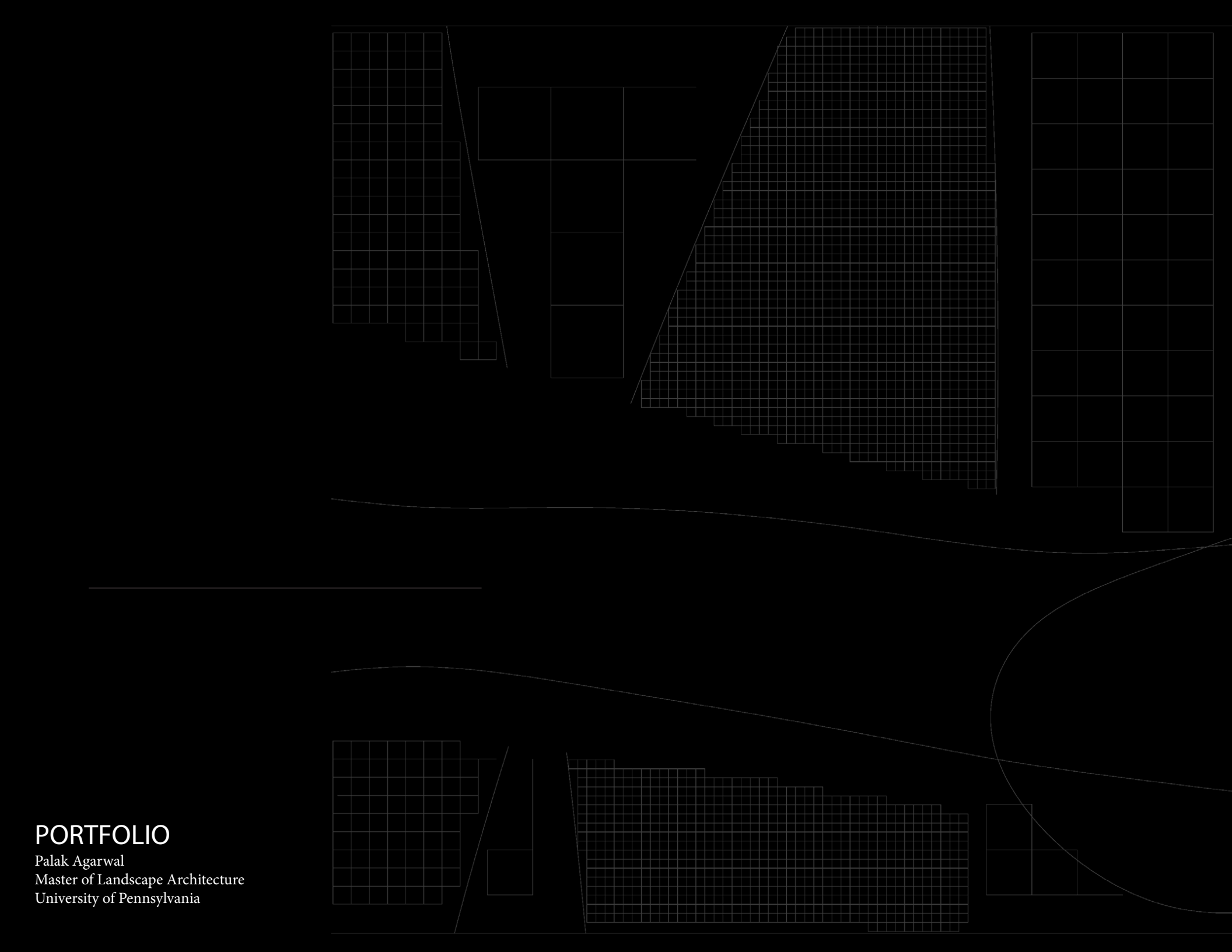


PORTFOLIO

Palak Agarwal
Master of Landscape Architecture
University of Pennsylvania

LAYERED GARDEN
MLA STUDIO 1 | UNIVERSITY OF PENNSYLVANIA

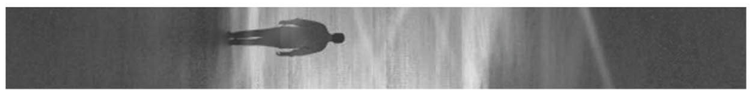
MUDSCAPES
MLA STUDIO 2 | UNIVERSITY OF PENNSYLVANIA

NURTURING THE SHIFT
MLA STUDIO 3 | UNIVERSITY OF PENNSYLVANIA

FLUX GARDEN
WORKSHOP 2 | UNIVERSITY OF PENNSYLVANIA

THE RESTORED PLANTERS
INTERNSHIP | REED GILLILAND

ELUSIVE SITE
B.ARCH STUDIO 6 | RV COLLEGE OF ARCHITECTURE



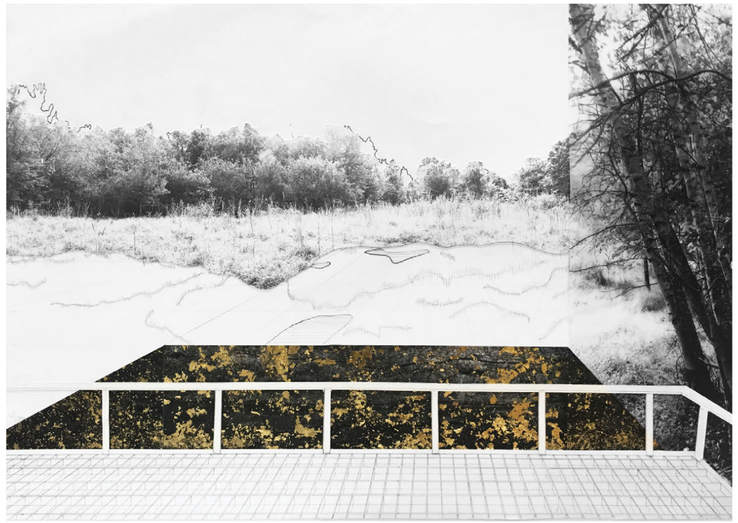
ANCHOR
COMPETITION ENTRY | BHUMIPUTRA ARCHITECTURE

CHOTE KADAM-CHANGING INDIA ONE AT A TIME
PROFESSIONAL WORK | BHUMIPUTRA ARCHITECTURE

DEPLOYABLE ARCHITECTURE
SUMMER PROGRAM | CEPT

LAYERED GARDEN

MLA STUDIO 1 | UNIVERSITY OF PENNSYLVANIA
ADVISOR : REBECCA POPOWSKY
LOCATION : UPPER ROXBOROUGH RESERVOIR, PHILADELPHIA

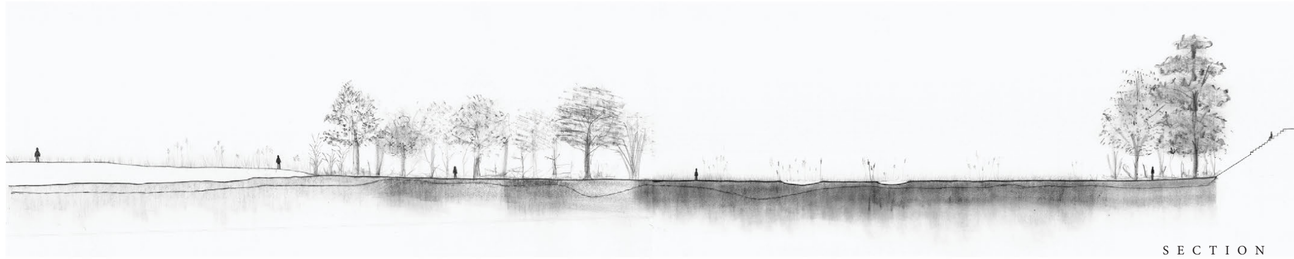


This studio particularly focused on seeing and experiencing landscape through drawing. The project evolved out of repeated site experiences, the representation strategies that explore those visits, lessons learned through precedent studies, and imaginative formal and conceptual explorations. Project was not only be understood as complete or final constructs, but also as negotiations of fixity and change that engage existing site dynamics, the passage of time, and the design imagination.

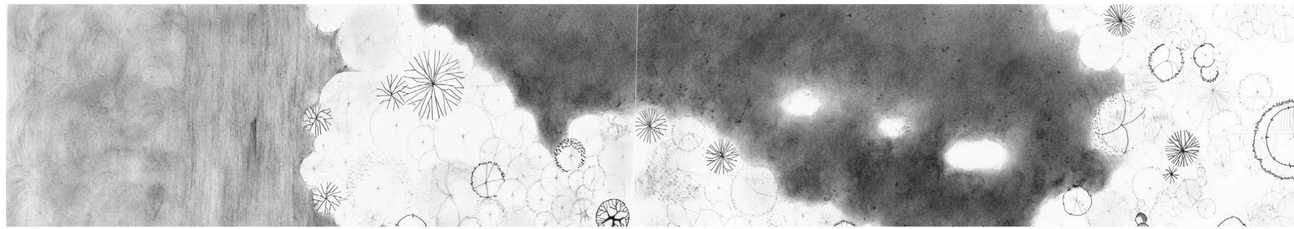
The site was initially understood as a construct of layers - time, vegetation and hydrology. The section of the site reflects all these layers and helps understand the connections between these different elements. The garden was an expression of this interaction.

The garden was designed as platforms that were built off the negative spaces between the trees on the berm of the reservoir. A pit was dug at the end of the run-off stairs to symbolize the change in the functionality of the reservoir. The different layers of soil in the pit have a specific timeline attached to it and are representative of the quality of water that was being filtered.

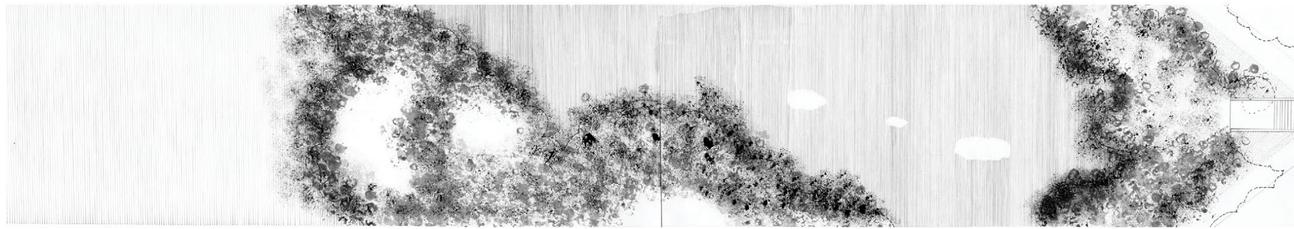
A trail was designed from The Schuylkill Center for Environmental Education to the reservoir to connect the garden to the larger Schuylkill River trail. A similar material palate was chosen to create the trail and the platforms to connect them visually. The design was presented as a axonometric with various sectional perspectives which talk about the spatial experience. All the drawings are layered and formed as a composition of various analog and digital medias and kinds of paper.



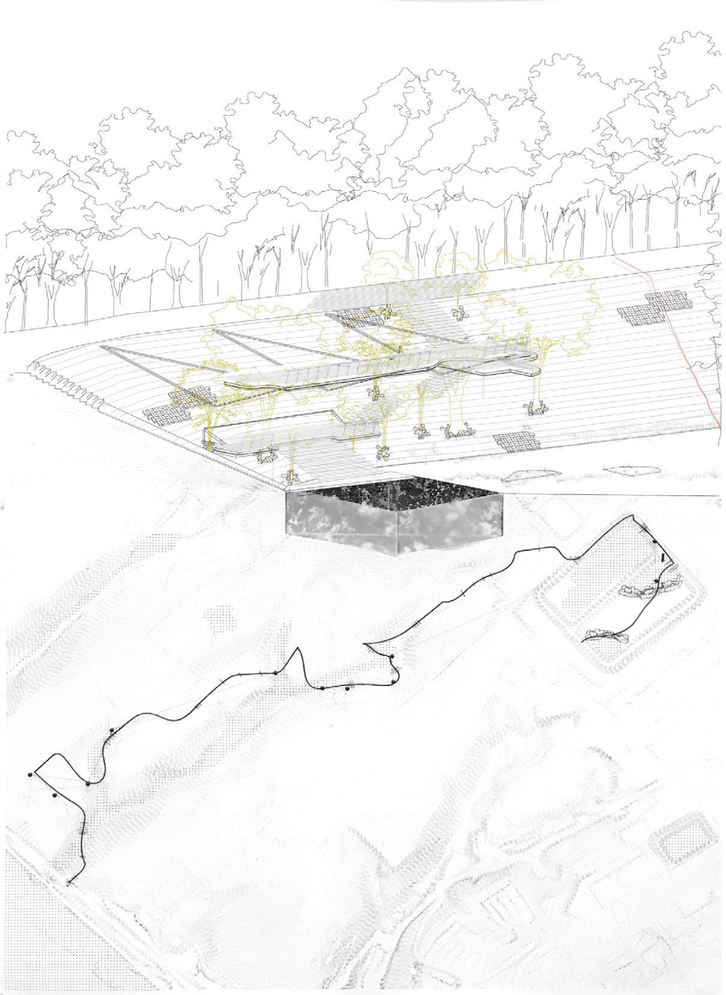
SECTION



VEGETATION PLAN

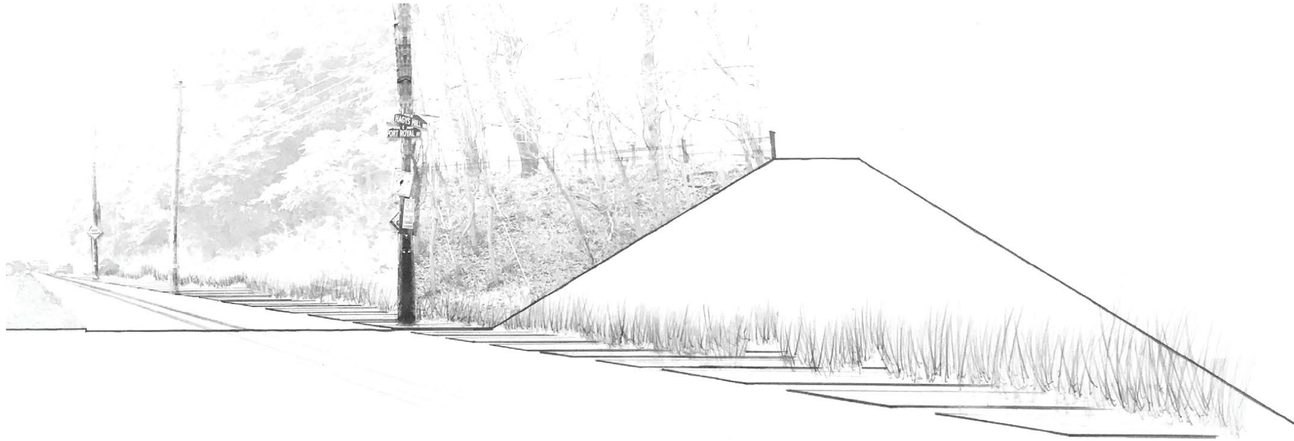


MOISTURE PLAN



FINAL GARDEN DESIGN

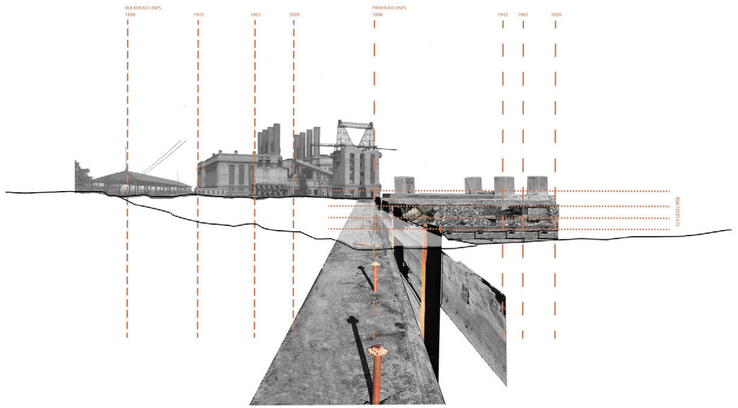
SECTIONAL PERSPECTIVE THROUGH THE BOG



SECTIONAL PERSPECTIVE SHOWING THE PATH

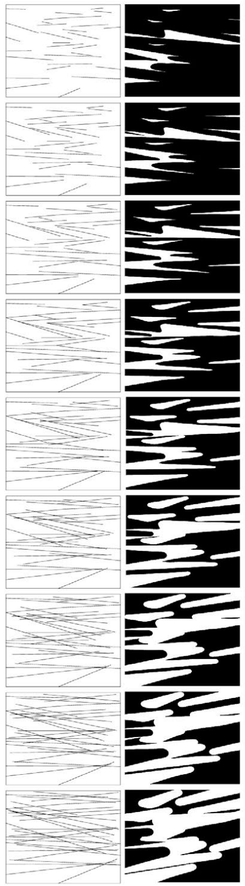
MUDSCAPES

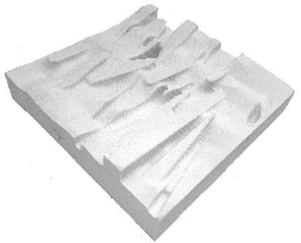
MLA STUDIO 2 | UNIVERSITY OF PENNSYLVANIA
ADVISOR : KEITH VANDERSYS
LOCATION : FISHTOWN, PHILADELPHIA

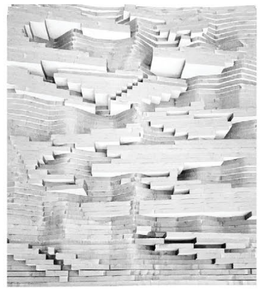


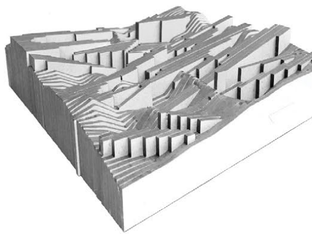
This studio concentrated on developing skills and creative sensibilities for transforming a section of the Delaware riverfront in the Fishtown area of Philadelphia. The aim of the studio is to answer to a larger context in terms of ecology and socio-economic factors. Parks are powerful and strong ideological statements: they play an emblematic role in definitions of public space; and they are cultural representations of both social and environmental ideals at a very particular moment in time. Public parks have ideals about democracy embedded within them. They are invariably contested grounds in their making and management as well as their appropriation by the public. Thus, parks are microcosms of the political, social, and economic terrain that form the basis for any discussion about landscape. The site is beside Penn Treaty Park which was built in the 1900s as a symbol of peace.

While researching about the site and the history I came across Petty's Island which is now being converted into a natural preserve. An interesting fact that I found was the mudflats are the type of wetlands which are more appropriate to this region. So my project used this typology and use it as a park. It plays an important role in the ecological process and it would be interesting to design the interactions with mud. The park was a process landscape which was designed to allow for future sea level rise and creation of new mudflats, The idea was to create a space that allows one to be ware of their existence without destroying or compromising on their habitat. The form came out of multiple iterations of a few lines.

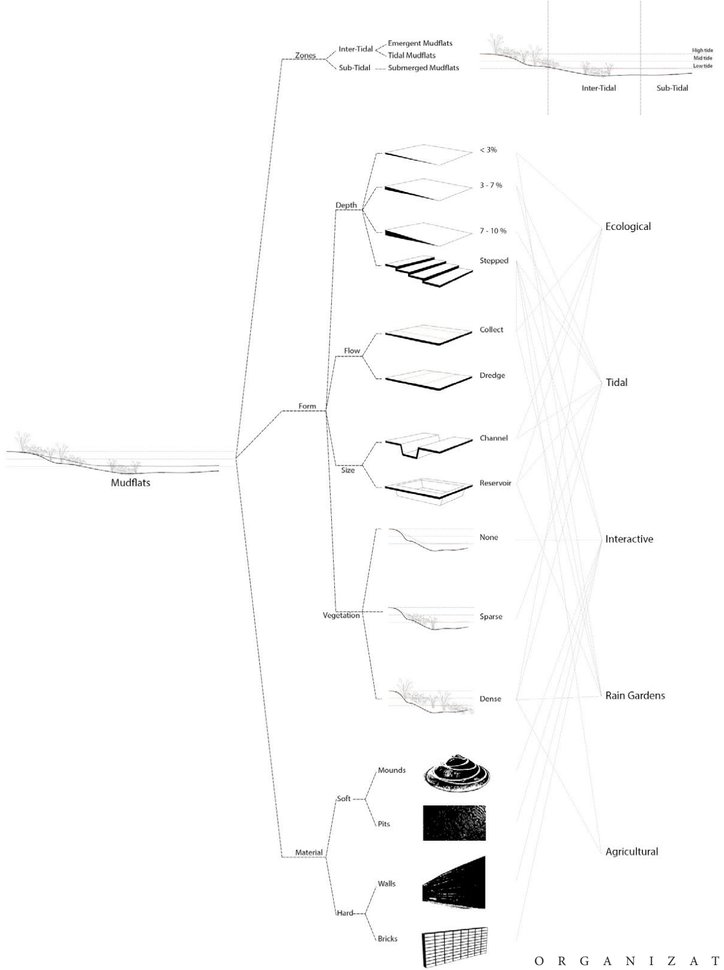








ORGANIZATION PLAN AND MODELS



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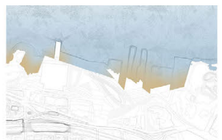
2 0 1 1

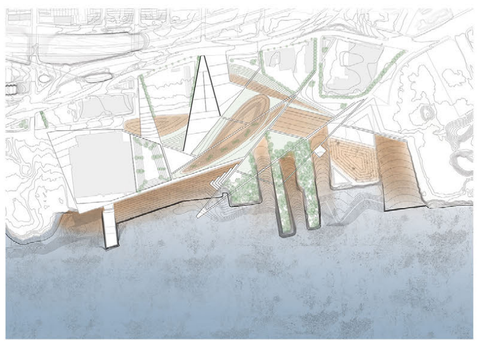
2 0 1 8

2 0 1 9

2 0 4 5



2 0 7 5



O R G A N I Z A T I O N P L A N A N D D I A G R A M S

E C O L O G I C A L A N D E X P E R I E N C E M U D F L A T S 2 0 1 9

2 0 2 5

2 0 4 5

2 0 7 5

NURTURING THE SHIFT

CONSERVATION, PROMOTION AND EFFICIENCY

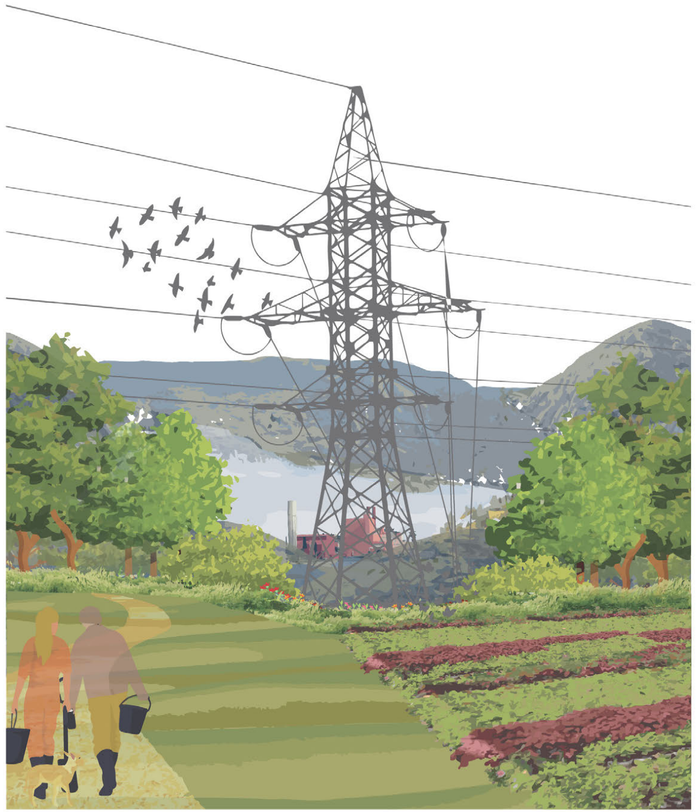
RIGHT-OF-WAY STEWARDSHIP COUNCIL

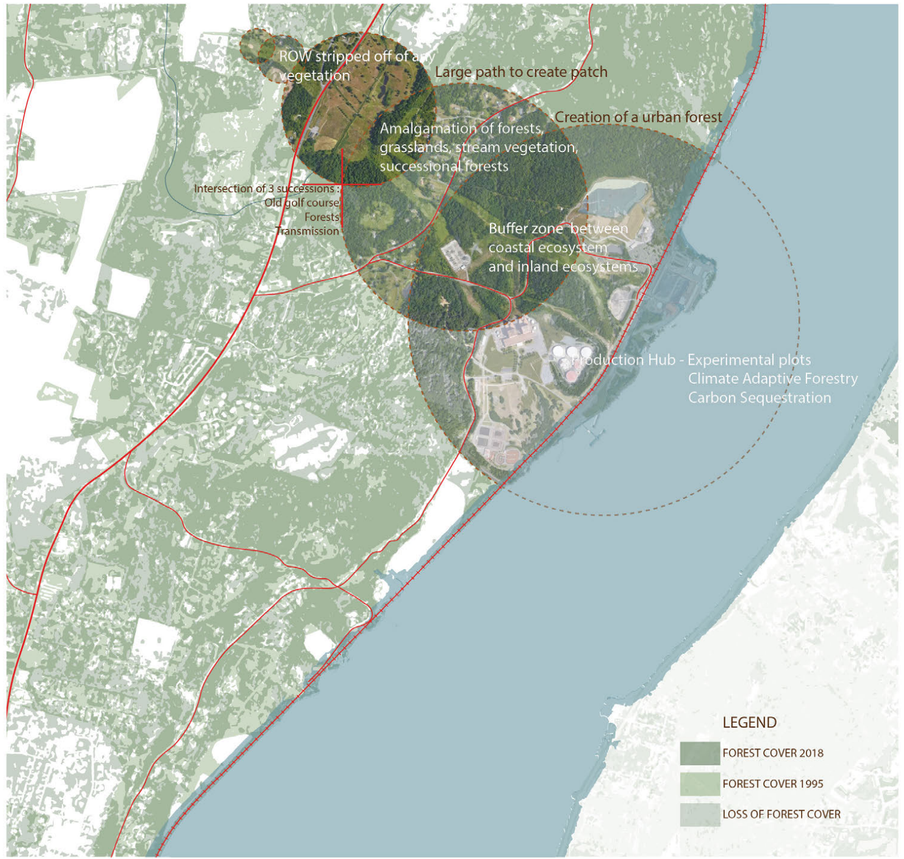
NURTURING THE SHIFT

MLA STUDIO 3 | UNIVERSITY OF PENNSYLVANIA
ADVISOR : TODD MONTGOMERY
LOCATION : HUDSON VALLEY, NEW YORK

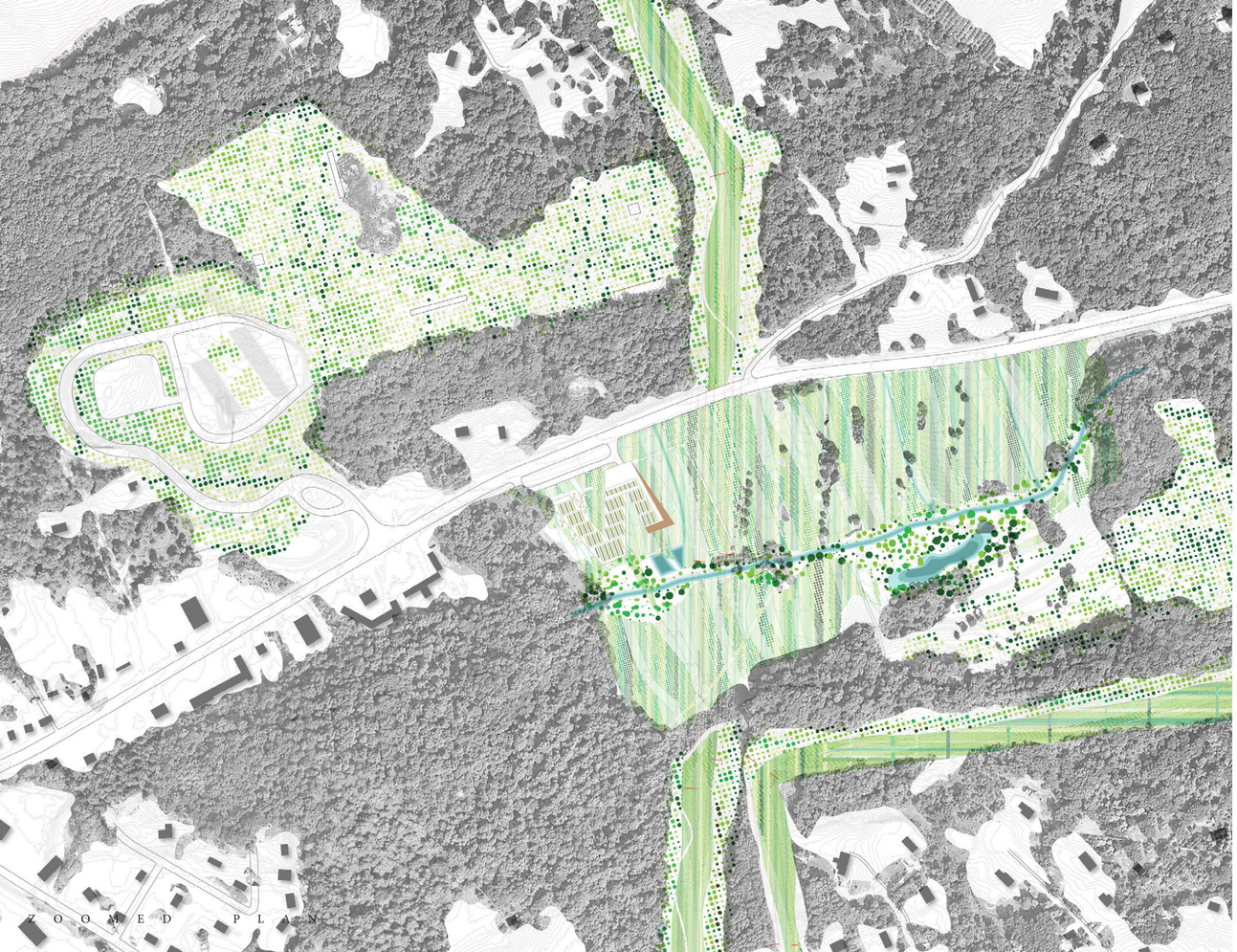
It is speculated that by 2050, New York's warm climates will be similar to the warm climates of Georgia today. This presents a unique challenge to the ecosystems. Ecosystems will face as triple threat : cold, heat and drought. For the forests of New York it is a race against time. We need to devise a plan now to help promote and maintain the biodiversity present, while still being flexible enough to accommodate for future changes. With future deforestation, its important to strategically plant and conserve areas that won't change. There are two things we will never have enough of: time and territory. As a productive landscape, we need to continue using the site for production – plant production. The site provided the necessary land to promote climate adaptive forestry, experimental plots, multiplying local patches and creating corridor systems to connect with old forests. As cities expand the fight for space between the forests and humans continues, and unsurprisingly, humans are slowly depleting the green cover available. It is the need of the hour.

This problem can be solved through an obvious answer that's around us – ROW. The infrastructure created is here to stay and in the future most of them might become inefficient to a level in which they aren't used anymore Most of these are neglected and have little to no maintenance regime. So why not use them to come up with a maintenance regime that will promote the movement of flora and fauna making the easement efficient. Danskammer is at the junction of 3 different ecosystems and a transmission corridor of varying character. By producing new form of energy source at Danskammer and creating a new grid that will focus on closer towns/cities, we will create a new energy corridor that will be efficient and work on many layers.

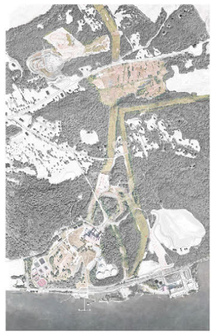


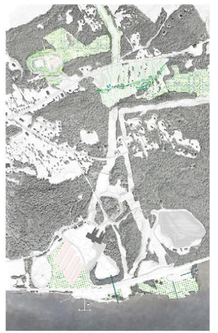


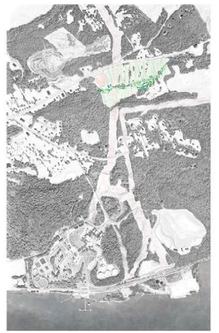
ORGANIZATION DIAGRAMS

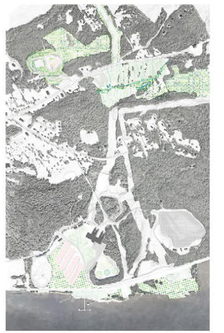


ZOOMED PLAN

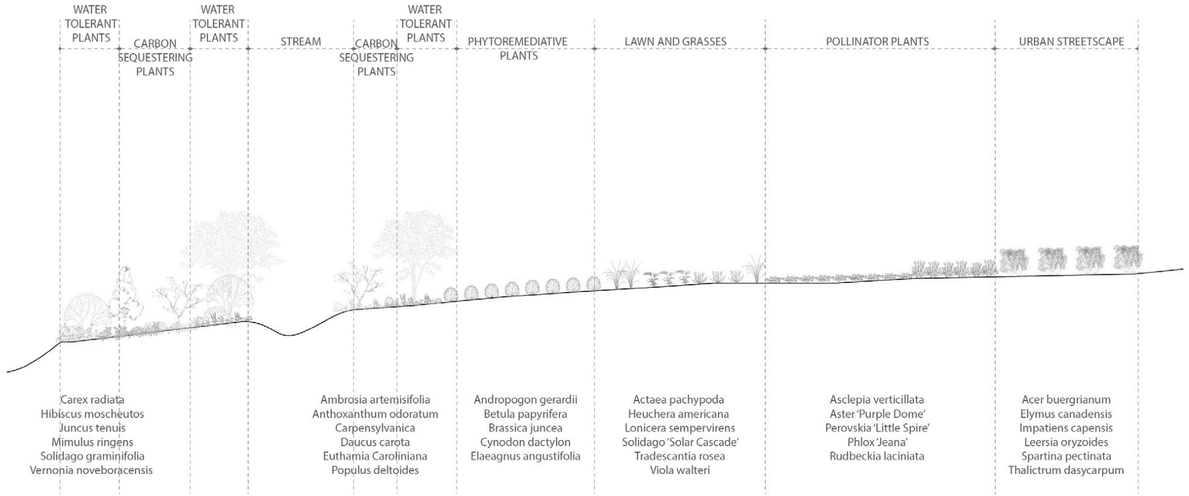




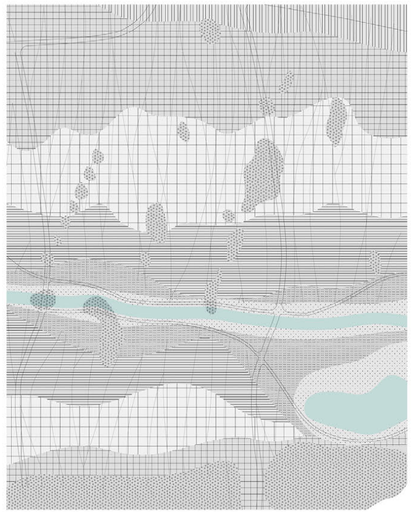




TIMELINE DIAGRAMS



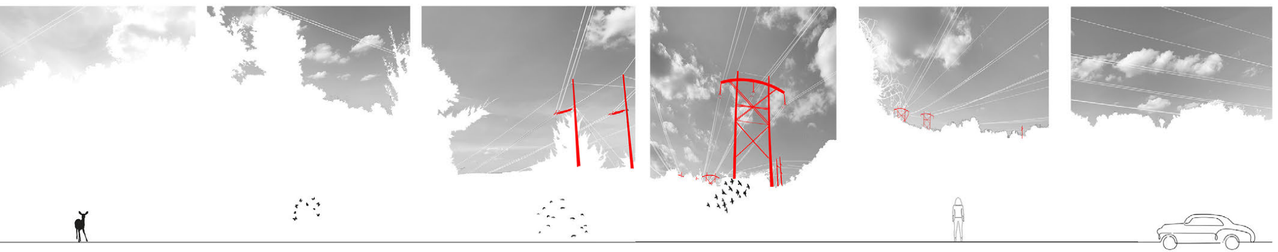
PLANTING SECTION



LEGEND :

- URBAN STREETSCAPE PLANTS
- EXISTING TREE COVER
- FLOWERING PLANTS
- LAWN AND GARDEN PLANTS
- PHYTOREMEDIATIVE PLANTS
- WATER TOLERANT PLANTS
- CARBON SEQUESTRATION PLANTS

P L A N T I N G P L A N



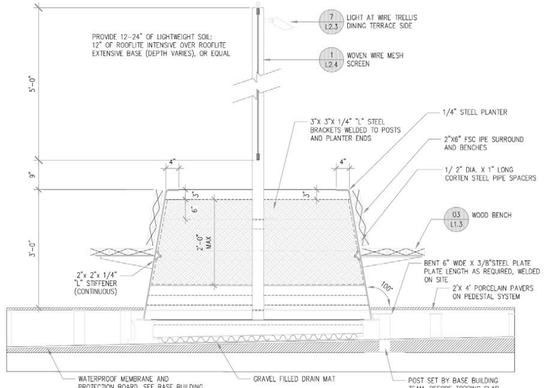
THE RESTORED PLANTERS

INTERNSHIP | REED GILLILAND
ADVISOR : CINDA GILLILAND | LARRY REED
LOCATION : CALIFORNIA

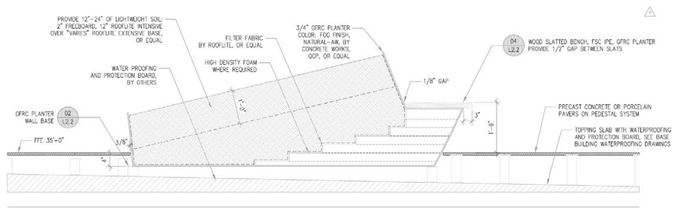
Last summer I interned at Reed Gilliland Landscape Architects in Petaluma, California. It was an amazing 12 week experience where I got to learn about all the profession from making drawing to site visits to finding and buying materials. The leaders of the firm Cinda and Larry made sure to involve in all the process and also trust me with tasks that were new to me. This really opened up possibilities for me and gave me a chance to learn new things which aren't covered in school.

During the internship I mostly worked on 3 projects. Two of them were residential and the other one was a commercial building. I was involved in the conceptual design phase for most of them and got to make construction drawings for another project. During the internship, I got to visit some sites which were affected by the California wildfires and being there with a arborist I got to learn a lot about plant health and tree maintenance.

The project presented here was the commercial project were we designed planter boxes in a new form and had to provide drawings to a concrete contractor to help them cast the planter in the right shape and method. It was a roof garden and there were a lot of restrictions in terms of planter depths and weight. The terrace has three different zones meant for different functions. From a cozy private space to larger gathering spaces for groups to hang out. There planting plan of the terrace involved many vegetable and fruit trees with a herb and smell garden to involve and engage the users of the building on the terrace.

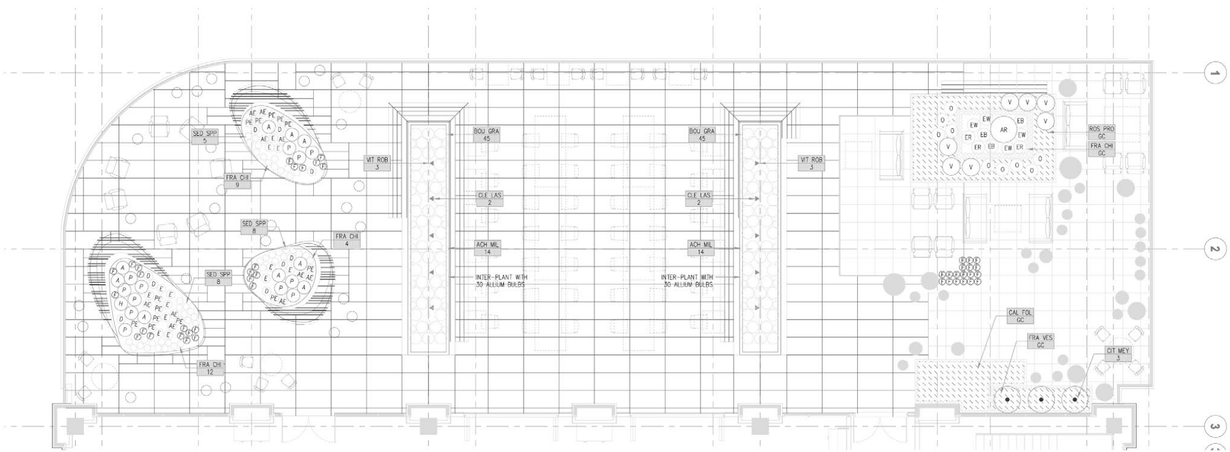


01 PLANTER AT DINING TERRACE
1"=1'-0"



01 PLANTER AT OUTDOOR LOUNGE
1"=1'-0"

T E C H N I C A L D R A W I N G S

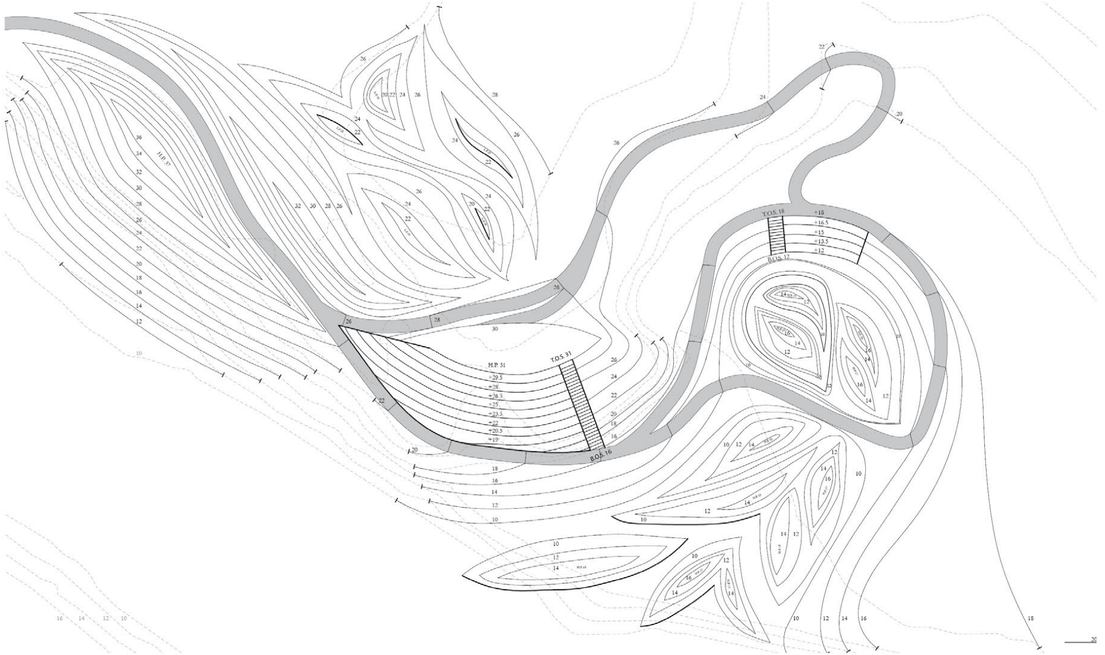


FLUX GARDEN

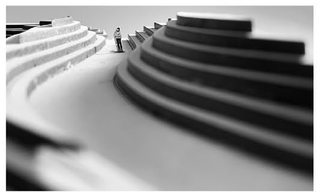
WORKSHOP 2 | GROUP WORK | UNIVERSITY OF PENNSYLVANIA
ADVISOR : CORA L. OLGYAY | ANNELIZA KAUFER
LOCATION : PENNYPACK, PHILADELPHIA

Our group's point of entry into the site was the existing s-curving group of contours, which led us to consider contrasting enclosed and expansive landforms. Building upon the physical juxtapositions, we considered temporal relationships between light/shade/shadow and high/low tide. These themes translated into alterations of the site through extrusions and depressions of the topography. We altered most of the contours, yet maintained the overall s-curve of the existing landform.

The entrance path begins between two mounds that rise from wide bases. In addition to the visual access the mounds would create dramatic shadows. The sense of enclosure along this portion of the path would peak at the middle and diminish at each end. Exiting this area, one reaches a fork in the path and a new view of the river. The path on the right leads down toward the water's edge with a highly exposed series of tiered seating embedded into the hill. Beyond this point, the path forks again, with the option of walking either through or around the constructed series of scalloped islands in the fluctuating tidal bay. This fork ultimately loops back onto itself, but not before reconnecting visitors to the path above. The vantage point offers easy access to the water. This resting area also serves as a prime spot to observe and engage with the shifting water levels that leave traces on the mounds.

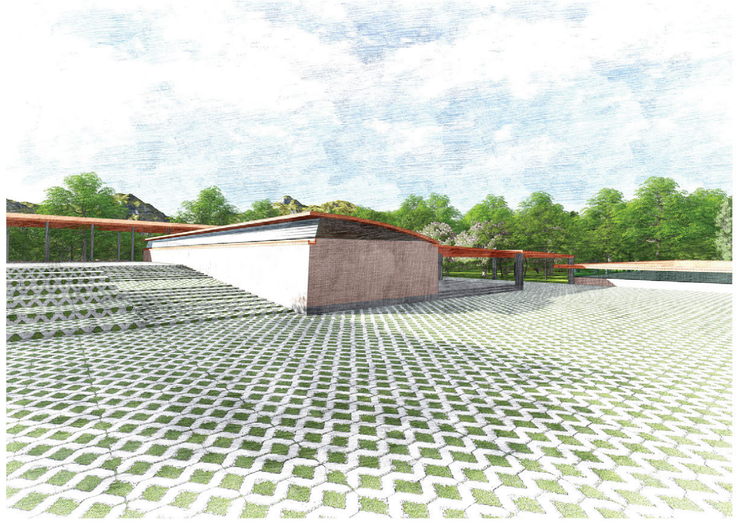


GRADING PLAN AND MODEL



ELUSIVE SITE

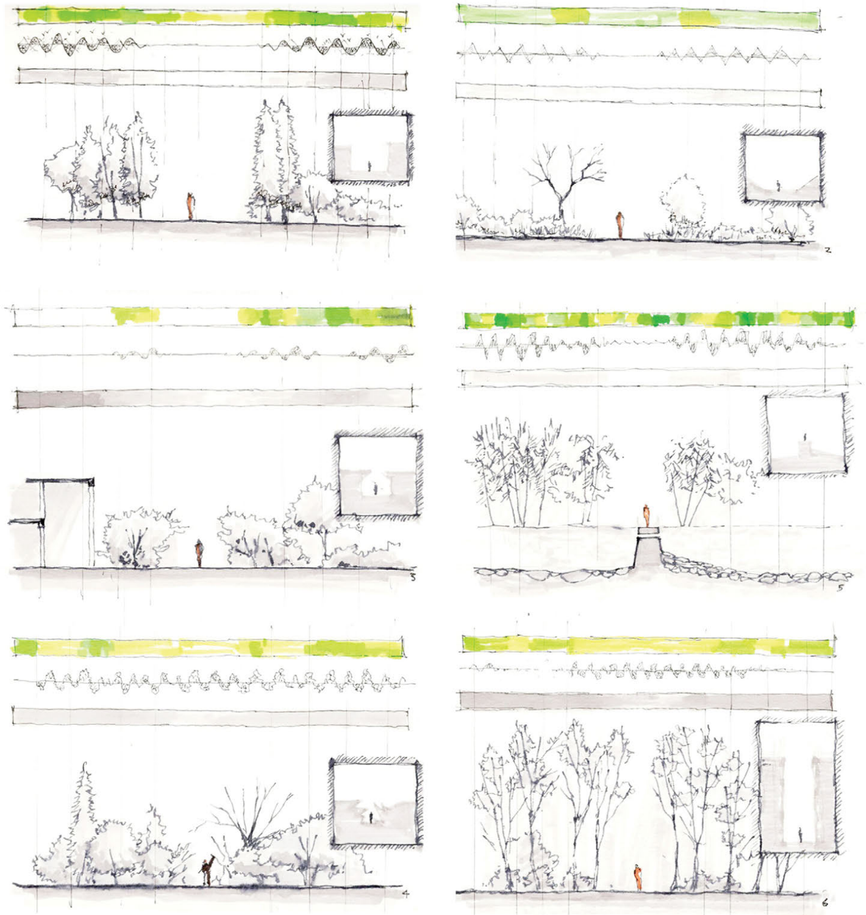
B.ARCH STUDIO 6 | RV COLLEGE OF ARCHITECTURE
ADVISOR : ANITHA SUSEELAN
LOCATION : VALLEY SCHOOL, BANGALORE, INDIA

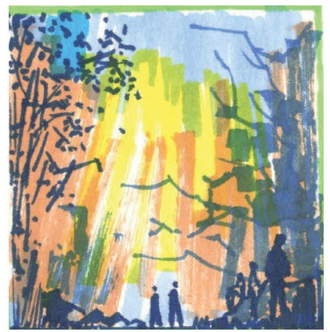


This studio particularly focused on understanding the differences and similarities of institutional goals and architectural goals. Special attention was paid on the creating of spaces of learning - formal, informal and interactive processes of learning and role of the built environment. The role of built environments in therapeutic and nurturing institutions and their functions. The site provided for a very nature and landscape driven project.

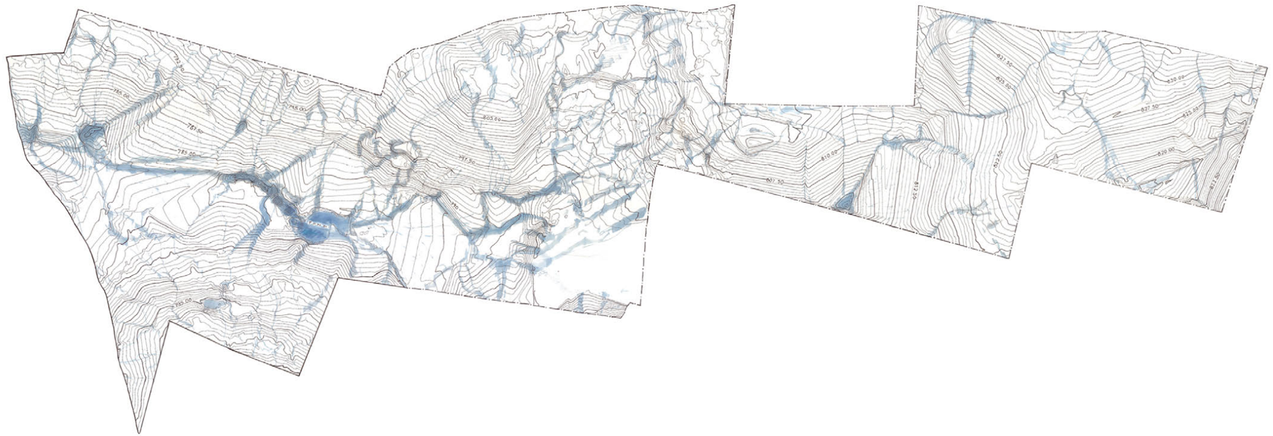
Institute for Ayurveda and Integrative Medicine is a medical research unit of FLRHT with the larger mission to demonstrate the contemporary relevance of Indian Medical Heritage in providing medical relief and in extending education, training and imparting creative community services. The research unit is primarily engaged in the conservation and study of medicinal plants used in Ayurveda beyond combining platforms for creative arts therapy .

Alternate medicine deals with creation of the accurate atmosphere for correct treatment. Hence, this light factor plays an important role. The design was derived out of the amount of light entering the space and the type of light. Different lighting options alter the perception of a certain space, which in turn affects the psychological feeling of the person. It was important to study the site completely as it was around 110 acres and proposing a plan for it needed a detailed understanding. It was important to understand water drainage on site to make sure my intervention didnt affect the natural system that existed. made throughout the site to understand the quality of space .

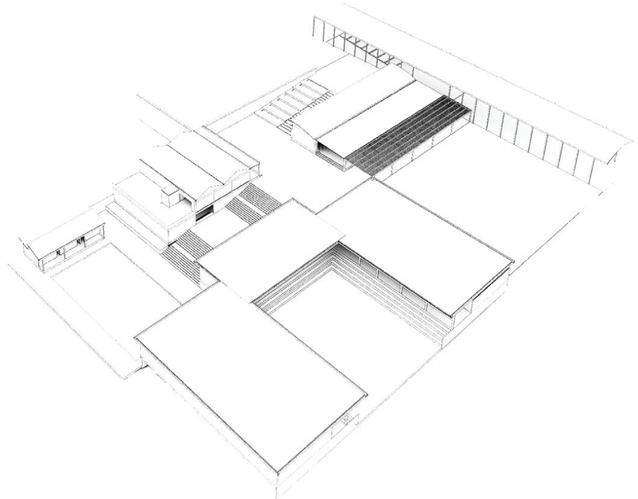




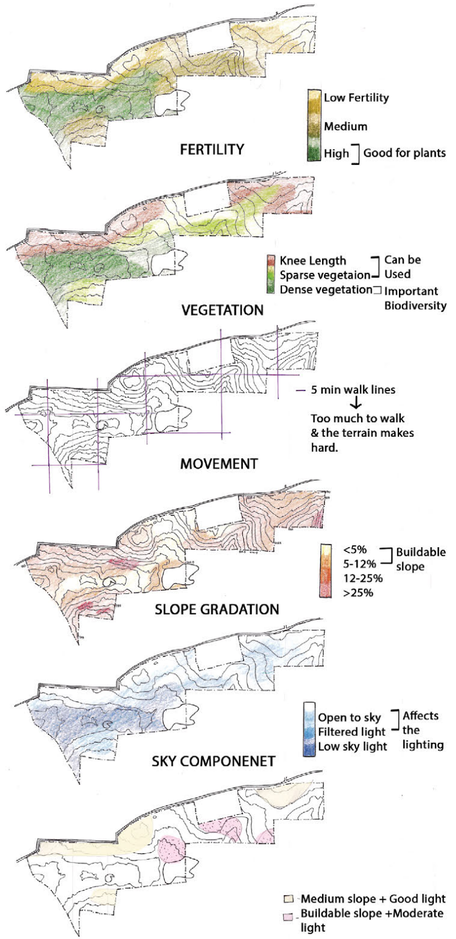
SITE TRANSECTS



WATER DRAINAGE MAP

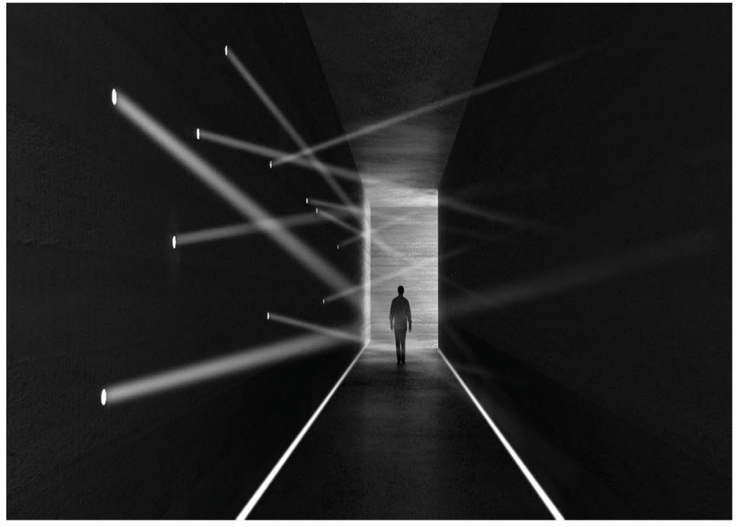


VIEW OF CAMPUS



ANCHOR

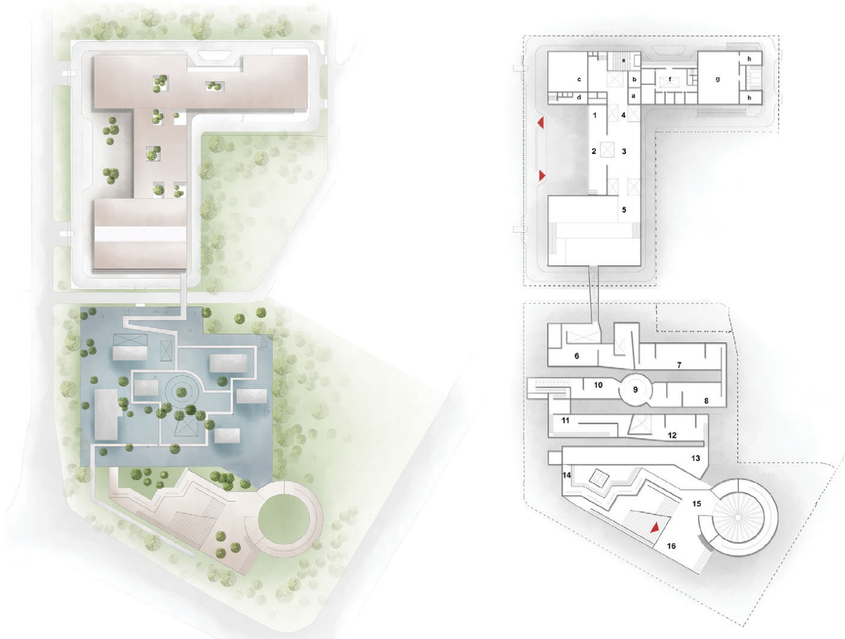
COMPETITION ENTRY | BHUMIPUTRA ARCHITECTURE
ADVISOR : ALOK SHETTY
LOCATION : DELHI, INDIA



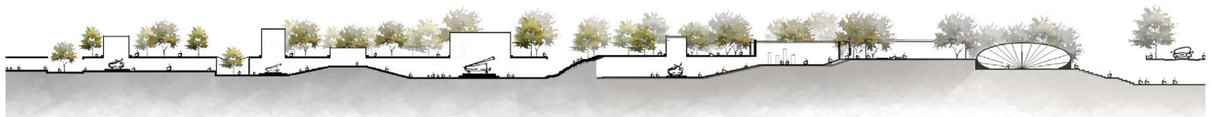
The Indian War Museum must commemorate our military's gift of peace to the country by embodying this essential sentiment. Our design achieves this by leaving everything at surface level untouched: 85 per cent of original tree cover, as well as the age-old barracks that lend historic relevance to the site. Accordingly, the museum itself would be situated below eye-level, in a series of otherworldly chambers below the surface of the earth. Hence the metaphor of the anchor: just as that piece of solid machinery plunges to uncharted depths to secure the mother ship, so does the military afford our country a degree of stability that often goes unnoticed.

The experience of visiting this museum would be like no other, allowing patrons a meditative space in which to contemplate on the journeys endured by our jawans. Furthermore, the three components of our structure reflect the three wings of the military. The glass boxes that bring in light from the sky symbolize the lofty province of the Air Force. Water bodies dotted throughout the premises, which also serve as rainwater harvesting catchments, symbolize the Navy. Finally, the use of earthen materials, tunnels and trenches pay homage to the Army.

In conclusion, the objective of this museum calls for an built form that is out of the ordinary. Through these design parameters, our hope is to create an immersive experience that communicates the enormity of the military's responsibility. If, through a single visit to this museum, we can enable visitors to conceive the immense call of duty that our military fulfills, it will be our humble way of giving thanks for the sacrifices made by them every single day.

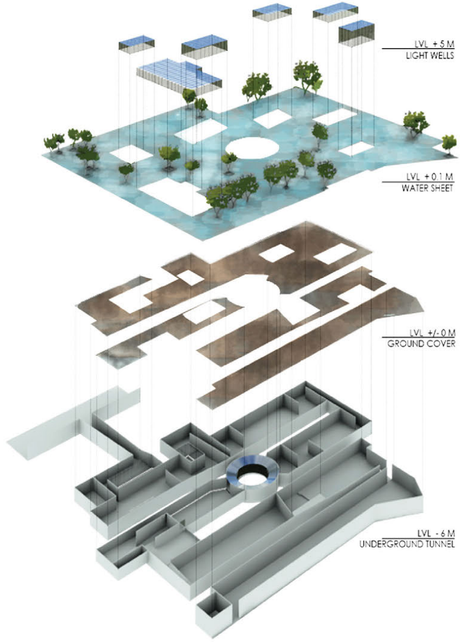


GROUND AND BASEMENT PLAN

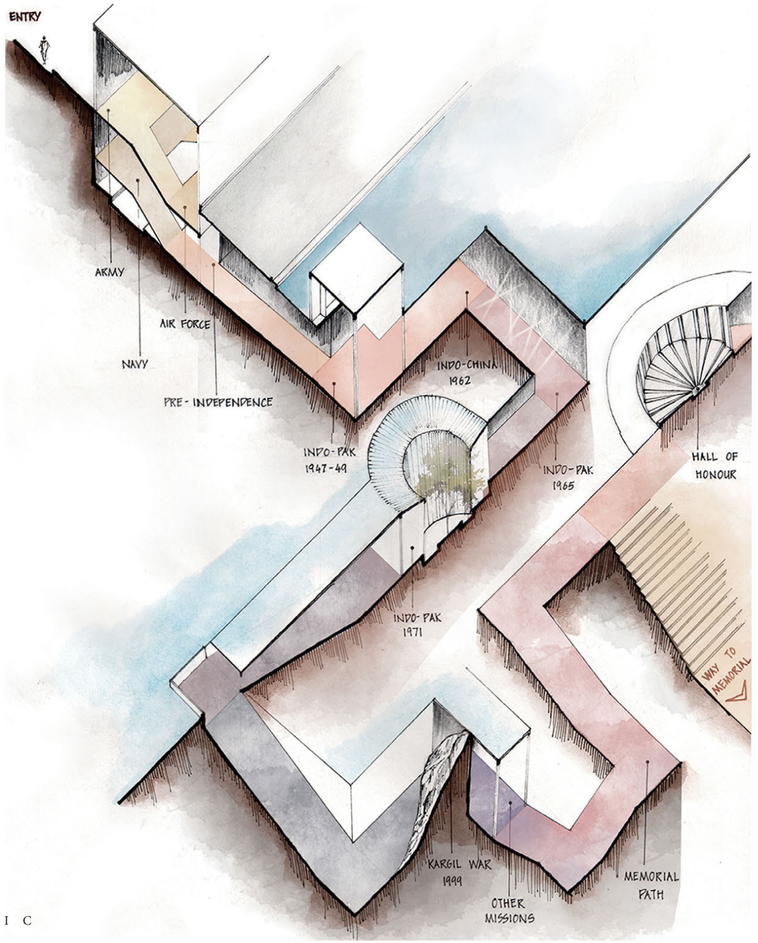


CONCEPTUAL SECTION

CONCEPTUAL RENDERS



EXPLODED AXONOMETRIC



CONCEPTUAL AXONOMETRIC

CHOTE KADAM - CHANGING INDIA ONE AT A TIME

PROFESSIONAL WORK | BHUMIPUTRA ARCHITECTURE
ADVISOR : ALOK SHETTY
LOCATION : INDIA

India has some of the world largest slums. Dharavir, in Mumbai, is the biggest slum known to man kind. Most of these dwellings have similar living conditions and all of them face certain challenges. The most common challenges being of sanitation and lack of basic shelter.

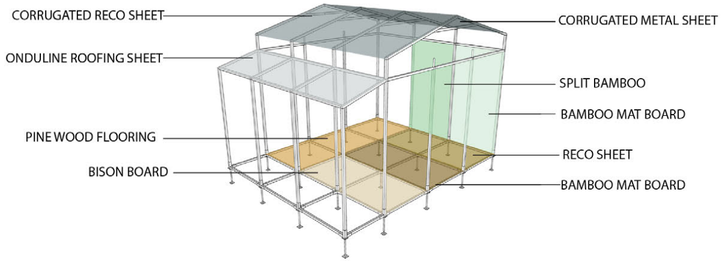
Most of the houses built by them are temporary and use waste material that can be found around. As most of the dwellers are a part of the construction industry they tend to lead a nomadic life. Moving from one place to another in the search of employment.

Using the idea that most of them belong to the construction industry we tried to develop a prototype that used waste scaffolding and metal sections on site. It was designed and built so that it could be dismantled easily and moved to another location without much hassle. The skin of the prototype was initially made of bamboo mats. Many other materials have been tried and tested. Two prototypes were built and kept in these localities and surveyed through the year to figure out the shortcomings and make improvements in the design.

The design was made keeping the cost of it in mind as most workers would not want to pay a high amount for them. We also came up with a financial scheme that would instill the idea of ownership in the dwellers. Maximum budget alloted for each unit was about a $1000.

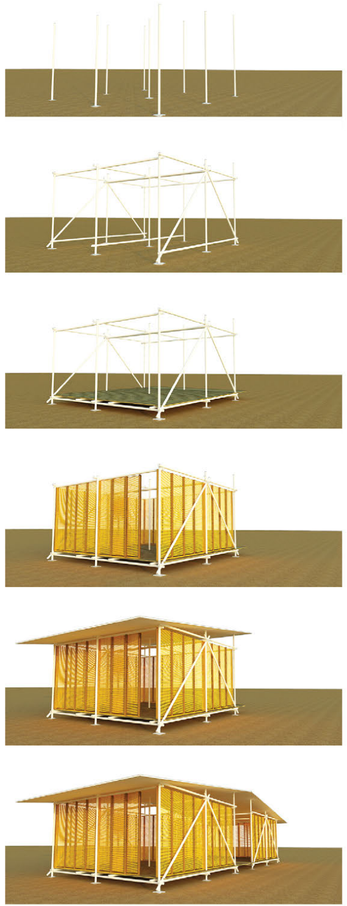
The third prototype was designed with a modular concept that could be repeated to form bigger units. The entire unit is raised on jacks by a foot, to ensure protection from floods and water clogging.

The industrial ventilator ensures good air circulation within the unit as it dispenses of the hot air that accumulates inside. The mesh panels facilitate cross-ventilation and can be replaced with any panel depending on conditions outside. Hooks are welded onto the metal frame and used banners printed on flex are used to cover the unit and offer protection from the rain. F R P sheet is used to cover the skylight and offers ample natural light. A simple hinge is used to secure the door.



PROTOTYPE TYPE 1

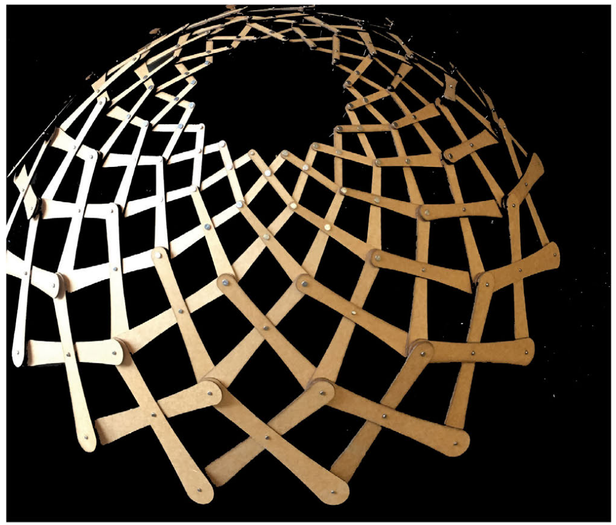
INTERIOR RENDER



PROCESS MODELS

DEPLOYABLE ARCHITECTURE

SUMMER PROGRAM | CEPT
ADVISOR : VICKY ACHNANI
LOCATION : AHMEDABAD, INDIA

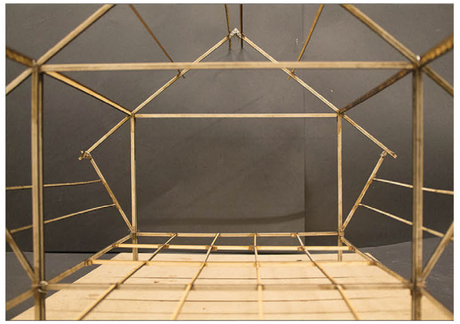


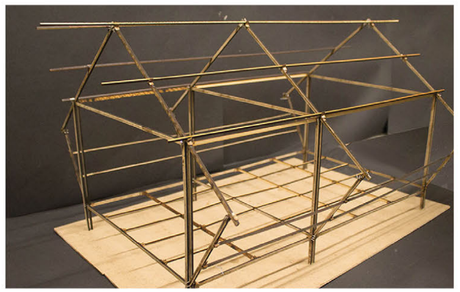
"Today our built environment is affected more and more by rapid and dramatic change, ecological considerations and social and cultural impact. In this scenario, a form of architecture that is flexible and lightweight with minimal environmental impact, sited easily, responsive to new technological and aesthetic opportunities, has a great value."
- Kronenbrug, 1997

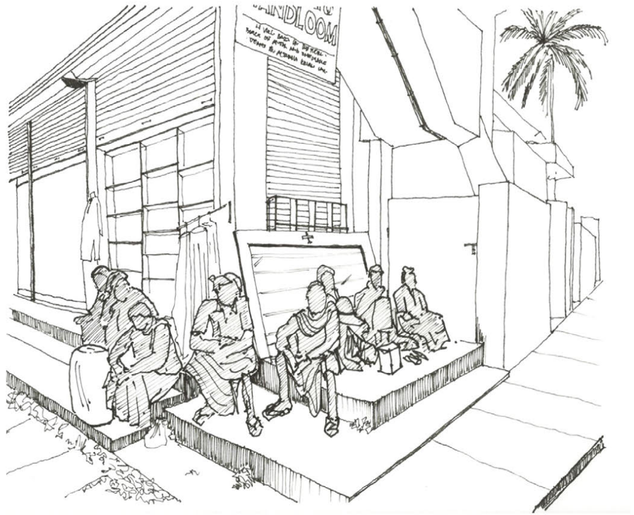
So with this workshop we took a leap from the conventional practice and look at architecture that is in motion; that is flexible and demands lightness, without compromising on strength. We got into the intricacies of weighing our building components, generate discussions on material distribution, look at built form as connection of nodes and not just merely draw but practice service, detail out mechanism for components look into sophistication of assembly as methods. We undertook prefabricated componentised construction that was informed by discussions and practice. At the same time it responded to extremely operational parameters and more often than not make use of experimental and explanatory construction methods where we employ innovative materials and constructional techniques, with a range of detailing that is much more than conventional.

The workshop was an intense hands-on undertaking with a focus on designing, detailing, component mechanism, prototyping and true scale execution of a built form whose components are flexible and assembled in lightweight systems resulting in a endless array of configurations. The final form was structured in the shape of a pentagon keeping in mind the after shocks. The walls were made at an angle so that if there is another disaster the walls collapse on the outside and not harm the habitats inside the building. The frame is made majorly using box sections with pin joints.

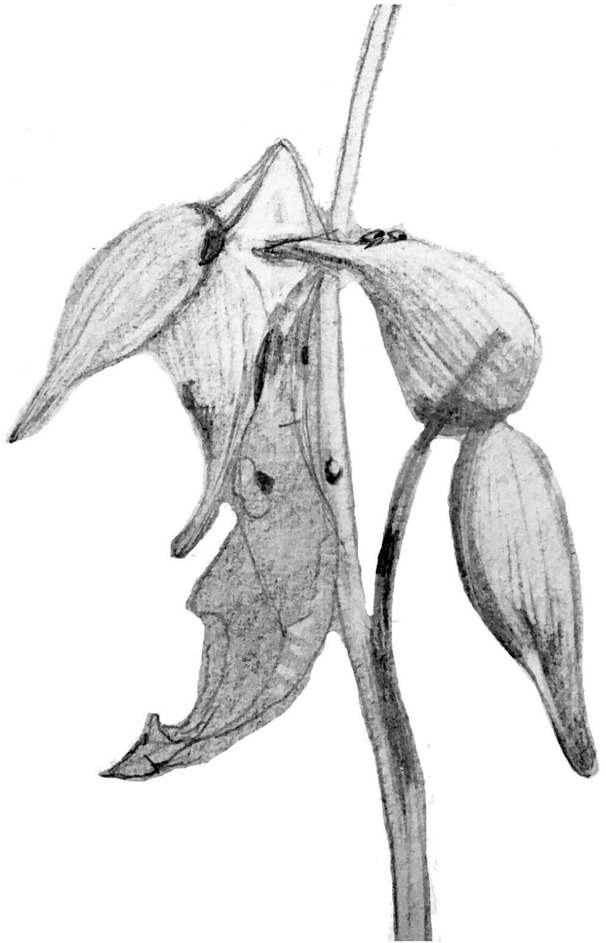
PROCESS MODELS







Feature Plant :
Common name : WHORLED MILKWEED
Scientific name : Asclepias verticillata
Growth Habit : Shrub
Average Height : 6 ft
Native or non-native : Native
Invasive : Not invasive
Wetland Indicator Category :
FACU
Non-Hydrophyte



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