

SELECTED PROJECTS

BY
KHUSHBOO GUPTA

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CONTACT

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EDUCATION

- Royal College of Art **2017**
MA Architecture London, United Kingdom
- University of Edinburgh **2012**
MA (Hons) Architecture Edinburgh, Scotland

PROJECT ROLE

- **Competition // Uplift** : spaces, senses, communities **2020**
 - Self Driven competition to help strengthen rendering and design process skills
 - Used Grasshopper Parametric modeling to explore design options and renderings using V-Ray.
- **Professional Work // Remodeling Future** : Educational Masterplan **2020**
 - Developed conceptual masterplans using Illustrator for various public school masterplans working for PUSD
 - Designs were developed after critical site analysis, teacher parent Interviews and Budget Availability
 - Responsible for all design development work and client meeting with PUSD board
- **Professional Work // In-Between Spaces** : Veteran Housing **2019**
 - Worked with Developer clients incorporating local design codes and creating sustainable community spaces.
 - Worked and responsible for all design development, discussion for final concept bid submission.
- **Professional Competition // Jam Session**: Socrates Sculpture Park Kiosk **2019**
 - Freelance design work for a competition entry in New York.
 - Assisted in design development and was responsible for all the detailed final drawings for submission
- **Competition // Mimicking Nature**: A Look-Through Point **2018**
 - Designed a look-through point over Mount Nemrut in Turkey, that was selected as a shortlisted entry.
 - Produced parametric design models using Grasshopper and final renderings using V-Ray.
- **Graduate Research Project // Electric Rush**: A Monastic Hydropower Plant **2017**
 - Researched and mapped mountainous environments of the Himalayas in QGIS to understand the socio-techno-political dynamics of the region.
 - Responsible for all output, project was realised after critical site evaluation of all stakeholders humans & animals involved.
- **Graduate Research Project // De-Industrial Revolution**: Bulmer Brick Education Center **2014**
 - Designed a brick research and development facility in Bulmer, England as a part of the De-Industrial Revolution Studio. Researched manufacturing of materials through site investigations, site visits and site interviews.
 - Produced 3D printed brick arch models using Rhino and CNC machine-tooled site models. Also created 1:1 scale plaster brick model, as well as technical drawings for the project.

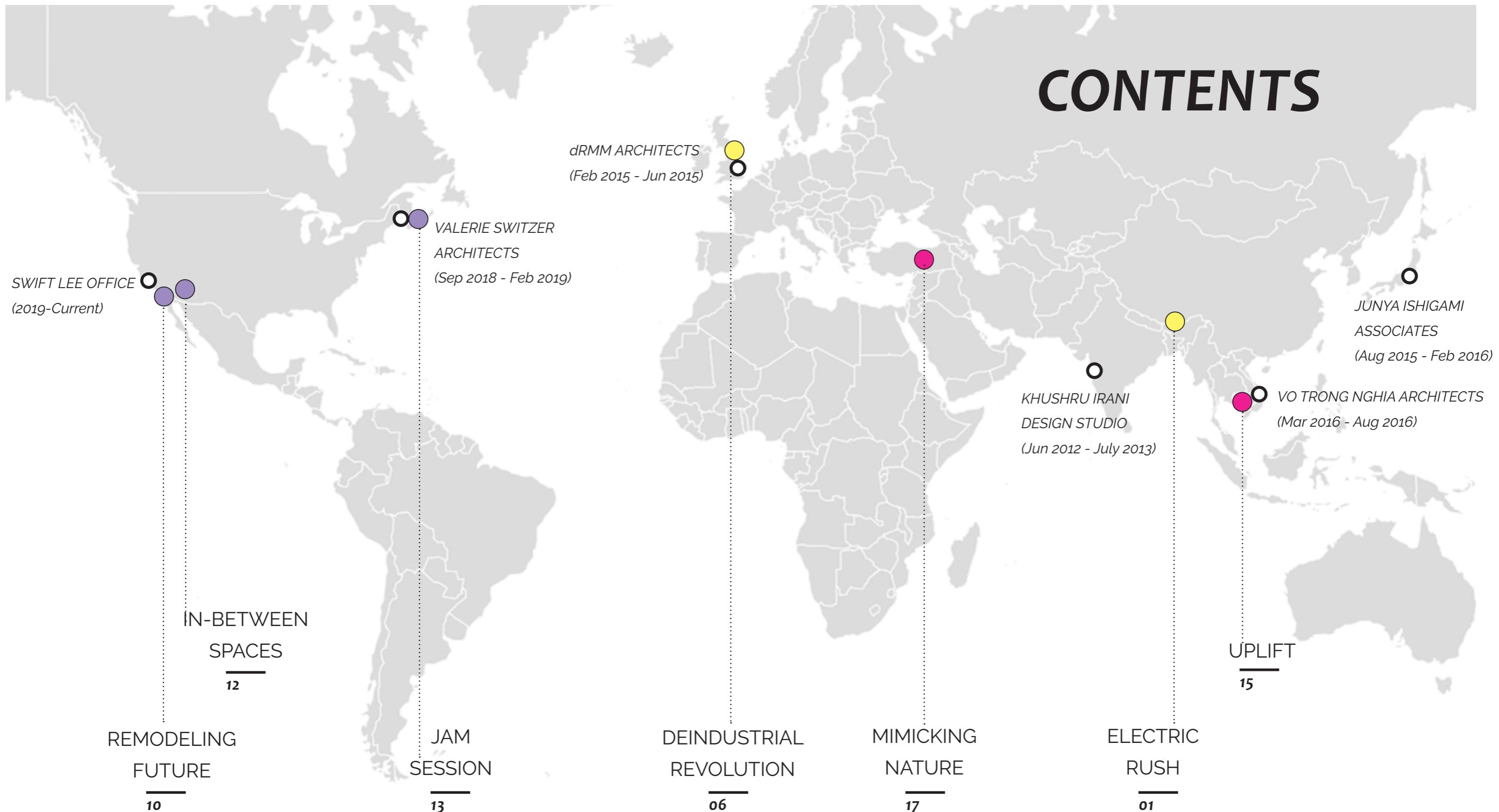
PROFESSIONAL EXPERIENCE

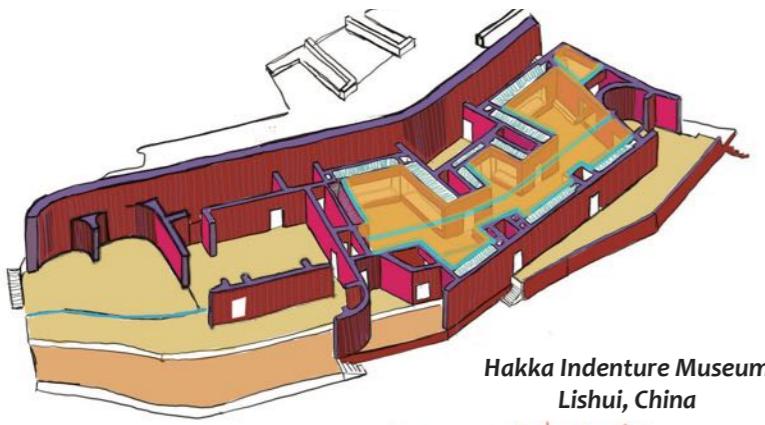
- **Swift Lee Office** // Pasadena, CA **Sep 2019- Current**
Assistant Designer
 - Leading masterplan design discussions for Pasadena Unified School District (PUSD), field inspections for school, and preparing presentations for parents and faculty.
 - Preparing construction documents for school renovation projects.
- **Valerie Switzer Architects** // New York, USA **Sep 2018-Feb 2019**
Freelance Designer
 - Participated in design competition for a interventionist design in a park for a few months, working on design iterations and final drawings for the submission.
- **Vo Trong Nghia Architects** // Ho Chi Minh, Vietnam **Mar 2016 - Aug 2016**
Intern
 - Participated in design development, prepared conceptual physical models, and completed final drawings for competition submission panels for the Suncheon Museum, South Korea.
 - Finalized master plan proposals for a luxury beach hotel and concept renders for the hotel atrium.
- **Junya Ishigami + Associates** // Tokyo, Japan **Aug 2015 - Feb 2016**
Intern and Communications Manager
 - Built physical models in the design development stage for a restaurant-house design.
 - As lead manager for an international collaboration of a park competition in Mumbai, prepared contextual research and conceptual designs and facilitated communications between multiple teams.
- **dRMM Architects** // London, United Kingdom **Feb 2015 - Jun 2015**
Intern
 - Edited, designed, and compiled project portfolios for sales and marketing publications.
 - Assisted in construction stage drawings for various projects using VectorWorks.
- **Khushru Irani Design Studio** // Pune, India **Jun 2012 - Jul 2013**
Junior Architect
 - Secured the flagship project for a boarding school extension and led the design and development phase. Also contributed to the early construction phase drawings.
 - Successfully concluded site study, design and execution of a landscape design project for a multi-family residence.

SOFTWARE TOOLS

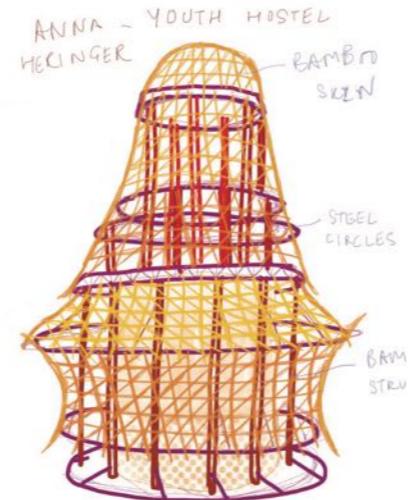
- Rhinoceros 3D
- AutoCAD
- Grasshopper 3D
- V-Ray for Rhino
- Procreate
- Revit
- SketchUp
- Adobe Suite
- QGIS

CONTENTS

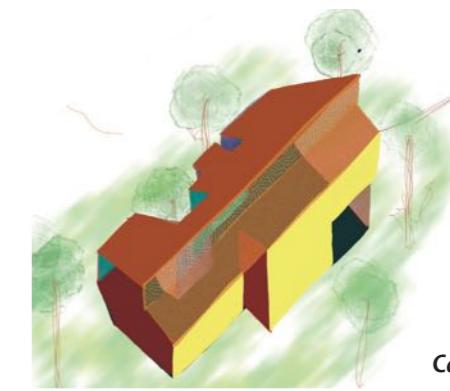




Hakka Indenture Museum
Lishui, China



Anna Heringer,
Youth Hostel



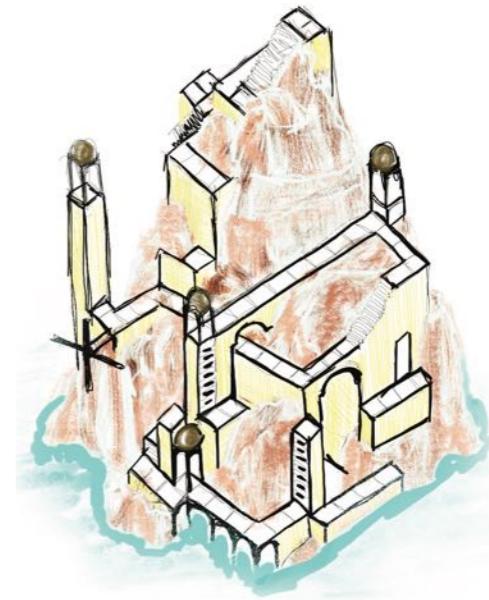
Norman Jaffe,
Carl Fischer House



ACADEMIC WORKS



Padmanabhapuram Palace Complex
India



Monument Valley Game



ELECTRIC RUSH

A Monastic Hydropower Plant

2017 / Academic Research project

Tawang, India

Mentors:

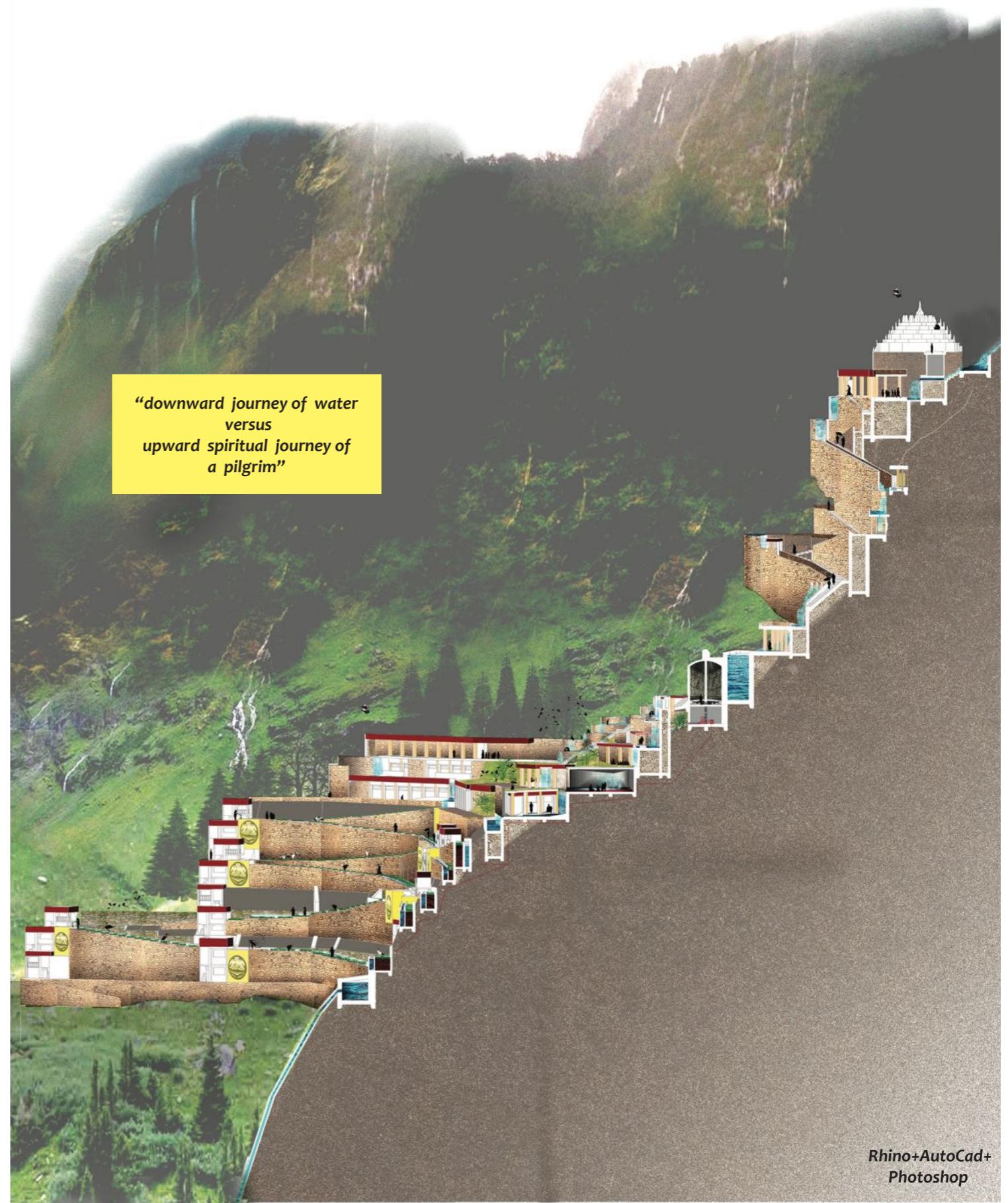
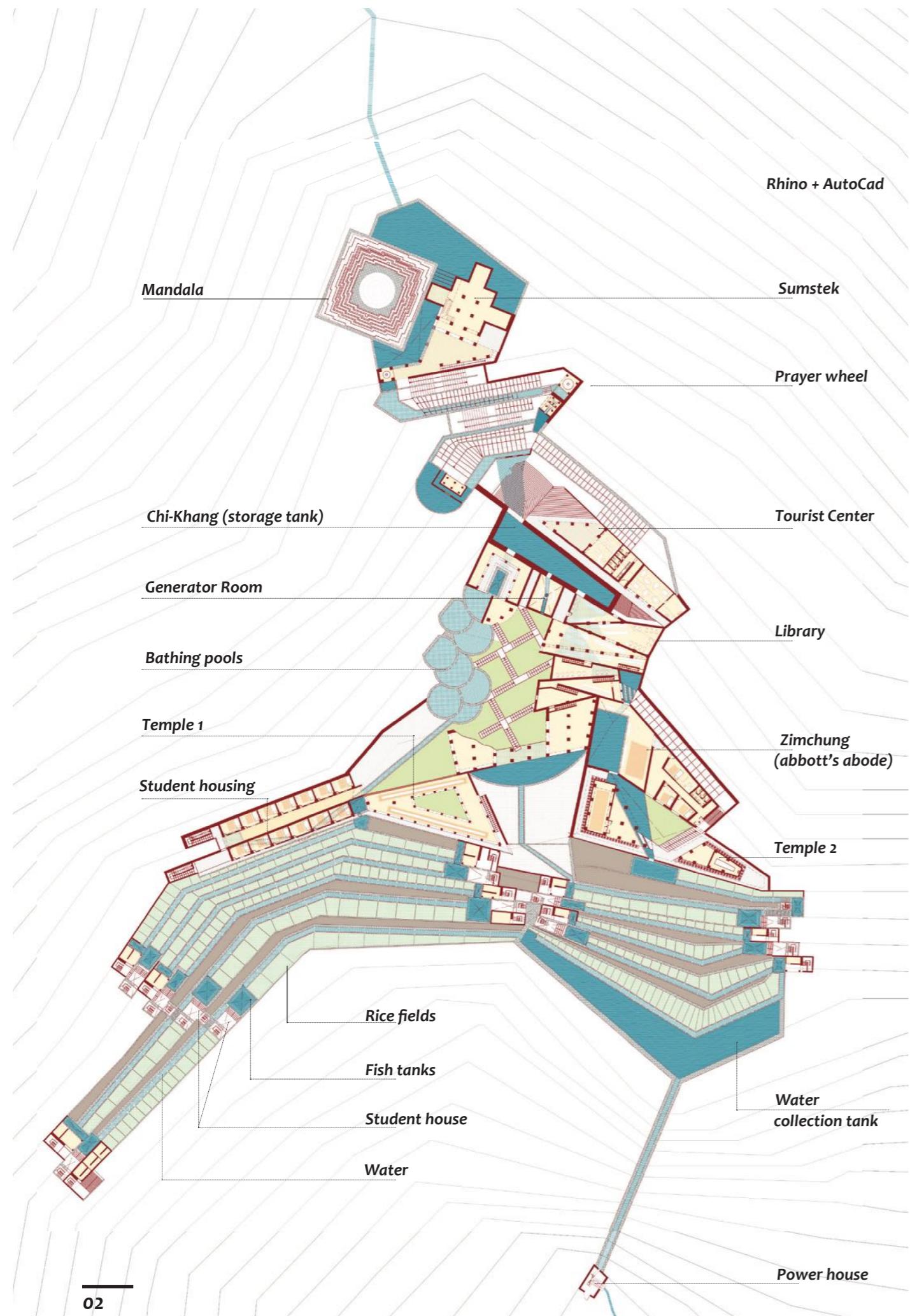
Daniel Pascual Fernandes

Alon Schwabe

Electric Rush is a parallel narrative about the downward journey of water to produce electricity and the upward spiritual journey of a pilgrim through a monastery. The proposal is a sensitive integration of monastic typology and hydropower technology. It reimagines a monastery that will attract endangered birds while producing hydroelectric power. It repurposes monasteries into specific guardians of mountainous landscapes, thus empowering them against the building of large dams that threaten sacred rivers.

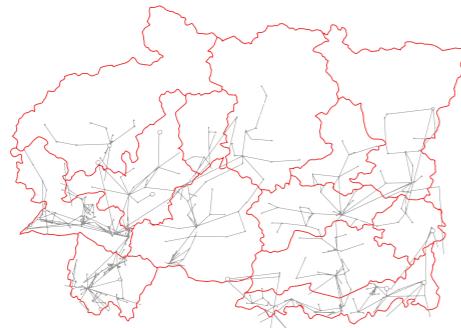
The Himalayan nations have seen a push to build numerous dams across the mountain range and as an alternative a network of monastic hydropower plants has been designed.







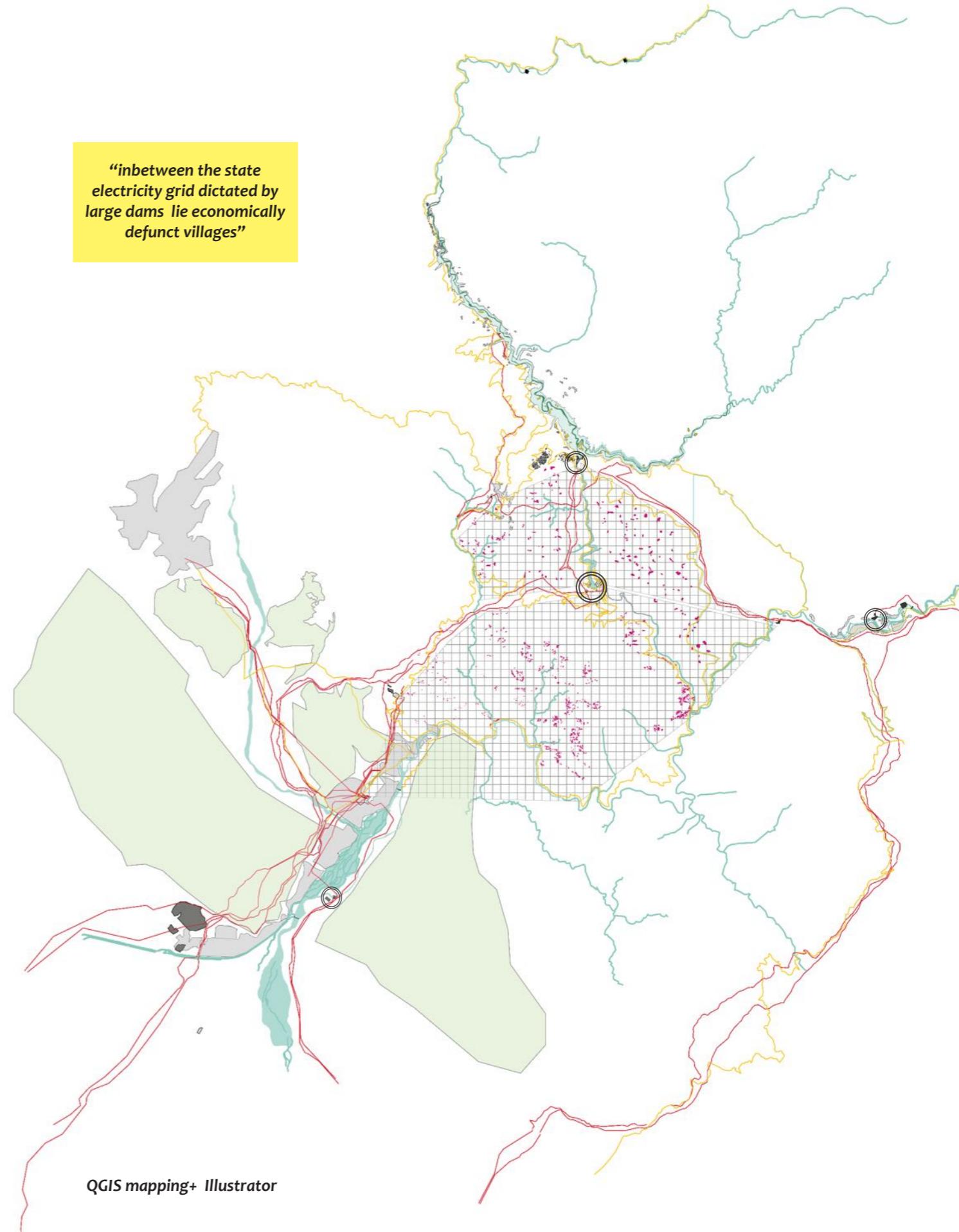
*"inbetween the state
electricity grid dictated by
large dams lie economically
defunct villages"*

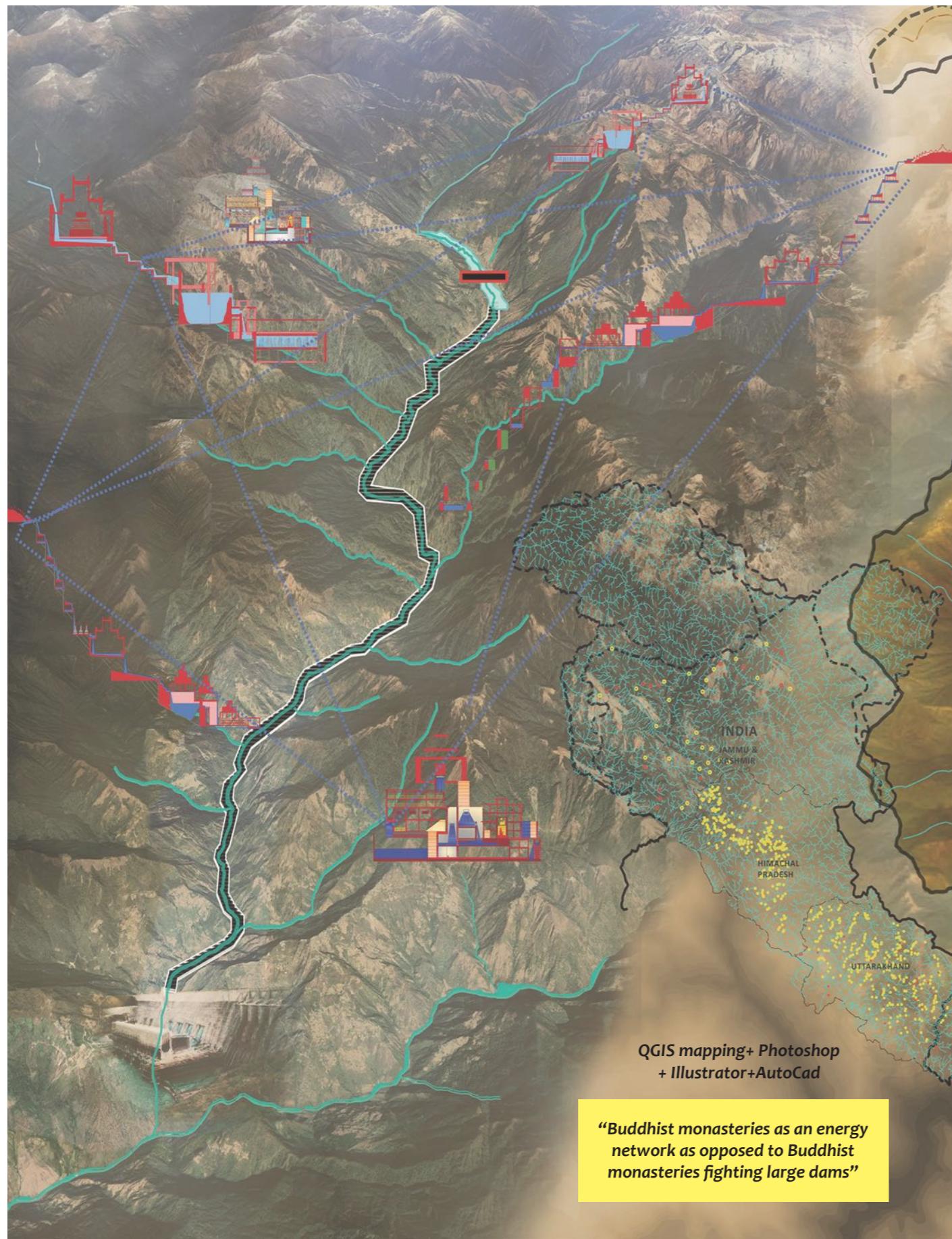


Research

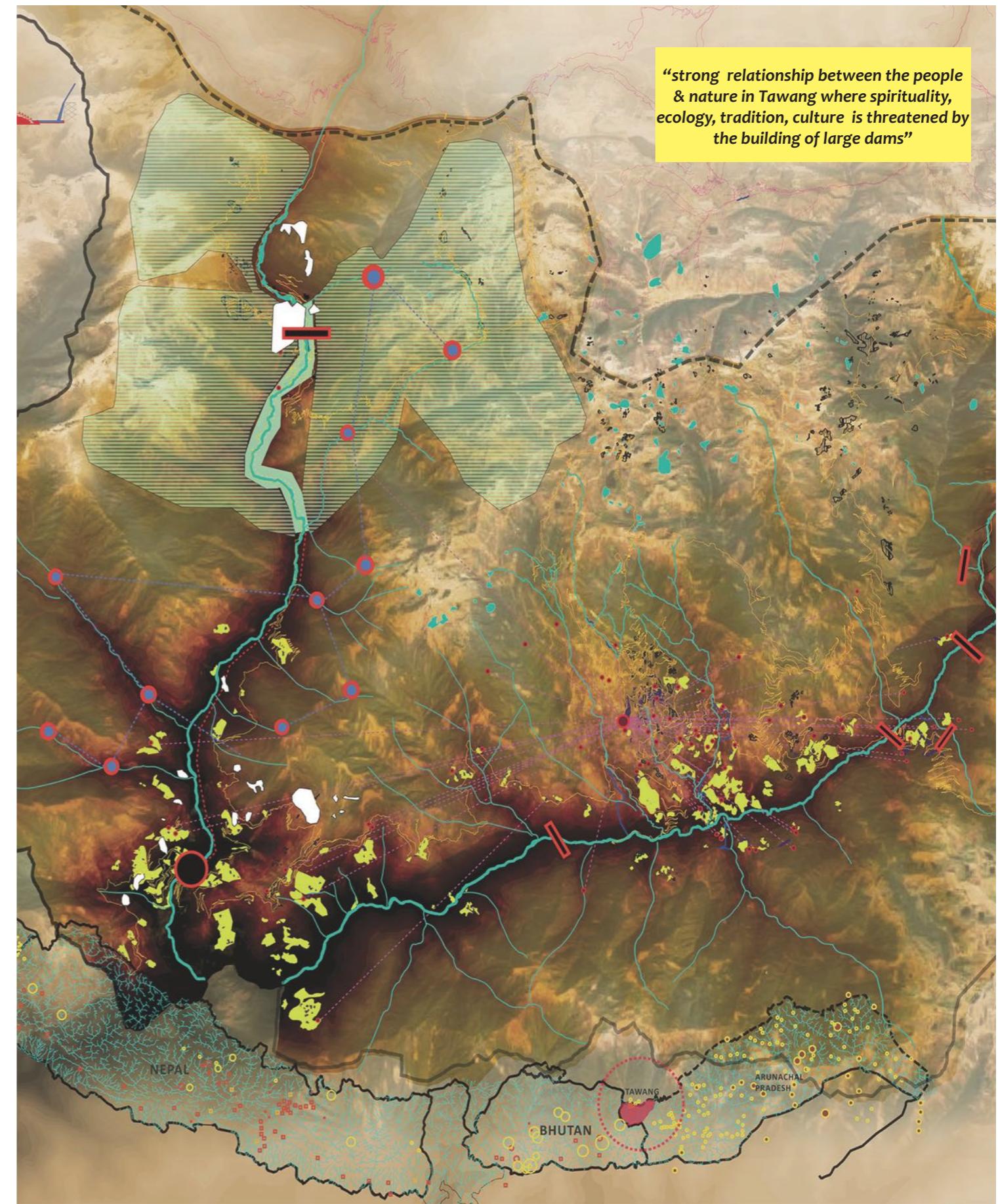
Comparing the scale of dam building activities in Nepal and Uttarakhand (India): a micro hydropower plant built by and for the people in Nepal versus, a large dam funded and built by the government in India. A Micro Hydropower Plant is supportive of the local needs and resources whereas large dams alienate and ignore the local context.

Right: Mapping three large to medium dams in Uttarakhand, inbetween the state electricity grid dictated by dams lie economically defunct villages.

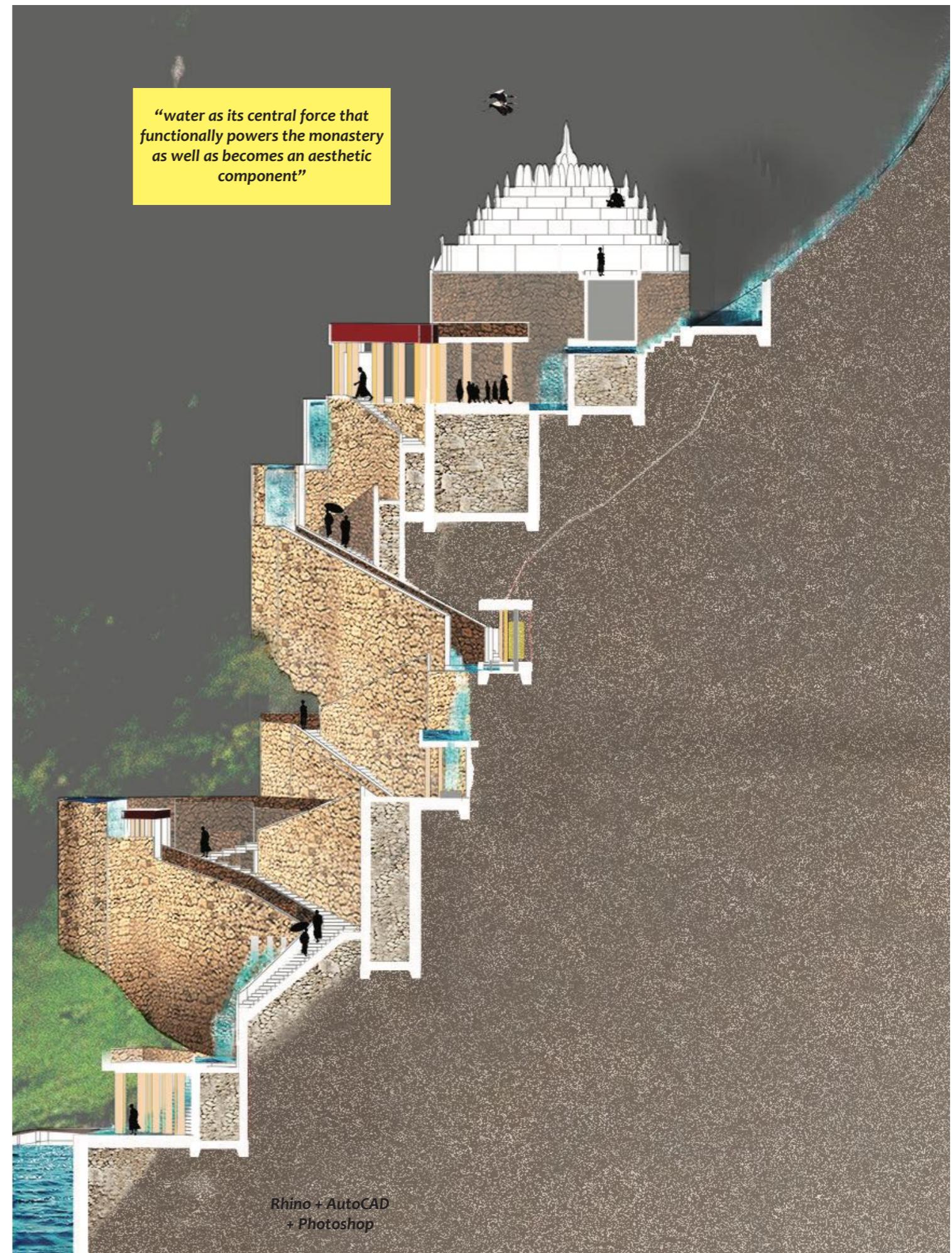
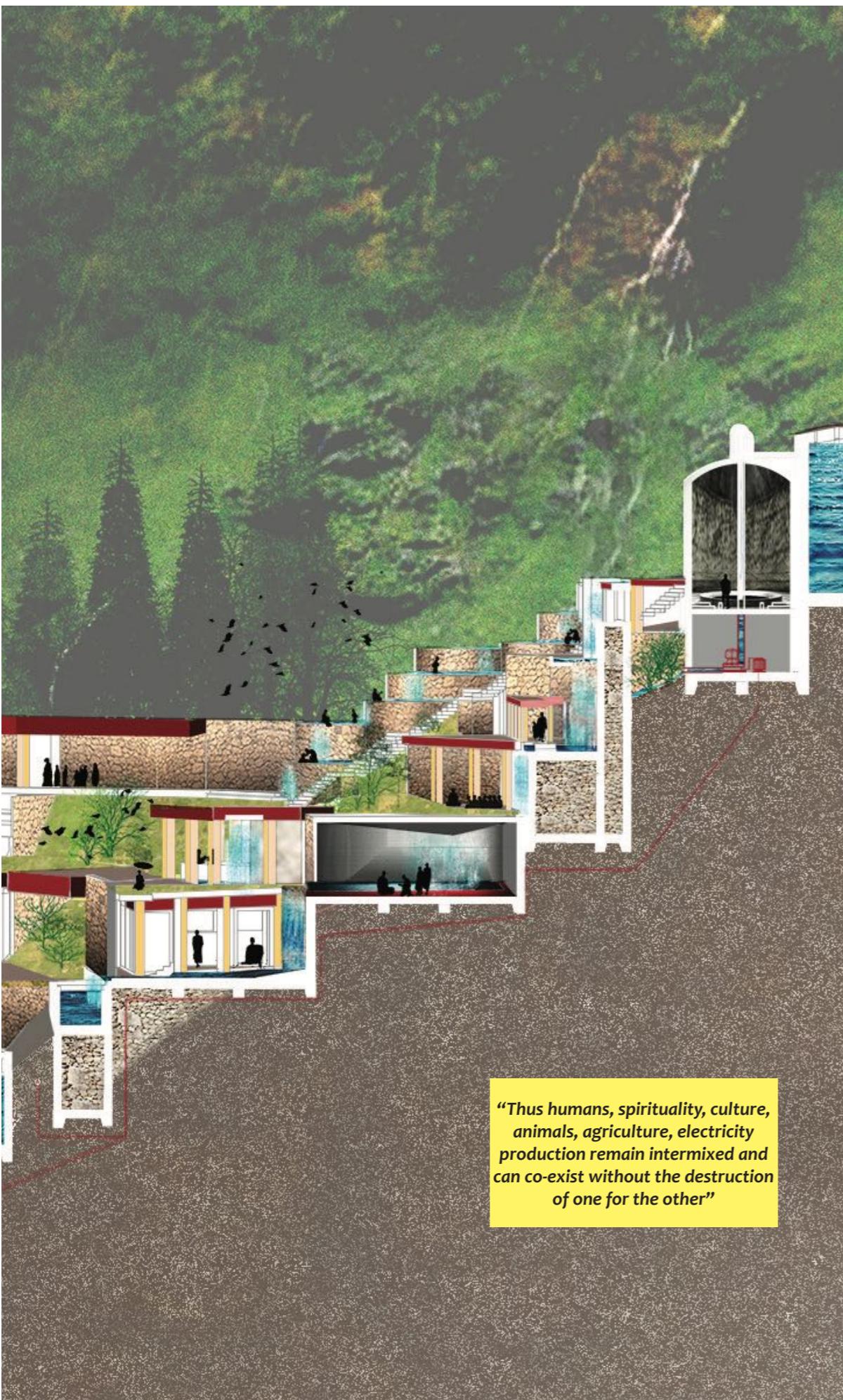




Zooming into Tawang, where the Indian government is planning construction of seven major dams (— on the map). Tawang like most Himalayan regions has been historically ruled by Buddhist monasteries (● dots on the map of Tawang).



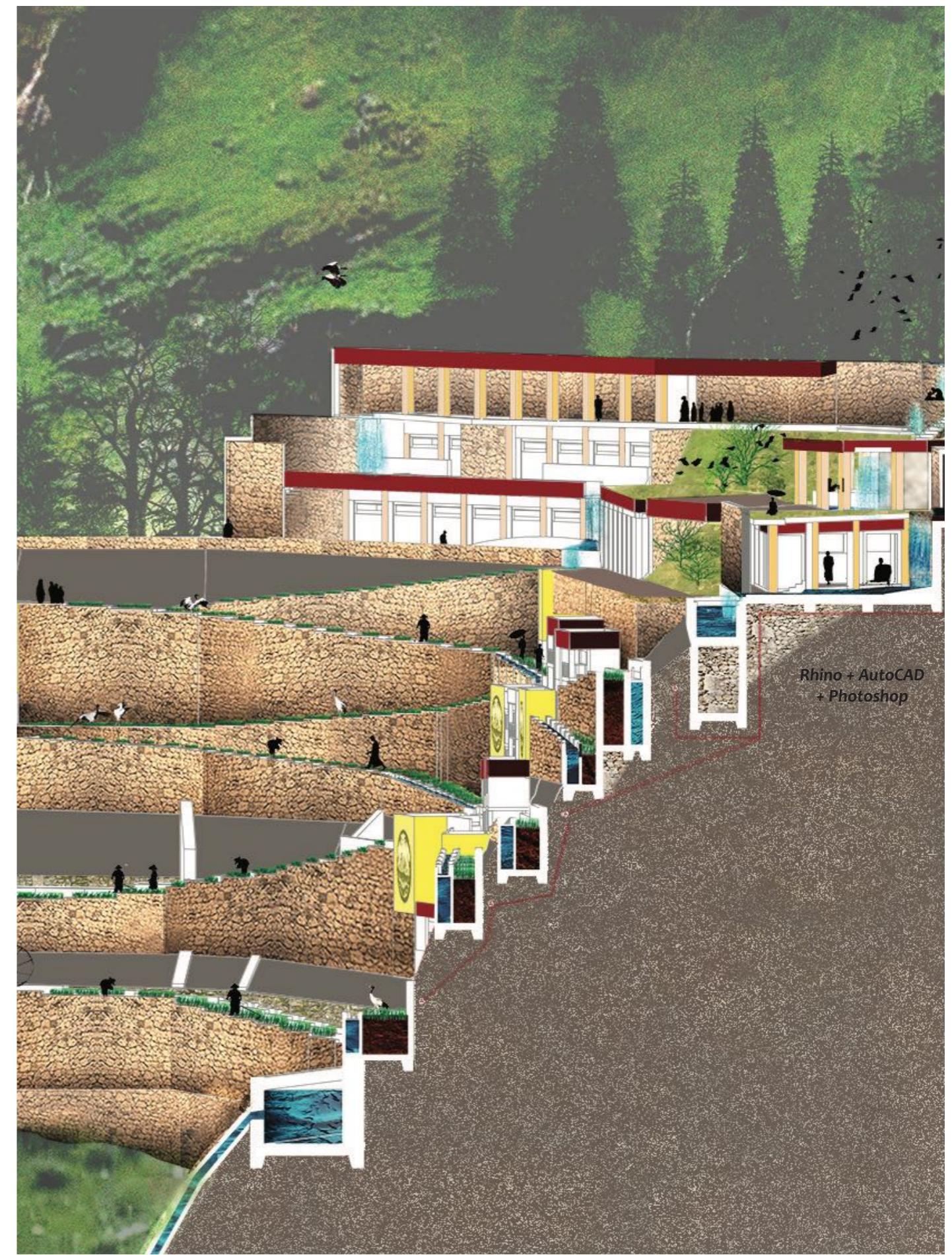
By building dams, water becomes a medium through which the government is moving in to take control of the land and its governance from the monasteries as well as tightening India's claim over Tawang.





06

Hydroelectric power production takes advantage of the vertical fall of water but for a thriving ecology, the benefits of horizontal spread of water cannot be ignored.



Rice fields provide a conducive environment for attracting the black necked cranes and other species that feed on rice and fish.

DE-INDUSTRIAL REVOLUTION

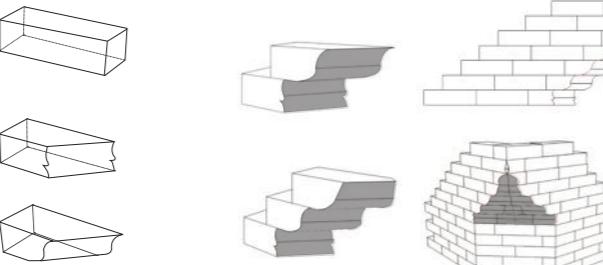
Bulmer Brick Training & Educational Center

2014 / Academic project

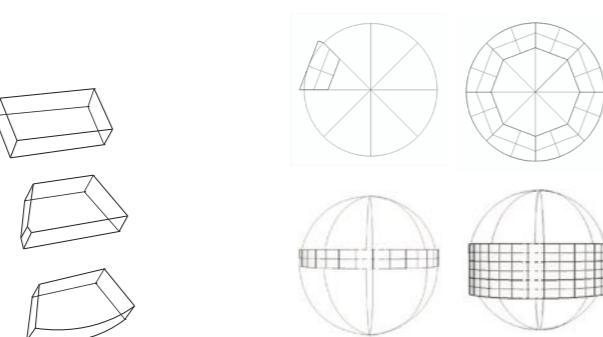
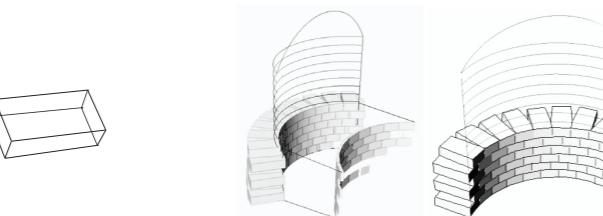
Bulmer, England

Mentor:

Satoshi Isono



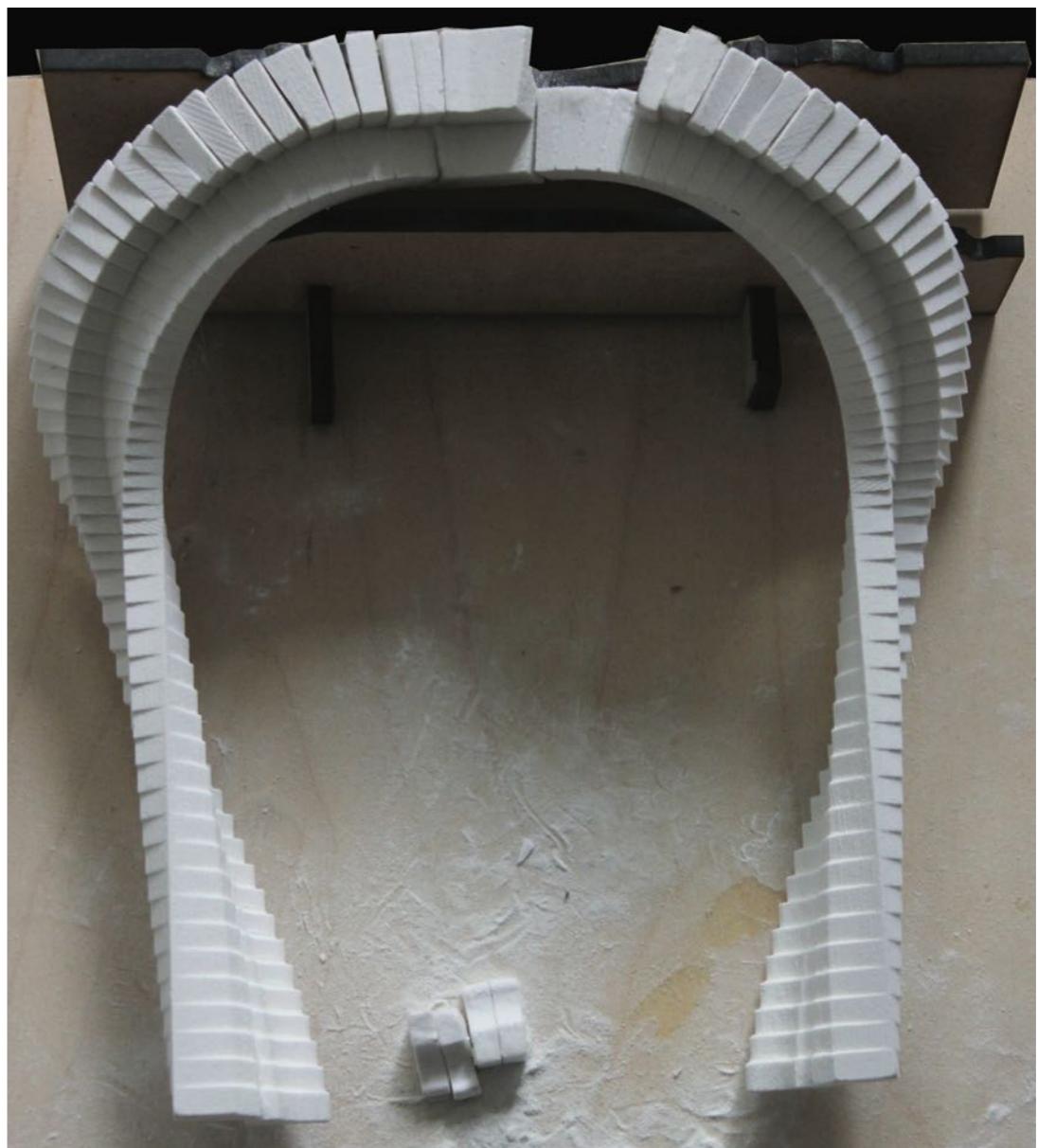
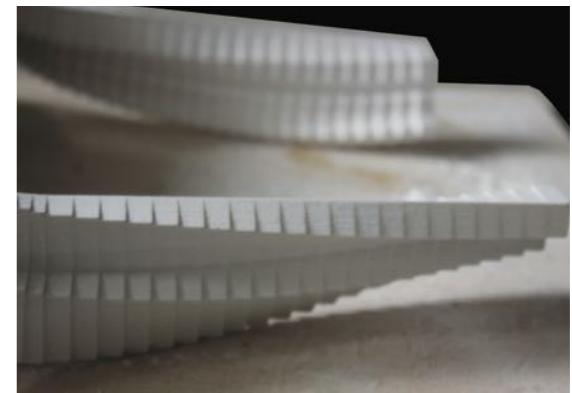
"technological advances in machinery eg. the robotic arm is used to rethink the dying art of handcut traditional hand-cut 'gauged' bricks"



Everyday occurrences of Gauged Brickwork

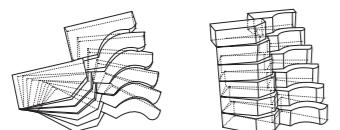
De-Industrial Revolution: Bulmer Brick Training & Educational Center imagines a future where technological advances in machinery is used to revive the dying art of hand-cut 'gauged' brickwork. This opens up newer possibilities within brick building design.

A robotic arm replaces traditional hand-cut gauged brickwork, that enables bricks to be used ornamentally as well as structurally through which a holistic brick training facility and educational center is presented.

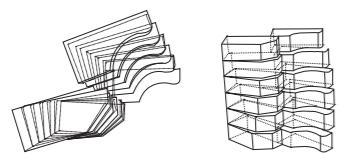


3D printed bricks vs Wire cut bricks

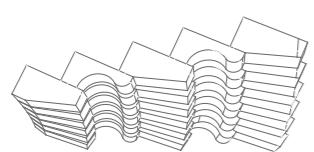
eight degree arch
two brick arch



four degree arch
two brick arch



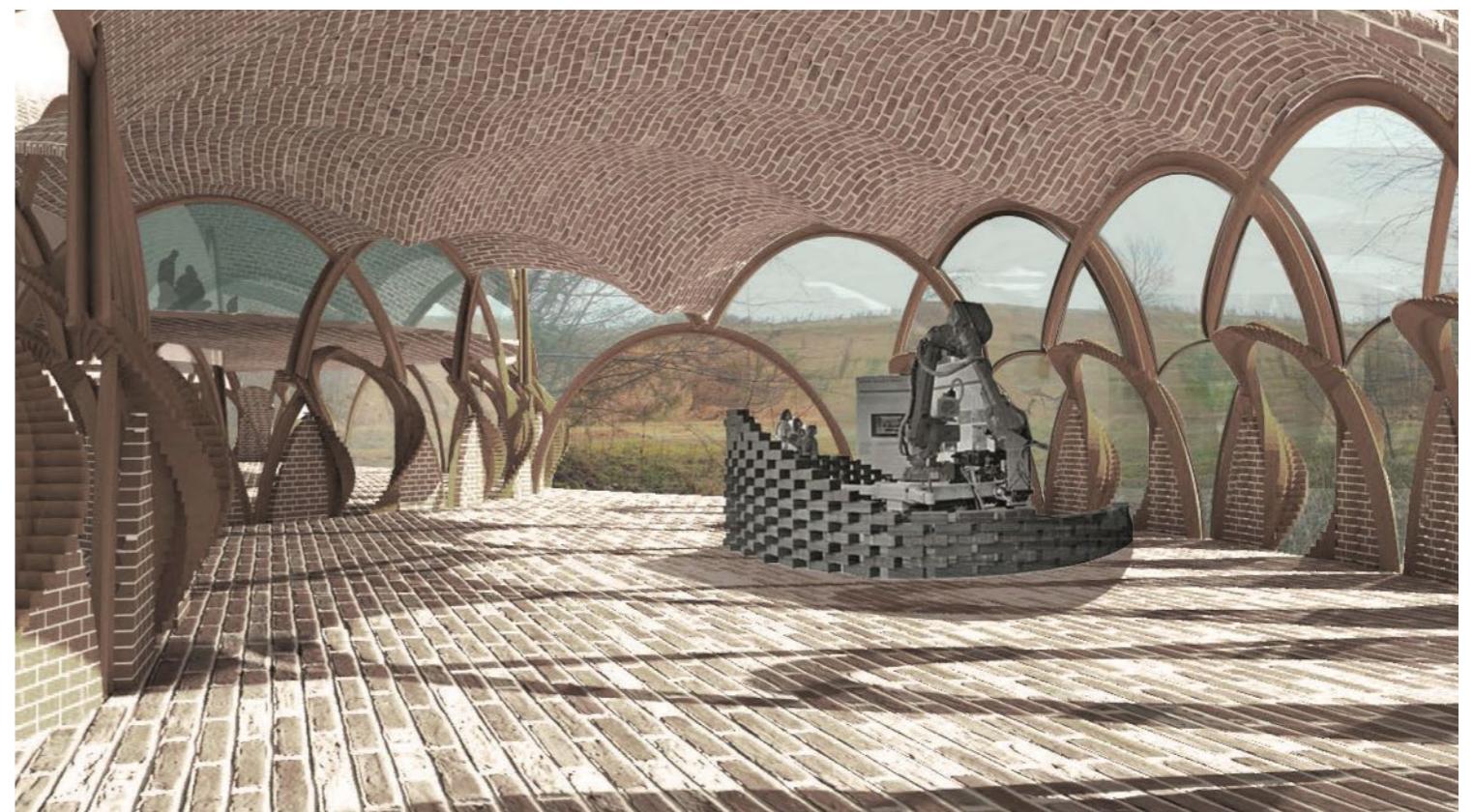
two degree arch
four brick arch



Gauged Arch experiments
Rhino +VRay

Bulmer Brick Training & Educational Center uses gauged brickwork to create open arched structures and closed arched brick studios. The institute becomes a model for exhibiting and popularising gauged brickwork. It also challenges the contemporary use of brick as a facade only material due to a deficit in material innovation.

"challenges the contemporary use of brick as a facade only material due to a deficit in material innovation"

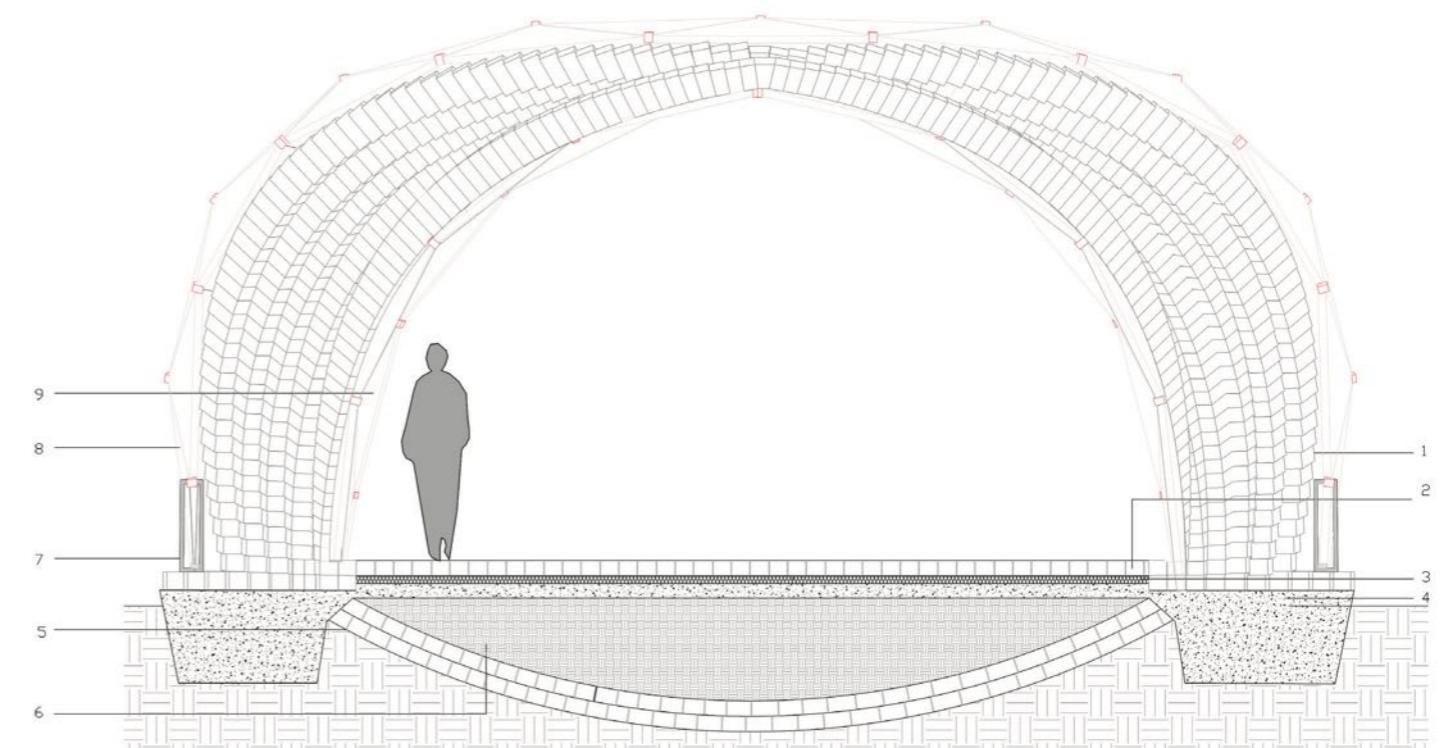
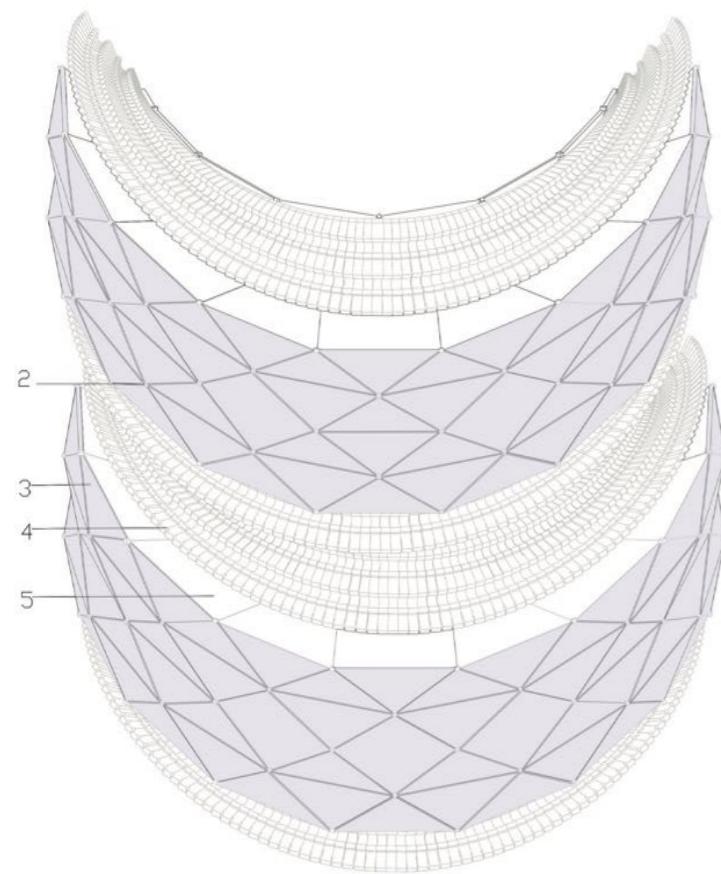


Open -Arched Brick Spaces

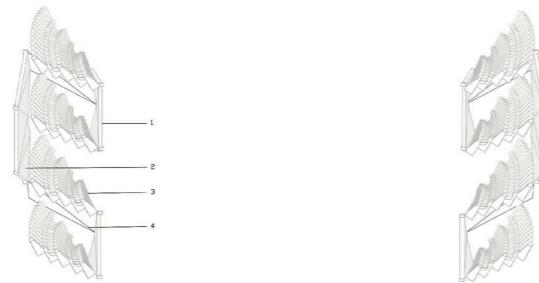
Rhino +VRay



Closed -Arched Brick Studios



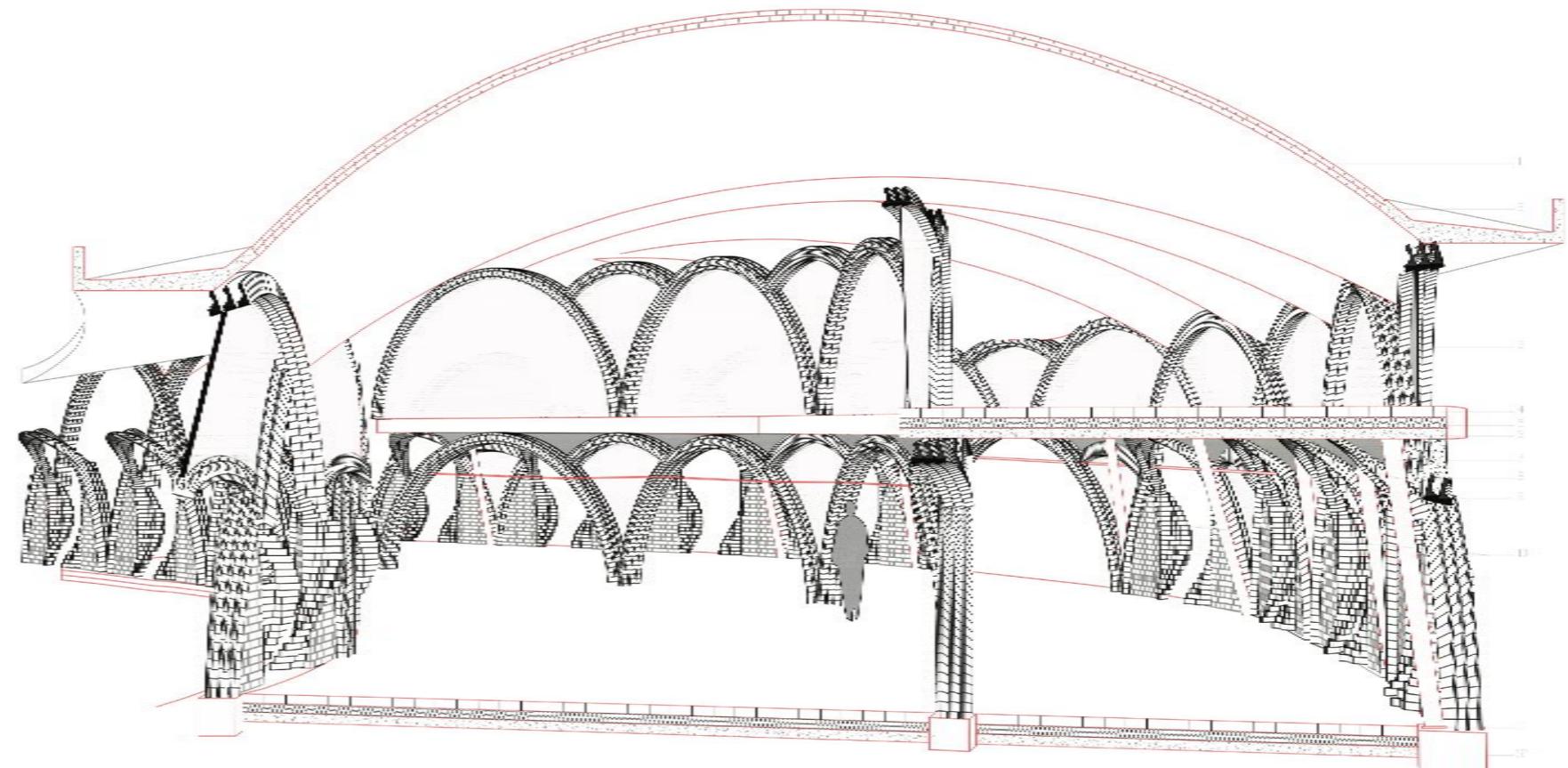
Closed -Arched Brick Studios



Technical Resolution

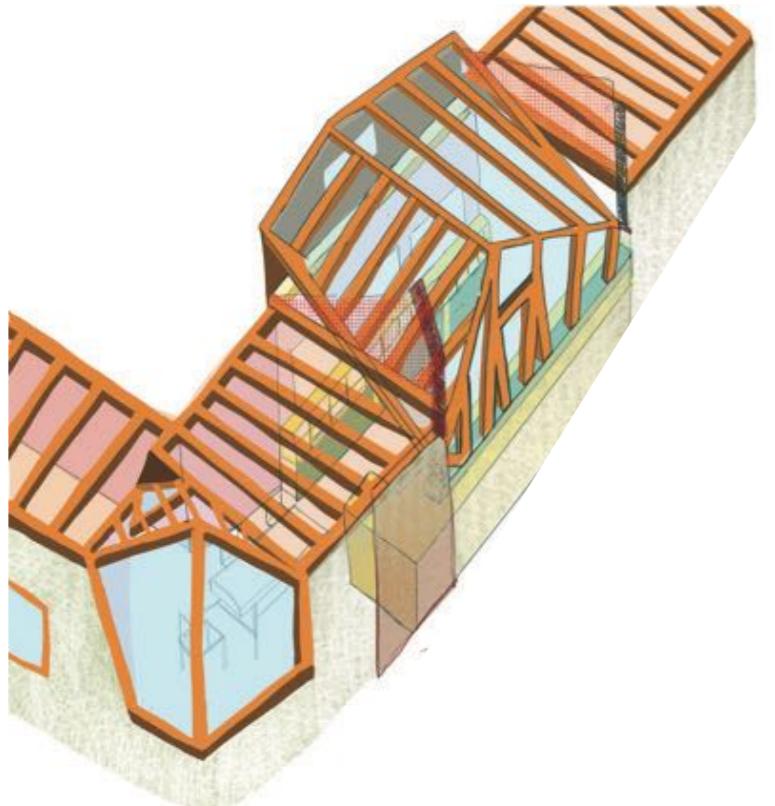
Expressive, ornamental arches are used as a framework for creating an open brick construction facility. Using the 4 degree twist arch with buttresses as module, the elevation is detailed with additional steel poles for strength.

The closed brick arched facilities are detailed by thinking about a glass structure independent of the bricks. This glass arched structure is designed to provide an extra skin and to seal the edges along the arches. Following the geometry of the brick arches, folded plate glass arches are designed to fit on the interior of the arches alternating with ones fitted in the exterior of the arch.



Open -Arched Brick Spaces

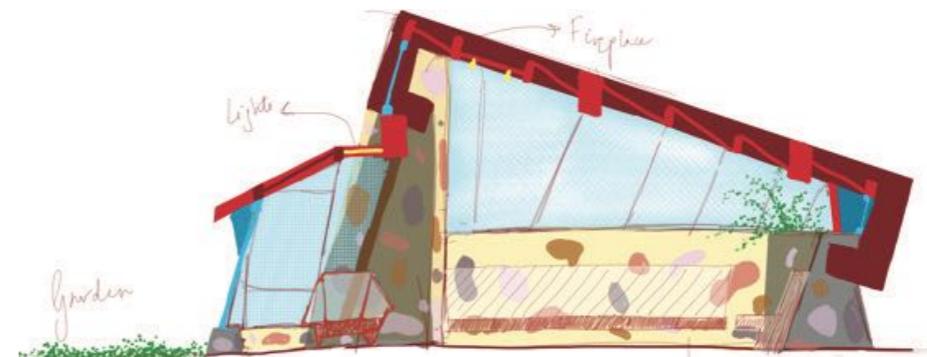
Rhino +AutoCad



Gehry House,
Santa Monica



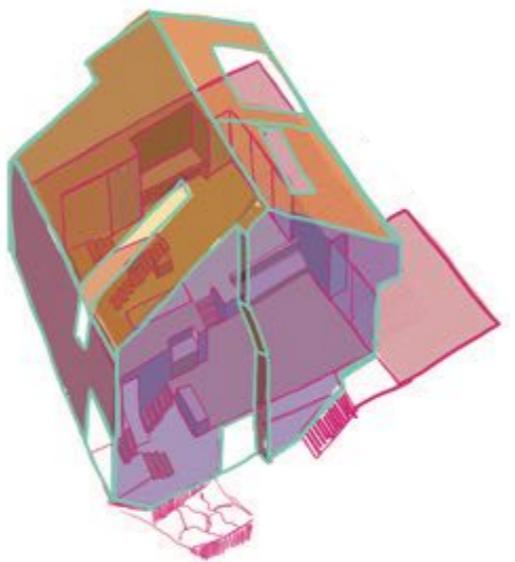
Beit Beirut Museum
Existing ruins



Frank Lloyd Wright,
Taliesin West



Frank Lloyd Wright,
Taliesin West



Norman Jaffe,
Perlbinder House



Framework House,
Atelier Cole

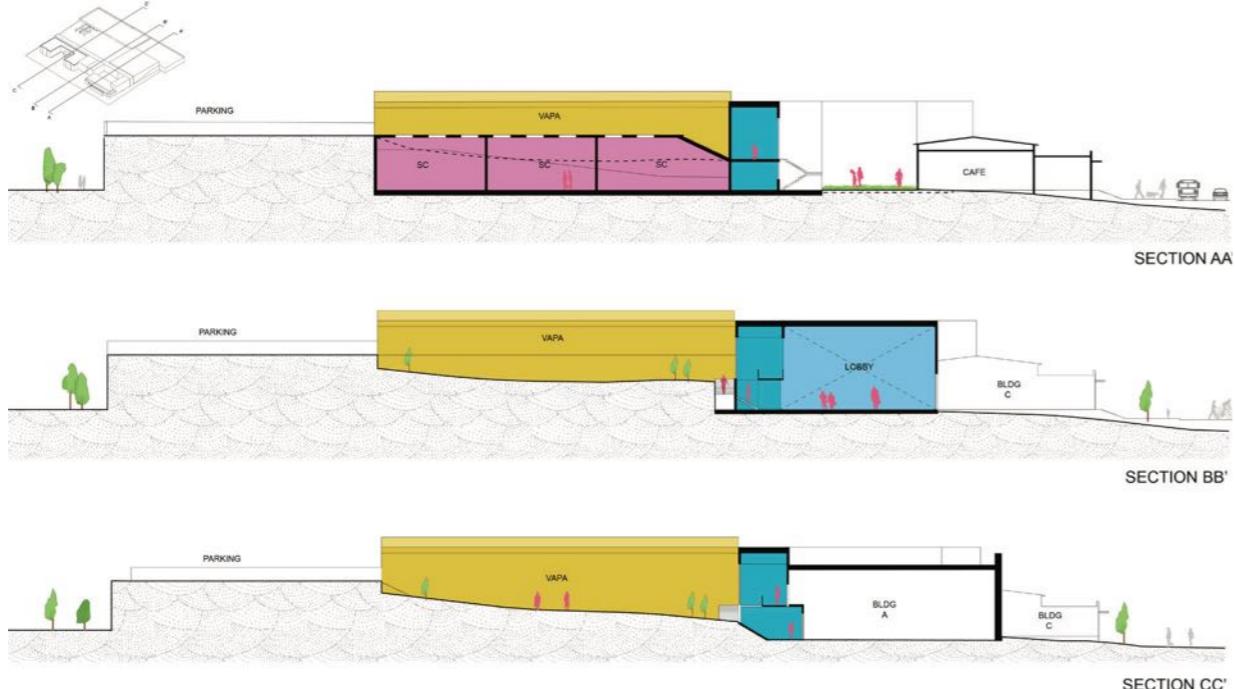
PROFESSIONAL WORKS

REMODELING FUTURE

Educational Masterplans

"piecemeal extensions of public schools over many years and thus lack a sense of organisational coherence and do not have enough facilities "

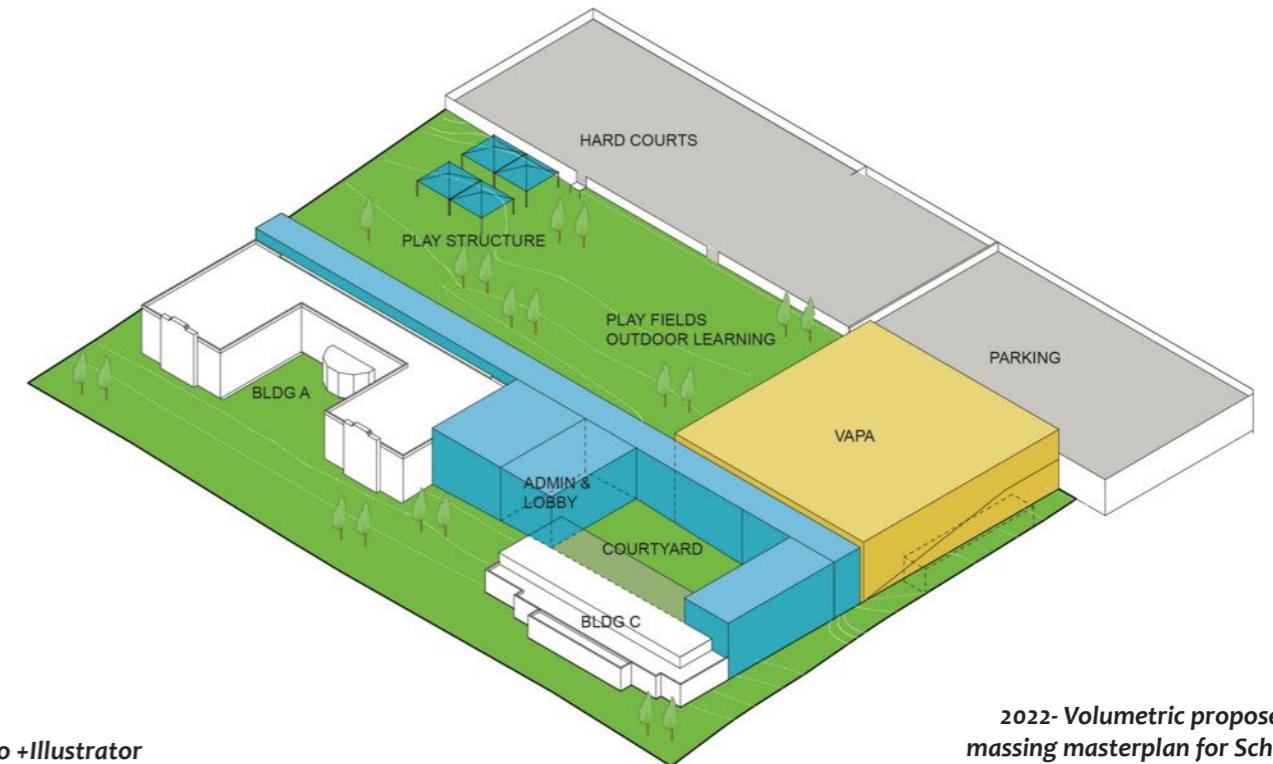
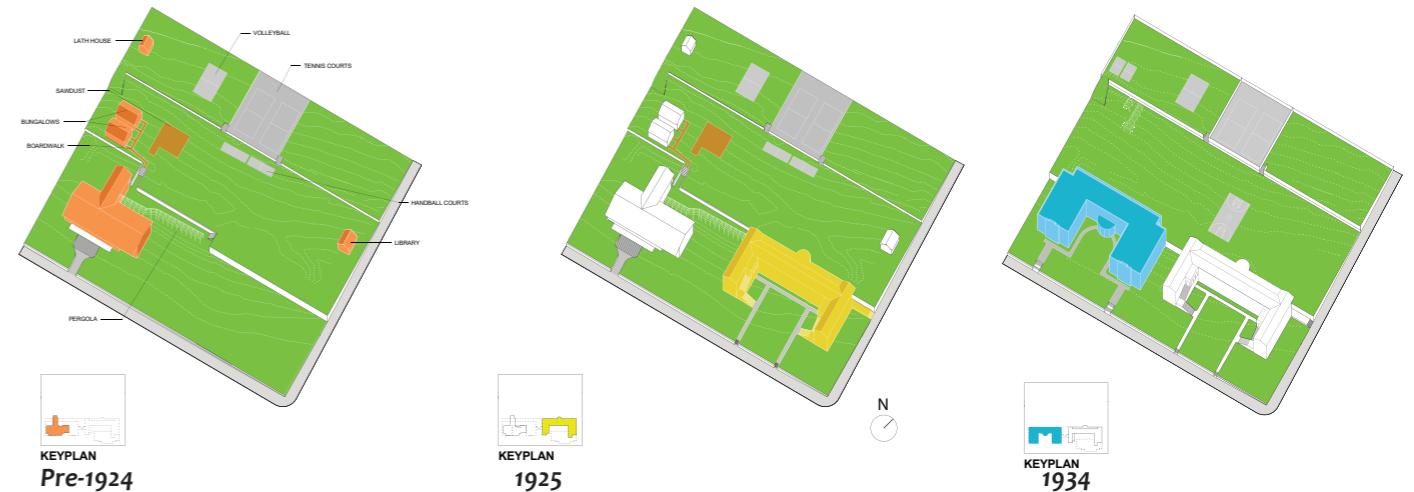
2019-20 / Professional project
Los Angeles, USA
Collaboration: SwiftLee Office



AutoCad +Illustrator

The project revolves around future planning of educational spaces within Public Schools in a bid to increase their popularity and competence over private schools or charter schools. The Public schools are often piecemeal extensions over many years and thus lack a sense of organisational coherence and do not have enough facilities to attract students of all backgrounds. The masterplanning exercises try to overturn this by giving building coherence to the schools and introducing spaces where free learning and flexible spaces can be made possible.

Chronological introduction of buildings to campus



2022- Volumetric proposed massing masterplan for School A

Rhino +Illustrator



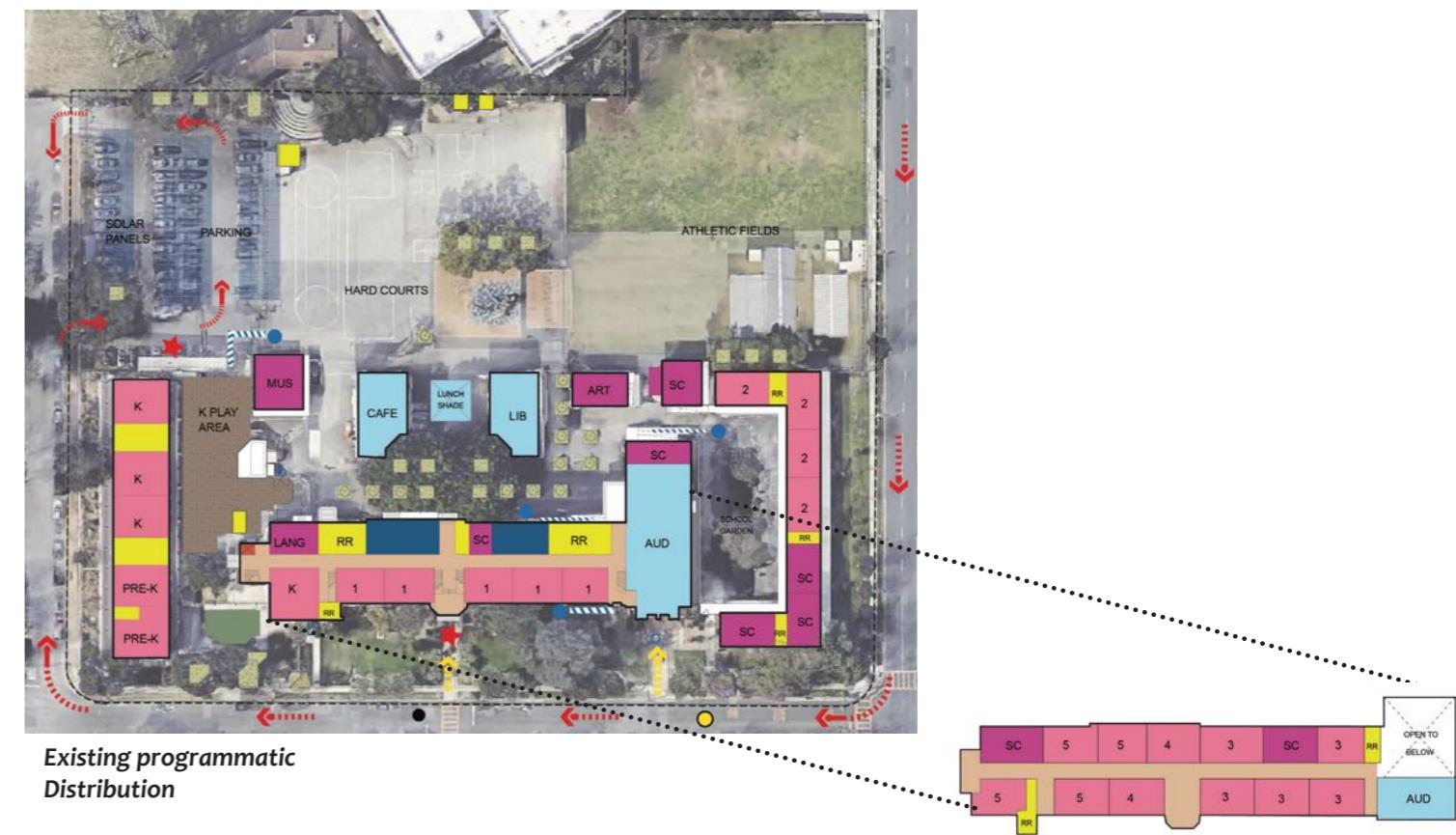
AutoCad+Illustrator



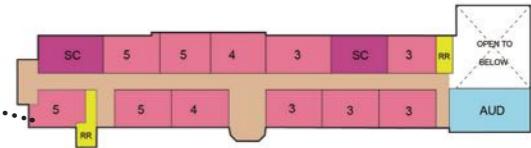
Among the series of masterplanning exercise, the existing context is thoroughly investigated to understand the site and its limitations. Staff, principle meetings, site documentation with various consultants helped provide a complete picture for the schools drawbacks and advantages.



School B : The project rethinks-vehicular and pedestrian movement, special learning classrooms versus regular fixed classes, public and private entrances, administrative versus student zones, soft and hard landscapes, etc to create diverse, learning environment .



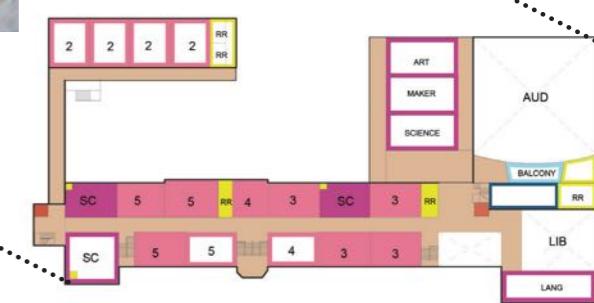
Existing programming Distribution



“vehicular & pedestrian movement, special learning classrooms vs regular fixed classes, public & private entrances, administrative vs student zones, soft & hard landscapes”



Proposed programming Distribution



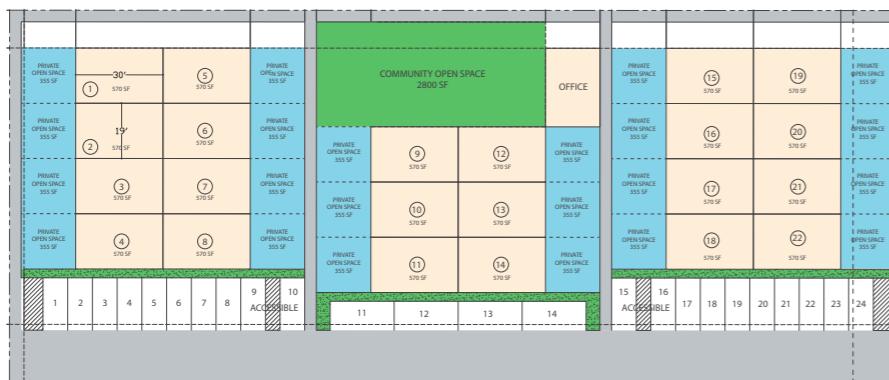
IN-BETWEEN SPACES

Veteran Housing

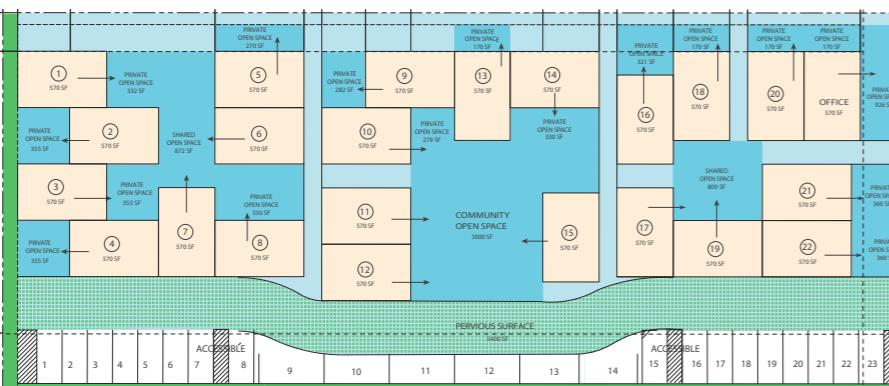
2019 / Professional project

Los Angeles, USA

Collaboration: Swift Lee Office



**Regularly spaced,
repeatable
modules**



**Dynamically
spaced, repeatable
modules**

Illustrator

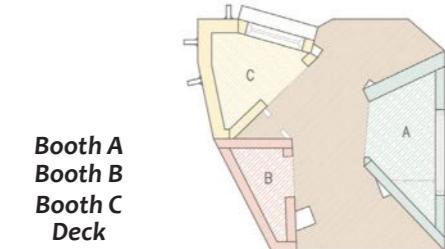
The project is conceived with the need to provide low-income housing for veterans living in LA. The housing project aims to provide identical private living spaces as well as open community areas hoping to create a safe balanced living, in happy neighbourhoods for veterans of all ages and backgrounds.

A horizontal path cuts right across the housing blocks which takes one through shared courtyards pushing people to meet neighbours. The vertical pathways divide the housing into three distinctive blocks with an office located in the first block, close to the main street.



JAM SESSION

Socrates Sculpture Park Kiosk

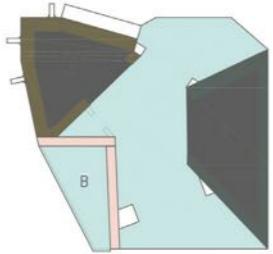


2019 / Professional Competition entry

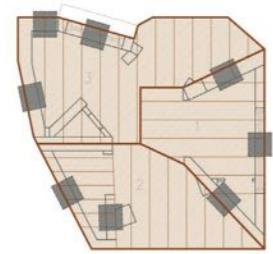
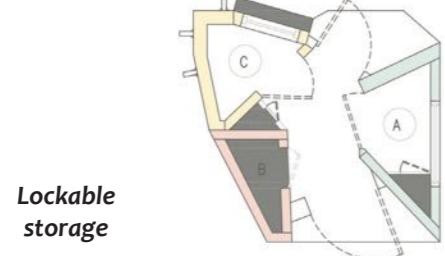
New York, USA

Collaboration:

Valerie Schweitzer Architects



"kiosk with its openings and niches promotes engagement as an object that can also then be inhabited"



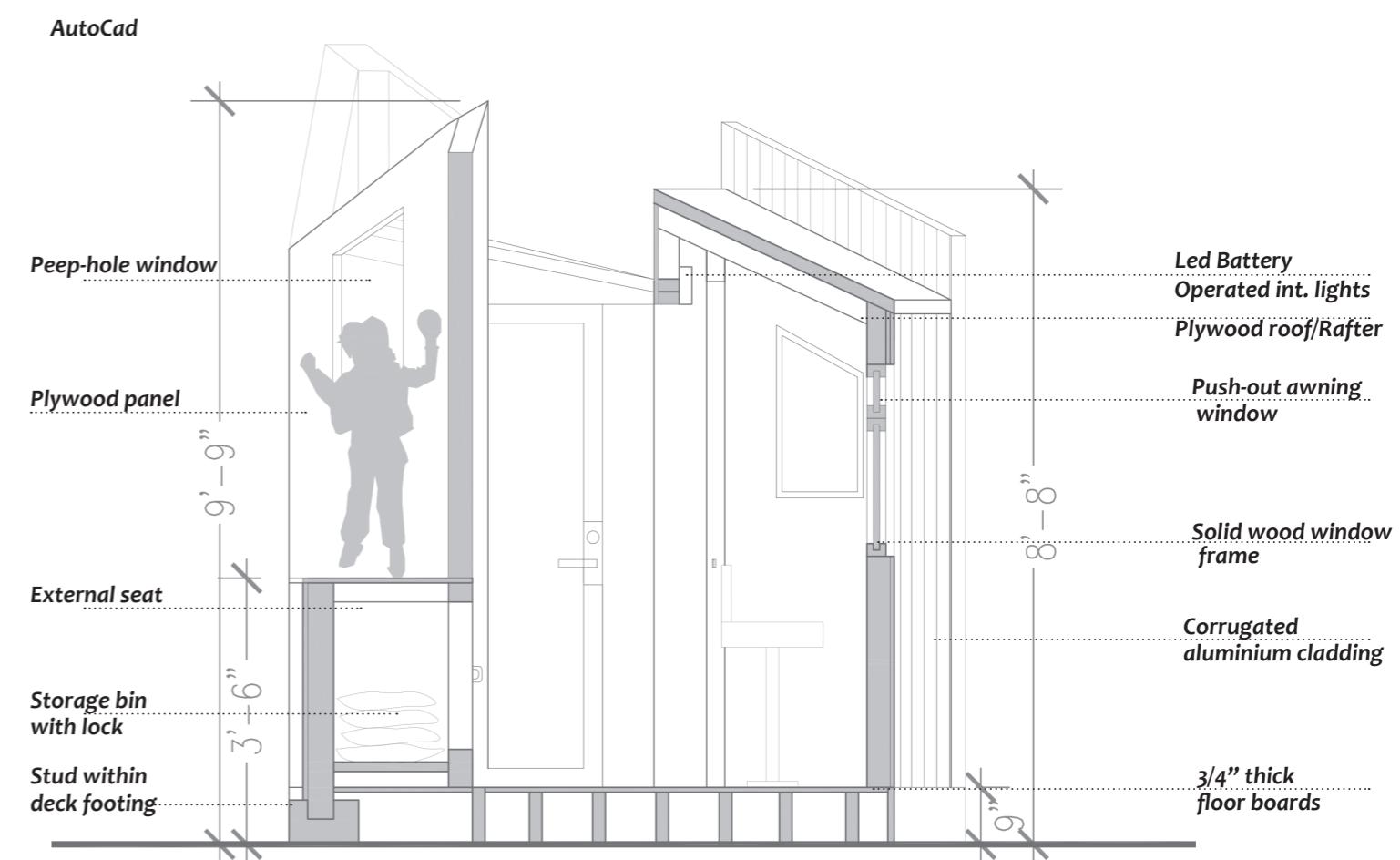
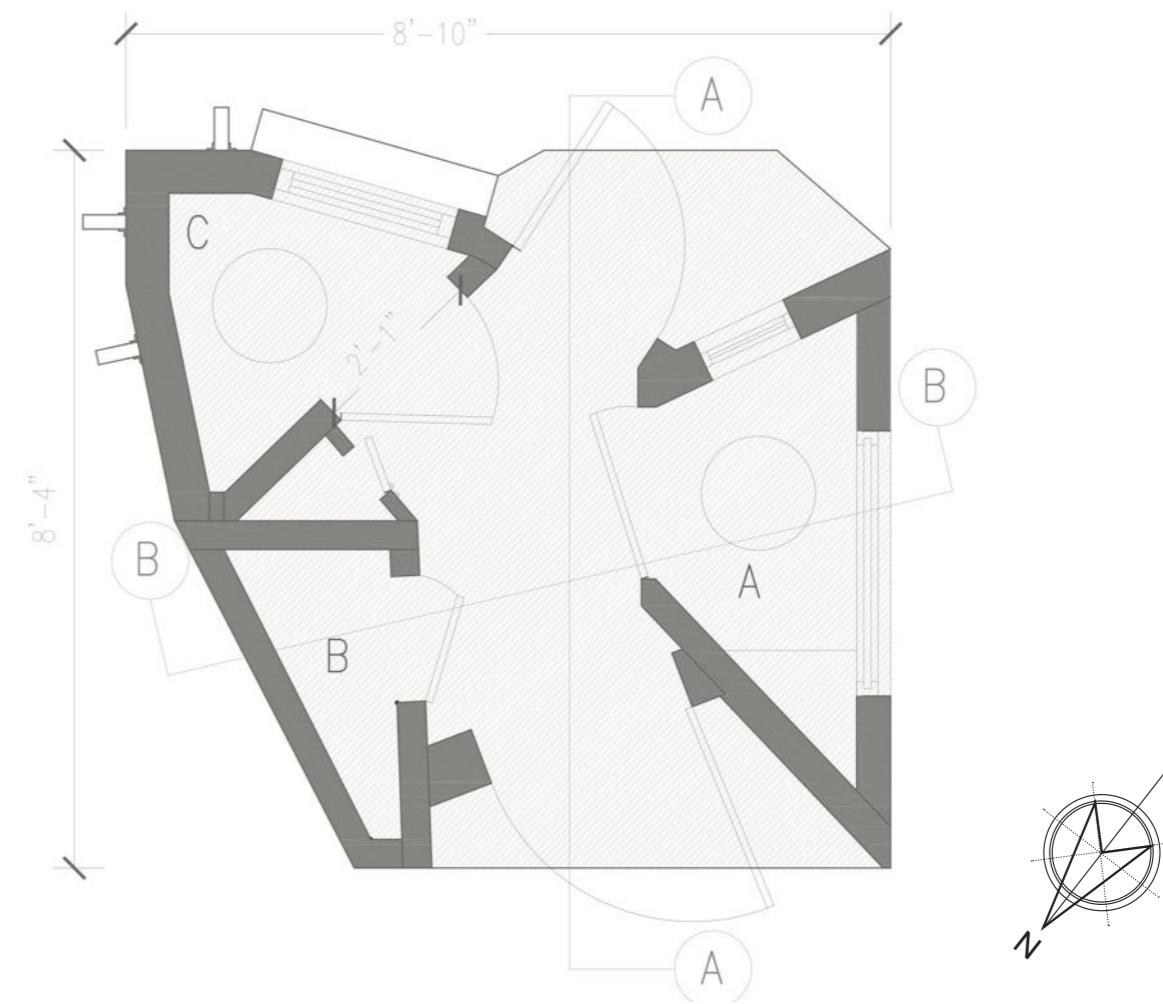
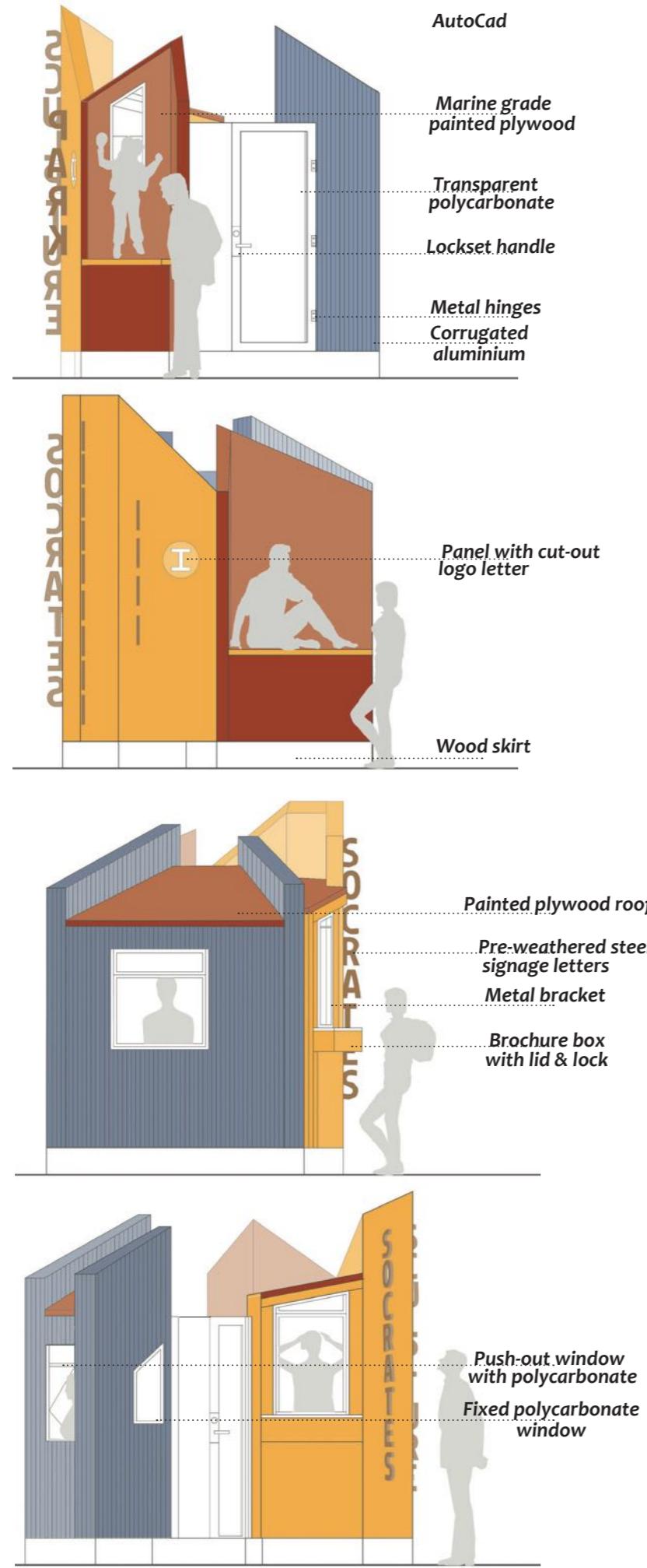
AutoCad

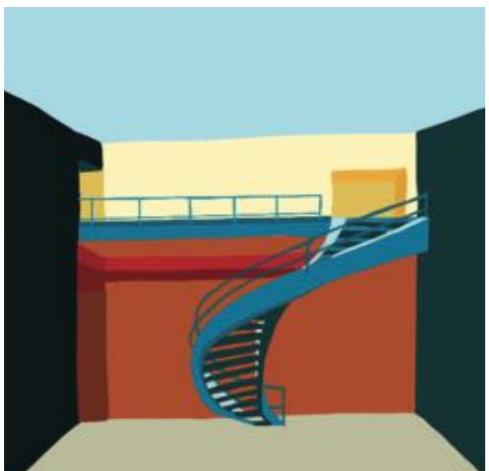


Rhino+Vray+
Photoshop

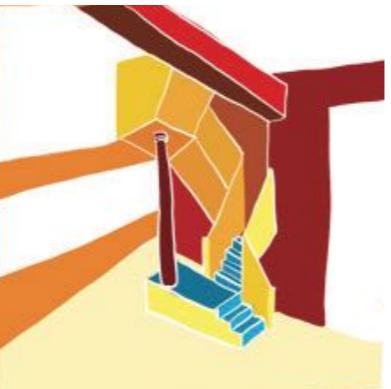
Jam Session: Socrates Sculpture Park Kiosk celebrates the industrial context of Socrates Sculpture Park. It furthers its mission to provide a shared social venue for unusual artistic expression. The sculptural dimension of the kiosk, with bold geometric forms and raw materials, announces the park as a place for leisure and fun artistic happenings. The kiosk with its openings and niches promotes engagement as an object that can also then be inhabited.







staircase framing a
courtyard



stand-alone sculptural
staircase



staircase contrasting
heavy and light



staircase that frames
opening



staircase as a bridge

PERSONAL WORKS



staircase as a wall



staircase as a
boundary

UPLIFT

Spaces, Senses, Communities

"proposal foresees a future where food as well as houses can be grown on site creating a self sustained environment."

Rhino + Grasshopper+
VRay+Photoshop



2020/ Competition

The Vine Retreat, Cambodia

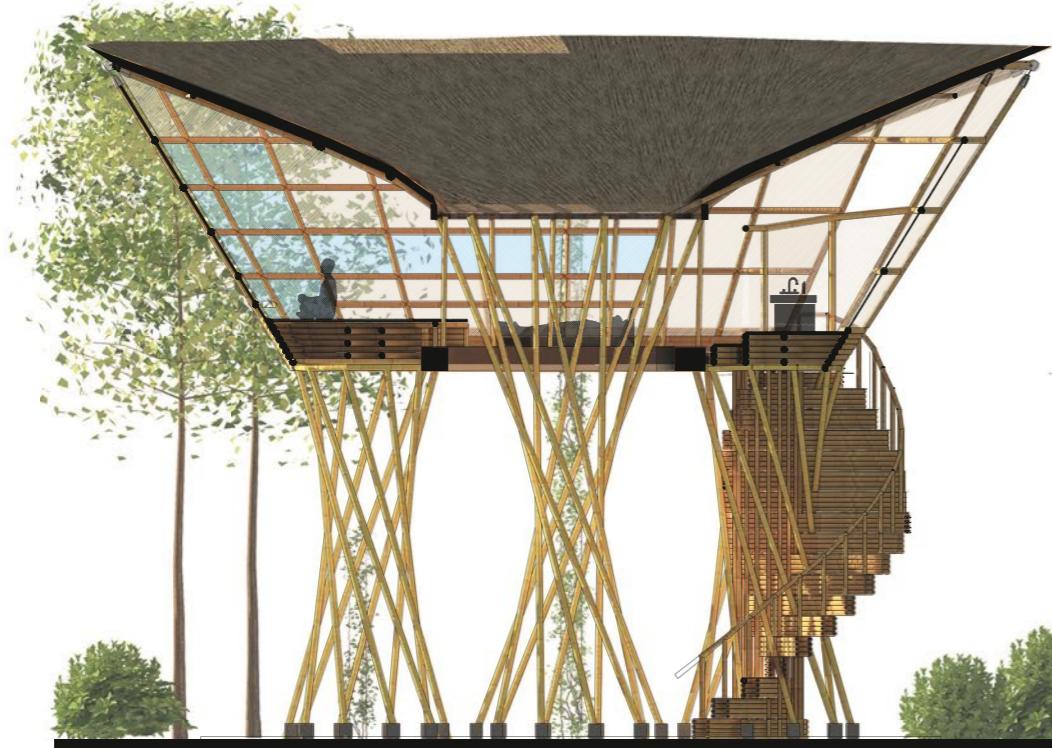
Collaboration : Self



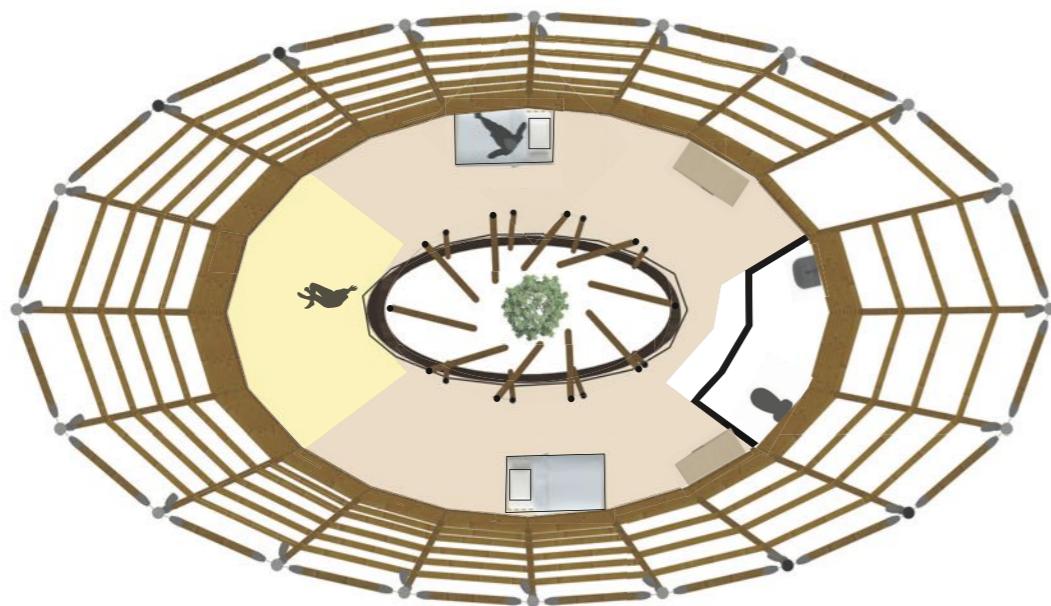
Grasshopper Design Iterations

The Vine Retreat is a stop for urban visitors to come for a rejuvenating, quiet experience and a romantic retreat in search for rural simplicity. Rural based architecture is important to 'uplift' communities as it provides employment and economic growth which is otherwise limited by migration of people from the countryside to the city.





Rhino + VRay+
AutoCad+ Illustrator



"nestled above, it becomes a symbol of escapism from the exterior world, an opportunity to look inside by reflecting the simplicity and openness of the surrounding nature "

The *Uplift* huts are designed in a way to maximize space for foliage and so as not to disturb the soil conditions by placing the huts at ground level, instead they are placed above ground at a height of 6-9 meters to be able to view the surrounding landscape with its farms, mountains and forests.



Rhino + Grasshopper+VRay+Photoshop

MIMICKING NATURE

A Look Through Point

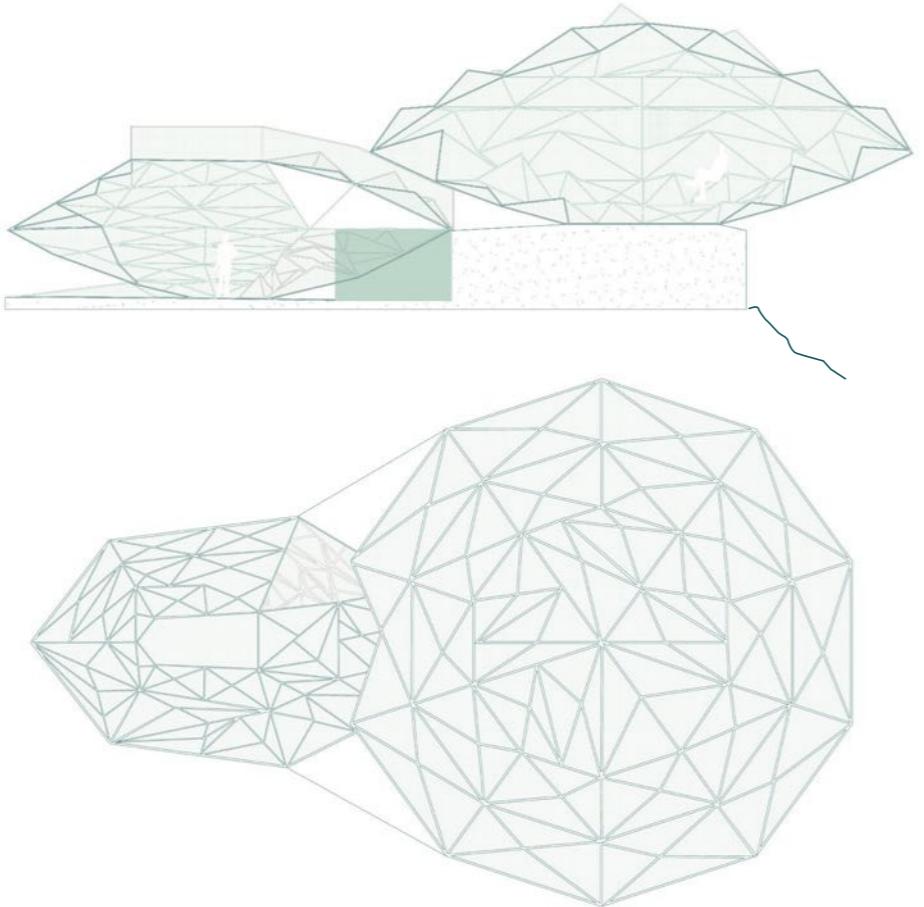
**"blurring the boundaries
between built space and
environment"**

2018 / Competition
Mount Nemrut, Turkey
Collaboration : Self

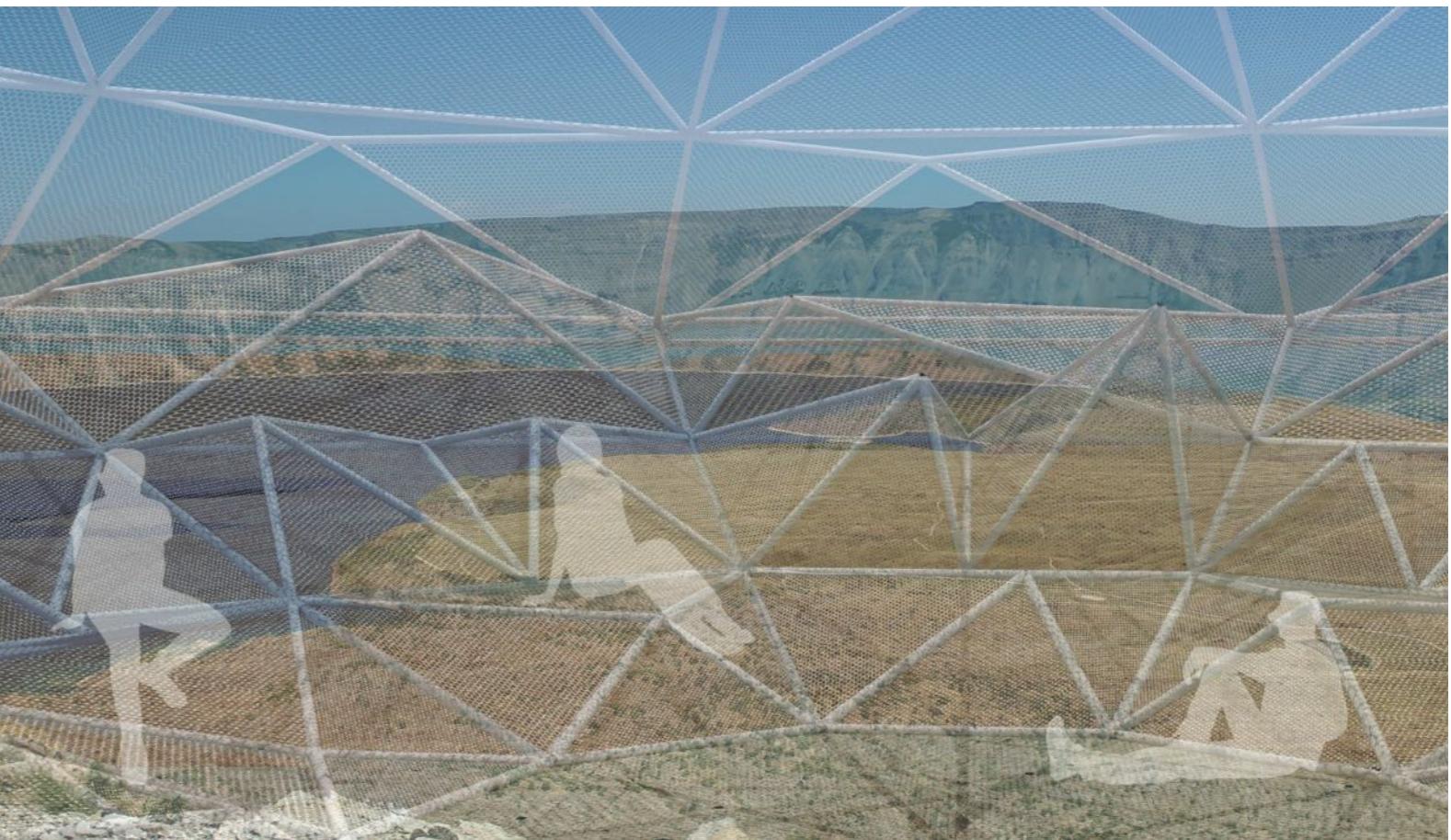
'Mimicking Nature' springs from the need to enjoy the views of Mount Nemrut's delicate landscape in a dynamic space. Unlike most look out points where the need to experience danger comes with using strong steel beams for cantilevering over edges, this project aims at providing a soft abstract space that looks like an ephemeral object in the landscape, overlooking the immense caldera.

The structure hovers above the crater and the light transparent mesh shell allows views not only from it but through it, thus blurring the boundaries between built space and environment. It mimics the delicateness and elegant unevenness of the landscape.

Rhino+ Grasshopper+
AutoCad



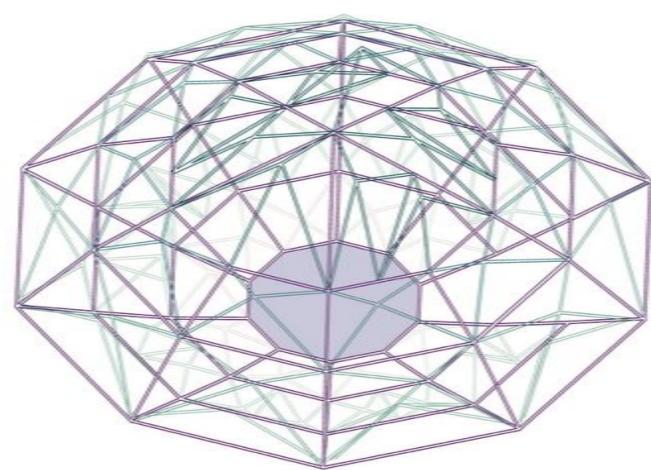
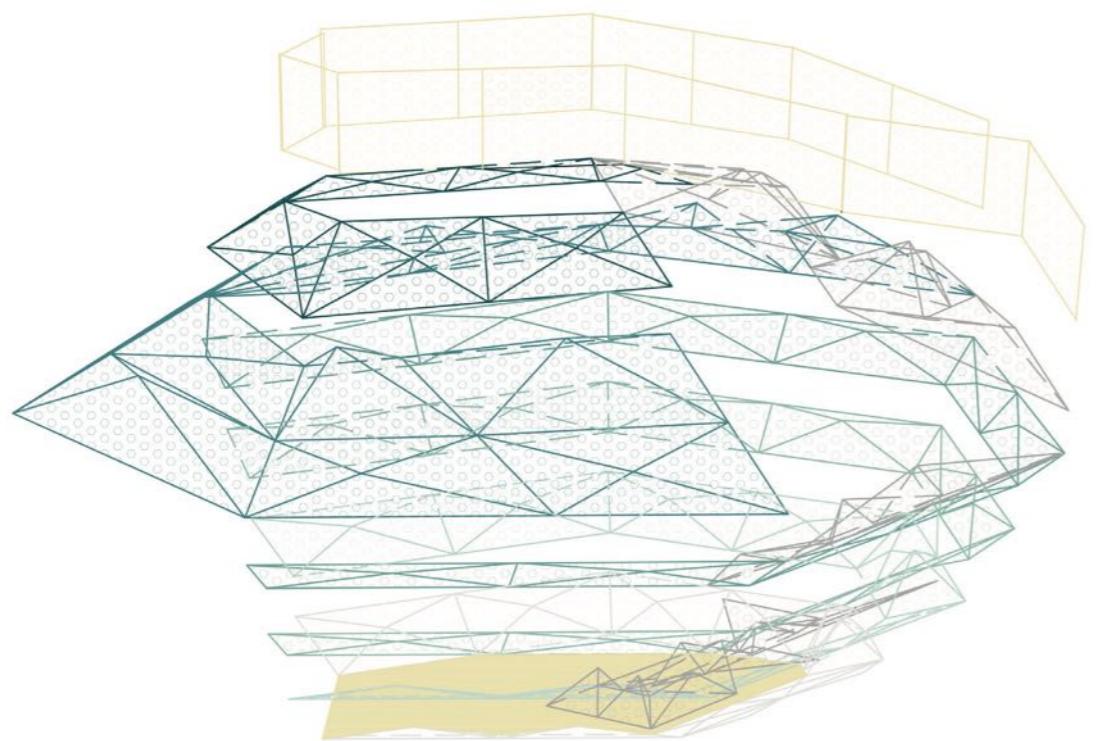
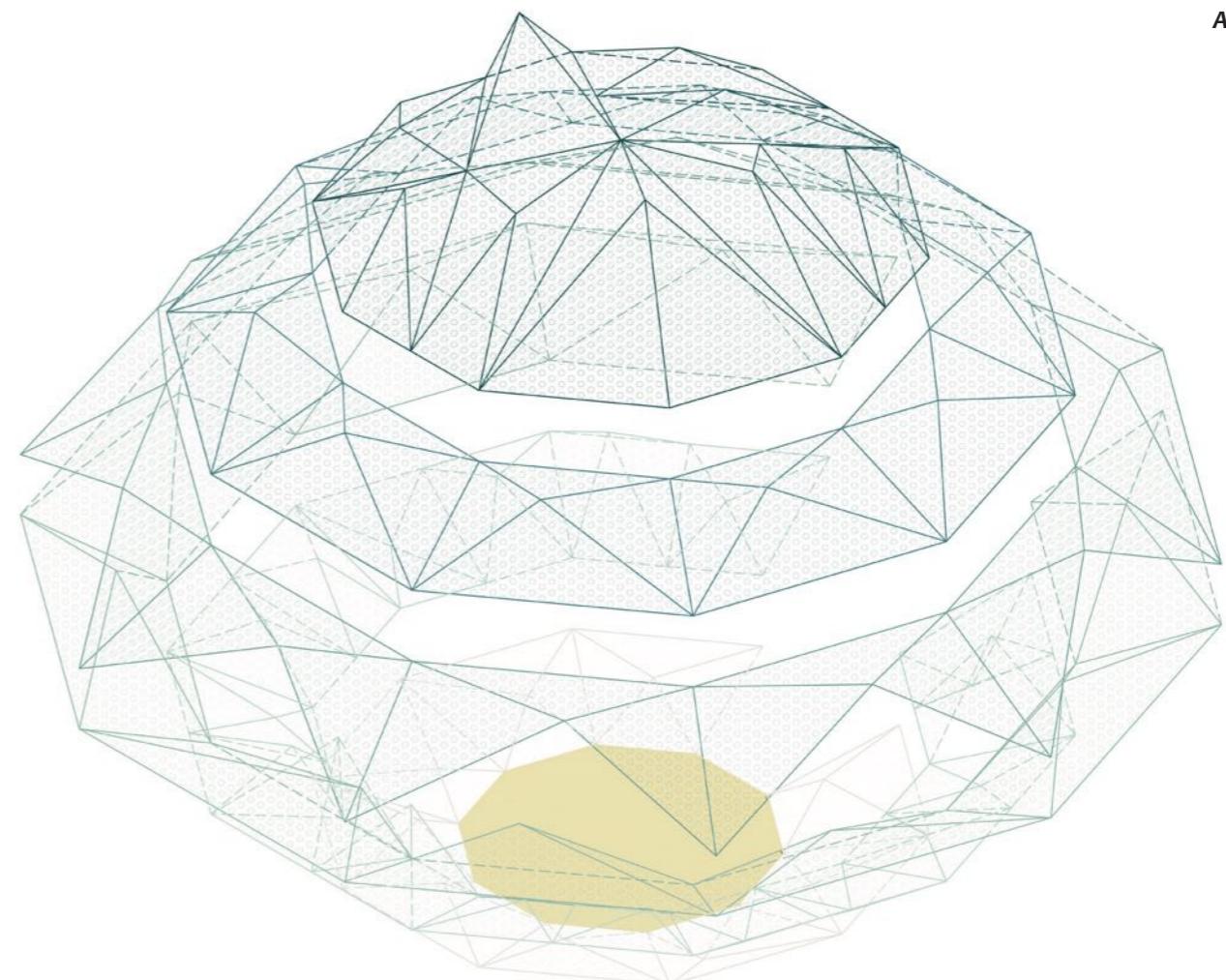
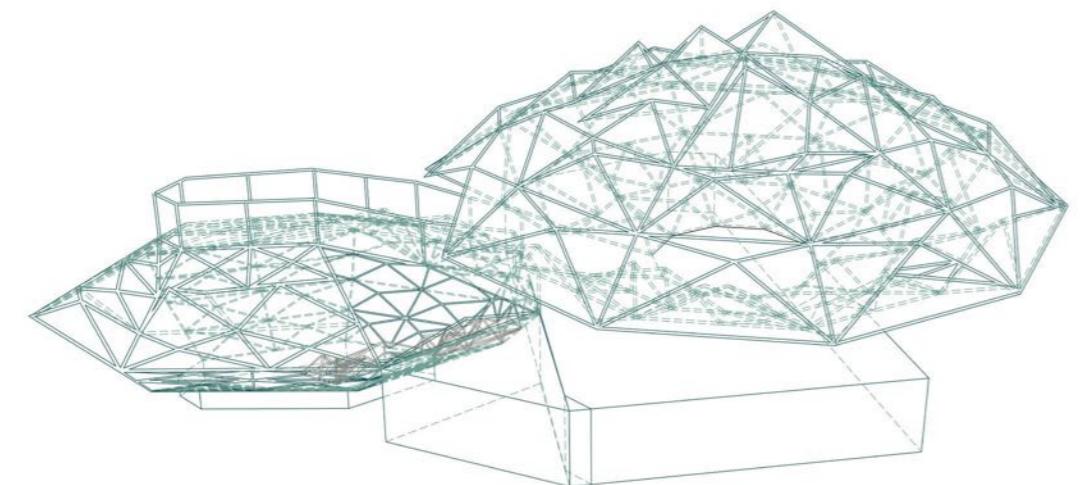
Rhino+ Grasshopper+VRay+Photoshop



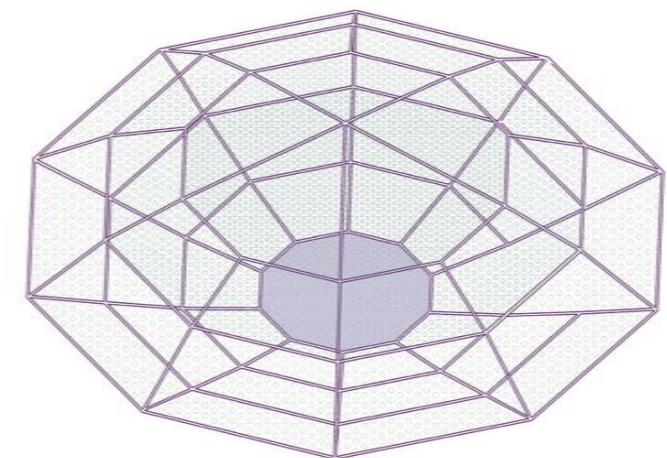
Budget restrictions dictated the design of the structure to be made of elements that can be easily fabricated and quickly assembled on site. The secondary structure consists of triangulated metal mesh pipes and planes attached to a primary network of steel pipes that form a symmetrical dome like structure. The structure sits with its base on the edge on the caldera, with metal meshes fanning out, hanging over the caldera, almost floating like a cloud bubble.

"an ephemeral object in the landscape, overlooking the immense crater"

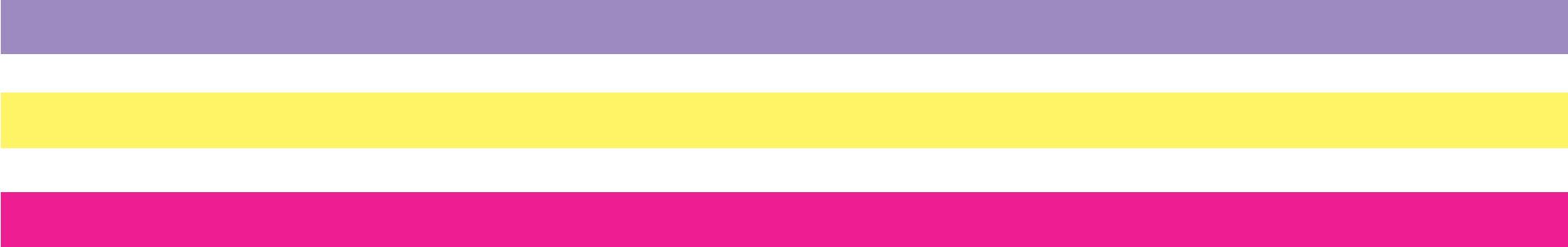
Rhino+ Grasshopper+
AutoCad



Secondary mesh



Primary mesh



THANK YOU

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