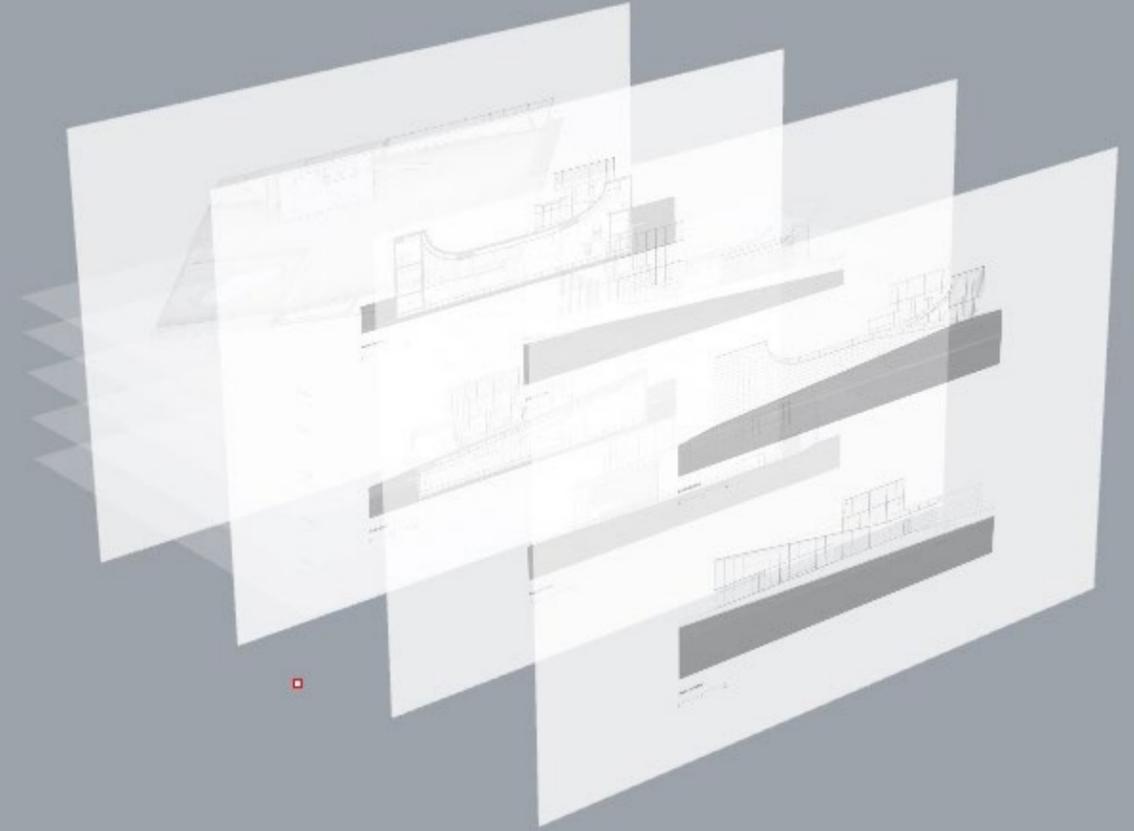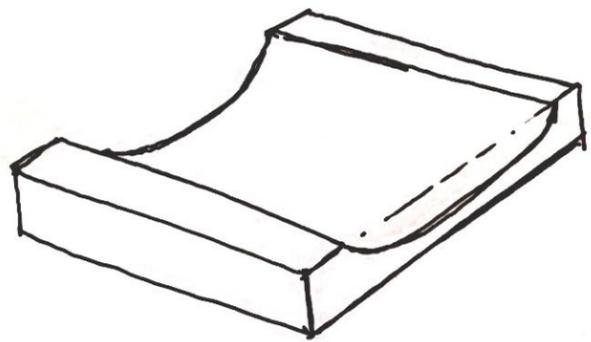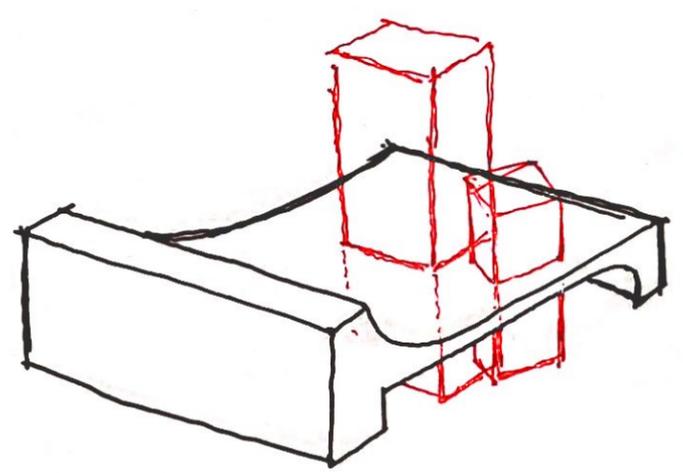
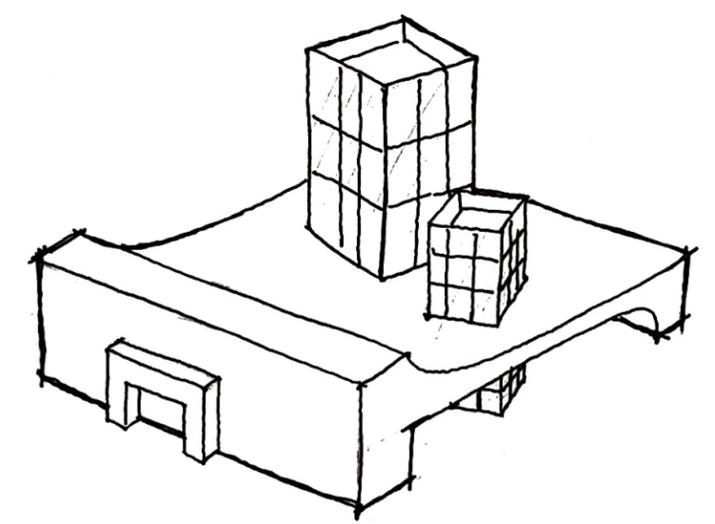Abstraction of Essential Geometry

Transform 1 : Split

Transform 2 : Rotate

Transform 3 : Extend

Transform 4 : Add

Re-contextualization

This transformation takes a motif from the concrete structural portions of the Cite De l'Ocean and extends it into the form of the building. The primary thought is to separate the original abstract geometry into two parts, and flip one of them, to form a central-symmetric geometry. Then, in order to make it stand on the ground, I extend the one side that is higher, so that it could touch the ground. In order to further express the idea shown in Cite De l'Ocean, the addition of two volumes was made in an arbitary angle. Therefore, this building has a them of connecting different volumes to serve a function of architecture.

The project's primary parameter is that of spatial openness. The original building, with a special and interesting curved surfaces, and transparency formed from the intersecting of geometries and openings, shows an intelligent use of simple volumes. In this iteration of my design, I accede on this idea, and using the intersecting of volumes to create optical transparency. By using flipping, addition, and extension, the interior transparency has a curved, interesting, and symmetric optical view.

process: transofrmation
1.abstraction   2.split   3.flip   4.extend   5.add   6.re-contextualize
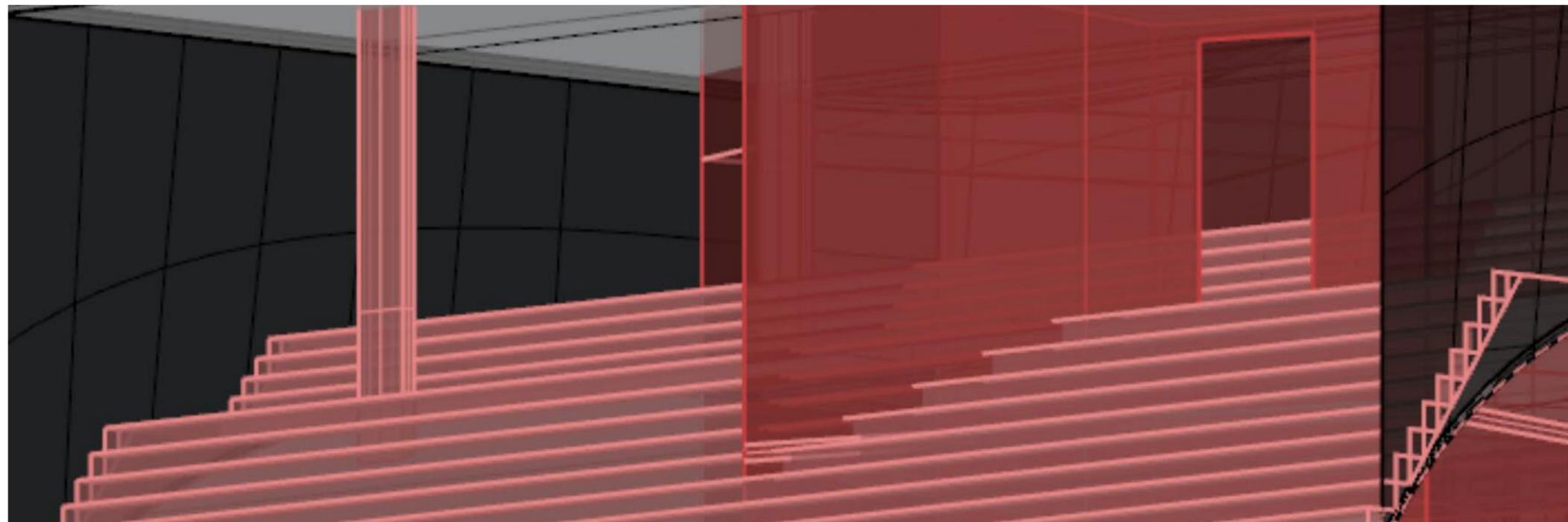
Interior view of the final version
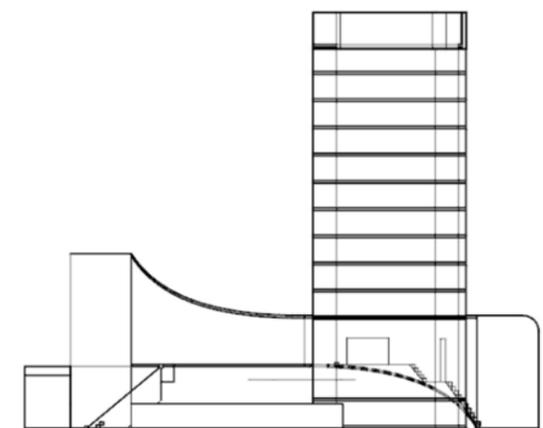
Section, non-scale

TONY TAO

Basic Implicit Modeling Practices

|	Curve-Based Model 1	Curve-Based Model 2	Surface-Based Model 1	Surface-Based Model 2

Implicit Result

Control Objects

Modeling History

Square → ArrayCrv → Flow

Curve→ Copy→ Crv2View → Copy → Tween → Flow

Circle → Loft → Copy → Array → FlowAlongSrf → Crvs → Sweep2 → Srf

Curve →Tween → Loft → Flow

Operation Tree

Reference Geometry
Control Geometry
Implicit Operation
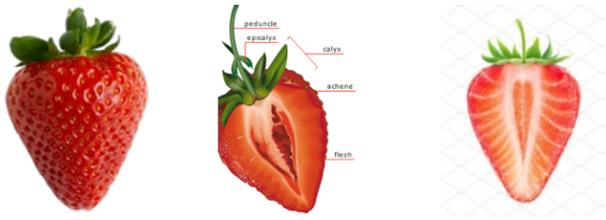
Strawberry

Strawberry has a heart-shape, or bell-shape, which means the curves on the surfaces of them are special. The slope of the tangent lines keeps change. When the strawberry is cut in half, it also shows a special pattern defining structural hierarchy: there is a central part, which is divided from other parts by a very clear red line; it also has radient white rays shooting from the central part to the "shell". There, we can find clear boundaries between red and white parts; we can also find vague boundaries between white and grey parts. The color is also showing a gradient view: it is gradually turning from red to white. When these concepts are abstracted, we can get a diagram looks like plan or section: the openings mimic vague boundaries, and the rigid lines which might be walls mimic clear boundaries.
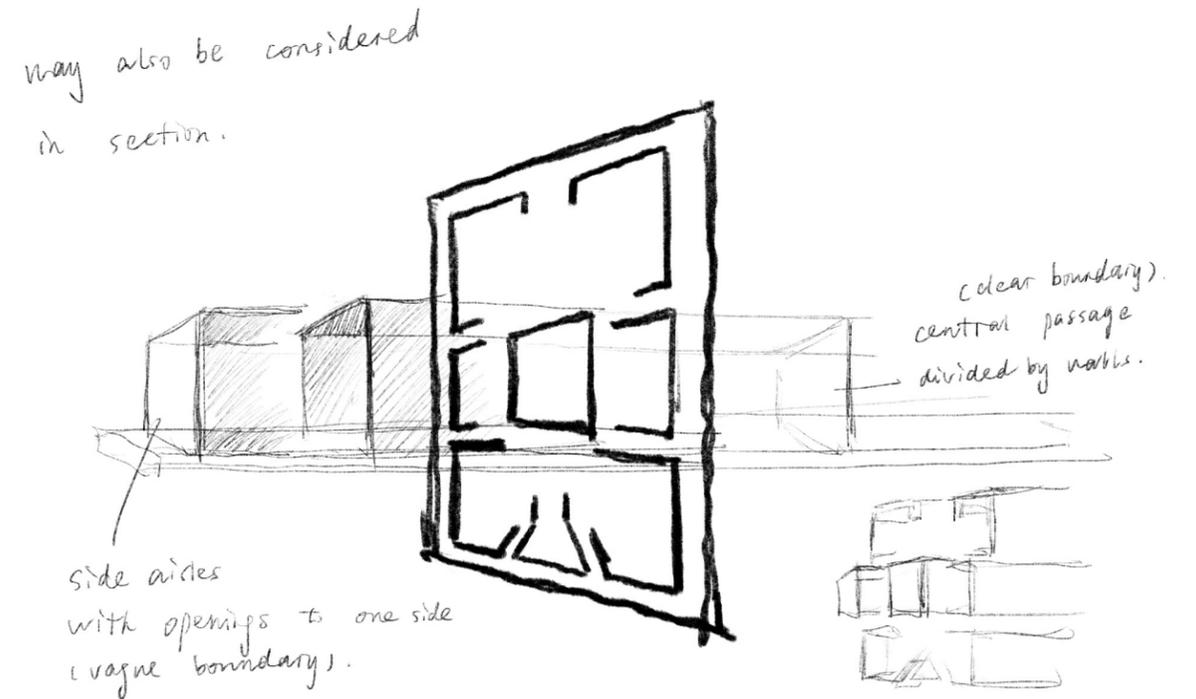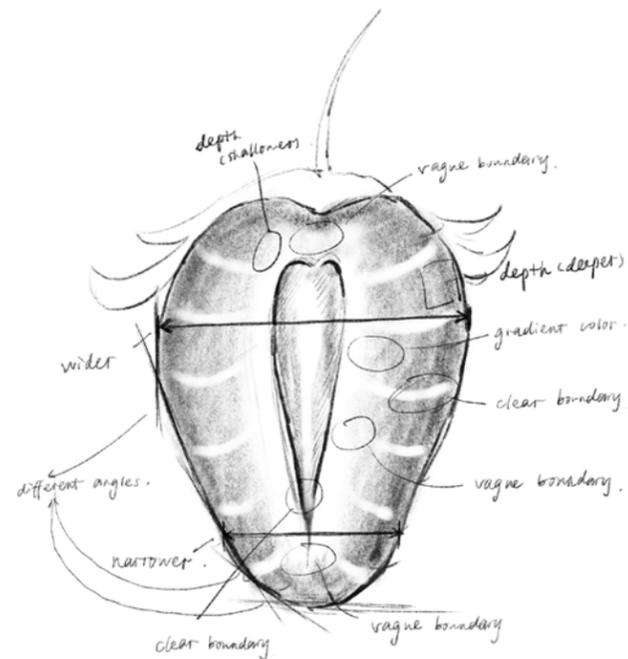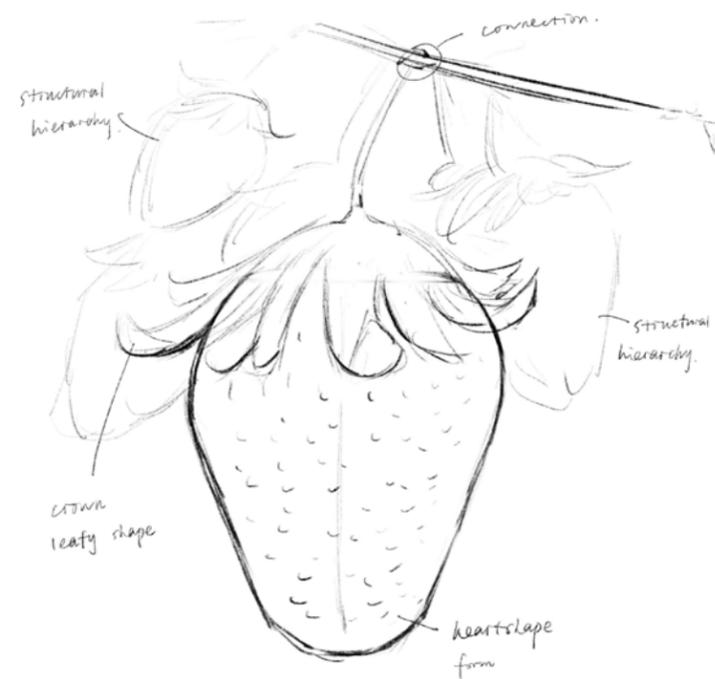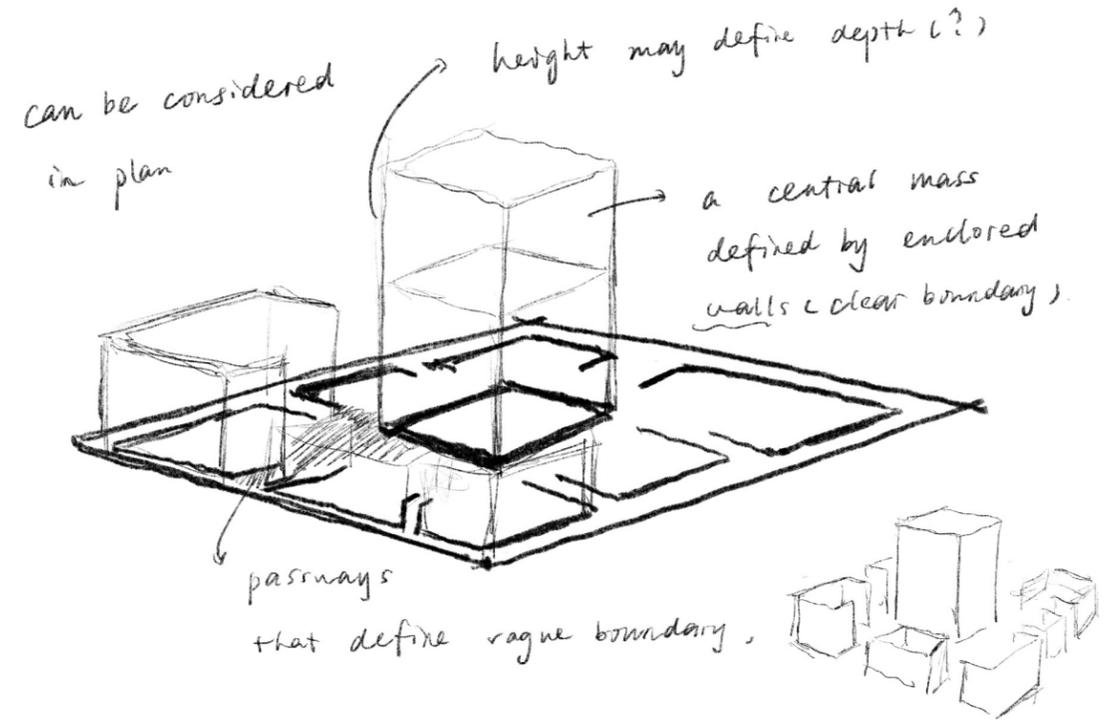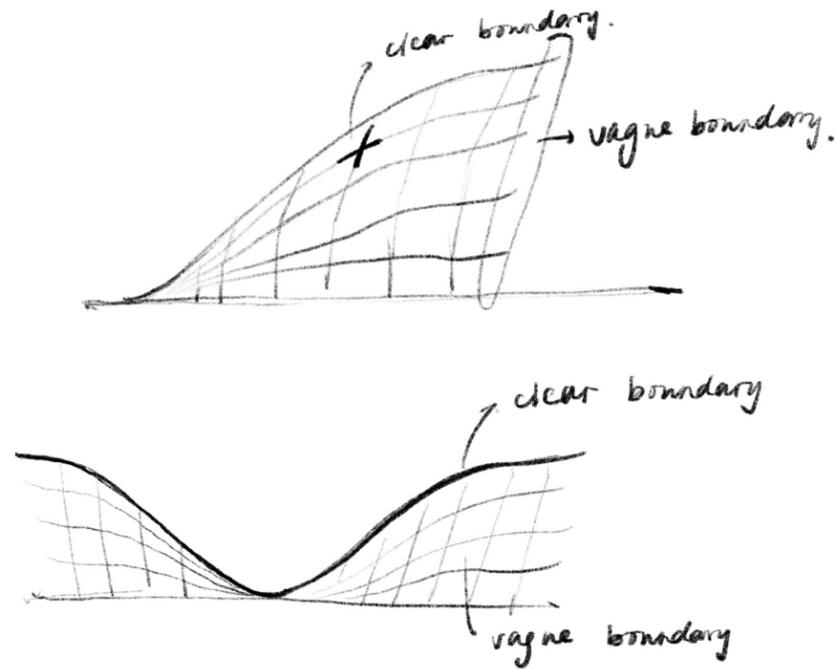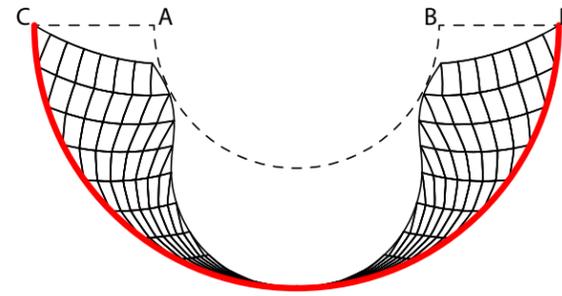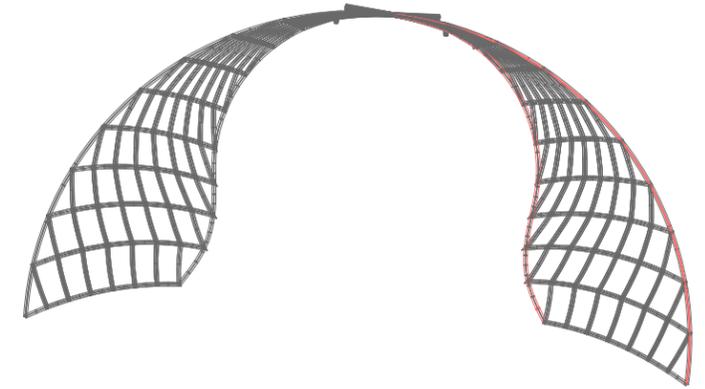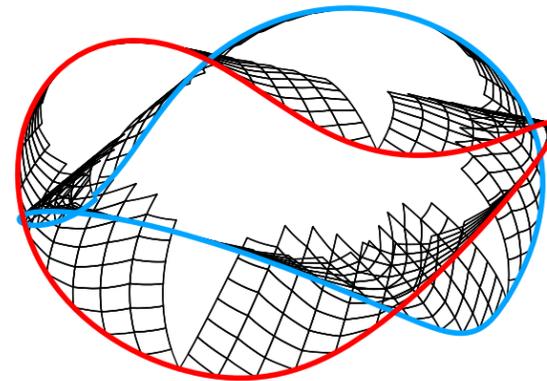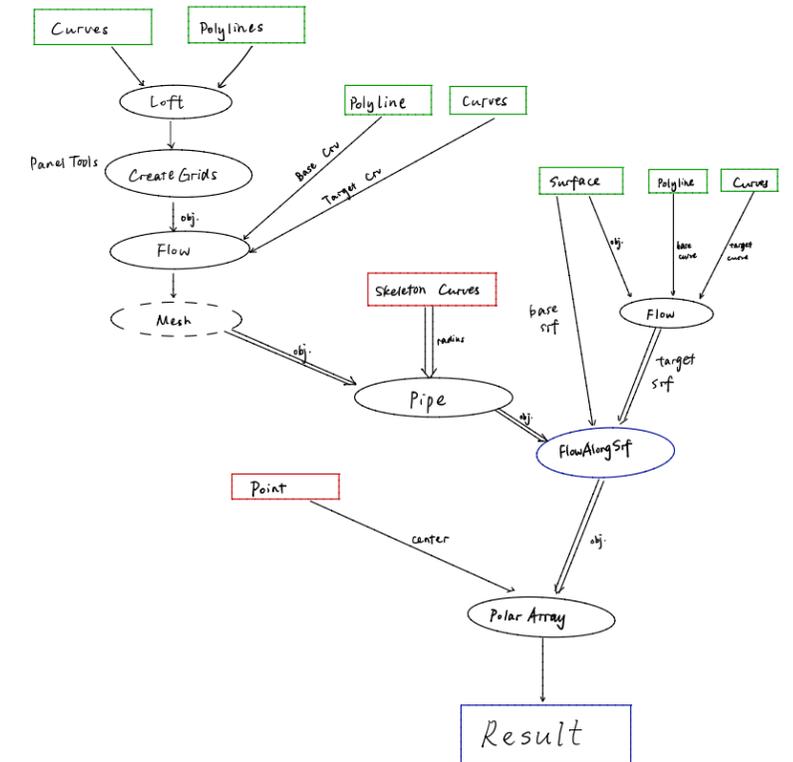
1. Curve Pattern
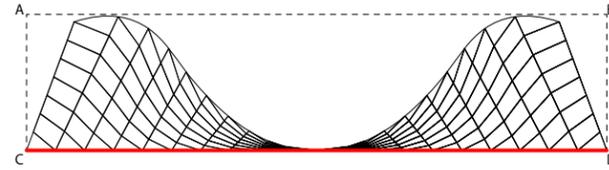
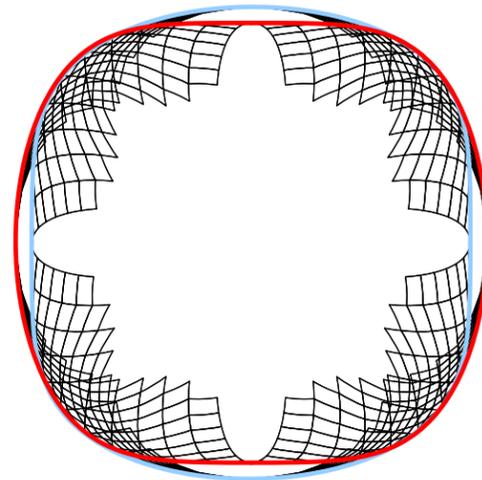

2. Unit Boundary

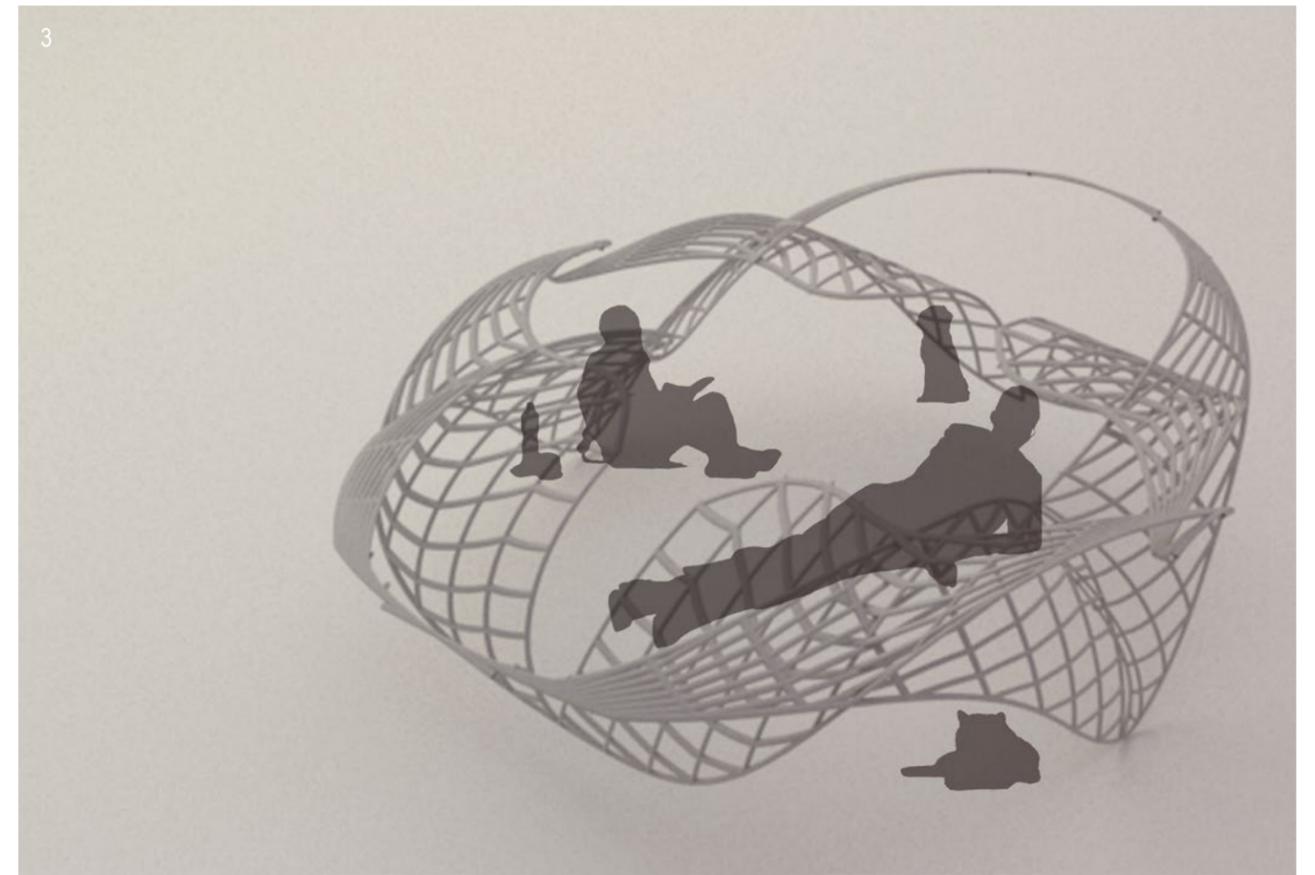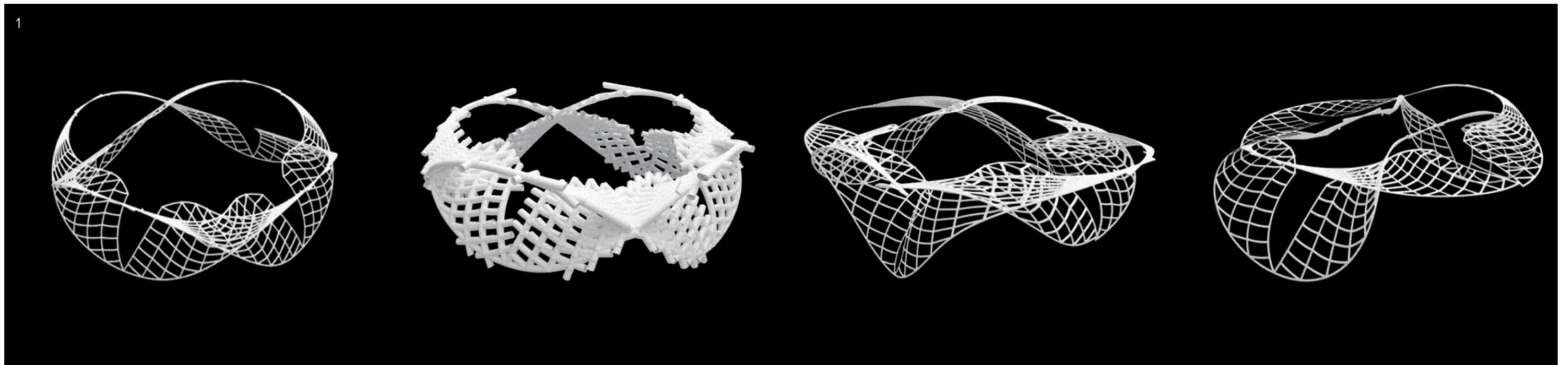3. Transformation

4. Thickness Variation

Surface Driven Transformations

Large Scale Combinations of Unit Transformations

Operation Tree

1.Final Design Variations / 2.Perspective (Building Scale) / 3.Perspective (Furniture Scale)
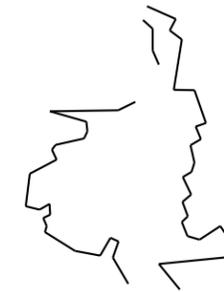
TONY TAO

48.125 DIGITAL MEDIA II / ASSIGNMENT 3. VISUALIZATION

The natural elements are dissolved into the urban surrounding, making the boundary faded. However, the decay and different road surfaces could still separate them.


These boundary lines simply represent important roads and street that separate the park from its urban surroundings.


Satellite and aerial imagery represent larger, homogenous regions that have architectures sharing similar traits inside it . These zones also contain fewer public interactions, thus making a "block" of the nearby community.

Perspective viewpoints that contain a distinct scene identify key points and experiences that make up the public quality of the surrounding area. These "hotpots" links different streets and roads, help to add complexity to the nearby site.
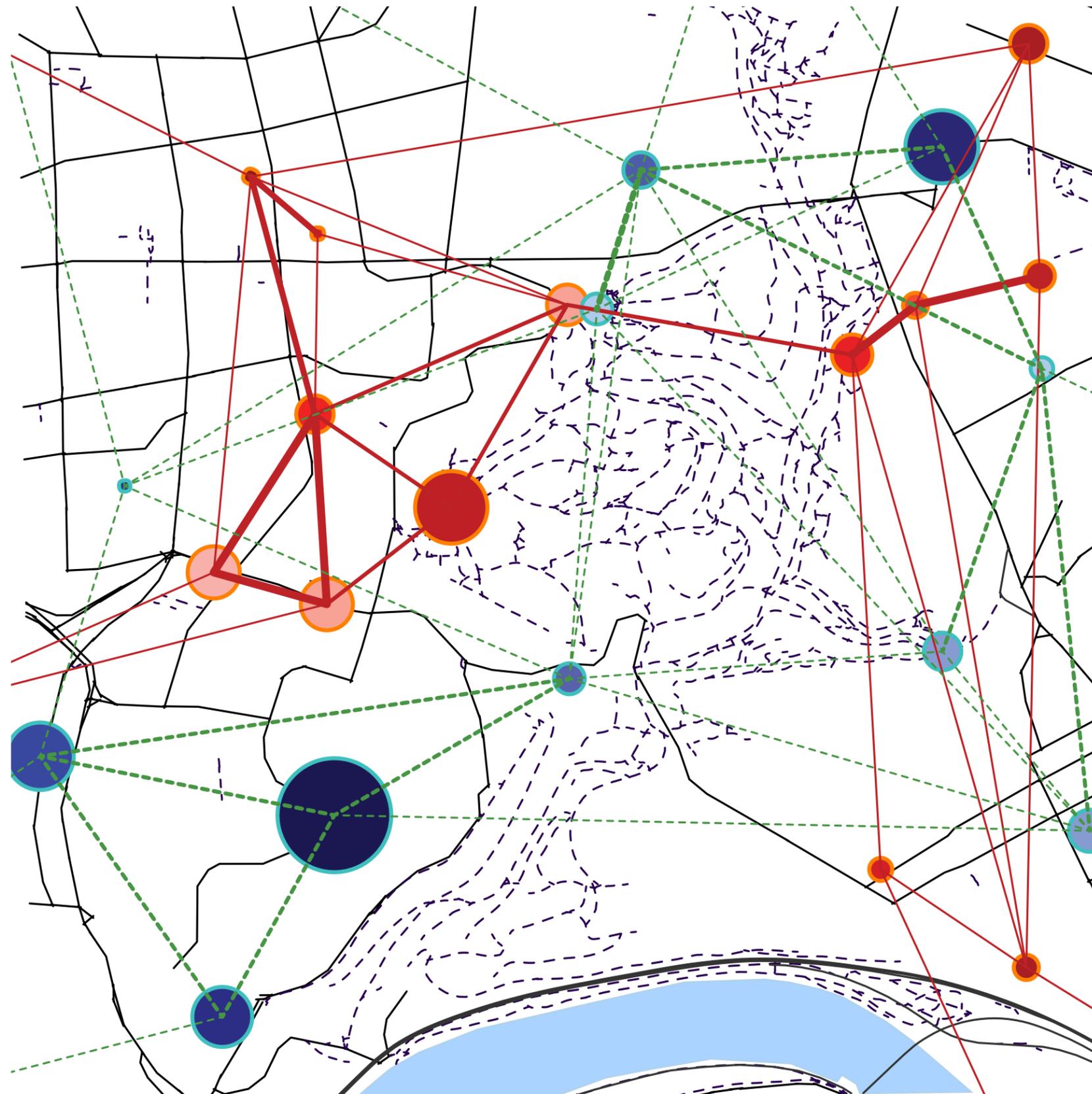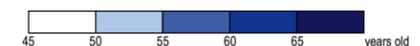
Pedestrian Roads
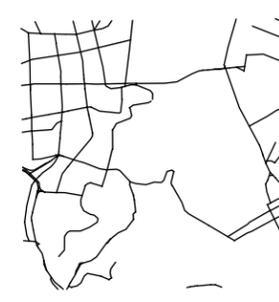
Vehicular Roads

Orange circle nodes represent popular destinations among younger population(younger than 45 years old).

5	15	25	35	45 years old

Blue circle nodes represent popular destinations among older population(older than 45 years old).

45	50	55	60	65 years old

Red lines represent a young population connection. Heavier line weights indicate a closer connection.

Green dashed lines represnt an older population connection. Heavier line weights indicate a closer connection.
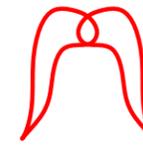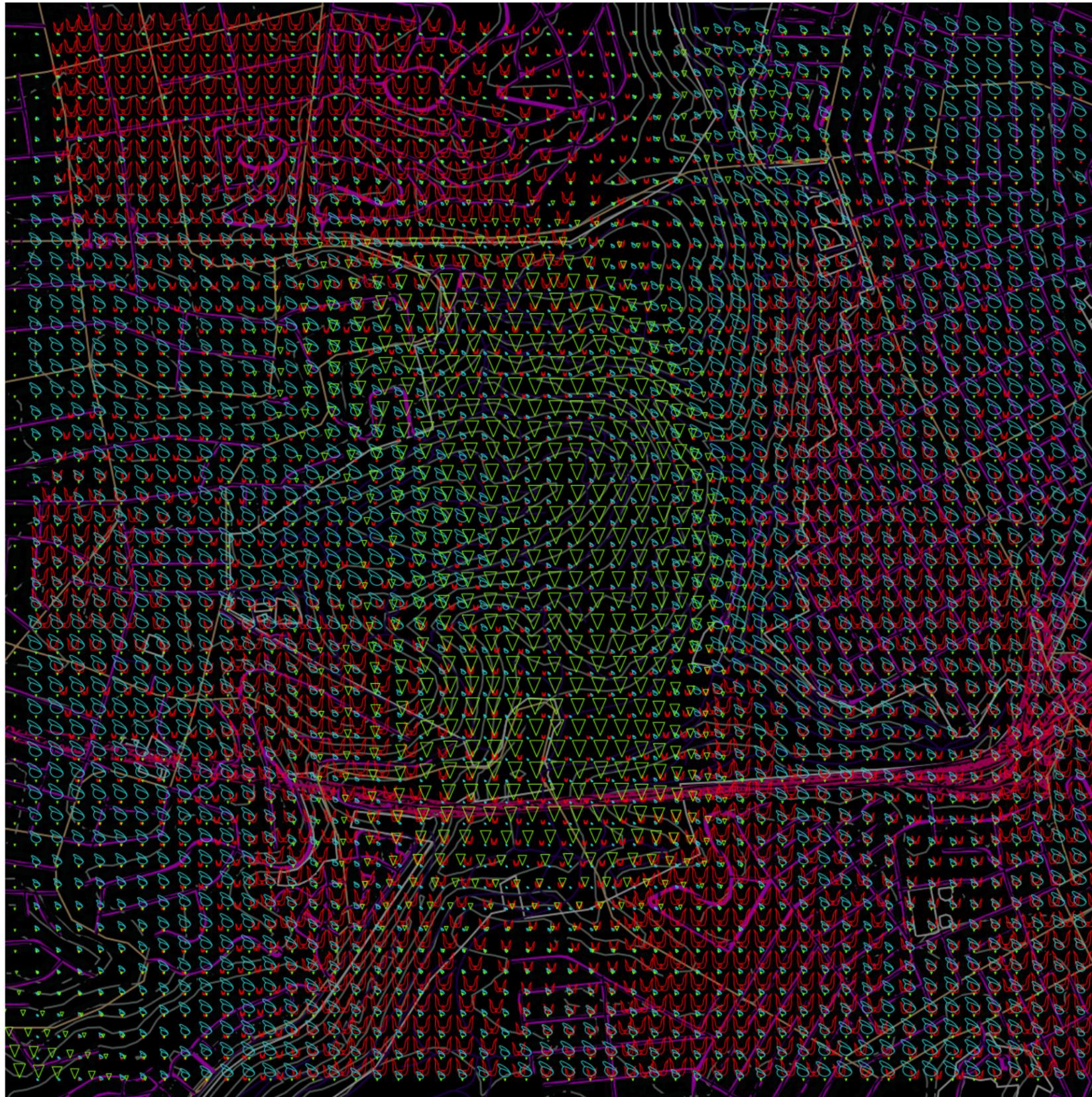
Red beard conditions represent older population, indicating with median age older than 45.
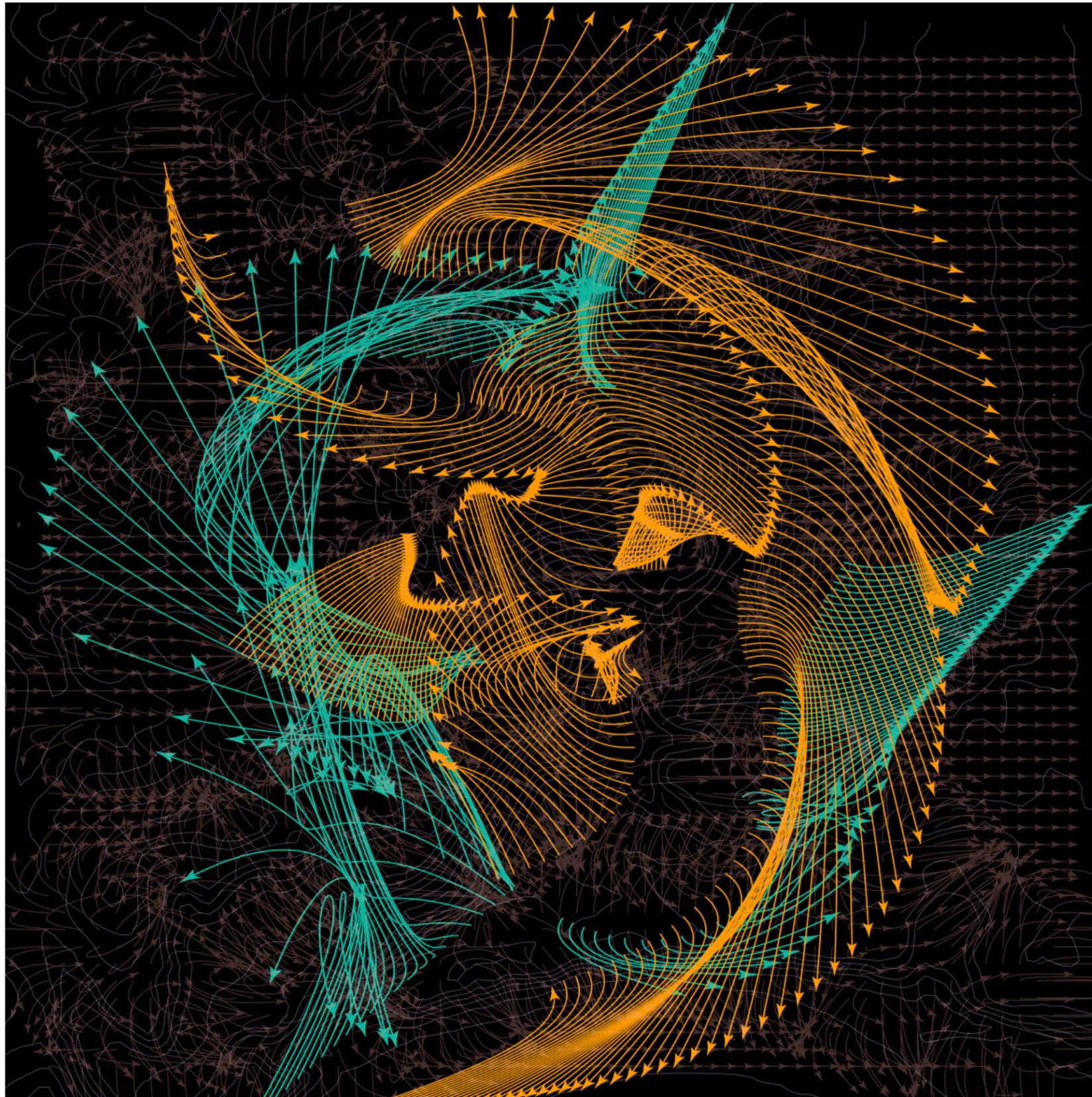
Blue cap conditions represent younger population, indicating with median age younger than 45.

Green Triangle conditions represent green plant growth or natural environment that hardly has inhabitants.
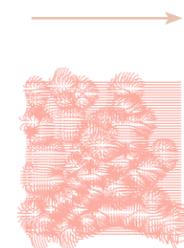
The yellow arrows represent how younger population dissolve into different parts of the site. Their dissolution is broader and have more variation than older population.

The blue-green arrows represent how older population move in the different parts of the site. Their moving pattern shows a slower, narrower, and less energetic path than younger population.
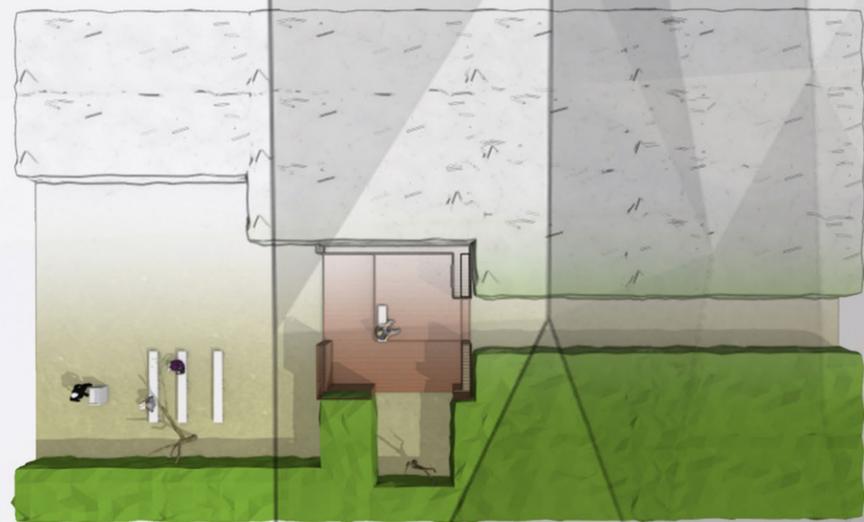
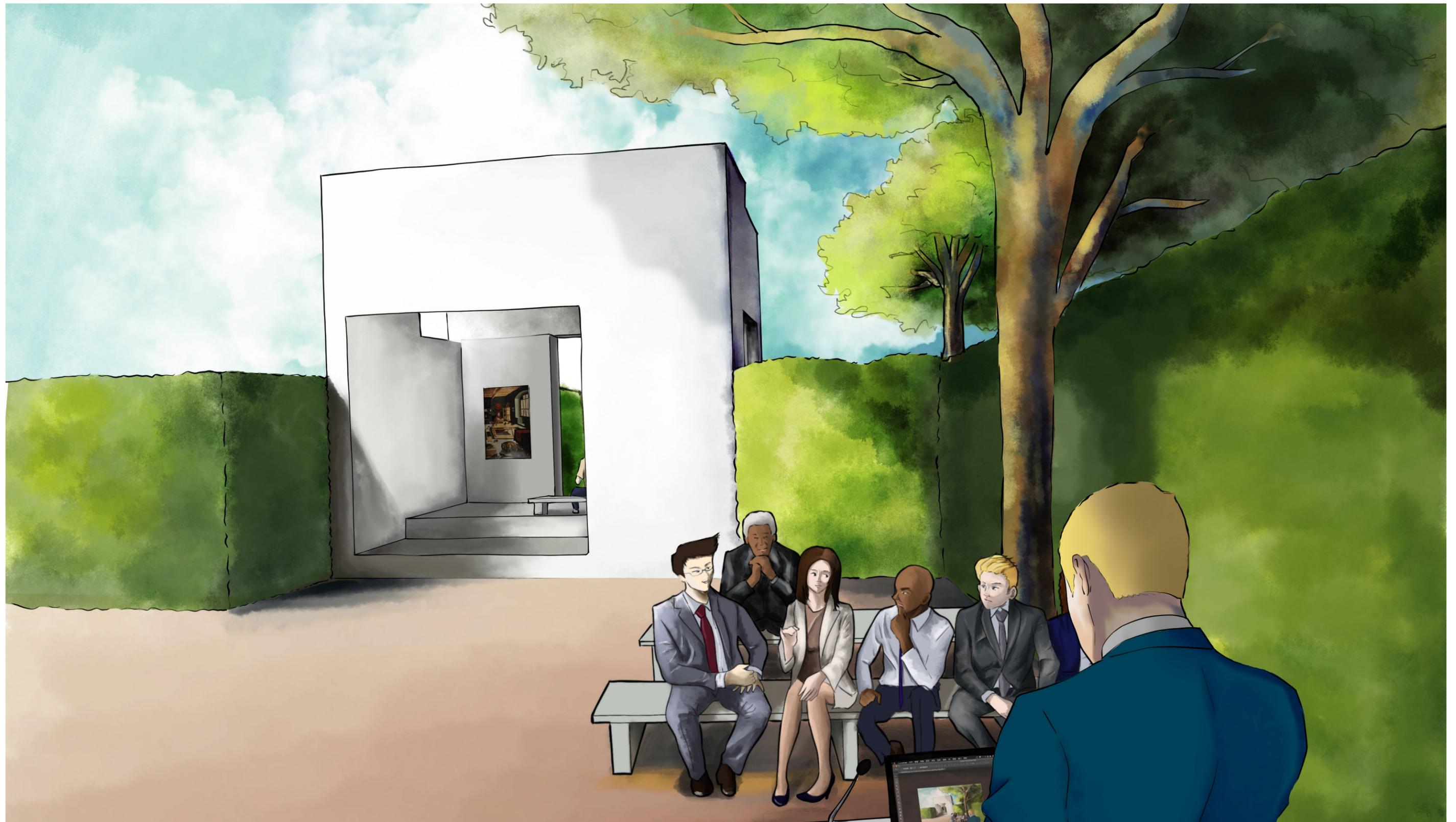The small pink arrows represent the topography of the chosen site. The arrows point to the lower height.

Purple lines indicates site contour. It depicts the overall sihoutte of the whole site, on whose surface the pink arrows flow along.
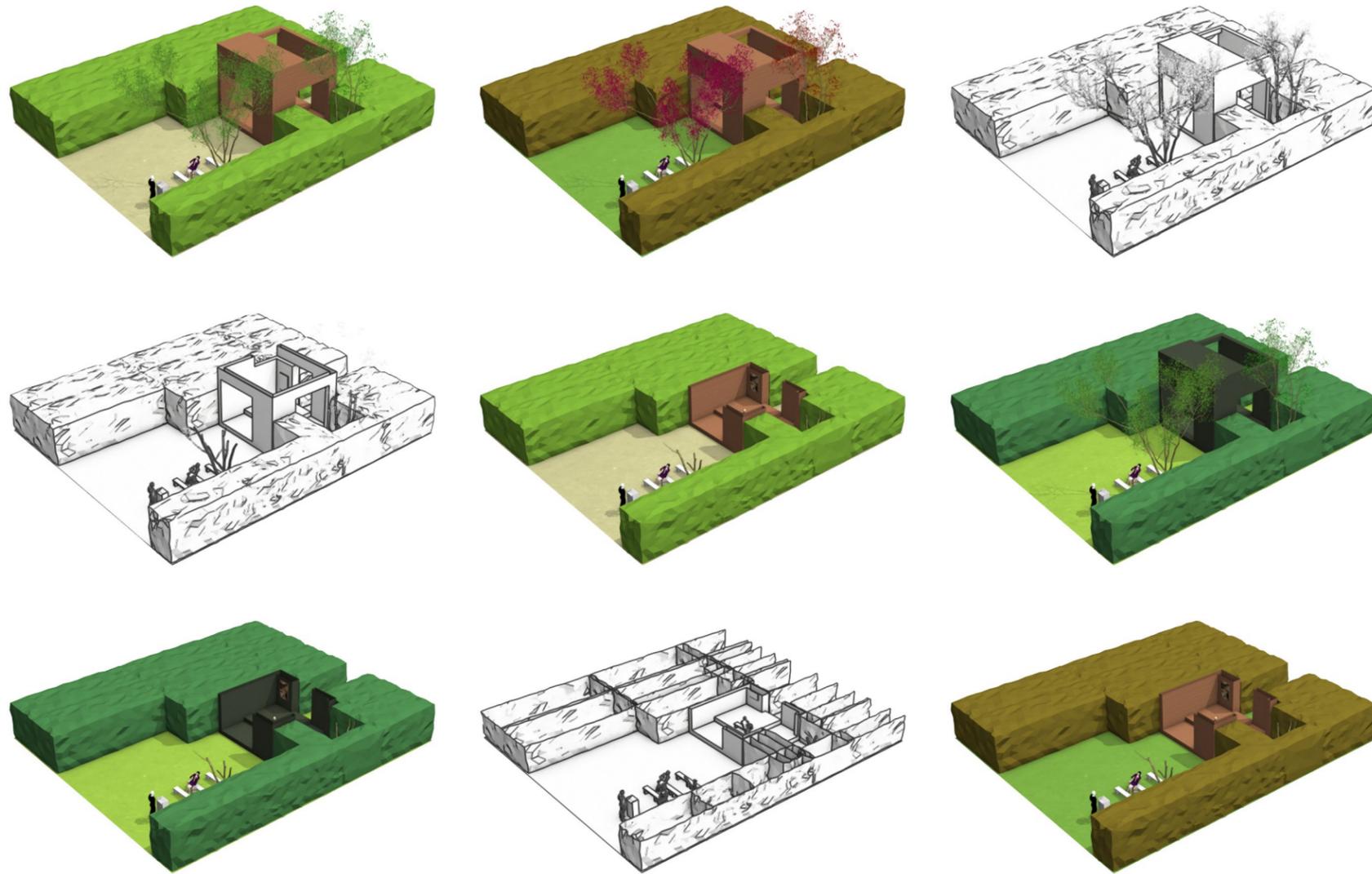
TONY TAO

48.125 DIGITAL MEDIA II   /   FINAL PROJECT
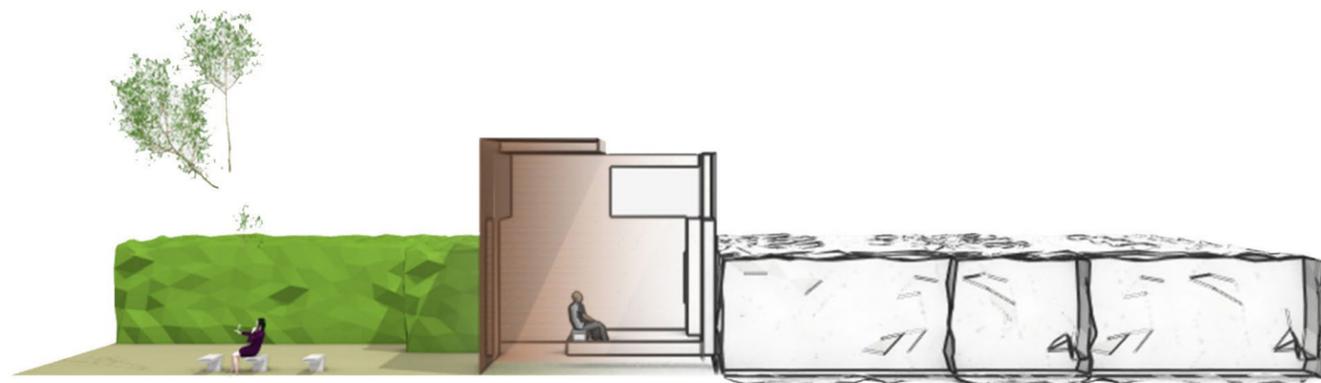
Hybrid Drawing 1
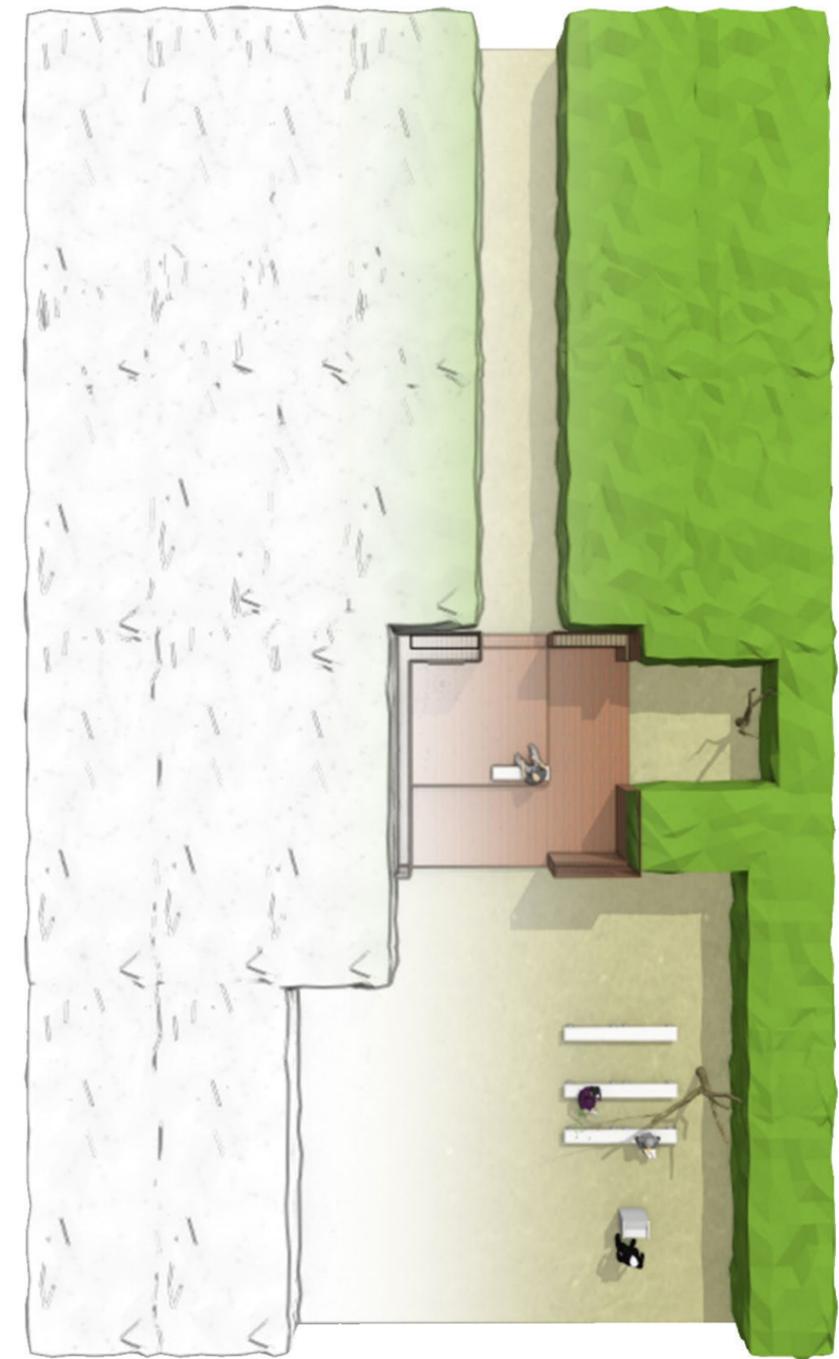
Hybrid Drawing 2

1. Design Options and Isometric Sections

2. Section

3. Plan

1. Perspectvie - Entrance

2. Perspectvie - Main Space