

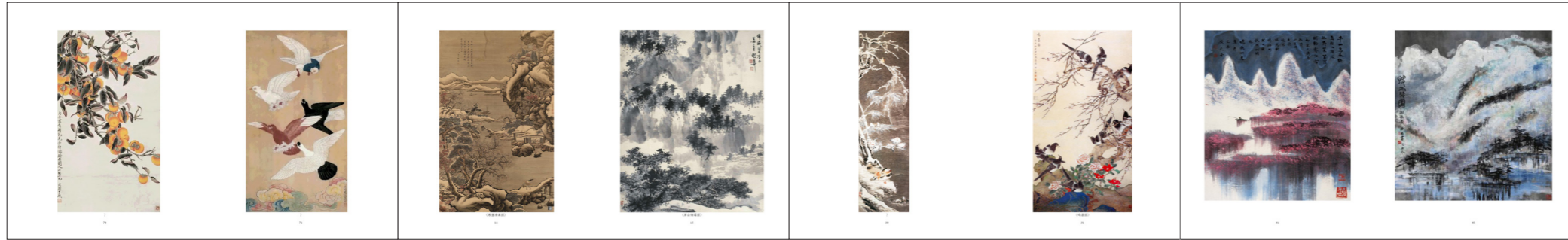
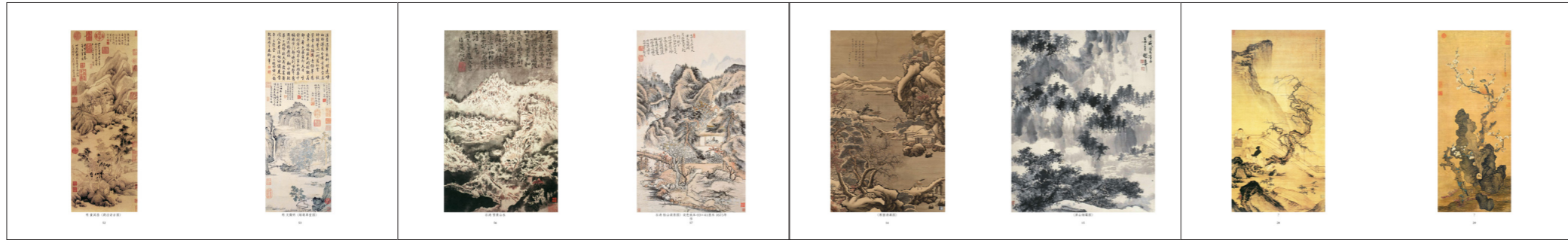
A Bath of Ice and Fire

Geothermal bath design in Changbai Mountain, China

Yan Zou

This research poster is organized into a grid of 40 numbered panels, each containing an image and a brief text description. The panels are arranged in 5 rows and 8 columns. The images include historical artifacts like a Greek vase, architectural drawings of Roman and Japanese baths, various artworks depicting bathing scenes from different cultures and eras, and modern-day photographs of public and private bathing facilities. The text panels provide context and historical information related to the images.

3 **Research**
Naked Bath History

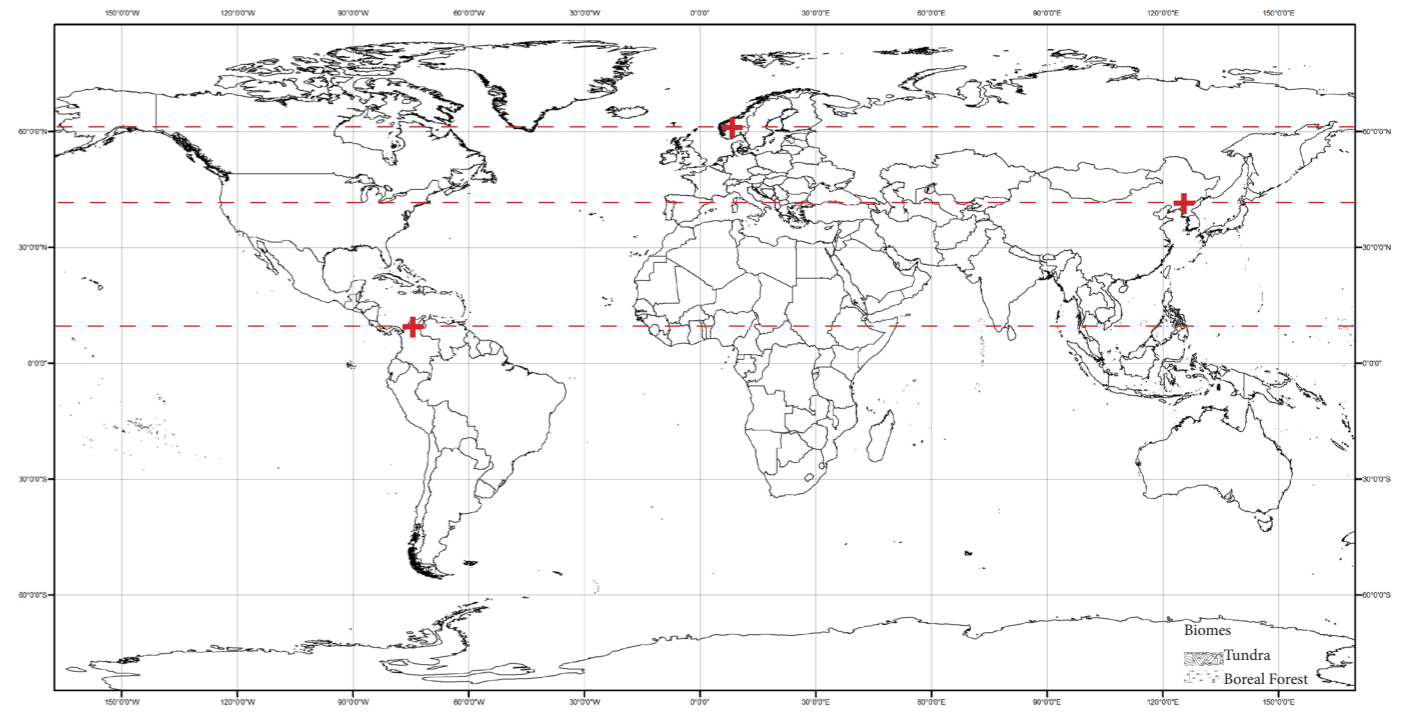
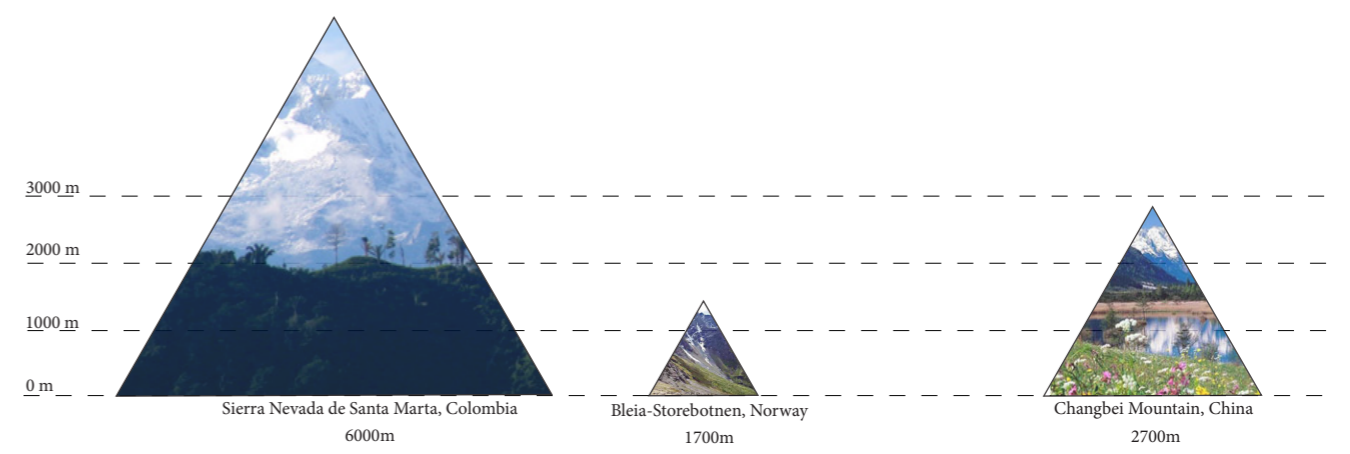


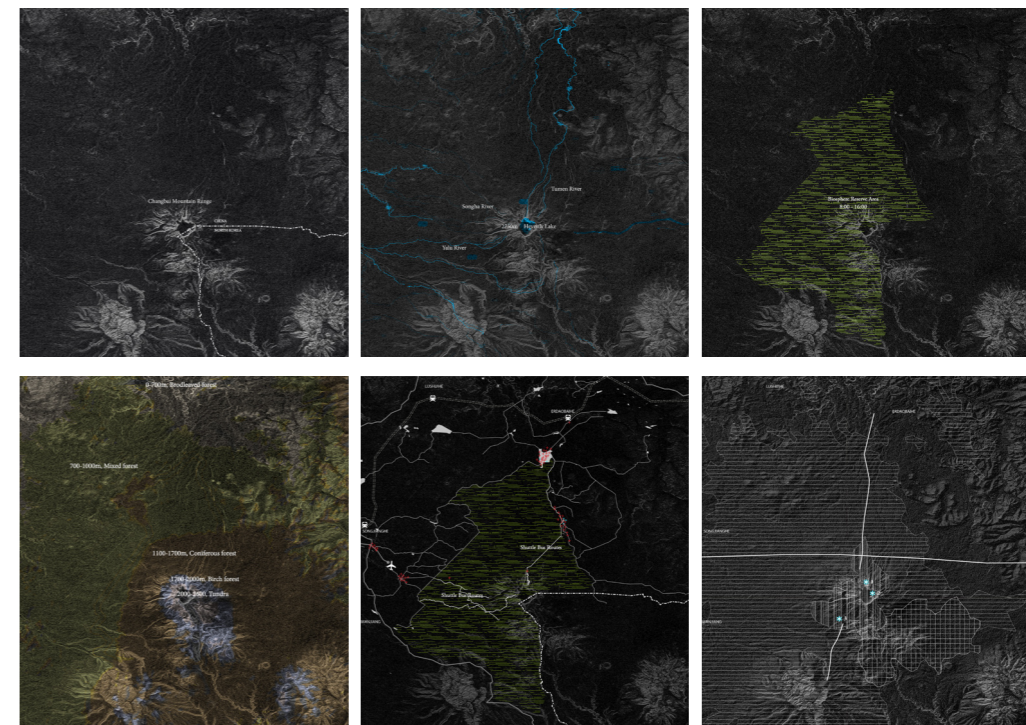
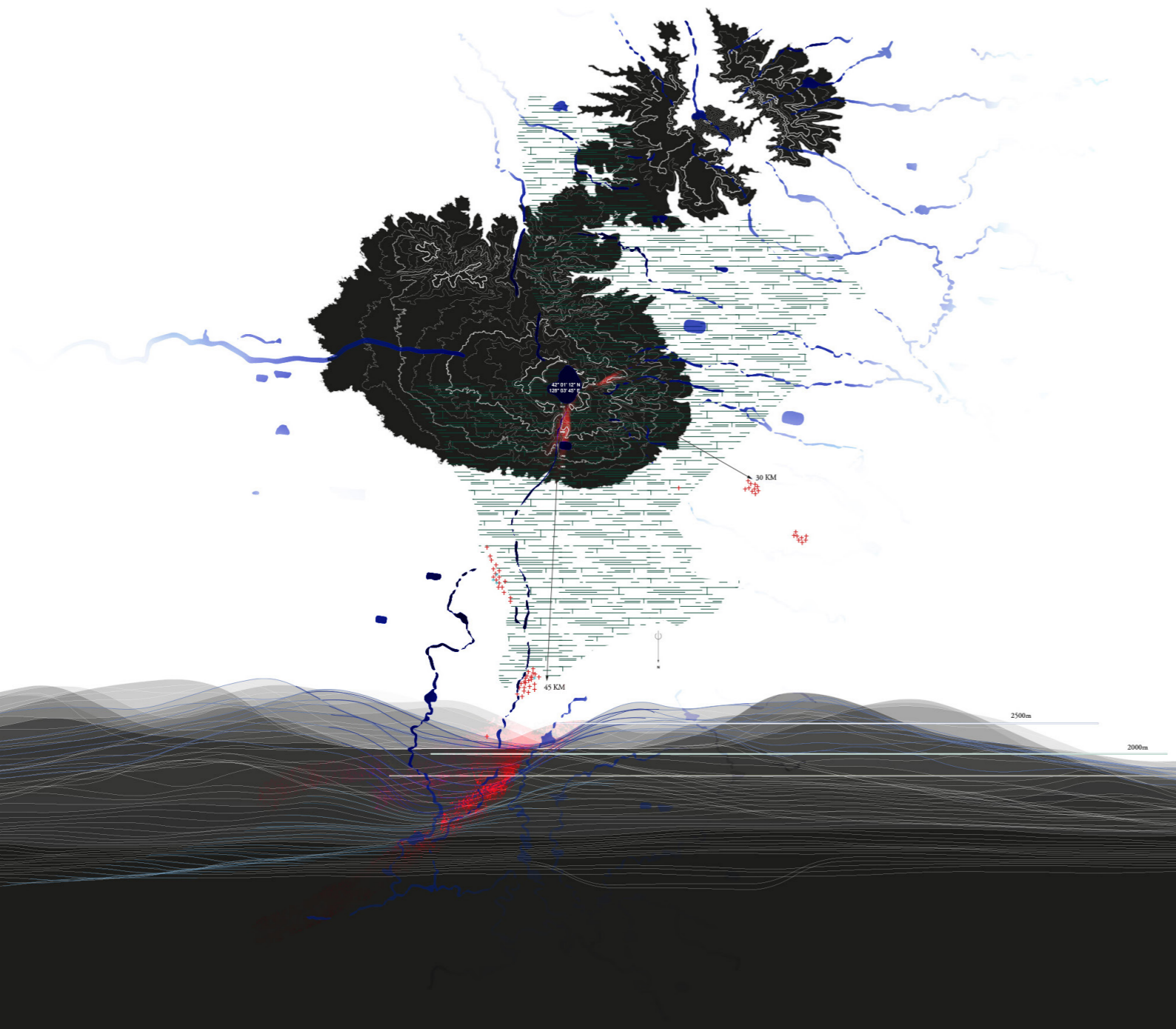
Research
Chinese Aesthetic
towards to Landscape



Chapter 1 Into the Mountain

“Everything is interconnected.”
_ Alexander Von Humboldt





Contradiction

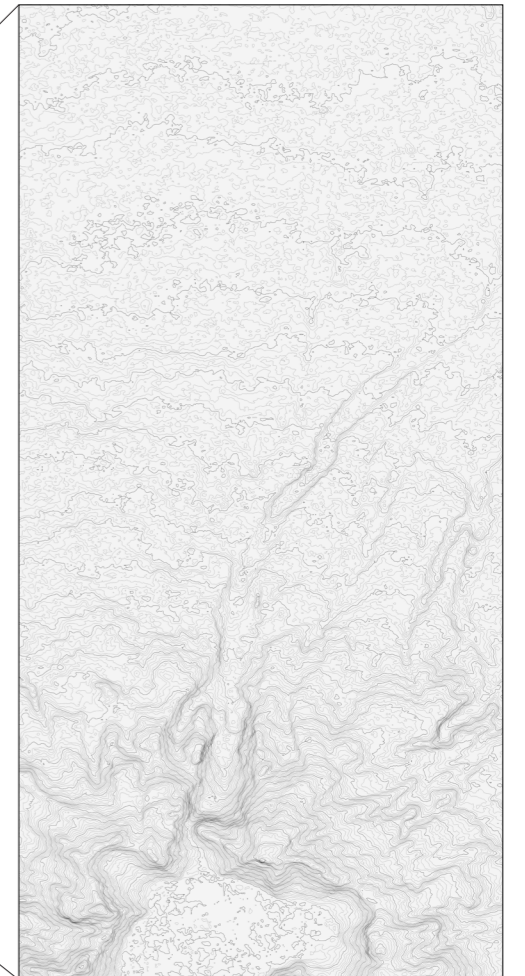
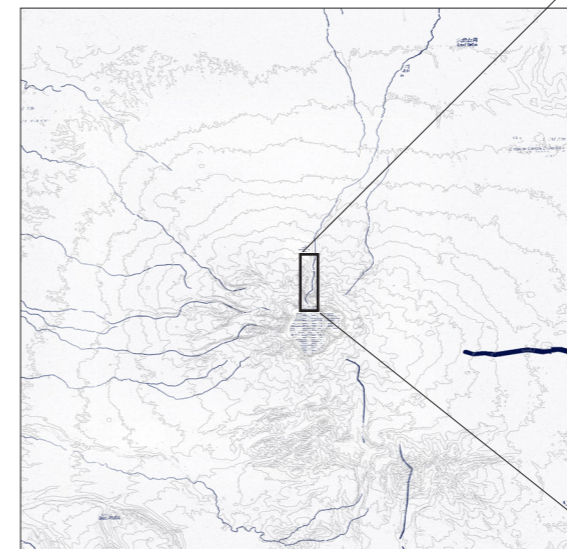
After addiccting to the Roman's luxury bath palace, Chinese became to chase a Japanese nature-like hot spring resorts. The nature-like environment costs abundant of artificial energy to maintain the whole system operate, for instance, the manpower, electricity, financial resources.

The hot water is pumped from pools to pools. The so-called "hot spring" is a result of boiler. In order to make a leisure feeling and the best service, the towels and the bathrobes are unlimited supplied. There is no control on the use of shampoo, nor soap,etc. The waste water is just piped out in the area opposite the Biosphere Reserve Area.

In nowadays, most of the leisure value or aesthetic are built on the wealth. Leisure shoule be intangible and is made from may experience. Except the envy our friends have for us when we post the trip photos on Facebook, what are we actively looking for ?

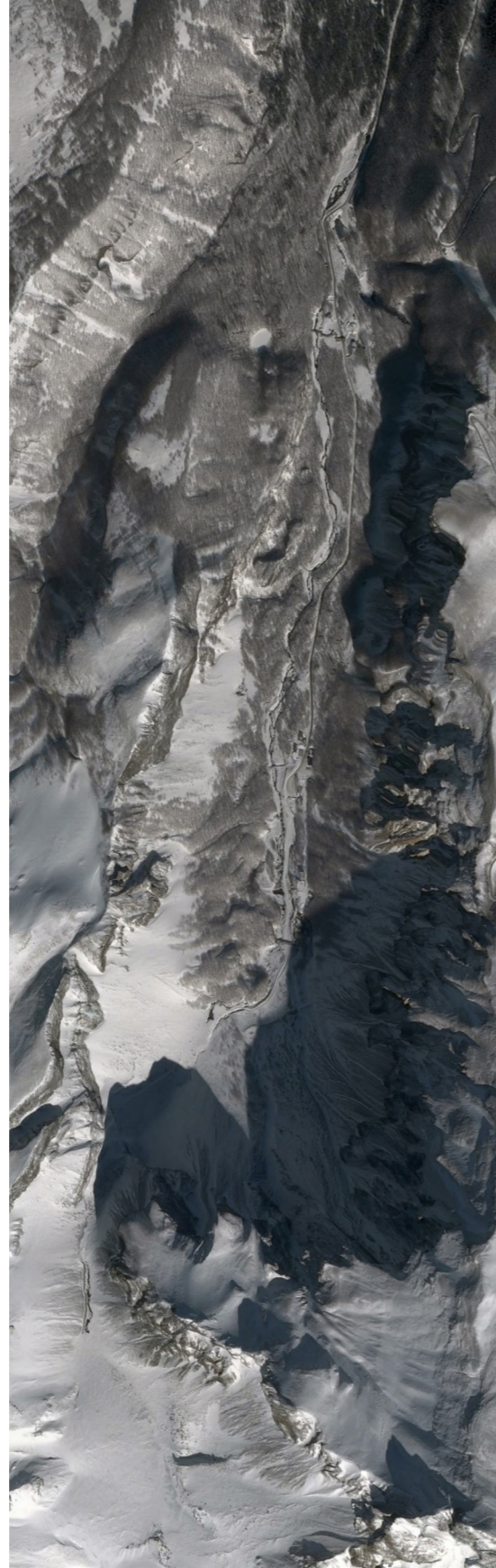
Chapter 2 Beyond the Valley

*“The role bathing plays within a culture reveals the culture’s attitude
toward human relaxation”
– Sigfried Giedion, 1948*

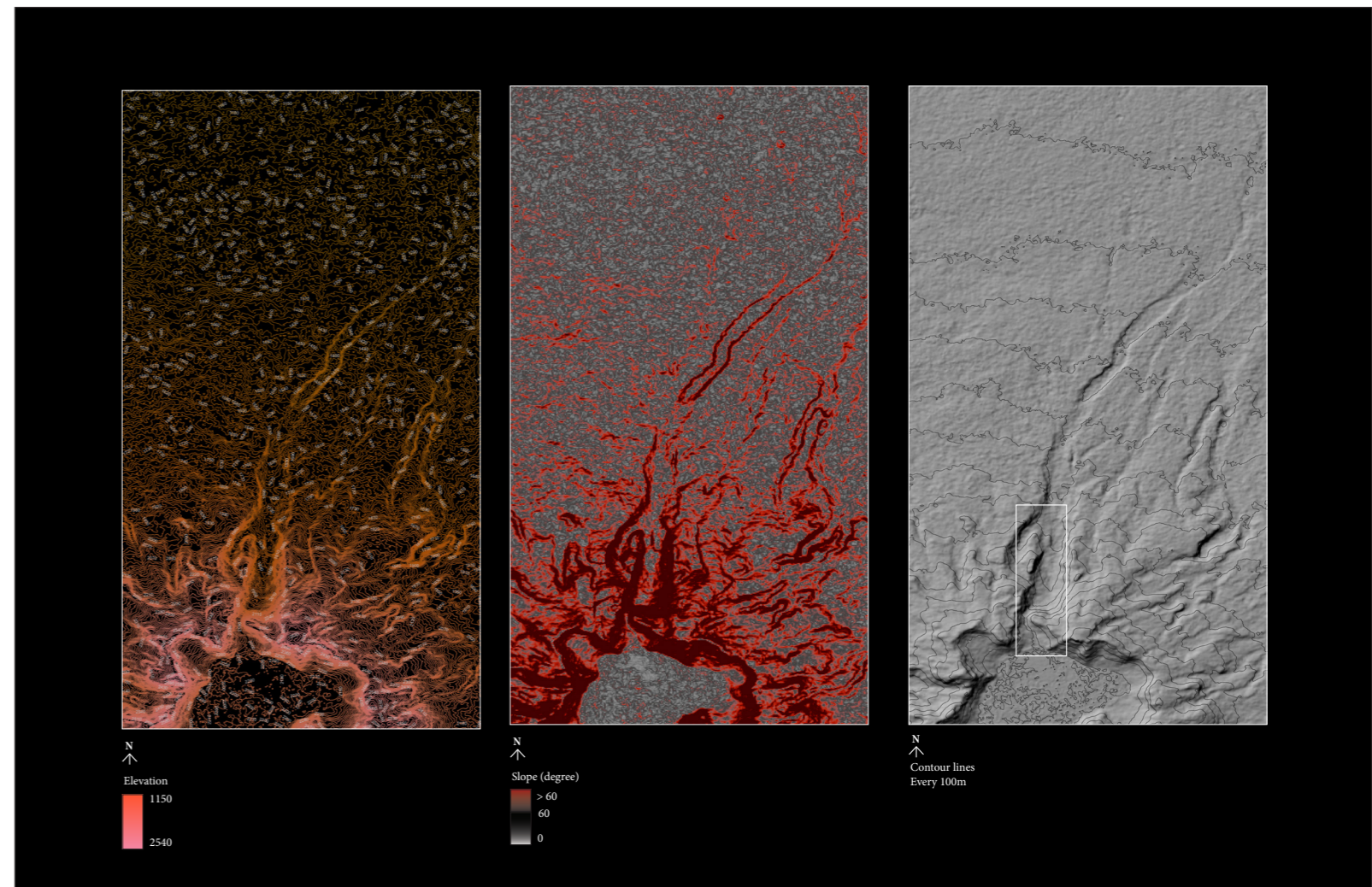


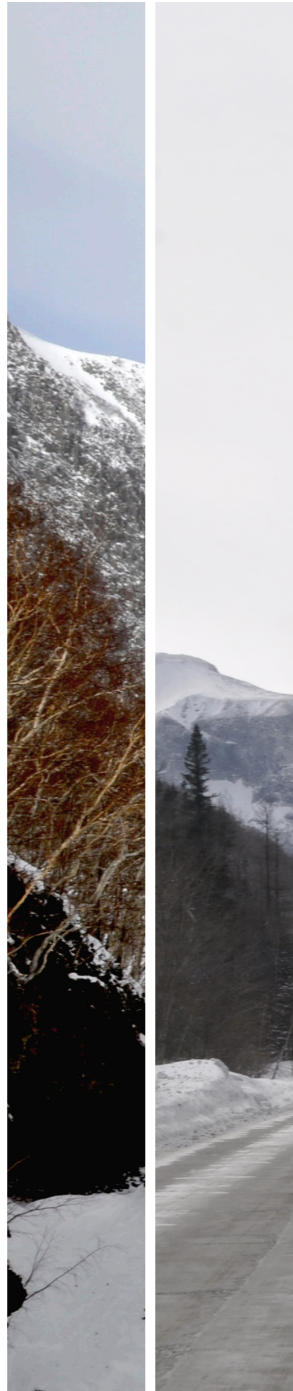
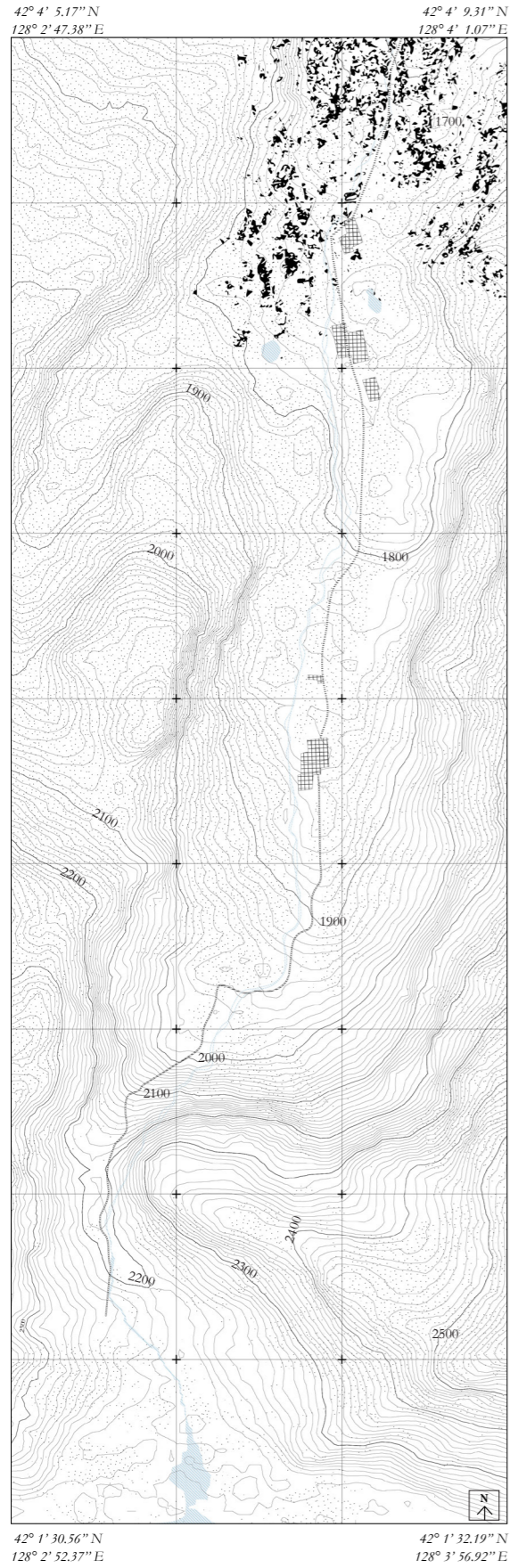


20110528/ Google map









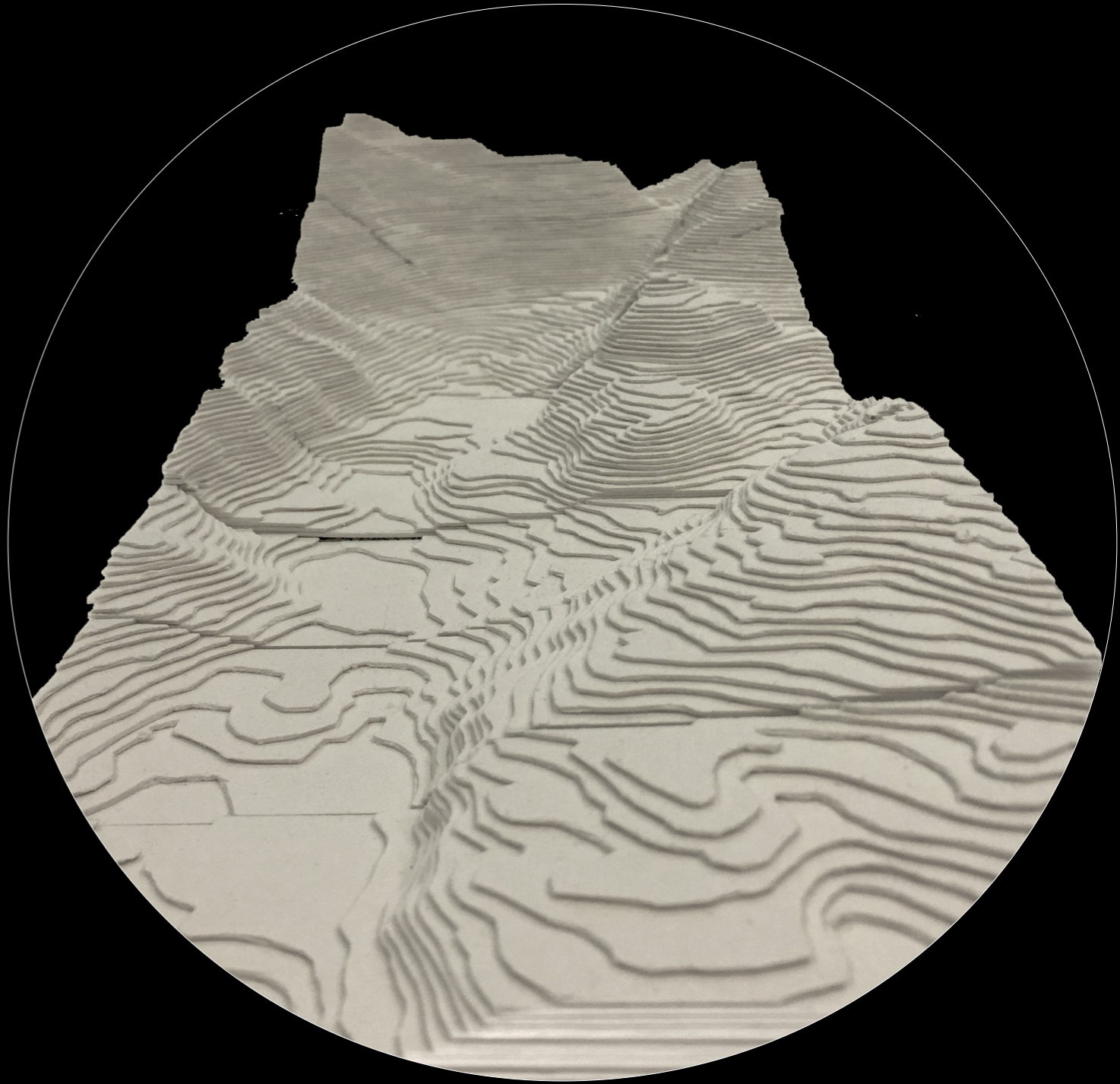
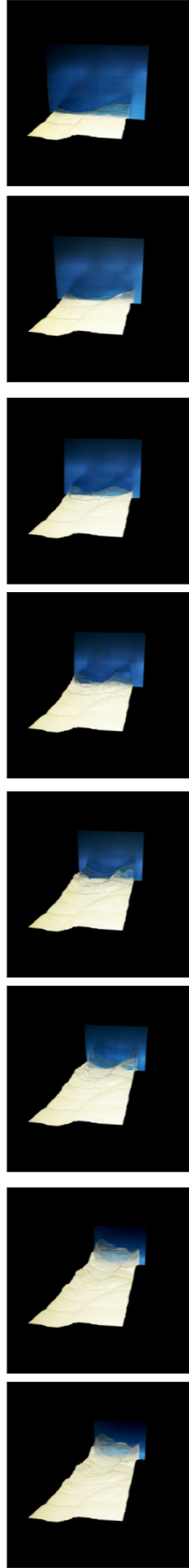
20170214/ Google map
12





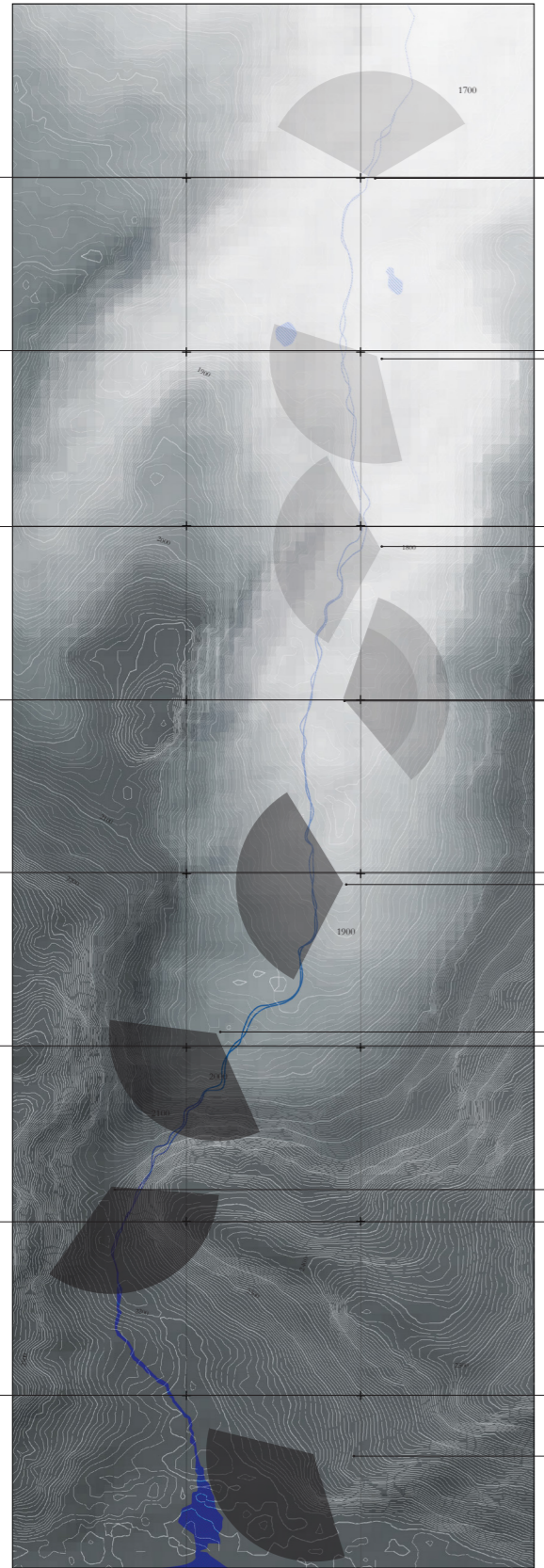
Legend

-  Conifer Forest
-  Birch Forest
-  Water Body
-  Creek
-  Existing Facility
-  Existing Transportation



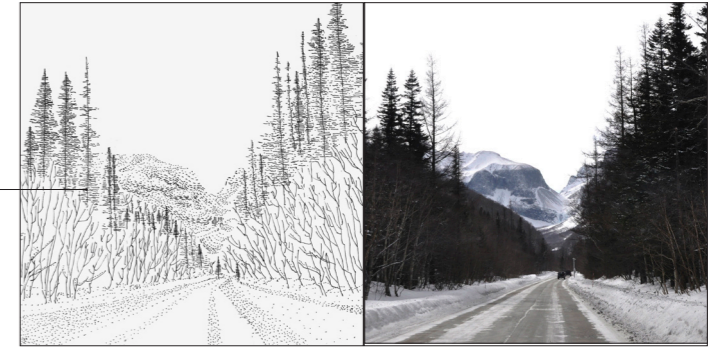
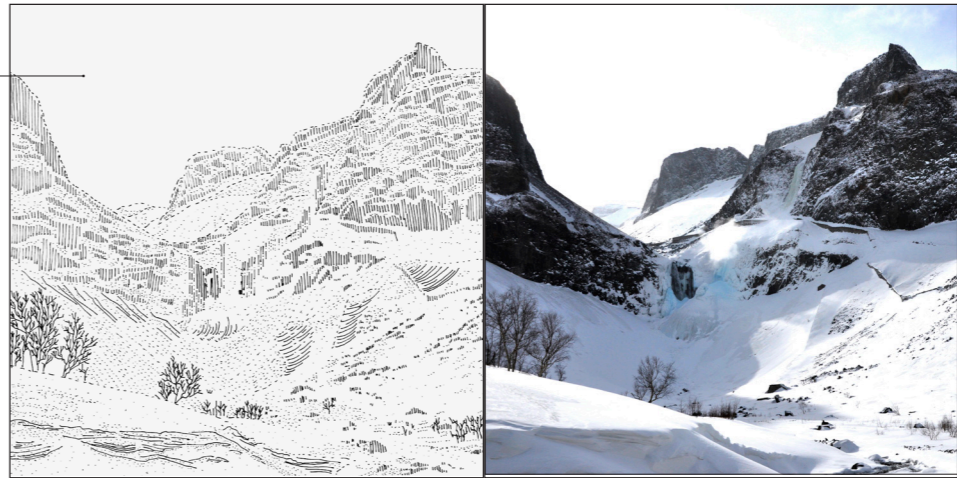
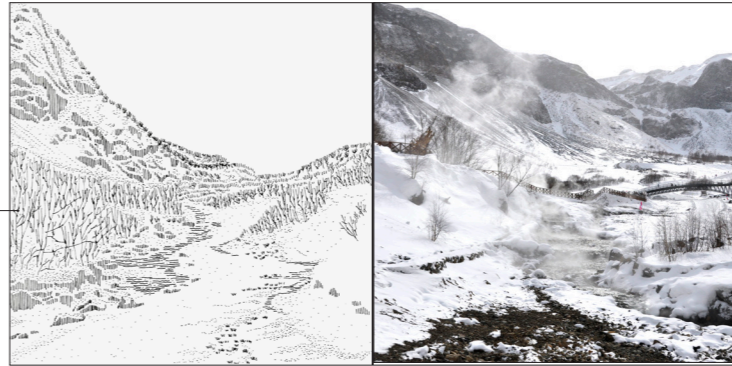
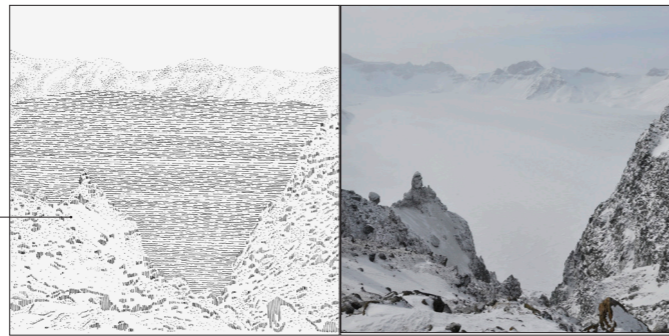
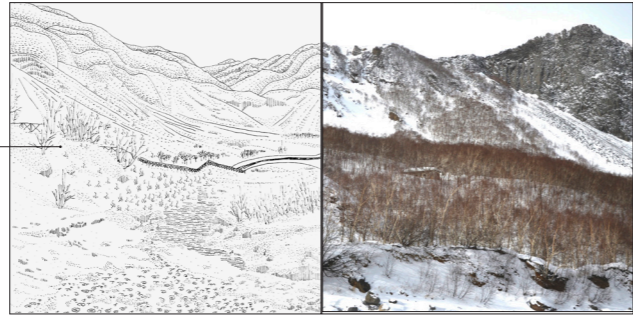
42° 4' 5.17" N
128° 2' 47.38" E

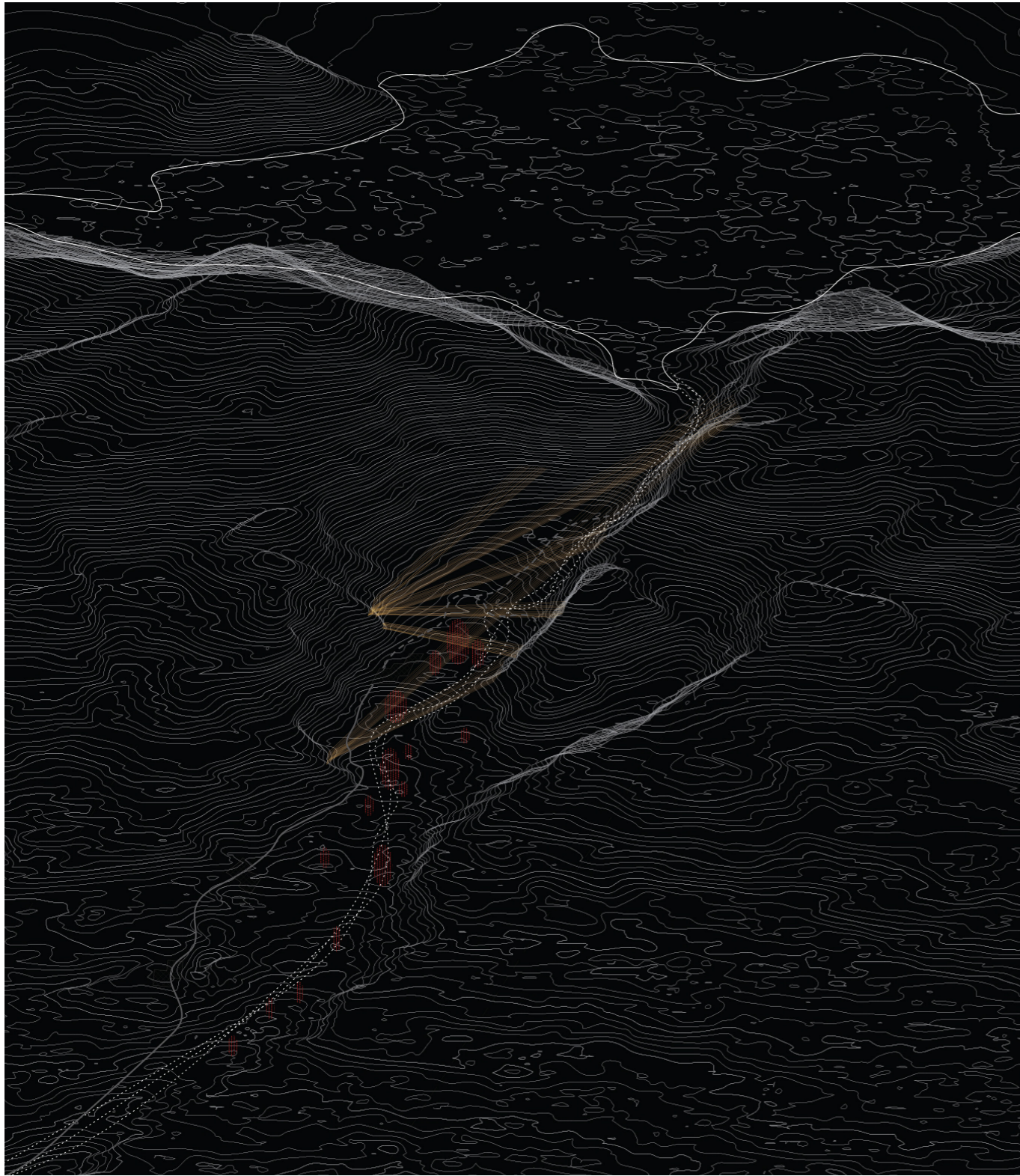
42° 4' 9.31" N
128° 4' 1.07" E



42° 1' 30.56" N
128° 2' 52.37" E

42° 1' 32.19" N
128° 3' 56.92" E

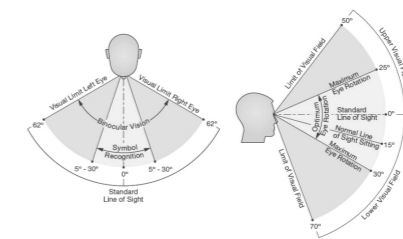




Viewshed

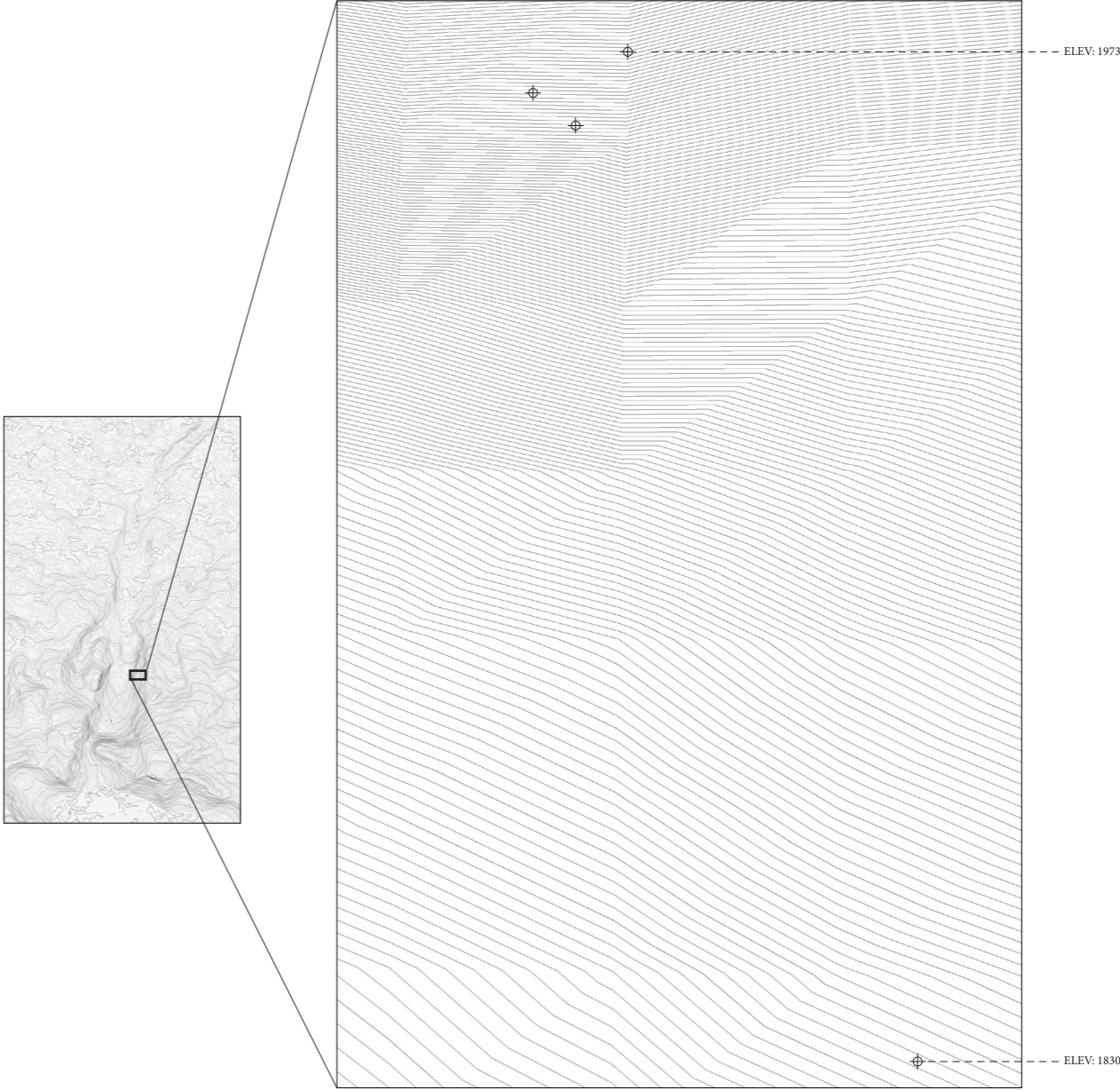
Site selection

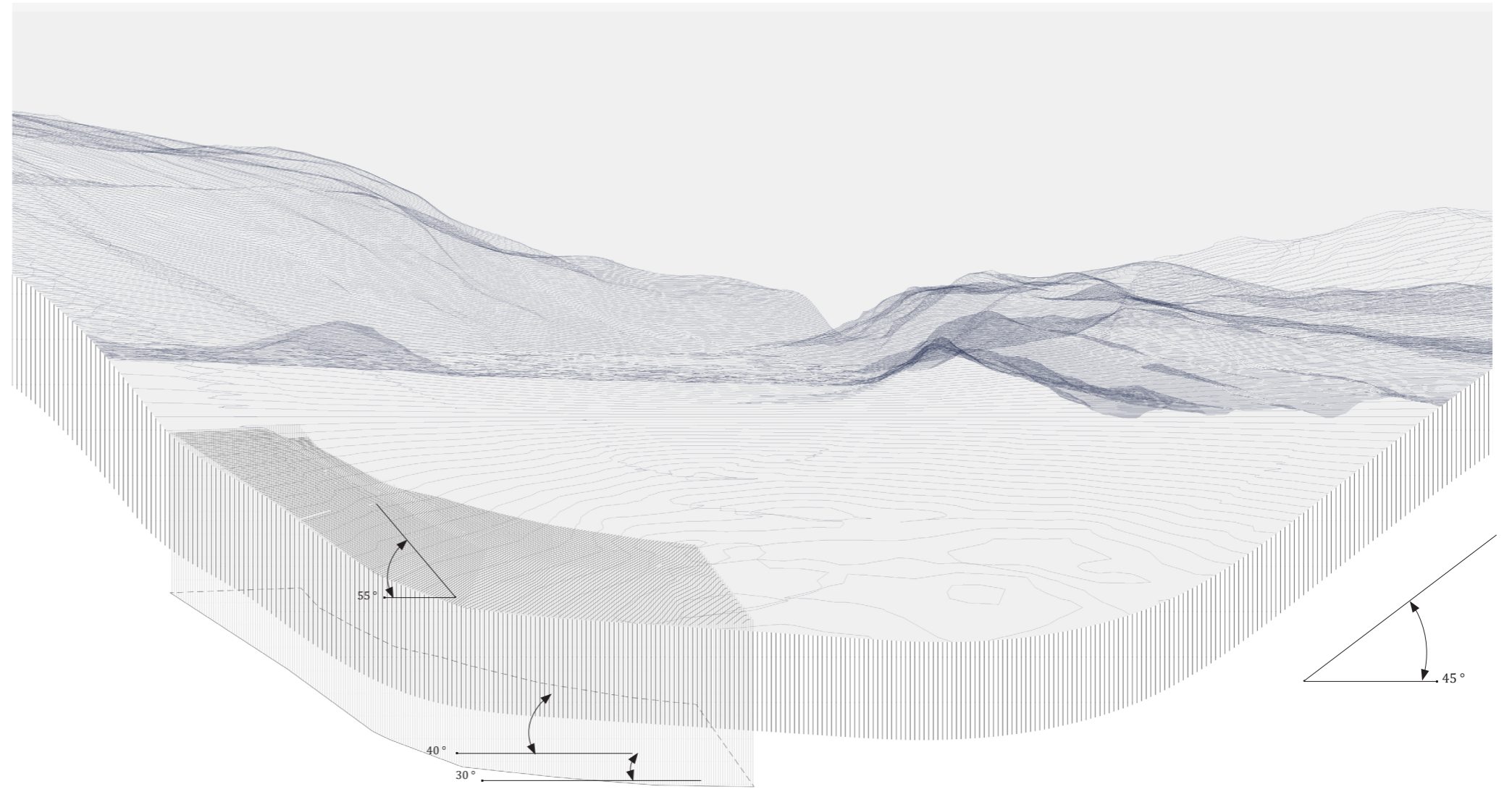
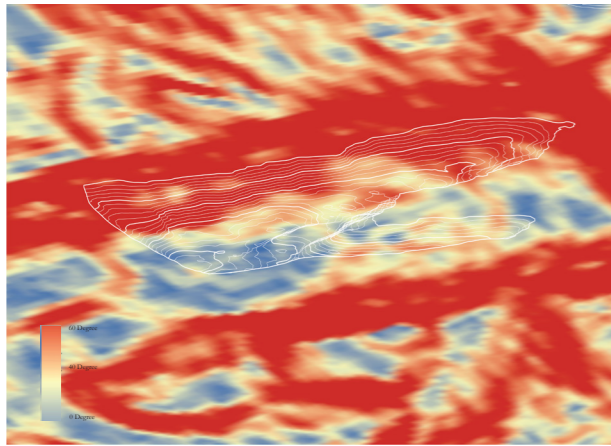
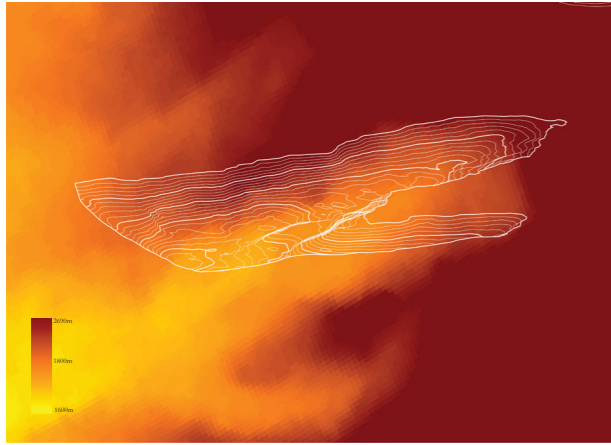
Design site selection is according to the height, the elevation, the distribution of hot spring, the slope, the aspect and, the last but not the least, the view corridor - VIEWSHED.



Chapter 3 On Site

“To bathe is to fall into step with your biological rhythms”
— Leonard Koren, 1996

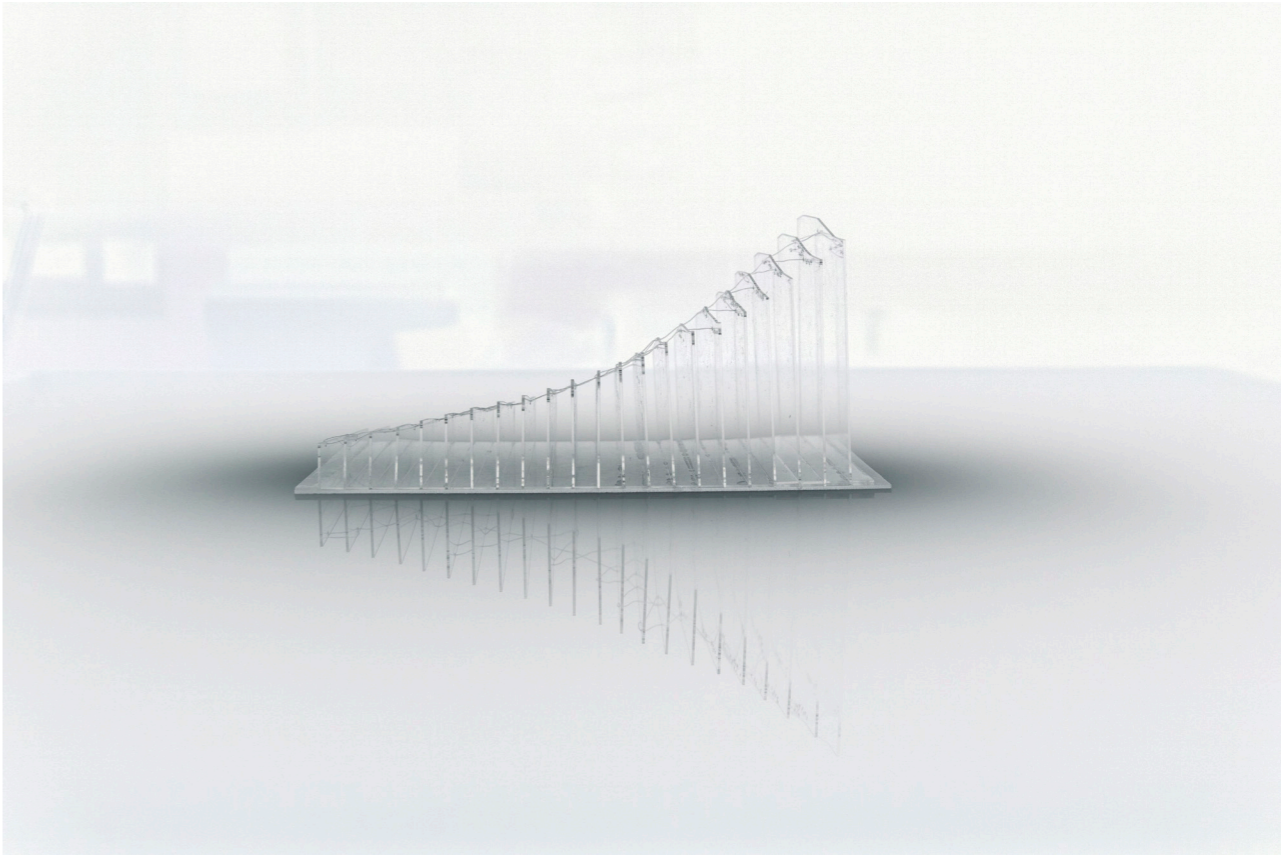
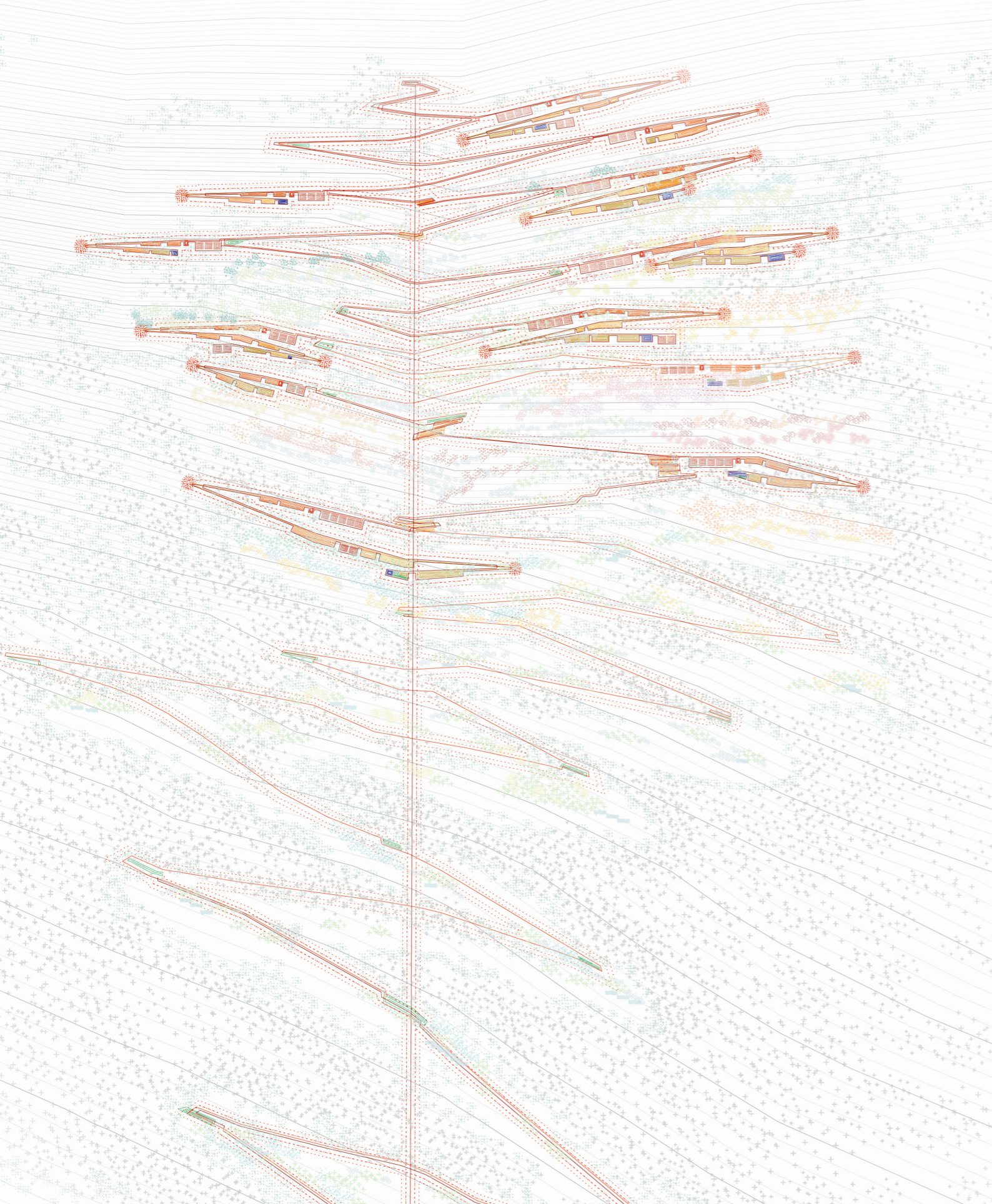


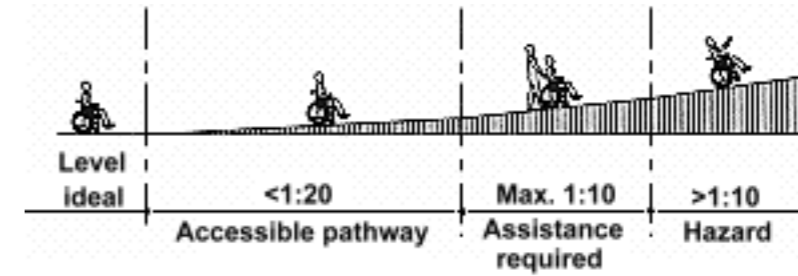
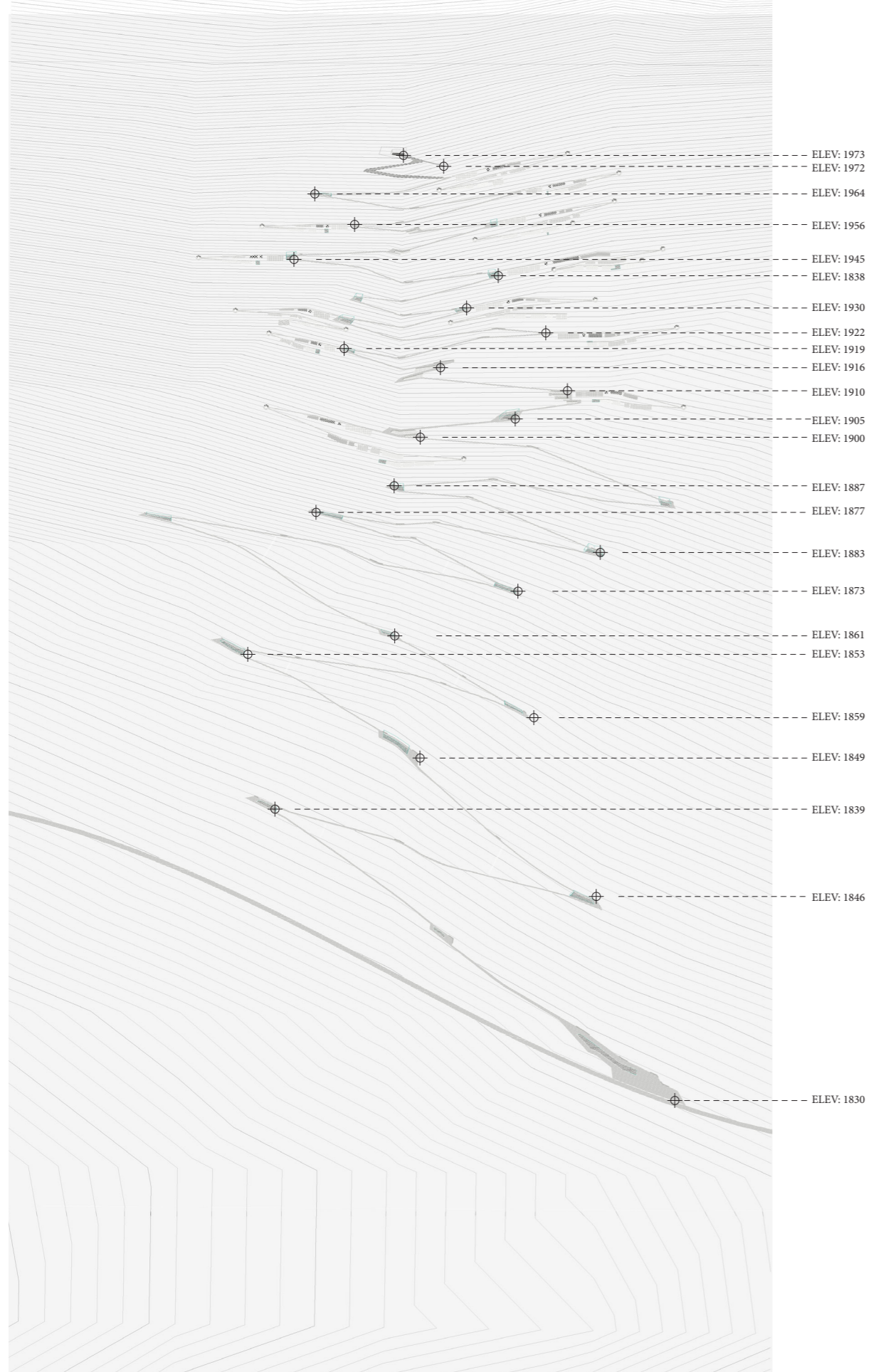


Chapter 4 Design

*How I define a great bathing environment?
... A place that awakens me to my intrinsic earthy, sensual and paganly reverential nature...*

leonard koren





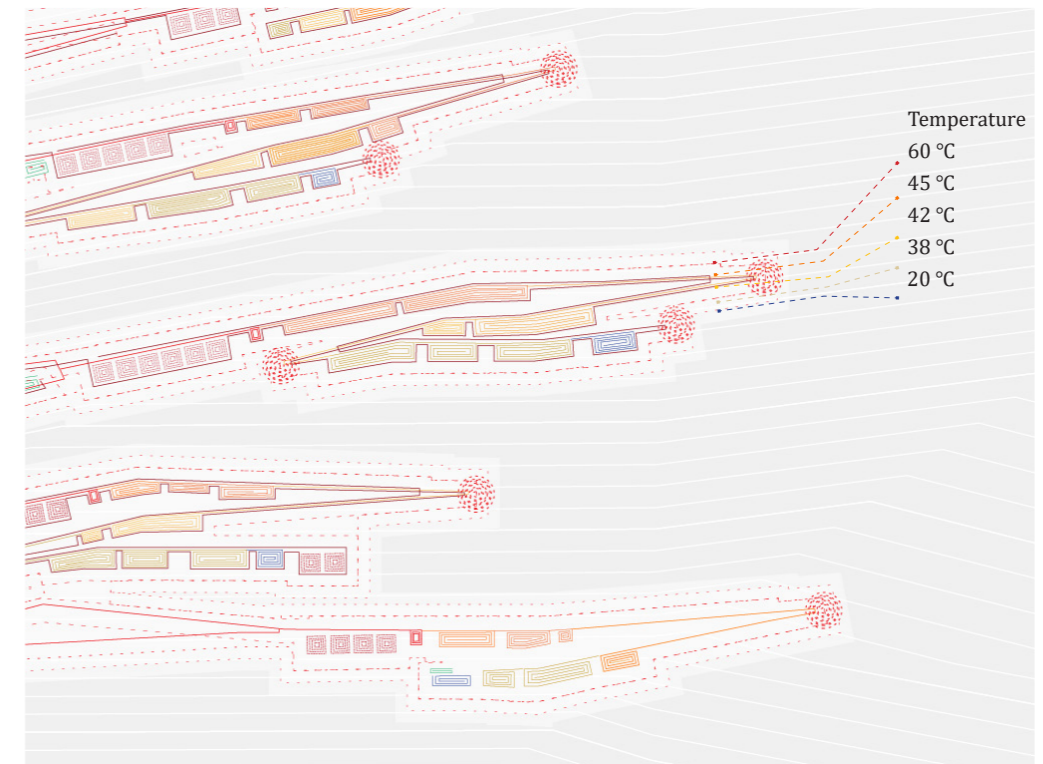
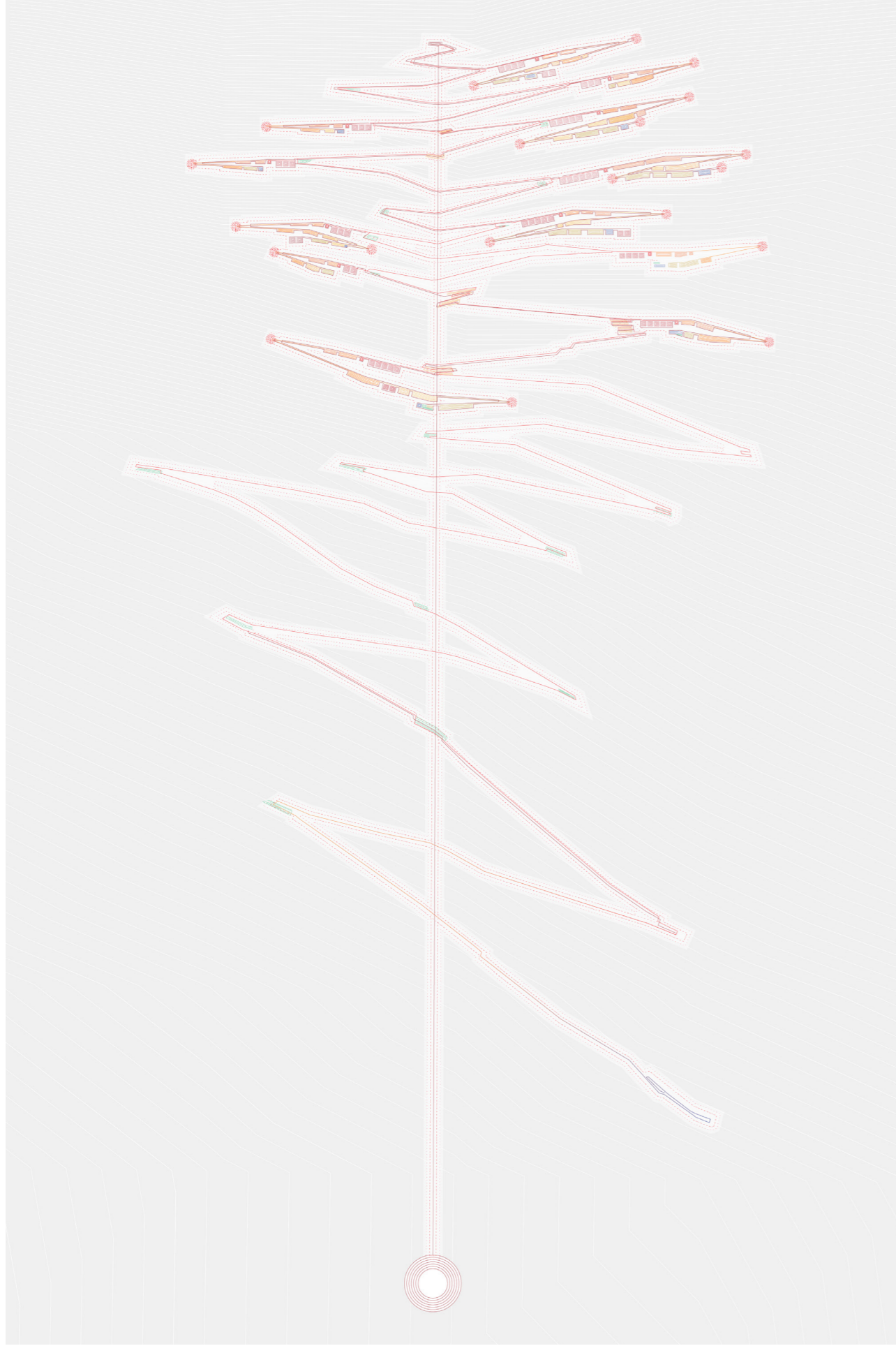
Bath/Path

Water flows along the ramp.

From hot pools to cold pools, the same from high to low, water-flow follows the ramp. The ramp is designed according to the topography. In order to maintain the whole gravitation networks, one pumping system as external power is required to transport the hot water from the lower land.

To provide ramps wherever stairs obstruct the free passage of pedestrians, mainly wheelchair users and people with mobility problems.

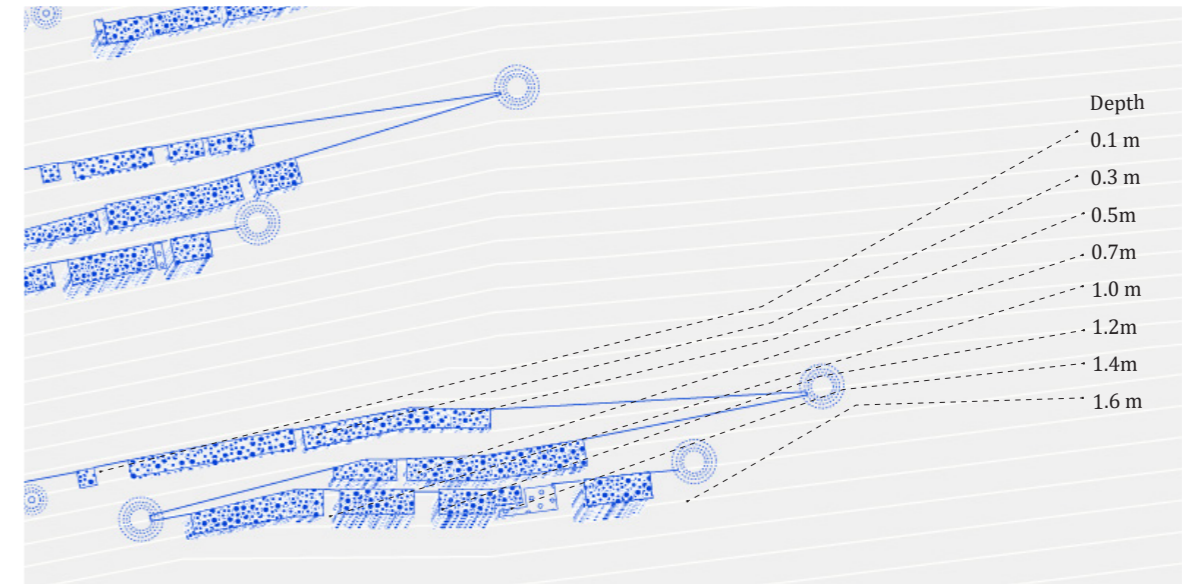
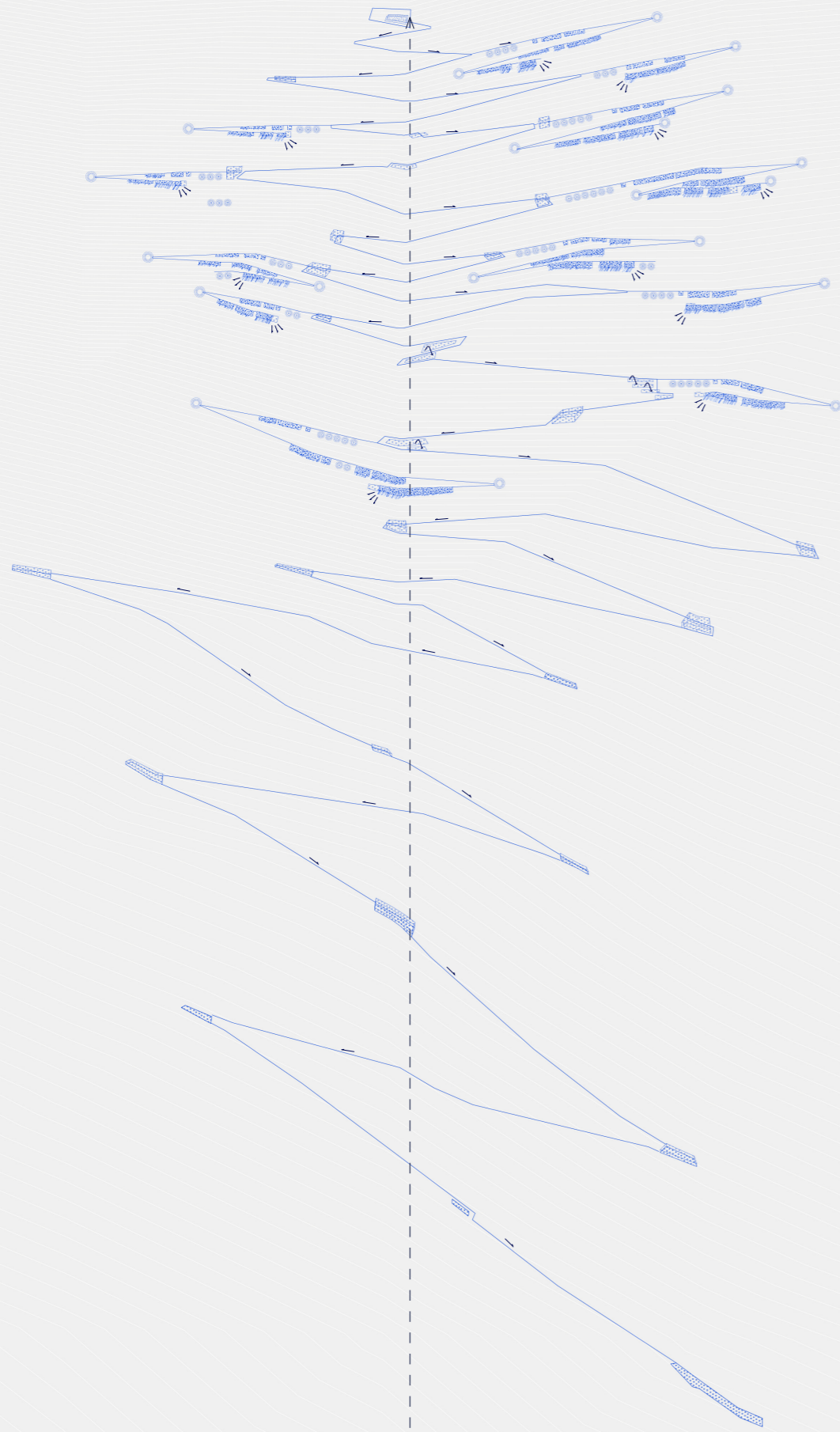
Maximum slope	Maximum length	Maximum rise
1:20 i.e., 5%	-	-
1:16 i.e., 6%	8 m	0.50 m
1:14 i.e., 7%	5 m	0.35 m
1:12 i.e., 8%	2 m	0.15 m
1:10 i.e., 10%	1.25 m	0.12 m
1:08 i.e., 12%	0.5 m	0.06 m



Temperature-Scape

Gravity flow water distribution system is designed together with the heat distribution system.

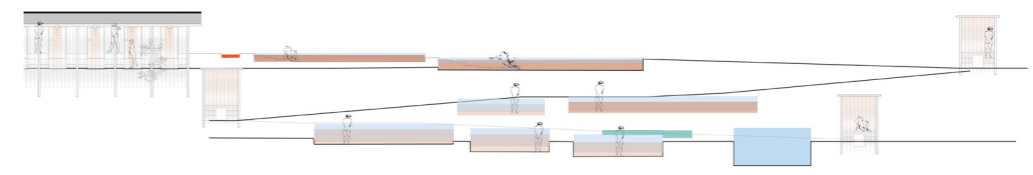
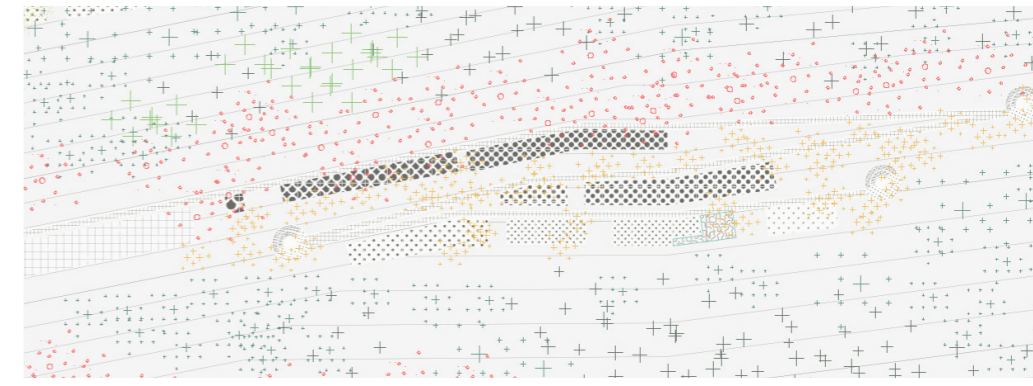
From hot pools to cold pools, the same from high to low, water-flow follows the ramp. The ramp is designed according to the topography. In order to maintain the whole gravitation networks, one pumping system as external power is required to transport the hot water from the lower land.



Depth

The depth of the pool is designed from 0.1 meter to 1.6 meter according to different function and position. For example, the sitting pool is designed as 0.5 meter.





Plan

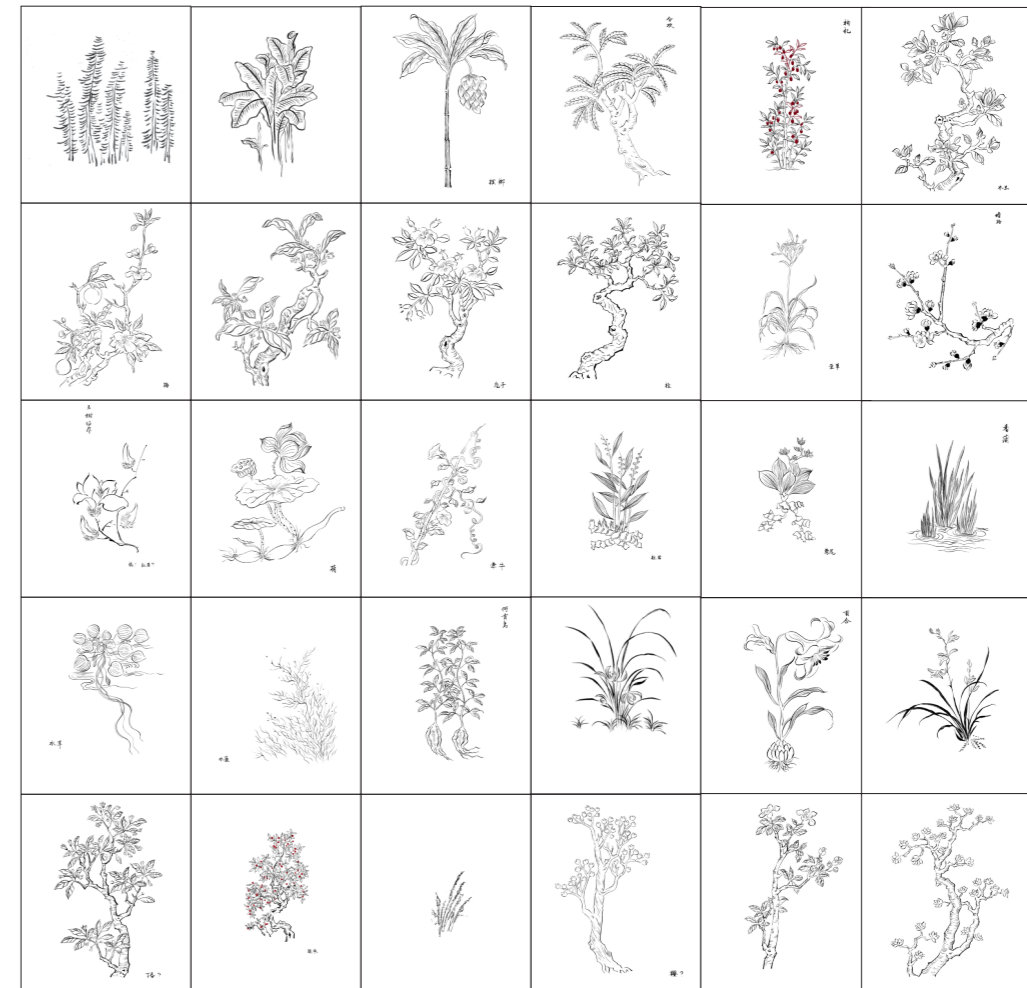
The width of the pool is designed from 1meter to 1.5 meter according to the slope.

There are ten bath area are designed along the path on the terrain. Each group offers a special scenery. The distance between each group is considered by the view.

A reservation system is needed.



Pamukkale
_ Reference of the pool's size



Vegetation

With the help of the heat, some vegetation can be invited to the bath.

Along the ramp, the higher temperature brings the vitality for specific trees. In spring, some trees will bloom earlier. On the contrary, some trees can't tolerate the frozen will dead in winter. In short, there will be a special vegetation layer along the ramp and the pools.

The heat source locate on lower land. There will be some greenhouse nearby to attract more visitors in winter. Some cold water can be pumped for shower use.

Vegetation is selected by color, blooming time, fruit, texture, aroma and herb as well. The new vegetation is along the ramp, it also helpful to block the view from the others. When people soaking in the pools, they are also enjoy the atmosphere that created by the vegetation.

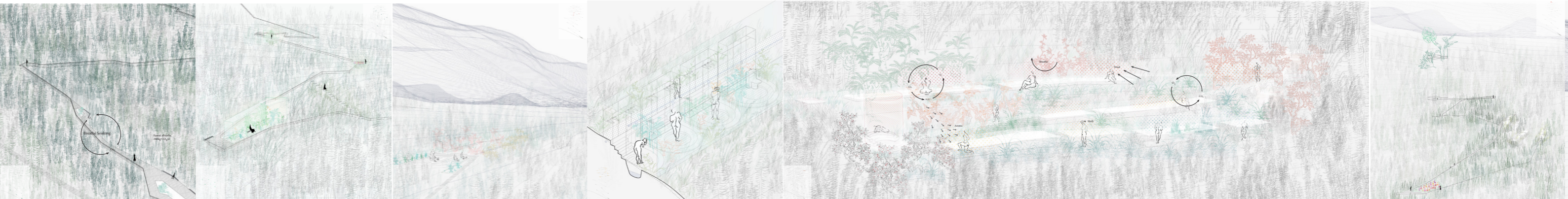
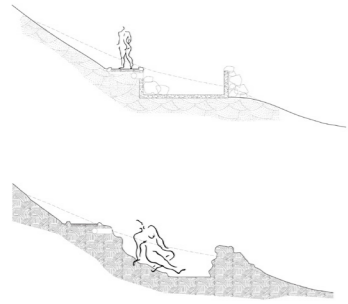
Bath Stories

_ An experience between Ice and Fire

The project aims to design a bath as spiritual renewal as physical cleansing. Slower pleasure in waters help to reconnect us to nature in an increasingly water-stressed era.

Nudity companion as a catalyst for creating community.

Ergonomics and topography fit into the pools, thus creating a unique temperature-scape that heals.



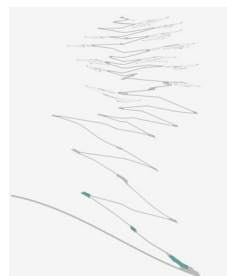
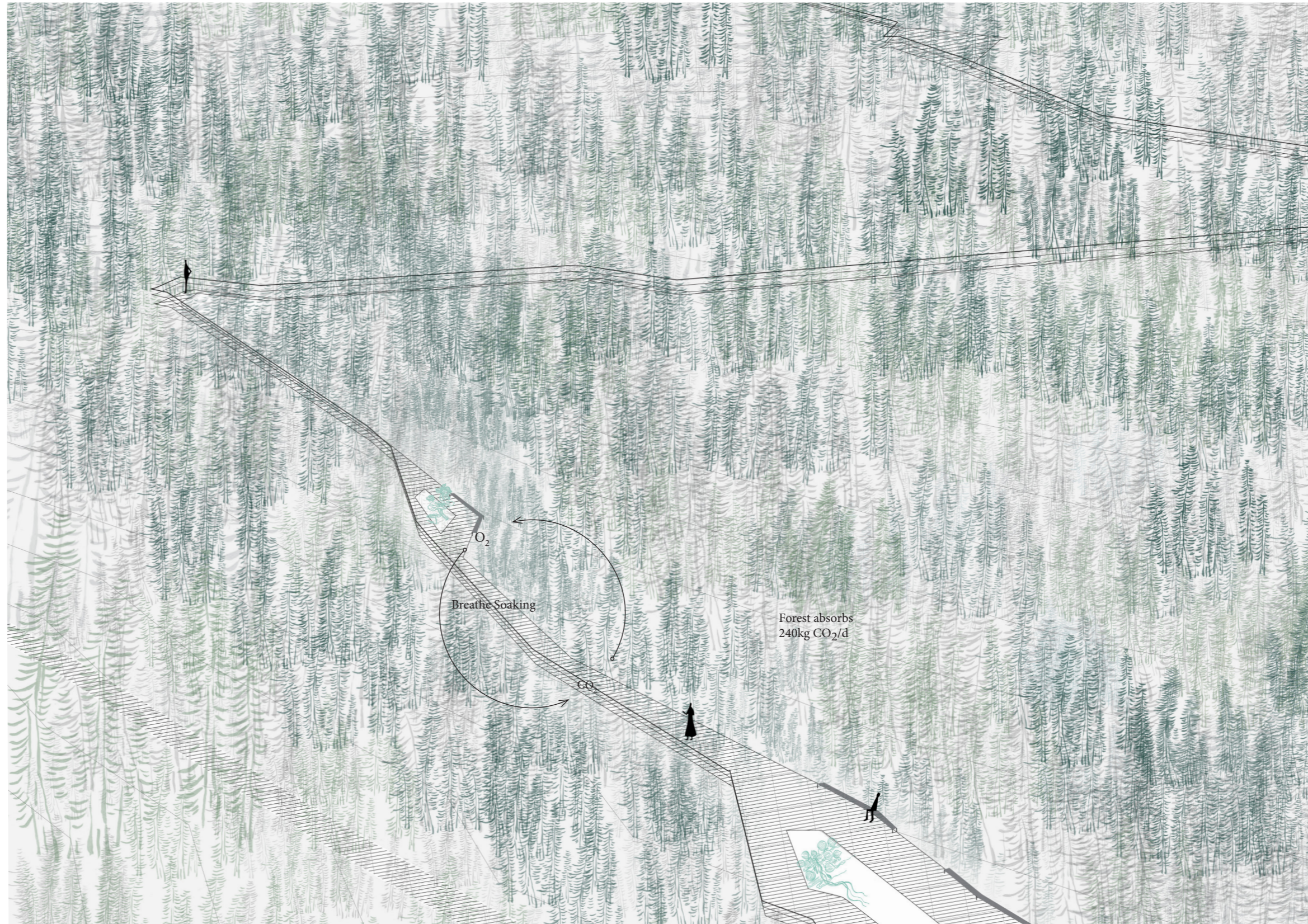
Story 01- Breathe Soaking

Shinrin-Yoku

Health benefits of walking

- forest-bathing
- the calming,
- restorative power of simply being in a forest or among trees

“In 1982, the Forest Agency of Japan first proposed a new movement called 'forest bathing trip' (shinrin-yoku) to promote a healthy lifestyle," Li explained. "Now it has become a recognized relaxation and stress management activity in Japan.”



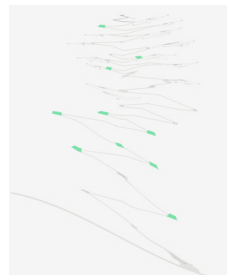
Story 02- Green Box

Shining Box

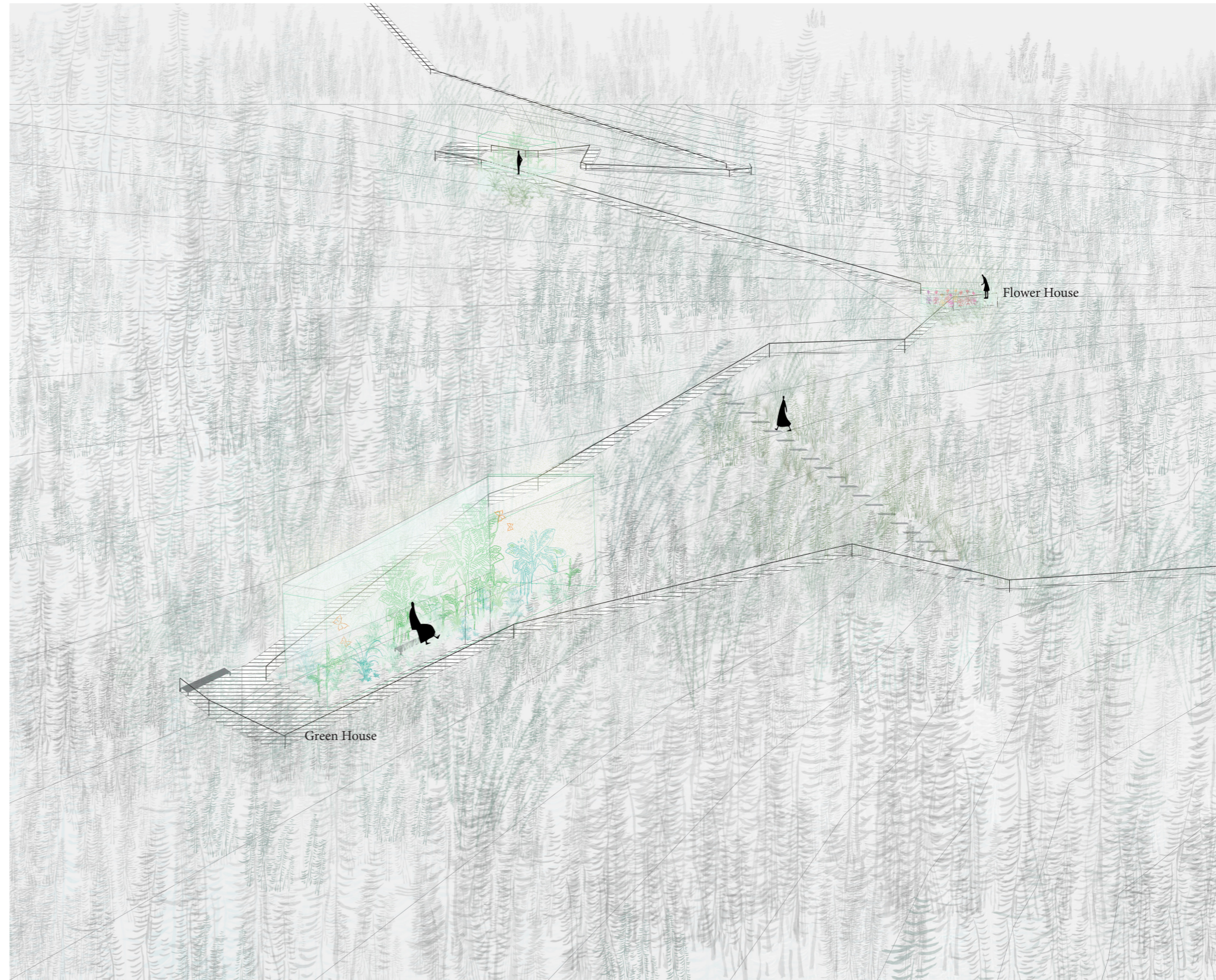
The greenhouses are distributed at the corner of the path. According to height difference of the slope, they are designed in different height. The taller ones are for trees and the shorter ones are for flowers. Besides, the visitors can go inside the large green house to take a rest. They will offer a fresh color in the white winter.

Eventhough you are not here for a bath, you can also enjoy a new scenery that benefit from the heat source.

Large green house



Shorter green house



Story 03- Feet Pools

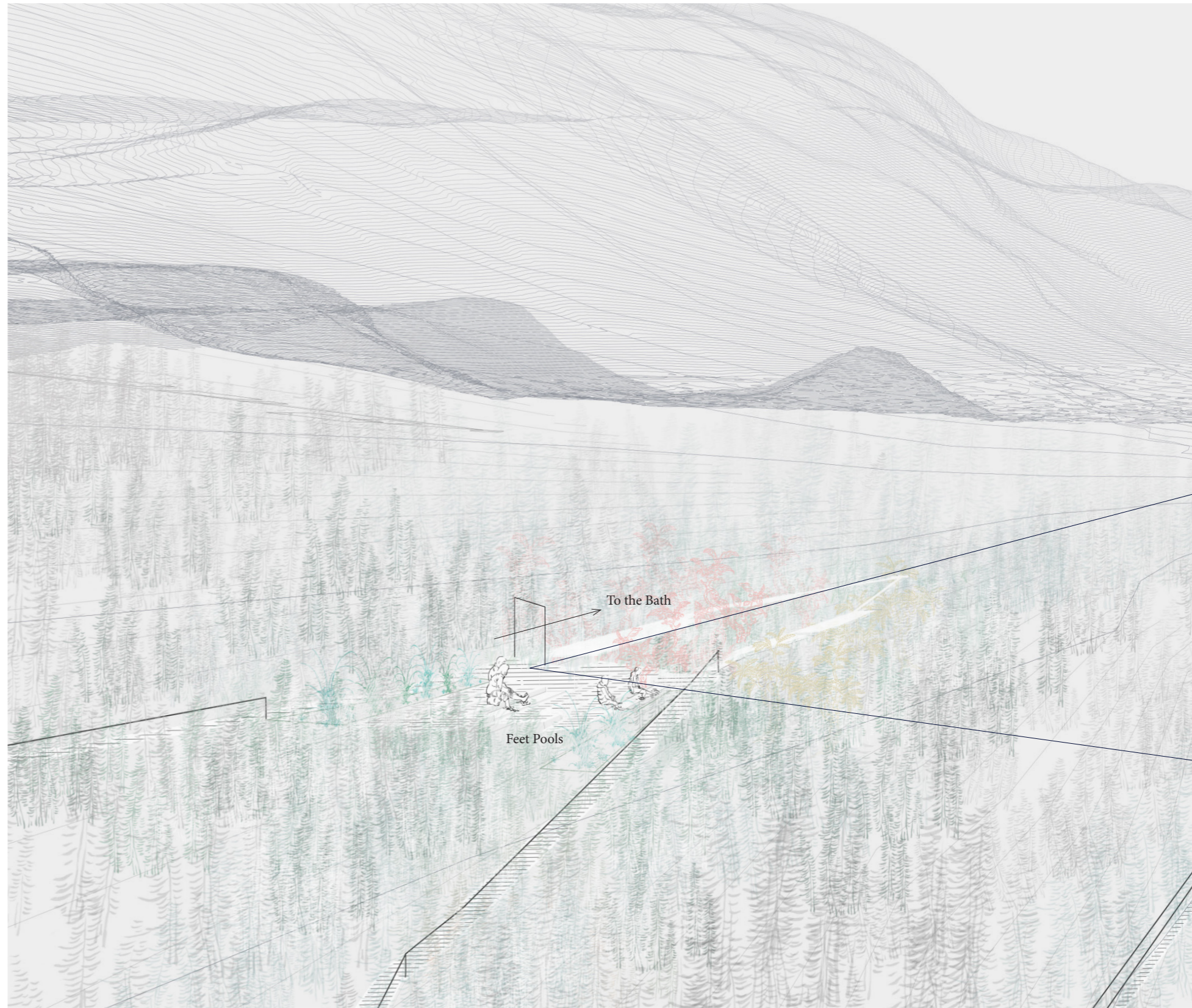
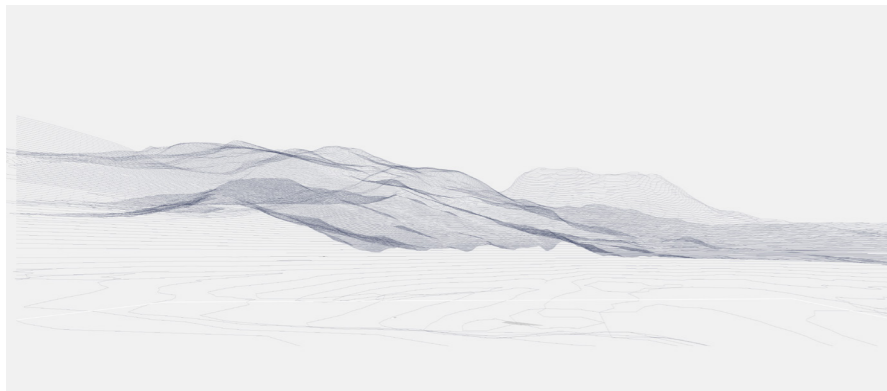
Relax in the climbing

At the specific aspect and height, the feet pools are offered. The seats are towards to the waterfall.

The feet pools are also for the nomal visiors. They can enjoy a different view upper into the valley.



View sitting on the bench



Story 04 - Shower with Plants

Eco-friendly

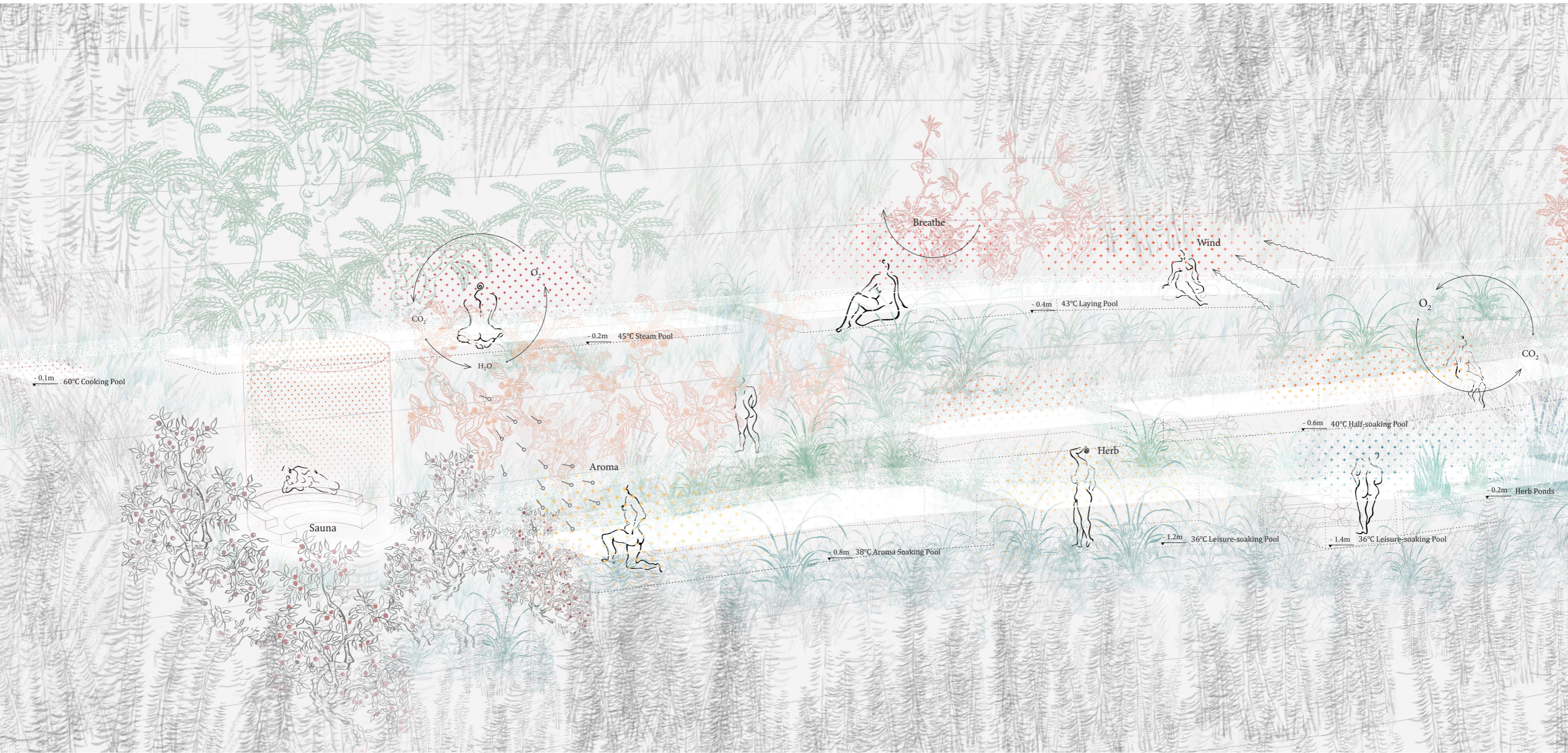
Closets are designed as changing rooms.
In order to offer some place for the vegetation, the shower place is designed in a circle shape.

Shower/conditional are strickly controled here in the shower room.

Waste water collector is underneath, it also works as a structure.



Story 05 - Inventory of the Temperature-scape



Story 05 - Alternate Inside and Outside

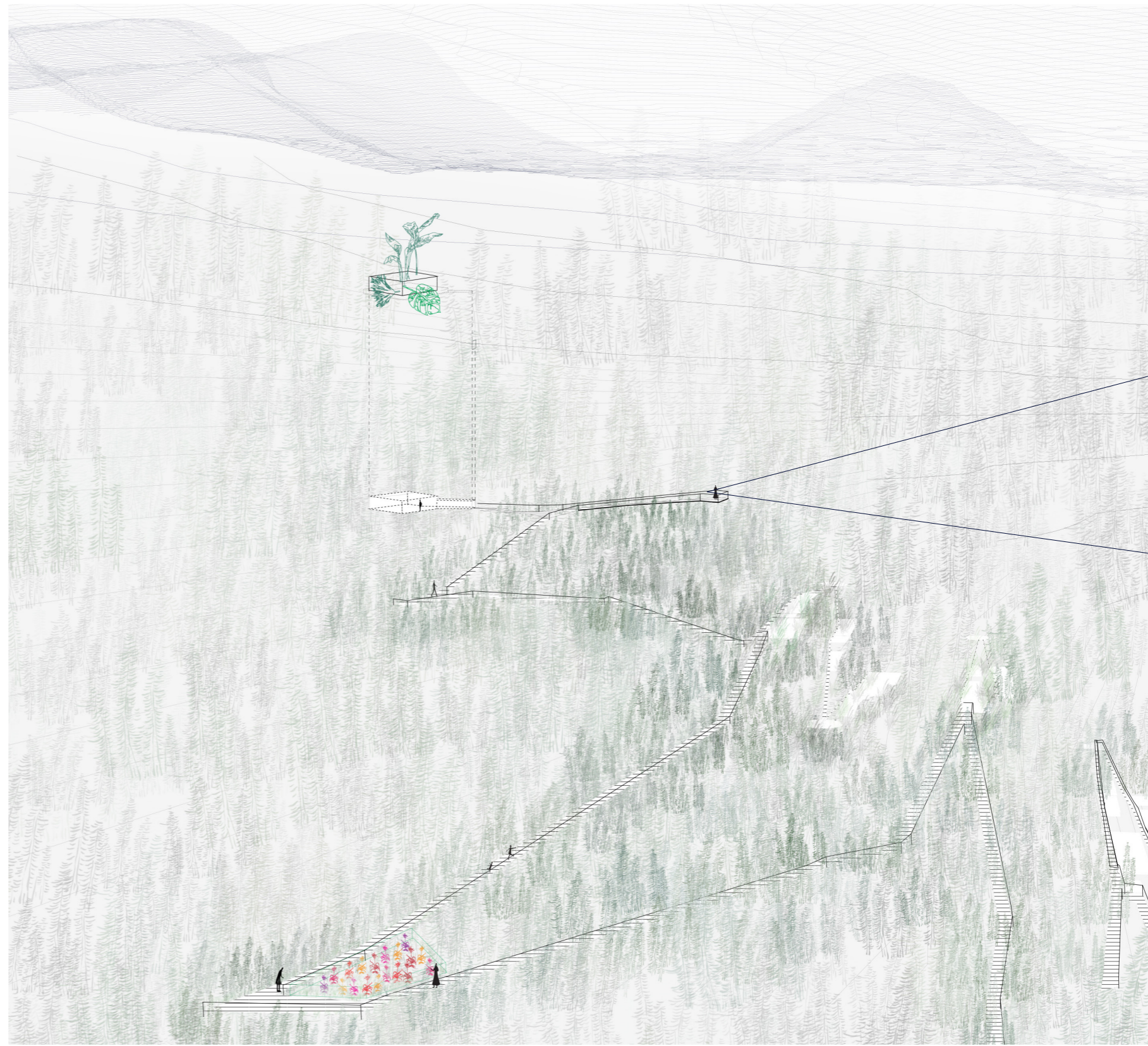
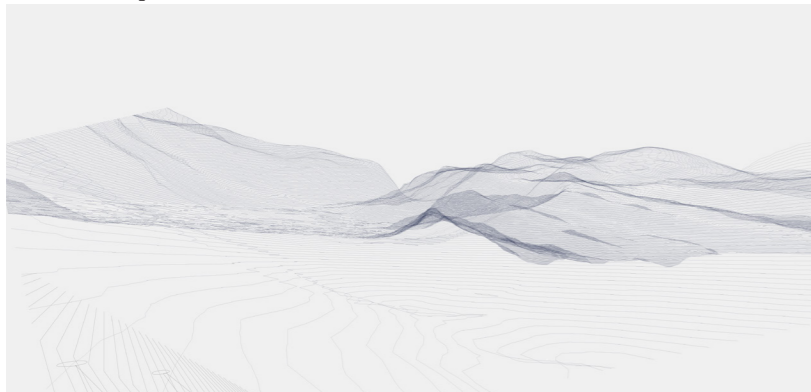
Cave/Inside

There is a tropical garden in the top cave. It is designed as a hot water tank. The hot spring was pumped to here and then distributed to the bath along the path by gravity.

Platform/Outside

The platform offers a feeling that soaking into the air, surrounded by the forest.

View on the platform



*“In and out breathing,
the speed of blood couring through your veins, the
slowness of tireness...
The mechanical world of objective time- senonds,
minites,
hours- is irrelevant here.
Taking a bath properly requires being able to
guiltlessly linger, hang out,
or do nothing whatsoever.”*

_ Leonard Koren



