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PORTFOLIO



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enfandrich.com



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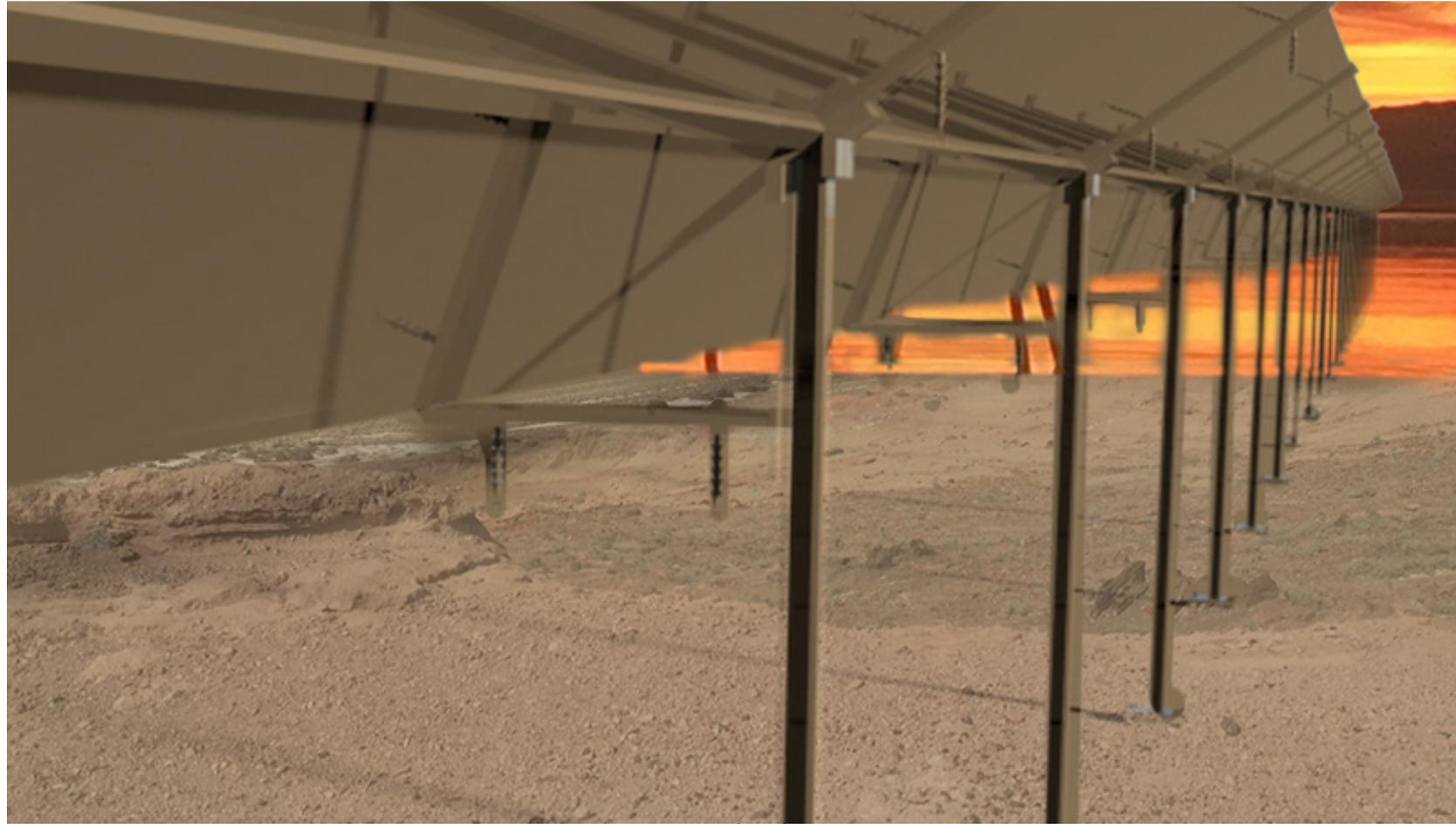
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SOLARIZE

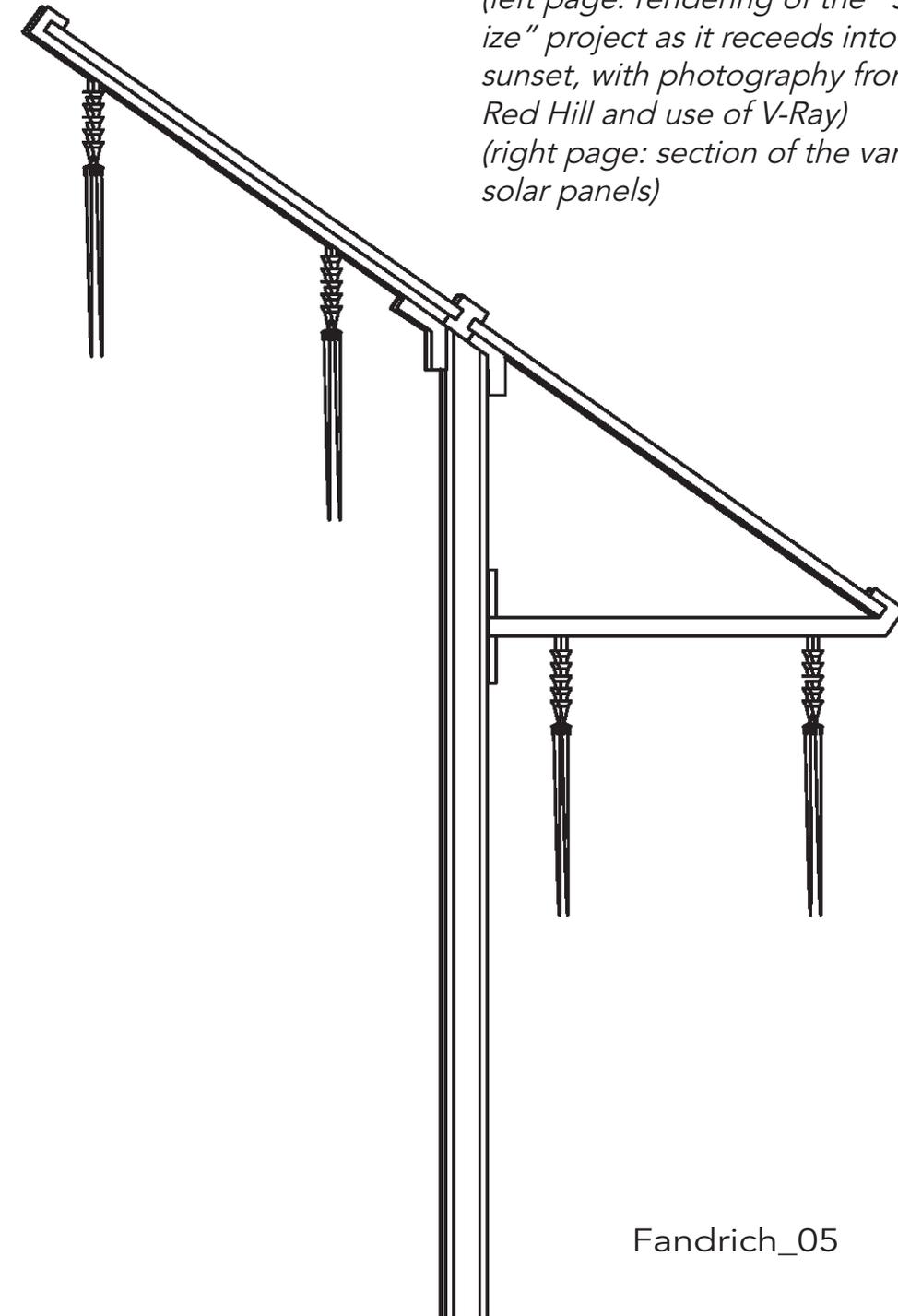
"Solarize" is a project, located at the Red Hill on the east shore of the Salton Sea, meant for the American nomadic populations that travel the nation in their out-fitted vans. These people,

depicted in Jessica Bruder in her book *Nomadland*, have certain needs that are not currently being met by contemporary society; this project seeks to accommodate the land to the nomadic lifestyle and provide these van-dwellers with daily needs.

Specifically the need for electricity and reprieve from the California sun. In order to meet their requirements for survival, "Solarize" proposes a line of solar panels be built stretching from the base of the Red Hill out into the Salton Sea.

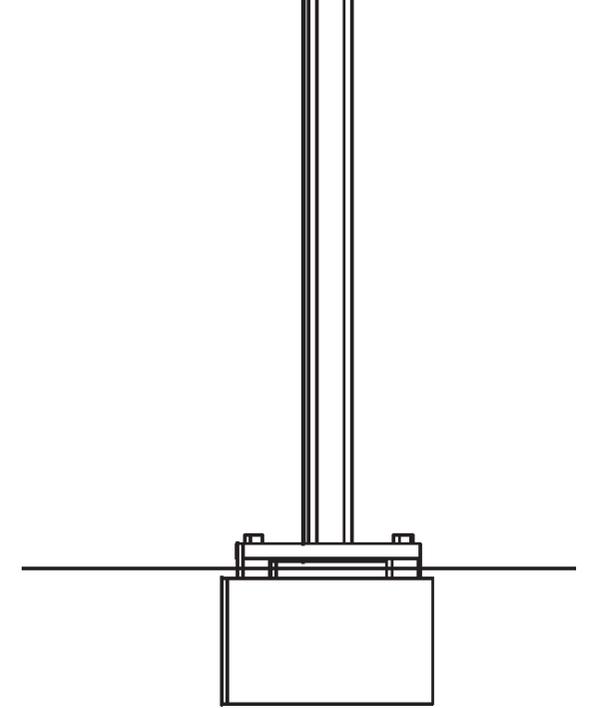


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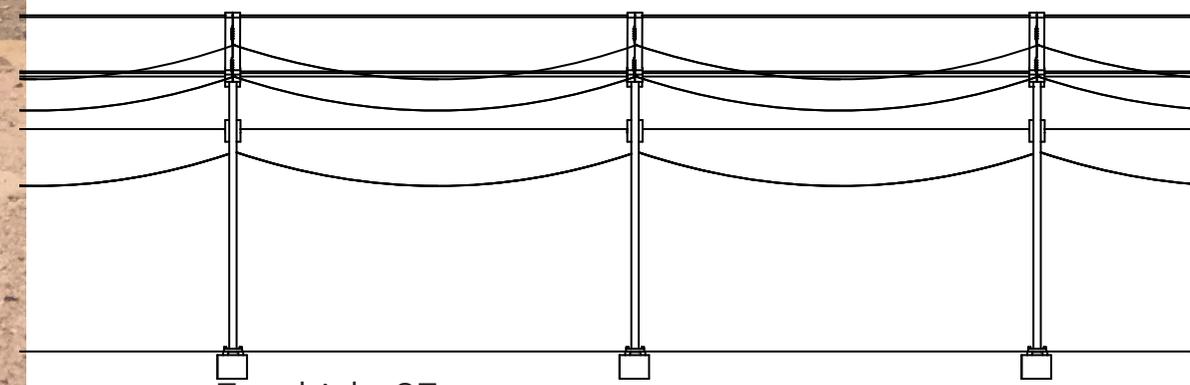
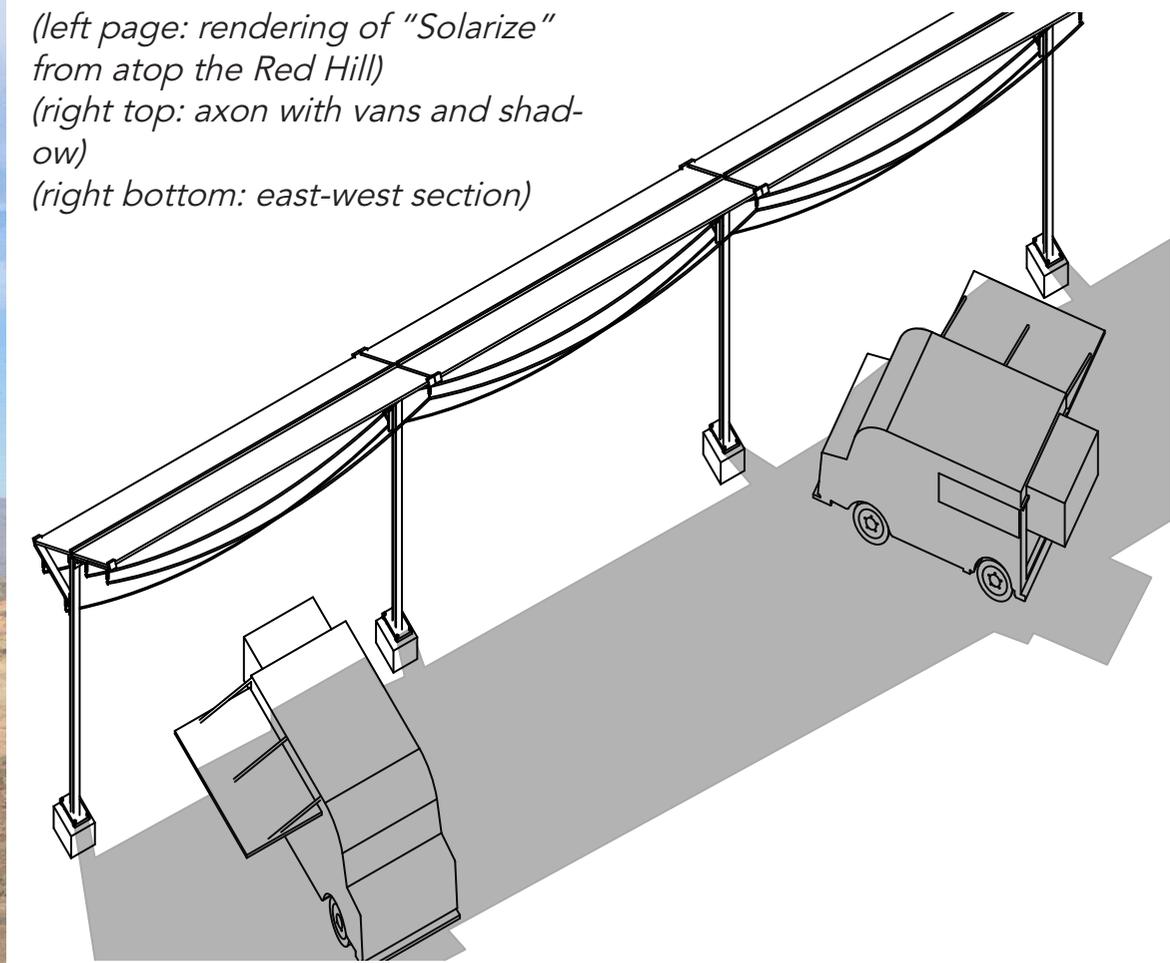
*(left page: rendering of the "Solarize" project as it recedes into the sunset, with photography from the Red Hill and use of V-Ray)
(right page: section of the vans' solar panels)*

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*(left page: rendering of "Solarize"
from atop the Red Hill)
(right top: axon with vans and shadow)
(right bottom: east-west section)*



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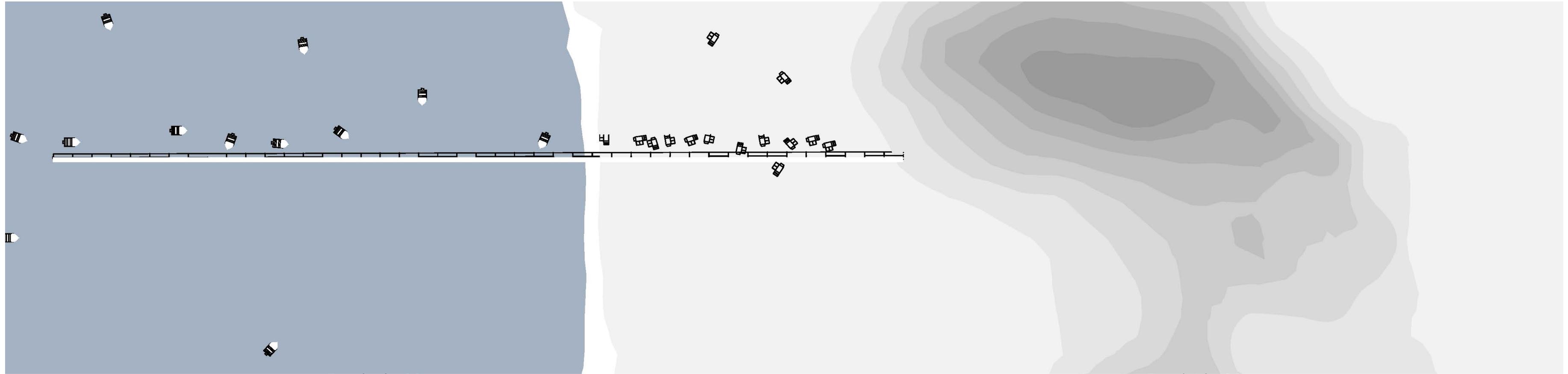
The idea is to create a striking east-west line drawn across the landscape, acknowledging and not altering the natural terrain and water while still imposing some sense of order upon the organic lines of the site's geography. A shining beacon against dull rock, the solar panels seek to provide and protect, allowing

vans and boats to drive or sail up to the infrastructure and connect to its energy. The industrial nature of the steel design is based off the purely practical form of pylons, which also cut a distinct line across the landscape, albeit a less substantial one when considering shade. Pylons, though often utilizing

trusses to support their soaring heights, can look as straightforward as the solar panel designs developed for this project. The height of the individual panels is determined, unlike the necessary towering nature of pylons, by the varying height of vans and the needed shade. They are just tall enough to allow for travel be-

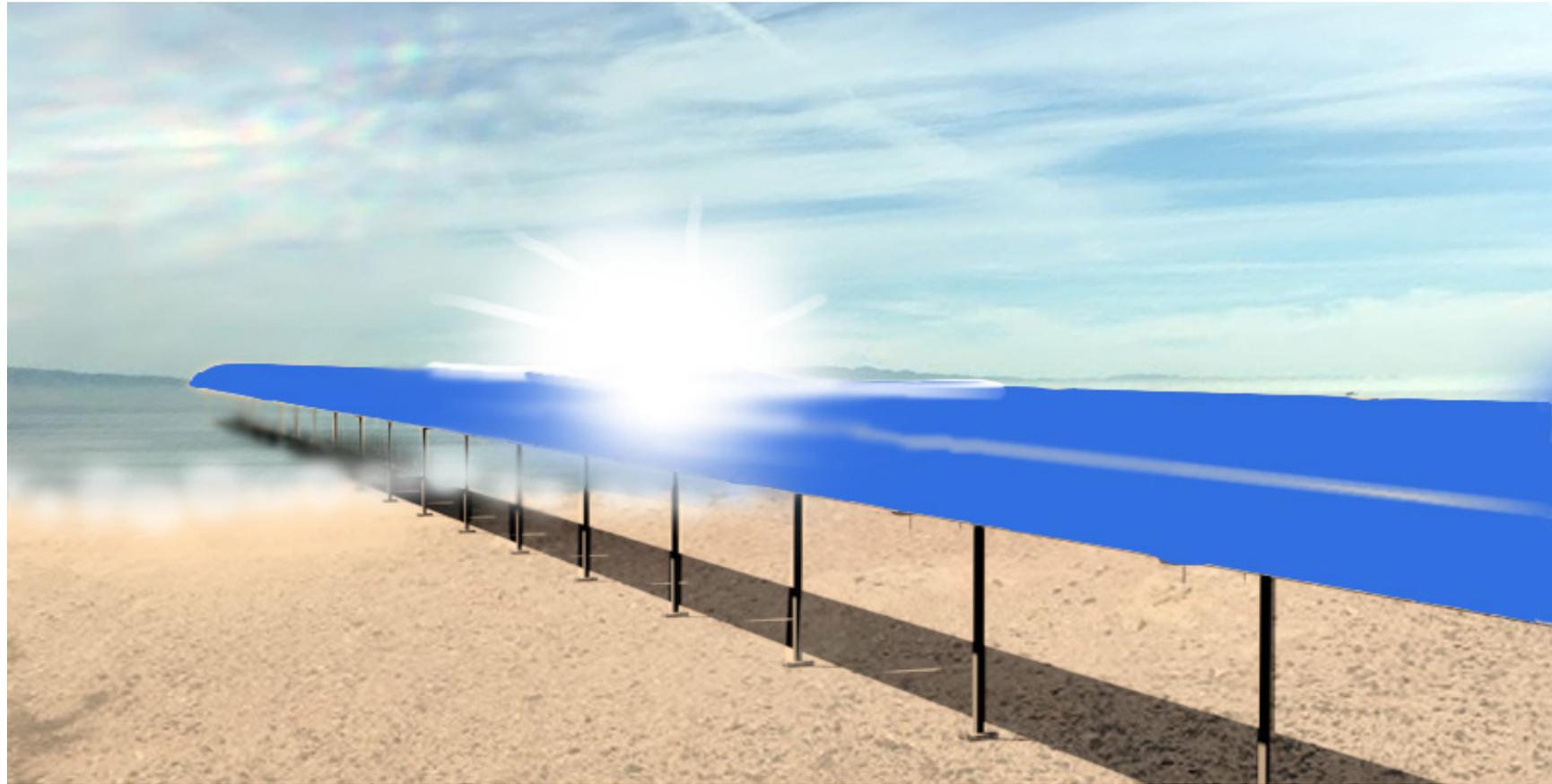
neath, but not so tall as to make the parallel line of cover unusable. This project also takes inspiration from the Green New Deal proposed by US Representative Alexandria Ocasio-Cortez, making sure to utilize and promote clean energy. This line of solar panels adjacent and within the Salton

(bottom: a site plan for "Solarize" with a gradient with elevation for the Red Hill showing not only the project's infrastructure itself, but also the vans and boats as they interact with the provided electricity and shade)



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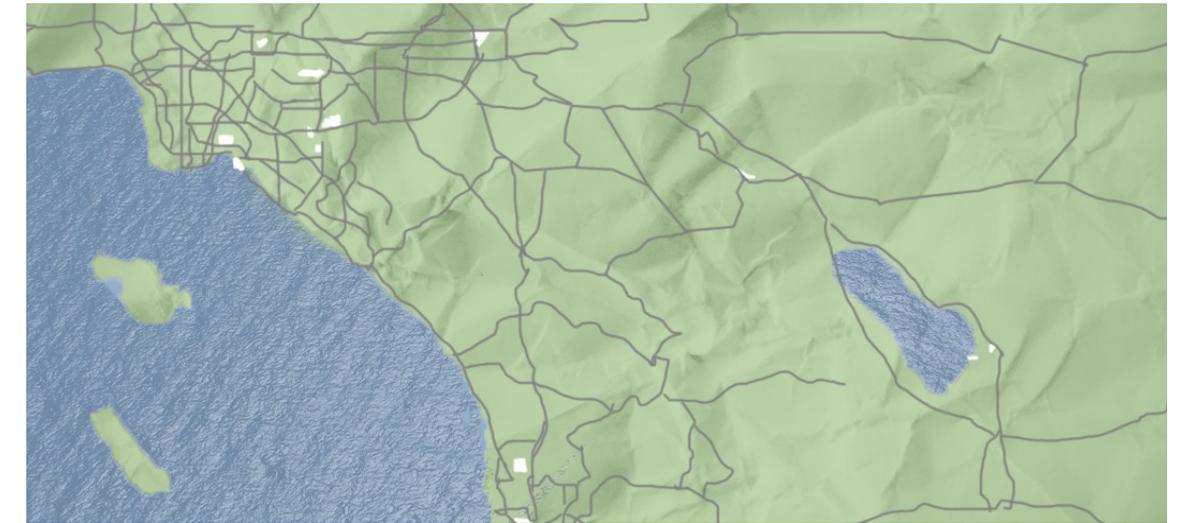
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Sea is but a small part of a larger network of sources of clean energy throughout California and the larger United States. Ideally, this design would aid in propagating a series of sites like this where nomadic people are able and encouraged to drive up, attach their vehicle, and receive free energy in order to promote solar

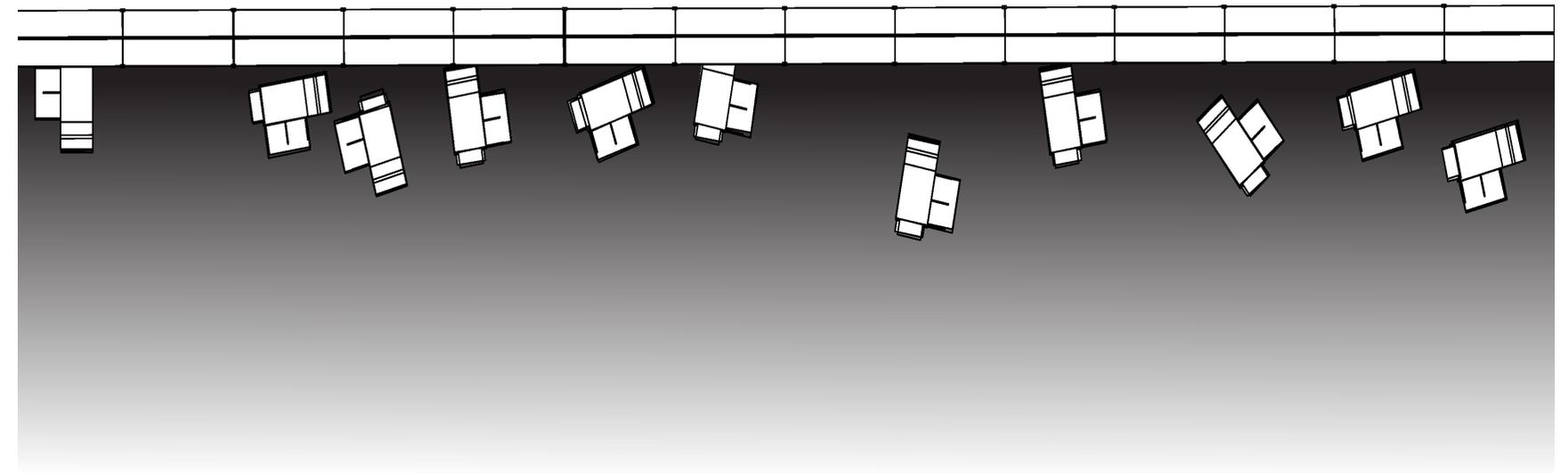
(top: rendering with V-Ray of "Solarize" extending into the Salton Sea as the sun shines off the solar panels, with photography from the beaches of the Salton Sea)

panel use on a larger scale. Designs such as this one would pop up amidst any kind of environment so as to allow these nomads to travel freely and not worry about their access to clean energy. This project and others like it seek to encourage green energy alternatives while also protecting and aiding those who travel the US rather than settle into a stagnant plot of land.



(right top: map of solar panels locations across California and the southwest of America)

(right bottom: zoomed-in site plan with abstract emphasis on shade and vans amid it)

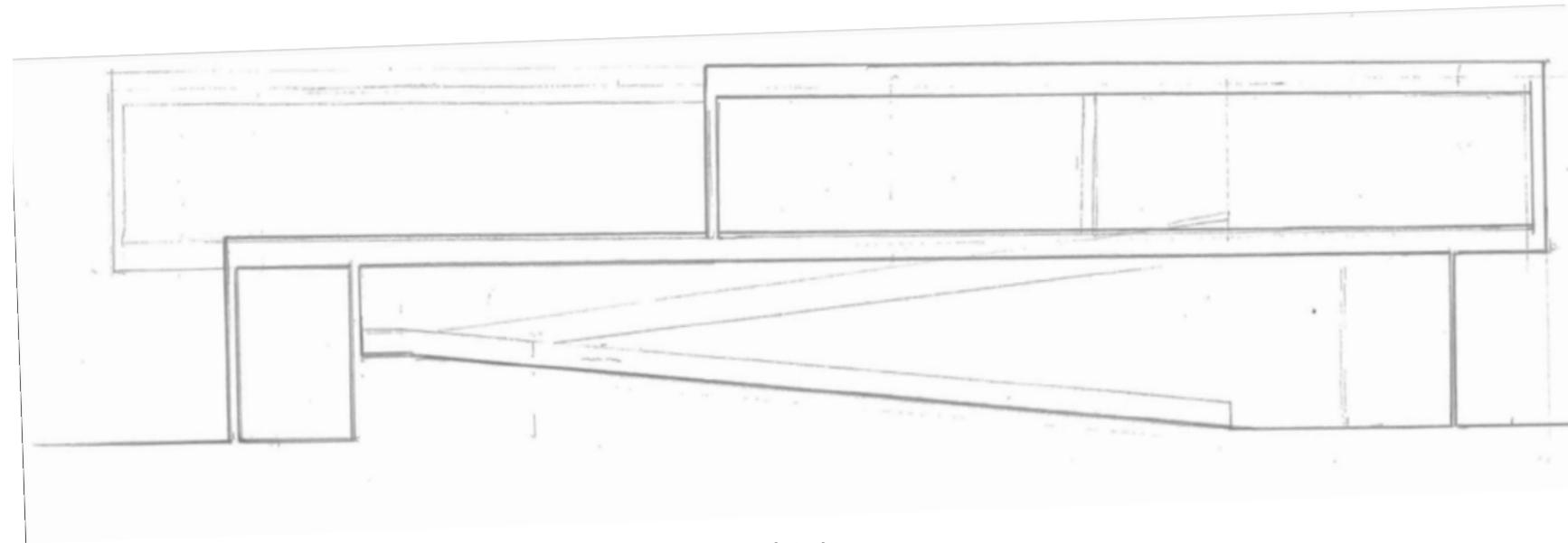


COMMUNITY CENTER

Located within a block of New Haven adjacent to the famed Louis' Lunch, the site for this project sought a community center which allowed for growing and preparing of food for the neighboring areas. In order to meet this demand, this project utilizes rooftop gardens in order to create accessible spaces for growing, congregating, and consuming. The design of the building itself focuses heavily on the linear, horizontal elements of the

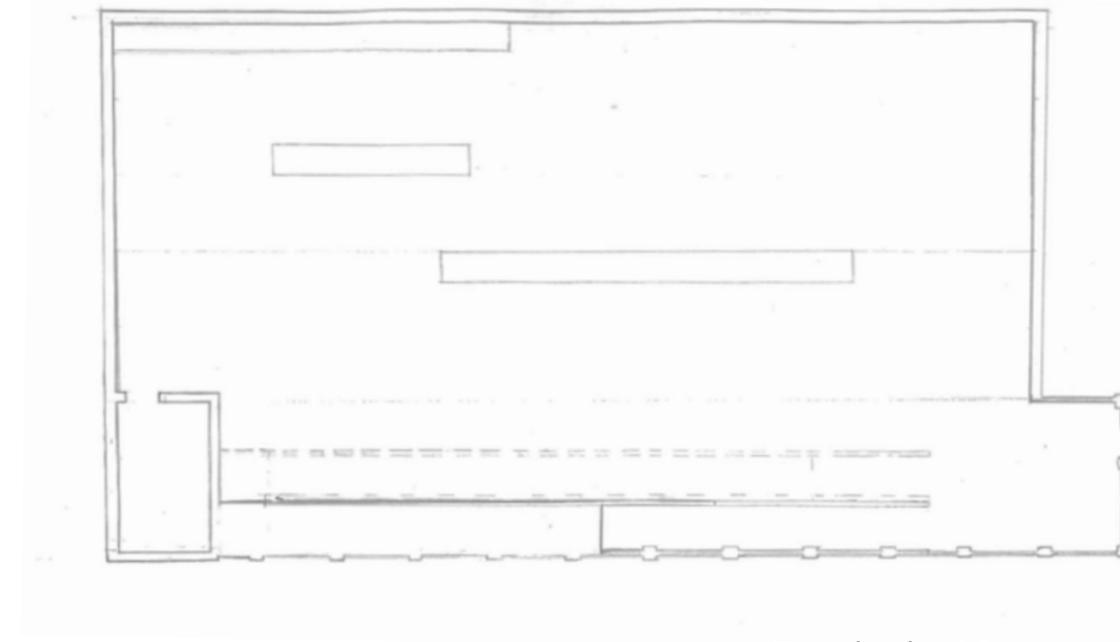
space by creating long cavities for occupation. Though the kitchen, dining room, and entrance area are all one relatively non-linear space, the subdivision of the grand area through the use of long tables, counters, etc. allows for it to feel longer. This, along with the use of a very horizontal section and elevation, counteracts the squarish plan. Another important adder of length is the entrance area ramp which leads to the upstairs areas.

This ramp, and the visual emphasis on it through its occupation of a glass box, is centralized in an effort to focus on accessibility, not pridefully, not in a grandiose way, but in an attempt to make useable the rooftop gardens to all. This is further developed by the placement of the ramp at the front of the building, visible to pedestrians on the street and also immediately accessible upon entering the space. The length of the ramp, too, further emphasizes the horizontality of the spatial elements.

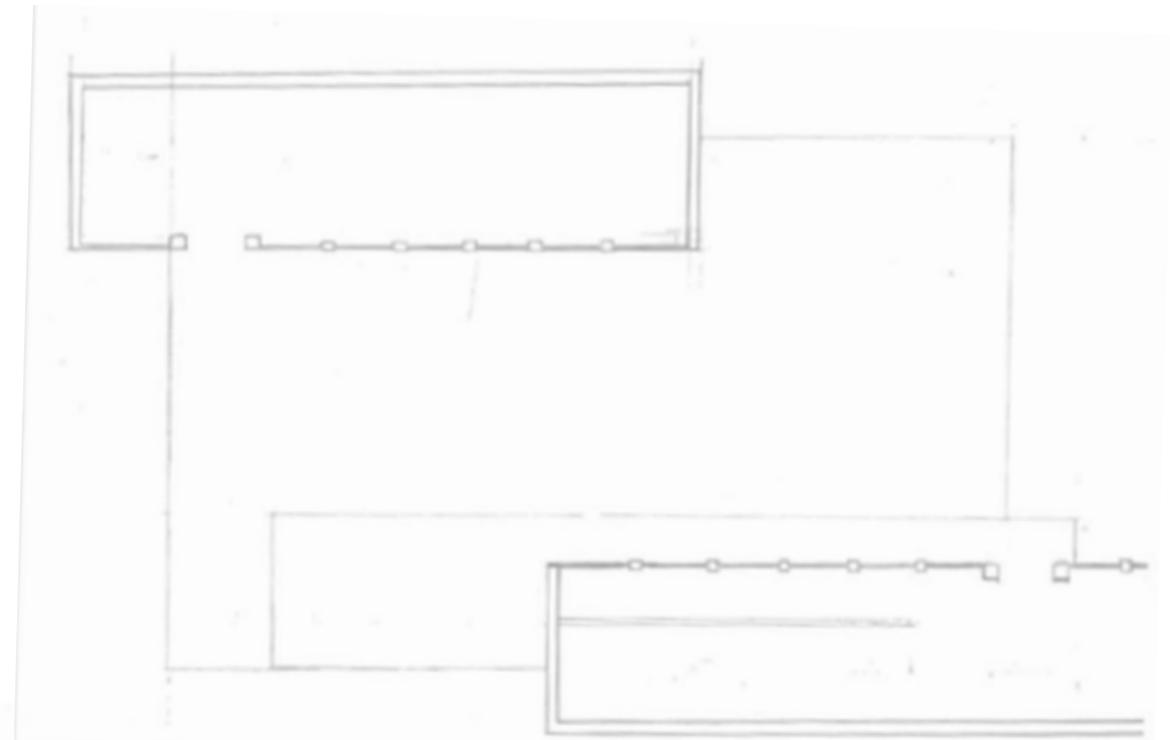


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The rooftop area is dedicated largely to the garden for growing plants and food. It is able to be accessed through the doors separating the interior from the exterior, and is visible to the enclosed rooms through the inward-facing windows which make up the second floor's inner walls. The large windows, as well as the doors, make for a blending of the inside and the outside in an attempt to find nature and organicism within a city landscape.



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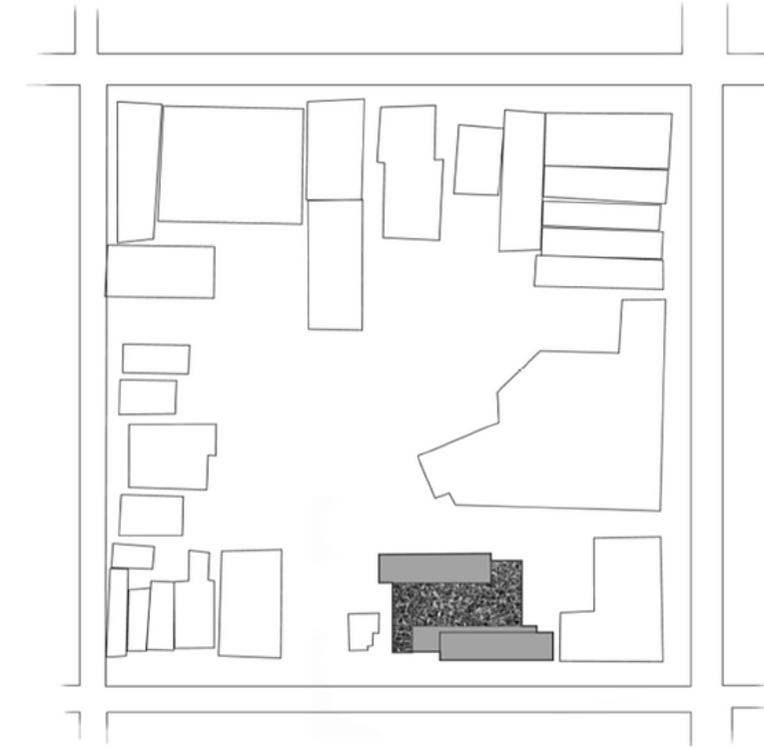
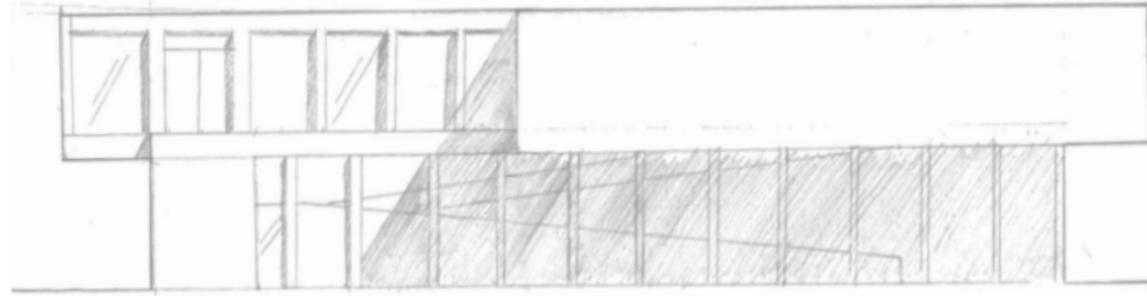
*(left page: section on an axis parallel to Crown St in New Haven of the Community Center)
(right top: plan of the second story of the Center, with an emphasis on the interior spaces, glass ramp space, and the roof garden)
(right bottom: first story of the Community Center with linear tables cut through the glass entrance space)*

(top right corner: elevation from the south with emphasis on directional shade)

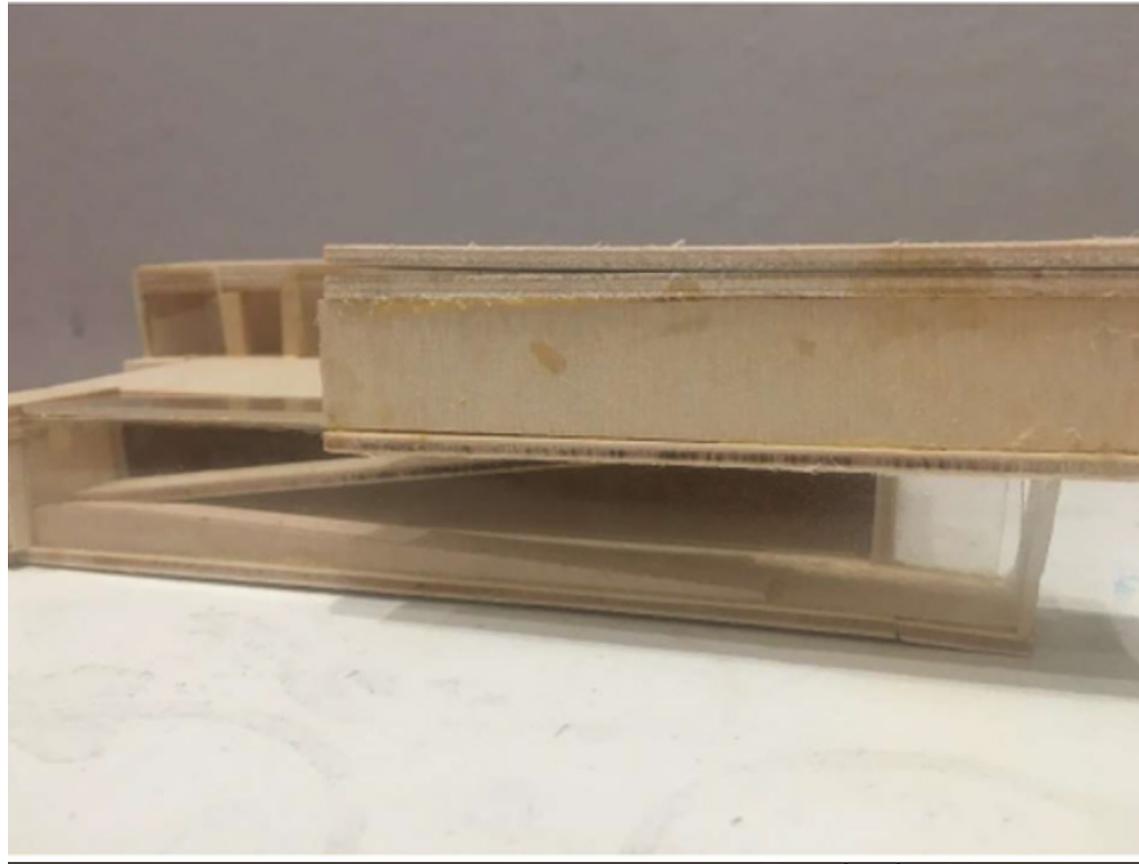
(bottom left and right corners: sketch model of the Community Center made of bass wood and acrylic)

(right page top: site plan)

(right page bottom: day/night renderings of the Community Center from across the street)



Another important element of this design is its acknowledgement of and brave insertion into the urban facade. The fabric of the streetscape is incomplete in this area, so this building seeks to patch a hole; where it could have occupied the space behind Louis' Lunch, instead it sidles up adjacent to the iconic landmark, and addresses the street and sidewalk head-on. Its concrete facade addresses the road and becomes a part of the urban fabric, both elevationally and in plan.



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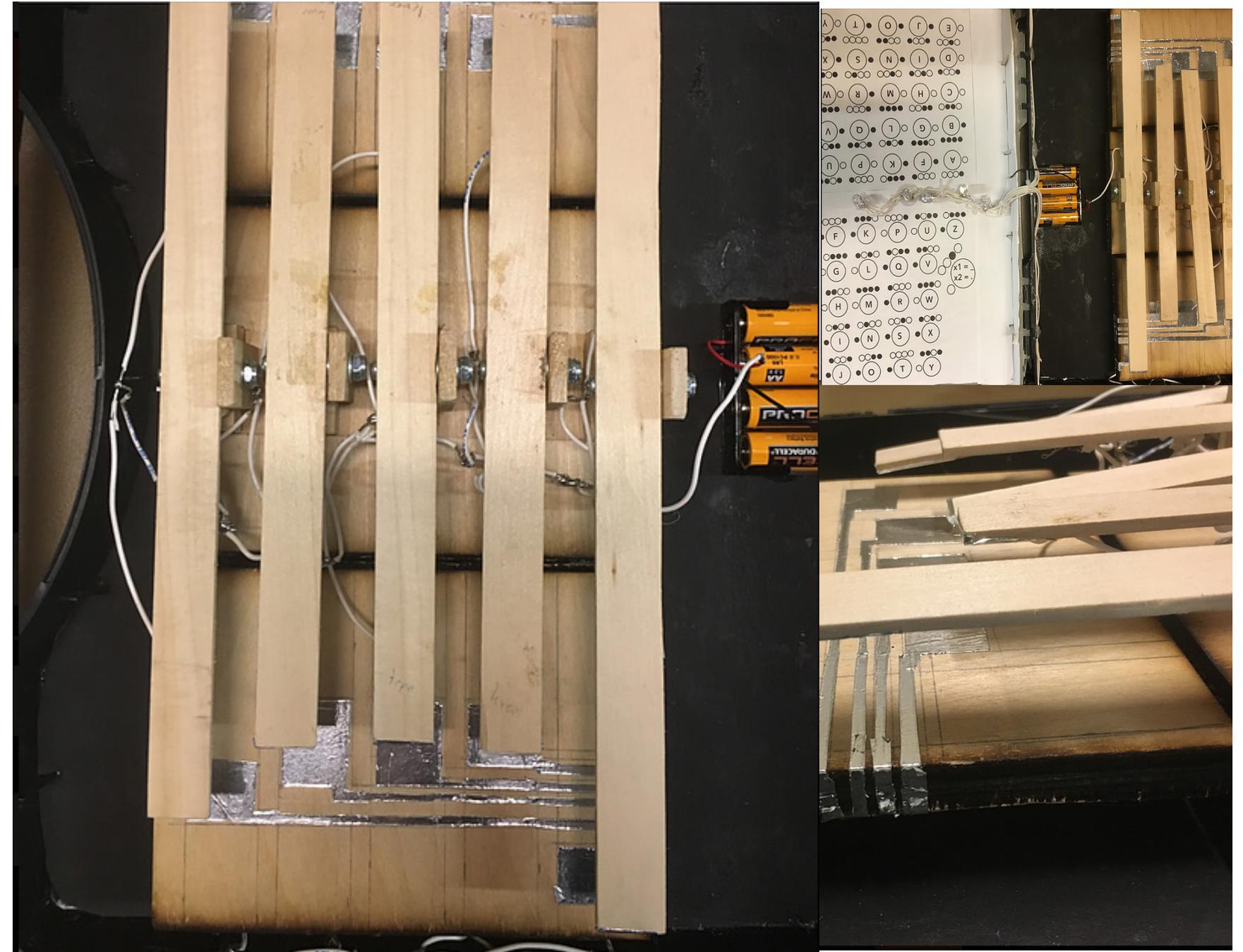
THE MACHINE

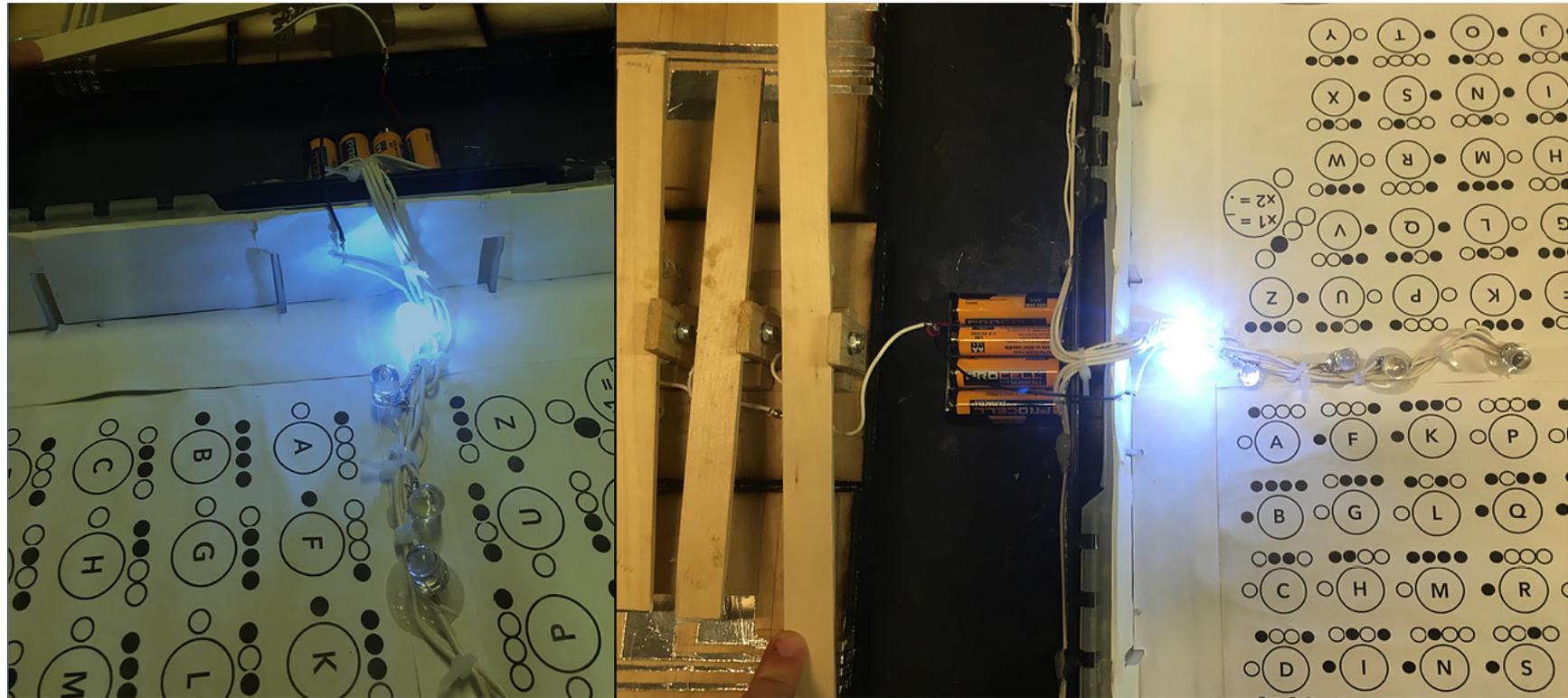
This group project endeavored to explore communication methods by creating a box encasing a machine and language for two-person correspondence. Working to analyze the ways in which people use technology to communicate and the ways in which this can serve to both expediate the process of connection and complicate it. In order to get at these questions of how technology can both aid and take value away from communication, this project aims to complicate a two-person interaction to the level of inconvenience - utilizing tech to do so.

This machine is largely comprised of five levers, which, when tapped, each complete a circuit. These circuits correspond to five lights that, when lit in a certain pattern, are associated with a letter of the Roman alphabet. Therefore, when held down with a certain number of fingers, the



*(left page: the machine from above)
(right page: focus on wiring, batteries, and conductive tape)
(page 18: emphasis on the light mechanism and language of the Machine)*





levers light up certain bulbs which allow one to read a letter off of them. This process of spelling out words one-by-one and having to constantly consult the language guide adjacent to the lights, makes the entire procedure arduous and borderline useless. Nowhere as convenient, sensical, or universal as Braille or Morse code, and of almost no purpose to two speaking and hearing individuals in close

enough proximity, the machine questions our overuse of technology and when it actually begins to become a hindrance. While theoretically it could be useful on a larger scale, between individuals far away or in separate rooms, the invention of a new language makes the whole process more complicated than necessary and, while engaging for the mind, feels more grueling than interesting.

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The idea behind the project was exactly this: to overcomplicate technological communication to the point of interference. Is there still a use or enjoyment in communicating with another when the procedure of doing so is so convoluted? At what point does technology begin to hinder the ease of conversation? Is it necessary to invent new modes of communication when the ones in place make do?

THE LOG

Given a segment of a found log and asked to create a space from the piece, I began this project by sawing the log into eight distinct divisions. From there, it became a project dissecting orientation and what "up" and "down" mean when there is no clear directioning to an object or space. By connecting the portions and slices of log with dowel segments in a new orientation completely distinct from how it was once put together as a whole, the project seeks to examine form and its variability. Part of how it attempts to do so is by being changeable even in its static reassembling. Despite the fact that the dowels and log slices are permanently bound together with glue, the sculptural space created is able to morph. The object here is meant to change orientation and question normative views of direction as it becomes "topsy-turvy."



(above and page 20: different orientations of the log, constructed of a found log and dowels)

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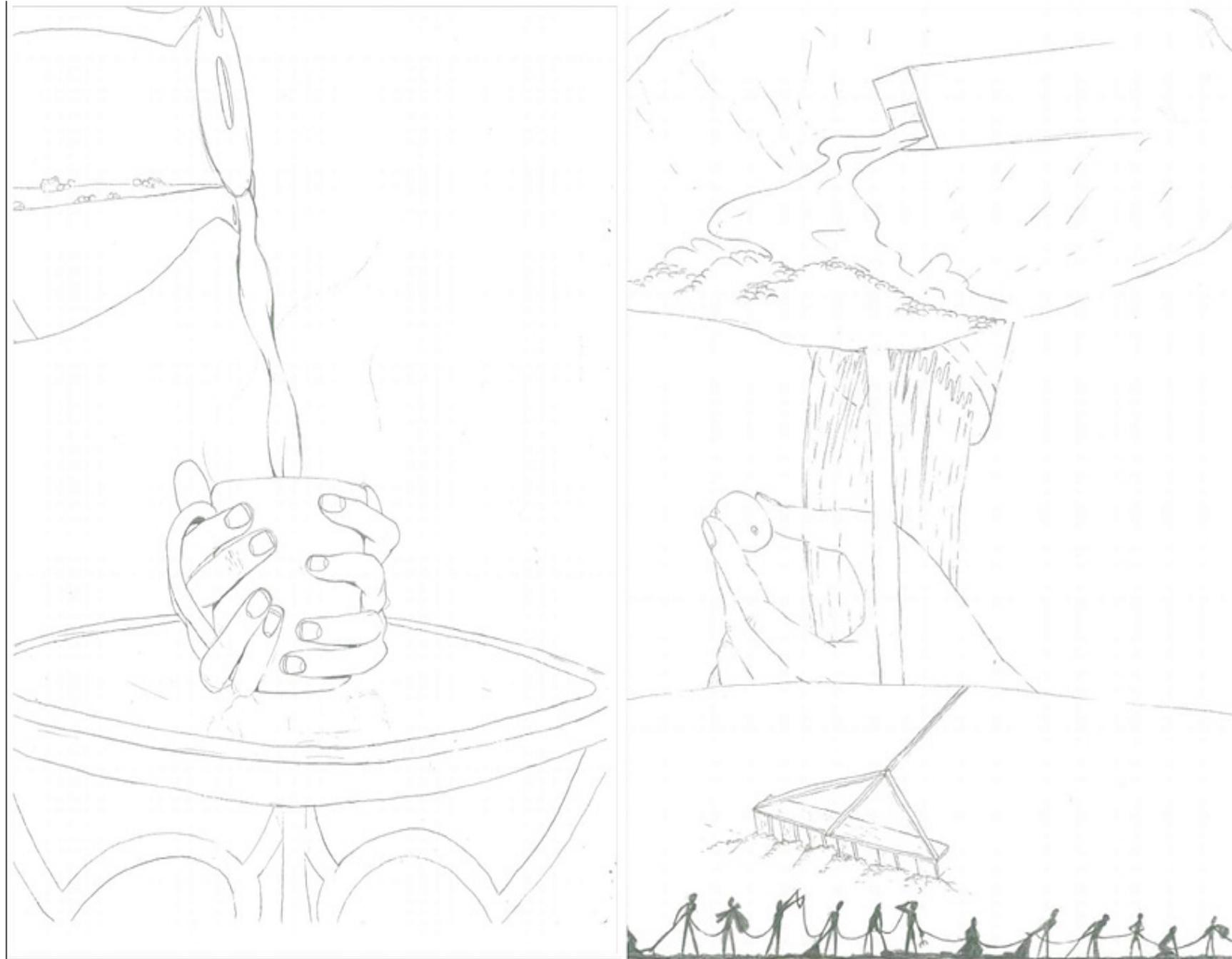
MISC. DRAWINGS

A large part of these miscellaneous drawings is comprised of sketches - in pencil and some charcoal - of coffee. This series includes not only the origin narrative of coffee, but also tries to convey how it feels to make and convivially consume the drink. These drawings seek to examine the relationship between individuals and communities with coffee, while also confronting the reality of its growth and the coffee bean's history as a crop harvested largely by slaves. The next series of drawings presented in this section is a compilation of pepper drawings: sketches in pencil of a rotting bell pepper drawn throughout the process of its decay. These peppers and their deterioration are part of an exploration into

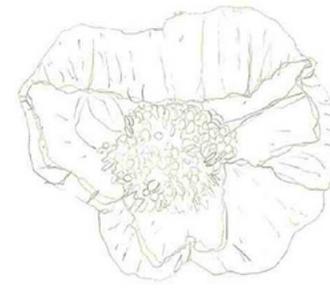
(right: the origin story of coffee, drawn in charcoal and pencil)



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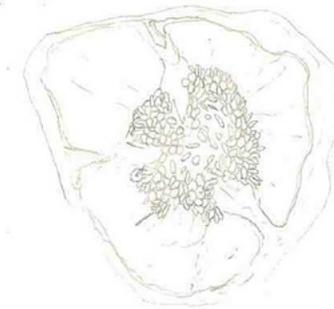


(left page: the act of making and consuming coffee)

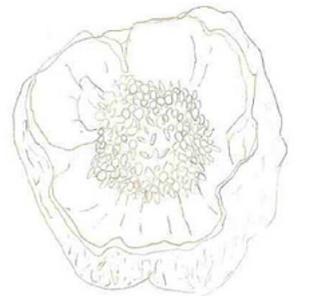
(right page: the life span and deterioration of a bell pepper)

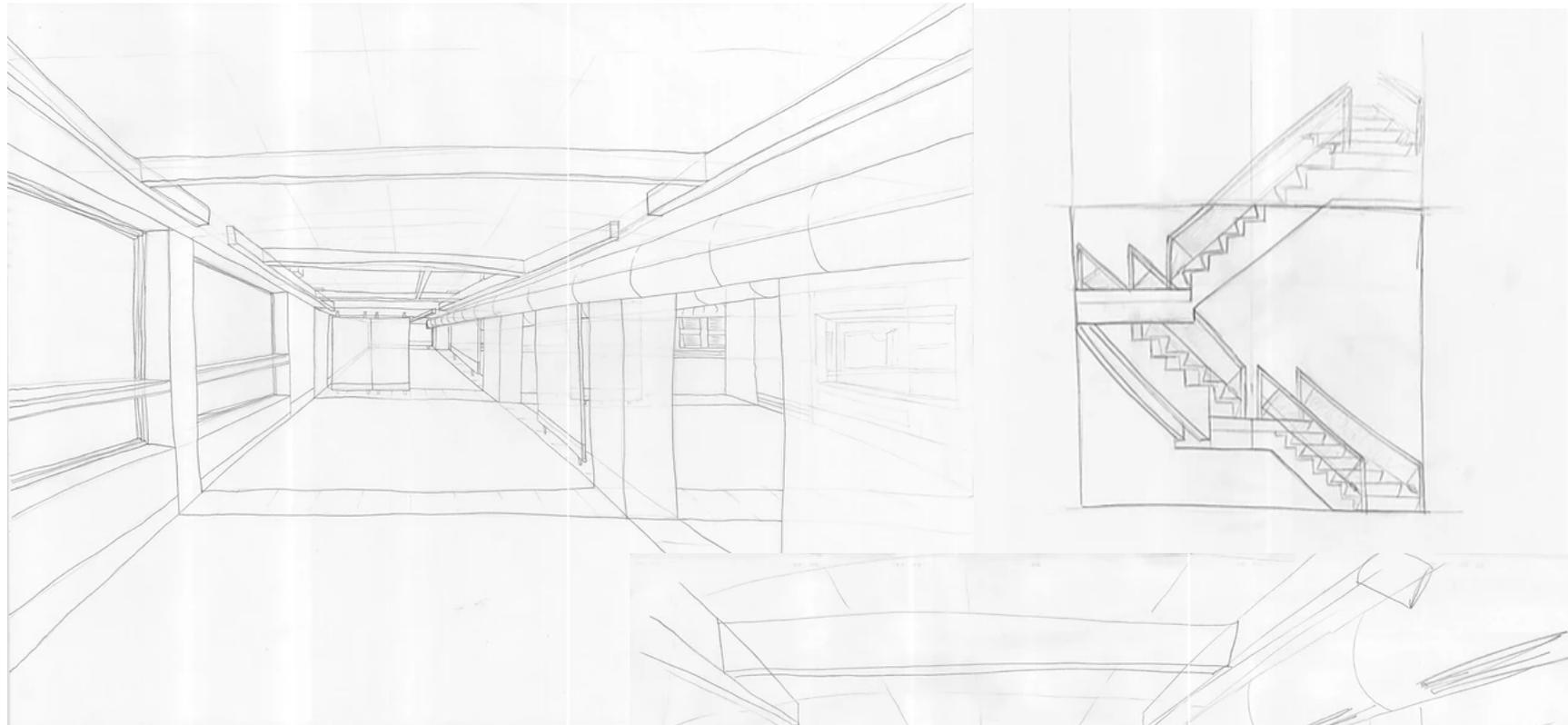


how the life span of any perishable object leads to change and development, from the growth of mold to the movement and scattering of the bell pepper seeds. These vibrant and varying pepper drawings lead the viewer to ask themselves about both existence and the finite nature of life and also about food waste. To waste food in the pursuit of an artistic venture, especially on a class-wide scale, is surely a moral net bad. How can one passively observe the rotting of a perfectly edible food object for the sake of aesthetic investigation while remaining ethical? While this is an isolated scenario, the imagery of rotting food puts into mind the conscious waste of so many corporations, restaurants, etc.

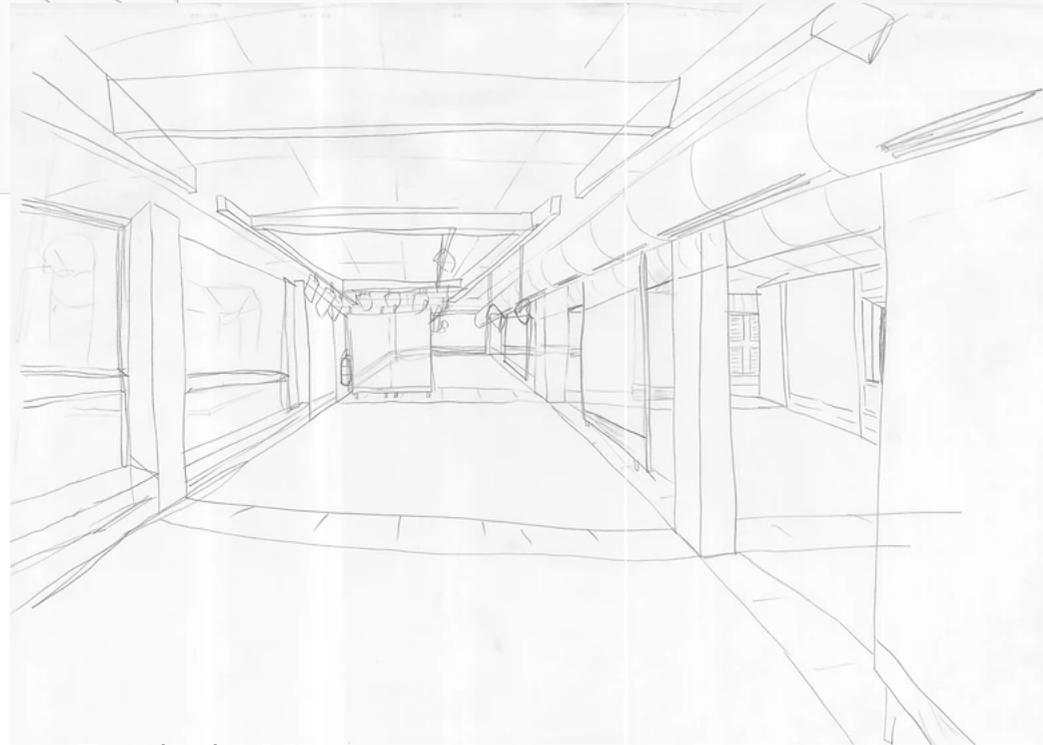


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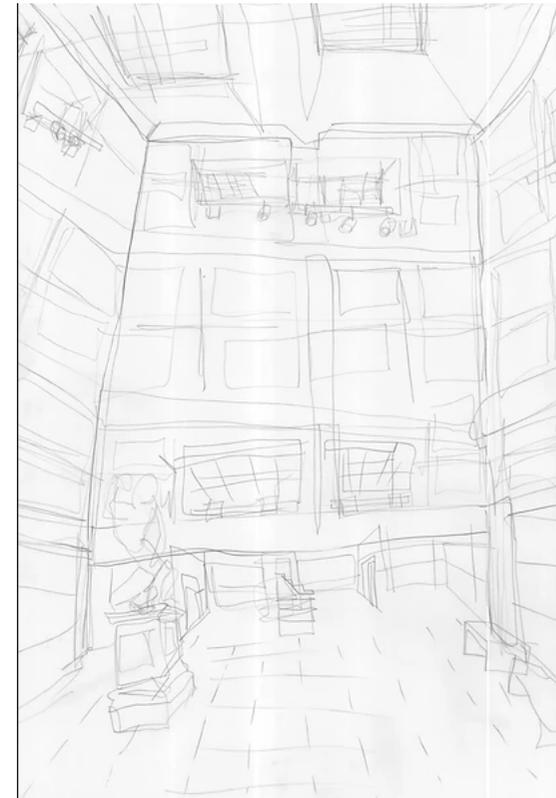




*(above left: YCBA interior view)
 (above right: YUAG stairwell section)
 (below: blind contour of YCBA interior)*

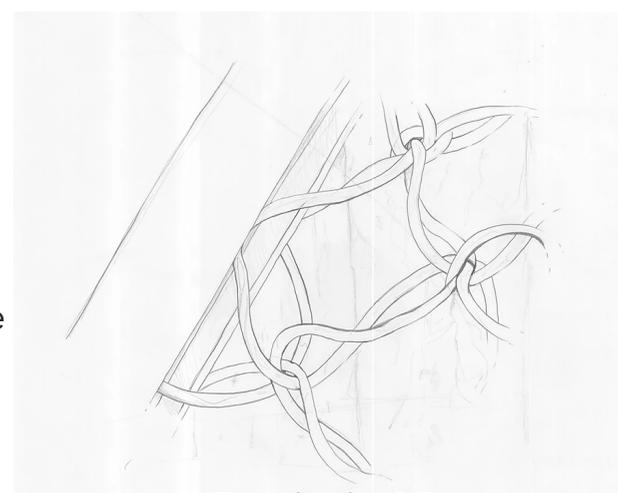


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The next portion of drawings is an examination of the Yale Center of British Art and the Yale Art Gallery, all drawings in which are made fully from observation and without the use of rulers or erasers. They explore perspective, section, and detail drawings; some are contours, and the one above is specifically a blind contour of the YCBA foyer. This selection of images is mostly

bound by location/subject, and more loosely is held together by the conception of loose, careful strokes in the pursuit of not a perfect picture, but a picture that portrays the feeling and moment of a space. They endeavor to build a mood for the viewer, to recreate what it is and how it feels to occupy these architecturally significant places. Altogether, these drawings provide a comprehensive summary of my abilities as an artist, and the wide variability of experience I hold with the medium of pencil hand drawing.



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*(left top: blind contour of the YCBA lobby from below)
 (middle bottom: close up detail of YUAG stairwell railing)
 (right top: YCBA stairwell from the outside in the library)*

THE MUG

The Mug, as a project, is intended to address the prompt of creating a "lunchbox" to consume food in pairs. This container for food is meant to be able to hold the ingredients for the meal, freshly prepare it, and then divide the portion in two for an intimate, two-person dining experience. In this case, because the food chosen was coffee, the lunchbox created was a mug, which is initially carried with the white lid at the bottom with coffee grounds contained in the wooden area. Upon one wanting to prepare coffee, water can be boiled in a separate container and then, once the mug has been inverted, poured over the ground. The concept is that the metal mesh will act as a coffee filter and strain the completed coffee into the two mugs situated below. The white, 3D printed lid that initially kept the grounds in will then act as a saucer for the



*(left page: the Mug, made of bass wood, 3D printed material, and metal mesh/foil, from above)
(right page top: the Mug all put together in elevation)
(right page bottom: the Mug without lid and mugs from above)
(page 28: elevational view of taken-apart Mug)*

two cups, forcing the two participants drinking coffee to place their cups next to each other. This allows for a more physically close and emotionally intimate experience. The two half-circle mugs, created in such a way that they both serve to close the vessel when it is full of dry grounds to avoid spilling and then act as mugs, are meant to be the perfect shape for the human hand, to mimic the feeling of holding a warm drink in a typical, larger mug. The lack of handle on either mug is dual purpose: on one hand, it forces one to hold the cup in one's hands to feel the warmth of the drink, and on the other hand, it is meant to make one more physically close to their companion while reaching for their cup. Once full and being drank from, the cup is intended to have a certain orientation. In order for the hands to cup the mug a specific way, and so as to avoid spilling, one must press their lips to the curved side.

All-in-all, the Mug is meant to create a drinking atmosphere of comradery and friendship. Built from half inch bass wood slices which were stacked atop each other and then hollowed out with a drill press and sander, it is the culmination of hours of design, within the woodshop, at the studio desk, and using Rhino and a 3D printer in order to perfect the intended result. The snug fit of the 3D-printed elements with the wood and metal elements is no mistake. It resulted from much effort in the pursuit of creating something that, with the help of some polyurethane and imagination, could theoretically hold water. That being said, it is merely intended to be the design for a product that, when actually produced, would be far more watertight.





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THE ROOM

The Room is the theoretical sibling to the Mug, meant to be built around the consumption of coffee. That being said, it extends to food beyond the common caffeinated drink. It is, primarily, addressing the prompt of creating a room meant for coffee making and consumption, sitting, and comradery. The prompt also, importantly, specified that there needed to be access to a second level in the Room.

It was with this basis that the project began, and a conception for the space was born. The tables, chairs, and other surfaces would double as the "staircase" necessary, with places to sit and eat extending all the way to the "ceiling" of the Room. This staircase is comprised of elements taken from the wall.

(right: the Room from the side, focusing on shadow)



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The walls, then, are another important feature of the space. Meant to emphasis contrast, specifically in thickness and light admitted, one wall is thick - occupying almost half the dimension of the floor - while the other is a thin, flimsy piece of bass wood. The thin side has windows which allow in tons of light, and its chairs, tables, and storage spaces are made of the same thin material. On the other hand, the almost-comically thick wall juxtaposed has its elements of the staircase/pieces of furniture made of half inch bass wood. The thickness of the material allows little light to enter the space from that side, and what light does enter is severely limited by the depth of the windows. Together, the two sides create a dramatic contrast which speaks as an experiment in light, depth, and thickness. The elements which protrude from the opposite walls create a shadow display on the floor which, depending on the nature of the light



access, can invent interesting, almost-whimsical patterns of shadows. The shadows vary in intensity depending on how far each platform is from the floor and from the light source. This mixture of shadows' darkness is, in my opinion, the most compelling element of the space, in addition to the interaction of the platforms of each side with each other across the space - how they invade each others' territory and create an interesting and dynamic silhouette in profile. Where does the space occupied by one wall and its elements end and the other begin? The shadow-patterned floor between the two further greys the line between the two opposing sides.

(left and right pages: more visuals of the interior space of the Room)

STEP WELL SECTION



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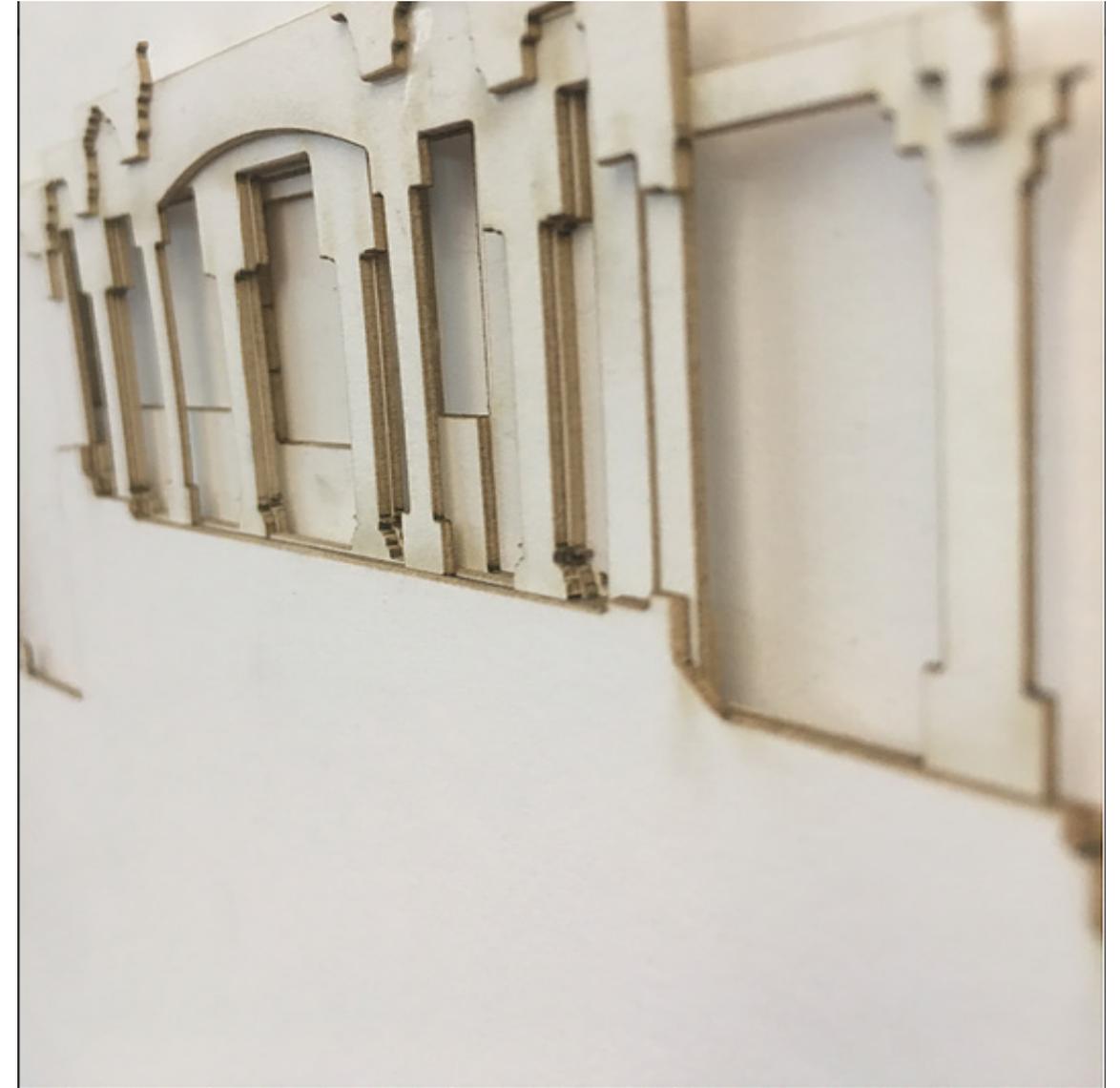


This 3D section of an Hindu temple - specifically the Modhera step well, dedicated to the solar deity Surya - takes advantage of the bilateral symmetry of the sacred space by taking a section straight down the middle of both the temple and its accompanying step well. This project, while focusing on symmetry, also seeks to emphasize the details of the space. This temple is exceedingly ornate, with intricate

details occupying all available space. This project, then, utilized both the three dimensional and the two dimensional to place importance on the sculptural details of the space.

Three dimensionally, the laser-cut layers of the temple show the details of the columns and ceiling in silhouette, with each layer adding more columns and more dimensionality to the section. But just a silhouette is not sufficient for showing in full how intricate the columnal details are: hence the use of two dimensional pen work. One column, at the entrance of the *Sabhamandapa* (the assembly hall), is therefore shown in a larger scale in order to show the impressive level of detail on the sculptural elements of the space.

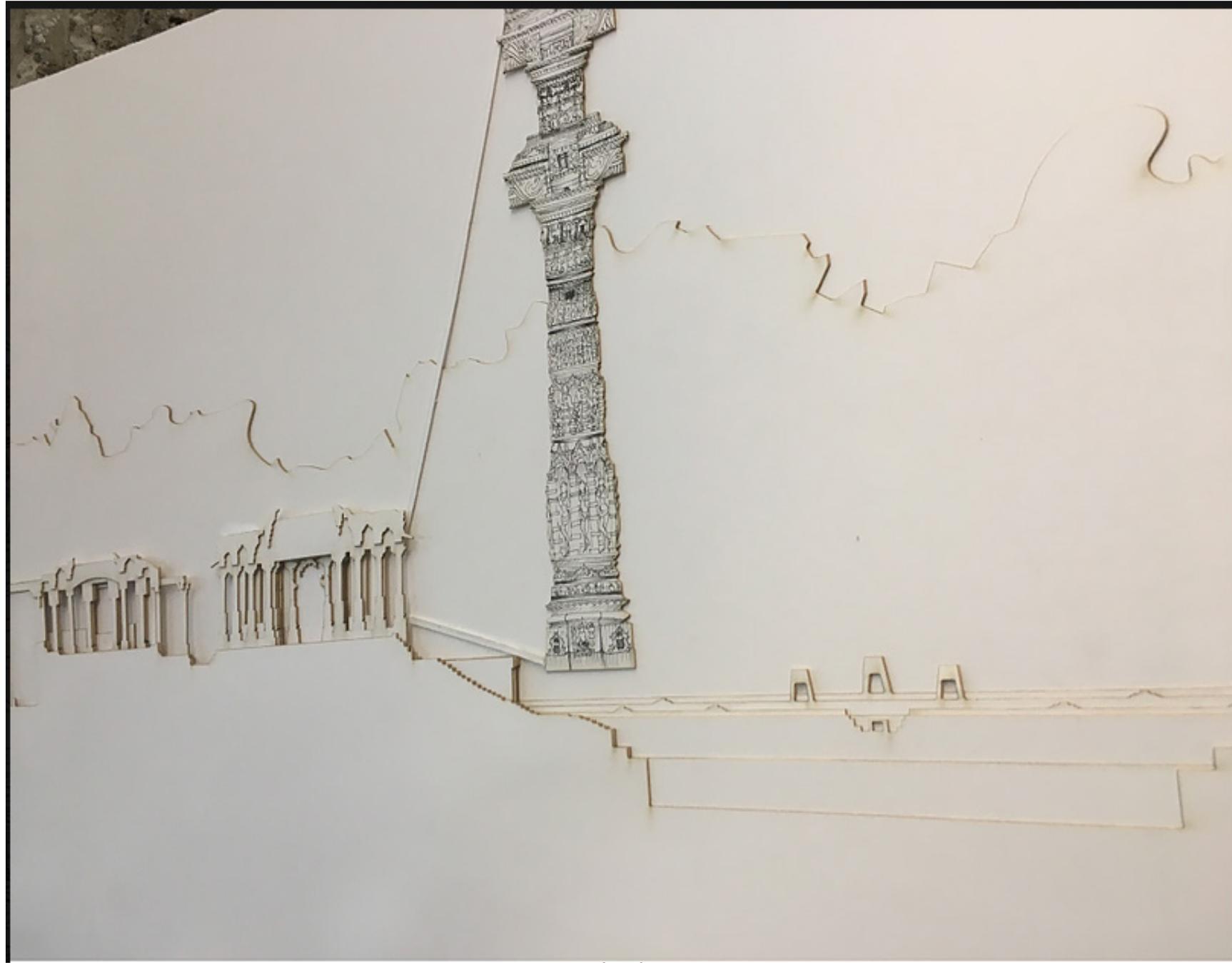
Though the entire ornateness of the temples and adjacent step well is impossible to fully capture, this project endeavors to do so expertly.



(left page left side: close up from the side of the temple of the section)
(left page top: detail photograph of the columns at the front of the temple)

(right page: close up of second temple space)
(page 34: full shot of the step well 3D section)

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SYNTHESIS

In response to a prompt regarding the use of two materials in the pursuit of emphasizing some natural phenomenon, this project utilizes paper and coffee stirrers to create a curved, organic space that endeavors to manipulate wind. The conception behind it is that the curved halls of the synthesized pavilion will move the wind (simulated, in this case, by a desk fan) through its spaces from one end to the other.

The design is for an largely outdoor area, though some of the halls are roofed with an organic, curvy wooden shape that was laser-cut. Atop the roofed area is crinkled paper meant to represent the use of greenery, further blending the inside and the outside part of this pavilion-like installation. The coffee stirrers are used to emphasize some of the sharp turns of the halls, both by providing structural support and allowing the curving twists

to be possible, and by adding contrast to the paper walls. The use of coffee stirrers and paper as the major elements of the project also speak to the importance of green practices in architecture. How many pounds of supplies are wasted at the end of the school year as architecture students trash their unused materials? Hence, for a project about nature (wind, in this case, as well as the roof greenery), it seemed especially imperative that the supplies used create as little waste as possible. Hence the use of nontraditional, cheap materials in the pursuit of making a statement on recycling and green architectural practices.



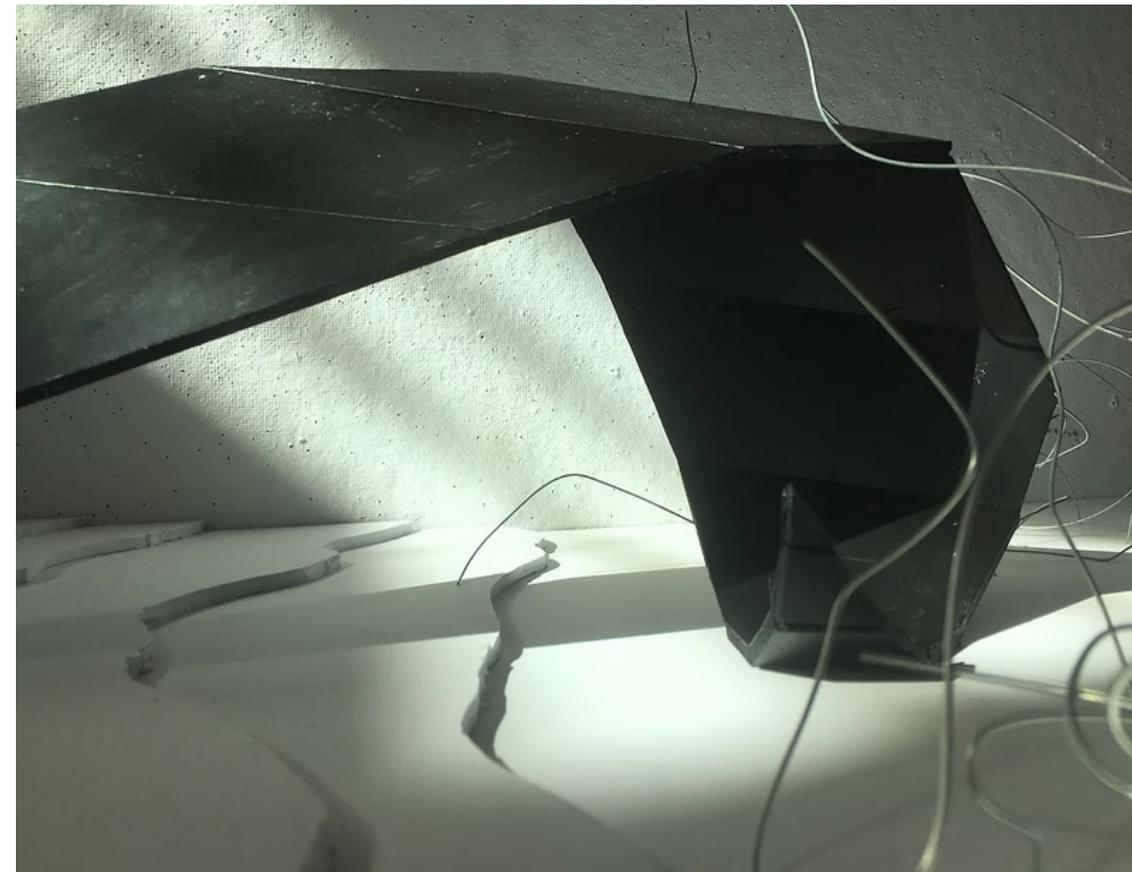
*(above: interior space of the Synthesis, made of wooden coffee stirrers, paper, and laser cut wood)
(page 36: the Synthesis from the exterior)*

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FOLDED PAVILION

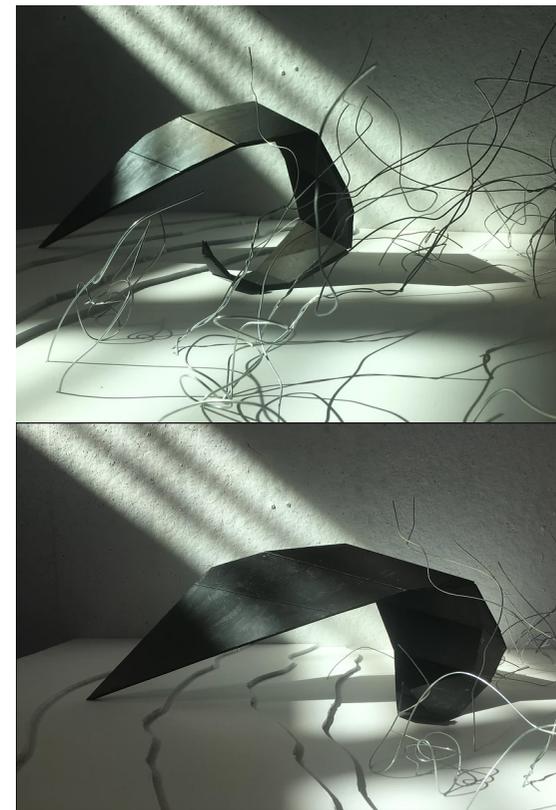
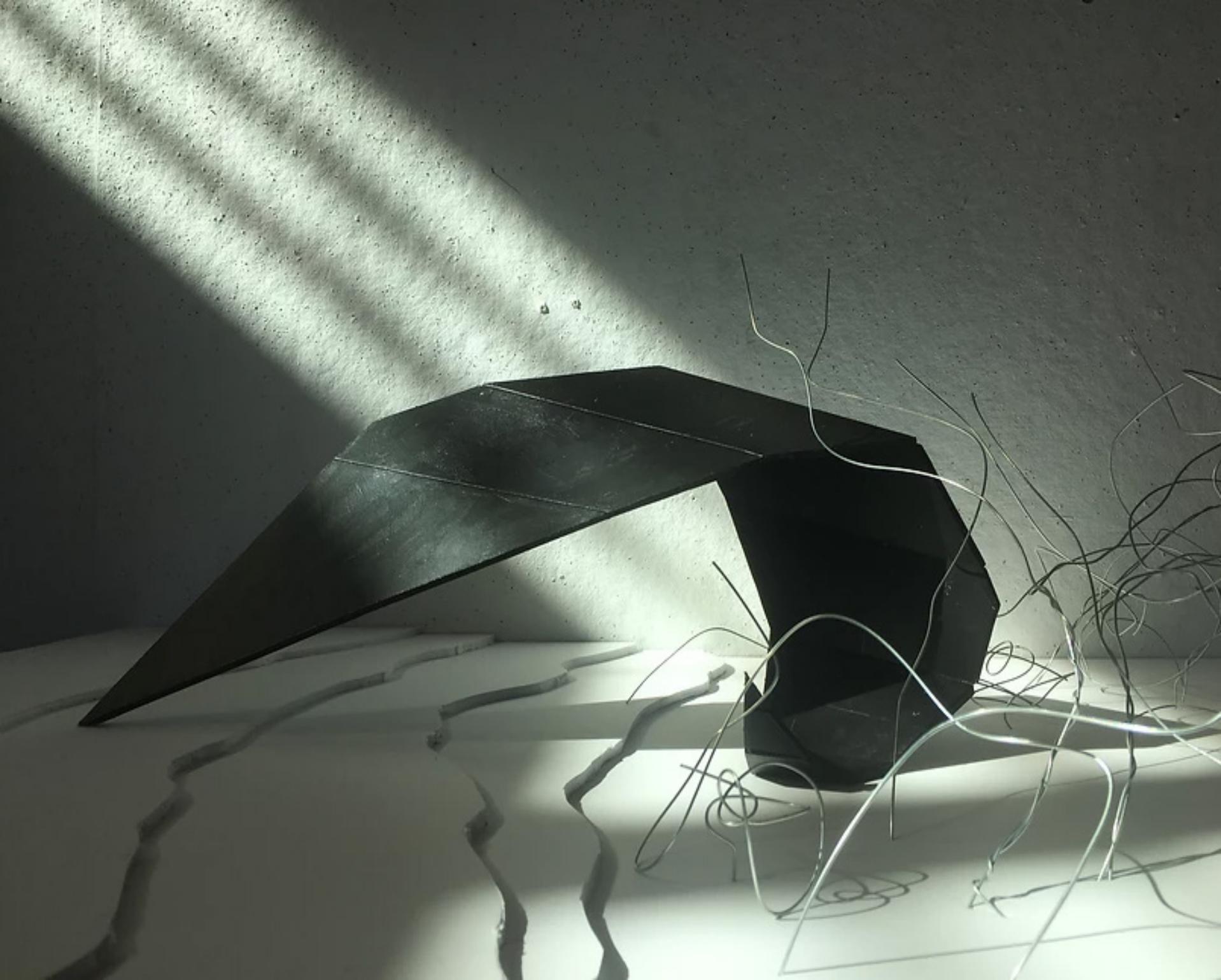


(above:the folded pavilion model, made of painted black foamcore with metal wire trees)

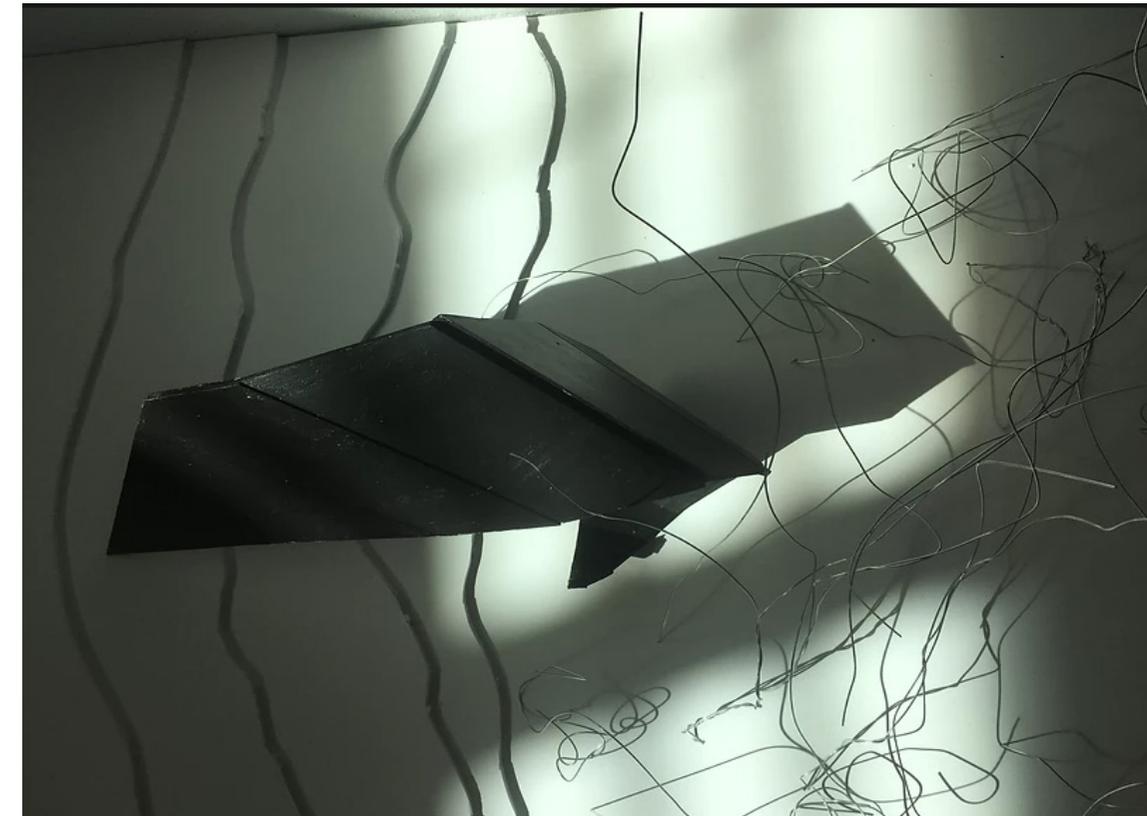
The Folded Pavilion is a project intended for situation in the New Haven Beaver Pond Park, specifically at the entrance to the wooded paths. The twisted metal in the monochrome model is meant to represent the forest within the park, and the Pavilion is so located that it provides a funneling entrance to the woods. In order to achieve the act of funneling bodies into the pathways amid the trees, the Pavilion twists from a large, higher-up area that allows many to enter to the lower area which has a much smaller feel to it, forcing bodies to get closer as they begin on the tight trails.

The name of this design comes from the origami research that went into its creation. The Pavilion is made - at least in model form - of foam core cut into the shape of an elongated parallelogram, which is then sliced in a number of places with shifting angles and spacing. These slices, all made on one side of the board, then allow the parallelo-

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(all photos through page 41: different angles and aerial shots of the model)



gram to be folded into the twisting shape that the entrance pavilion takes. The shape - especially in its black model form, against the white landscape - is meant to create a dramatic and dynamic statement against the relatively flat and mundane environment. Part of the way the drama and momentum of the design is built, is through the entrance being



comprised of one single corner of the large form touching the earth. It seemed to defy gravity in a startling way, enticing and scaring visitors in equal part. On the other hand, the side which begins to enter the forest touches the ground solidly, forcing visitors and occupants to interact with the architecture and walk

atop - or even, in the case of the folded corner, sit atop - the shape.

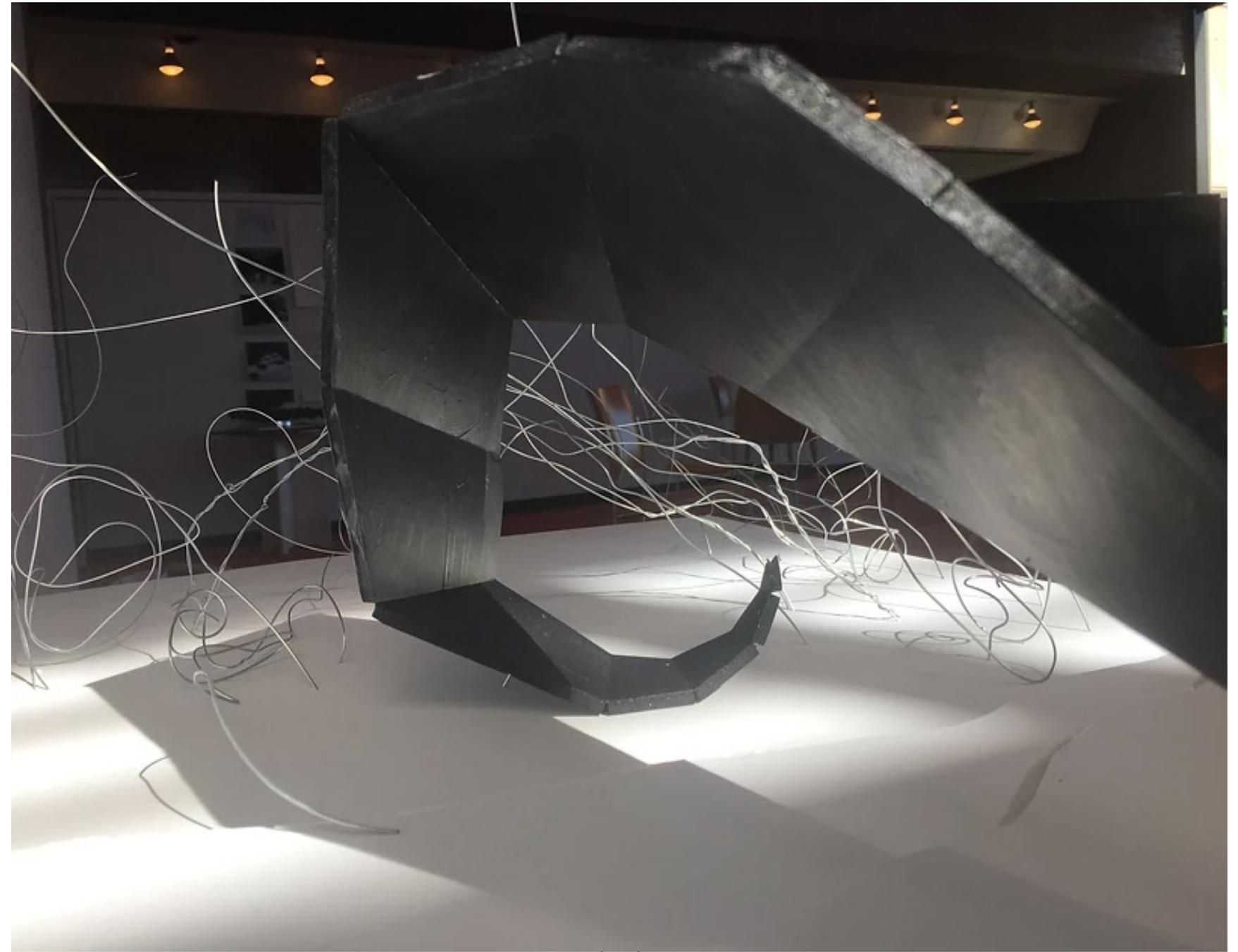
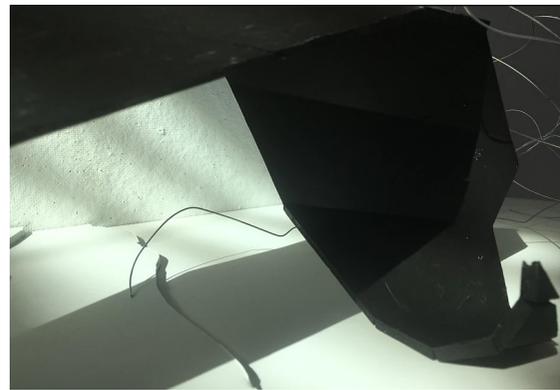
While the model uses striking monochrome to increase the drama of the piece, the real creation of the Pavilion would be built of planes of concrete, which, still in contrast with the greenery of the park, would build its own kind of

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dynamism. How can such a heavy, weighty material defy gravity so elegantly, using only planes to create a twisting and swirling space.

Part of what adds to the movement of the whole design is the way its smaller, shorter end begins to enter the woods and how the landscape, slowly descending into the park's wooded trails, increases the momentum of the swirl. It not only moves one into the park, but also does so at a descent, forcing one to enter into this twisting area of shade and begin one's journey.

All-in-all, the Pavilion creates an interesting piece of architecture for park-goers to see, to enter, and to interact with.



Fandrich_41



(Fallingwater in oil paints)