

PORTFOLIO

selected works // 2015 - 2020
cornell university | class of 2020

academic (undergraduate)
architecture

complete works (11)

undergraduate architecture
2015 - 2019

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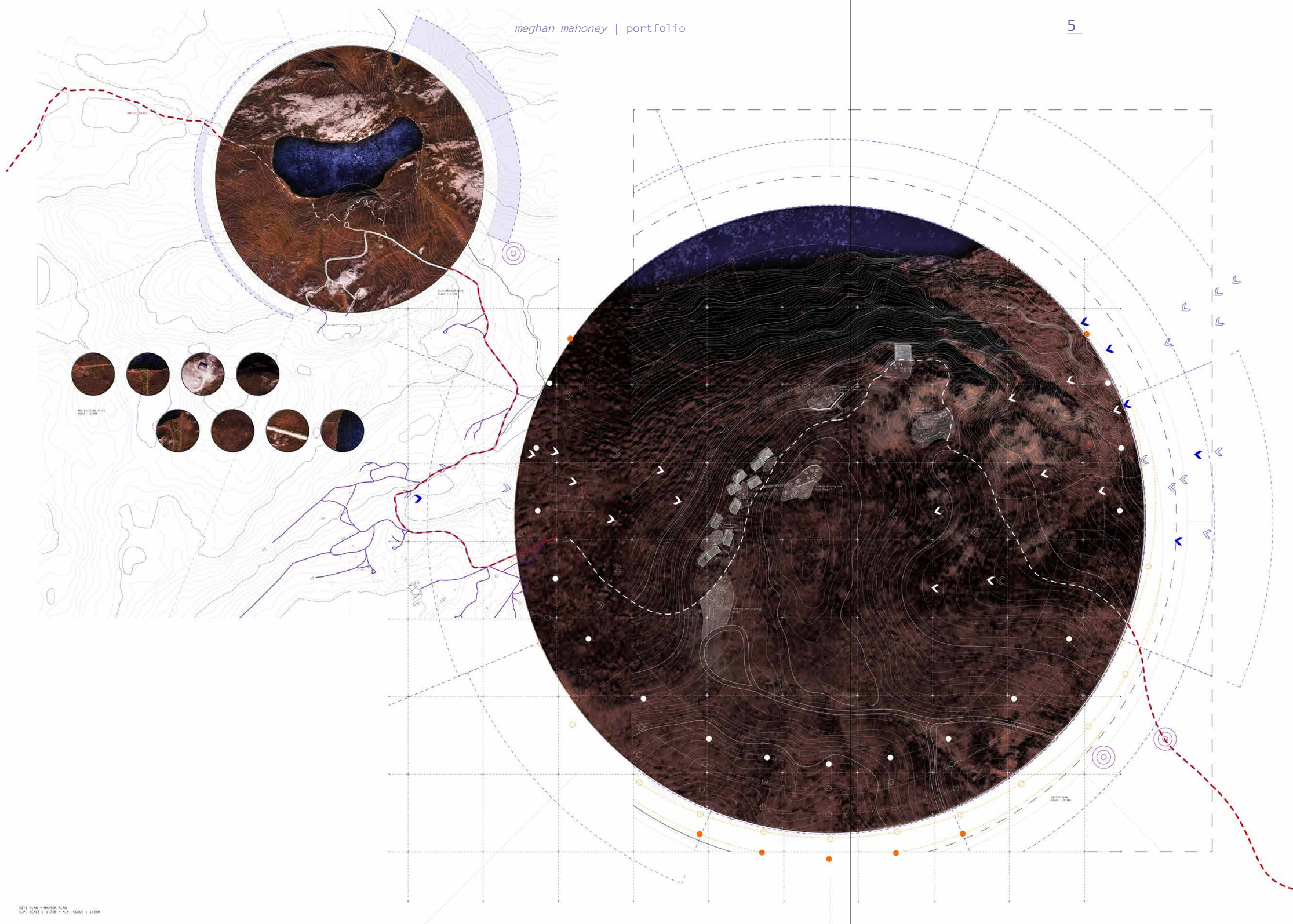
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1:50000 site map + 1:500 site plan | 360 panorama with relevant peaks



LIGHTHOUSE

01.23.17_05.03.17

Arctic Trail Base Camp + Kangerlussuaq Common House

arch 4101 // fourth year, design studio vii -
conditions option studio
professors: dorte mandrup + marianne hansen
published: PLATE: Vol 02, 0_18f

* The common house tower design is derived from the reading of landscape as a sea of rolling hills surrounding the small airport town of Kangerlussuaq, Greenland, as well as understanding the plight of the trekkers and locals as they navigate the Arctic Trail. This demanding trek runs all the way from Sisimiut on the west coast to the Greenland Ice Cap, a few kilometers north of Kangerlussuaq.

* The Arctic Trail Base Camp is located just outside the town, which boasts the largest airport in Greenland and yet is home to just over 500 inhabitants, serves as the official trailhead.

* An additional extension brings hikers up to the Ice Cap through the town, running parallel to the long fjord from which the town takes its name; Kangerlussuaq literally translates to "large fjord" in Inuit-Greenlandic.

SITE PLAN + MASTER PLAN
S.P. SCALE | 1:1250 + M.P. SCALE | 1:1000



1. light

The top opening allows for light to be brought down into the open tower year round. By angling the northern wall, sunlight is brought in from the south to spill down into the space, while the light, grated platforms and polished furniture filters and reflects this scarce arctic sunlight.

2. circulation

The main circulation to each of the three programmatic zones is located in the back "spine" of the building, as are the services, so as to allow as much space as possible to be open and naturally lit.

3. access

The larger, more public zones are located closer to the bottom of the tower and are held within the belly of the building while the lighter, more private spaces are located in the top in a more vertical condition.

4. visibility

The lighthouse is highly visible to weary hikers and skiers in search of the official end of the trail as well as a last sight of civilization before departing into the harsh wilderness for those who start from Kangerlussuaq.

lake panoramic september 16, 2:12 PM

the expansive nature of the landscape would be captured in the panoramic deck

concrete block | site selection september 16, 3:04 PM

the concrete block acted as an anchor for a satellite and would provide the base for the structure.

site approach september 16, 3:17 PM

the approach to the site is largely untouched and is gently sloping to allow for maximum viewing.

* tower versitilty axono-
metric diagram

* site documentation
photographs



* This common house/base camp serves to educate and prepare hikers while also educating them about Greenland and the perils of the Arctic Trail.

WHITE WALLS

01.23.17_05.03.17

Museum + Exhibition Space

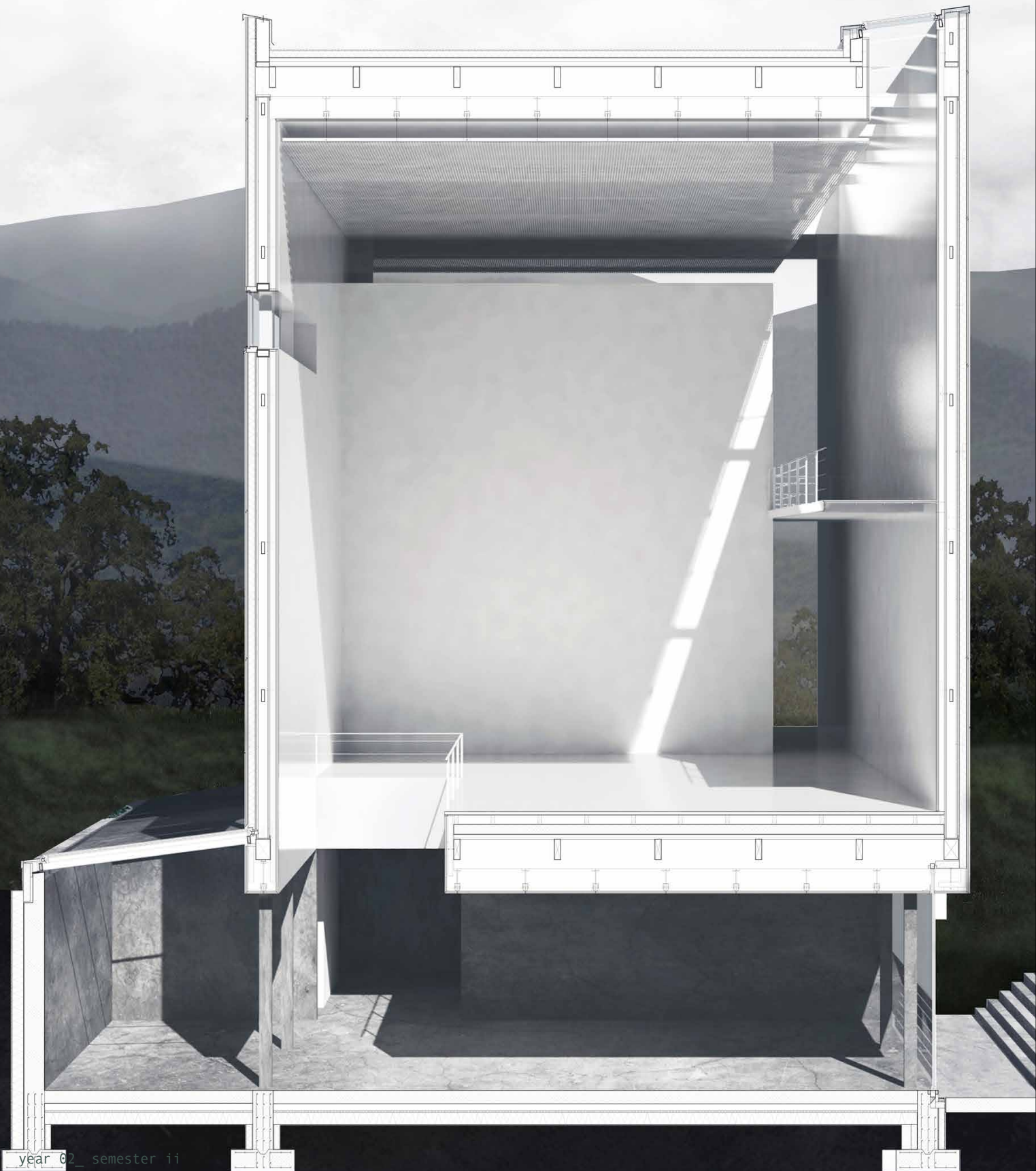
arch 2102 // second year, design
studio iV - integrative design
professor: vincent mulcahey

* The full potential of the building is realized in the way that it fits into the site. The simplicity of the “imagined site” allows for the purest form to take place and gives the impression of a perfect “temple of art” among a generous and natural landscape.

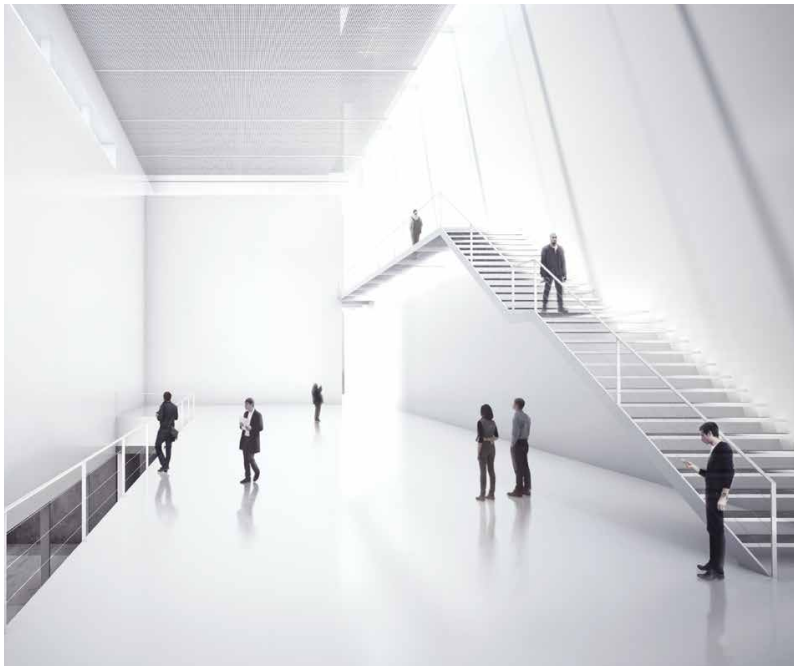
* The “box” can be altered and manipulated but the simple structure is always kept pure, resulting in a free-flowing open exhibition space for larger works within the airy upper level. By ensuring that the building stays true to its simplicity and open interior, the unobstructed floor plate serves as an isolated temple in which pieces can be admired and studied.



perspectival section | northwest view | main exhibition space + below level private collections



year 02_ semester ii



interior rendering #1 | upper platform level
dimensions: 24" x 18" final print



interior rendering #2 | main exhibition space
dimensions: 24" x 18" final print

* Cross Perspectival Section
Scale: 1" = 1/4"

PARADISE RECLAIMED

08.23.19_12.03.19

*Eco-Retreat + Climate Change
Research and Artistic Facility*

*arch 5101 // fifth year, design
studio ix - environmental co-exist
studio*

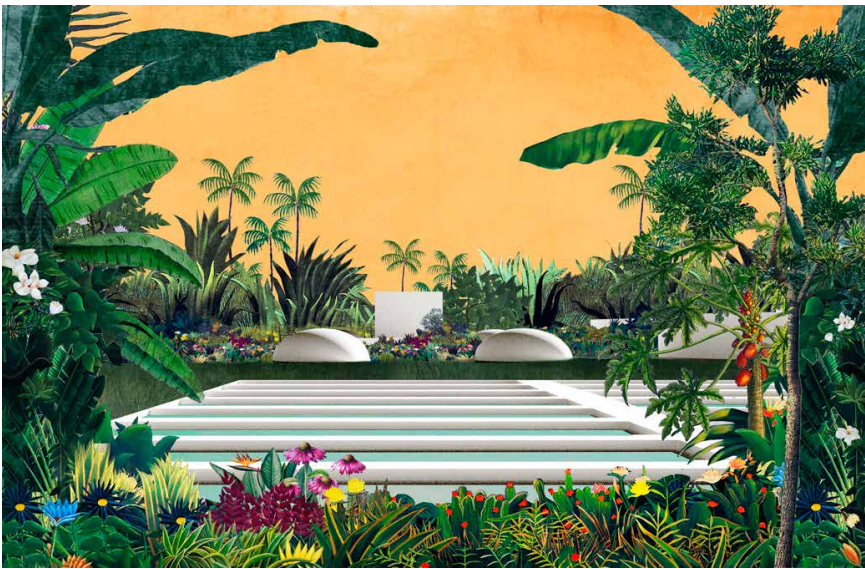
*professors: chad oppenheim + thomas
mckeogh + bear huessler*

** On the isolated island of Virginia Key, just off the coast of Miami, a team of scientists works to create an augmented paradise in which experimental testing can take place away from the confines of the urban environment. In this exotic conservatory, reminiscent of a long lost Eden, humans become the divine designers of a new age of genetically modified flora and fauna. The facilities, which consist of reclaimed elements of an abandoned water treatment facility, have been altered in order to enhance and embolden the natural world.*

** The changes in weather and climate are reflected through subtle changes in how the buildings filter and reflect light.*



holding tanks
concept collage #1



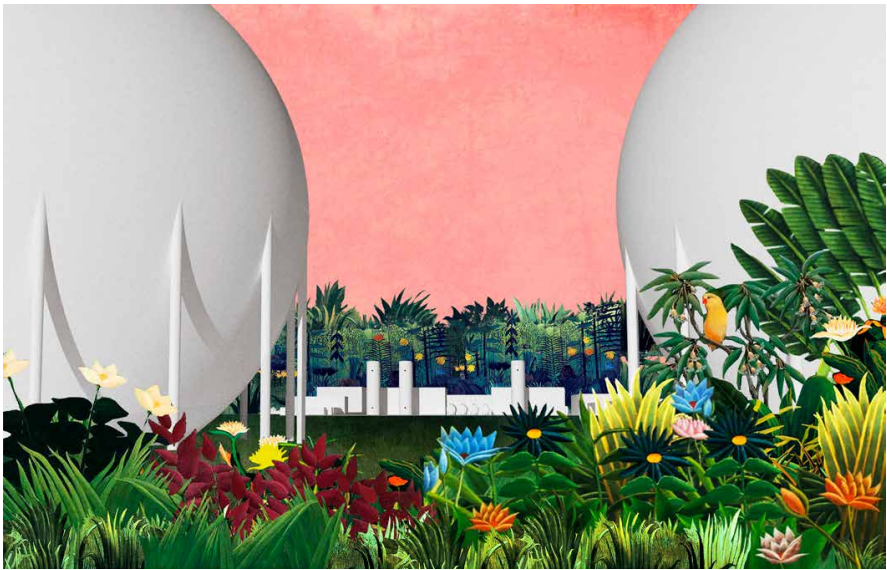
evaporation pools
concept collage #2



filtration towers
concept collage #3

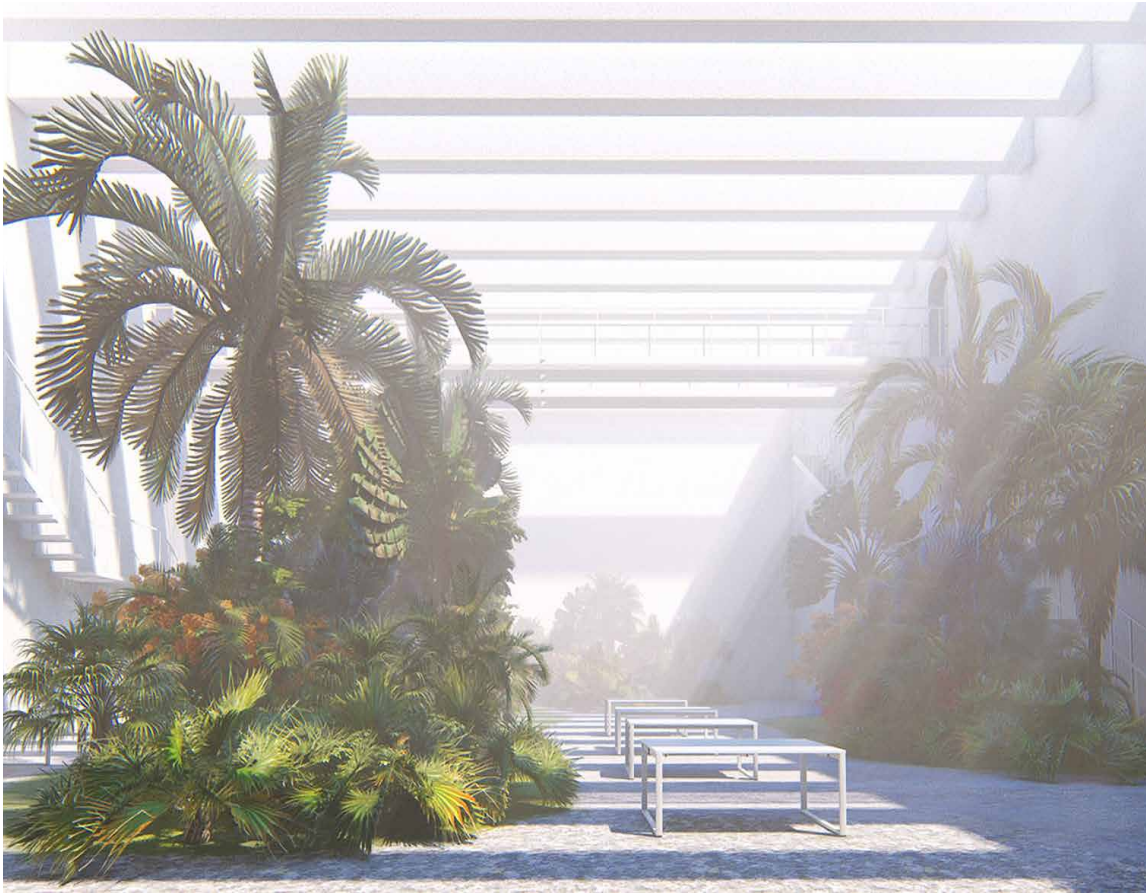


south tower
concept collage #4



horton spheres
concept collage #5

1. Leave infrastructure intact - not only is it more ecologically friendly, it allows for unique and monumental forms to be re-imagined for programatic use.
2. Allow nature back in - by encouraging and curating the regrowth of the island, an enhanced paradise can be achieved.
3. Apply architectural interventions to each typology - bring the two populations together through spatial orientation and organization.



interior rendering | residence courtyard
september 22 | 12:00 PM
dimensions: 24" x 18" final print



exterior rendering | seed banks
september 22 | 12:00 PM
dimensions: 24" x 18" final print

OUR LADY OF LIGHT

11.09.19_11.20.19

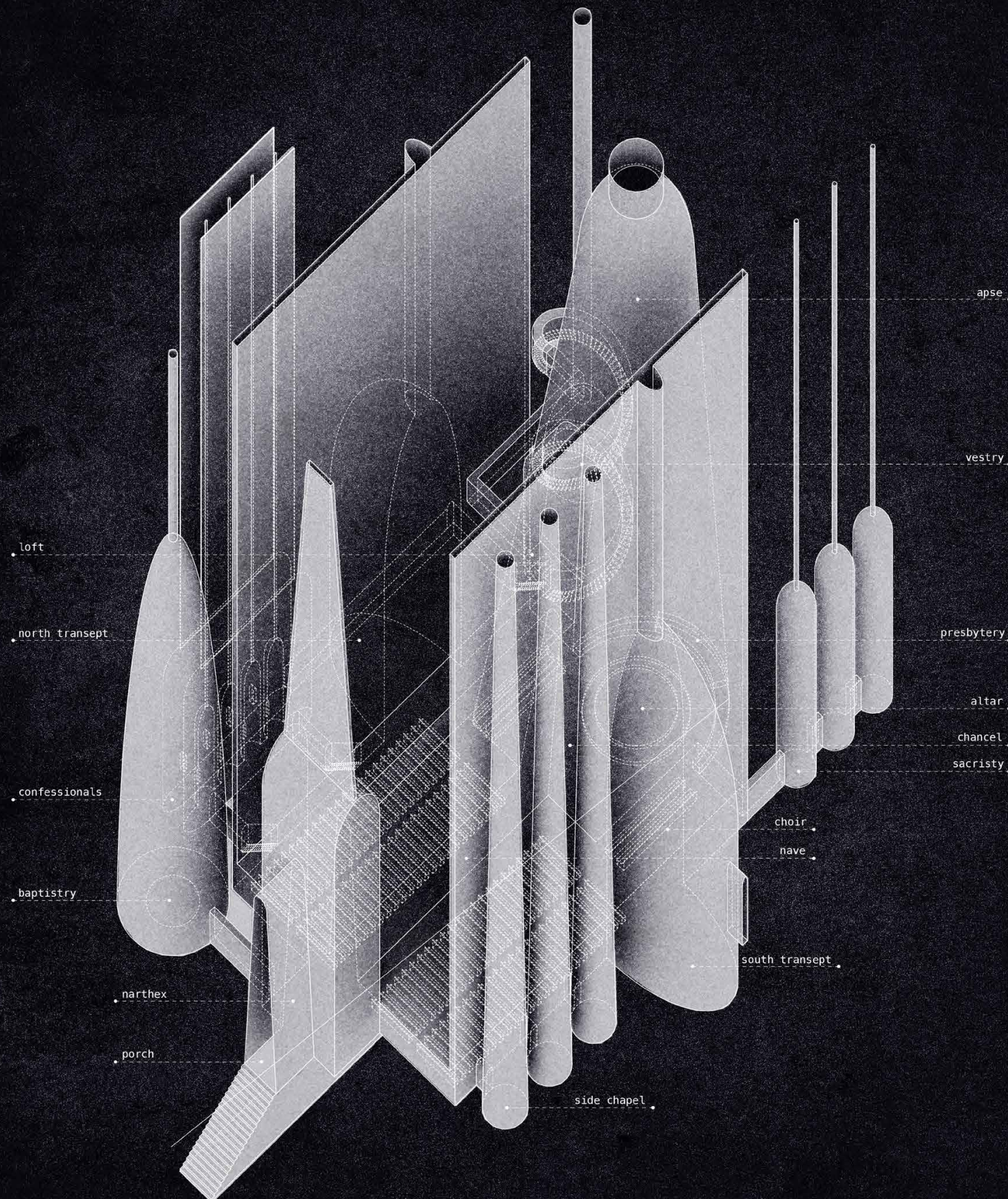
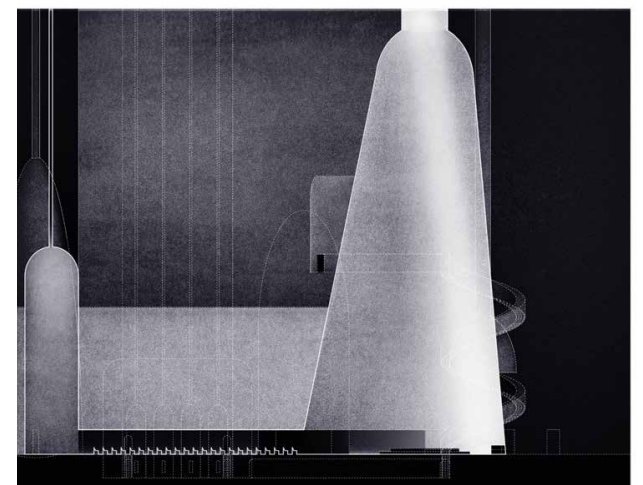
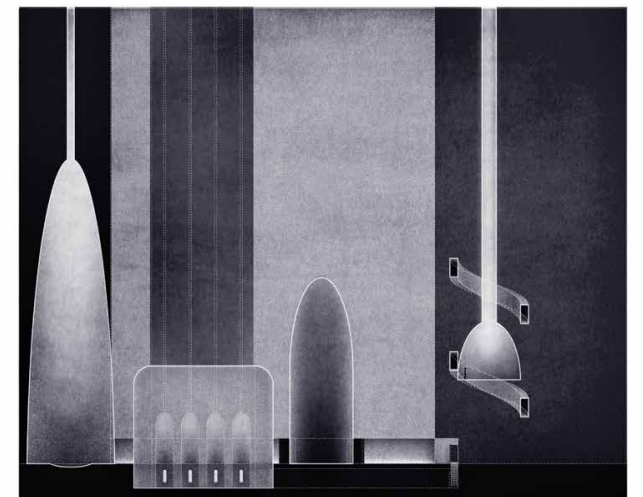
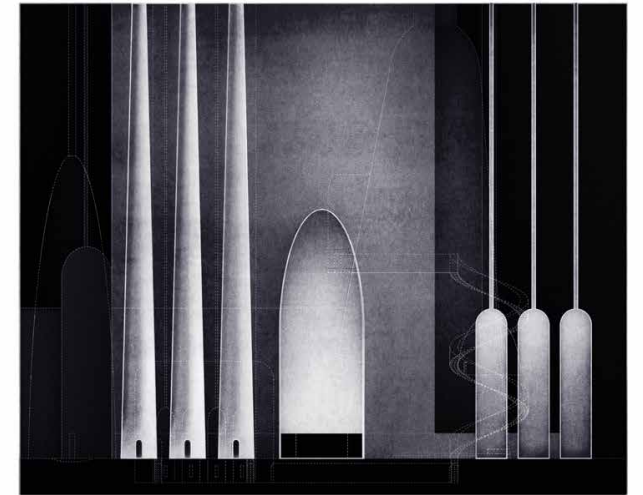
Catholic Church

independent design charette //
fifth year, independent project
partner: ottavia e. boletto

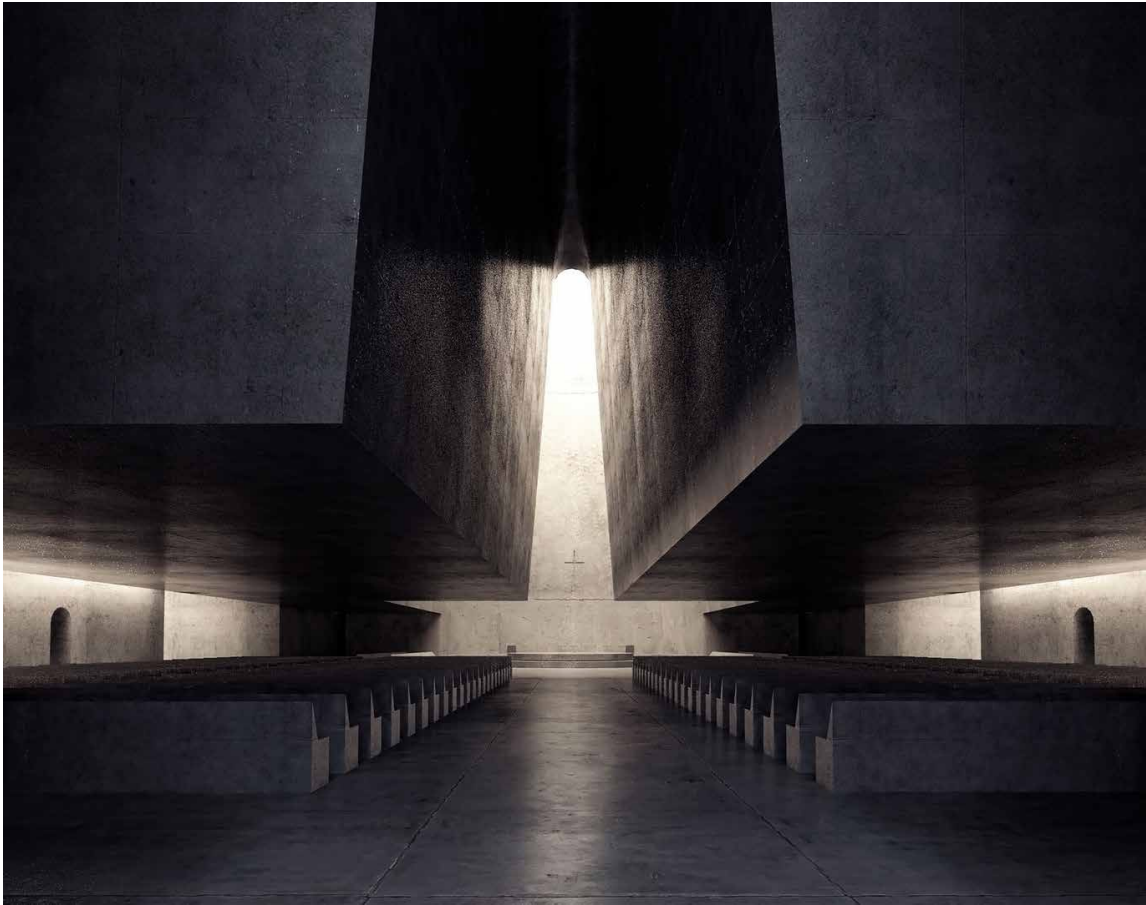
* Inspired by one of the earliest Christian church typologies in which sacred spaces were carved out of rock, the project comprised of a series of excavated spaces. The proposal relies heavily on the play between light and shadow, and on the nuanced penumbra in between (similarly to chiaroscuro in painting).

* This is achieved through a sequence of compression and release wherein mass and gravity are contrasted with dramatic verticality. The atmosphere that is evoked is spiritual, contemplative, and mystical.

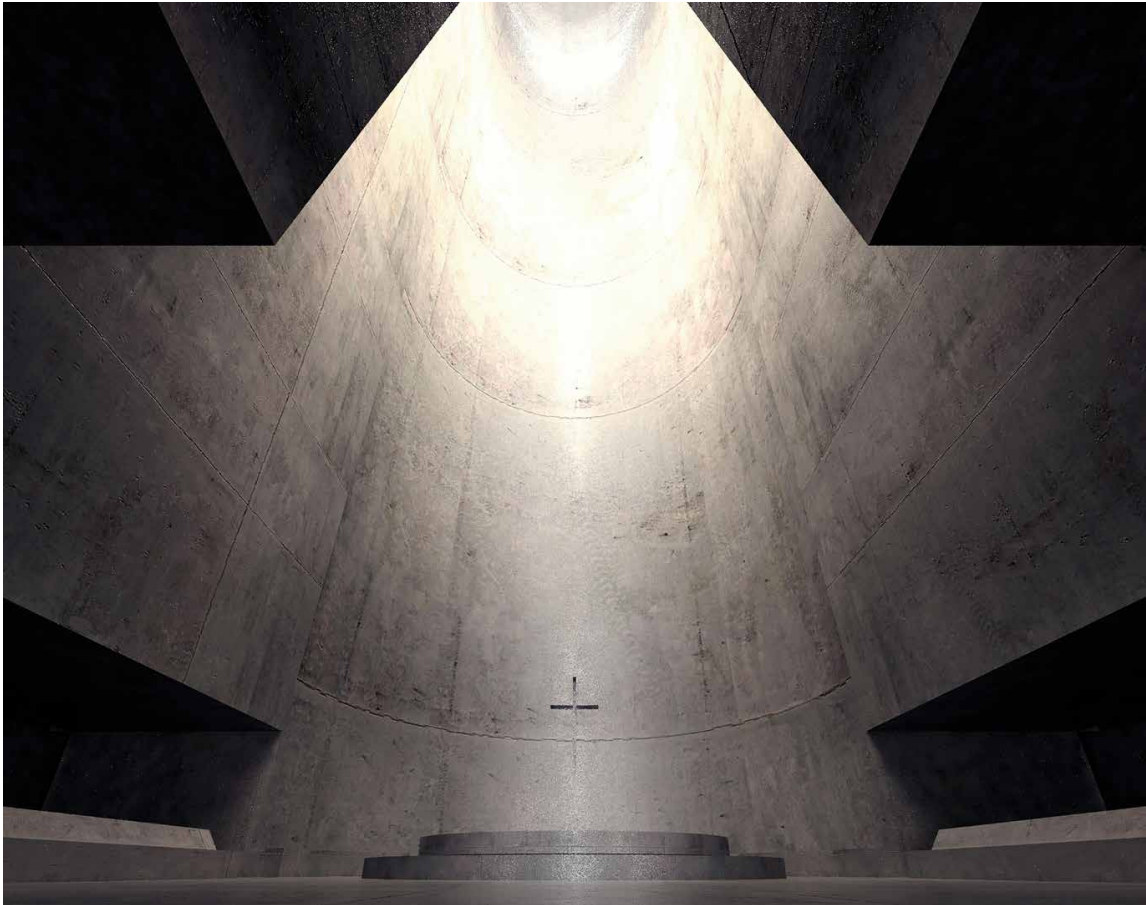
* The traditional program of a Catholic Church has been used as a grounds of departure for the curation of experiential spaces. By allowing the strict layout to act as a strategy rather than a restriction, new spaces could be discovered within an ancient typology.



* formal axonometric
Scale: 1' = 1/8"



interior rendering #1 | center aisle - nave
september 22 | 12:00 PM
dimensions: 24” x 18” final print



interior rendering #2 | altar - chancel space
september 22 | 12:00 PM
dimensions: 24” x 18” final print

ORGANIC FORMS

01.29.19_05.04.19

*Grand Canyon Geology
Museum + Research Residence*

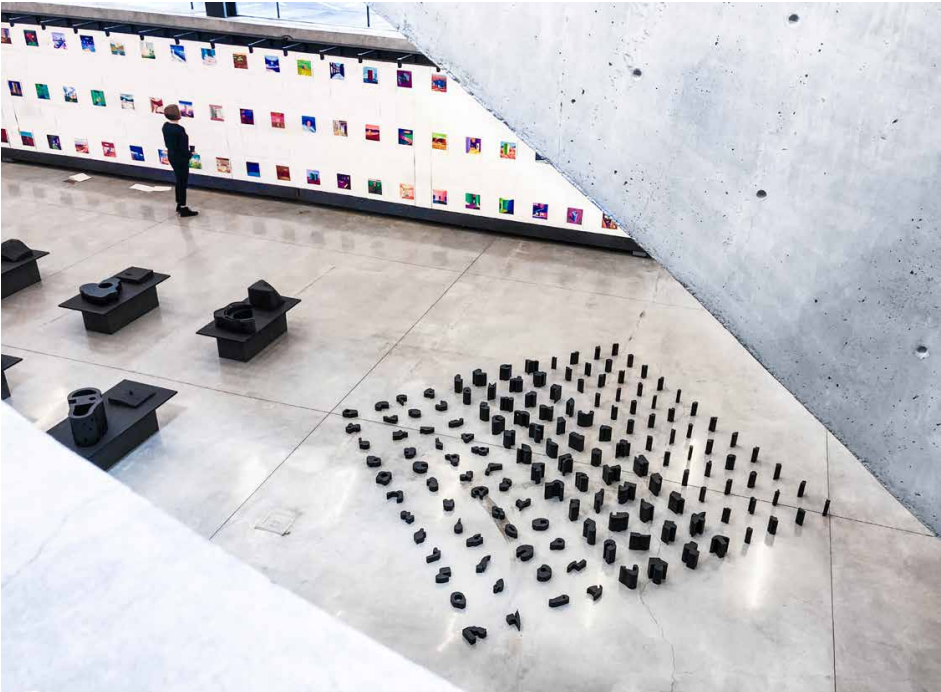
arch 4101 // fourth year | design studio viii

professors: mauricio pezo + sofia von ellrichshausen + diego alfonso perez garcia

partner: gina kribbs

** Perhaps the only difference between objects and things resides in their scale. Before objects were available to be found, even before they had a proper name, things were already there. Mute, opaque, tacit, like posing for an impossible still life, one without an author. Things precede words, yet sometimes they exceed them. Ruskin, in one of his many didactic enterprises, could describe a mountain formation through a tiny rock, and vice versa.*

** Architecture, as any work of art, is founded in the same tautological principle. There is no purpose in nature (even if we see it). It has been clearly (and irrevocably) entitled as the “useless utility” (the same a brick or a tulip). Architecture, as any other natural thing, can certainly be produced without history, but also without context, program or construction. What is left, then? Perhaps no more than some invisible tendencies, some comparative sizes and basic directions.*



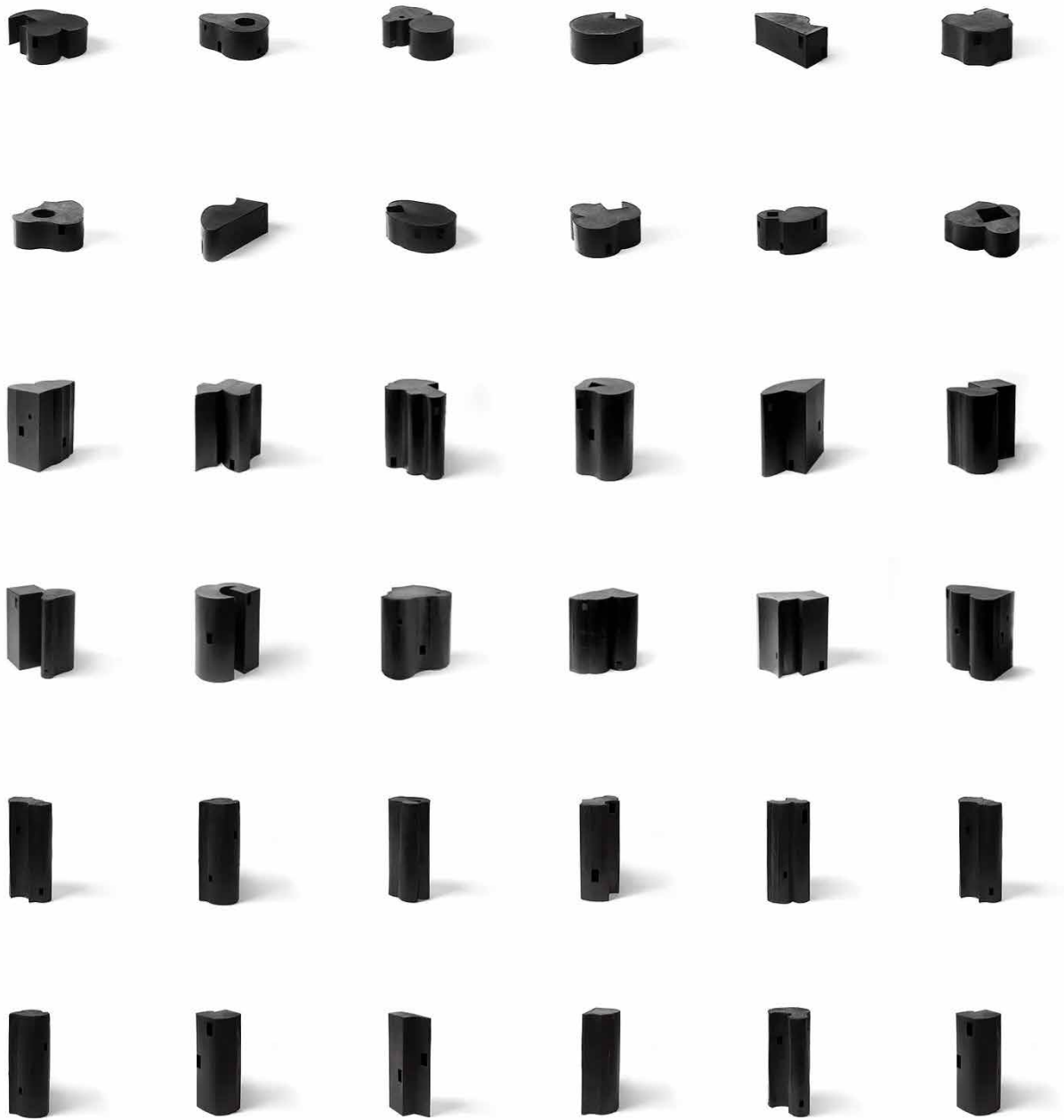
final exhibition | view from bridge

may 04, 2019 | 12:45 PM



final exhibition | event + gallery space

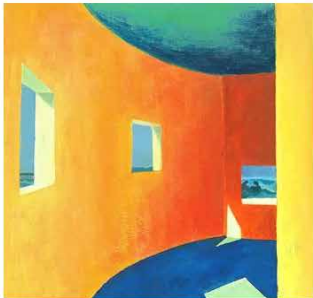
may 04, 2019 | 12:30 PM



“inventory models” | studies for final form selection
year 04_ semester ii



conceptual perspectives | formal qualities highlighted



HOUSE #1

12.20.19_01.06.20

A Modern Palladian Villa

deisgn charette // winter, 2019-2020

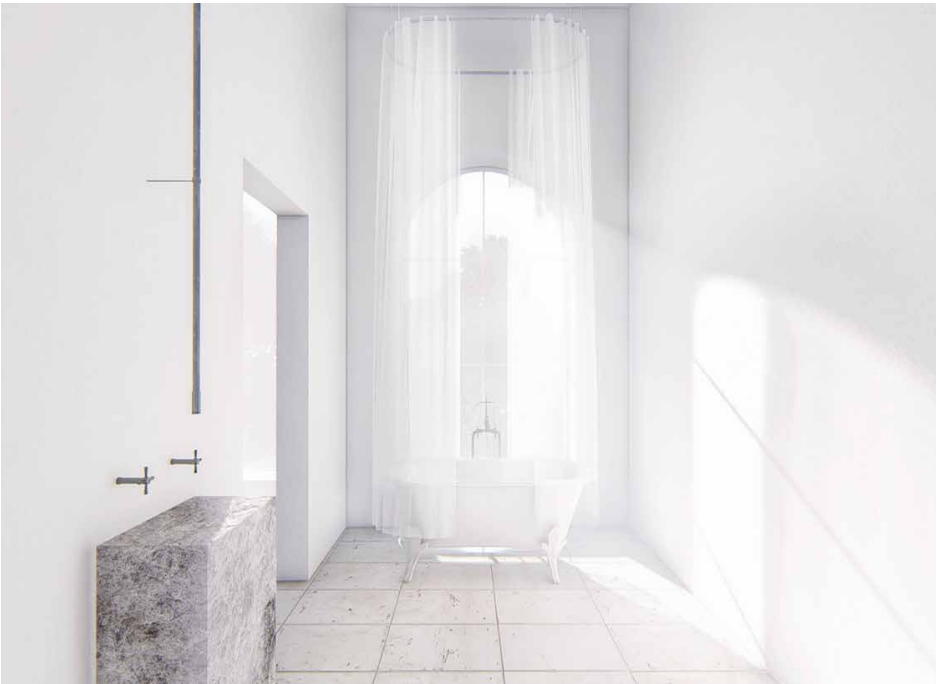
* House #1 is one of rationalism and tradition. The layout, symmetry, and rectilinear form suggest an austere but rich Palladian past while the bare walls and high ceilings allow for a more minimalist modern atmosphere. The inspiration behind this house is simply that it is “a house I would live in.”

* The entire enclosure is exactly 100ft x 100ft with a courtyard of 35ft x 35ft, allowing for a continuous floorplan of 8,775 ft2. This is of course luxurious, and yet the spaces themselves speak to a more simple style of living. Indeed, the narrow bedrooms and cloistered interior are reflective of the monastic lifestyle in which one’s surroundings should mirror the serenity within. Or perhaps they could be seen to inspire serenity themselves.

* The public wings of the house are essentially a series of corridors through which light and life may pass freely. The west wing includes the family room, kitchen, dining room, and living room while the south wing includes the study, foyer, library, and studio. By minimizing wall space, yet still achieving spatial separation, these rooms inform the inhabitants’ daily lives through sequential order.

* The private wings of the house are reminiscent of monastic cells, each is a sanctuary of pure and uninterrupted reflection. The rooms of the east wing each have a single large window for light and narrow floor-space, while the master is slightly more spacious with double french door openings and a fireplace. The master bath echoes the focused, spiritual experience of the bedrooms, with a single light source that allows for an ethereal space for cleansing.





OF LAND & LIGHTNESS

06.28.19_07.03.19

Flamingo Observation Tower in Al Wathba , Abu Dhabi

design competition // architecture
design competition | summer 2019

partner: ottavia boletto

** The project is an architectural ode to the natural beauties of the Al Wathba Wetland Reserve and to the lightness of the world of birds. Hovering above the landscape and supported by four lean stilts, the tower treads lightly on its surrounding scenery, suggesting an optimal relationship between man and nature: one of complete inclusion, yet minimal intrusion.*

** While its simplicity of form and materiality allows for its impact within the landscape to be minimal, its conceptual simplicity is embedded with the power to impact the viewers' experience and memory, making it an iconic landmark within the park.*

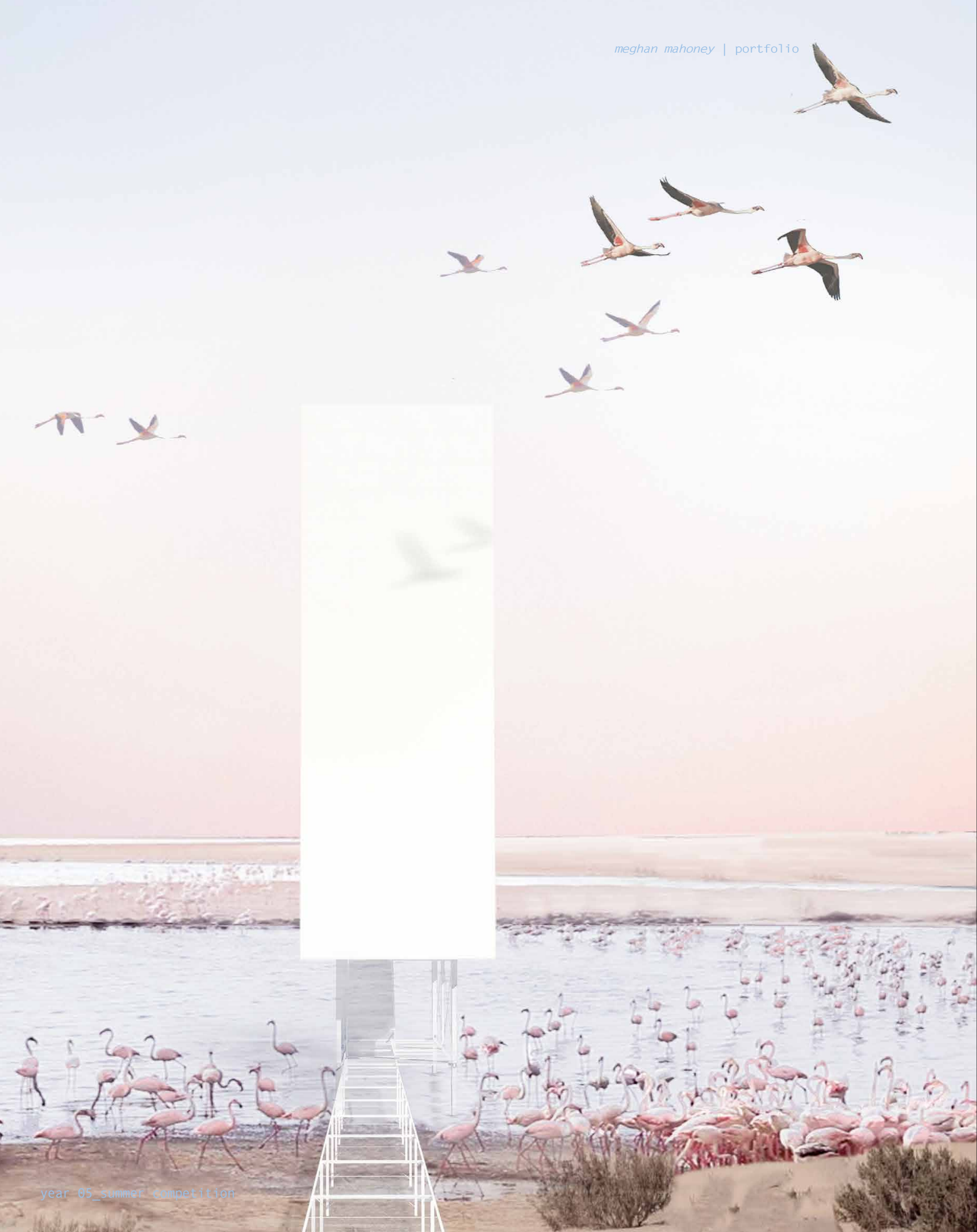
** Within the structure, the fleetingness of a passing shadow, the soft sound of wings flapping, and the wavering reflection of the water below are captured by the white walls: like blank canvases they are coloured by what surrounds them, a constant reminder of the delicate balance between nature and the manmade.*

** The meshes soften the harsh sun rays, providing temporary refuge, while still granting transparency and an unfaltering connection with the sky. The few and interspersed openings allow for other senses to be enhanced during the visitors' ascension, making the release onto the 360° panoramic viewing platform all the more breathtaking and sought after.*

** With its white walls melting into the sky and its staircase peeling downwards to suggest the beginning of a journey, the project establishes its poetic presence within the reserve, speaking a language that is at the same time elegant and fantastical.*

lagoon view | final exterior rendering
dimensions: 12" x 20"
vray collage



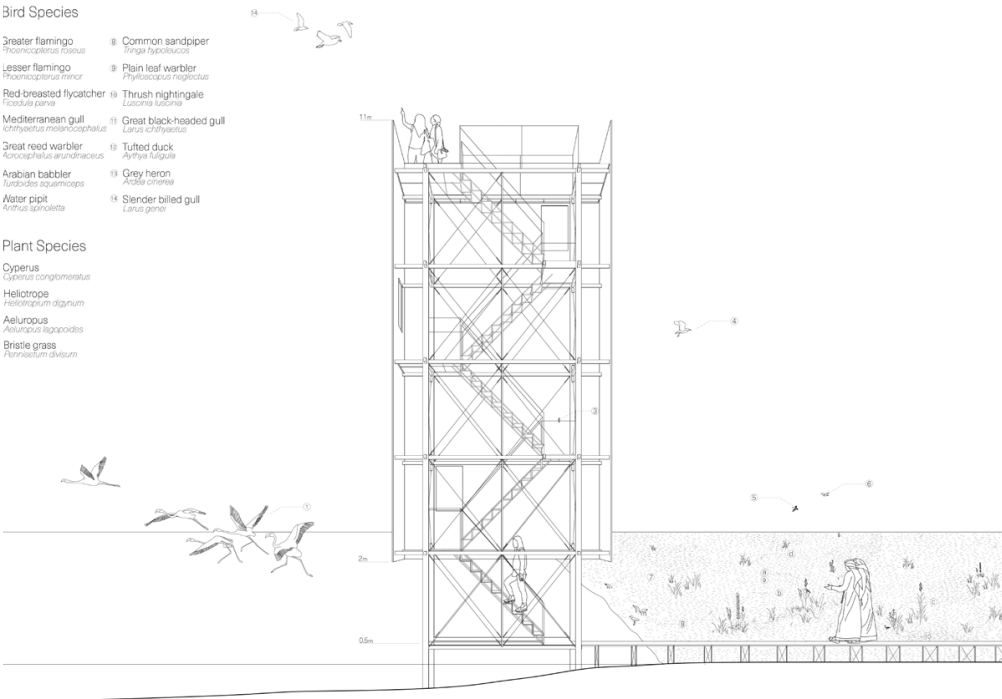


Bird Species

- Greater flamingo
Phoenicopterus roseus
- Lesser flamingo
Phoenicopterus minor
- Red breasted flycatcher
Troglodytes panis
- Mediterranean gull
Larus mediterraneus
- Great reed warbler
Acrocephalus arundinaceus
- Arabian babbler
Turdoides squamiceps
- Water pipit
Arctopus spinosus
- Common sandpiper
Tringa hypoleucos
- Plain leaf warbler
Phylloscopus neglectus
- Thrush nightingale
Luscinia luscinia
- Great black-headed gull
Larus albigularis
- Tufted duck
Aythya fulgens
- Grey heron
Ardea cinerea
- Slender billed gull
Larus gene

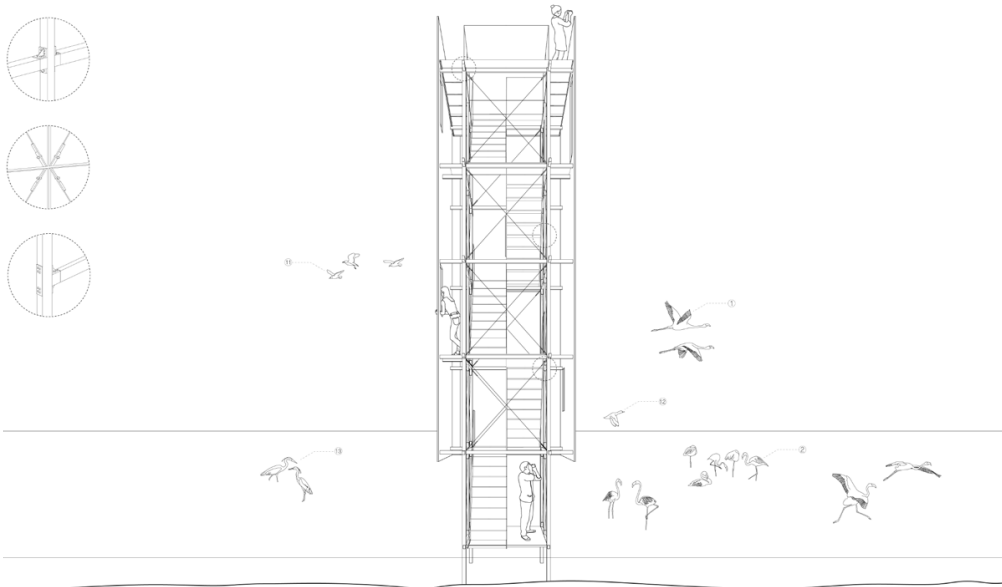
Plant Species

- Cyperus
Cyperus conglomeratus
- Heliotrope
Heliotropium digitum
- Aeluropus
Aeluropus lagopoides
- Bristle grass
Pennisetum diuicum



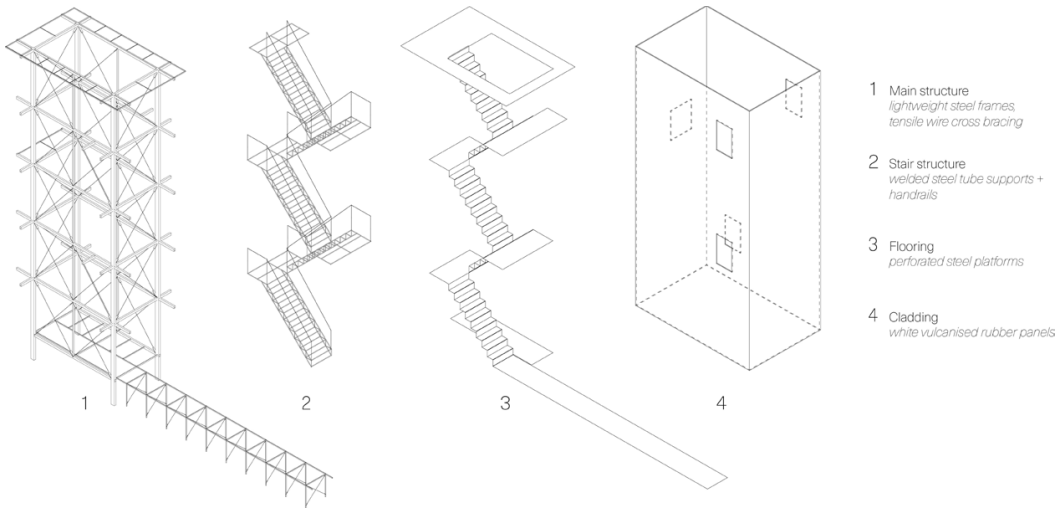
perspective Longitudinal Section

1/2 2



perspective Cross Section

1/2 2





meghan mahoney | portfolio

- * greater buffalo site map
- * major commercial centers + green spaces
- * dimensions: 24" x 72" final print

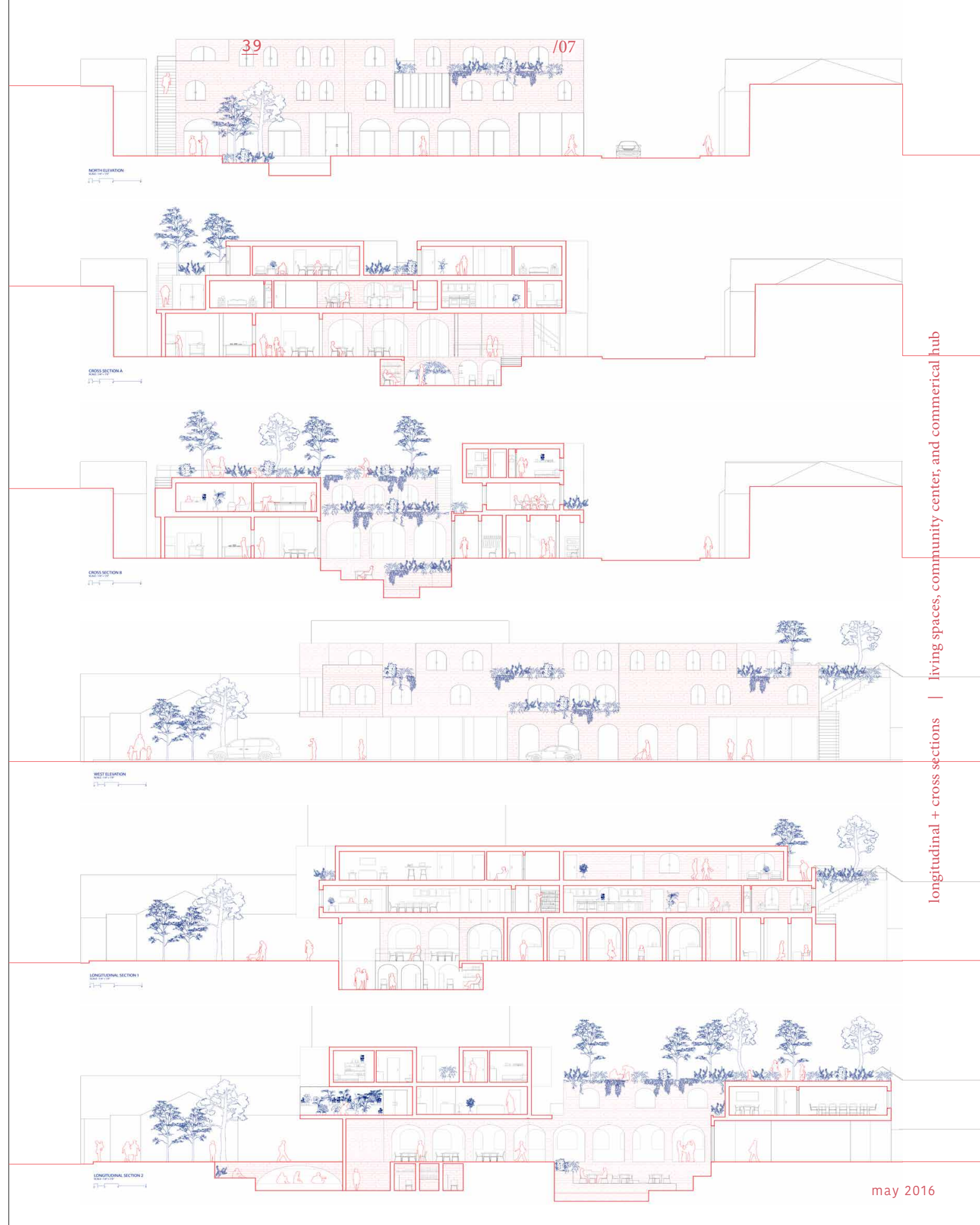
ARCH & BRICK

01.23.17_05.03.17

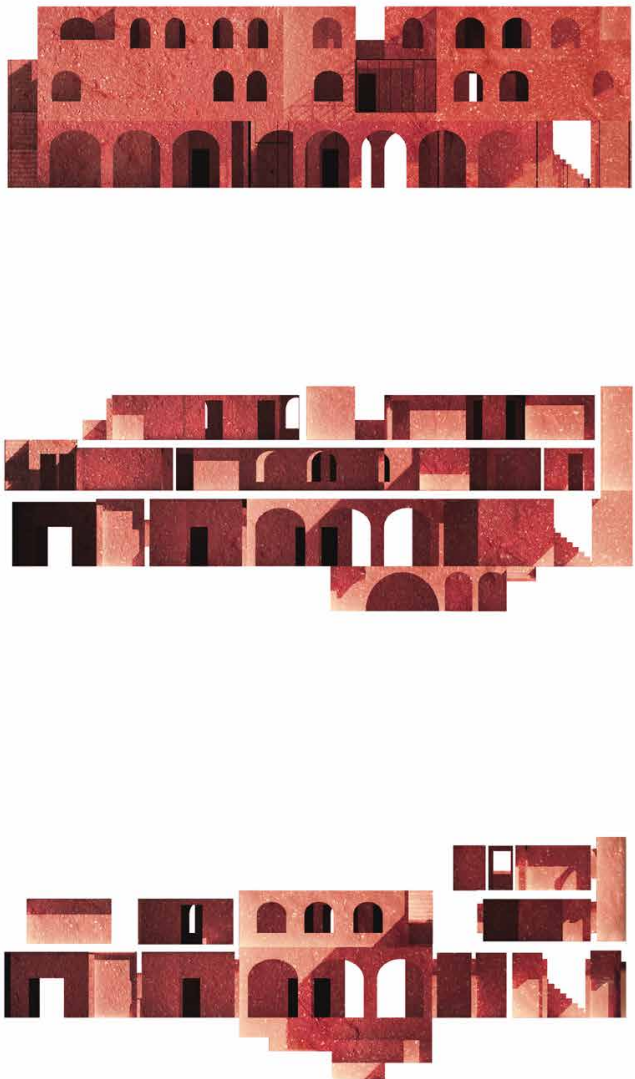
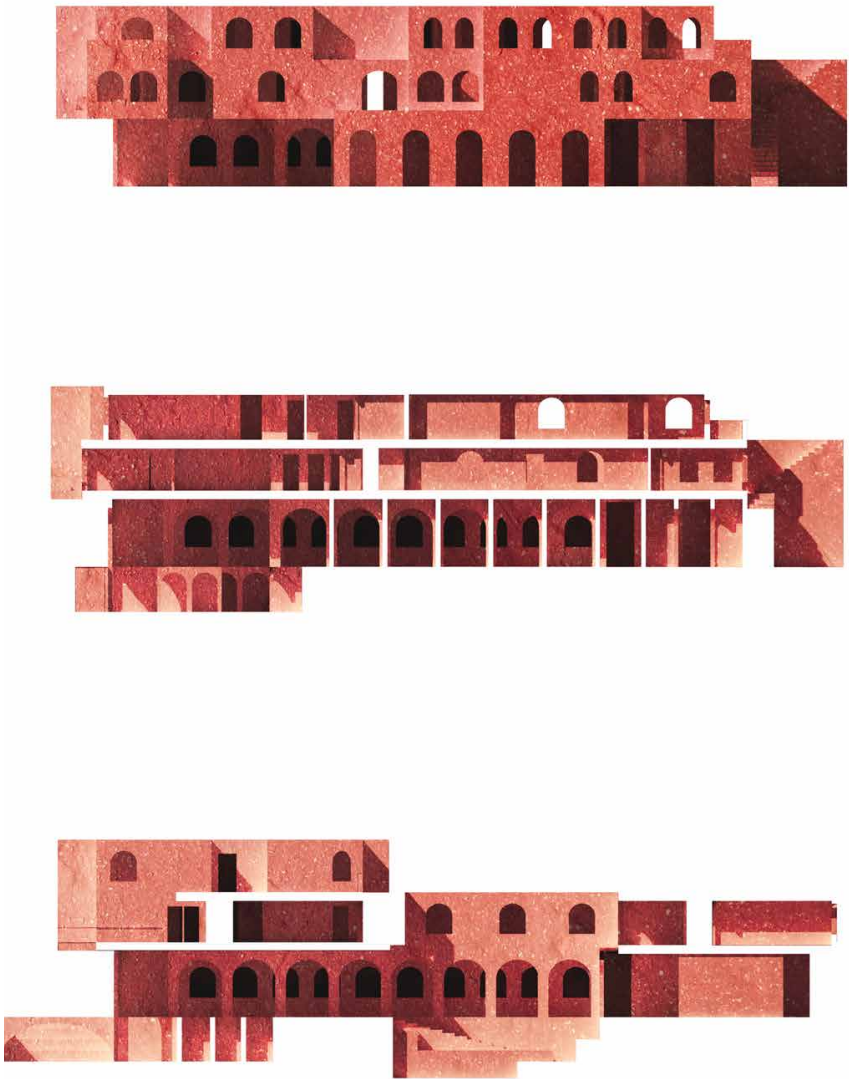
*Buffalo Co-Housing
+ Commercial
Community Center*

*arch 3101 // third year, design
studio v - urban design*

professor: ryan ludwig



longitudinal + cross sections | living spaces, community center, and commercial hub



FINAL 05.03.16

exterior experience
collages

dimensions: 12" x 28"
final prints

main courtyard space

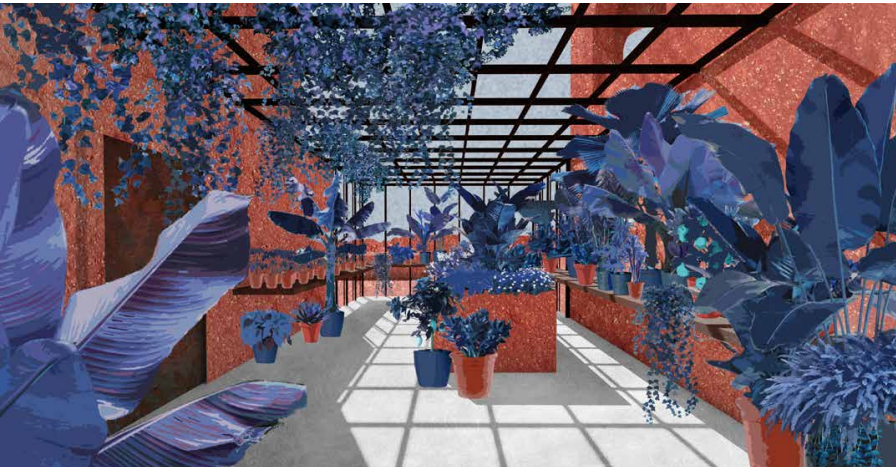
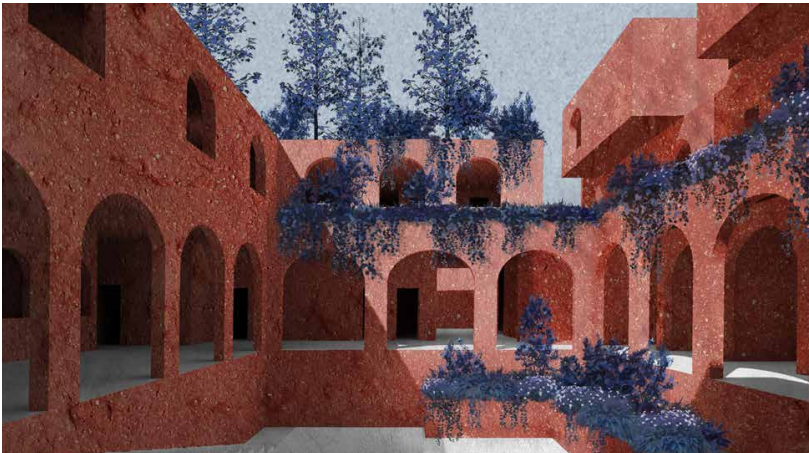
entrance walkway from
street

** By bringing the numerous benefits of co-housing together with a community center and commercial hub, the Buffalo Community Complex serves many diverse groups while creating a dynamic and multi-functional space for both inhabitants and visitors.*

** Combining urban garden, community center, apartment living, and commercial hub, this multi-purpose complex is an ideal example of the kind of projects that can revitalize districts within cities such as Buffalo. Using a central courtyard as the core of both community life and public space, the building draws neighborhood residents and shoppers in while keeping the closed, private feel of an apartment complex.*

** The entire building will act as a community center, complete with amenities such as a gym, classroom, daycare, recreation hall, and rooftop communal garden.*

** While the first floor consists of a variety of different commercial stalls ranging from food vendors to service-provider consulting booths. The second floor would hold the amenities required to provide for the community as well as the entry level for the co-housing units. Each unit could house 3-4 families with a shared living and dining space.*



** Providing affordable co-housing as well as a thriving commercial center, this complex would benefit the community in a variety of ways and could serve as a model for future projects in the area.*

major commerce area
communal greenhouse and support nursery
communal rooftop garden facility

dynamic diagram | industrial loom instrument
dimensions: 31" x 18"
lead pencil draught on lennox sheet

STRIATE

01.28.15_05.01.15

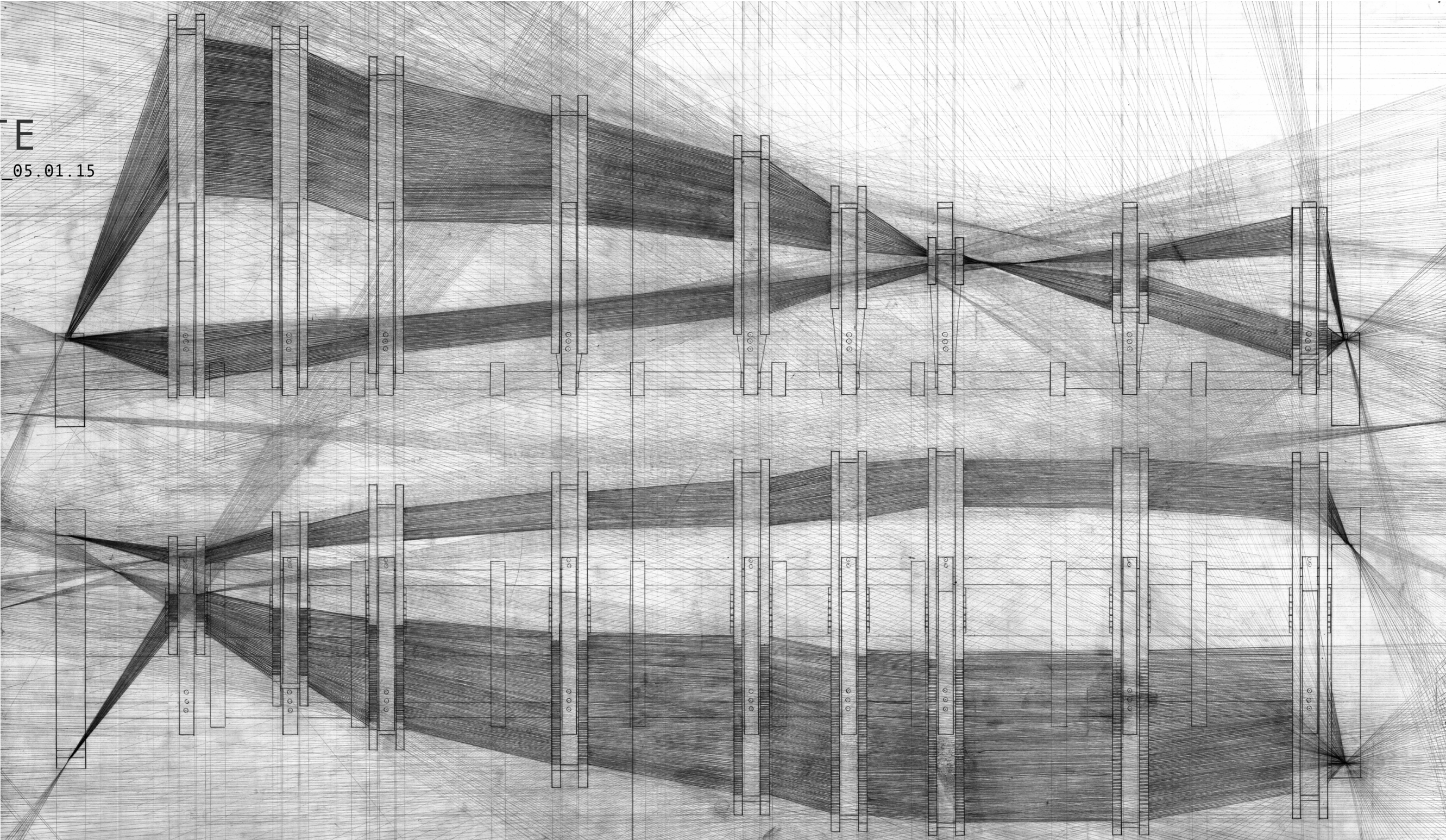
Woven Pavilion

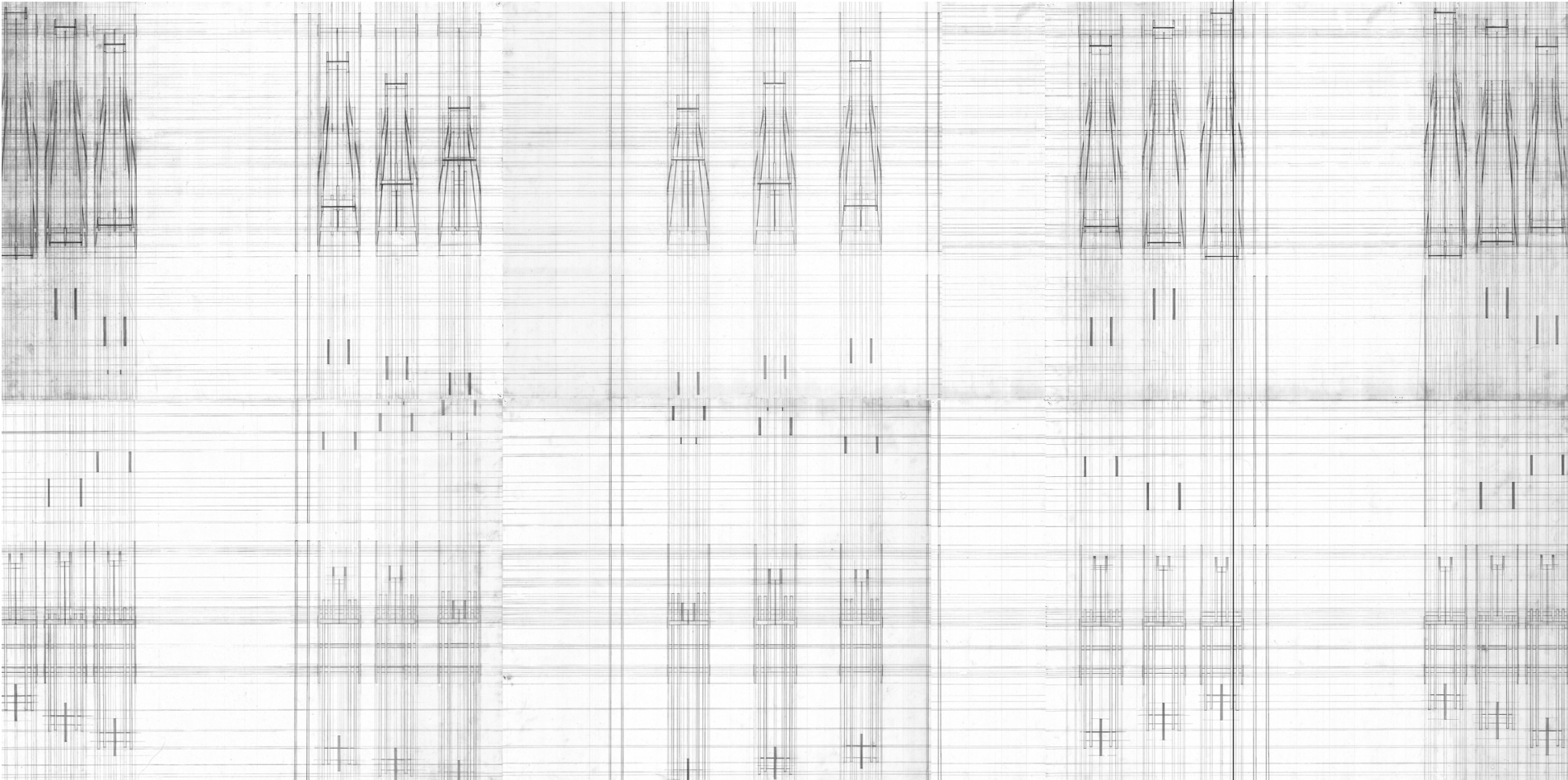
arch 1101 // first year, design studio i - abstract design

professors: jim williamson, lorena del rio

T.A.: aaron goldstein

* The industrial loom is an instrument that can be used to create art as well as functional product. Focusing on the kinetic properties of the common weaving tool, a mechanism could be devised that both imitated and distilled the most valuable of these properties and transform th object into architec-
ture.





MIDTERM 10.29.15

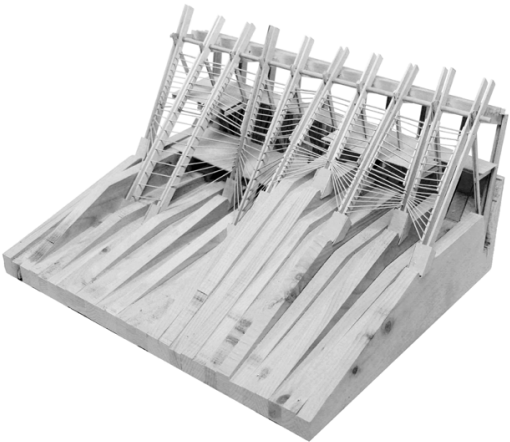
** Focusing on the kinetic properties of the common weaving tool, a mechanism could be devised that both imitated and distilled the most valuable of these properties and transform th object into architecture.*

mechanical analysis | industrial loom
instrument
dimensions : 84" x 31"
lead pencil draught on lennox sheets

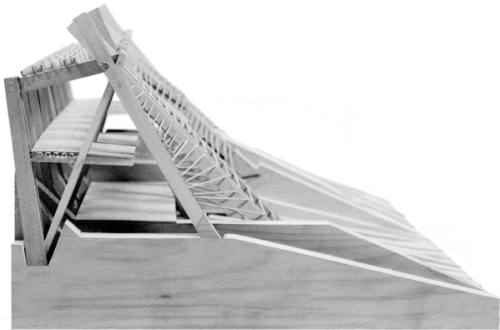
completed with teammates : daniel
park, sydney harmon



final model | frontal view
scale: 1/8" = 1'



final model | isometric view
scale: 1/8" = 1'



final model | elevation view
scale: 1/8" = 1'

P O R T F O L I O

meghan mahoney