

LIBERTY CHAPMAN  
2023-26 GSAPP WORKS



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2023-26 GRAPH WORKS

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**PRESERVING  
INVISIBLE HISTORY**

**REIMAGINING  
TRADITION**

dition:  
ng on Mott Street

**1**



In the vibrant mosaic of Mott Street Chinatown, the establishment of a third place becomes a lively social dialogue, intricately weaving the fibers of private and public space. Rooted in a semester-long exploration of Mott Street and the dai pai dong, and the potential preservation of temporary hawker structures and stalls, particularly in Hong Kong

Structures such as the Dai Pai Dong 大排檔 (a typology of outdoor neighbourhood dining) and the street markets are representative of cultural heritage, reflective of the histories of Hong Kong. Although considered "temporary" these structures have been established for decades owned by generations of hawkers and utilised by generations of customers.

The abstraction of its original form as an open-air allure and communal ethos creates hybrid environment, seamlessly blending the timeless essence of tradition with the modern day Chinatown. Reclaiming space for the community's third place of gathering.

The narrative of this folding and mobile intervention seeks to rediscover heritage and origin, intricately interwoven into the urban fabrics and materiality of the surroundings.

## Reimagining Tradition: The Spirit of the Dai Pai Dong on Mott Street





## CRAFTING CULTURAL THIRD-PLACES IN CHINATOWN



As a second part of the exploration, the new typology of a dai pai dong derived from well-known vernacular architecture of chestnut stalls and other hawker stalls gave way to a multi-directional study of the dai pai dong 大排檔 inspired third space.

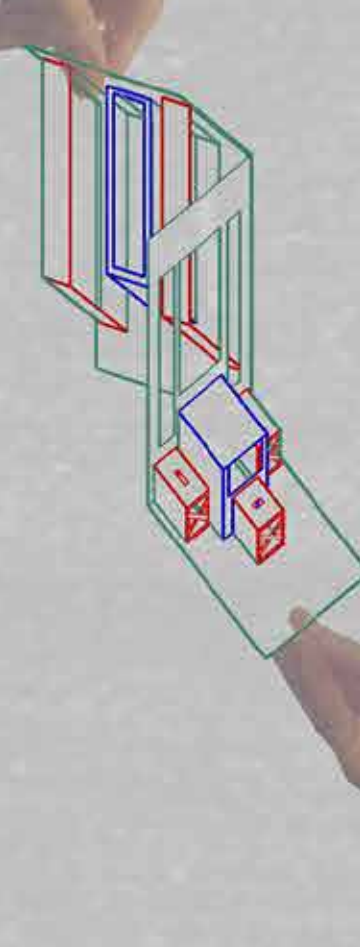
Each doorway entrances of storefronts and apartment buildings are models and investigated, mapping out negative spaces as places to be occupied.

Finally, the materiality is influenced by typical red white and blue bags, and other woven plastic bags demarcating these spaces of vibrancy and interaction.

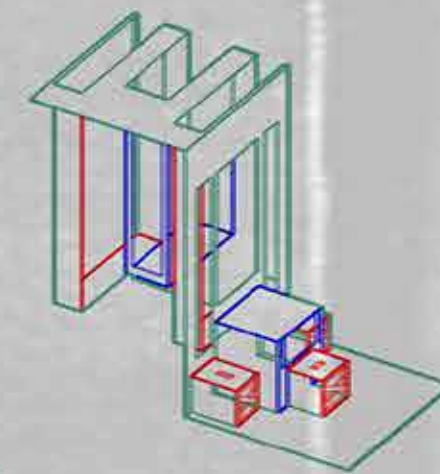
STEP 4.



STEP 5.



STEP 6.

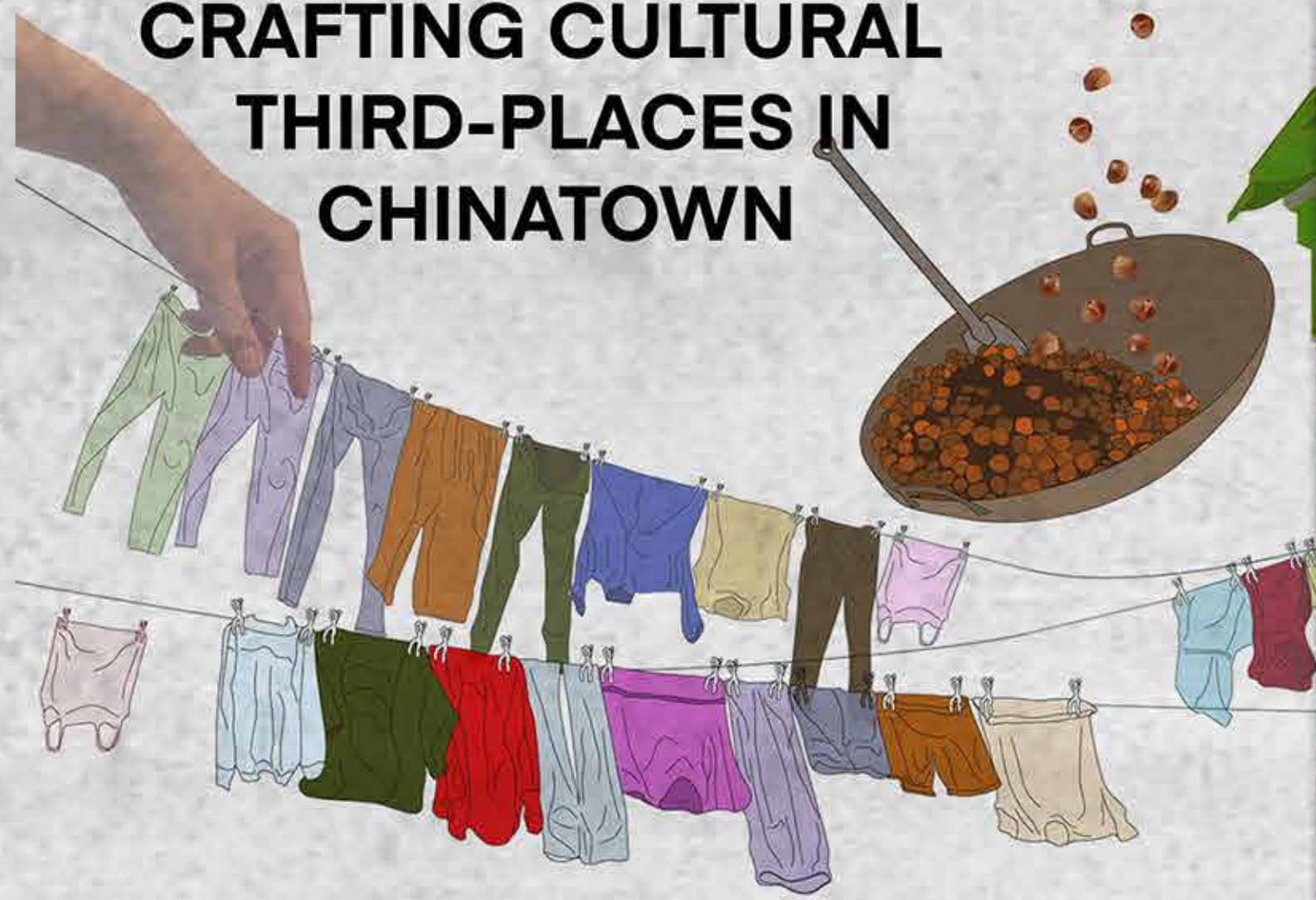


77 MOTT STREET





## CRAFTING CULTURAL THIRD-PLACES IN CHINATOWN



Is the significance and cultural value of Dai Pai Dong only embedded in the food?

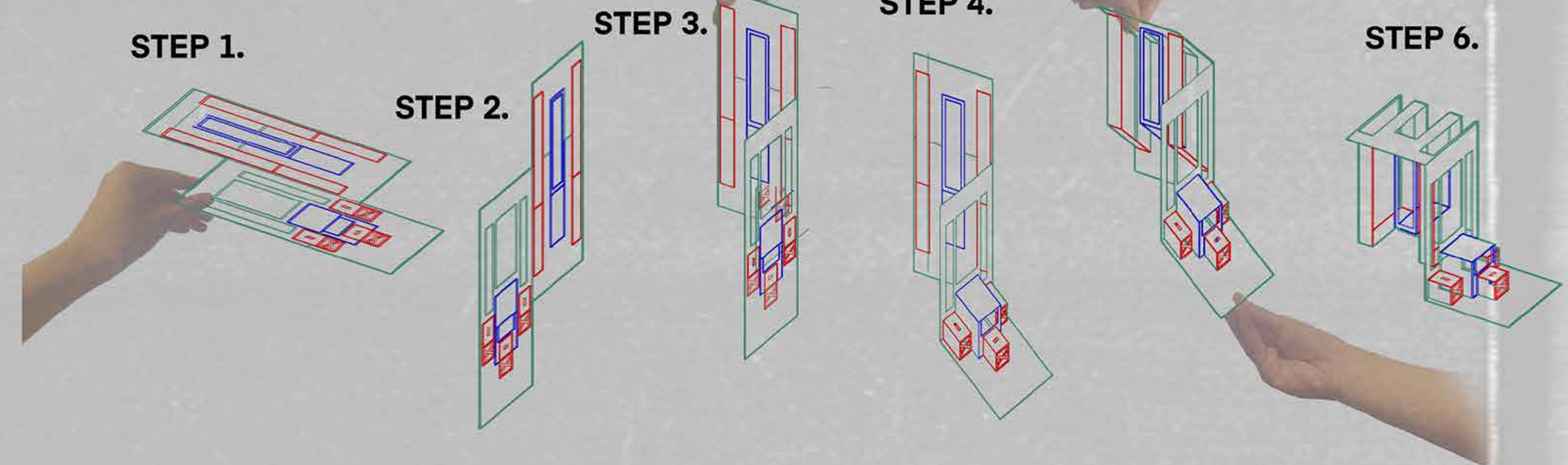
Is its historical value and its story come from the generational history of ownership?

What happened when a Dai Pai Dong has moved indoors?  
Does it lose its cultural attraction value?

Is the recognisable "architecture" of a dai pai dong pure novelty and should we encourage its evolution?



## FLAT-PACK DAI PAI DONG 大牌檔



73 MOTT STREET



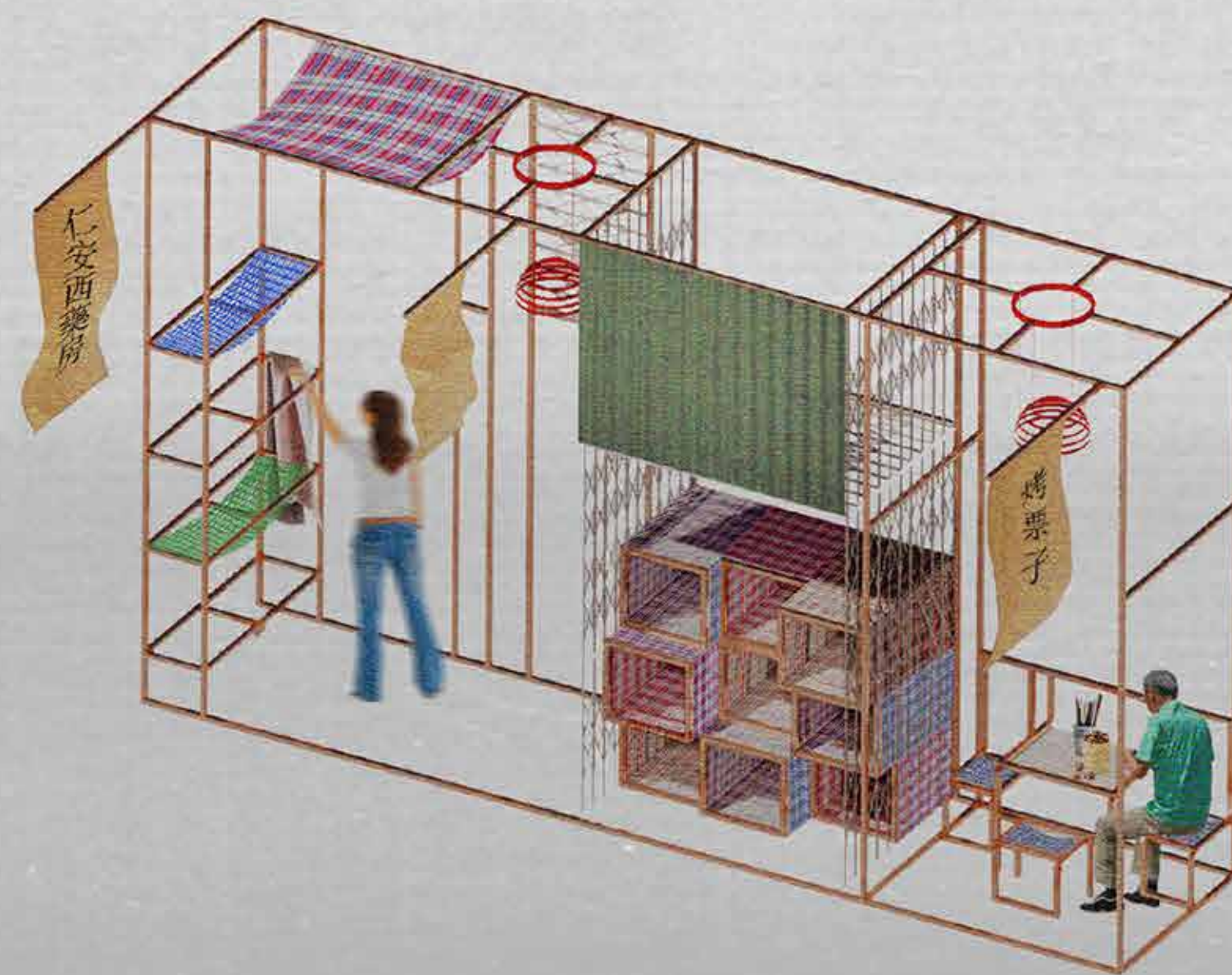
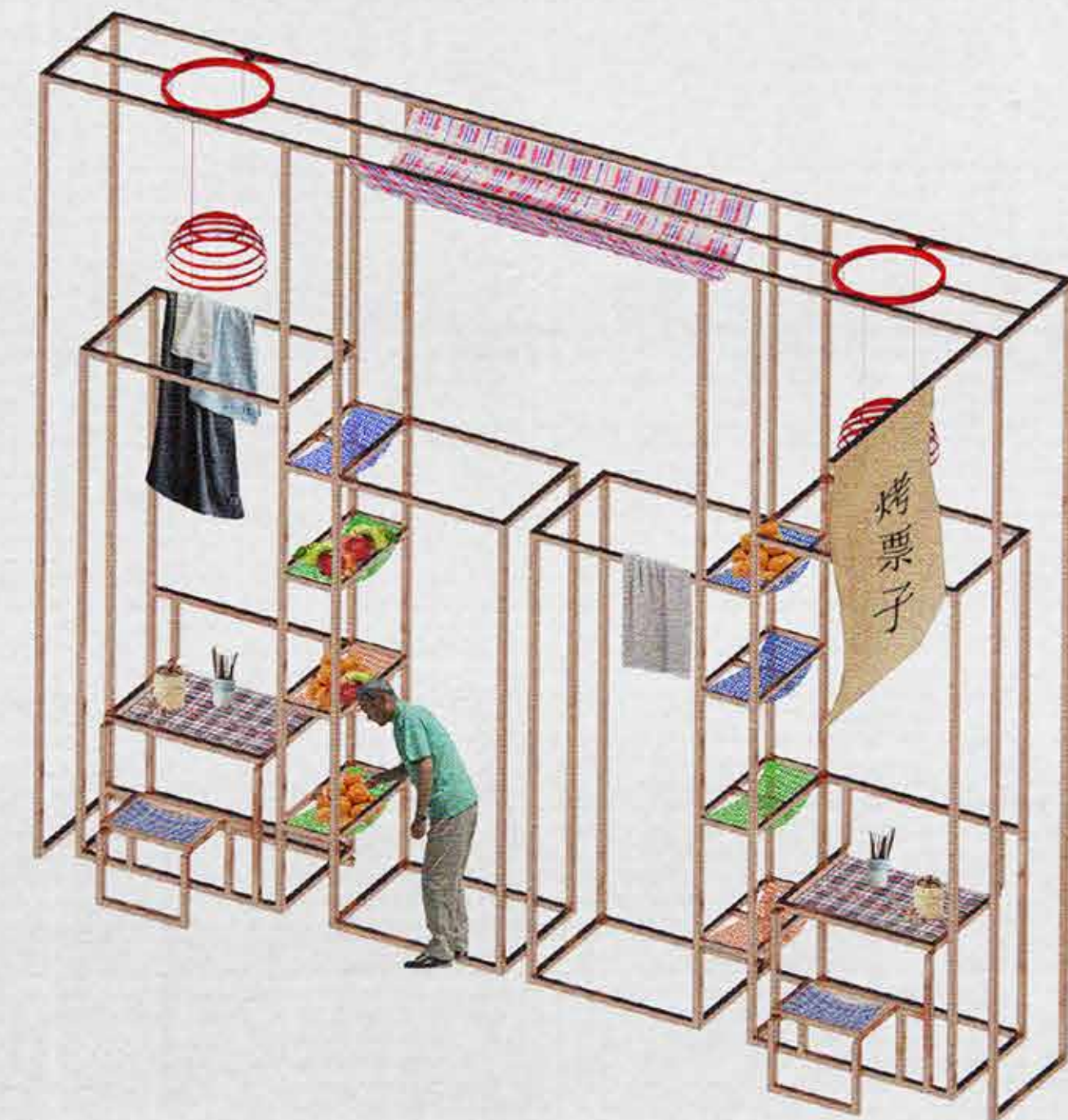
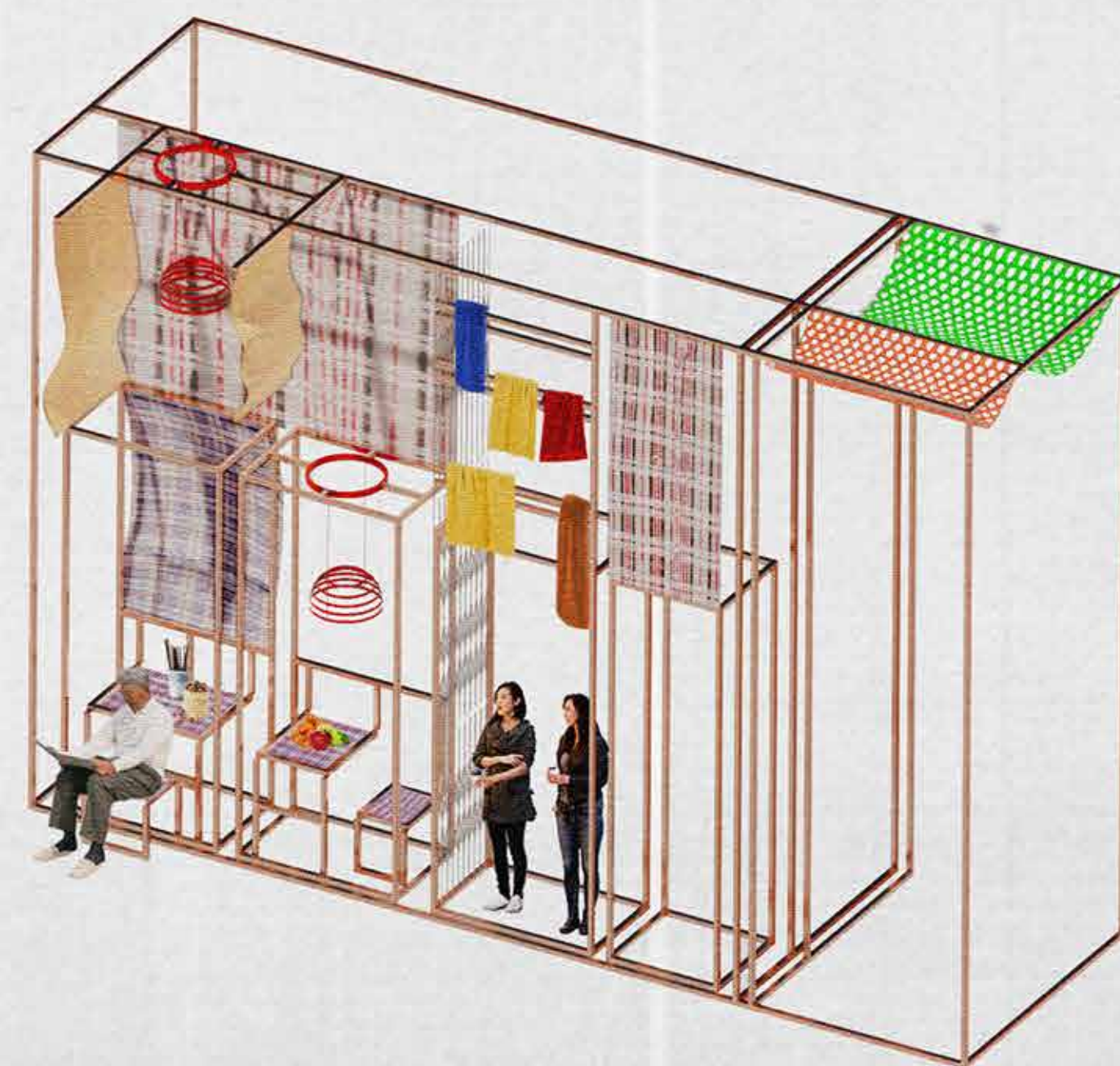
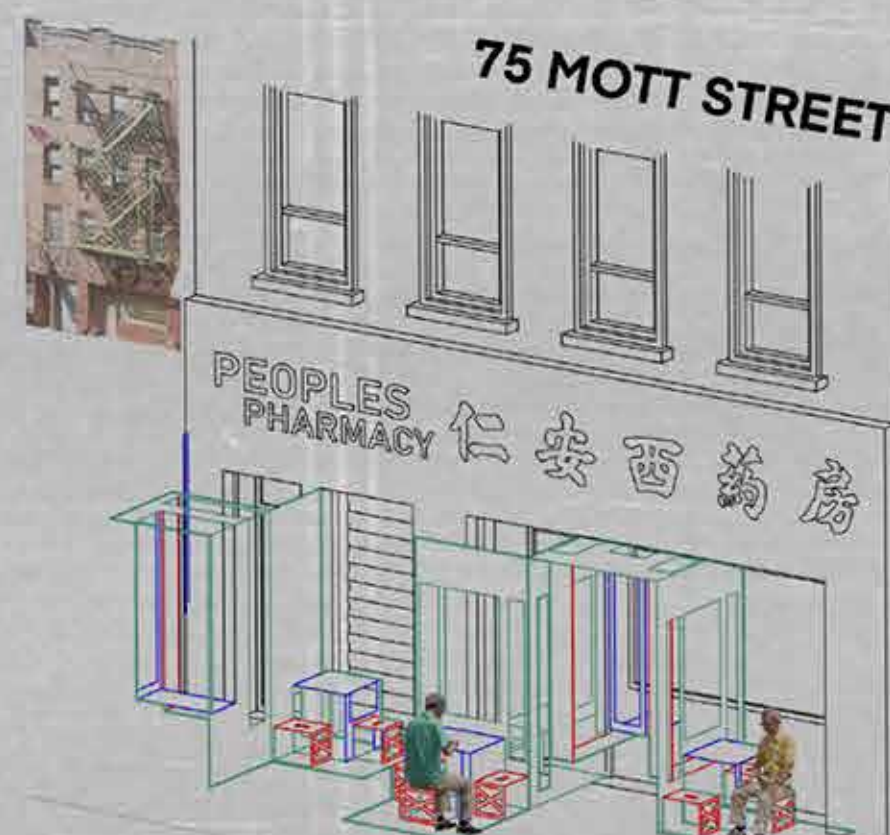
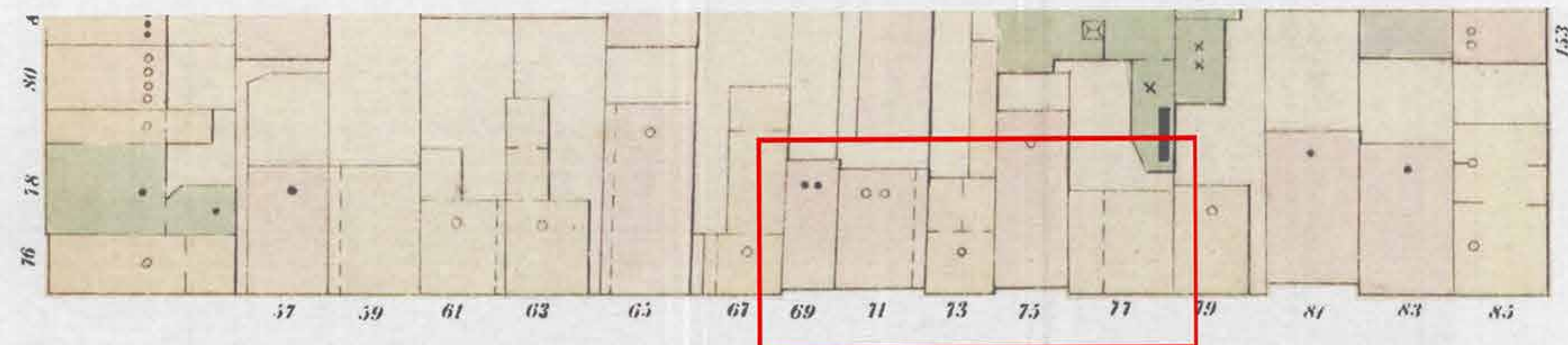
77 MOTT STREET





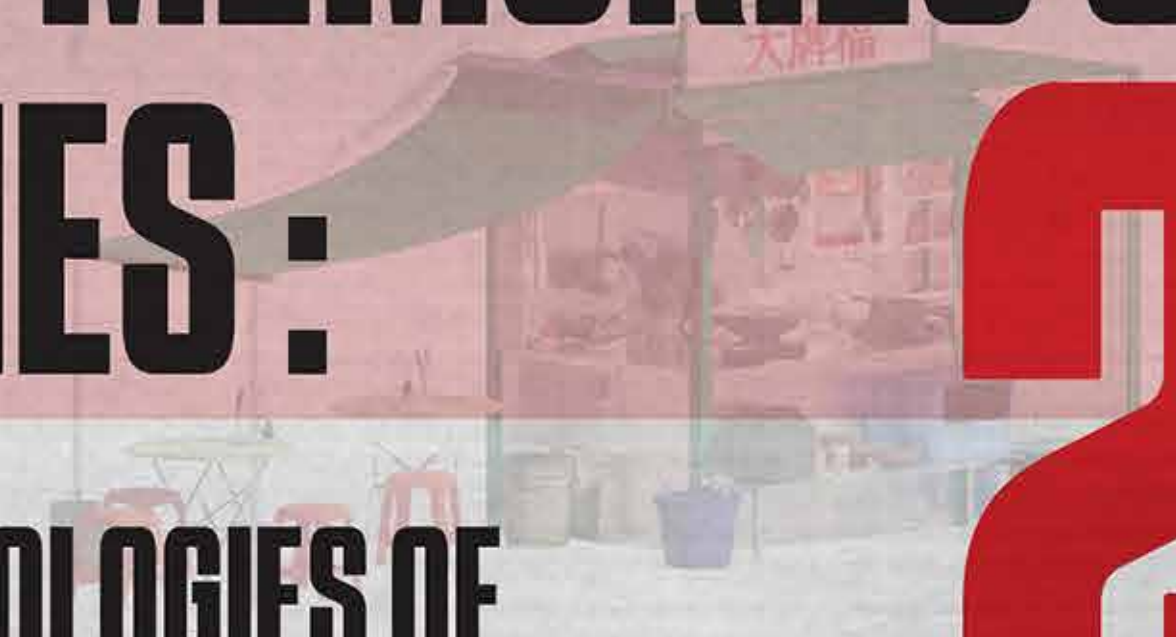
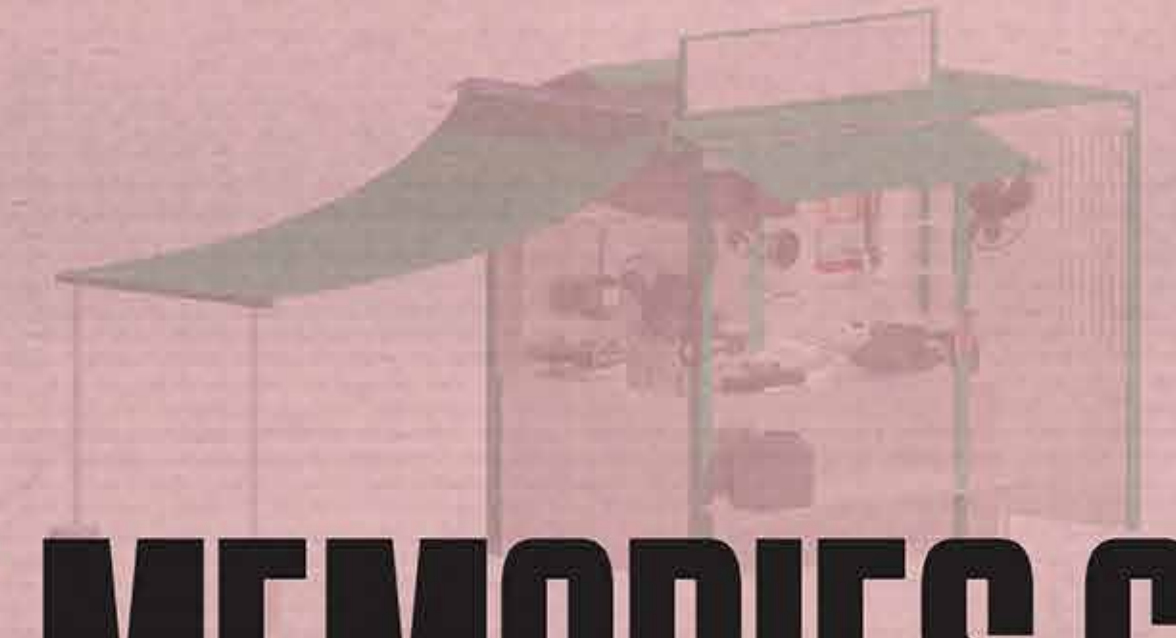
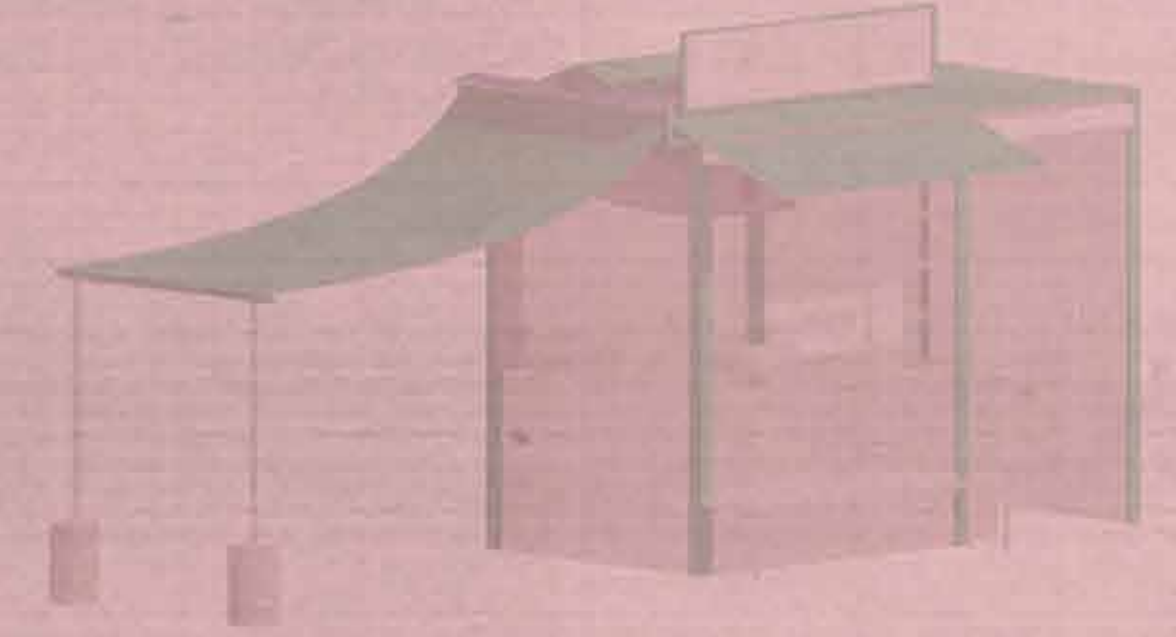
# HISTORICAL BUILDINGS OF MOTT STREET

1853





MENTS OF A DAI PAI DONG



# URBAN CULINARY MEMORIES & INFORMAL LEGACIES:

PRESERVING THE DAI PAI DONG TYPOLOGIES OF HONG KONG'S STREET CULTURE





## Introduction:

Preserving spaces of vernacular architecture, informal cuisine and individual lived histories presents a complex challenge in every rapidly developing urban cityscape, especially when these spaces lack fixed boundaries but hold cultural permanence within a vibrant community. Such is the case with the Dai Pai dong, a typology of open air food stall that is specific to the city of Hong Kong.

To understand the emergence of the Dai pai dong, its city of origin has to be introduced. Hong Kong, one of the most metropolitan and cosmopolitan cities in the world. It is more than the glamorous gleam from the modern facade of shiny skyscrapers like the HSBC building by Norman Foster and the spectacle of uber-luxurious shopping malls. More than the sleek characterisation of the city-slick bankers, international commerce and its commercial-driven Central District. Hong Kong's culture is rooted in its native citizens, and of the intersection between the local population and the integration of immigrants and expatriates, creating the home of one of the most vibrant gastronomic cultures. The cuisine of the city, particularly, street food culture is entwined with the history of Hong Kong. One notably and arguably iconic representation of Hong Kong food culture is the Dai Pai Dong. A typology of urban food hawker stall, is undeniably culturally significant and recognisable. With appearances in films such as ChungKing Express directed by the critically acclaimed Wong Kar Wai, a nostalgic reflection of 1990s Hong Kong through its raw and genuine glimpses of Hong Kong life, the dai pai dong plays a role several times throughout the film as a third place setting weaving in chance encounters, social gatherings and an energetic space of intimate connections.

## ARCHITECTURAL ELEMENTS OF A DAI PAI DONG





## Historical Context

The Dai Pai Dong's association with the urban environment of Hong Kong is integral to the imagery of local Hong Kong cultural and historical fabric. Its origins and creation of this typology of food stall is bound with Hong Kong's history and its troubled identity under the power struggles of countless political and colonial regimes.

During the late 19th to mid 20th century, the city experienced countless political and regime changes. Beginning with the Opium Wars 1839-1842 and 1850-1860, this event demarcated the beginnings of Hong Kong's tumultuous history as the British colonised Hong Kong, securing what colonists claimed was a "barren rock" and transforming it into a historically "important economic center and the best port in Asia" (Caroll 528).

Several decades later, the British colony of Hong Kong fell in 1941 during World War II, surrendering to the Japanese after a 18 day battle (National Archive). Local civilians, Cantonese natives and British expatriates alike attempted to escape. However, a majority were subjected to internment camps, murdered, tortured and 20,000 people rumored to have been forcibly sent off to Hainan Island to work in the mines (JinYang news). The British resumed control of Hong Kong when the Chinese Civil War began. The Japanese Occupation lasted for 3 years and 8 months till the end of World War II. Immediately, the British government resumed control of Hong Kong and its "millions of lives lost and devastated economy" (Poshek Fu 381).

The economy and stability of the city of Hong Kong could not recover fast enough, as soon after the Japanese Occupation, began the Chinese Civil War disrupting 40% of Hong Kong total trade as the city heavily relied on China. Then quickly came about China's involvement in the Korean War as a communist ally of North Korea fighting against UN forces. In retaliation, the United States placed trade embargoes on China in 1950 including Hong Kong and Macao. Although they were both British colonies the United States perceived the two cities as the "weak links in the economic chain they intended to throw around the China coast" as a result almost all goods were refused export to Hong Kong causing a shut down of industry (Carmen C. M. Tsui 187.) In these destitute conditions, food, household goods and fuel increased approximately 50%. At this point in 1955, the Hong Kong people were only earning 30 dollars per person when the cost of living to keep a person healthy

cost \$50-60 dollars (Carmen C. M. Tsui 188.)

To fight the increasing retail food prices, the Urban Council of Hong Kong began to leniently issue food licences in 1950 to markets and individual vendors to create a more competitive economy and provide civilians with cheaper sources of food. In this process, the government began to issue adhoc licenses to any civil servants and former soldiers who wishes to create their own small food business as a way to quickly create more jobs through the need for boosting the food industry (Carmen C. M. Tsui 188.)

Within this context of economic desperation is where the first Dai Pai Dongs emerged. These quick-to-create food stalls became the lifelines of many struggling families in a prolonged Post War environment. Their simple improvised open air design with folding awnings and portable military kerosene stoves allowed local vendors to be set up in 15 mins offering accessible and affordable meals to the Hong Kong population in urgent need. (Brian Lau Chatteris).

## The Elements of the Dai Pai Dong

The Dai Pai Dong has had many evolutions of culinary, contextual and visual identity in the rapidly changing urban and modernizing cityscape of Hong Kong. It's original chinese translation 大排檔 and 大牌檔 are constantly debated and interchanged in reference to these food stalls. The word Pai 排 or 牌 in chinese meaning row and license respectively, demonstrating the differing neighborhood impressions of the characteristics of the Dai Pai Dong. Most dai pai dongs used the word 排 in the names of their business in correlation to the rows of food stalls that would line up next to each other. In the early days of the Dai pai dong, the businesses would occupy space between side streets and apartment complexes in organised rows providing the neighborhood countless options one after another for affordable meals. In comparison, the word 牌 is noticeably used in government articles, subtitles translations of interviews and other news journals. 牌 or licence is referencing the large license signs that were required to be hung on the exteriors of the open air establishments to show police of their government approved statuses.

Aside from the etymology of the chinese word for Dai Pai Dong that reveals a glimpse into the community identity of this typology of food stall, the unique characteristics of the

大排檔 are defined by three main elements- its vernacular architecture, the food menu and the generational journeys of the local Dai Pai Dong entrepreneur.

## The Architecture

The vernacular architecture of the dai pai dong is characterised by its vibrant green awnings held up with metal poles cast in concrete buckets, and simple butane stoves. The visual aspects of dai pai dongs have not changed from its initial conception in the 1950s. It has retained its large red signage with green borders, aluminum counters, foldable wooden tables, red plastic stools and scattered multicolored and multi purpose plastic buckets. On a detailed scale, stacks of bowls are tucked away in metal shelves, tables are equipped with cups filled with chopsticks, chilli sauces, soy sauces and other oils which are contained in little ribbed glass jars with metal lids and small spoons and the red "lucky calendar" hung near the cash register within the stall. Finally, the food stall's presentation format of their menu varies from the traditional hand-scrawled white board menus in black marker and the modern plastic laminated printed menus.

## The Menu

The contents of each menu of the dai pai dong are slightly unique from one another with varying family recipes and dishes passed down from generation to generation. However, there are four main types of specialised menus that are discernible from the collection of food stalls.

The first is the dessert stall. They specialise in serving tong sui 糖水 or in a direct translation sugar water, which historically were known as sweet concoctions with healing or health benefits. This encompasses any type of cantonese dessert soup from red bean soups, peanut filled rice dumplings, seaweed green bean soup and mango pomelo sago desserts.

The second type of menu is the wok-fry stall, often seen in films such as the previously mentioned Chungking Express. This stall is famous for its drama of its fiery wok creating a spectacle of flames flipping up into the open air to create wok fried dishes such as the iconic crispy salt and pepper squid, fried rice, stir fried clams in black bean sauce, mixed scallion noodles and beef egg and tomato stir fry. This type of menu is well known for its hearty lunch time meal for bankers, salespeople, construction workers and school

children alike, while late at night it caters to a rowdier crowd of lightly tipsy office workers following their company happy hours.

The third type of stall is the noodle stall that serves one style of noodles, whether it be an establishment that has perfected the art of wonton noodle soup and congee or a specialty dai pai dong that focuses on a selection of beef brisket, offal or liver noodle soups.

The fourth and final dai pai dong menu is the cafe stall. This menu features the beginnings of fusion cuisine revealing residual British colonial influences. From fried pork chop over rice, spam and egg scrambled sandwiches, condensed milk toast and the classic potent concoction of Hong Kong Style Milk tea, locals and tourists crave these dishes of the most satisfying breakfasts of guilty pleasure exploring the streets of Hong Kong.

Each of these menus and famous dishes, no matter how delicious, cannot compare to the significance of the owners and community experiences of the dai pai dong. It is the personal testimonies and memories of the dai pai dong that truly reveal the cultural and community impact that complete the definition and qualities of a Dai Pai Dong.

## The People

Hong Kong local Chan Kwong Lu grew up in the 1950s working at his aunt's grocery store as a delivery boy catering to nightclub ballrooms, bathhouses, "opium-smoking cabins", and mahjong houses. Through his recollection of his experiences in 1950s Hong Kong as a young boy, he describes his encounters of dai pai dongs and their original density clustered on side streets between Nathan Road and Canton Road. He recalls the endless stretching presence of the dai pai dong, no matter how little physical space the stalls occupied on the street their "tables and stools went far" even attracting famous opera singer Sun-Ma Sze Tseng. In an interviews, he speaks about the atmosphere of famous dai pai dongs such as Hing Kee 興記煲仔飯. The crowded stall served customers their signature claypot rice and roast goose till 2-3am filling the air with "smokes and noises" through the 1970s. Now Hing Kee operates out of a conventional restaurant space still serving up dishes to this day. Chan describes a community connected through these small food businesses, where dai pai dong owners would end their daily business and seek



out a eating place away from their own establishments and would often find themselves gathering for beers and snacks at the grocery store run by Chan's aunt where he quickly befriended them.

Further memories of Hong Kong's food stalls were told by Japanese Occupation survivor Poon Kwai Hoi who was 17 years old at the end of World War II speaks about his time as a shipyard worker at the Whampoa Shipyard. Working for his uncle, Poon had a monthly salary of \$20 HKD equivalent to around \$2.58 USD and received an additional \$1 HKD for lunch on sundays. He would go to the countless dai pai dongs in the district of Hung Hom between Lo Lung Hang Road and Winslow Street for full meals of roast goose and chicken for only \$0.20 to \$0.30 cents. The dai pai dongs in this area were all fixed in a row 排 on Wuhu Street.

One of the many dai pai dongs that catered to shipyard workers like Poon Kwai Hoi was Yeung Hon Yuen's family run dai pai dongs. Yeung's father first opened the stall named Ning Po Restaurant in the mid 1950s, where Yeung began to work with his father and mother since the age of six or seven. As a young child he balanced school in the mornings and working at the family business in the afternoon till 2am at night. He eventually quit school at age 11/12 as it became too hard to maintain and continued to work for his parents full time. The family eventually opened 2 more stalls, Yeung Choy Fat, a speciality fish ball and beef ball stall in the early 1960s and then Lai Heung Yuen, a cafe and coffee style stall in 1963. Yeung's family delivered to policemen, served jade stal hawkers, teachers, students and the "coolie" shipyard workers coming from transportation agencies nearby. He speaks about the close connected network of street hawkers and dai pai dong owners creating a loan system based on trust and community called a Chit Fund. His mother would lend and borrow to save money for their own family's chit fund for future needs. Yeung Hon Yuen eventually used this money in 1976 after he sold his dai pai dong license back to the government to open his own indoor cafe in honor of his mother, and the cafe's business has been thriving and growing in its current new location for almost 50 years.

### The Dai Pai Dong of Today

The past memories of the dai pai dong create a nostalgia for this community created by food bringing people from all occupations, ages and backgrounds to the foldable tables

and plastic stools. However, these remembrances contrast with the currently shifting socioeconomic realities of the dai pai dong revealing what has been lost, preserved and transformed.

With the sudden influx of hundreds of dai pai dongs and street hawkers saturating the street in the 50s and 70s, the government claimed to experience problems of obstructed traffic zones, congestion, and refuse problems created by the dai pai dongs. The government found it hard to control the countless unmonitored dai pai dongs to which they had arbitrarily handed out licences to any person who wanted to start a business. Although originally well intentioned to aid the struggling population post World War II, the government claimed that the stalls were "a nuisance", "encouraged criminality... and are a menace to public health." (Ken Newcomb 340)

To address this issue, the former Urban Council of Hong Kong "implemented the Ex-gratia Payment Scheme" in 1983 which encouraged dai pai dong owners to voluntarily relinquish their food licenses in exchange for money. The council declared that their intention was not to close down the businesses, but to offer them a solution and assistance to relocate from the street to a storefront. Their argument was based on "if the food in 'Dai Pai Dong' is delicious and there are a certain number of customers, there is still a way to operate in a private shop. ( Info.gov) In addition to the Ex gratia scheme, the council at one moment in time ruled to only allow spouses and family members of the dai pai dong owner to inherit the license, unable to transfer the license once all family member are no longer able to run the business. Following the implementation of these payment schemes, inheritance policies and the countless urban development taking, many stalls closed permanently due to higher and unaffordable rent, leaving only 15-20 dai pai dongs left in Hong Kong.

Out of the 15-20 dai pai dongs that still exist in true traditional dai pai dong fashion with vernacular green awnings and metal base is Yue Hing. Yue Hing is a cafe style dai pai dong run by Elaine after her husband the original owner passed in 2021 during covid. It was famous for their corned beef scrambled egg sandwich with signature peanut sauce. After a brief closure, the dai pai dong miraculously reopened past the pandemic. The current business is going strong after 75 years of a family run food stall.

Another successful dai pai dong is Chan Kun kee run by a father, Chow Heng, and his three sons. Originally run by a person named Chan who transferred the license to Chow Heng, the current owner after six months, what started as a dai pai dong now has two locations one in Hong Kong and the other in Sydney run by the youngest son. Its cuisine is typical of a dai pai dong in its wok fry typology, from salt and pepper squid to sweet and sour pork, but due to its success and its relocation into indoor storefronts its prices have increased significantly. Although the classic awnings are no longer green and patrons no longer sit on buckets, their success cannot be denied as they have moved their operations across two continents.

Despite these stories of resilience and success, most dai pai dongs have struggled to endure economic hardships or governmental resistance. A stall like Cheung Fat noodles was considered one of the most popular dai pai dongs, run by the Ma brothers, the outdoor restaurant was visited by neighborhood communities, tourists and the rich and famous. It opened in the 1950s and conducted strong and steady business for 70 years. From mixed scallion egg noodles, handmade fish balls, braised pork knuckles at \$4-5 dollars USD, it was quite the affordable and tasty culinary experience. Unfortunately, it was forced to closed down in 2023 due to the government reclaiming the land for redevelopment. Now, this 70 year legacy has disappeared, where many Hong Kongers did indeed attend the bittersweet closing day to show support as lifelong patrons of the dai pai dong.

This loss, along with other case studies in comparison, challenges and questions how to define the success of the dai pai dong food stalls. Between the three elements of a dai pai dong, architecture, the menu and the people, which are the most important characteristics to determine success of a dai pai dong? Is a dai pai dong's value derived from its gastronomic qualities? Or does it lie in the generational lineage of ownership and collective memory, the architecture of an open air stall and its ability to dissolve boundaries between class, age and race can connect through a shared culinary experience in the vital zone of community in the boundless space of the Dai Pai Dong.

These questions create clarity in which the cultural significance of dai pai dongs extend beyond their menus and their plastic stools. To fully understand what and why the dai pai dong is at risk culturally beyond its physical

presence, Hong Kong's colonial past of classist and racial hierarchies must be examined as they shaped public perceptions of informal working class spaces and street food culture through these harmful colonial narratives that vilified the spaces like the Dai Pai dong as "unsightly" and "disorderly" laying the groundwork for governmental policies of erasure that continue to threaten the existence of the Dai Pai Dong today.

### Colonial and Historical Perception

Dai Pai Dongs and hawker markets were historically framed as "problems" in western perspective, particularly through the colonial mindset of writer Frank Leem in the 1970. After spending time in China and Hong Kong, despite recognising the industry of hawking as their economic necessity and community value, he diagnoses the Hong Kong Hawker markets as an example of "social disorderliness" and of "litter and dirt" (Leem 82, 81) However it is under the British Government in which they constructed policies that both enabled and restricted the dai pai dongs, while denying the native Hong Kong people legitimacy in their own city,

This colonial mindset that once dismissed the livelihood of citizens and the essence of a culture continues to seep into the current Hong Kong Government participating in the erasure of a vibrant and cooperative practice. It should be recognised what was lost in street culture must be uncovered and preserved as a part of reclaiming Hong Kong's identity as the community still recovers from the reverberations of a century of British colonialism,

In British History, the narrative of the British transforming Hong Kong into one of the most metropolitan trade ports in the world is cemented in history books. This idea that Hong Kong as a special territory lived in harmony with its colonies where "the vast majority of Hong Kong's Chinese were 'free immigrants' and 'willing subjects of its colonial regime. However this narrative omits the injustices and discrimination the Hong Kong people faced during the time of British occupation.

As more British colonist settled in Hong Kong, spaces were needed to be built and designated for the new arriving population into the island. Property and land were bought and sold with the urban planning proposals of segregated housing where a demarcation line was drawn along the European district where no Chinese person could live and



"no property could be sold to anymore of Chinese descent." (242) It was ultimately declared unlawful by the supreme court, but the true mindset was revealed through other attempts of exclusion. For example, newly erected buildings "had to provide no less than 1000 cubic feet of space per occupant" which economically excluded the majority of the Hong Kong Chinese population (244). Newly developed areas such as the Kowloon peninsula was only available to people approved by the British governor of Hong Kong and although it was "understood that the Chinese were not be excluded", the governor's officer insisted that only the "clean-living" and educated members of the community" be allowed access (245).

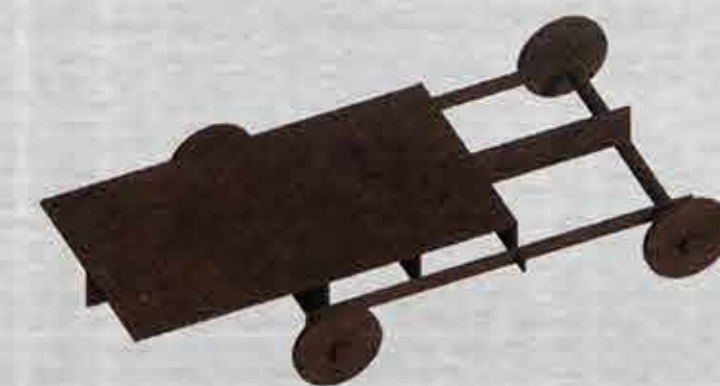
With this investigation into the legacy of discrimination and exclusion from Hong Kong's spaces from its own native citizens, it can spark a beginning of understanding how dai pai dongs have become symbols of resilience, perseverance and exclusion, as spaces that were created out of political and economic necessity, yet imbued with cultural permanence and collective memory. The preservation of the dai pai dong is not simply about saving a form of street food cuisine or an architectural typology but rather about reclaiming a space that once offered livelihood, belonging and refuge and protecting the boundaryless space of rich cultural community to those citizens and ancestors who were once denied access from colonial institutions.

The dai pai dong as a cultural and architectural entity, represents more than a simple food stall, but rather an embodiment of a living archive of Hong Kong's social history. It is a space reflecting culinary tradition, class dynamic and community identities and the valuable intercultural interactions it provides a place for. The closure of these spaces as they face urban redevelopment and governmental opposition, marks not only the loss of affordable food options but the erasure of a critical part of Hong Kong's urban fabric. As the stalls transition into more commercialized indoor space, the city loses the informal borderless nature that made the dai pai dong a unique space liberated from the rigid conventions of the public and private.

The challenge is left for Hong Kong society to decide how to choose to remember and preserve the dai pai dong. Whether it is through historical walking tours, Dai Pai Dong food festivals or informative databases and engaging websites or apps. Their roles as social hubs where people

from all walks of life could connect and engaged over a collective sense of belong over a shared meal of salt and pepper squid or beef noodle soup goes beyond preserving food tradition but about reclaiming a part of Hong Kong's urban identity and resisting the erasure of the city's working class heritage. The dai pai dong does not remain in the past to be discarded but it is a dynamic example of the enduring spirit of the community and the cultural heart of Hong Kong.

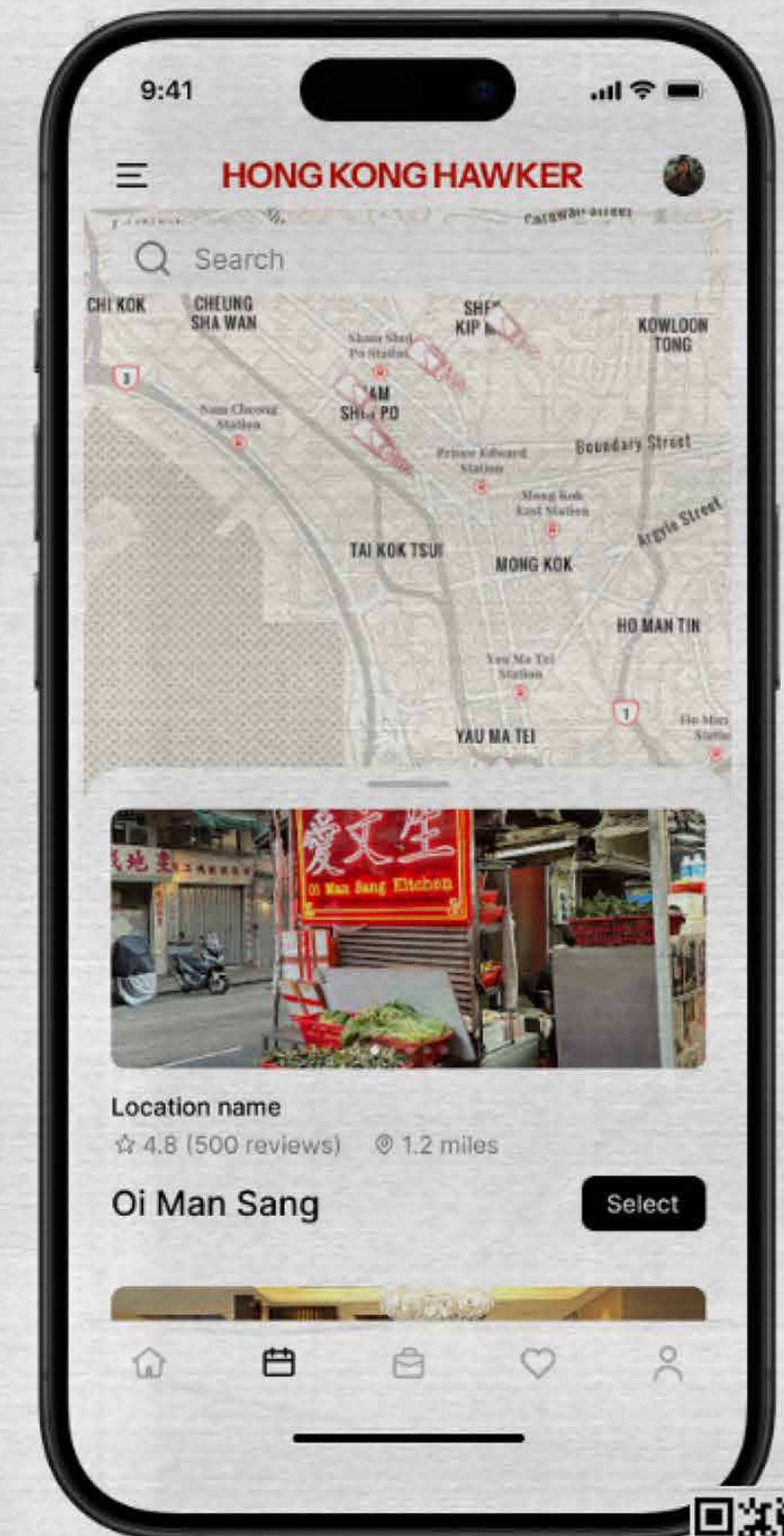
## ARCHITECTURAL ELEMENTS OF A CHESTNUT CART





From these case studies, it reveals a conversation on how we remember the iconic dai pai dong restaurants that were once neighborhood institutions now gone forever?

On the left, is a proposal of a Cultural and Culinary Preservation App to make this rich and "tasty" history readily accessible and gamified.







**RUINS, RENEWAL &  
REHABILITATION**

**3**



Sitting hidden in the middle of the Rutgers University campus, the Old Essex County Jail opened in 1837. Its presence echoes the weight of Newark history.

Its ruins of this institution are a direct reflection to the deep-seated socioeconomic and racial disparities embedded within the American incarceration system.

This project began with historical research recognizing external events that occurred in the outside world to the changes of conditions within the Essex County jail. From the effects of overcrowding during the Great depression and to the results of the Newark Riots.

This project shows an additional layer of analysis, looking at the consequences of mass incarceration on the individual. Most notably, Nixon's war on Drugs where it exacerbated a wider racial imbalance in the prison system.

During this period, Black Americans are 3.3 times more likely to be arrested for a drug war violation than White American, despite similar rates of use.

1939 RESIDENTIAL SECURITY

POP. DENSITY OF BLACK AMERICANS

1950 REDLINING & "URBAN RENEWAL"



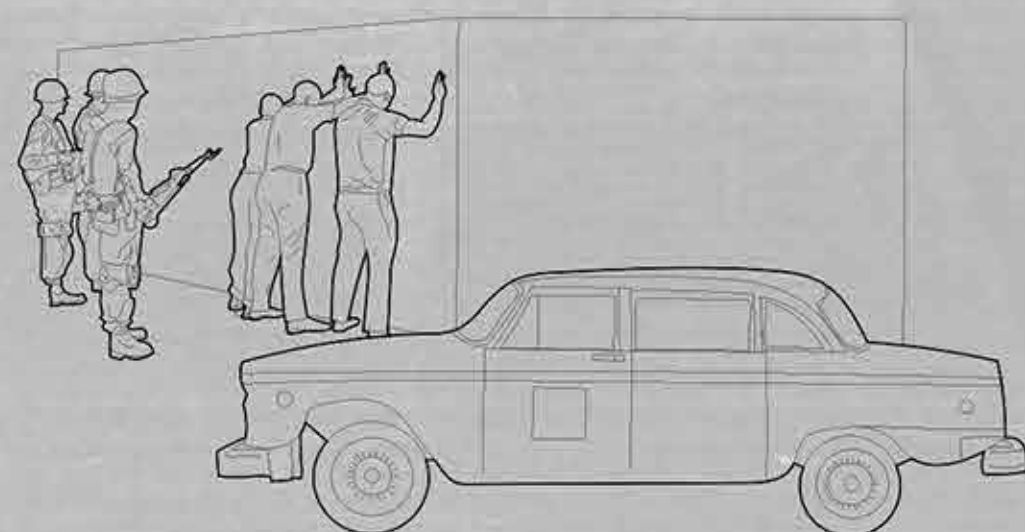


FREE  
SOUP COFFEE & DOUGHNUTS  
FOR THE UNEMPLOYED

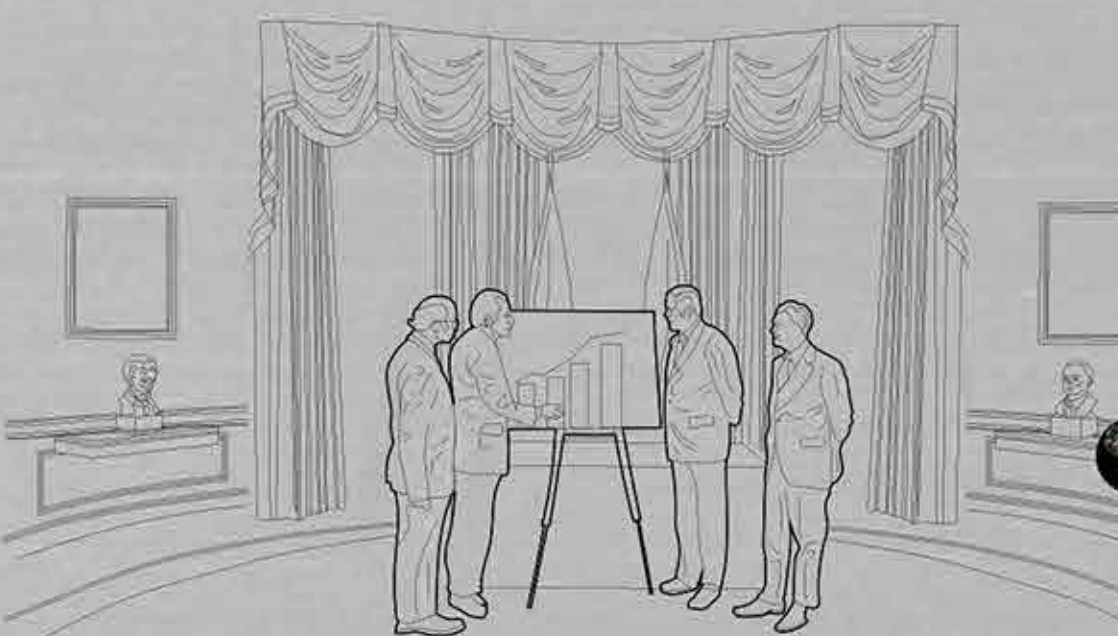
A. 1929- The Great Depression impacts Newark in full force. The jail experiences overcrowding.



B. 1967- 1000 protesting individuals are arrested after the beating of cab driver John Smith by officers. The jail reaches severe crowding and becomes an abusive environment, causing fighting amongst prisoners.



C. 1971- President Nixon declares a war on drugs. The jail is used by the Bureau of Narcotics. After the bureau moves out in 1986, thousands of law enforcement records are left behind, mixing with the debris from squatters and drug addicts.



Moving from historical to analytical research, the mapping shows systemic damage and prejudice through census reports & redlining of neighborhoods from 1939 and 1950s as shown here overlapping with the County Jail.

The chosen site looks to youth advocate programs in the Newark Area from Big Brother mentorships, Youth Trauma centers, and YouthBuild Newark that focuses on engaging disconnected young people through career development, crime prevention and education.

Extending these scattered initiatives into a hub addressing the center of the damage.

However, in its current dormant state, it is time for the prison to be reclaimed by the community it has affected.

It is imperative to focus on the idea of creating a safe space of transition and reentry for previously incarcerated youth.

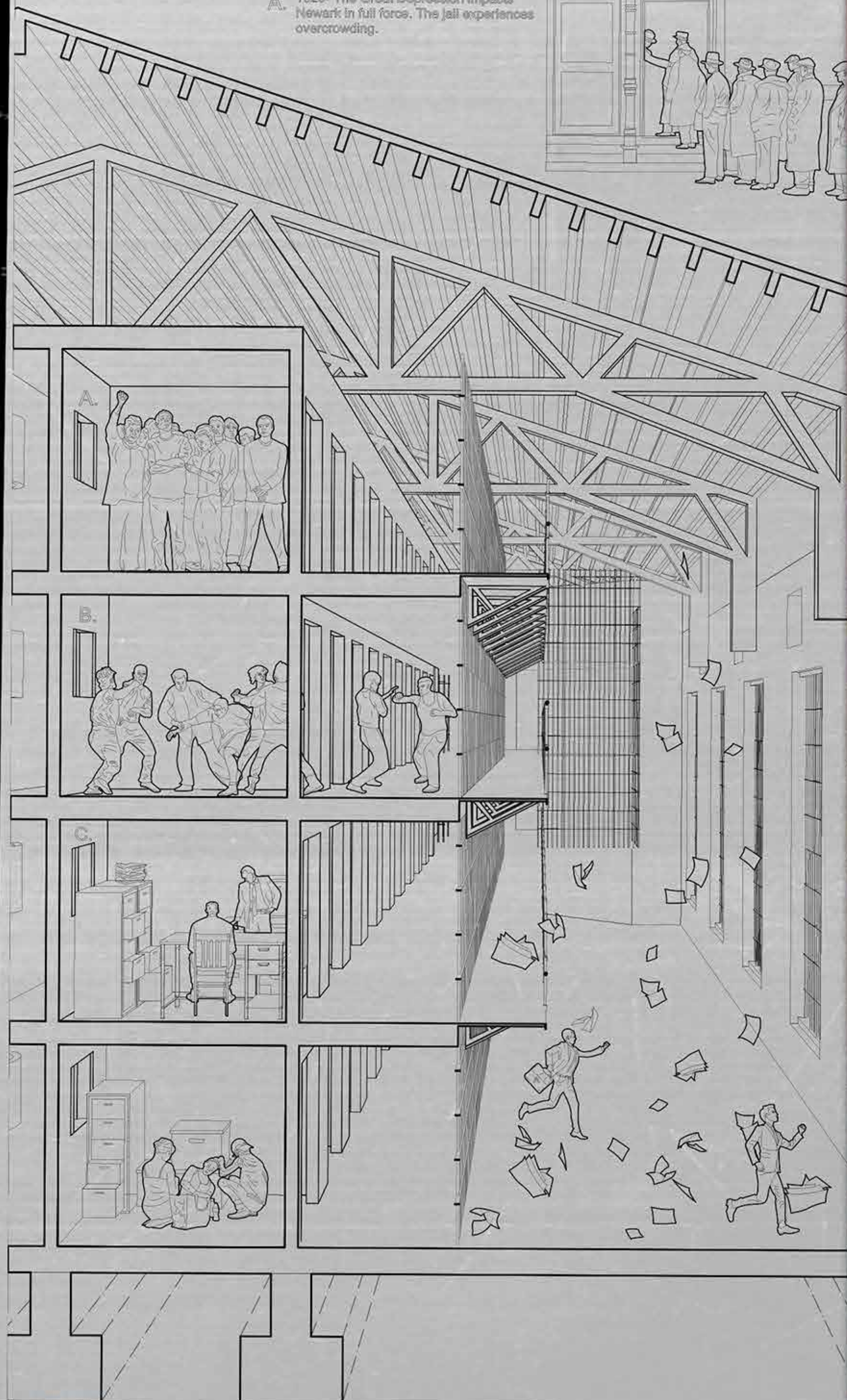
This project proposes the Old Essex County Jail as a shell adaptive reuse project offering recreation and rehabilitation for formerly incarcerated youth.





FREE  
SOUP COFFEE & DOUGHNUTS  
FOR THE UNEMPLOYED

A. 1929- The Great Depression impacts  
Newark in full force. The jail experiences  
overcrowding.



The model demonstrates the immediate consequences and long term systemic damage caused by external events that directly reflected within the jail.

#### Immediate effects in the active jail in red:

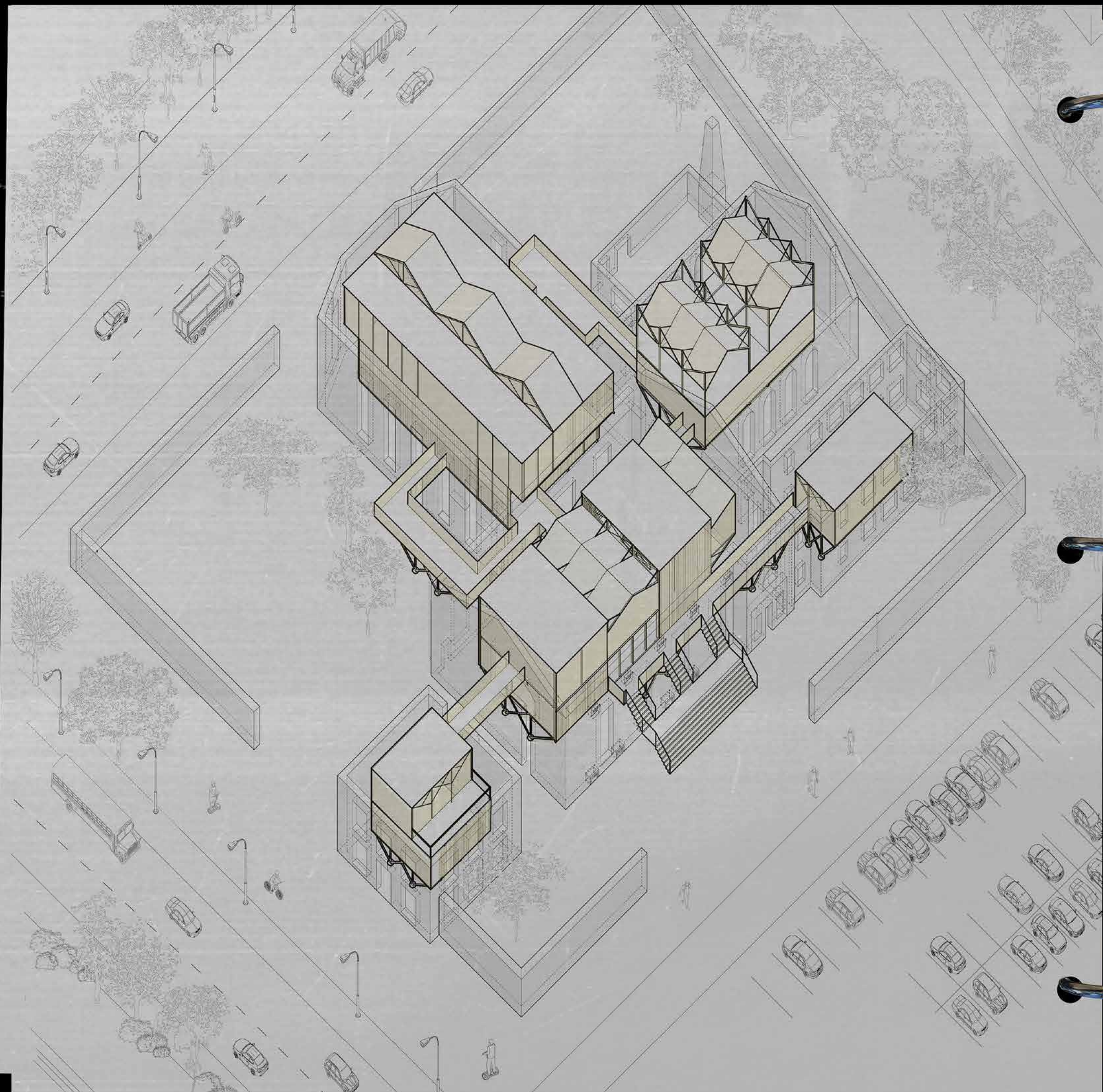
1. 1967's Newark Riots, protesters arrested in this jail after the Cab driver John Smith was a victim of police brutality.
2. Prisoner & inmate abuse of power by correctional officers as a result.
3. 1970s Bureau of narcotics in its last life used it as an office space then abandoned with confidential records

#### Long Term systemic effects in blue:

1. Solitary confinement and Isolation, resulting in severe depression to anxiety where a third do not see treatment
2. Neighborhood with higher rates of incarceration, associated with lack of healthcare and healthy food retailers, a study in Atlanta showed poor cardiometabolic health in subjects
3. Prison Gerrymandering, where people who are incarcerated outside of their hometown are counted as a part of the population. unable to vote, affecting the representation system in elections and policy.







Inspired by the surrounding youth programs and Project Avaré, an empowerment and community camp for children in San Rafael California.

The proposed tailored youth programs will include active leisure, and targeted skill-building endeavors.

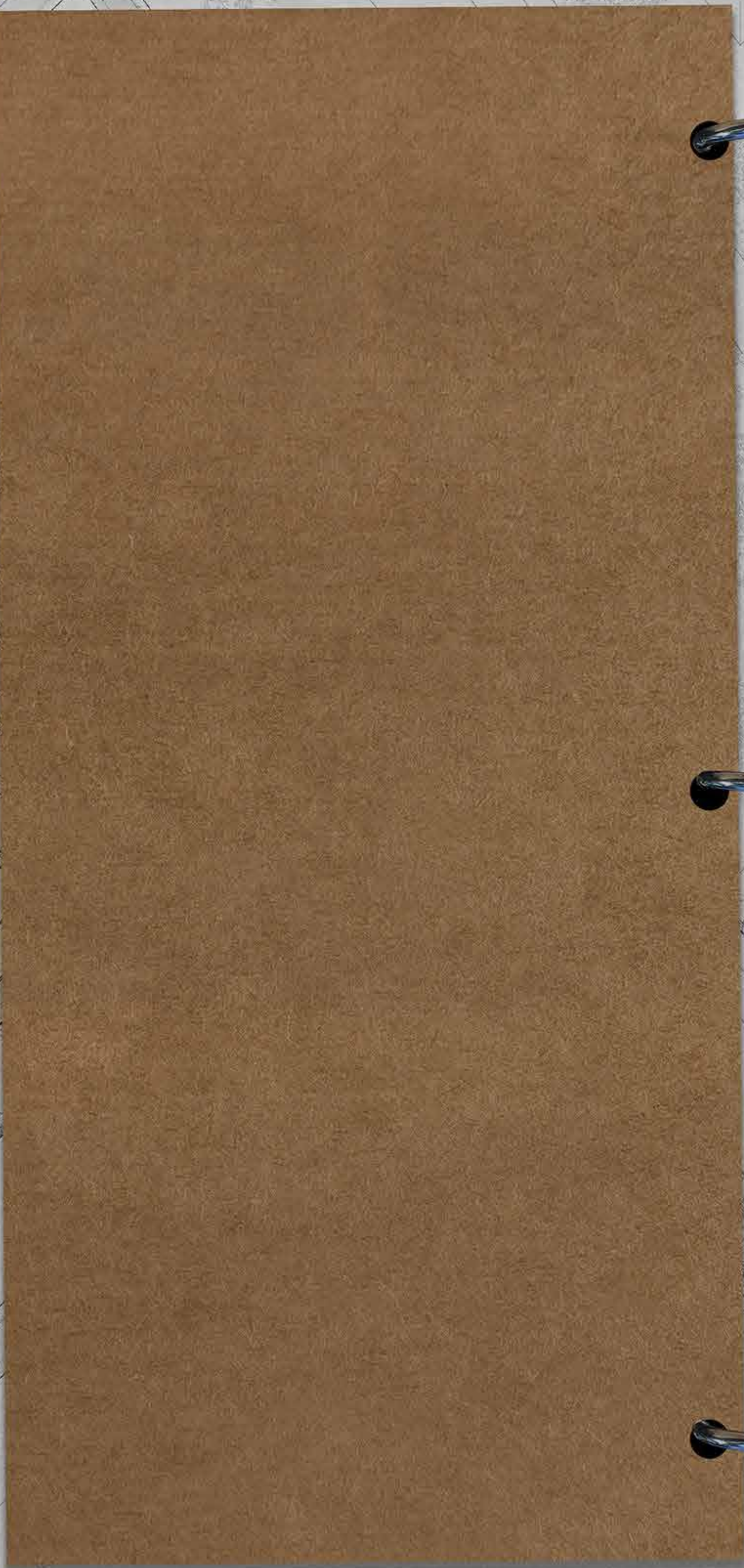
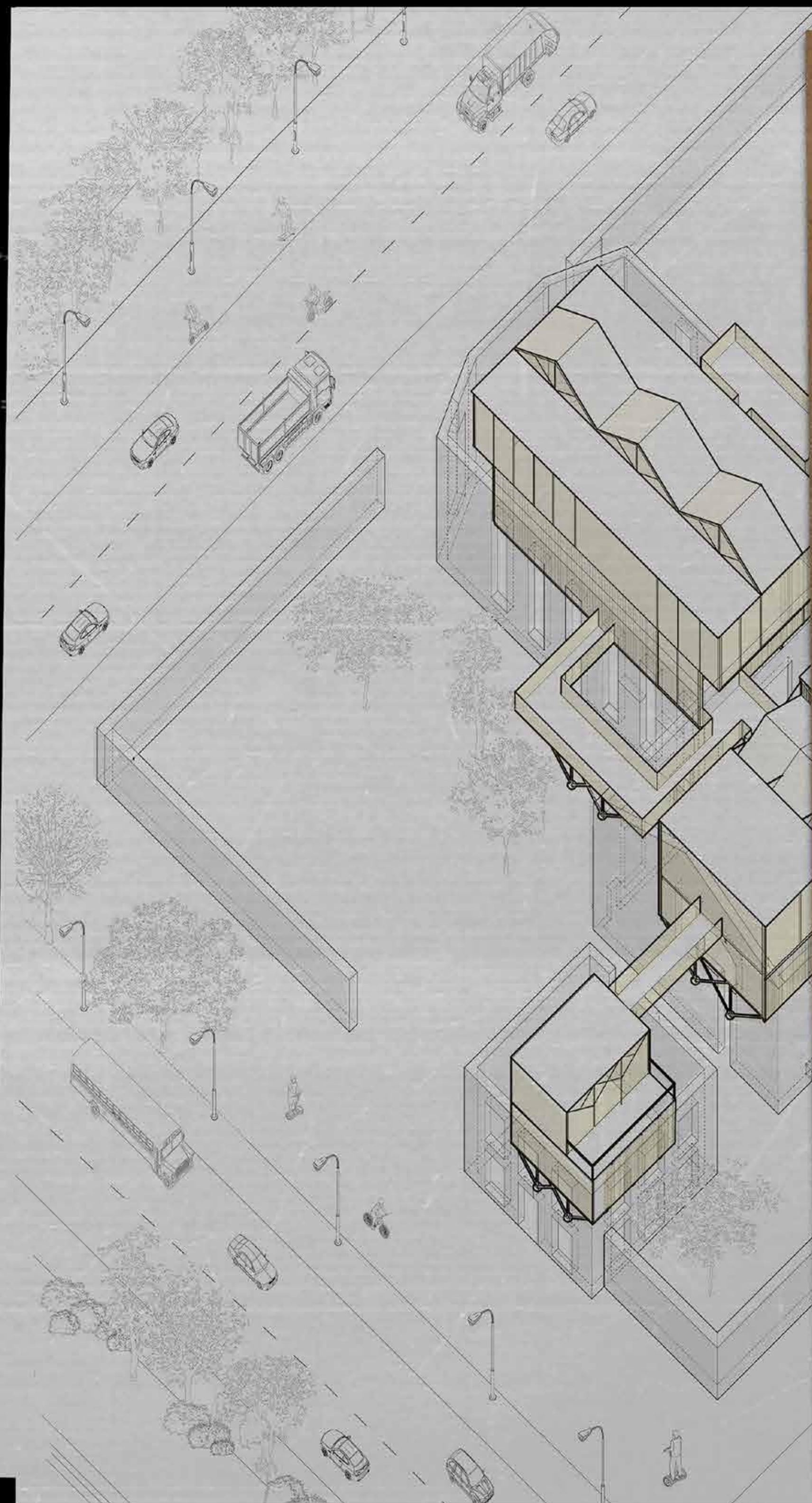
Aiming to empower participants to chart a path towards personal growth, community reengagement as well as the rediscovery of the importance of leisure and fun in teen development. Central to this initiative, the space will provide job counseling, woodworking facilities, mentorship programs, and digital makerspaces creating a safe personal space for self expression.

Teens and visitors will have different experiences, visitors will only have access to the interstitial spaces of the existing jail and the new structure, focusing on educating the public about the site's history and the effects of mass incarceration with a provoking exhibition.

While the teens will have their own separate circulation for their programs creating a safe space and the floating buildings within the existing structure represent a recognition but not an erasure of the past but rather a new future from within where history can move forward from these dark experiences.

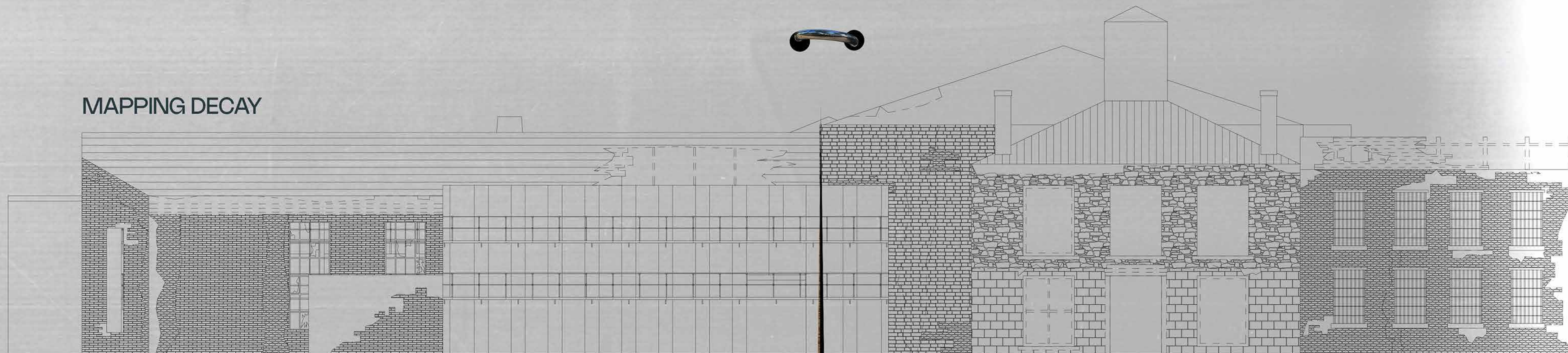




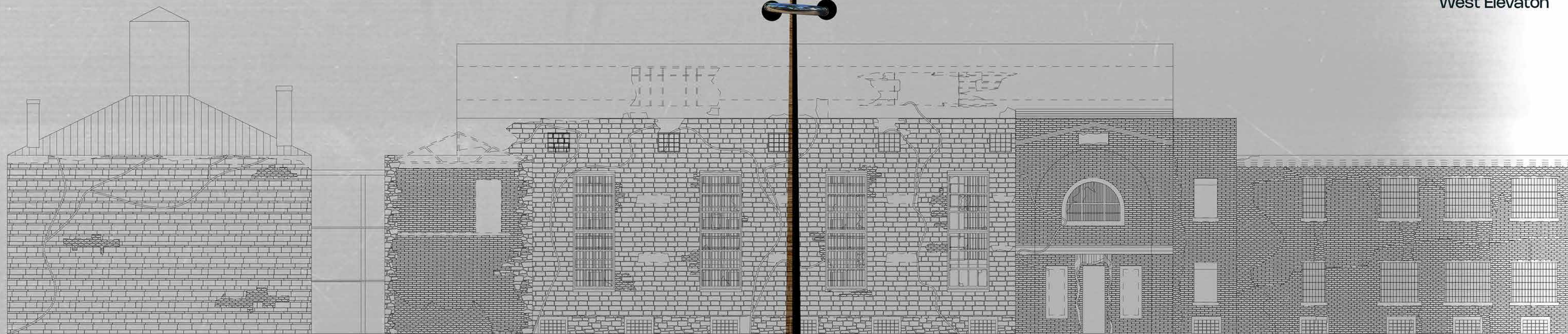




# MAPPING DECAY

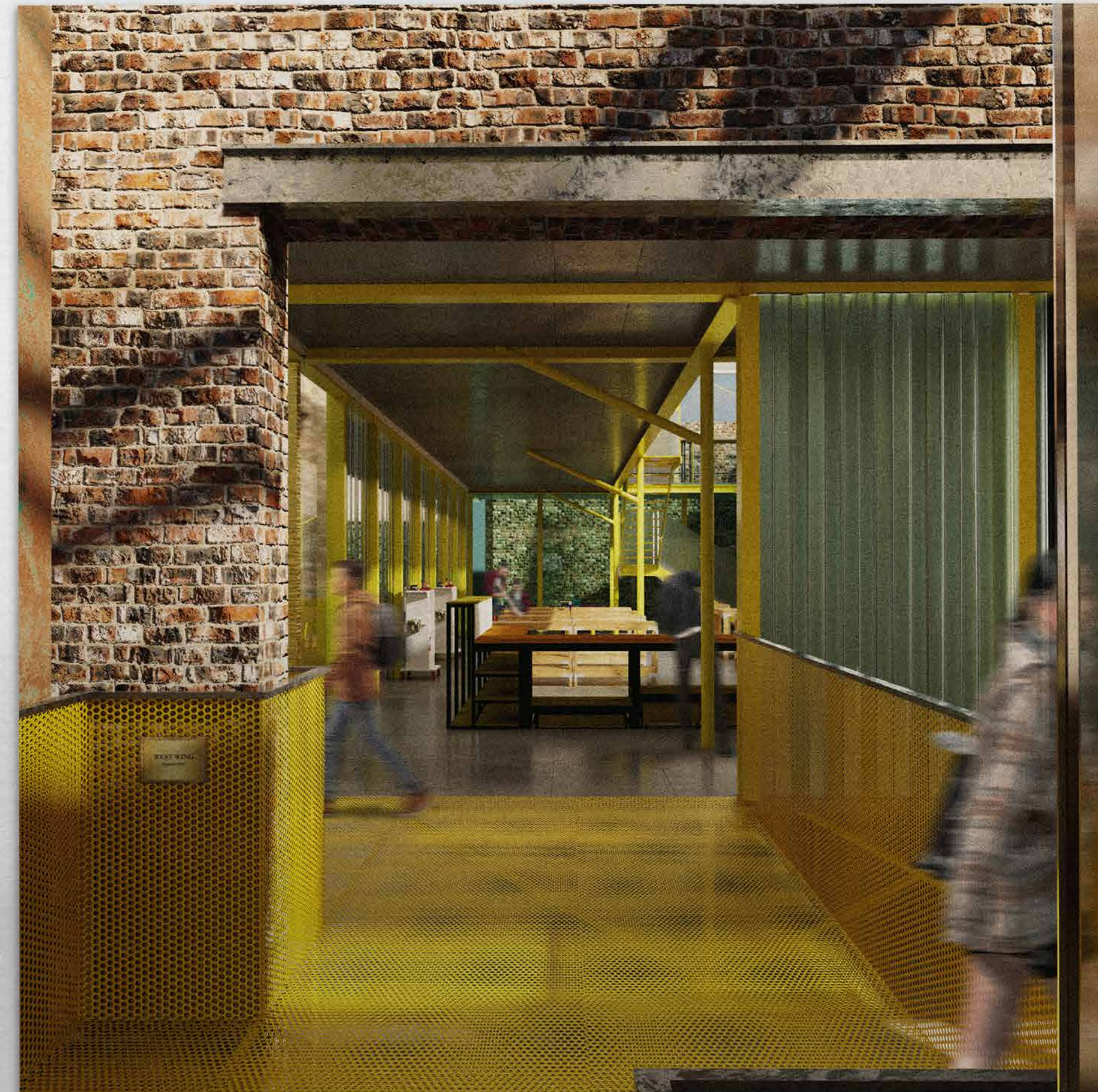


West Elevaton



South Elevaton





"Between Thresholds of Past & Present"



# CURATION & EXHIBITION

# THE PAVIA & EDGAR RESIDENCE

# 4

SCALE 1/16"

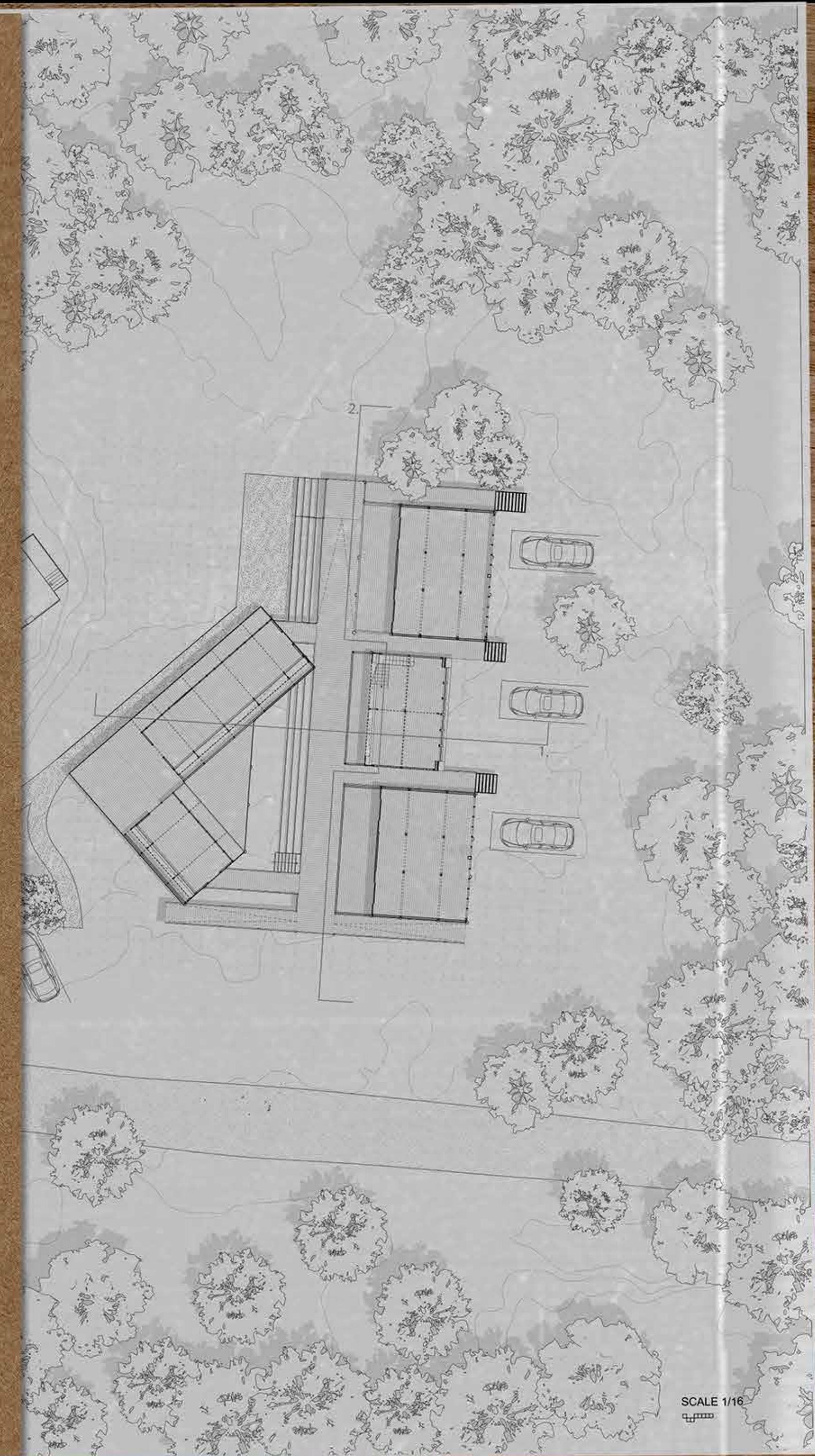


# 4 CURATION & THE PAVIA & EDGAR RESIDENCE EXHIBITION

The Pavia and Edgar Residence is a workshop space in East Hamptons created to house the late Pavia's abstract expressionist art.

Influenced by the surrounding environment of the Three Mile Harbor and the nearby Maidstone harbour, the newly proposed artist residency bring the organisational element of the dock within the landscape.

The buildings bring an element of discovery just as Pavia's sculptures are intended to be viewed as found art objects in a landscape in a calculated yet organic organisation.





Focusing on the principles of abstract expressionist principles:

**1. Movement**

Brought by the meandering circulation of the visitors

**2. Variation**

Through tilting buildings and residences to create variation in space and lighting

**3. Balance**

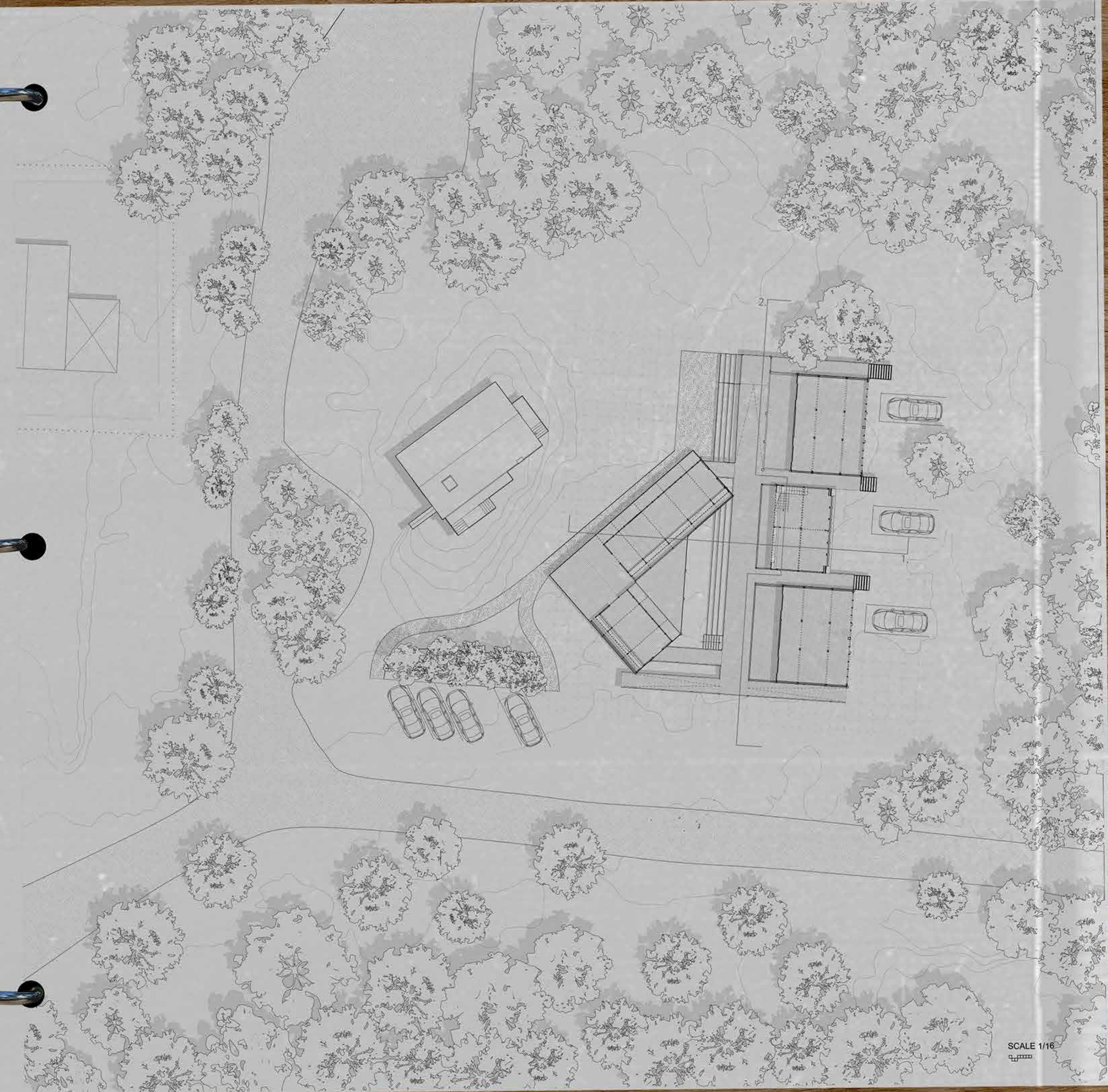
Through placement and adjustment of each building, east of the dock for visitors and west for the artist residencies.

**4. Repetition**

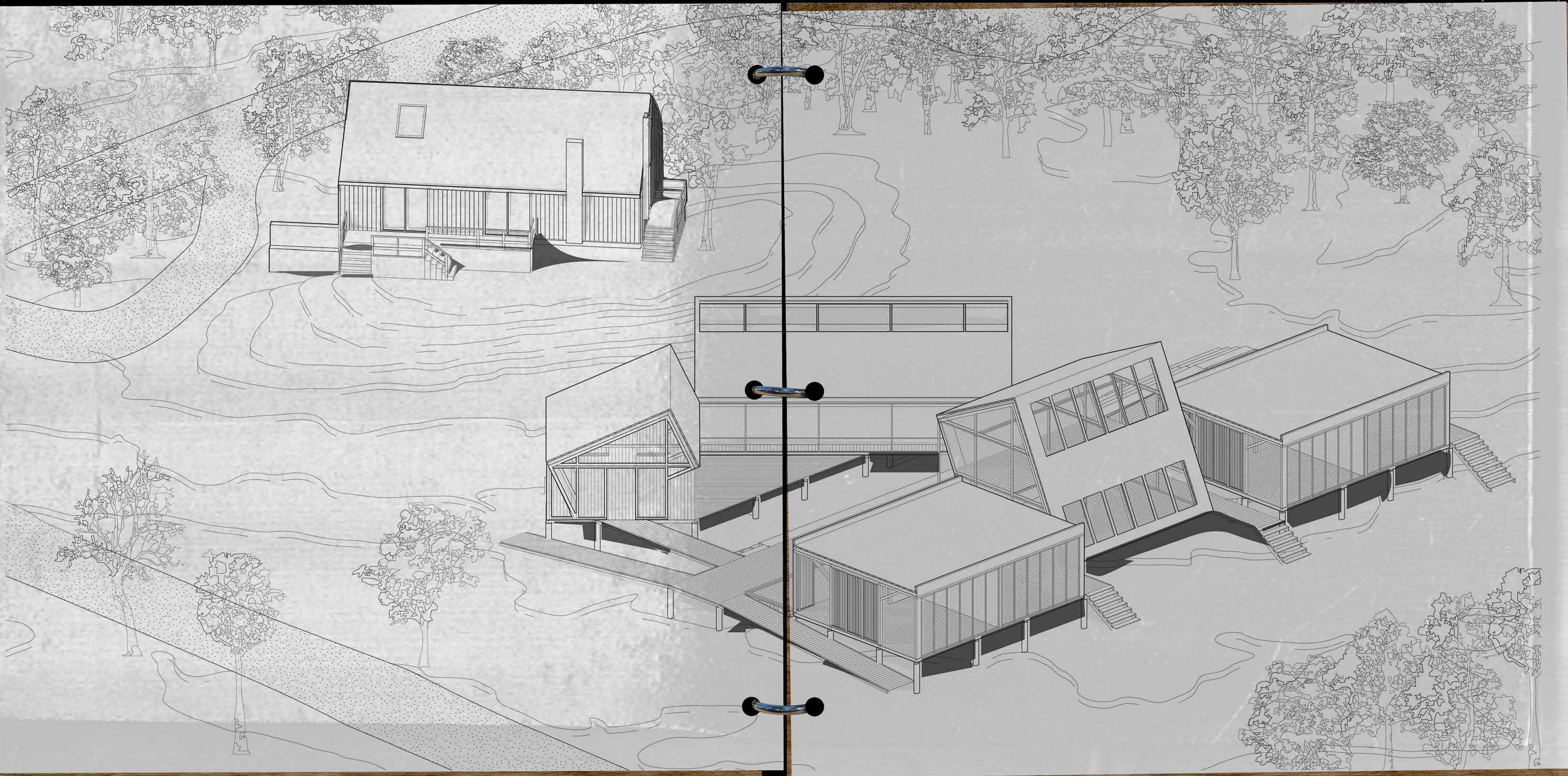
By organisation of the marine dock on land as a device of wayfinding.

**5. Energy**

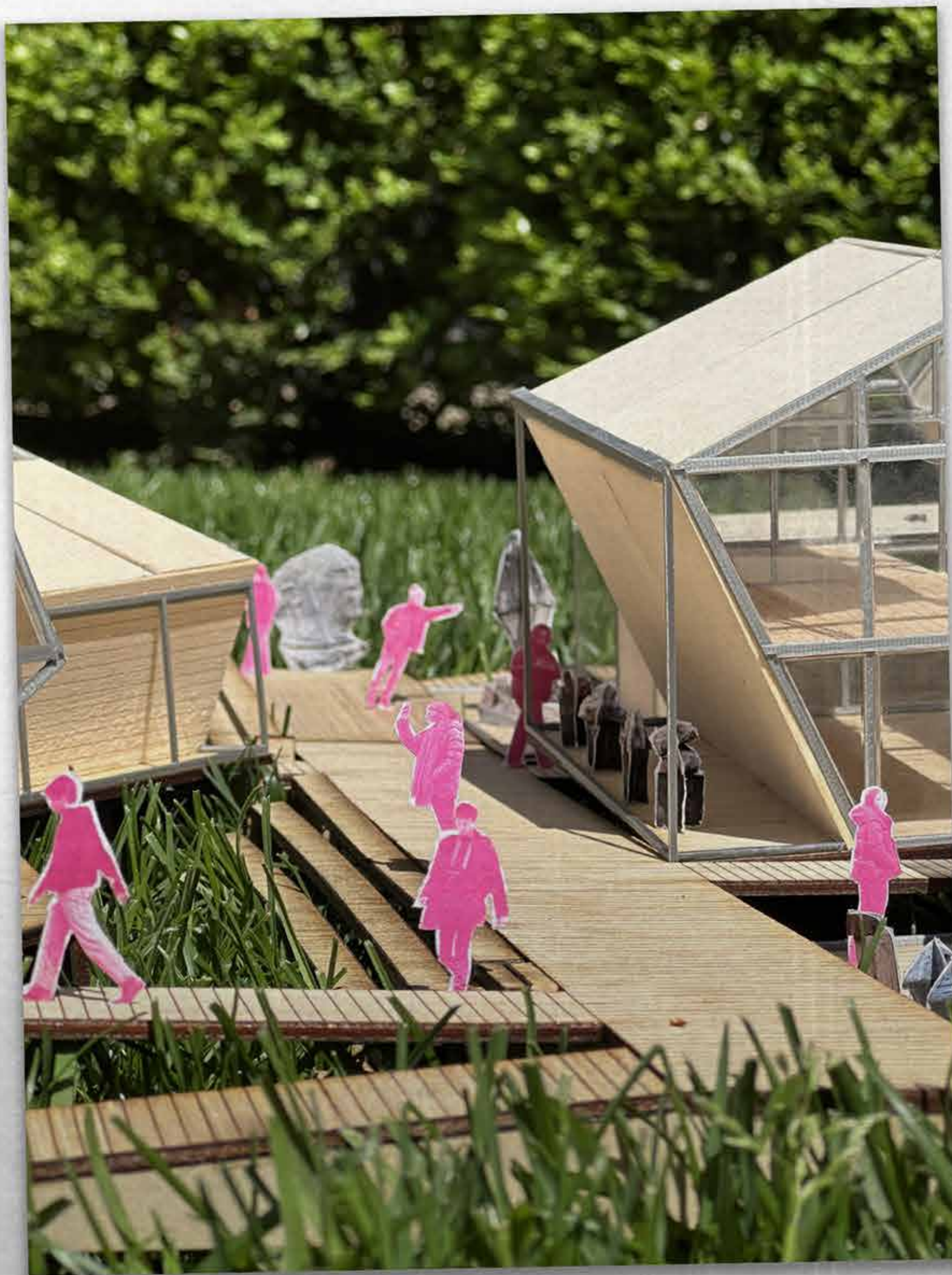
Bringing all previous elements together as one, buildings pushing, pulling, and wading in of the dock.











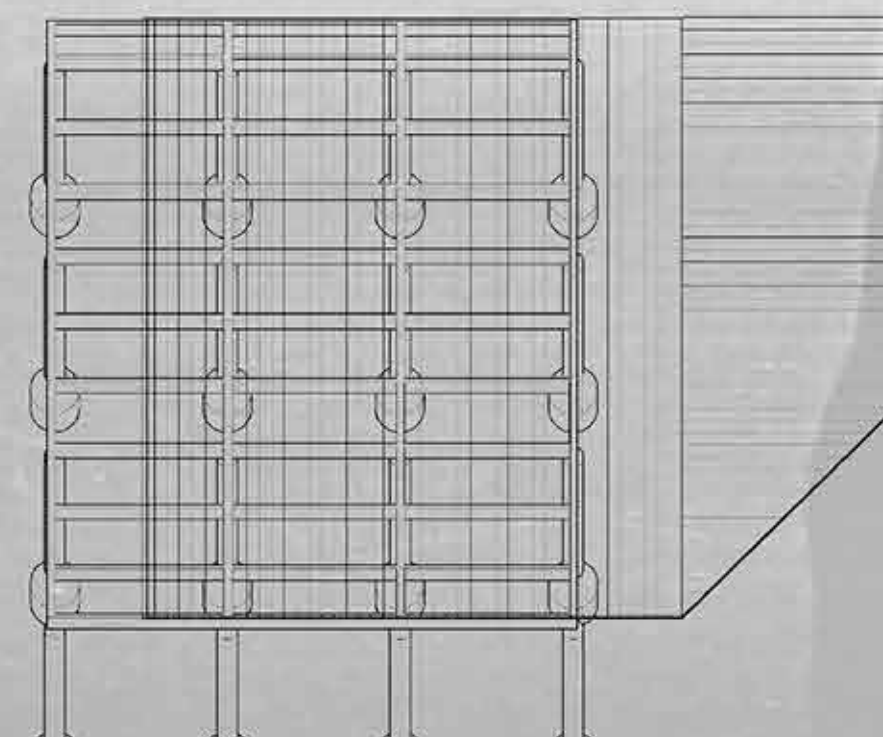
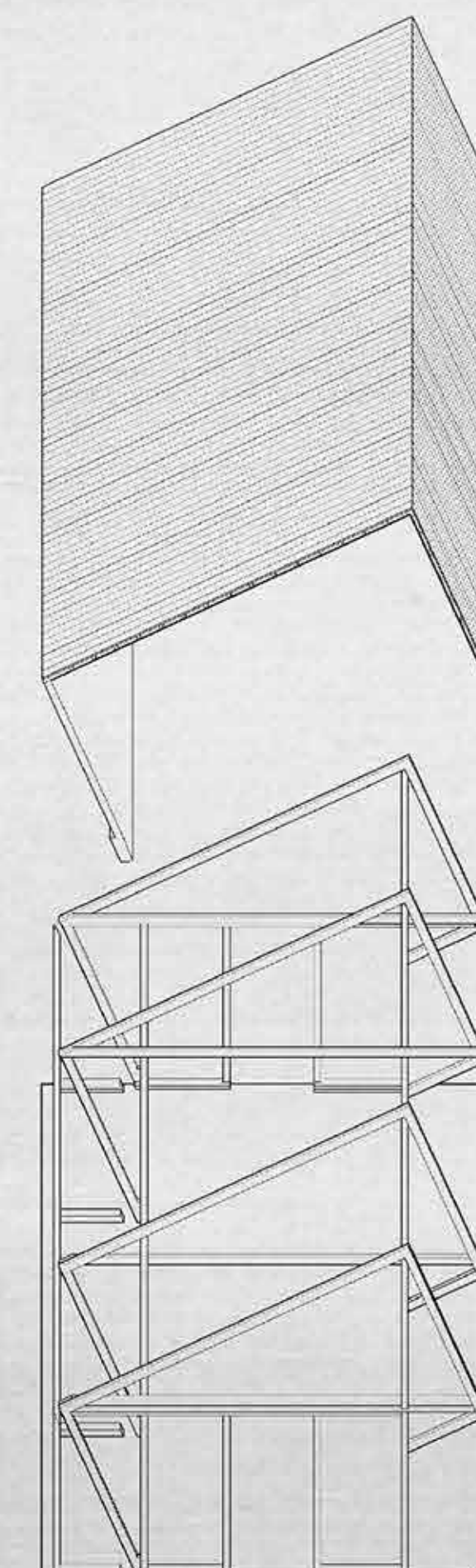
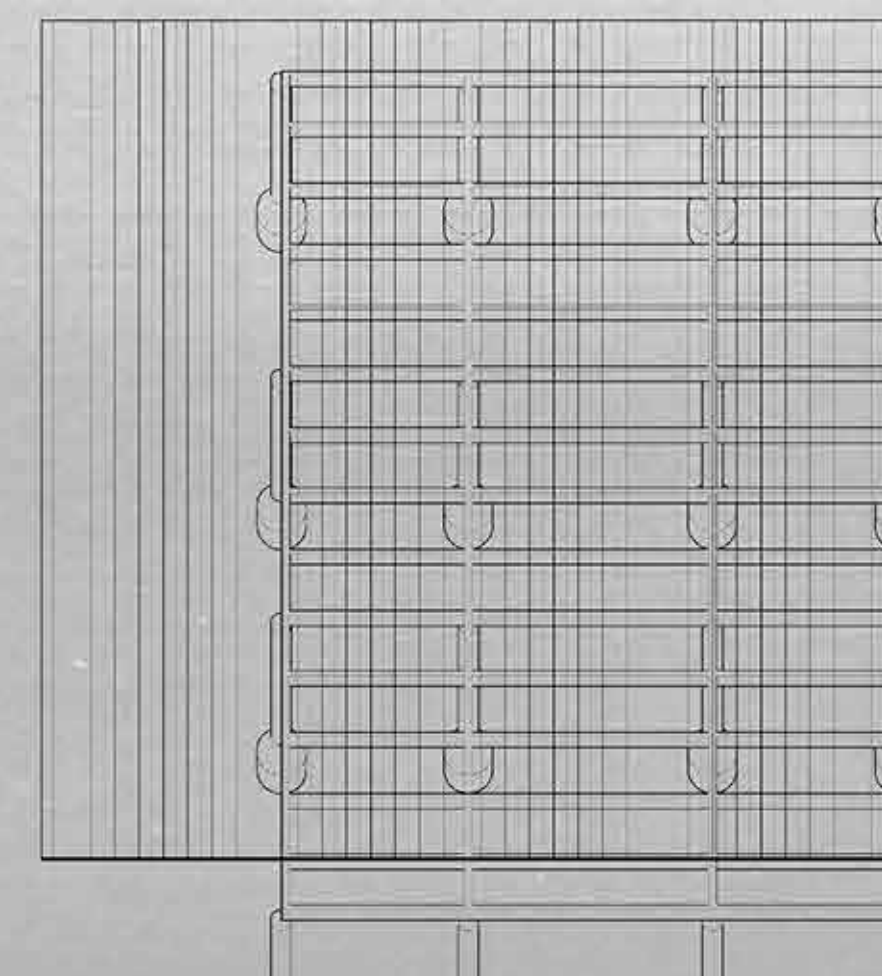
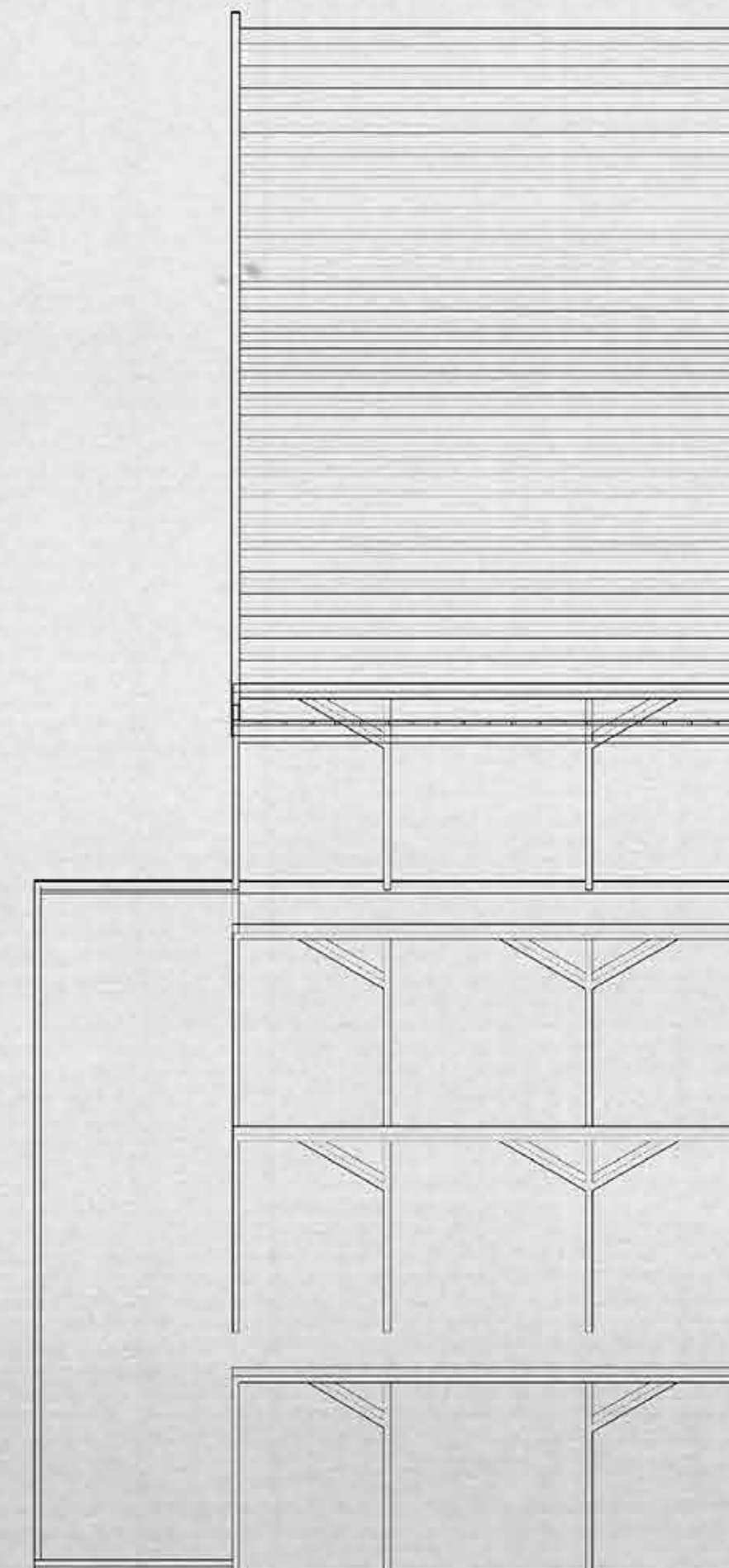
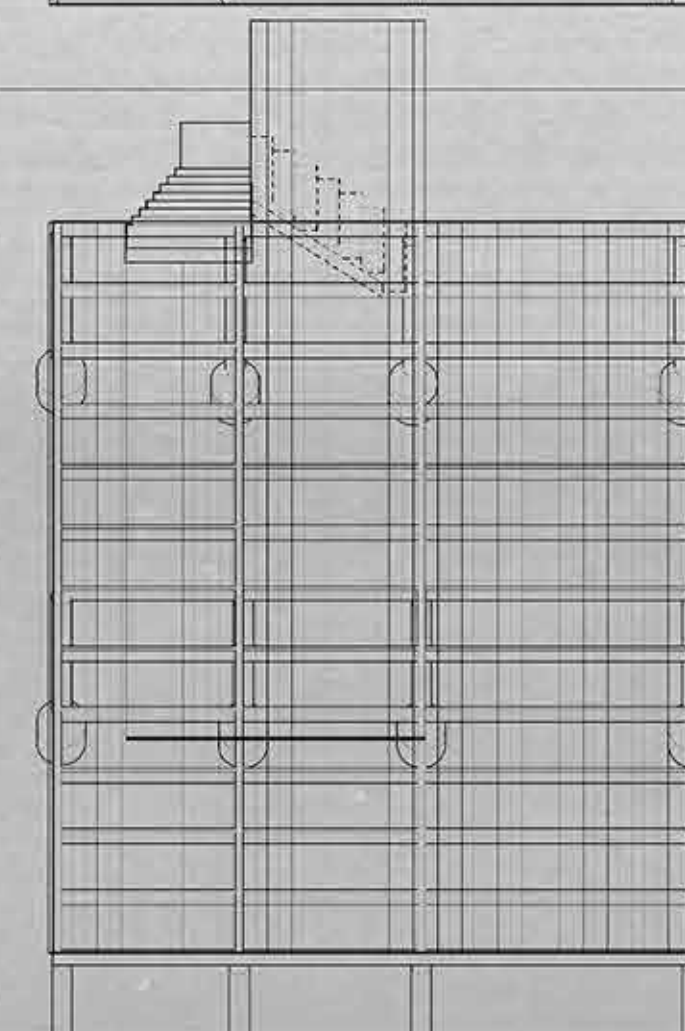
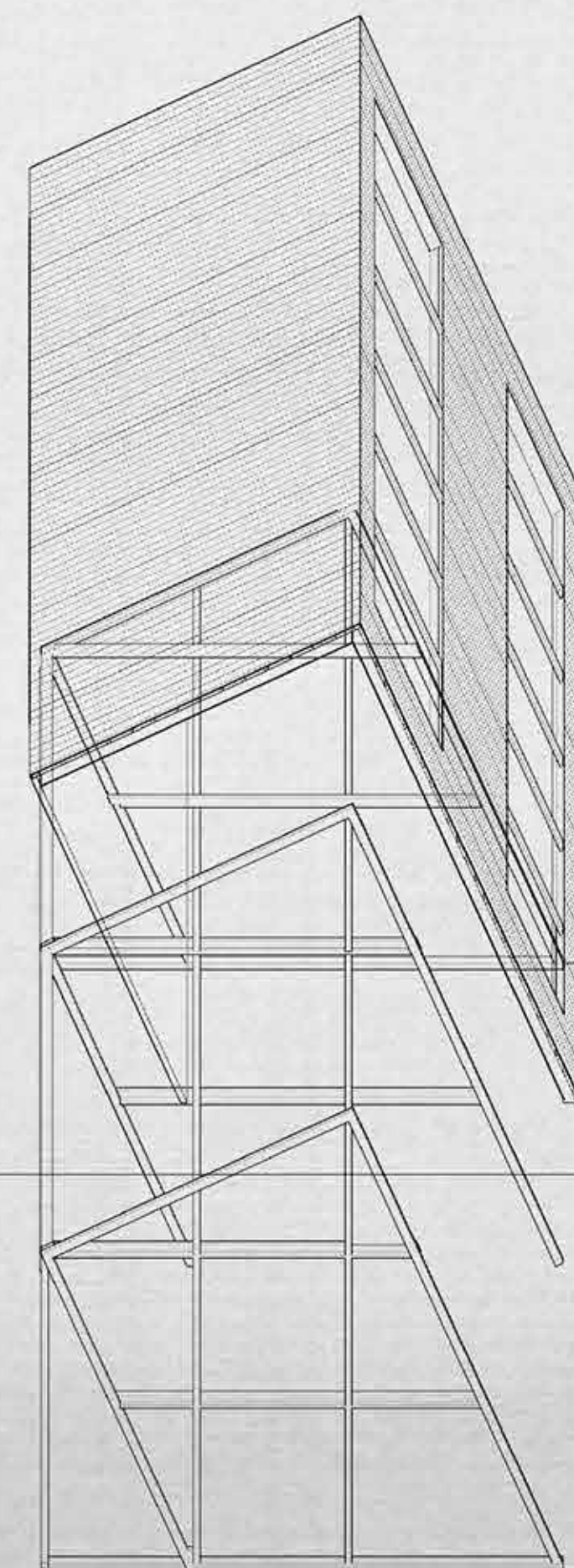
Movement



Repetition



Variation



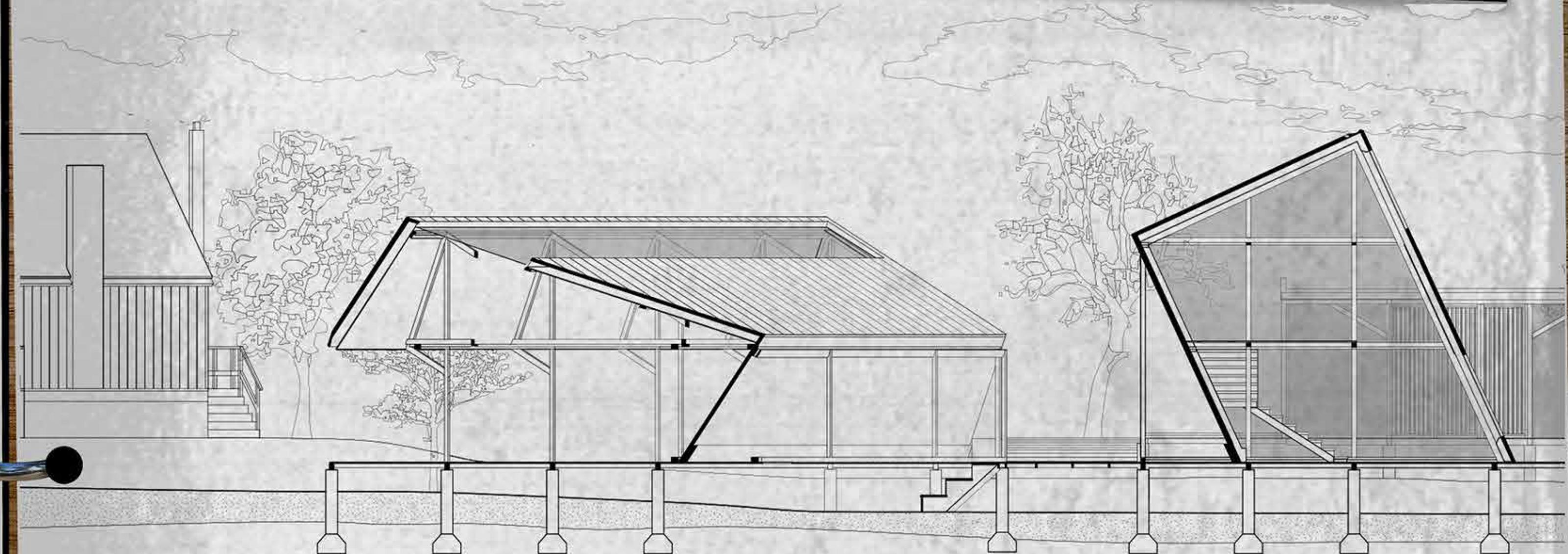
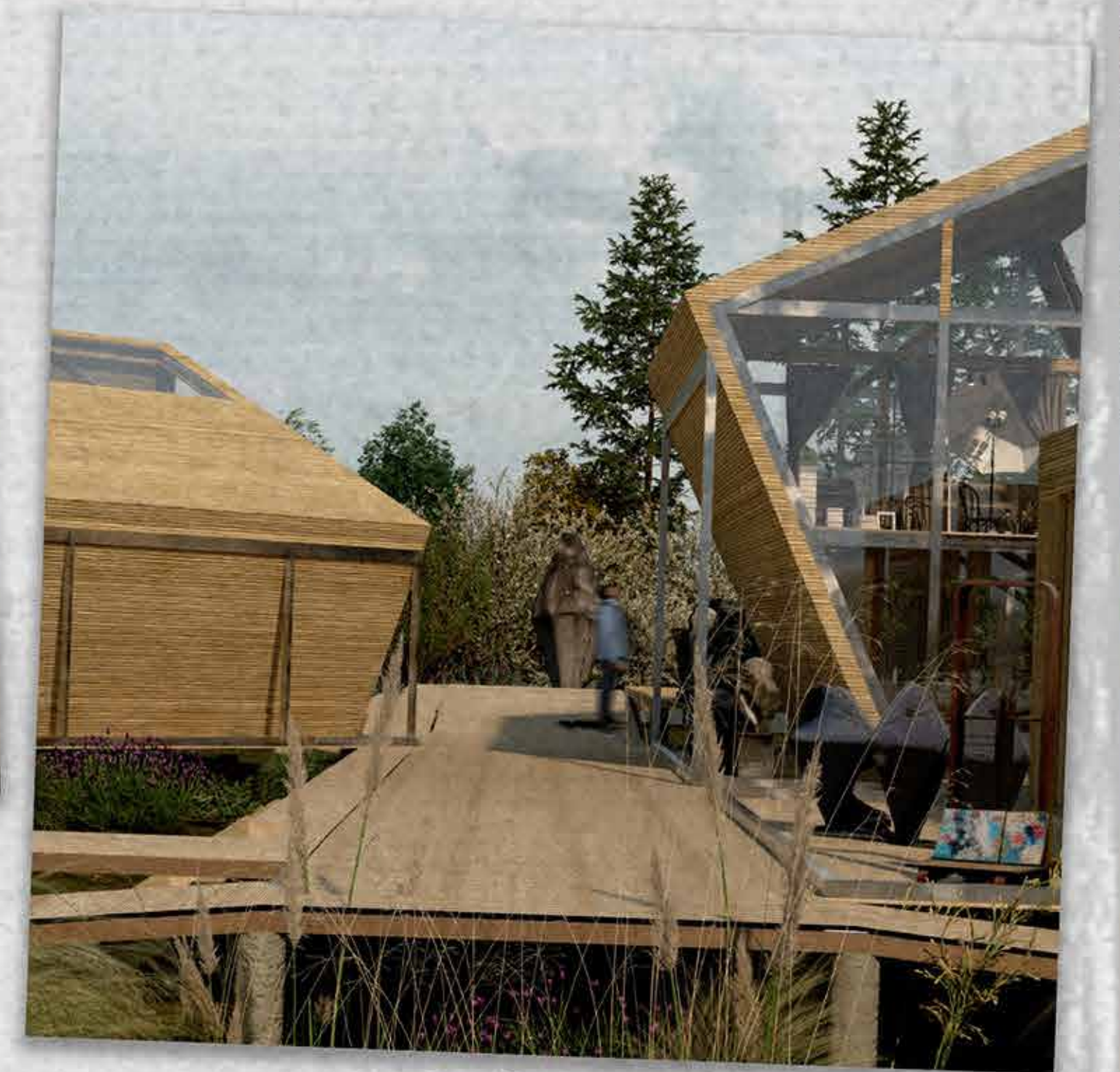




"ABSTRACT EXPRESSIONIST PAINTINGS DOCKED WITHIN GRASSY PLAINS"



"ARTIST IN RESIDENCE"

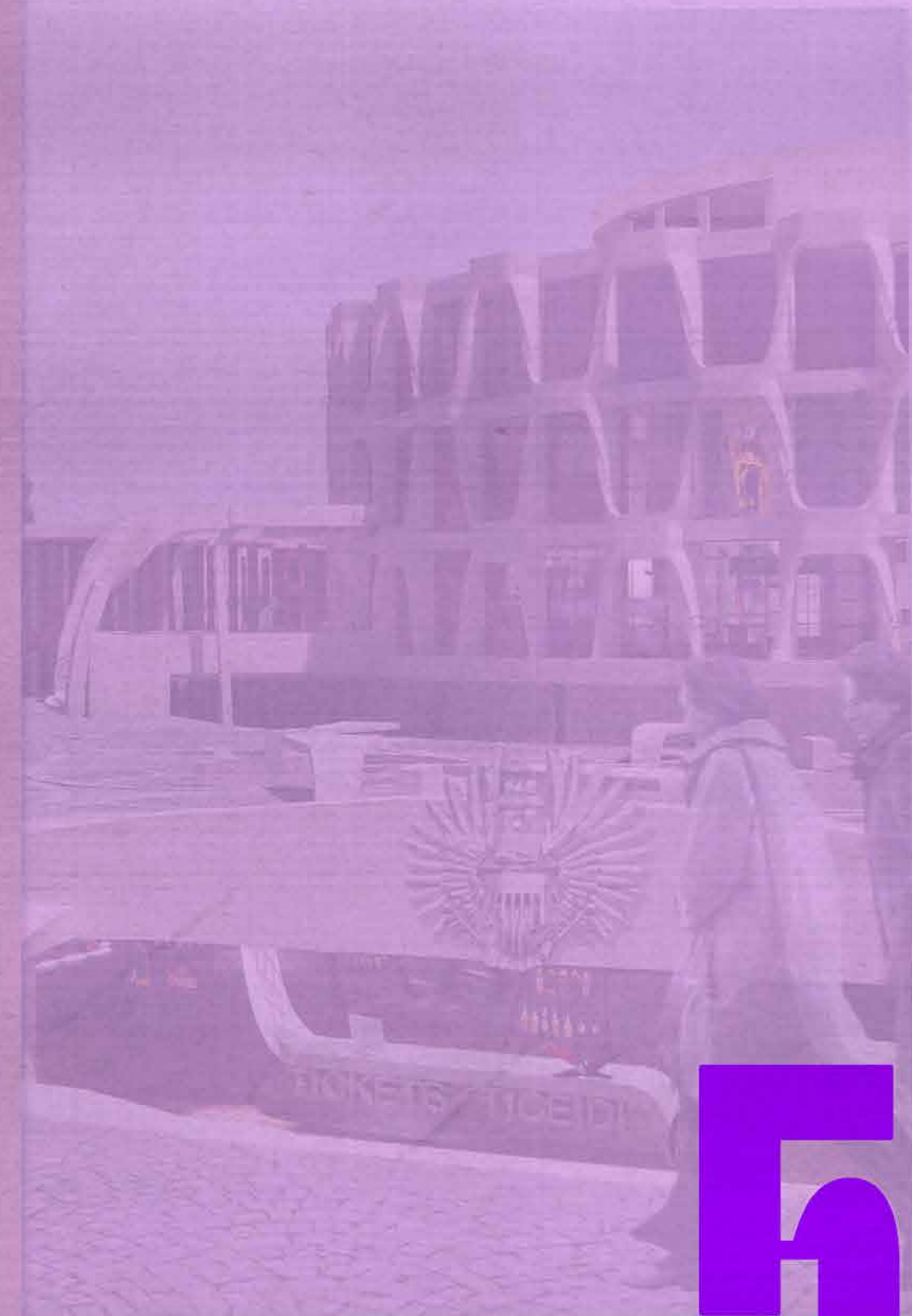




# PUBLIC CULTURE

NG SIGNAGE & THE

5





Our intervention of the US Embassy in Dublin explores Irish and Irish American Public Culture and its sub culture(s). Irish pubs have played a pivotal role in both Irish and American culture for centuries. They are iconic institutions—defined by distinctive features, layered histories, and enduring social significance. The Pub is an anthropological artifact, adapted through family tradition, the Irish American diaspora, and political conflict while remaining embedded in traditional Irish heritage and identity. They intersect with communal memory and public life, shaping social interaction as inclusive, and steadfast spaces.

Curated Program:

- Bar & Gift Shop
- Ticketed Theater
- 16 suite Inn
- Sub-culture exhibitions (Patronage, Music, Pub Artifacts, & Signage)



GUESTS ARE GUIDED INTO THE ENTRANCE WITH TWISTING SIGNAGE & THE EMBASSY'S ORIGINAL BRONZE EAGLE SCULPTURE.

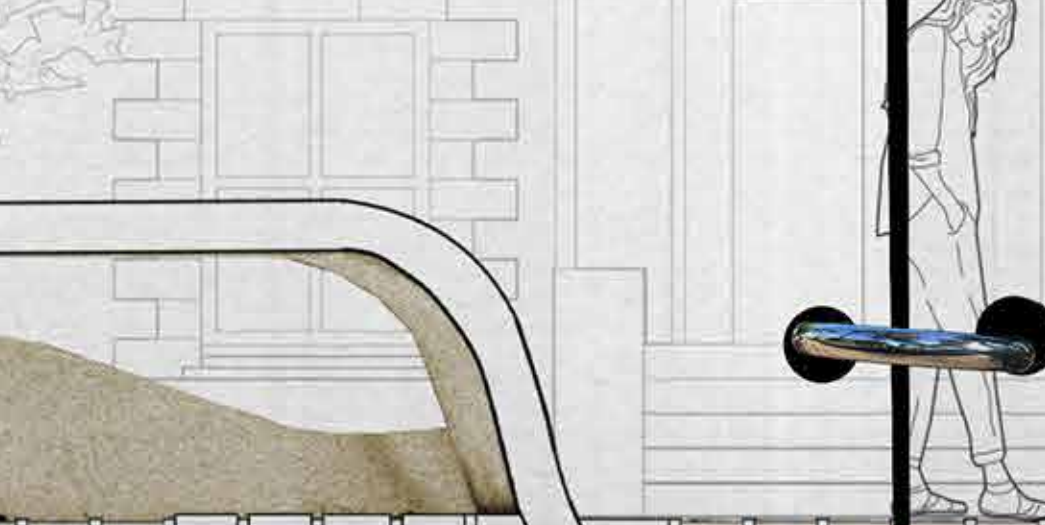


"PUB & PERFORMANCE ATTITUDES" IN SECTION PERSPECTIVE

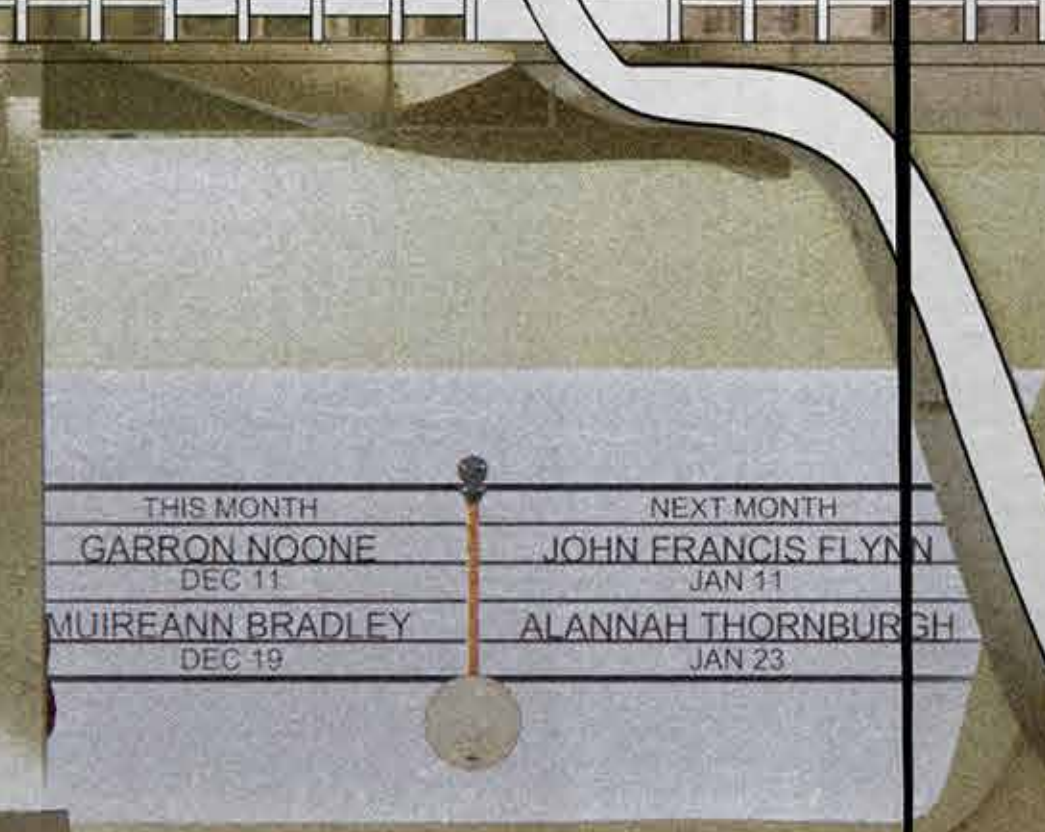




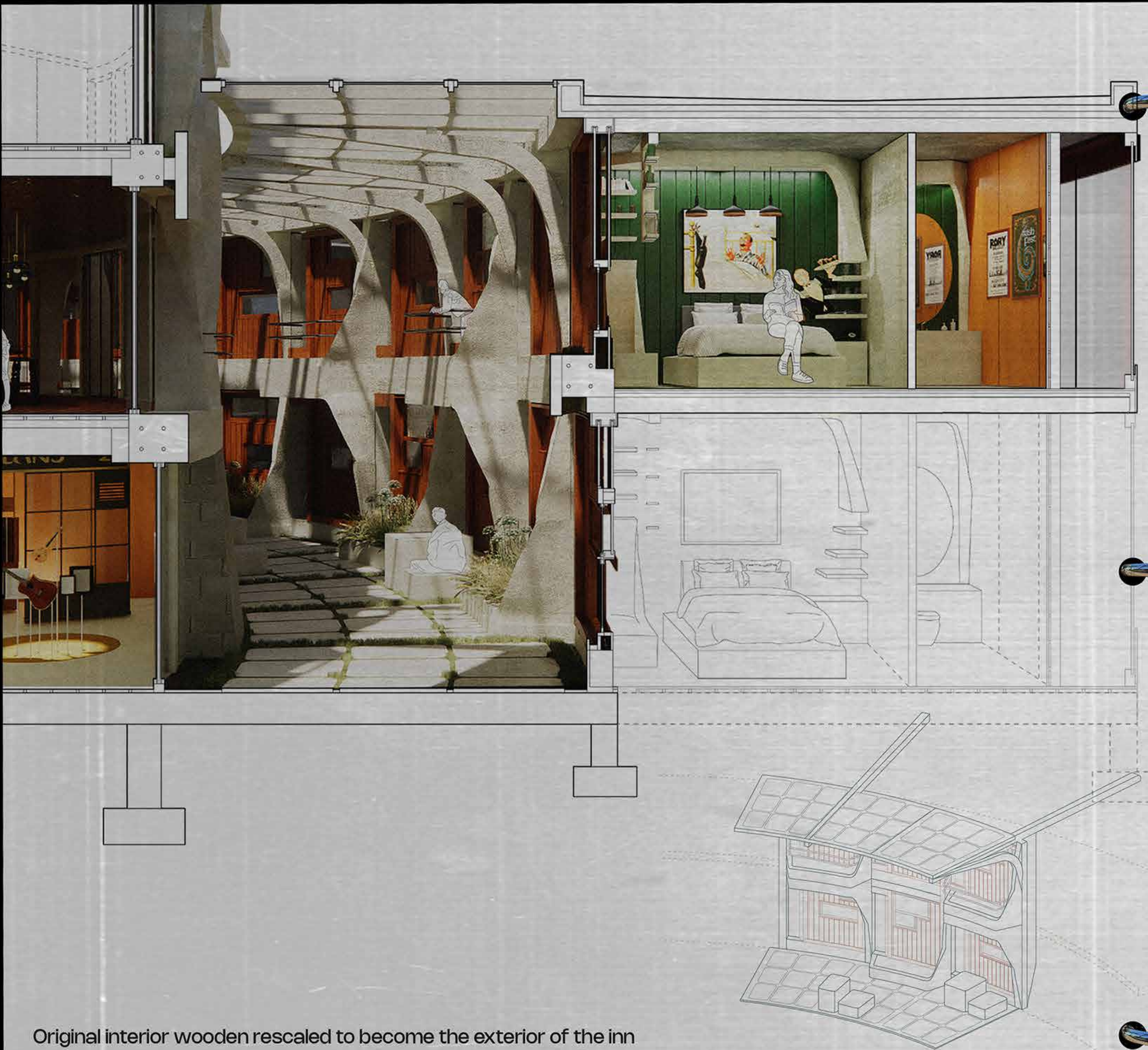
AXON BY LIZA HEGEDUS



Pavers interact above and below curving downwards to create bar tables and seating.







Original interior wooden rescaled to become the exterior of the inn  
Radial pavers are rescaled to create interstitial space and reflect upwards as a glass canopy.

Through crafted details, intimate scales, and shared thresholds curated from the visual identity of the pub, these additions dissolve boundaries between hospitality and exhibition, public and private, allowing the pub to infuse every aspect of the visitor experience.

The recombined shok beton modules are again transformed from the exterior and brought in and through the interior of the hotel room to create livable elements. We wanted to highlight the playfulness of two dimensional vintage advertisements by transforming them into three dimensional articulations.







Original interior wooden rescaled to become the exterior of the atrium. Radial pavers are rescaled to create interstitial space and reflection.

Designed for both public and private audiences, our theater shifts in character throughout the day – open and informal during daylight hours, ...then transforming into an intimate, ticketed venue at night.

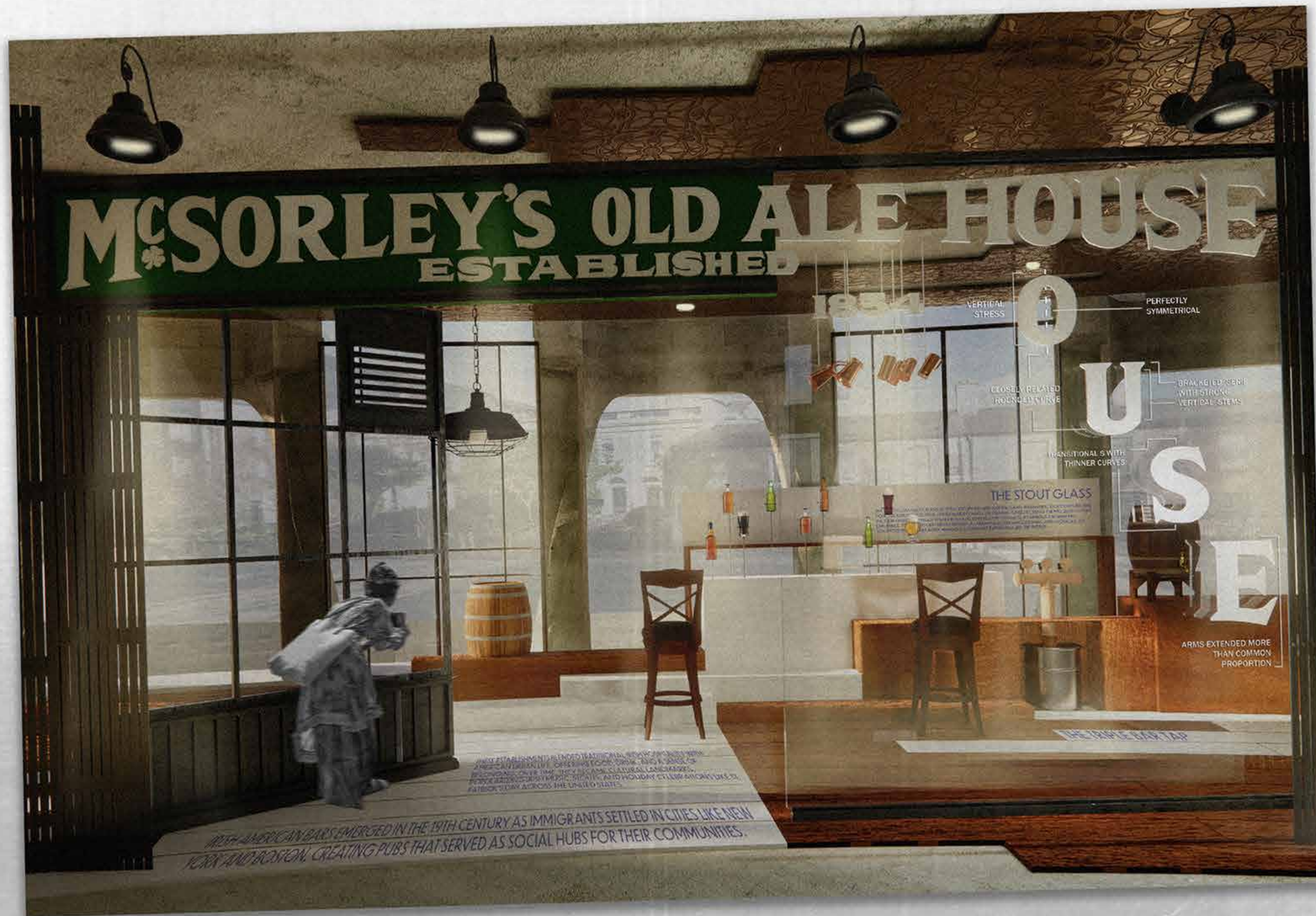
The original atrium becomes a space for historic, cultural, and acoustic exchange showcasing the influence of American folk music on the Irish music scene such as the historic collaboration between American musician BB King and Irish guitarist Rory Gallagher. We create a metaplay by animating the instruments depicted in two-dimensional music posters and transforming them into three-dimensional forms of display.

"PERFORMANCE ATRIUM OF IRISH & AMERICAN MUSICAL EXCHANGES"

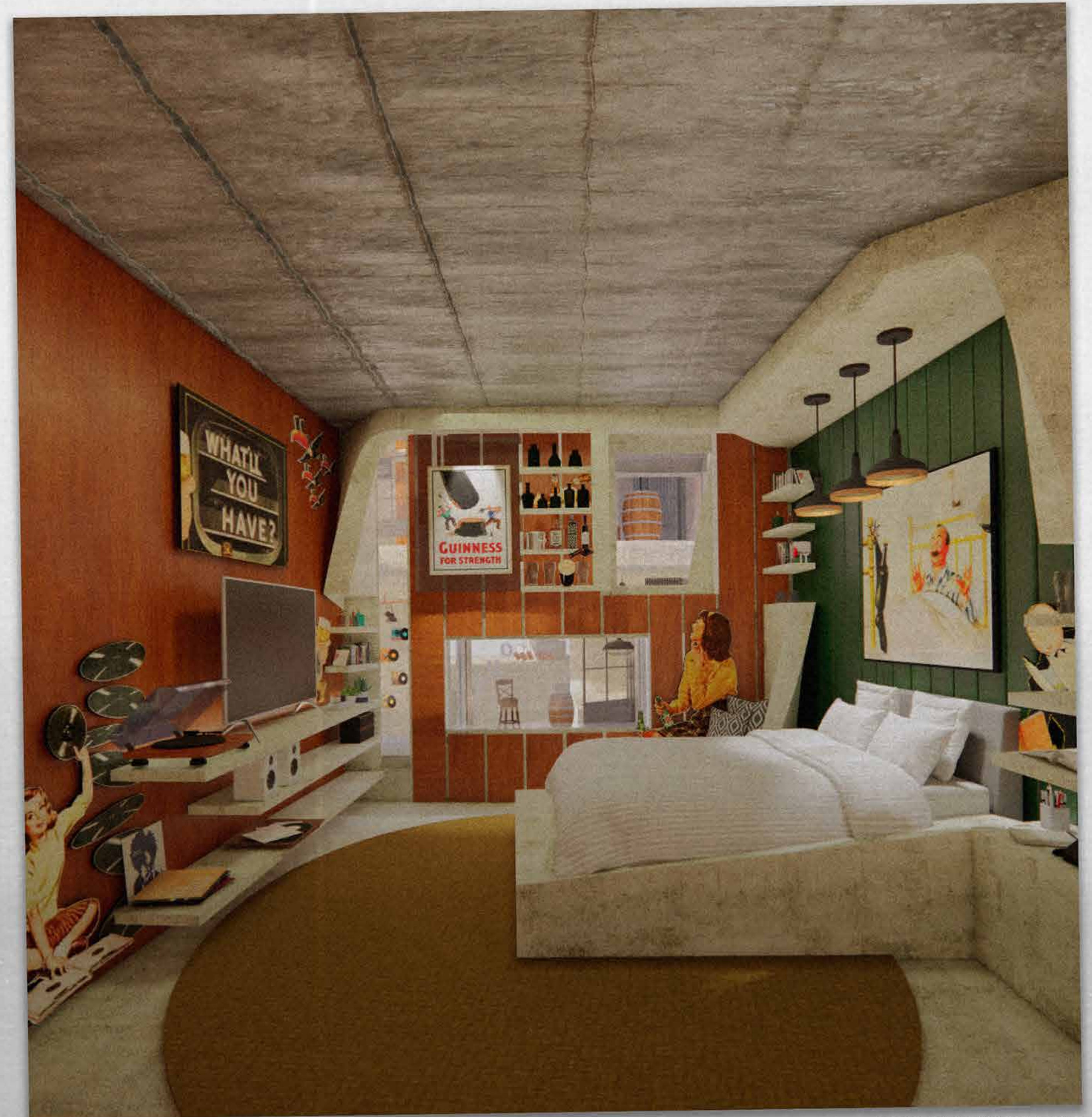


MODELED BY  
LIBERTY CHAPMAN  
  
PHOTOSHOPED BY  
LIZA HEGEDUS





"THE ANTI-PERIOD ROOM: DECONSTRUCTED HISTORY"



"METAPLAY OF POP CULTURE FROM 2D TO 3D FUNCTIONALITY & EXHIBITION"

RENDER BY LIZA HEGEDUS



# CO-HABITATION

Our housing is designed for aging residents who want to live with some level of assistance but who still live independently. The building inspired by NORCs also known as Naturally Occurring Retirement communities provides apartments for both aging residents, live-in caregivers, and families of aging residents.

The building is sited diagonally through the site, stitching together the residential neighborhood to the east of the Convent with the mixed-use, and formerly manufacturing, neighborhood to the west of the Convent.

By taking the inspiration of a rice terrace the open air qualities of Lacatan's Vassal, its stepping form is relating to both the surrounding neighbourhoods and coordinating with sunlight reception with over half of the units facing towards south, and there are trellis located on the southeast wall working as a facade as

# LIVING IN BLOOM



# 6



# 3D-HABITATION LIVING IN

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By considering the connection between the elderly and the caregivers, we are trying to keep the accessibility between these two groups, but at the same time split them spatially and give them their community space coordinated with the atrium garden.

**Points of Focus:**

1. Service
2. Care
3. Nature
4. Social Interaction
5. Sense of Humanity









# A DAY IN THE LIVES OF RESIDENTS AND CAREGIVERS

By Liberty Chapman



Natalie tends to the indoor garden in her free time, while Nora and Nick have their daily chat.

Beatrice and Stanley dance on their terrace.



FLOORPLAN BY CHANG CAO







Jose and Ortiz preparing the residents' lunch.

While Will assists Anna in physical therapy.



Alexander plays with his granddaughter, Isabel.

While his son makes a family breakfast.







Eastern Bluebird

REMEDIATION  
WETLAND FLOAT

MANUAL AND ASSEMBLY KIT



INTERSPECIES  
WETLAND FLOAT

7



WETLAND FLOAT  
INTERPRETIVE

Canada Goose

Eastern Mud Snail

**REMEDIATION  
WETLAND FLOAT**

MANUAL AND ASSEMBLY KIT

Liberty Chapman and Elizabeth Oh  
Instructor: Emily Bauer

Great Blue Heron

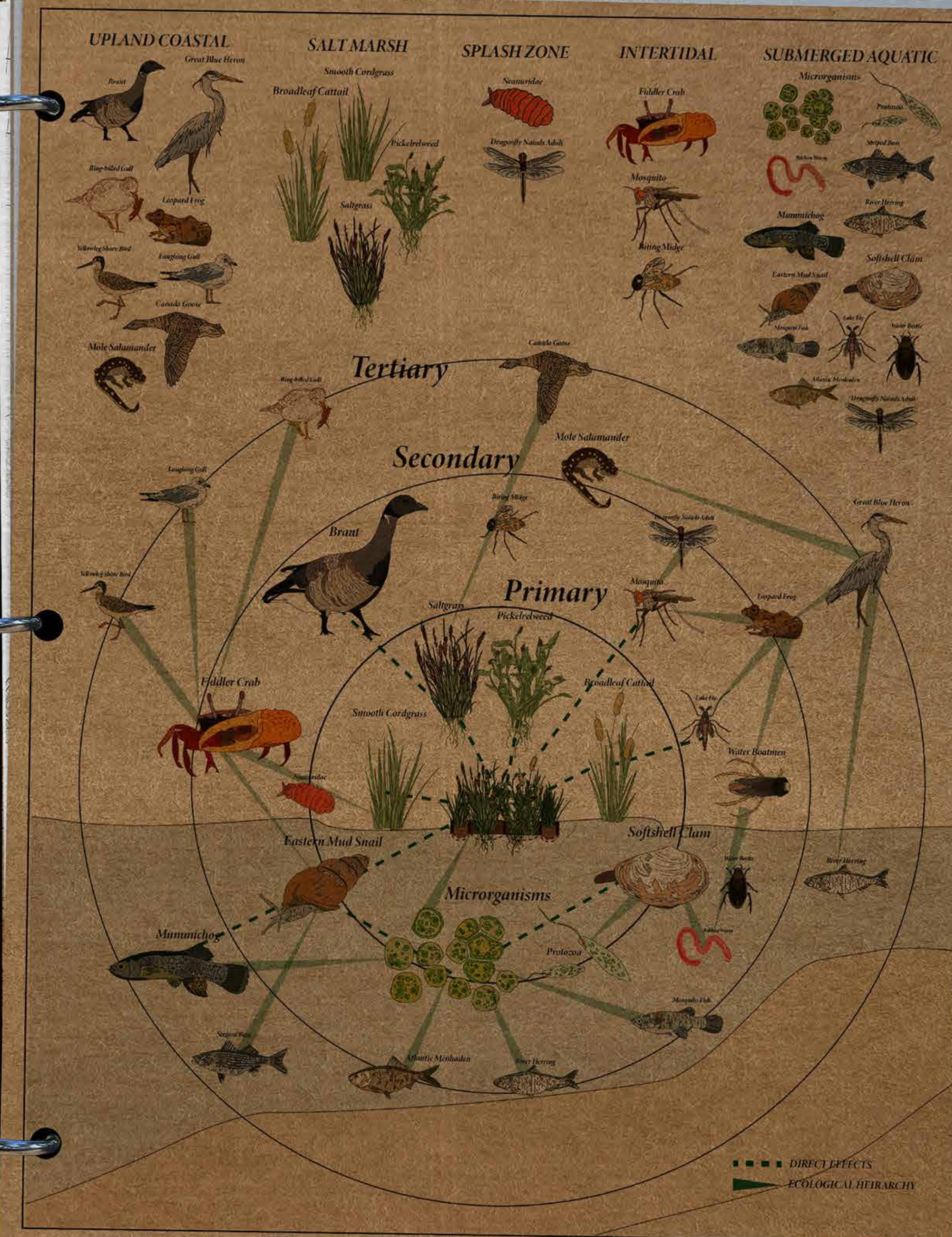
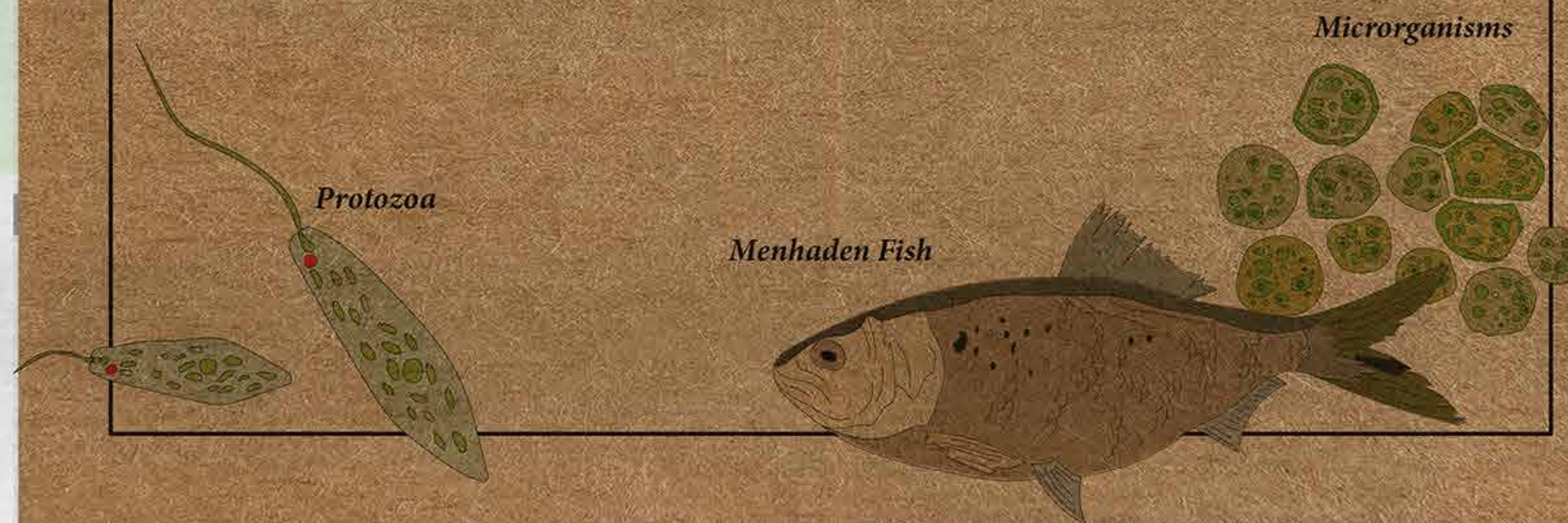


# Concept Statement

Today's Bushwick Inlet Park was previously a site with oil refineries that polluted the waterway. Even today, Bushwick Inlet Park's water is deemed "unacceptable," according to water quality tests. As community members fight for valuable park space for the public, we want our float to primarily purify the waterway via phytoremediation to make it a thriving ecosystem for humans, marine animals, and plants alike. Wetlands are crucial for climate adaptation, and researchers have shown how floating wetlands may do an even better job at filtering pollutants from water due to increased surface area of biofilm that can take up pollutants. Specifically, we are seeking to construct a float that will host hydroponic non-invasive plants that are effective at phytoremediation, such as smooth cord grass, pickerelweed and salt grass. All of these are native to the New York City harbor and can be found in traditional wetlands. They can take up heavy metals, Nitrogen, Phosphorous, and potentially other hydrocarbons that may be embedded in the benthic zone.

We created a simple Ikea-like kit of parts with easily sourced materials such as 1x4 wood planks, empty recycled wine bottles and coir fiber planters, so that our design can be easily replicated and accessible to anyone interested in building their own. If our float begins to weather from exposure from environment and the natural material were to disintegrate and/or sink, the plants could take root in shallow water and continue to provide the same benefit of phytoremediation.

Hydroponic plant decay would also create detritus in which menhaden fish directly consume and this detritus provide nutrients primarily to microorganisms such as Protozoa including zoo plankton, that is mainly consumed by local fish such as river herring and mosquito fish. In concept, the support for microorganisms and small fish could invite tertiary aviary predators such as the Great Blue Heron and Canada geese that feed on the small local fish.





# Axonometric Example

## HEMP ROPE

A grid of rope made to support and to hold in place plant plugs in place as they grow.

## MARINE ROPE

Securing the fiber mat until the roots are able to support themselves

## COIR FIBER MAT

Biodegradable and porous. Will allow hydroponic roots to grow through and act as a substrate.

## CLAY BALL & LOAMY SUBSTRATE

## METAL MESH

Mesh as extra support as the coir fiber biodegrades as the roots grow stronger

## METAL WIRE

## INTERLOCKING FINGER JOINT

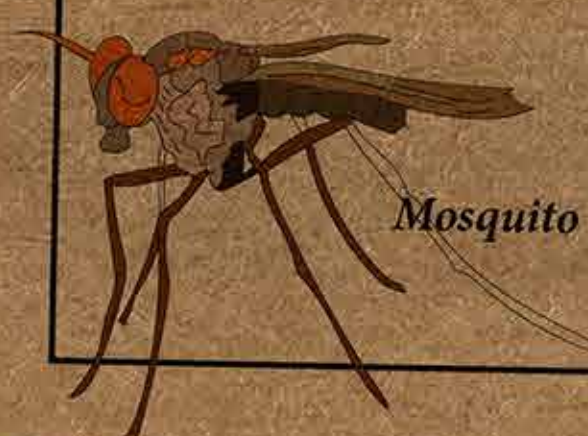
Wood material and joints to create strong single material connections.

## RE-USED WINE BOTTLE

Sealed with cork for buoyancy of the float

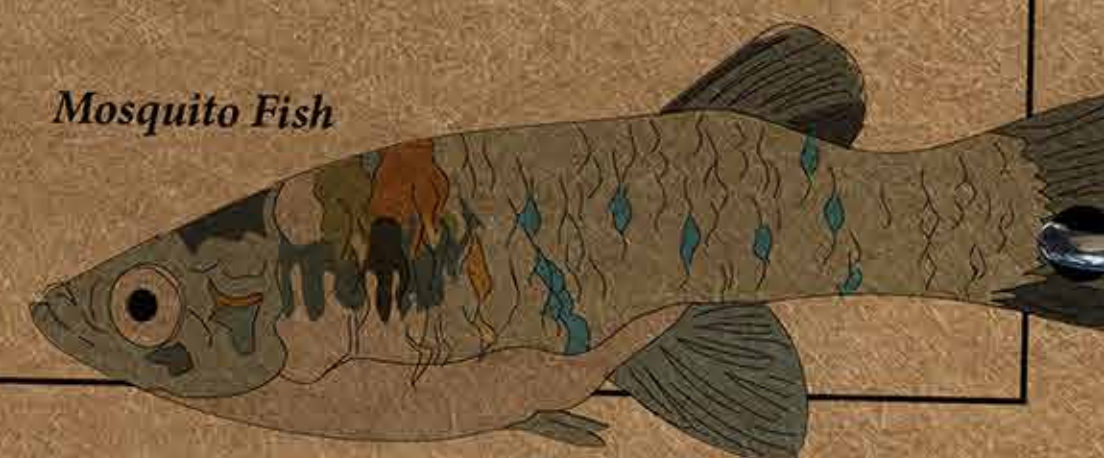
## CIRCULAR HOLDER FOR WINE BOTTLE NECK & BASE

Dragonfly Naiad (Adult)



Mosquito

Mosquito Fish



Canada Goose

**Saltgrass**  
Provide nesting sites for birds & insects  
Its detritus is a crucial nutrient for clams, fish, & crabs

**Smooth Cordgrass**  
Food source for geese and creates detritus  
Traps nutrients and filters heavy metals

**Pickereelweed**  
Absorbs nitrogen & phosphorous  
Filtering gray water and artificial wetlands

Scaled Empty Wine Bottles

Scaled Empty Wine Bottles

Marine Sealed/Treated Wood

Coir Fiber Net/Mat



**River Herring**  
Juvenile herring uses these plants for cover as they mature



Nitrogen  
Microorganisms

Phosphorous

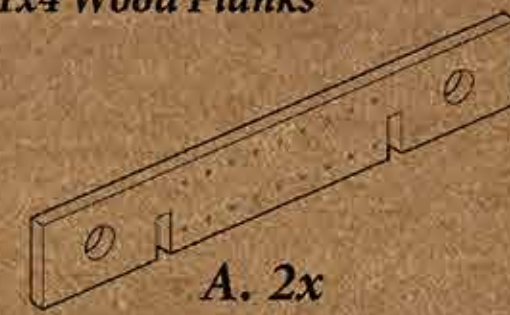
Detritus  
Plant decay creating nutrients for microorganisms



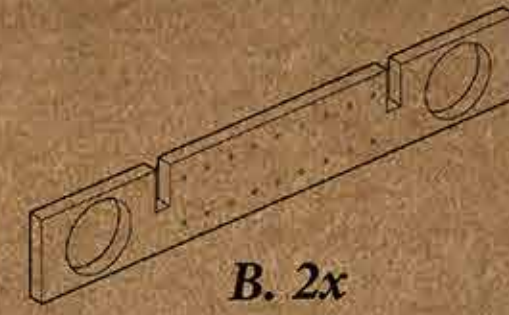


# Assembly Manual

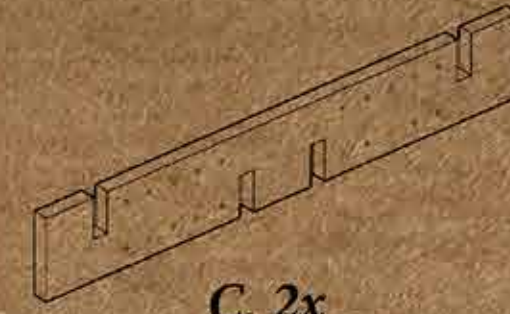
### 1x4 Wood Planks



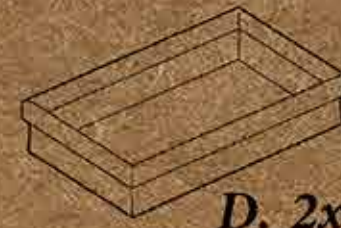
A.  $2x$



**B.  $2x$**

C.  $2x$ 

### Coir Fiber Planter



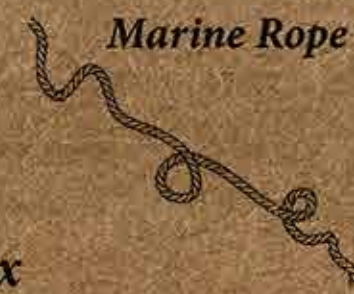
D.  $2x$

*Wine Bottle*



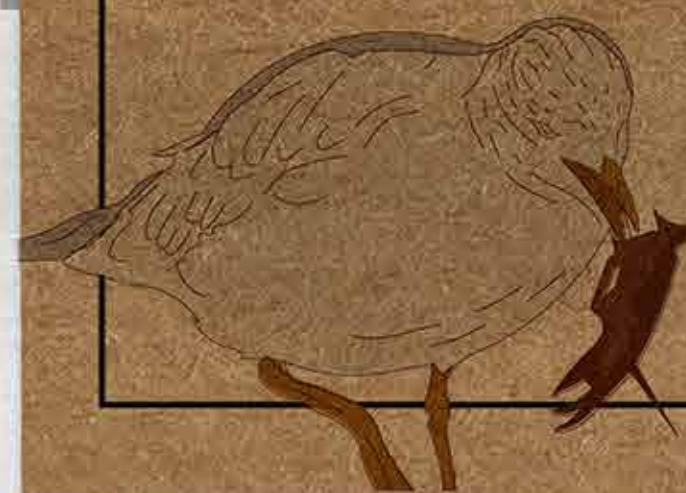
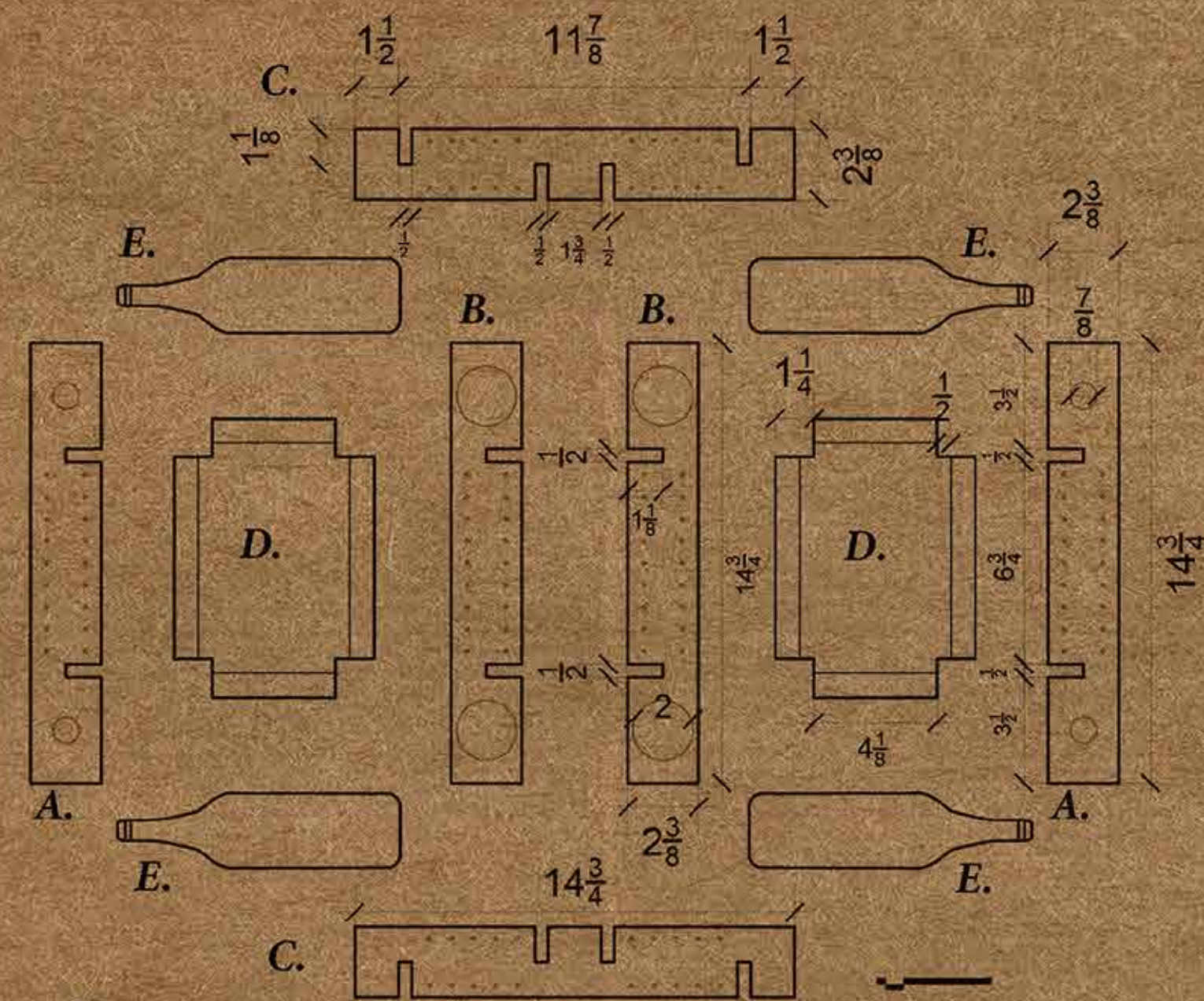
E.  $4x$

### Marine Rope



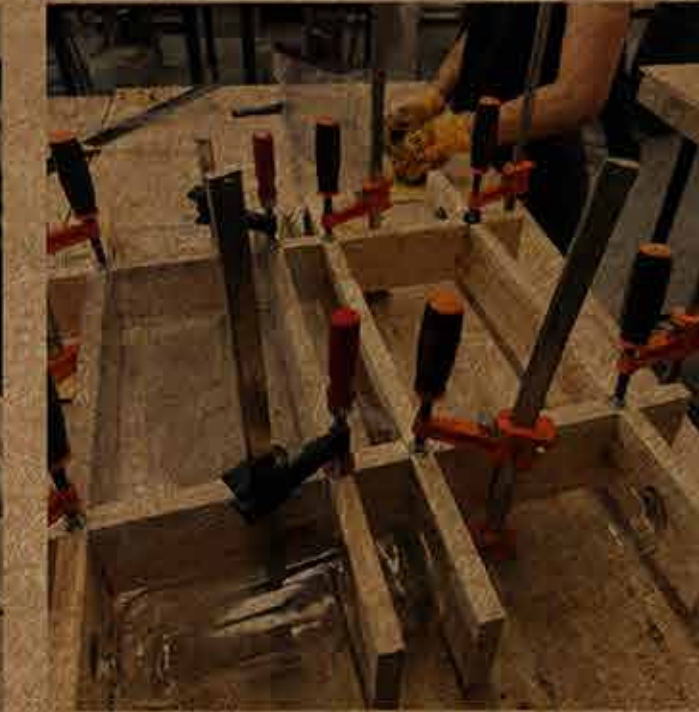
*F.*

### Hemp Rope



*Ring-billed Gull eating  
small crustacean*

## Process & Prototyping



### Striped Bass









Neanuridae



Leopard Frog



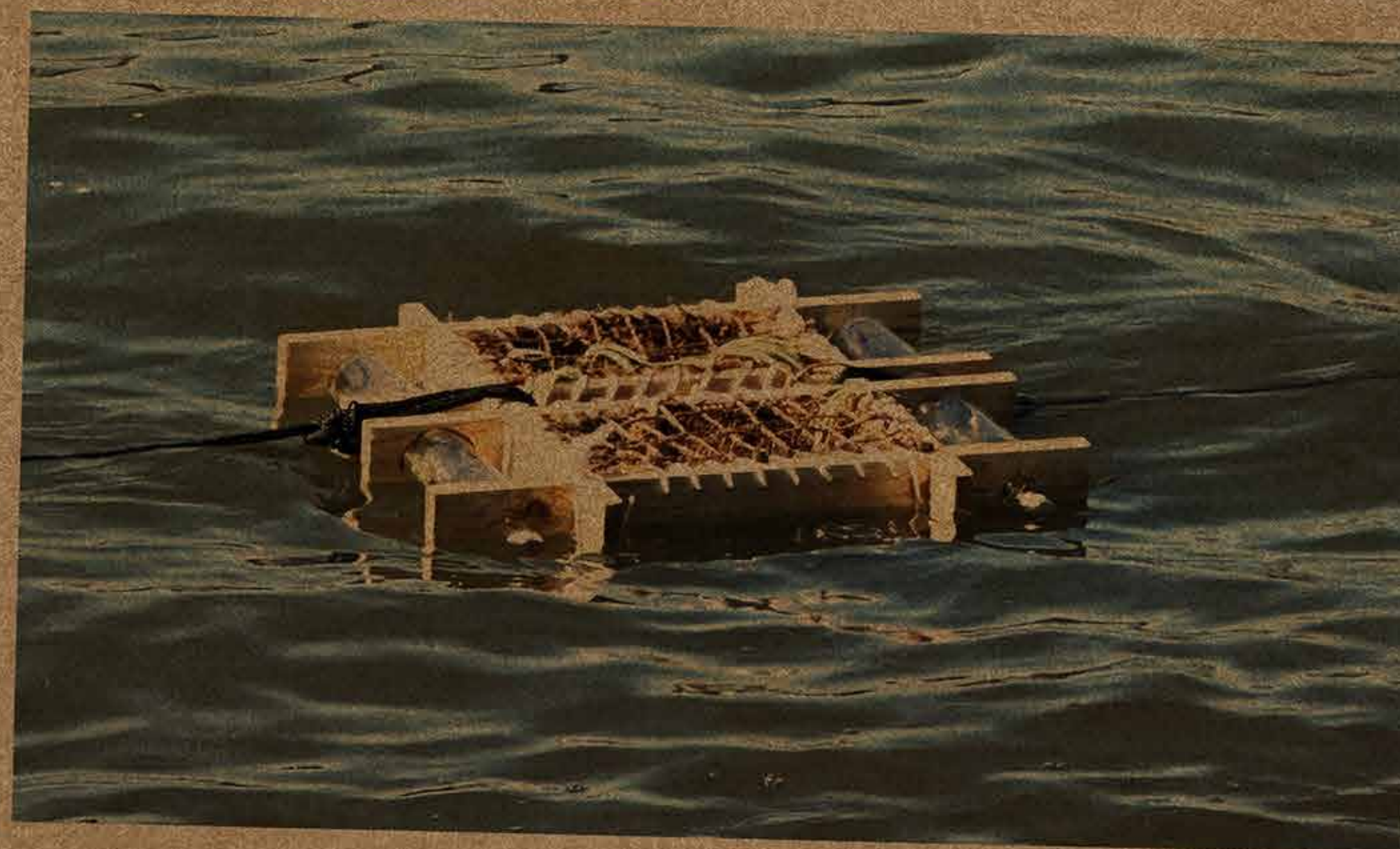
## IT LIVES! LESSONS LEARNED



Through this process, we learned that the wood construction required more time and care in creating the wood joints as it was both our first time extensively working with simple wood planks. In the future, we would like to consider sourcing recycled wood material instead of pretreated wood from Home Depot.

As we were creating our float we added more and more layers to consider how materials like the coir fiber is a natural material and could biodegrade quickly, we added a metal mesh in a late stage of our design to ensure that the plant plugs could have more time to grow through the coconut fiber before it degrades. Through the idea of using natural materials, it helped us consider the type of plants we could use that could grow with little substrate leading us to hydroponic plants and how its decay would benefit our targeted ecological system.

After reflecting upon our design, a next step could be to explore how our method of construction can serve as a baseline where people could replace the wood with other recycled materials in the same form. It would be exciting to explore how the form and construction could stay the same but the materiality could change to create a series of floats of this simple interlocking shape and compare how they perform in dialogue to the original design.





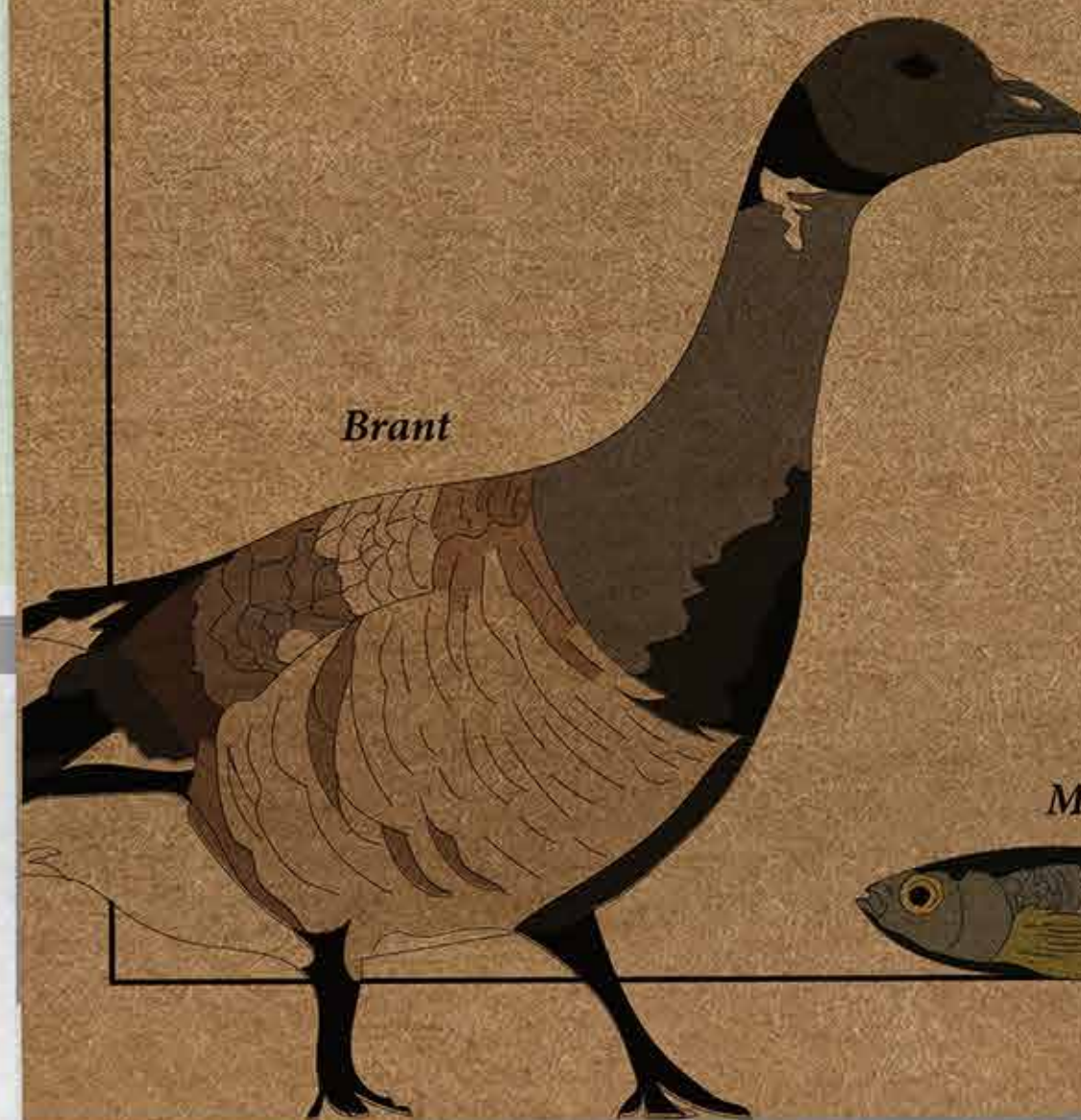
# SEED BOMBS

Instructor: Emily Bauer



Lakefly

Mole Salamander



Brant



Ribbon Worm



Mummichog

Liberty Chapman  
Elizabeth Oh

BETWEEN FARM  
& TIDE

7

8



## SEED BOMBS

Instructor: Emily Bauer

Lakefly

Mole Salamander

BETWEEN FARM  
& TIDE

Mummichog

We began our material investigations centered on oyster shells and glutinous rice, framed as material excess in regions where aquaculture and agriculture act as the main driving economic force.

The oyster shell waste stream originates from the aquaculture industry, where approximately 30% of oysters may be lost during harvest, leaving their shells to accumulate along shorelines.

Korea is the second leading country in oyster production in the world, producing an exorbitant amount of 280,000 tons of oyster shell waste annually.

The island of Namhae faces this problem of the oyster shell waste along the coast where piles are neglected around neighbourhood roads.

Known for its farming terraces, and coastal culture. The region of Namhae island struggles with depopulation, many rice paddy farmers who are over the age of 65 find it increasingly difficult to maintain these landscapes.





## SEED BOMBS

Instructor: Emily Bai

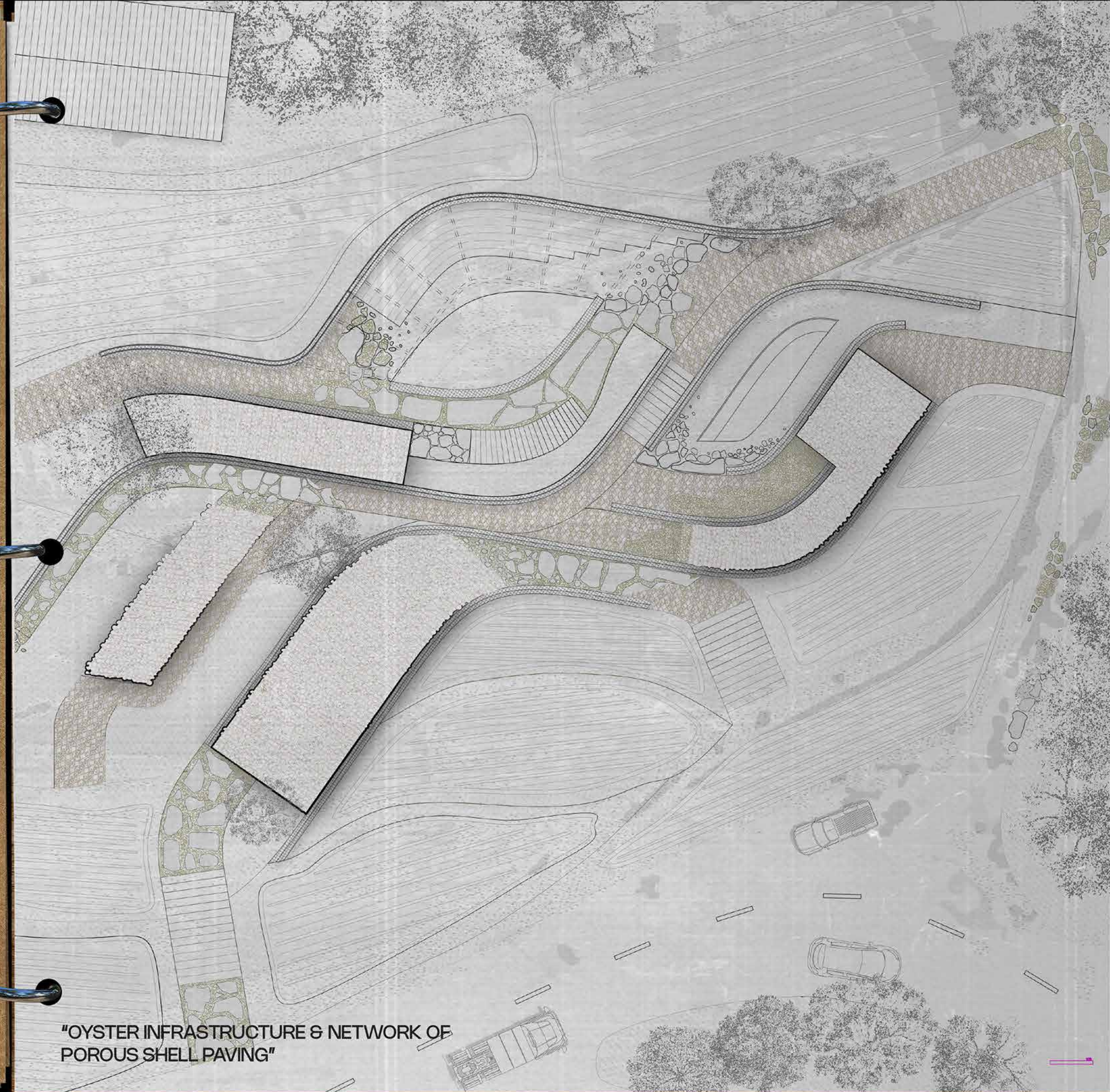
Lakefly

The site has a variety of conditions. In the sea thrives aquafarming; immediately adjacent to the water are flat rice paddies and garlic fields. On the mountainous areas are rice terraces. Interwoven throughout these zones are residential spaces. Mediating this landscape are retaining walls and other forms of boundaries set in place to both divide and regulate these different spatial organizations.

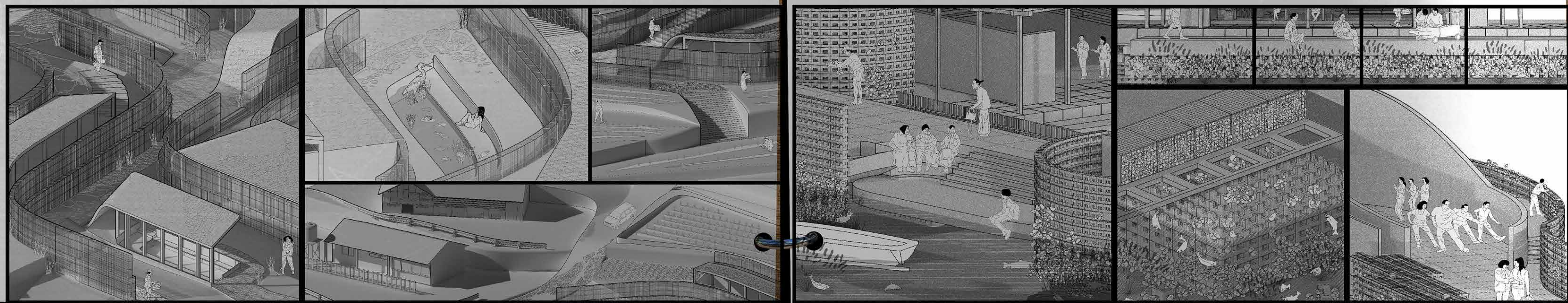
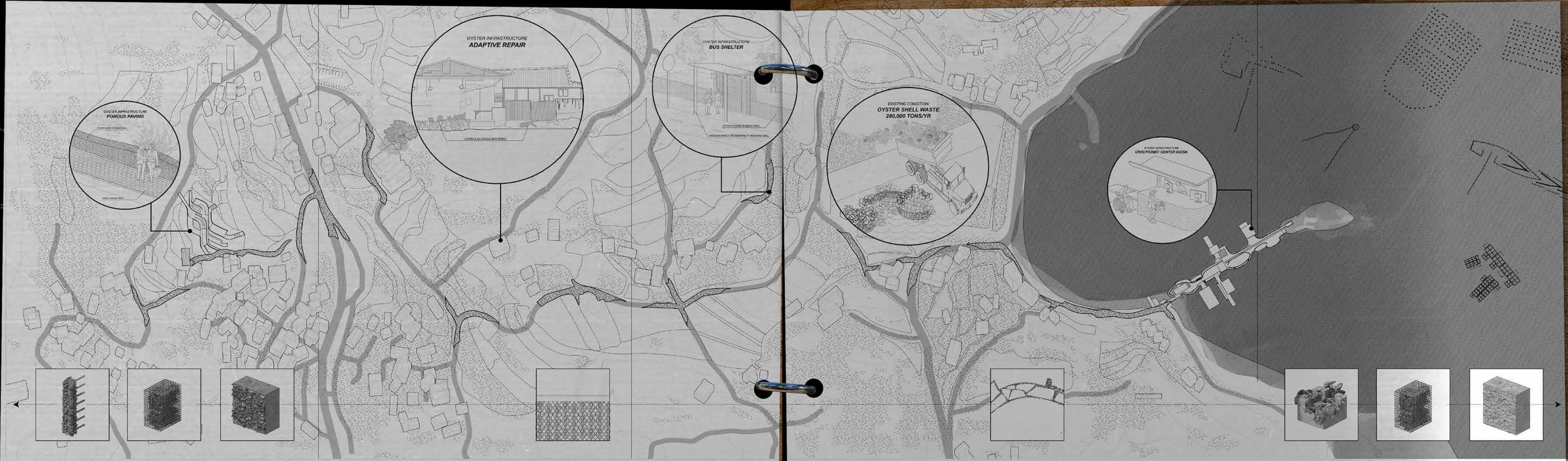
Our proposal focuses on two designs in each respective type of space - the agriculture fields and the aquaculture, in light of changing social, environmental, and economic conditions, with the incorporation of our oyster material as a key component integrated throughout the site.

It also proposes a connection of oyster material along the paths between the two as a connective tissue, through phases of porous paving, repair through oyster material aggregates to existing buildings and reimagined bus shelters, these interventions of different scales set a larger framework that exists of oysters and oyster shells as building material in rural coastal cities.

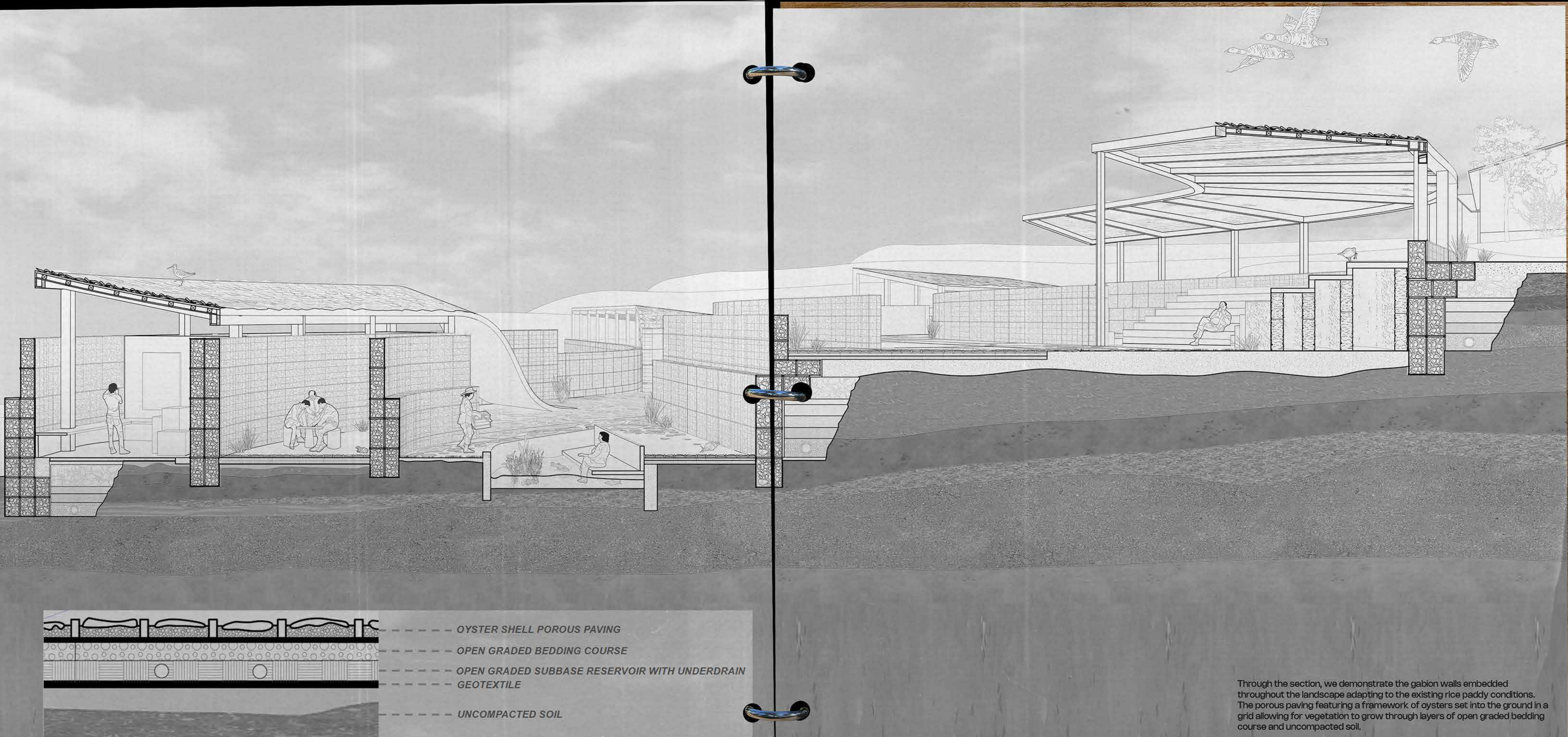
"OYSTER INFRASTRUCTURE & NETWORK OF POROUS SHELL PAVING"











Through the section, we demonstrate the gabion walls embedded throughout the landscape adapting to the existing rice paddy conditions. The porous paving featuring a framework of oysters set into the ground in a grid allowing for vegetation to grow through layers of open graded bedding course and uncompacted soil.





The oyster gabion walls acting as retaining walls for the rice paddies within the terracing levels of the ground create interstitial spaces that transform into small structures. These series of structures adapt to the landscape of underutilised rice terraces, revitalising them by reintroducing biodiversity into the farming landscape.

Dependant on the program, the porosity of certain structures change.

Some gabion walls are double layered with fully enclosed spaces to create areas of respite for farmers to gather, rest and refresh indoors.

Open structure serve as a shaded place for people and rice paddy species such as medaka rice fish, catfish and amphibians to coexist.

While material research and ecology labs that support these oyster and rice paddy adaptations, are partially porous for an informal study space with fully enclosed laboratories.







This render demonstrates the structures interacting on different elevations within this stepped rice terrace, the adapted paddies transform into open air places of respite and leisure interacting with local shallow water fish and the Korean Great Egret that could be welcomed back by the renewed biodiversity of the landscape with the ecology and material lab next to this experimentation of landscape

The ecology labs enjoy an observatory view into the rice paddy and material experimentations through the partially enclosed and porous gabion walls.





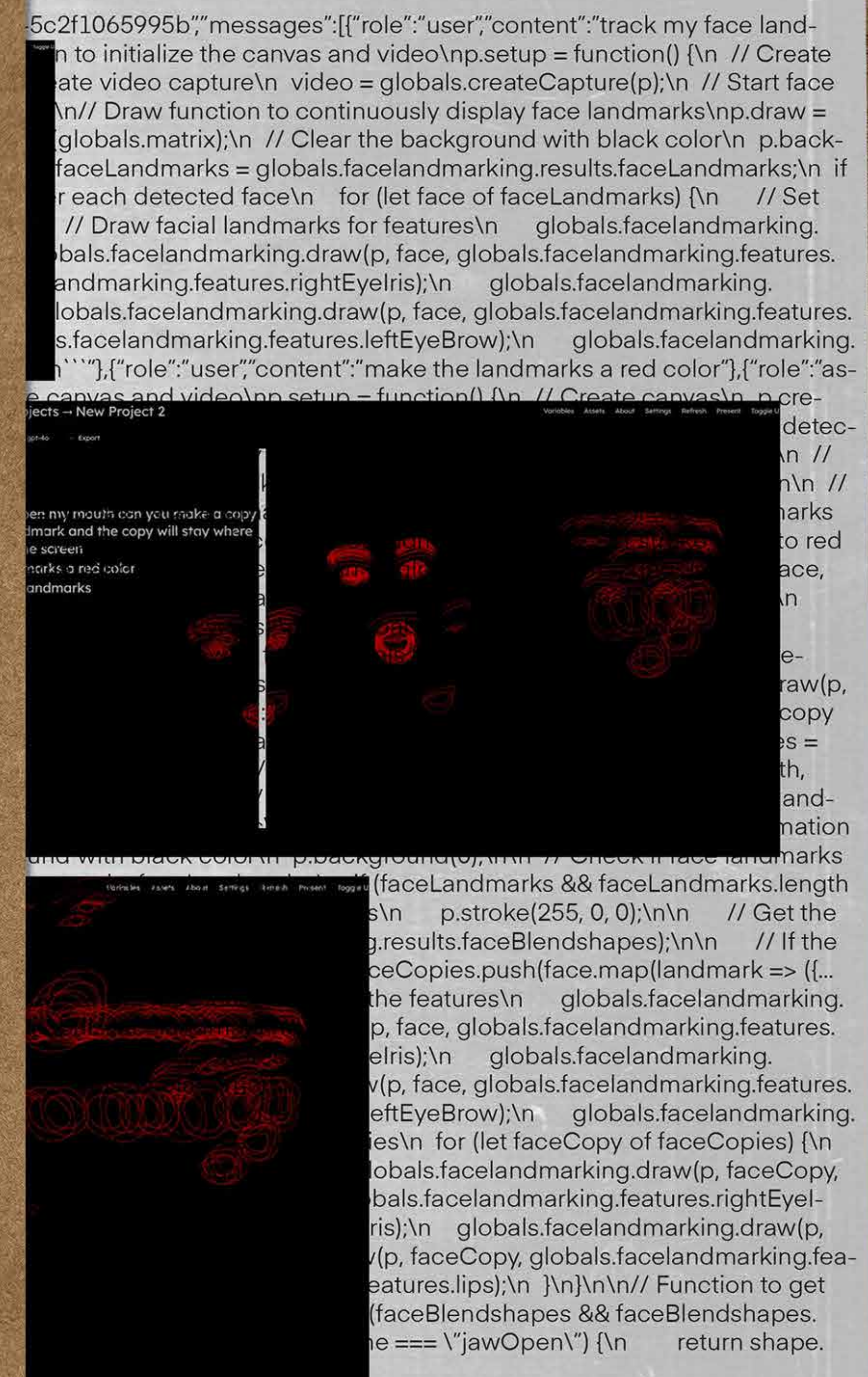
# CYBERNETIC AESTHETICS

# EXPERIMENTATION 9 OF GESTURE



# EXPERIMENTATION OF GESTURE TRACKING AND PROJECTION MAPPING TO CREATE PERFORMATIVE CYBERNETIC ENVIRONMENTS SHAPED THROUGH REAL-TIME BODILY INTERACTION.

These series of experiments with gesture tracking and projection mapping to create performative cybernetic environments shaped through real-time bodily interaction. Using web-based tracking and mapping software, the body becomes both interface and signal, generating responsive visual forms that blur distinctions between human movement, machine perception, and digital feedback systems.

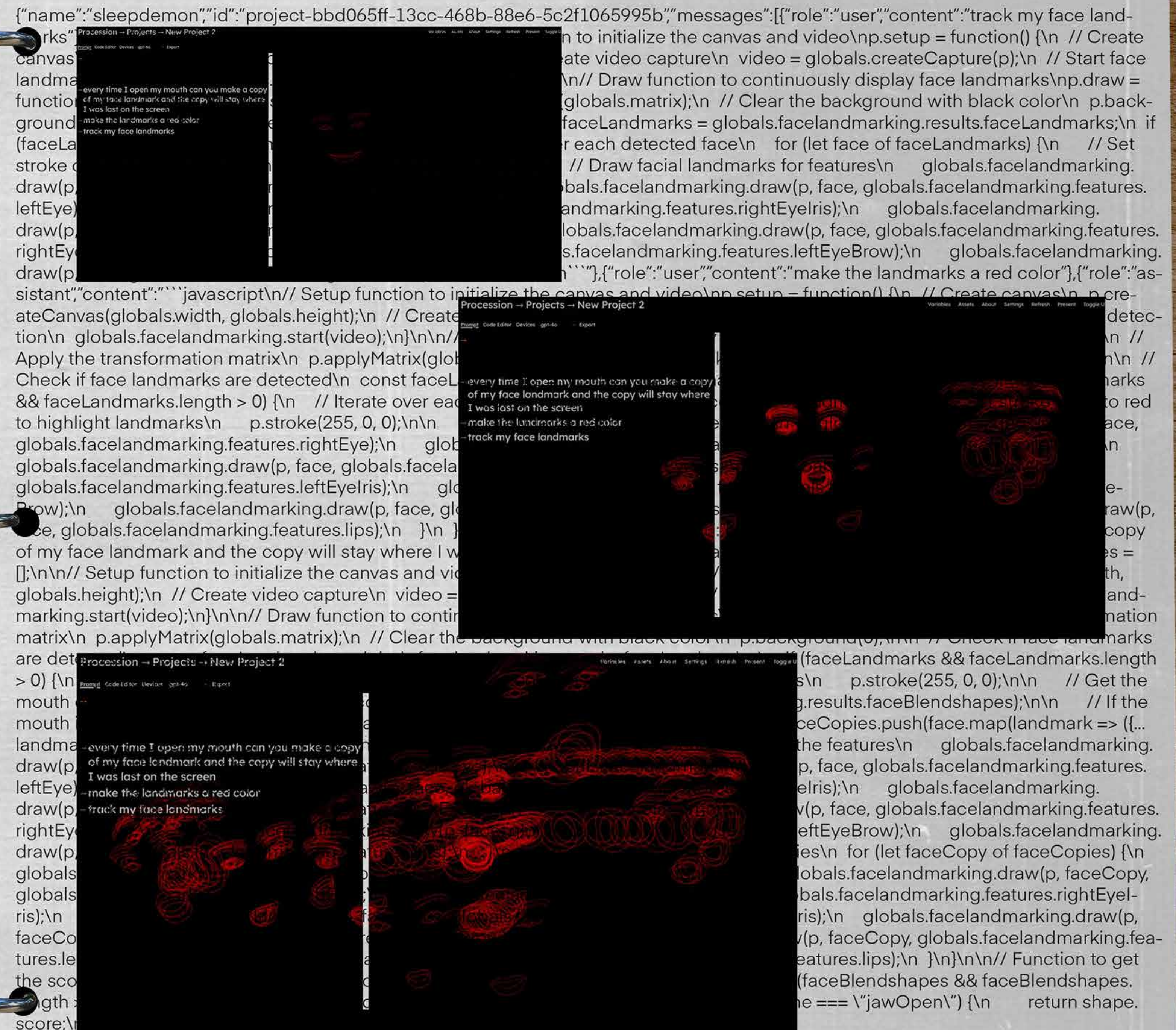


```
5c2f1065995b","messages":[{"role":"user","content":"track my face land-
n to initialize the canvas and video\np.setup = function() {\n // Create
ate video capture\n video = globals.createCapture(p);\n // Start face
\n// Draw function to continuously display face landmarks\np.draw =
globals.matrix);\n // Clear the background with black color\n p.back-
faceLandmarks = globals.facelandmarking.results.faceLandmarks;\n if
r each detected face\n for (let face of faceLandmarks) {\n // Set
// Draw facial landmarks for features\n globals.facelandmarking.
bals.facelandmarking.draw(p, face, globals.facelandmarking.features.
andmarking.features.rightEyelris);\n globals.facelandmarking.
lobals.facelandmarking.draw(p, face, globals.facelandmarking.features.
s.facelandmarking.features.leftEyeBrow);\n globals.facelandmarking.
n````"}, {"role":"user","content":"make the landmarks a red color"}, {"role":"as-
e canvas and video\np.setup = function() {\n // Create canvas\n p cre-
jects -> New Project 2
Variables Assets About Settings Refresh Present Toggle
get-40 - Export
detc-
\n //
\n\n //
marks
to red
face,
\n
e-
draw(p,
copy
es =
th,
and-
nation
and with black color\n p.background(0);\n\n // Check if face landmarks
(faceLandmarks && facelandmarks.length
s\n p.stroke(255, 0, 0);\n\n // Get the
g.results.faceBlendshapes);\n\n // If the
ceCopies.push(face.map(landmark => ({...
the features\n globals.facelandmarking.
p, face, globals.facelandmarking.features.
elris);\n globals.facelandmarking.
v(p, face, globals.facelandmarking.features.
leftEyeBrow);\n globals.facelandmarking.
ies\n for (let faceCopy of faceCopies) {\n
lobals.facelandmarking.draw(p, faceCopy,
bals.facelandmarking.features.rightEyel-
ris);\n globals.facelandmarking.draw(p,
v(p, faceCopy, globals.facelandmarking.fea-
eatures.lips);\n }\n}\n\n// Function to get
(faceBlendshapes && faceBlendshapes.
ne === \"jawOpen\") {\n return shape.
```



The first experiment focuses on freezing and exaggerating facial expressions, transforming subtle emotional gestures into amplified, graphic forms that investigate distortion, surveillance, and the mediation of identity through machine vision.

The second experiment explores full-body movement and primal gestures, using tracked bodily motion to generate reactive projections that emphasize instinctive movement, ritualized action, and feedback between performer and digital system. Together, the works examine how the processing, latency, and translation of movement into image produce a distinctly cybernetic aesthetic rooted in embodiment, control, and technological perception.





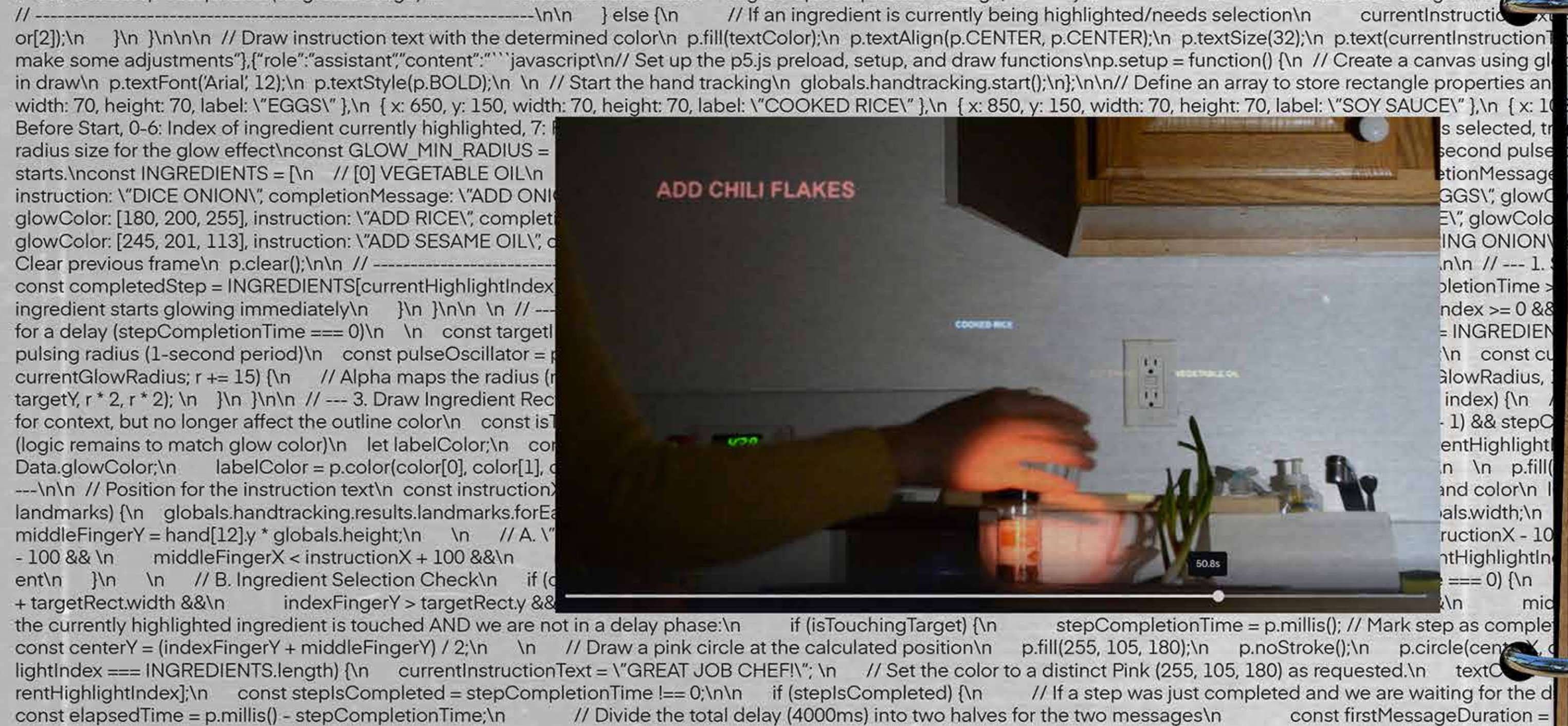
```

* globals.height;\n // Calculate the position slightly above the head\n let lineY = noseY - Math.
bigger"},"role":"assistant","content":"\"\"\"javascript\n// P5.js sketch with pose detection (tracking body
width and height\n p.createCanvas(Processing -> Projects -> make fire big
background with black color\n p.ba
relative to the line and adjust fire sca
landmark.y * globals.height;\n //
drawFire(x, y, scale) {\n // Draw the
scale it\n p.fill(255, 215, 0); // Yellow
width;\n let noseY = pose[0].y * glo
null;\n}\n\n// Function to adjust the
globals.height;\n let rightHandY =
line"},"role":"assistant","content":"\"\"\"ja
above the line\n\np.setup = function
transformation matrix\n p.applyMat
head\n let lineY = drawLineAbove
each detected landmark in the pose
ellipse(x, y, 10, 10);\n }\n }};\n }\n
ellipse(x, y, 30 * scale, 30 * scale);\n
draw a horizontal line above the head
position slightly above the head\n
(pose[15] && pose[16]) { // Assuming
tent":"move the fire lower on the scre
how many times hands are above the
= function() {\n // Apply the transfor
// Draw a line above the head\n let
}\n\n // Iterate through each dete
p.noStroke();\n p.ellipse(x, y, 10,
Red-orange color\n p.ellipse(x, y, 30 * scale, 30 * scale);\n }\n // Draw the middle part of the fire in
scale);\n}\n\n// Function to draw a horizontal line above the head\nfunction drawLineAboveHead(p
height;\n // Calculate the position slightly above the head\n let lineY = noseY - Math.abs(nose
AboveLine(pose, lineY) {\n if (pose[15] && pose[16]) { // Assuming indices 15 and 16 are for left and
n"},"role":"user","content":"show my body as a skeleton figure tracking instead of dots"},"role":"ass
scale for the fire\nlet handsAboveLineCount = 0; // Count of how many times hands are above the l
body skeleton structure\n\np.setup = function() {\n // Create a canvas with the provided width and
Apply the transformation matrix\n p.applyMatrix(globals.matrix);\n }\n // Clear the background with
skeleton\n drawSkeleton(pose);\n\n // Draw a line above the head\n let lineY = drawLineAb
fireScale = 5 + handsAboveLineCount;\n }\n }};\n }\n\n // Draw a larger fire lower on the screen
Red-orange color\n p.ellipse(x, y, 30 * scale, 30 * scale);\n }\n // Draw the middle part of the fire in
scale);\n}\n\n// Function to draw a horizontal line above the head\nfunction drawLineAboveHead(p
height;\n // Calculate the position slightly above the head\n let lineY = noseY - Math.abs(nose
AboveLine(pose, lineY) {\n if (pose[15] && pose[16]) { // Assuming indices 15 and 16 are for left and
false;\n}\n\n// Function to draw the pose as a skeleton\nfunction drawSkeleton(pose) {\n p.stroke(
dldx.x * globals.width;\n let endY = pose[endlx].y * globals.height;\n p.line(startX, startY, end

```

[illegible][illegible]

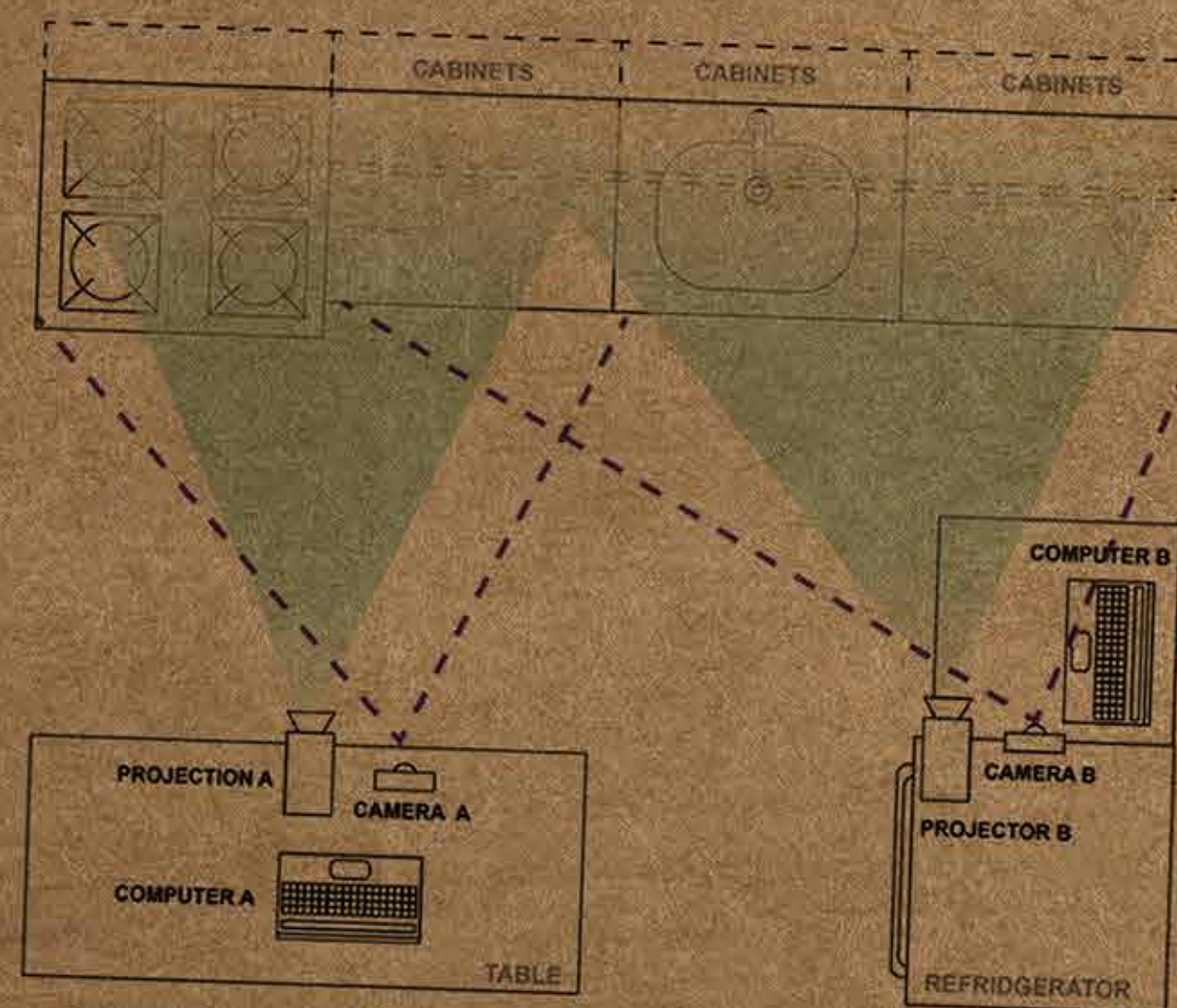




## Spatial Interaction To Reignite The Kitchen As A Social Space

This third experimentation looked at light cues to accompany recipes and cooking directions. Projections are mapped onto edible ingredients and kitchen cabinets to create a fully immersive interactive experience that transforms daily cooking tasks into performance art within your own personal everyday space.

The projectors were mapped out in two sections, in the diagram below. Projector A is aimed towards the ingredients while Projector B is aimed toward the upper cabinets, each has its own separate device streaming the code developed in Processing:





A photograph of a kitchen counter. On the counter, there are several items: a bottle of wine, a bottle of oil, and some other small containers. On the wall above the counter, there is a blue light projection of a glass. The projection is semi-transparent and appears to be a digital overlay. The kitchen has wooden cabinets and a white wall. The overall scene is dimly lit, with the blue light from the projection being a prominent feature.



### ADD CHILI FLAVOR

Each ingredient was given a clear and recognising color that would pulse with light when the recipe called for each object. The light pulse would stop when a hand touched the object.

VEGETABLE OIL

## SPRING ONIONS

RICE

**SOY SAUCE**

## CHILI FLAKES

## EGGS

ONION

**SELECT VEGETABLE OIL**

### GARNISH WITH SPRING ONION

### ADD RICE

```
// Custom logic for the ONION step (index 1) to show two sequential messages\n    if (targetStep.subMessage && currentHighlightIndex == 1) {\n// 2:\n        \n        if (elapsedTime < firstMessageDuration) {\n            // First half: DICE ONIONS (from completionMessage)\n            currentIn-
```



Perception Beyond Control:  
Cold War Psycho-optics, and the Rise of  
New Age Biofeedback and Experimental Art

Introduction:

New Age biofeedback devices, alongside experimental flicker films and expanded cinema emerged as experimental, self-directed perceptual learning systems reappropriated from psychological techniques developed within Central Intelligence Agency (CIA), and USSR research.

Investigations into visual and written documentation of CIA procedures reveal early experimentation using external control variables to develop perceptual manipulation techniques, such as photic flicker/ing, sensory deprivation, audiovisual stimulation and subliminal messaging, all of which demonstrated the capacity to induce altered perceptual states. During the Cold War, the CIA and USSR studied techniques into sensory manipulation particularly on its experimentation in light, color, flicker and sensory deprivation. Yet these variables proved to be too difficult to calibrate and their effects were unstable to standardize

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BEHAVIOR - USSR (U)

BY U.S. ARMY  
SURGEON GENERAL  
INTELLIGENCE OFFICE

2008 BBC REENACTMENT OF THE MCGILL EXPERIMENTS



PERCEPTION

BEYOND CONTROL

10



# BEYOND CONTROL PERCEPTION

## Perception Beyond Control: Cold War Psycho-optics, and the Rise of New Age Biofeedback and Experimental Art

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New Age biofeedback devices, alongside experimental flicker films and expanded cinema emerged as experimental, self-directed perceptual learning systems reappropriated from psychological techniques developed within Central Intelligence Agency (CIA), and USSR research.

Investigations into visual and written documentation of CIA procedures reveal early experimentation using external control variables to develop perceptual manipulation techniques, such as photic flickering, sensory deprivation, audiovisual stimulation and subliminal messaging, all of which demonstrated the capacity to induce altered perceptual states. During the Cold War, the CIA and USSR studied techniques into sensory manipulation particularly on its experimentation in light, color, flicker and sensory deprivation. Yet these variables proved to be too difficult to calibrate and their effects were unstable to standardize within the strict parameters of military deployment. Rather than functioning as reliable systems of psychological control, these experiments exposed the instability and variability within the embodied nature of human perception itself. As systems of perceptual manipulation exceeded the framework of military compliance, they escaped through public cultures of experimental art, cybernetic aesthetics and New Age biofeedback technologies. Within these new contexts, perceptual

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SAFE-157-78

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and biofeedback control evolved through wearable devices, immersive environments and flicker based cinematic experiences designed to isolate, modulate, and reorganise perception. Psycho-physiological techniques originally utilized for behavioral control were reframed into tools for self directed perceptual exploration through internal biofeedback loops and experimentations with altered states of consciousness.

Through close analysis of visual stimulation works such as Dream Machine (1959) by Brion Gysin and Ian Sommerville, experimental flicker films by Paul Sharits, and Denis Gorges' Synchroenergiser alongside Thomas H. Miller's spectrum glasses, this paper demonstrates how techniques originally developed within Cold War research were ultimately reappropriated as technologies for individual perceptual experimentation and internal feedback. Examination of these works and devices reveal that perception cannot be controlled by an externalized system but instead operated as an embodied introspective experience shaped by the observations of the subject.



## DEFENSE INTELLIGENCE AGENCY

### CONTROLLED OFFENSIVE BEHAVIOR - USSR (U)

PREPARED BY U.S. ARMY  
OFFICE OF THE SURGEON GENERAL  
MEDICAL INTELLIGENCE OFFICE

CONTROLLED DISSEM  
NO DISSEM ABROAD

CLASSIFIED BY CHIEF, MIO, OTSG  
EXEMPT FROM GENERAL DECLASSIFICATION  
SCHEDULE OF EXECUTIVE ORDER 11652  
EXEMPTION CATEGORY 3  
DECLASSIFY ON 31 DECEMBER 1990



NO FOREIGN DISSEM  
SECRET

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## Cold War Perceptual Experimentation

Engaging with declassified Defense Intelligence Agency documents, in particular, Controlled Offensive Behavior – USSR (U), allows an understanding of the original potential of perceptual manipulation as a technique of brainwashing. Through reviews of Soviet research, the document detailed methods of influencing human behavior. It initially investigated how basic variables of light, color, rhythm, and sound contributed to creating psychological phenomena and psychological weapons through "reorientation or incapacitation." Focusing particularly on photic flicker, psycho-optics, subliminal messaging and sensory deprivation, the document studied its first encounters with USSR tactics using the colored light spectrum as a weaponised tool.

Cold War military pilots were temporarily blinded and disoriented by "various intensities and colors of continuous or intermittently flashing lights during night missions." The visible spectrum of light and its limits of photooptic vision were tested, marking wavelengths of 1050 millimicrons (infrared) as the highest threshold of stimulation for the eye. Within the range of visible light, yellow colored light had the maximum effect of discomfort and was most effective in eliciting photophobia. Shifts in timing of visual and motor reactions were found to be lengthened through red, green, and yellow low intensity bulbs, where red produced irritability, and blue was recognised as a characteristic of sluggishness and sleepiness.

While non rhythmic flashing bright lights at close distances at high intensities could bring "alpha rhythms of the brain to match with the lights" eventually interrupting and preventing sleep to the point of death. In 1968, F-102 pilots reported pulsating lights in red from 15-20 times with a duration of two to seven seconds, a possible Soviet field experiment testing the variables of timing and rhythm for effects of disorientation. Subsequently, research from Tulane University concluded that types of rhythmic flicker had the potential of causing dysfunction of the human nervous system. Rhythmic light flickers or rather photic flickers had the capacity to cause discomfort to the eyes, tranquillizing effects, unconsciousness, and hypnotic states. More manifestations of photic flicker included subjects creating visual illusions of color sensations as well as patterns of odd shapes. These sensations occurred at 3-5hz while visual illusions appeared to be produced by frequencies of 10-12 hz and above.

Most of the described effects in the field were inconsistent, and it was found difficult to isolate external variables that could determine the true visual effectiveness of Soviet perceptual manipulation tactics. However, the effects were inconsistent, revealing that perceptual manipulation could not be standardized into a reliable system of behavioral control, making these techniques incompatible with the type of military compliance and behavioral control the CIA and USSR was looking for.

Few early experiments like Donald O Hebb's sensory deprivation trials attempted to control these unstable variables for perceptual manipulation in pursuit of understanding new techniques of brain washing. Hebb and Woodburn Heron's 1951 McGill experiments were one of the first to apply sensory deprivation as a way to analyse lapses of attention in monotonous environmental conditions. Subjects had to lie alone in "semi sound proofed chambers, wear translucent goggles and listen to constant masking sound of low intensity" Initially, the results of the study at McGill were ambiguous, it was till later that as "a consequence of the reports" it was labelled as a "brainwashing" procedure" The purpose of the study was to investigate what conditions individuals could be subjected to in order to increase susceptibility and suggestibility in a 72 hour time period. Eventually subjects reported vivid hallucinations and delusions as well as impairments in cognitive and perceptual functions. Later, researchers such as John P. Zubek expanded on these studies at the University of Manitoba in 1957. Originally, the findings of the McGill study were meant to be extended to study treatments for psychopathological subjects but these techniques opened the door to controlled studies of imagery and perception without drugs. Further analysis from American psychologist Franklyn N. Arnhoff, challenged the results of the experiments where subjects reported hallucinations. In order to be classified as a hallucination, "the experience had to possess an 'out-there-ness' quality where the subject has to be convinced of its reality." The terms "hallucination" and "delusion" were applied too quickly and were overdiagnosed, where in current literature the terms "images" and "perceptual experiences" are more fitting to describe the experiences of the experimental subjects, and began to replace "hallucination and "delusion."

Although the experiments showed influence in creating deficits in subjects, contrary to the assumptions of sensory deprivation, there was "often a minority of the subjects who

report disturbance" as there was a wide range of variation in response within subjective conditions. With other similar studies suggesting that with "sensory modalities, vision, audition, and kinaesthesia" all altered, it became difficult to determine the relative importance and influence of each variable. Arnhoff indicated that the behavior of the participants in these highly experimental situations was unpredictable, as the impact of "complex social, situational and personal variables" were as determining as external sensory input on the results.

Documentations of USSR perceptual manipulation tactics alongside Donald O. Hebb's sensory deprivation experiments reveal that producing controlled behavior, as implied in the DIA report Controlled Offensive Behavior was far more complex than anticipated, and attempts to standardize and control these variables proved inconsistent and unreliable. Rather than generating stable, repeatable outcomes, these experiments exposed the limits of perceptual manipulation as a method of behavioral control.

Taken together, these Cold War military and CIA studies demonstrated that while perception could be significantly altered, it could not be controlled by external agents and variables in any stable or systematically replicable way required for military compliance. Instead of producing predictable subjects and outcomes, these techniques generated variability, instability, and subjective divergence, undermining their abilities as instruments of brainwashing.

## Investigations into Perceptual Instabilities

These instabilities and unpredictabilities can be further understood through Jonathan Crary's analysis in Techniques of the Observer, which argues that perception is not a fixed or externally controllable system but it is "active construction" where the body is internally producing its own embodied visual experience. From this perspective the failure of the DIA and USSR experiments were not simply technical but their attempt to isolate and manipulate perception as a stable and passive input-output system overlooked the variability of the complex observations of the human subject themselves.

Crary references Johann Wolfgang von Goethe's Theory of Colors, arguing that color "is always a product of an admixture of light and shadow" in which the body processes light

into the spectrum of color, becoming an "active producer of the optical experience." Goethe's experiments repeatedly required a darkened room or a closed eye, creating conditions where the "the inescapable physiological components of vision can be artificially isolated and made observable." He found that in experimentation, that the experiences of the observed and the observer were often presented as "distinct and irreconcilable" where in reality they were "subjects to the same modes of empirical study."

In contextual environments of defense research conducted during the Cold War, intelligence agencies positioned themselves as objective observers, attempting to maintain distance from the subjects of their studies. But in practice, the observer's objectivity begins to weaken, as the specific conditions required to produce perceptual effects undermine the possibilities of controlled objective observation. The studies took forms of immersive experimentation, sensory deprivation, photic stimulation, and altered environments, not only destabilizing perception of the subject but also the observer's ability to regulate outcomes. The techniques developed were inherently unsuitable for external control as the effects relied on total sensory immersion and subjective experience.

Notably in experimentation of photic flickering, quantitative studies of the eye in terms of attentiveness, reaction times, thresholds of stimulation, and fatigue were tested to stimulate the activity and energy of oneself with the pulse of the brain. In the context of military compliance photic flickering was experimented as a medium for subliminal messaging. The flicker allowed for "simultaneous processing of several parallel streams of information", where the subconscious operation of memory became more susceptible to the influence of feelings and emotions. Further evaluating the photic flicker, there was no concrete proof that this type of perceptual hypnosis could play an important role in controlling behavior through brain washing. As Crary suggests, perception cannot be isolated as a stable object for control, the brain is not a passive receiver of information as they are given, instead information and its appearance conforms to our own internal mode of representation. He argues that in the case of perceptual manipulation "the visible escapes the timelessness of the camera" and visual information becomes embedded into an "unstable physiology and temporality of the human body" as the human subconscious and perception itself is too subjective and temporal. These theories and instabilities challenge the methods in which



the CIA and USSR attempted to influence perception with external stimulation; the experiments ultimately exceeded the frameworks of control that Cold War research looked to impose.

## Recontextualizing Perceptual Instability

Emerging out of the framework of military compliance, the instabilities of photic flicker and psychooptics found itself in a new context within the public cultures of experimental art and New age biofeedback technologies, where the experimentation of afterimages and feedback became an open and productive and technique for self driven perceptual learning experiences.

One of the first of these experimental art devices was the Dream Machine (1959) created by Brion Gysin and Ian Sommerville. Created as a simple and replicable device made of a turntable, paper, and lightbulbs, the Dreammachine was a stroboscopic light device to be experienced with closed eyes with the intention of approximating visions found in a dream state, replicating the effect of psychedelics without drugs. Gysin and Sommerville hoped for the Dreammachine to eclipse television to produce internal cinematic experiences as an endless generator for self-exploratory creativity, liberating consumers from mass media. Critics were skeptical of its effectiveness in producing visions, however, the Dreammachine flickered 10 times per second translating into a 10 hz pulse signal, a threshold where Cold War experiments found that frequencies above 10hz could produce visual hallucinations.

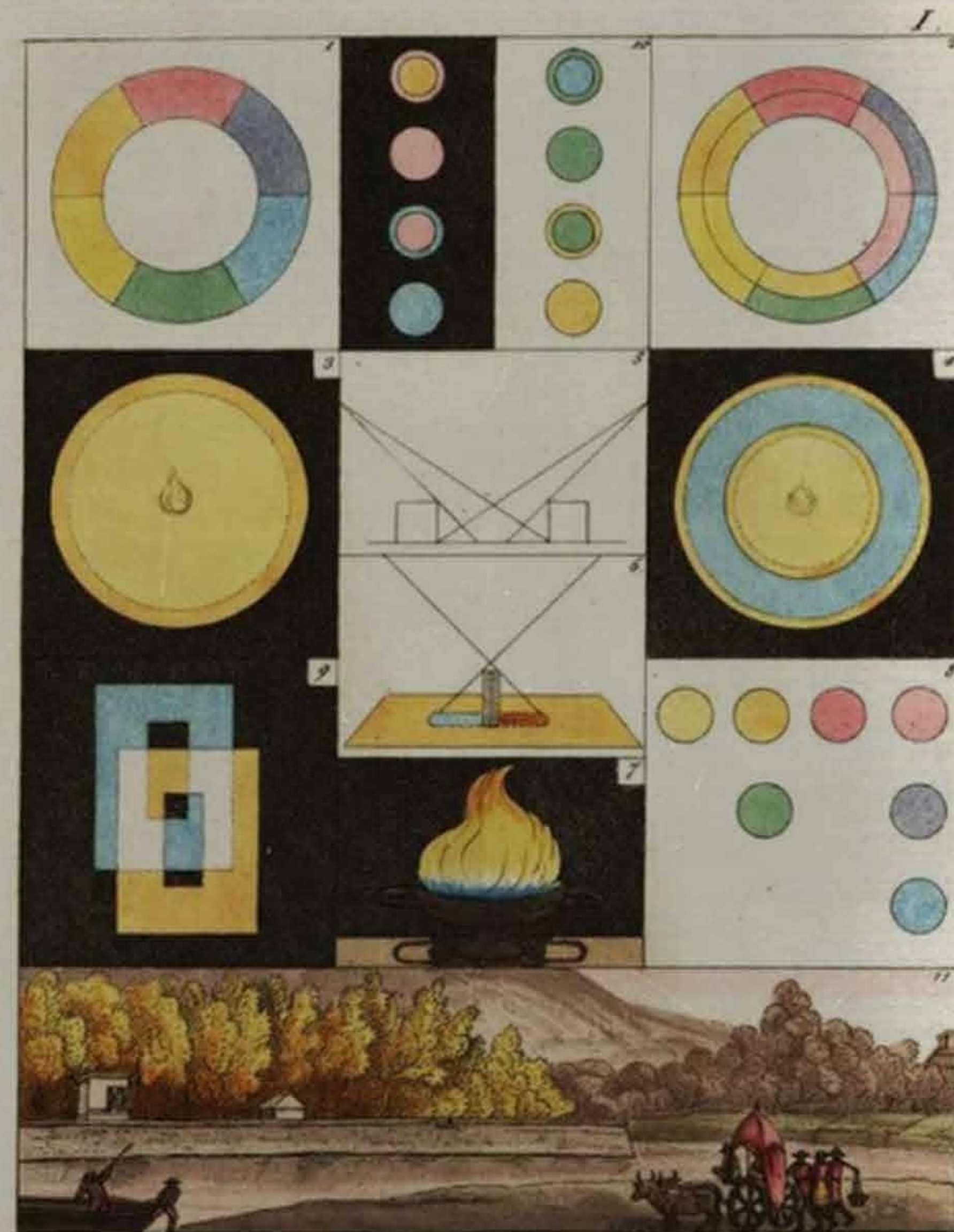
In this instance of the Dreammachine, the body and the optic nerve are not receiving or being fed external images, but the effects of the photic flicker generate them internally. The machine became a foundational artistic extension of the same perceptual techniques studied during the Cold War, sharing similar variables of flickers, frequencies, rhythms and sensory isolation to induce imagery. Through photic driving and closed-eye stimulation, the interactive art piece mimics certain conditions of sensory deprivation. The eyes become an active participant in the feedback loop, where the device's rhythmic light stimulus blurs into perception itself, creating a self exploratory perceptual experience. Rather than vision functioning as a passive process imposed upon the viewer, the Dreammachine demonstrates how the viewer becomes an active participant in con-

structing perception through internal sensory responses. The photic flicker no longer only generates internal imagery but it destabilizes perception itself, allowing for subjective visual experiences of unpredictability to emerge through the body's own neurological processing. What has previously functioned as a limitation within Cold War perceptual studies, the CIA and USSR's inability to fully control or standardize the results of perception, became the driving force of the artwork Dreammachine itself. The instability and variability made perceptual manipulation unsuitable for military compliance enabling viewers to generate individualised internal imagery and subjective visual experiences.

While the Dreammachine framed photic flicker as a meditative and self-exploratory perceptual experience, experimental filmmaker Paul Sharits intensified the same techniques into confrontational forms of expanded and perceptual cinema. His first works in photic driving color films were Ray Gun Virus (1966) and Piece Mandala/End War (1966). The films feature pure colors that flashed rapidly one after another, blending into pale whiteness. Sharits' subsequent work, particularly his "most successful flicker film, *n:o:t:h:i:n:g* (1968) aspired to induce changes of consciousness in his viewers. Sharits expanded on aspects of the meditative experience through perceptual manipulation, basing his work on Tibetan Buddhism. The film consisted of "highly vibratory color-energy rhythms" partially inspired by the "Tibetan Mandala of the Five Dhyani Buddhas."

Sharits' methodology aimed to isolate the film on its own, unaffected by external influence "standing in the way of the film being its own reality" allowing the viewer to enter new levels of awareness and self-driven visual experiences. *n:o:t:h:i:n:g* demonstrated specificity and articulation in utilizing colored photic flicker, controlling rhythms and patterning of color bursts, while sounds from the film "suggests a telegraphic code, chattering teeth, or the plastic click of suddenly changing television channels." Viewers for this film were intentionally set off-balance, seated alone under a "draining lightbulb", the concentration of the flickering colors induced an "almost intoxicating experience" after an extended amount of time.

Paul Sharits' work, classified as synaesthetic cinema, brings attention to the relationship between the film and the viewer where "human perception (sensation and conceptualization)" brings them together. Gene Youngblood's definition of synaesthesia in Expanded Cinema describes a "harmo-



JOHANN WOLFGANG VON GOETHE, THEORY OF COLOURS, 1810



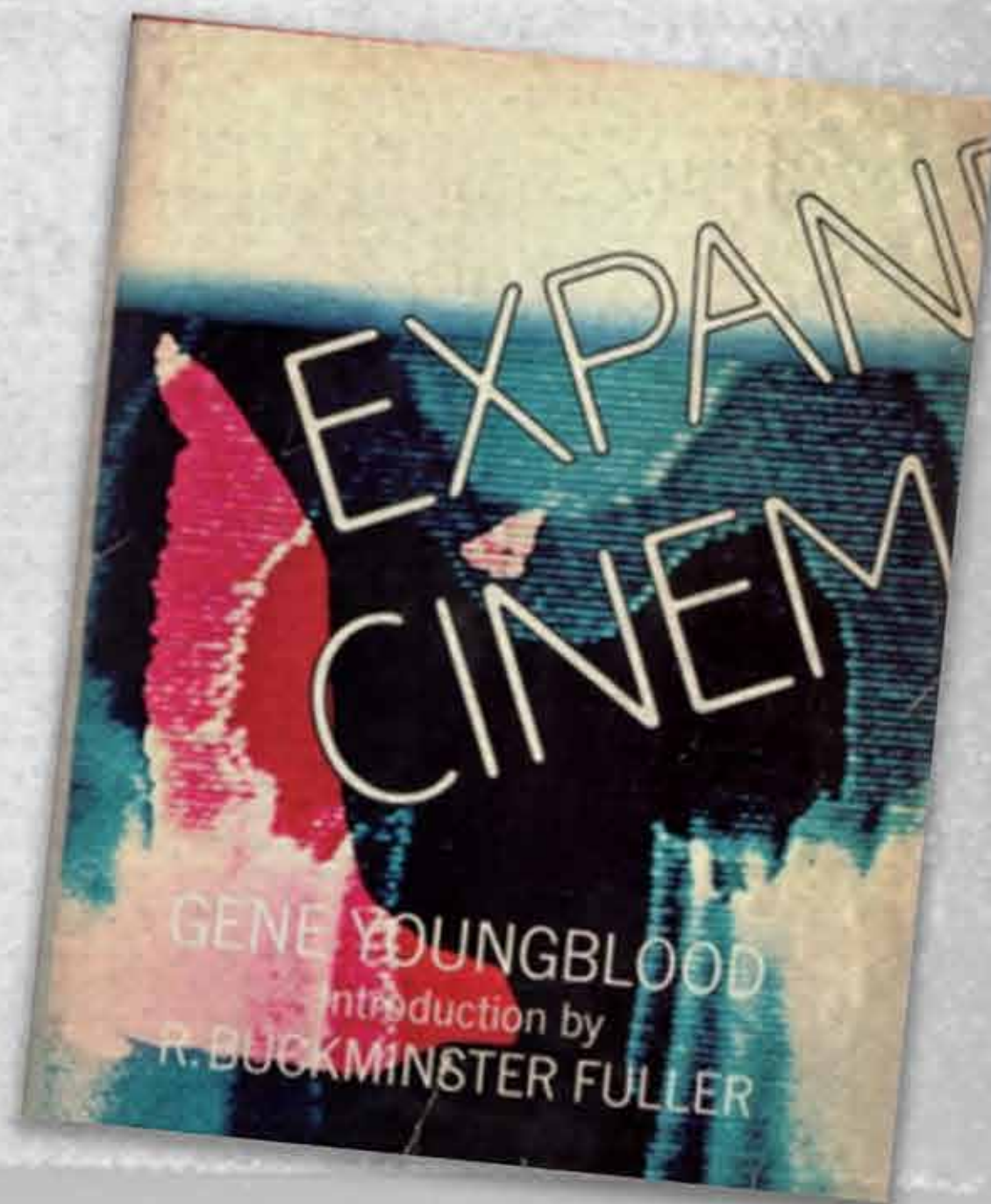
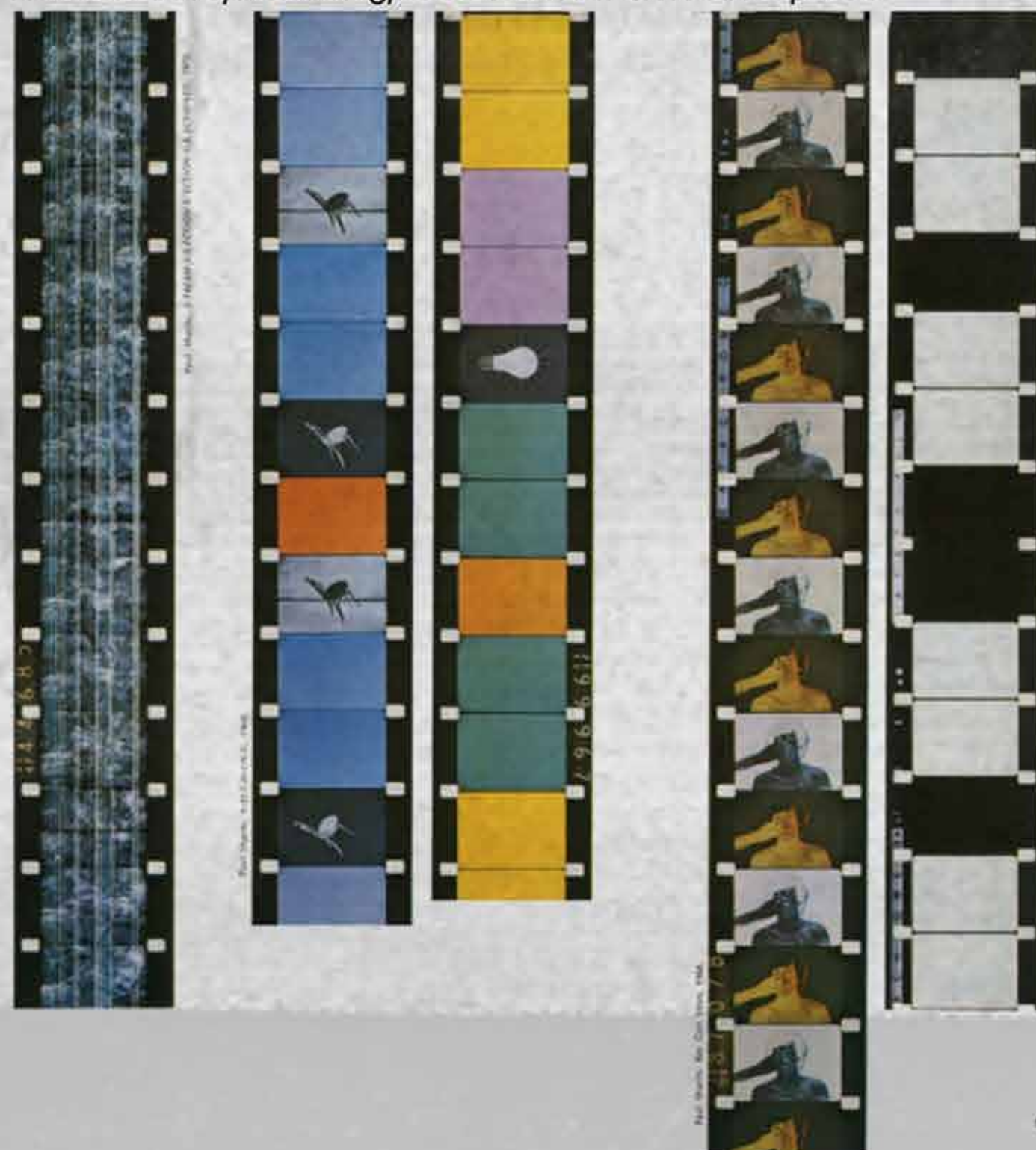
BYRON GYSIN & IAN SOMMERVILLE, THE DREAMACHINE, 1959



PAUL SHARITS, PIECE MANDALA, END WAR, 1966



PAUL SHARITS, n:o:t:h:i:n:g, 1968 with RAY GUN VIRUS, 1966



ny of different or opposing impulses produced by a work of art" creating a "simultaneous perception of harmonic opposites." Sharits' films were part of a new phenomenon of "new cinema" where Youngblood descriptively used the term "personal" as the individual experiences of the films are only an extension of the viewer's processing perception and the "filmmaker's central nervous system." The synaesthetics of photic flickers and varied inflection of tone and color produce responses that are "neither subjective, objective, or nonobjective", the variables in perceptual experimentation alter the signals in the internal control mechanisms of "the human bio-computer." The signals and images processed develop their own meanings and narratives change in the context of different sequences of content. Through the perspective of Expanded Cinema, Paul Sharits' films extended the same perceptual variables explored in Cold War psycho-optic research, but recontextualized sensory instability and physiological disruption into immersive aesthetic experiences in which altered perception transformed into a medium of introspection, embodiment and self-directed consciousness rather than a failed instrument of experimental control.

As Sharits' work underscored perceptual instability and sensory over-stimulation as immersive cinematic experiences, simultaneously New Age Biofeedback technologies increasingly began to investigate and reorganise the same perceptual variables of psycho-optics and photic driving into systems of self-regulation and psycho-physiological control. Rather than using flicker, visual stimulation and sensory isolation to destabilize a viewer through intense audiovisual confrontations, devices such as Denis Gorges' patented "learning-relaxation" device, also known as the Synchroenergiser, reframed these varying techniques as therapeutic and educational tools meant to guide consciousness, relaxation, internal awareness and mindfulness. Arising from the broader public culture of cybernetic aesthetics and New Age neurofeedback practices, Gorges' device transformed photic stimulation and rhythmic sensory feedback into individualised systems for managing oneself's mental state. The Synchroenergiser, a relaxation device for relaxing, stimulating and driving brainwaves and its experimental conditions remained almost identical to the environments created for the McGill experiments by Hebb and Heron. Gorges' invention shared variables like isolation, controlled sensory inputs of visual and audio feedback as well as the intent of altered perceptions. Each eye of the device was independently adjustable and each had a controlled

light source with adjustable parameters such as the rate of flicker, while the audio head set also had separately controlled left and right ear pieces. The control panel allowed for simultaneous or alternating light, sound, calibrations for the pitch of audio frequencies, with the metronome of audio inputs including the rate of a heartbeat sound generator and electromagnetic coils for pulsations. Gorges reappropriated these earlier perceptual experimentations into this device intended as a "relaxation aid" for the release of psychological and physiological stress, effectively reversing the original military interest in controlled behavior. As opposed to functioning as a system of external behavioral compliance, the Synchroenergiser reframed psycho-optic manipulation as an internally self-driven process of perceptual learning and neurophysiological balance. There were four possible combinations to alter synchronous pulsations, control in the hands of the individual user, granted self-direction of Gorges' perceptual learning system to internally control rhythms of relaxation while balancing the left and right brainwaves of the human subject.

Similar forms of perceptual alteration emerged through wearable optical devices such as Thomas H. Miller's spectrum glasses. Like Denis Gorges' Synchroenergiser, the spectrum glasses did not attempt to externally control the subject through perceptual manipulation but instead operated with self-directed interfaces where users could actively customize, modulate and reinterpret their sensory experience. Spectrum glasses were designed to provide a tranquilizing field of vision, they blocked peripheral vision and prevented the entry of ambient light, isolating the user's experience between their vision and the colored light. A color wheel was attached to the glasses diffusing a single light source creating a controlled color field to encourage calmness and sleep. In an approach similar to the Synchroenergiser's use of rhythmic audiovisual stimulation, the spectrum glasses reorganised perceptual input through controlled frequencies of color and light by transforming psycho-optic experimentation into individualised therapeutic experiences. By fragmenting, filtering and refracting visible light into chromatic distortions, the Spectrum glasses aligned with the broader cybernetic models of internal feedback and self-regulation, where perception itself became a site of active participation and self-monitoring rather than a passive receptor of visual information.

These New Age devices differed from military and scientific biofeedback systems of this era because rather than plac-



ing biofeedback sensors across the body and attempting to simultaneously regulate and standardize multiple unstable variables, the Spectrum glasses and the Synchroenergiser concentrated on altering one perceptual condition at a time, enabling the users to guide their own visual and neural feedback responses. The name Synchroenergiser itself indicated Gorges' belief that the human nervous system could eventually synchronise with the self directed rhythms and frequencies of the device. Both the Synchroenergiser and the spectrum glasses relied on repetitive sensory conditioning through light, color, rhythm, and controlled isolation of the senses, but unlike the Cold War perceptual experiments, their purpose was not to induce behavioral compliance or external control. Instead, these devices framed perceptual instability as a productive and therapeutic process through which users could learn to regulate consciousness, relaxation, and internal awareness. The goal of these devices was to train users to regulate their own relaxation, where they learned how to induce changes in their physical state without feedback, suggesting a cultural shift from coercive psycho-physiological experimentation toward self-directed models of cybernetic learning and perceptual self management.

## From External Control to Internal Feedback

The shift of psycho-optic experimentation from Cold War defense research into public experimental art and New Age biofeedback cultures reveals a transformation in how perception was understood. Within military and intelligence contexts, techniques such as photic flicker, sensory deprivation, subliminal message and audio visual stimulation were investigated as methods for inducing and controlling human behavior. But the instability and unpredictability of the perceptual experience repeatedly compromised these experiments, exposing the difficulty of distilling human perception and consciousness into stable and externally controllable systems. Instead of producing standardized techniques for creating human compliance, these experiments generated subjective variables and individually constructed perceptual responses that grew past the frameworks of military observation and control.

With the emergence of experimental films, expanded cinema and biofeedback technologies, the same perceptual instabilities became productive through these mediums of film and experimental devices. Works such as the Dreama-

chine and Paul Sharits's flicker films modified photic stimulation into immersive perceptual experiences that embodied the active participation of the viewers constructing vision itself. Similarly, Denis Gorges's Synchroenergiser and Thomas H. Miller's spectrum glasses reframed sensory manipulation into individualized systems of relaxation, wellness and introspection through cybernetic feedback loops. What had once been treated as a failure within the context of military experimentation became central to the artistic and therapeutic forms of self-driven perceptual exploration. These technologies reveal a broader cultural transformation in which psycho-physiological techniques of control and coercion were reappropriated by self driven systems of perceptual learning and experimentation. The cultural afterlife of CIA and USSR psycho-optic experiments demonstrates that perception could not function as a passive object manipulated by external drivers, but instead remained as an unstable and immersive participatory process shaped as tools for internal exploration through experimental cybernetic aesthetics, showing how perception is produced through subjective experiences of the individual observer.

DENIS E. GORGES, THE SYNCHROENERGISER, 1982

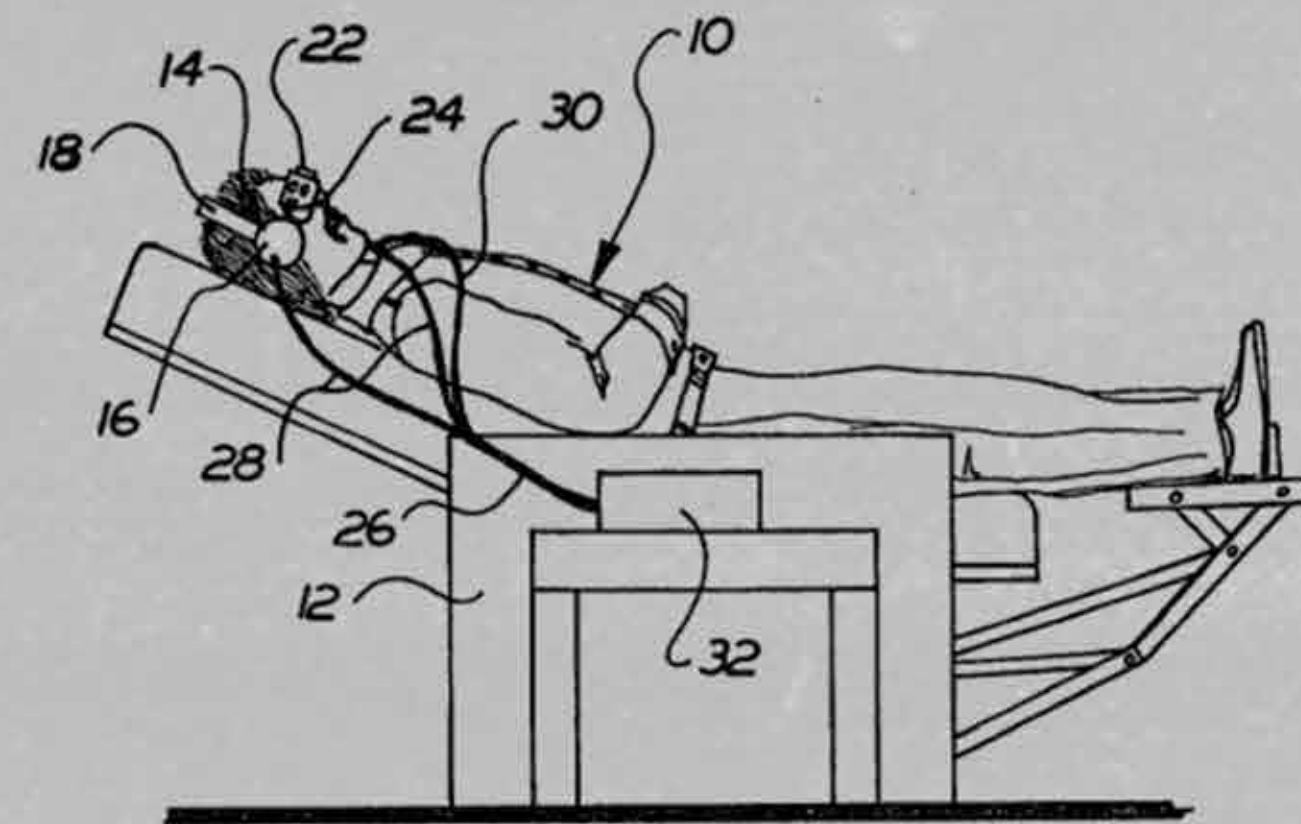


FIG. 1

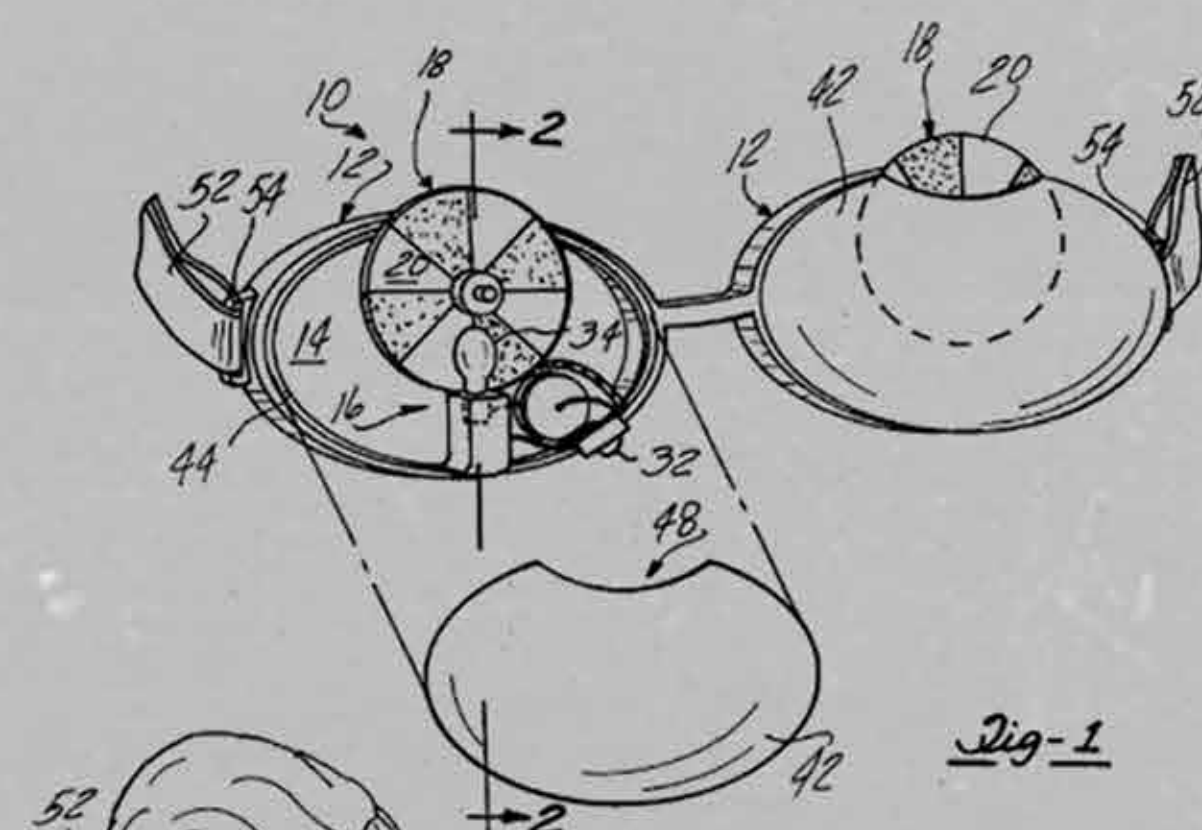


Fig-1



Fig-3

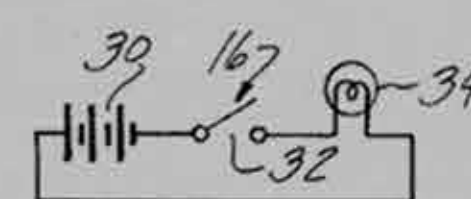


Fig-4

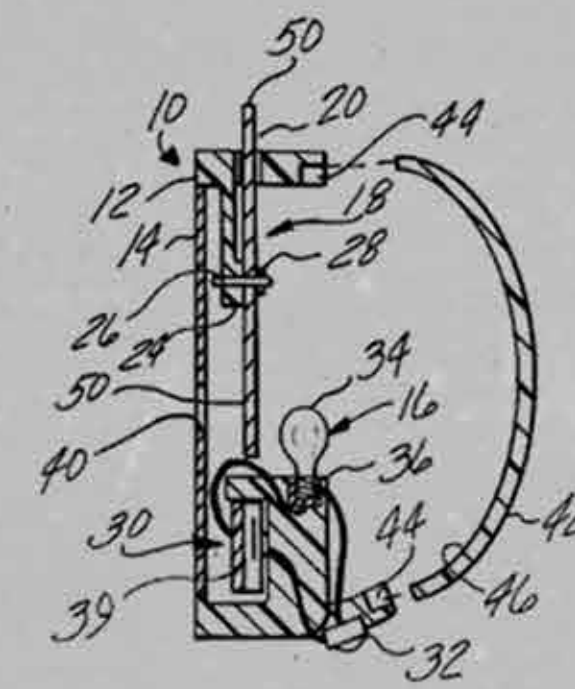


Fig-2

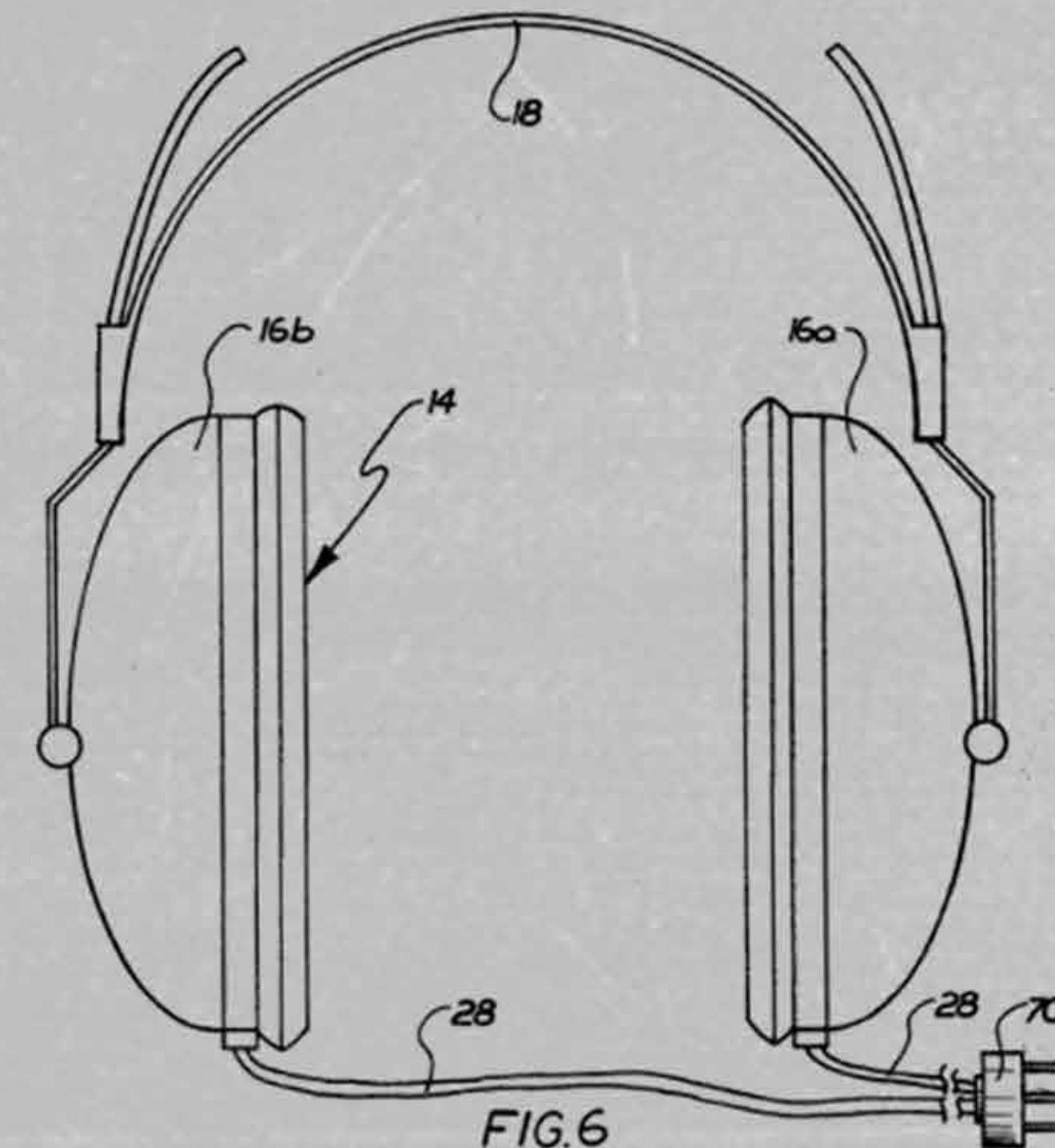


FIG. 6

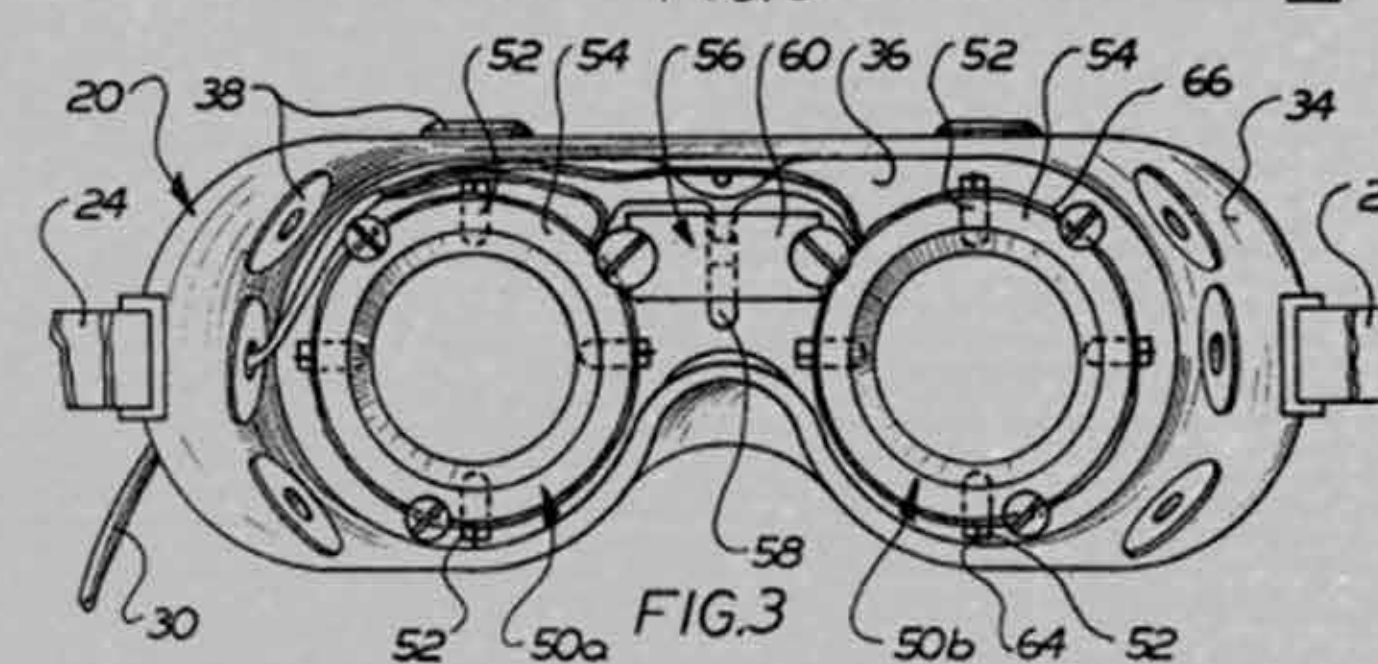


FIG. 7

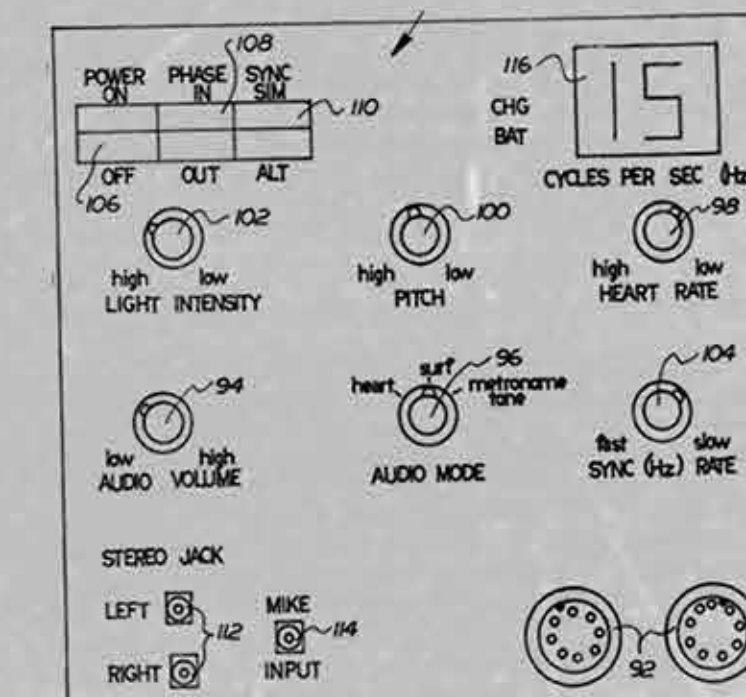


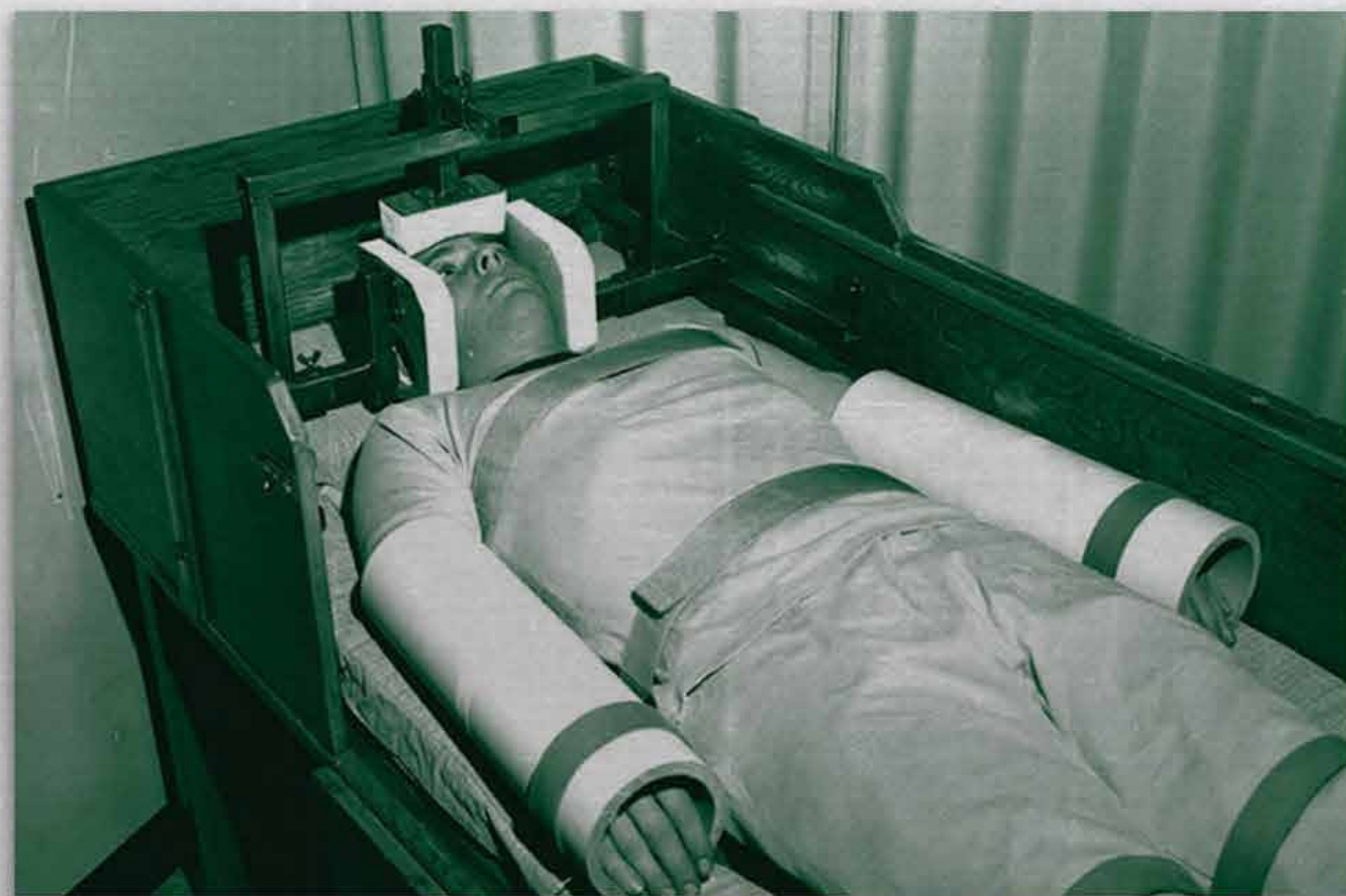
FIG. 7

THOMAS H. MILLER, SPECTRUM GLASSES, 1983





DENIS E. GORGES, THE SYNCHROENERGISER, 1982



UNIVERSITY OF MANITOBA EXPERIMENT, CIRCA 1980

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is formatted as a constructed archive, assembled to resemble a red-together collection of documents, drawings, and artifacts. ons, fragmented layouts, scanned textures, and overlapping archival files and research dossiers, reinforcing the idea of s of investigation and accumulation rather than a singular s format reflects my interest in narrative-building, historical a archaeology, allowing the portfolio to operate both as a projects and as an artifact in itself. By treating the portfolio to emphasize process, material traces, and the relationships research, technology, and spatial storytelling.

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DENIS E. GORGES, THE



# THANK YOU.

The portfolio itself is formatted as a constructed archive, assembled to resemble a scanned and pieced-together collection of documents, drawings, and artifacts. Layered compositions, fragmented layouts, scanned textures, and overlapping imagery reference archival files and research dossiers, reinforcing the idea of design as a process of investigation and accumulation rather than a singular finished object. This format reflects my interest in narrative-building, historical layering, and media archaeology, allowing the portfolio to operate both as a documentation of projects and as an artifact in itself. By treating the portfolio as an archive, I aim to emphasize process, material traces, and the relationships between memory, research, technology, and spatial storytelling.

Reconciling nature, culture, and technology has become central to the way I approach design. Through researching and understanding the existing narratives embedded within spaces, storytelling emerged as a foundation for my projects and spatial thinking. A deeper engagement with history, ecology, culture, and technological systems has allowed me to experiment more intentionally with materiality, atmosphere, and form. This process also encouraged me to reflect on aspects of my own cultural background that I had previously overlooked or taken for granted, and I now find myself able to incorporate those perspectives into my work with greater awareness and clarity.



