

SELECTIONS  
LAYNA CHEN

**CONSTRUCTIONS**  
+  
**DE-CONSTRUCTIONS**

GSAPP MSAAD  
2022-2023

**ARCHITECTURE IS NOT JUST THE CONSTRUCTION OF BUILDINGS. IT IS THE PROCESS BY WHICH WE UNDERSTAND THE WORLD AROUND US. THE SELECTION OF WORKS BELOW USE DRAWINGS, PHOTOGRAPHS, ESSAYS, DATA VISUALIZATIONS, AND DIGITAL MODELS TO CONSTRUCT, DECONSTRUCT, + RECONSTRUCT NATURE, THE LANGUAGE OF CARE, GENDER, + INFRASTRUCTURE.**

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# CENTER FOR COMMON EARTH

## A Tapestry of the Earth's Plantary Biomes

Juan Herreros  
Spring 2023  
w/ Brent Zhang + Yufai Huang

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What does it mean to be a museum of natural history today?

The American Museum of Natural History is a highly problematic building that continues to produce outdated, racist, and spatially unpleasant. As a prominent museum in the city, it is responsible for creating a relationship between nature and the public. As a draw for children, the museum also functions as an educational instrument. The museum is monstrous both in its size and collection. In order to decolonize this museum, we propose that this archaic structure be turned into a ruin and given back to nature. The new museum should belong to nature. As

an educational instrument that can work in this era when we are in planetary trouble. It is extremely necessary and important there exists a museum today that addresses the problematic entanglements man has with nature in the Age of the Anthropocene. Future museums should not serve as centers of display, but as a tool that changes the fundamental way people experience nature.

Through our analysis, the redesign of the AMNH encompasses its monstrous form and spatial organization and its problematic exhibitions.



Problematic exhibitions should be destroyed. The museum still has dioramas depicting "exotic" cultures, while Euro-Americans are not similarly objectified. **(see next page.)** The dioramas do not just have problematic racist overtones, but create a relationship towards nature where nature is exoticised and limited to visual displays.

Spatially, the architecture of the museum should reflect the biodiversity of nature. The museum should be an example of a natural space where the urban and the natural mix together and live harmoniously. The nature that is emphasized should not be the exotic nature of other countries, but the nature of New York. **(Brought in through the roof. See plan on left.)** Within the interior, Closed off public outreach, children's learning centers, and research areas should be opened to the public.

IDENTICAL CLOSED-OFF DIRECTIONLESS INCOMPREHENSIBLE



ARTIFICIAL IDENTICAL CONFUSING FOREBODING DARK

CONFUSING COMPRESSIVE NARROW ENDLESS DIZZY



RACIST ARTIFICIAL ENDLESS ARCHAIC BORING

# American Museum of Natural History: Program Changes Over Time



**1880's-1930's: Golden Era of Expeditions.**  
Museum's golden era of worldwide expedition. Major expeditions include Jesup North Pacific Expedition, Roosevelt-Rondon Scientific Expedition, and destinations such as the Congo River, Mongolia, and Peru.

**1885:** Museum finds permanent location in Manhattan Square. A monumental masterplan is proposed, with no funds.

**1865:** Temporary museum opens in the Arsenal in Central Park after public calls and letters.

**Major Expeditions**  
**Countries Represented in the Human Culture's Exhibits**  
The display of other cultures in museums reflects outdated cultural hierarchies such as "primitivism". European cultures superior to others.



**1891-1933:** Henry Osborn president of AMNH, problematic racist and eugenicist beliefs.



**1912-1913:** AMNH expedition to Africa brings back specimens for display, with elephants at the center.  
**1921-1930:** AMNH Asiatic expedition. Some animals were close to extinction at the time.



**1912-1913:** AMNH expedition to Africa brings back specimens for display, with elephants at the center.



**1935: Rose Center for Space and Earth**  
a way to give the public "a more lively and sincere appreciation of the magnitude of the universe."  
- Charles Hayden

**1924-1936: Construction of Theodore Roosevelt Monument**  
A statue of Theodore Roosevelt with Native Americans trailing behind him is mounted at the Neoclassical entrance.



## Education/Research (outside museum)

**1955: Southwest Research Station**  
Research station in Arizona opens serving geologists, anthropologists, biologists.



**1950's-1970's**  
Library and Program renovations to the museum. Courtyards of the museum get filled in with research labs and storage for exhibitions.

**1950:** 5th Floor of Original Building Renovated into a Library.

## Education/Research

**1950-1960:** Hall of North American Forests opens.

## Human Culture

**1960:** Hall of Ocean Life renovated. Giant blue whale model added.

**1990: Hayden Planetarium Renovation**

**1970:** 7-Story Linden Research Center added.

## Open Gallery

**1974:** Harry Frank Guggenheim Hall of Minerals and Morgan Memorial Hall opens.

**1980:** Tribes of Asia moves to Stout Hall of Asian Peoples

## Animals + Insects

**1993: Movable Museum**  
Children's movable museum with interactive museums visits over 700 schools and libraries, free of charge to all schools in the five boroughs of NYC.



**1998:** Hall of Biodiversity Added.

**1990:** 8-story library opens.

**1992:** Center for Biodiversity and Conservation opens and contributes to scientific research + edu. resources.

## Nonliving + Fossils

**2004:** Glider PhD program opens.

**1993:** Hall of Biodiversity Added.

**2008:** Hall of Ocean Life renovated again, with environmentalism as a focus.

**2014:** Glider Center Renovation published.



**2016:** Decolonize This Place demands "review of cultural representation."

**2022:** Richard Glider Center and research hub opens. Exhibition is designed to connect the many separate buildings in the museum and offer public visitors and experience of the research centers.

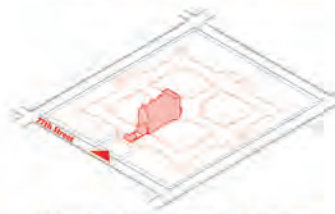
**2022:** Allison Roberto Mignone Halls of Gems and Minerals opens.

## Animals + Insects

**2017:** After protests to decolonize, Northwest Coast Hall to be renovated.

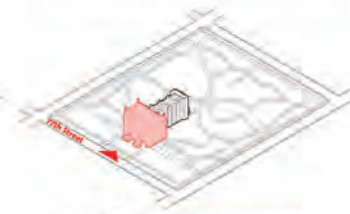
**2022:** Theodore Roosevelt Statue Removed

EXPECTATIONS - BEGINNINGS - MODEST



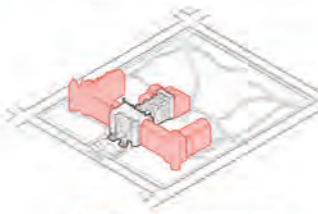
**1885: First Permanent Building**

SYMMETRICAL - GATEWAY - DESTINATION



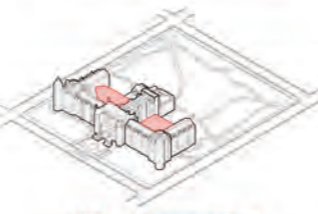
**1906: New Romanesque Entrance**

GRAND - SYMMETRICAL - FORTRESS



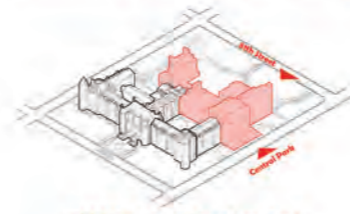
**1910's: Romanesque South + West Wings**

HIDDEN - SECONDARY - UNOPEN



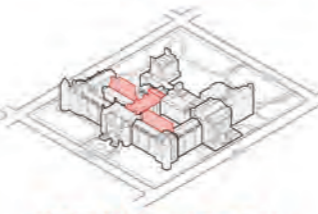
**1920's: Classrooms + Research Labs**

MONUMENTAL - ASYMMETRICAL - COMPETING



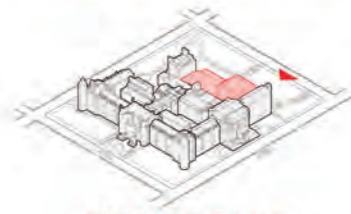
**1930's: New Neoclassical Entrance and Labs**

CRAMMED - SECONDARY - DARK



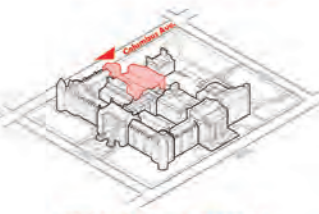
**1950's-1970's: Library and Program Renovations**

FAMILY - OPEN - TRANSPARENT - PUBLIC



**1990: New Planetarium Renovation and Terrace**

AHISTORIC - ORGANIC - OPEN



**2023: Glider Research Center Entrance**

## PROGRAM AND DIRECTORS

When we look at the changes in exhibitions over time, we have seen how the history of the American Museum of Natural History is the history of showing man's domination over nature. The global flows of artifacts within the museum's exhibits are from primarily Non-Euro-American countries. Some of the animals that have been included in the exhibits were endangered at the time. The museum has had a history of problematic directors with racist beliefs. In more recent times, there have been more research and educational programs established in the museum as it asserts itself as a producer and not just a collector or knowledge.

## BUILDING EVOLUTION

Throughout time, the evolution of the AMNH of Natural History has grown to its confusing and monstrous scale. The American Museum of Natural History began with a modest building in the park during the era of the Crystal Palace, when New York citizens called to have their own natural history museum. Each major additions recreates a new entrance in a separate historic style. When research laboratories and storage was added the museum, the gradually filled the inner courtyards of the original masterplan, creating dark and infill.

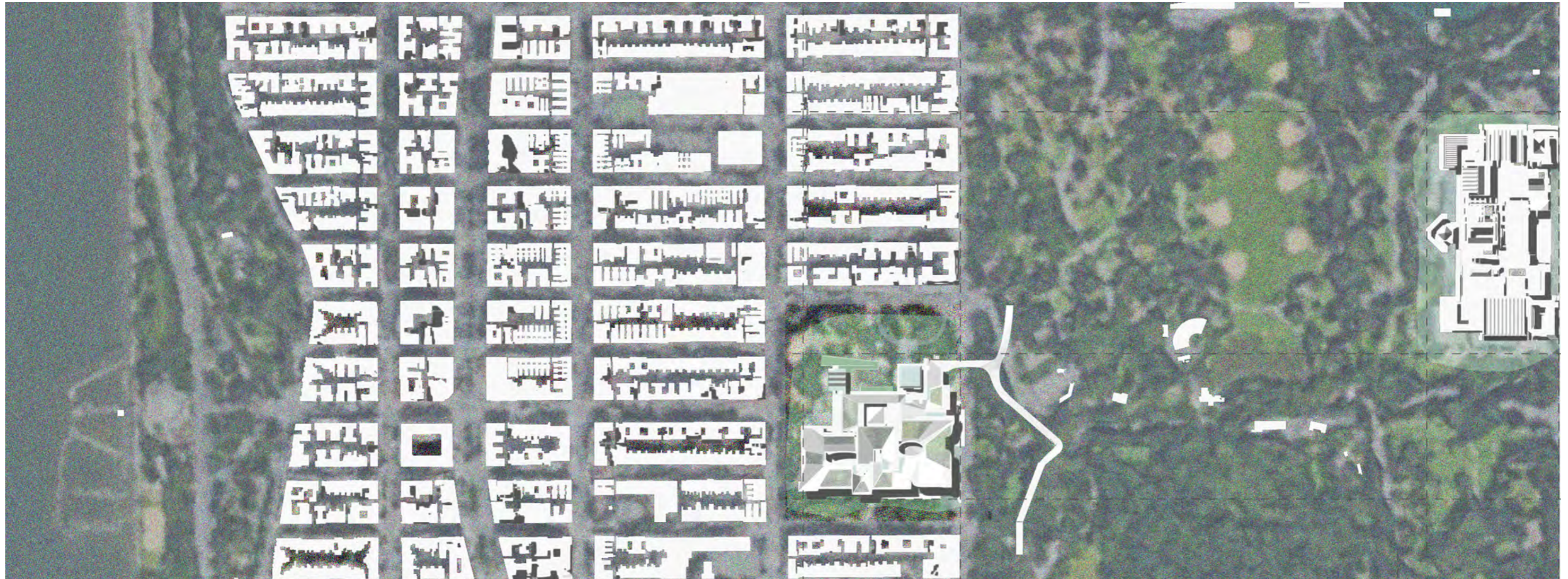
## DECOLONIZATION ATTEMPTS

Recent moves to decolonize the museum recognize its problematic past and have resulted in one or two remodels of the gallery, including the Northwest corridor of Native Americans and the removal of a the Theodore Roosevelt statue, which features the president riding horseback while Native Americans and Africans trailing behind him. Each architect is afraid to destroy any part of the original museum.

Even the most recent addition, by Jeanne Gang, which makes moves the connect the separate exhibits and labs and create a corridor to Central Park, does not address the problematic historical

entanglements the museum has. The dioramas of Asian, African and Native Americans still exist. No efforts of the existing renovation have made moves to demolish them. The design of the entrance itself creates another collaged entrance that we suspect will grow outdated as all the other additions have.

We make the case that the new museum does not do enough to decolonize the space and Our design proposes to renovate the museum prior to Jeanne Gang's addition.

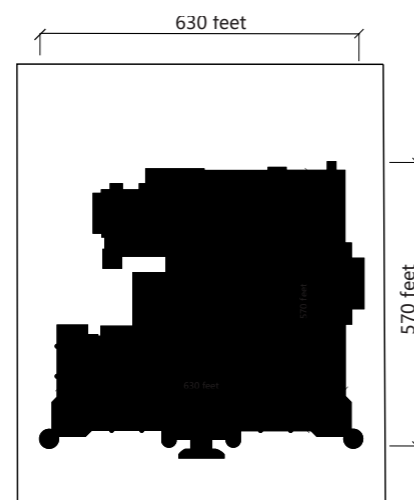


Site Plan w/ Finished Design extending from Hudson R. to Met.

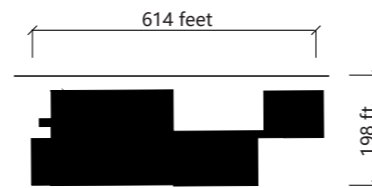
## THE MUSEUM IN THE CITY

The museum occupies a key position between the city and Central Park. Any design should attempt to negotiate the boundary of the line between the city and the park.

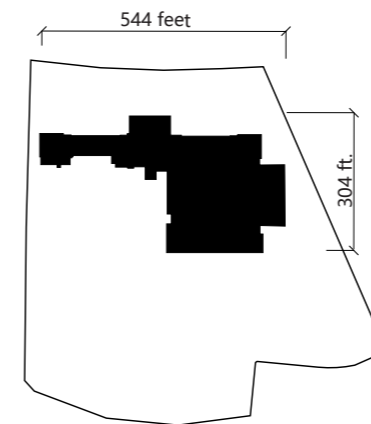
The museum also occupies a prominent position as one of the city's largest museums. It is dwarfed only by the Metropolitan.



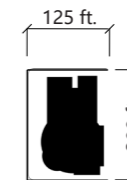
AMERICAN MUSEUM OF NATURAL HISTORY



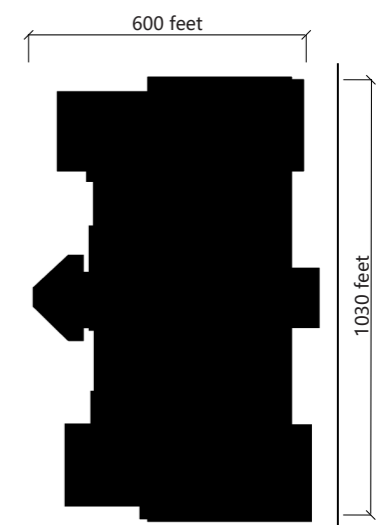
MUSEUM OF MODERN ART



BROOKLYN MUSEUM

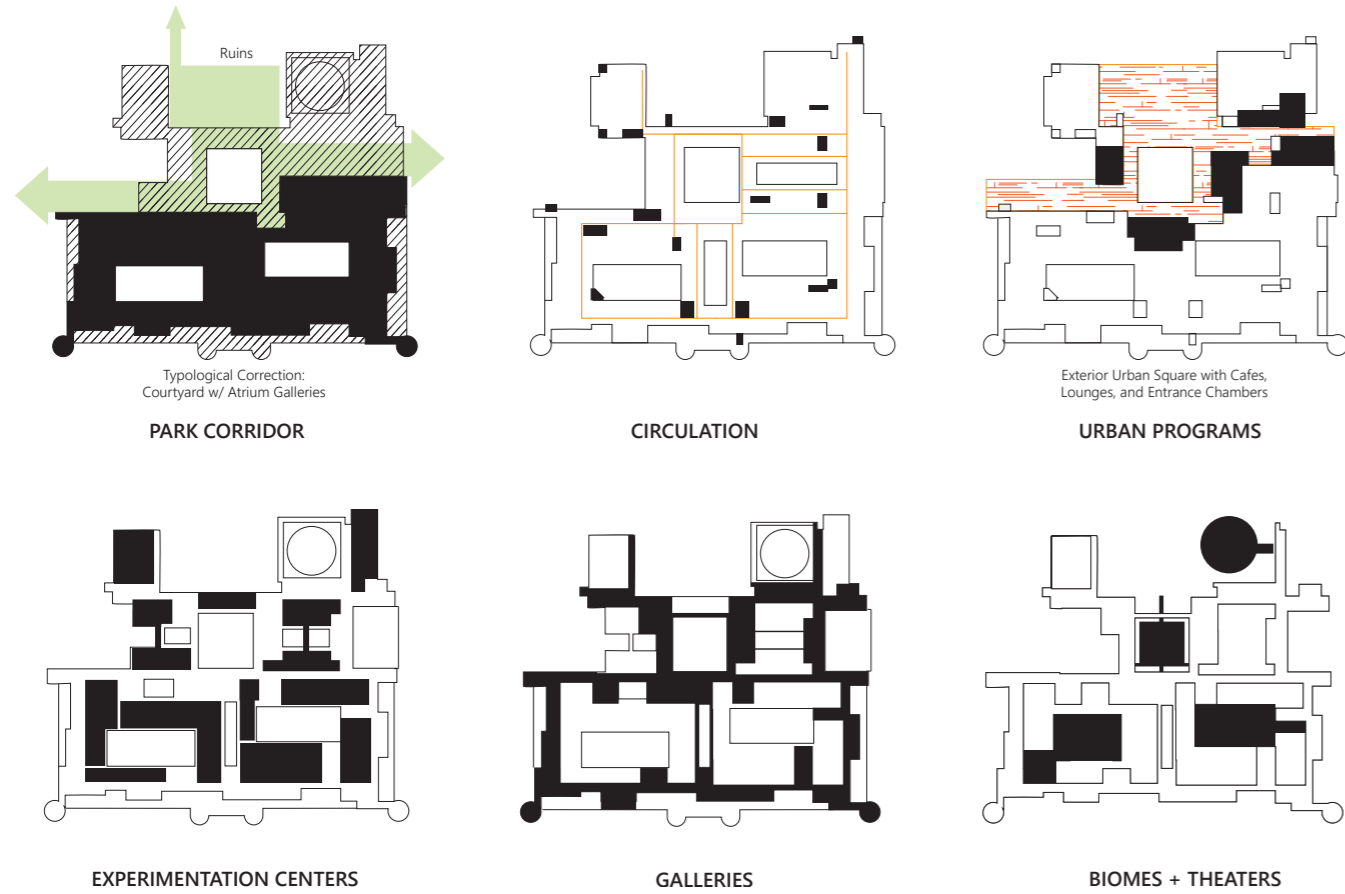


GUGGENHEIM

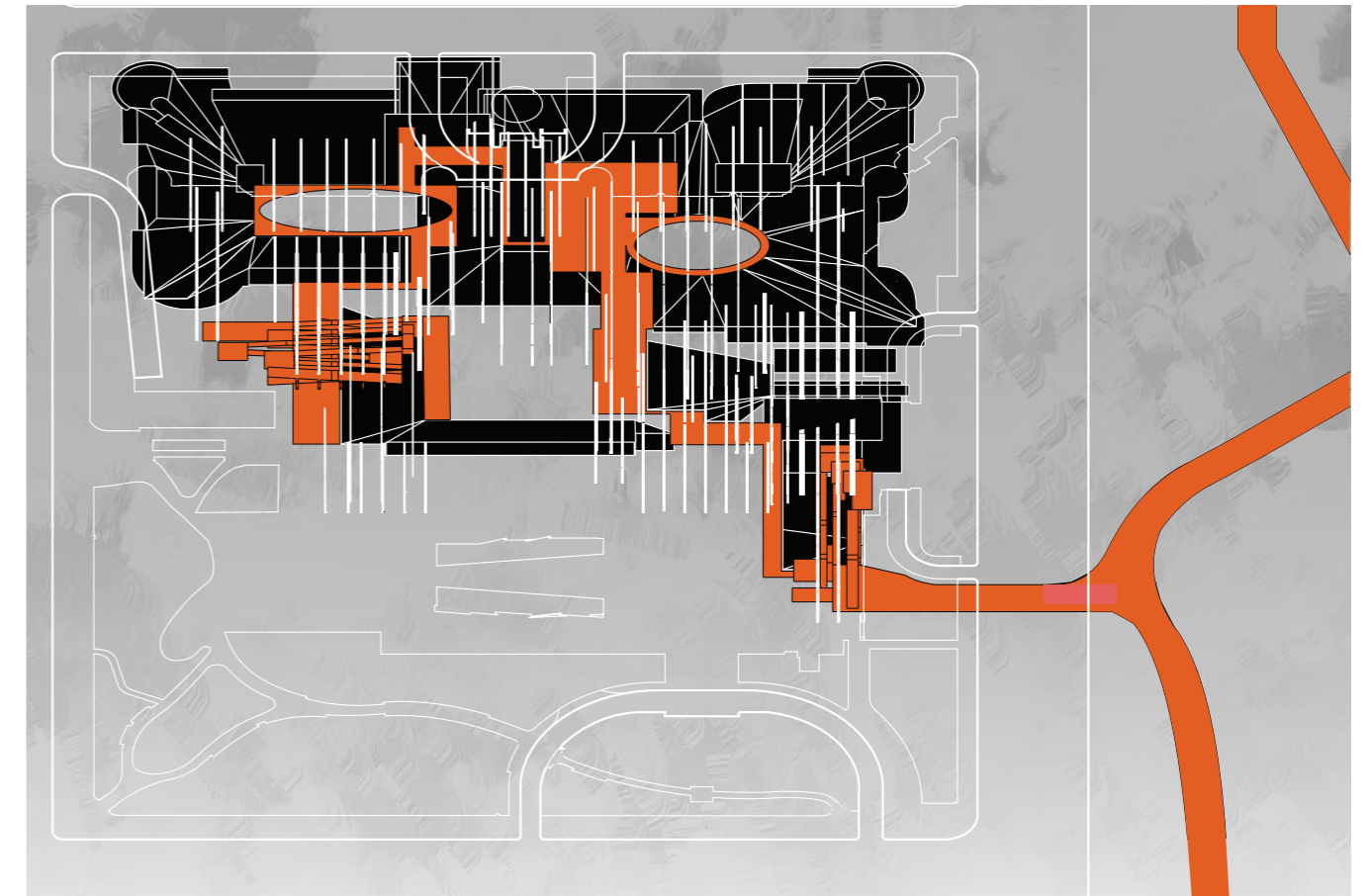


METROPOLITAN MUSEUM

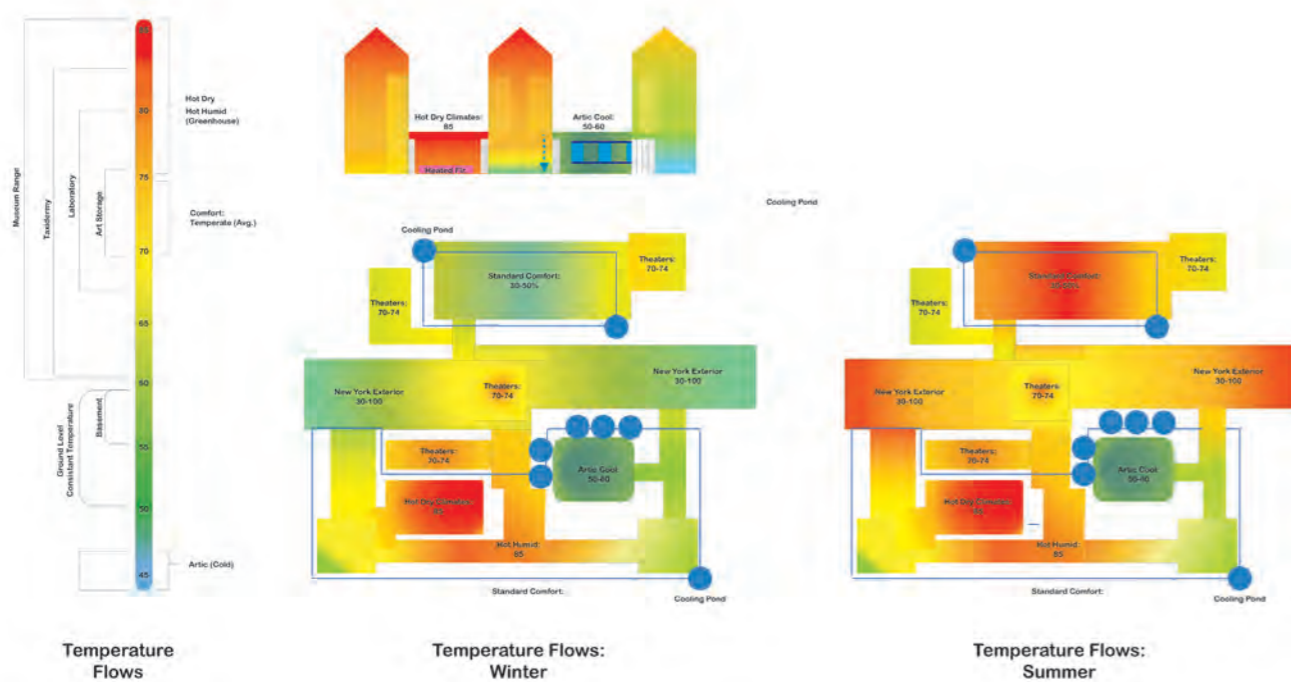
## DECONSTRUCTION DIAGRAMS



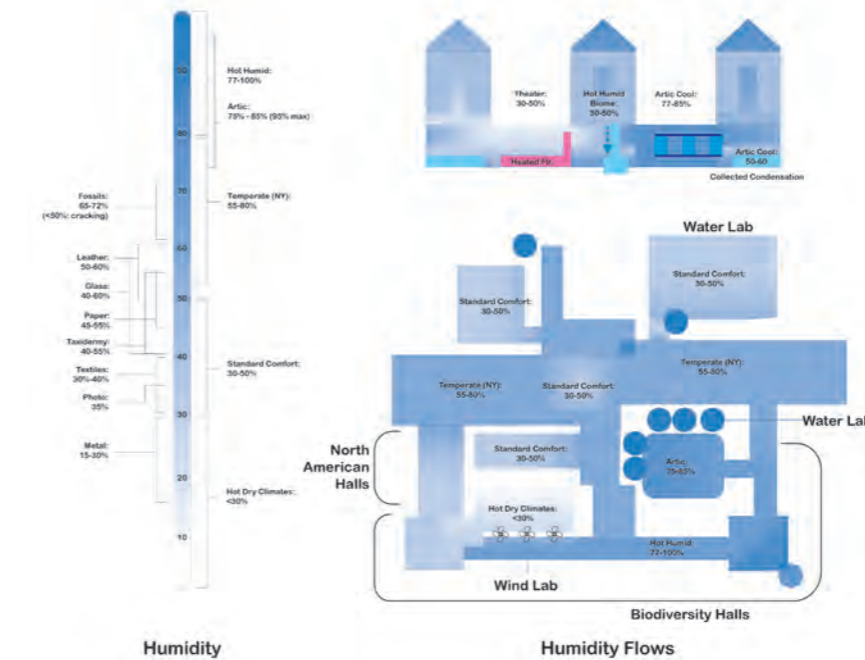
## WORMS EYE: EXISTING STRUCTURE, NEW CIRCULATION + ROOF



## TEMPERATURE: SUMMER + FALL



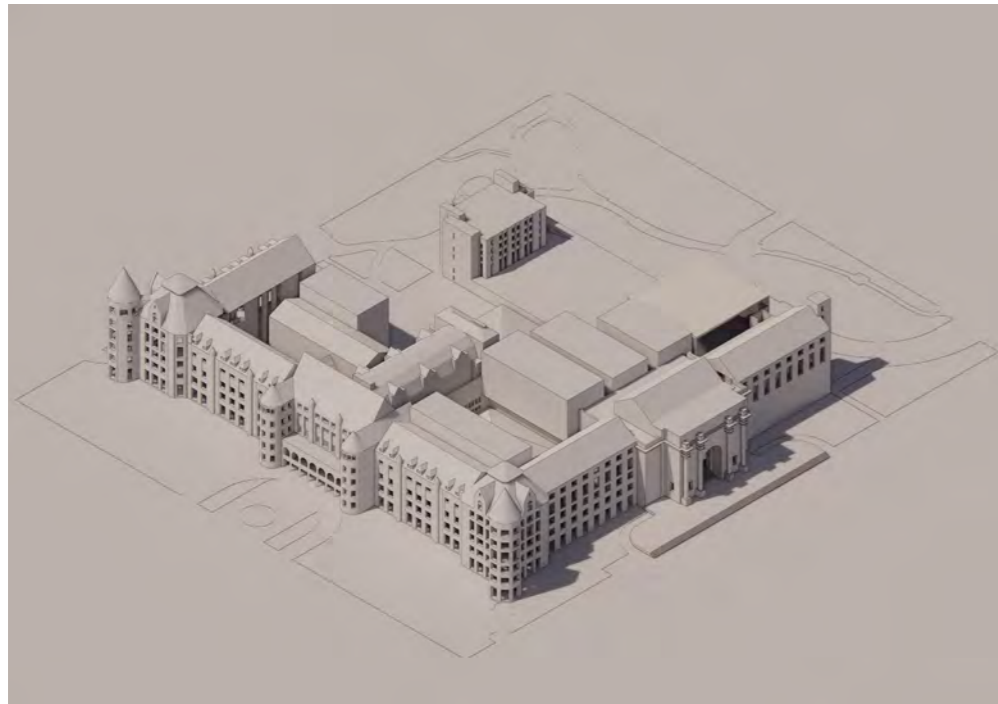
## HUMIDITY



## DECONSTRUCTION PROCESS

We propose that this problematic museum be torn down and given back to nature the city. We will create an exterior connection to the park through the space, continuous circulation using existing vertical cores, and rearrange urban programs along the main path. New spaces will be materially and spatially reconstituted out of the ruins.

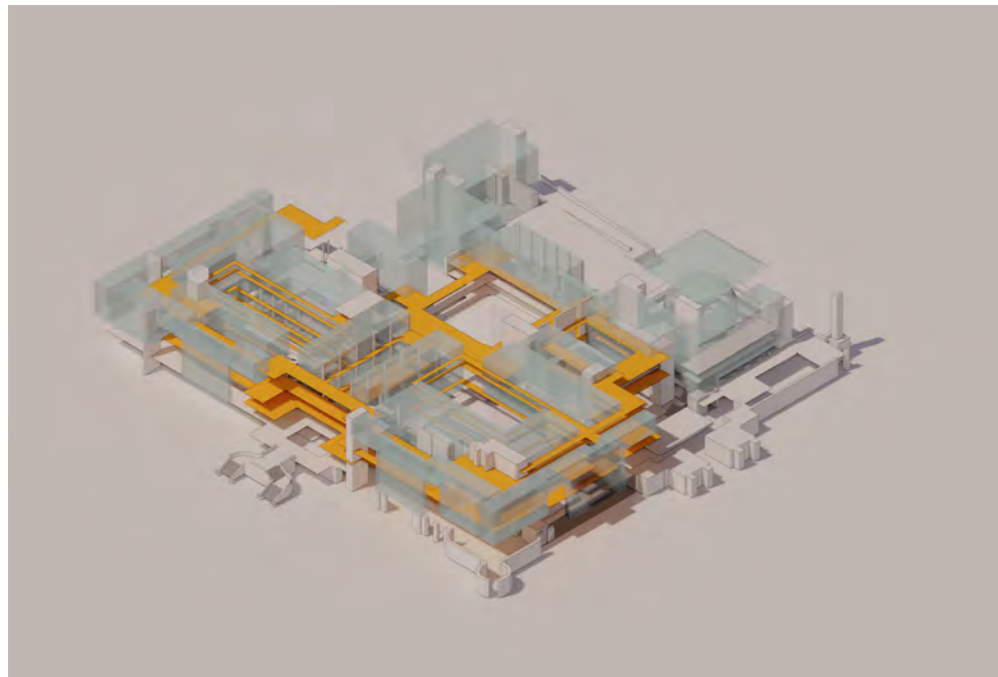
Instead of a museum that closes itself off from nature, it brings nature into the museum. We rebuild the museum using temperature and humidity, and in doing so, dissolving the building itself.



**(Top Left)**  
Existing Building

**(Middle Left)**  
New Experimentation Centers  
and Circulation

**(Bottom)**  
Tapestry of Earth's Biomes  
Across the Separate Floors



## TAPESTRY OF BIOMES DESIGN

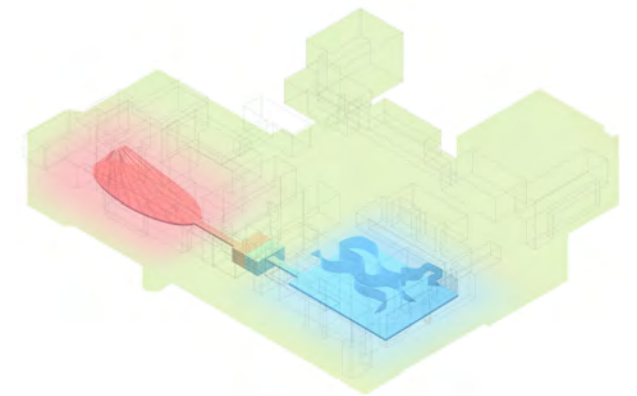
As part of our inspiration, instead of seeing nature as something that can be observed and studied through dioramas, nature is turned into an experience of temperature and humidity. The floor plans are an ever-shifting tapestry of the Earth's biomes. as heat and water travel through the building.

To realize the design of this tapestry, we designed two core biomes to drive all other biomes: one a hot desert biome and another a polar biome. When air and water is allowed to flow from polar and desert to the surrounding hallways, the effect they have in the galleries, the intermediate zones, will recreate the other biomes. The circulation and programs have been reorganized to create a continuous circulation and large galleries across all floors.

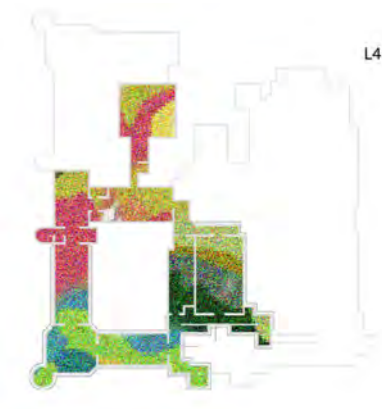
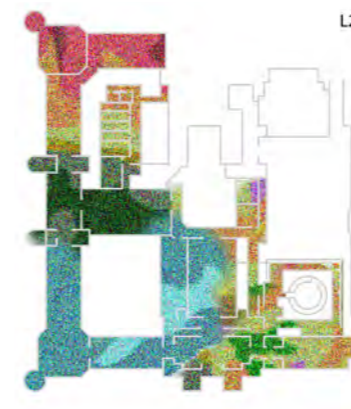
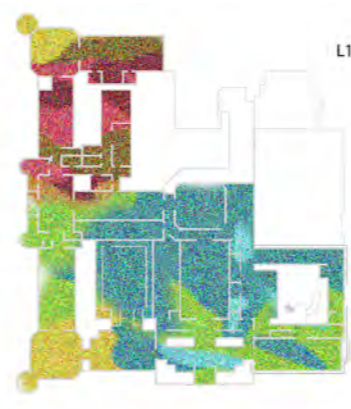
The surrounding experimentation labs are kept as temperature controlled spaces, while the surrounding spaces are a result of those spaces.

**(Top Right)**  
Dymaxion Map of Earth's Biomes

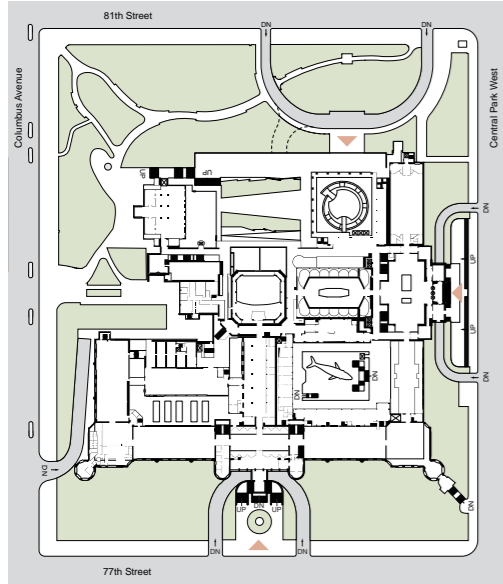
**(Middle Right)**  
Mixing air system showing experimentation centers and biomes.



- ICE SHEET AND POLAR DESERT
- TUNDRA
- TAIGA
- TEMPERATE BROADLEAF FOREAT
- TEMPERATE STEPPE
- SUBTROPICAL RAINFOREST
- MEDTERRENEAN VEGETATION
- MONSOON FOREST
- ARID DESERT
- XERIC SHRUBLANDS
- DRY STEPPE
- SEMIARID DESERT
- GRASS SAVANNA
- TREE SAVANNA
- SUBTROPICAL DRY FOREST
- TROPICAL RAINFOREST
- ALPINE TUNDRA
- MONTANE FOREST





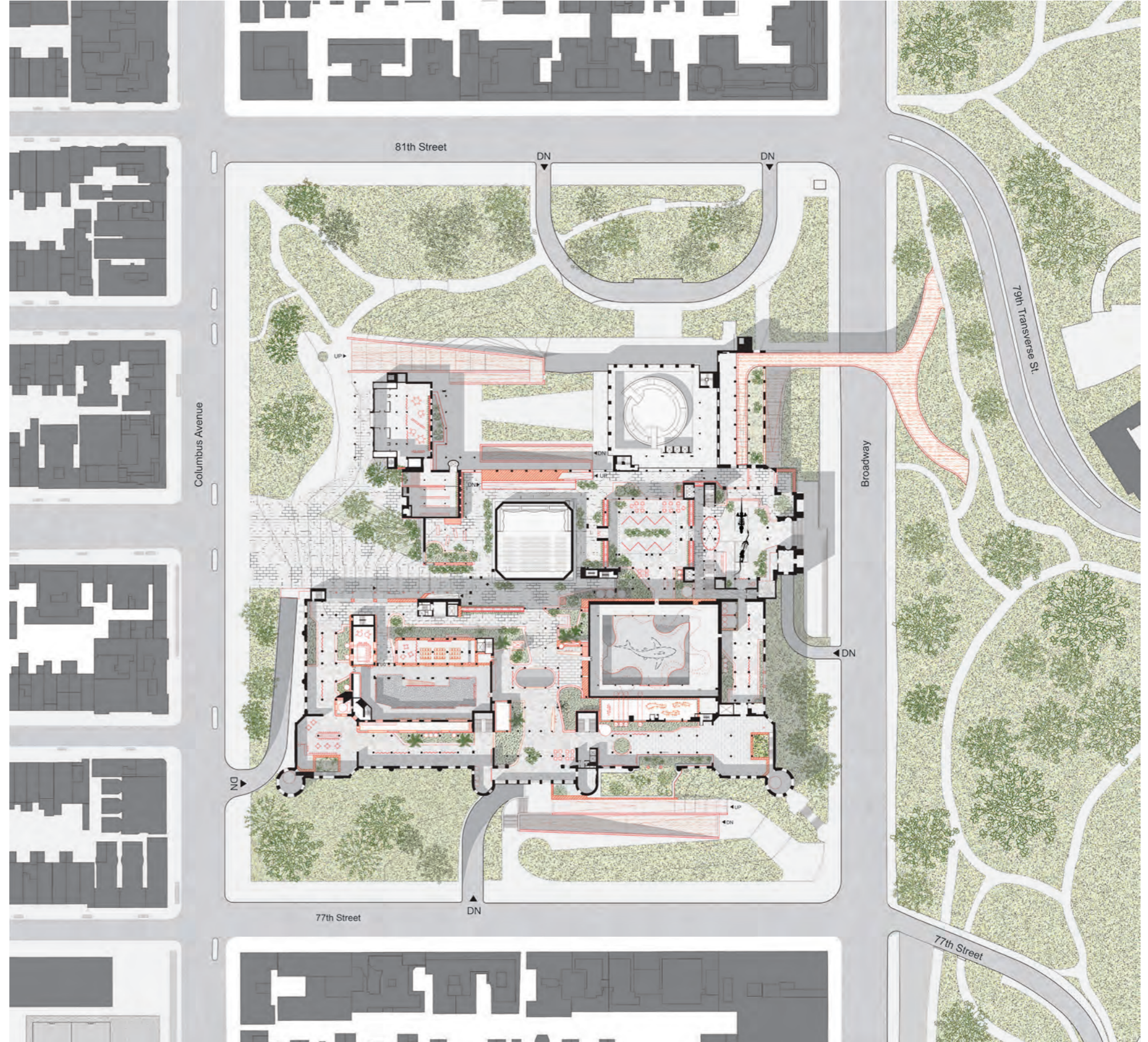


### ORIGINAL GROUND FLOOR PLAN

The original floor plan of the American Museum of Natural History is a collage of repetitive galleries that are pieced together as opposed to being cohesive experience. The circulation is confusing. Only two main stairs and lobbies connect all 5 public floors. The experience inside every space feels similar..

### PROPOSED GROUND FLOOR PLAN

In the floor plan of our design, the exterior green of New York Central Park cuts into the museum. From east to west, the space is entirely open for visitors. At the interior, the gallery spaces and the surrounding experiential climate based artworks stem from our biomes. At the ground floor, curtains and plants are connected and monitor the pipes and air that feed the two biomes. Plants and curtains mediate the temperature differentials between the exterior, biomes, and surrounding spaces, creating a tapestry of biomes with the interior space.



## SECTION + SCENES

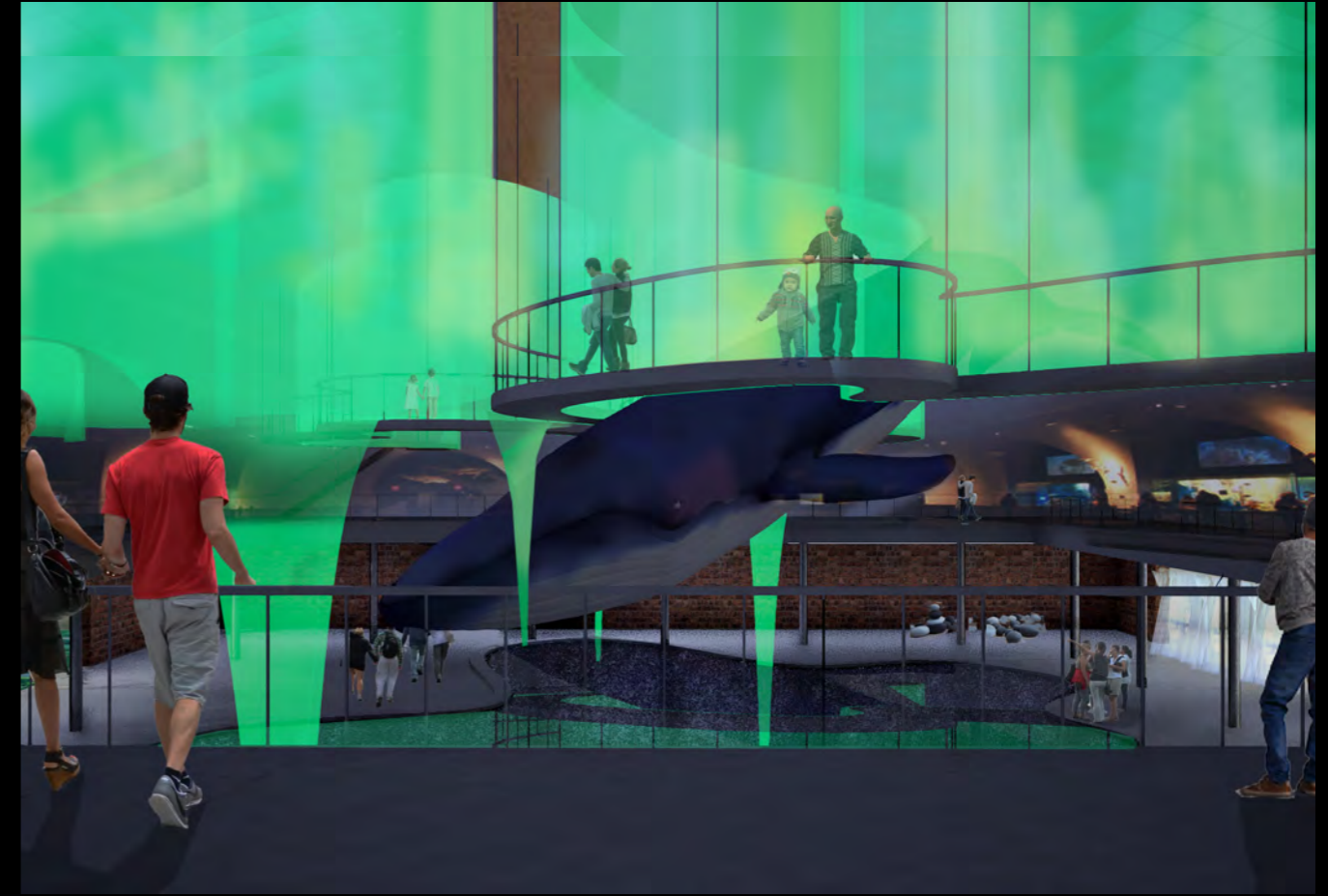
In these images, the messiness of nature is brought into our exhibits. Our museum does not see nature as something that is manicured and maintained, but as a powerful, but fragile force that is easily affected by human construction. The spaces provide scenes where there is an interplay of both humans and their environment.

The sections play on imagery of the original plans of the AMNH, but set these scenes against an apocalyptic background as opposed to an idealized setting.



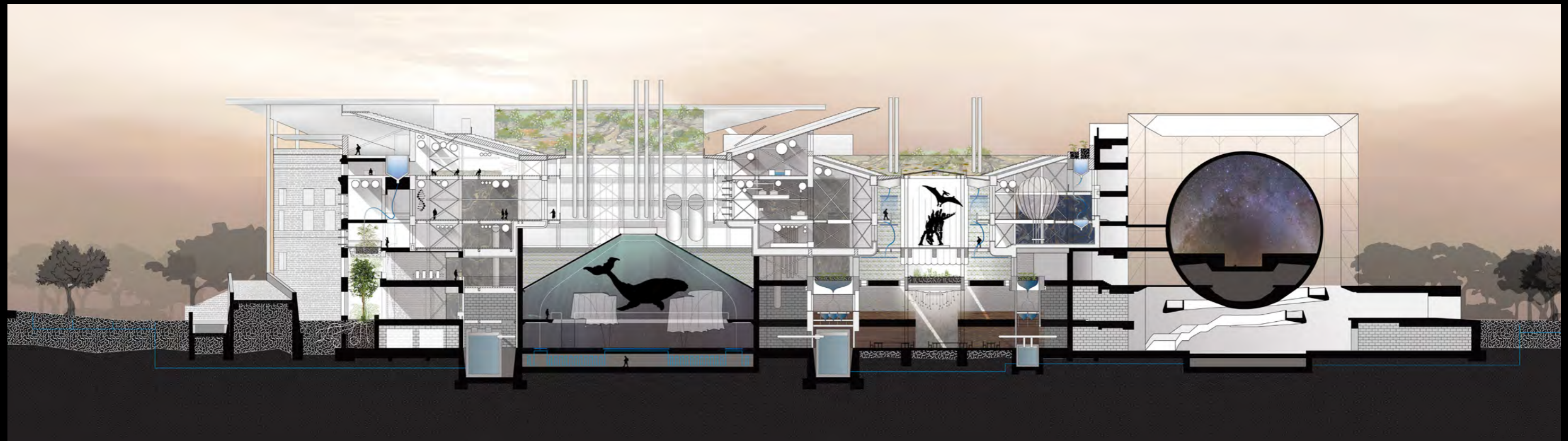
### HALLWAYS AND LABS

Experimentation centers are constructed on top of the ruins. The deterioration of the existing building is enacted and studied.



### ARTIC BIOME

This scene of the artic biome shows how we have kept the original roof and whale. Curtains with lit with lights create the experience of the aurora borealis. A cold metal panel at the bottom of the space creates the impression of the arctic.



### SECTION THROUGH ARCTIC BIOMES AND EXISTING PLANETARIUM

## SECTION + SCENES

We will build these labs by reconstituting the demolished building and building on top of the exposed steel structures. We have planters which are watered from water collection ponds at the roof level which bring water into the buildings. Edible kitchens in the old galleries are incorporated into the cafe.

The rooftop plays a role as a connection of nature and the building itself. The roof is accessible without having to enter the museum. It includes programs such as view observatories, Insects garden, farming land, electric energy stations and so on.



### DINOSAUR HALL

Instead of destroying the entirety of the museum, we will keep certain exhibits to allow awareness of how our concepts of nature originated.



### NEW ENTRANCE THROUGH MUSEUM TO CENTRAL PARK

The Center for Common Earth is a space that is designed for New York's general public. Green roofs cover the original theater. Facades of the new experimentation centers are exposed to the public.



### SECTION THROUGH NEW ENTRANCE AND EXISTING DINOSAUR HALL



**DESERT BIOME**

View of the desert biome. Sand covers the floor. Heat is conducted through pipes that run through the railings and pipes. Light is brought in from a skylight above.



**INTERIOR TO EXTERIOR TRANSITIONAL SPACE**

View of a typical space in between the experimentation centers on the upper floors and the exterior walls. Temperature is mediated from outside to inside by planters as well as reconstituted brick at the edges.



**SECTION THROUGH BIOMES**

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# NEW URBANISM AS AN APPARATUS FOR DISPLACEMENT

## Shibati, China: Planned and Unplanned Traditional Villages

Felicity Scott  
Spring 2023

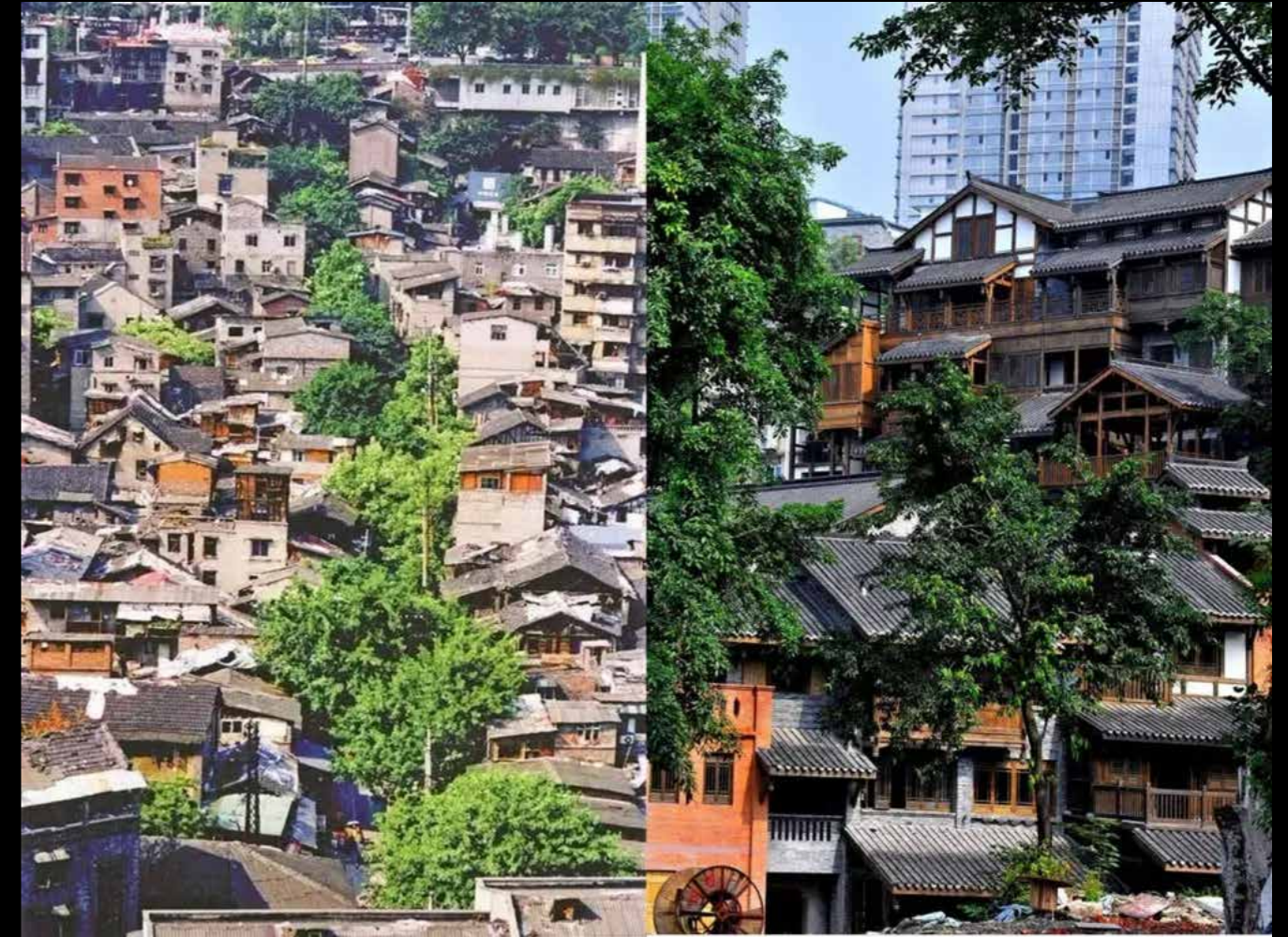
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**Abstract:** China's commercial move to grow its cultural infrastructure, dilapidated historic areas in the city center have been turned into tourist destinations utilizing principles of walkable urbanism. This paper looks at the 2017-2019 renovation and historic preservation of the Shibati Village in Chongqing, China, where the government's and developers' messages of protection and cultural restoration of the existing village are physicalized as the demolition and reconstruction of nearly all buildings and the displacement of existing rural residents. The blatant redevelopment and displacement of the existing impoverished class was legitimized through the language of protection and care. As Chongqing moves to establish itself as an international destination and cultural capital, care for people, culture, and the city's urban and ecological environment becomes redefined to enact a commercially tailored curation of China's social classes in urban spaces. The resulting commercial facsimile of the original village redefines history as a construction that moves through. However, in using walkable urbanism alongside other messages of care, the resulting village reveals how the invention of walkable urbanism is a universally applicable model of urbanism. In this new era, urban design strategies that are considered as universally beneficial within American cities take on a new life as emptied tools as an apparatus of displacement in countries with alternative historical narratives.

The restoration of Shibati, a village with a 2,000-year-old history, was intended to provide Chinese tourists and Chongqing's new bourgeoisie with a series of curated and commercialized historical experiences. Until its demolition in 2010, Shibati, or eighteen steps, had remained one of the largest migrant villages within the rapidly modernizing city of Chongqing. Located in the Yuzhou District, Shibati occupies a prominent link between the city's commercial center, historic sites like the Liberation Monument, and the Yangtze River. As one of China's mega cities, the municipality of Chongqing itself is strategically located to be China's international hub. The demolition and reconstruction of this district, an area of around 38 million square feet, took over a decade and involved the displacement of over 7,000 people, mainly rural migrants. Compared to other demolition and reconstruction projects, the process was considered slow and careful, and the compensation of the displaced residents generous. The new village installed by government-backed developers replicated the size and scale. A photo of the two villages reveals the reconstructed village as a commercial facsim-

ile of the original village. The primary differences appear to be the materiality. The reconstruction replaces the ad-hoc construction materials by rural migrants to materials used during Chongqing's Bayu Period, a culture dating back to 206 BC. The materially referential reconstruction also makes little attempt to preserve the layout and experience outside the original village. The original village had been described by foreigners and Chinese citizens as both dilapidated and authentically traditional. Despite its deficits, the rural village pre-demolition had been photographed as a site which captured "a true portrayal of the life of old Chongqing citizens." Post-demolition and post-displacement, Shibati is listed as "a celebrity hot spot." Shibati joins the other "ancient street renovations" in Chongqing, where Chinese history is preserved in order to create a cultural commodity for China's new burgeoning market-driven economy.

As China takes its place in the global market, projects including the renovation of Shibati are key to growing China's cultural industry. In a UN Report for Promoting the Cultural Expressions



Shibati Before and After the Renovation. The new construction is a pastiche of the existing village. Historical preservation is limited to the reconstruction of materials.

**Source:** wLi, Xinyi. "Shibati Old Street Opened to the Public for Reservation, Come Check it Out!". *iChongqing. Chongqing International Communication Center (for Culture and Tourism)*. Feb. 01, 2021. <https://www.ichongqing.info/2021/02/01/shibati-old-street-opened-to-the-public-for-reservation-come-check-it-out/>.



ISA's masterplan for Shibati in Yuzhong District China. The demolished and renovated historic village is in the center with high-rises to the east. Waterfront sight-seeing corridor in red.

**Source:** "World Bank. 2019. *Chongqing 2035; Chongqing 2035 : Spatial and Economic Transformation for a Global City.* © World Bank, Washington, DC.

of the People's Republic of China, the creation of "cultural diversity" is a key component of creating "sustainable development". As China establishes a public, soft power industries, including that of tourist villages, become a critical component of the cultural infrastructural network required to satisfy the needs of its growing consumerist base. Chongqing, a city whose mega blocks have been featured in Western newspapers in the past decade as culturally-deficit models of unchecked urban growth, now seeks to retool its image by utilizing urban models that integrate cultural infrastructure with sustainable urbanism. Key to the transformation of Chongqing has been the importation of New Urbanism, also called walkable urbanism, or transit-oriented development. Peter Calthorpe, a leader for the Congress for New Urbanism (CNU), "who had conducted the scenario analysis for [the Chongqing 2035 report], found

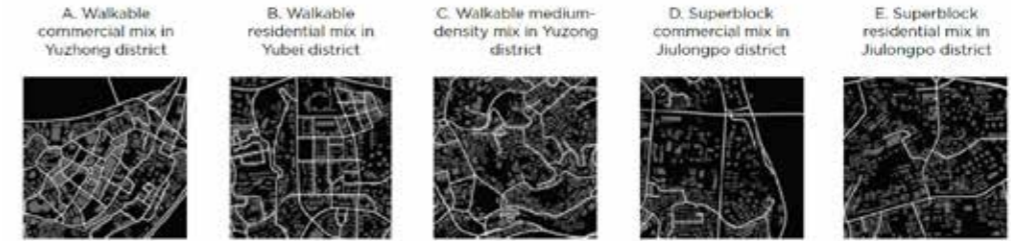
**that as Chongqing shifts from "quantity to quality", the western model of New Urbanism can be implemented as an antidote to the superblock expansion a generation ago.**

CNU's principles of New Urbanism have gained international recognition as a "people-centered" urbanism. Despite the difference in these two countries, these tactics are promoted in the Chongqing 2035 goals and projected to produce similar benefits. In the creation of Chongqing's soft power industry, the principles of walkable urbanism have been utilized regardless of the urban fabrics they are replacing.

Despite the difference between the district of Shibati and the Soviet mega-blocks of Chongqing, the walkable urbanism has been implemented using a similar process. When New Urbanist layouts of the 1980s redevelop the mega block developments of the 1950's, a livelier, human-scaled city is inarguably created. While earlier implementations of "transit-oriented layouts" in Chongqing by Calthorpe and Associates (See Fig. 2) are being used to deconstruct unnavigable blocks with pedestrian friendly streets, the existing urban fabric of Shibati makes it a different project.

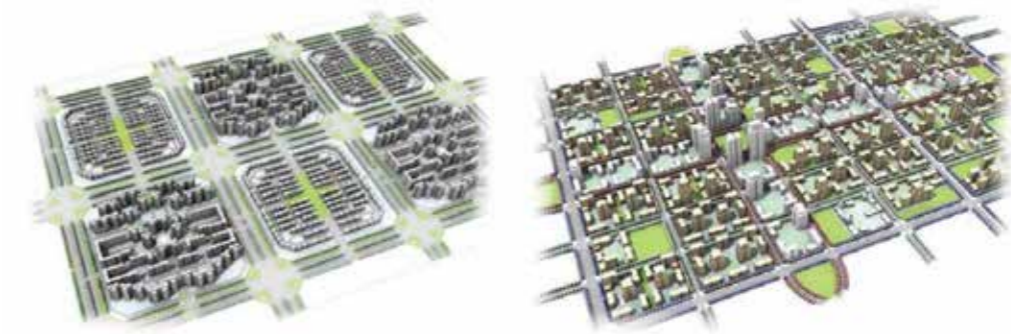
Despite these differences, development procedures happened in a similar manner. As Peter Calthorpe and local architects had collaborated to redeveloped the commercial center of Chongqing, British experts, design students, government

**FIGURE 4** Chongqing's Urban Forms



Source: Produced by China Sustainable Transportation Center (CSTC) for this report.

**FIGURE 5** The Urban Form of Superblocks (Left) and Walkable Development (Right)



Source: Produced by Calthorpe Associates for Chongqing 2035: Urban Growth Scenarios.  
Note: The diagrams are at the same scale.

Calthorpe's New Urbanist Proposals for Chongqing's Megablock Developments.

**Source:** 2035 Chongqing World Bank Report

officials, and local planning experts were invited as part of a 48-Hour workshop sponsored by both the Municipal Planning Research Center of Chongqing and the Cultural and Educational Office of the British Consulate planning process. During the meeting, where Shibati was characterized as being a part of the "various levels of transformation" in Chongqing, the reconstruction of Shibati centered on how to make the public space more "conducive to 'living'" through the introduction of commercial programs. As Shibati was renovated, the definition of the liveliness as defined as western commercial diversity came to replace the rural diversity that had already been grained within the village.

**While the original layout and programs of Shibati are unrecorded, photographs and documentaries of Shibati show a village that has the same qualities as the New Urbanism village that had come to replace it.**

In a 2001 article in the Worker's Daily, Shibati is described not as a crowded, dilapidated structure, but "like a sketch of an ancient mountain city:

well proportioned." The village is buzzing with a vibrancy created by migrants themselves: "hawkers carry loads of vegetables, aunts bask in the sun." while seamstresses make their living with "needles and threads at small stalls." Prior to the renovation, Shibati had developed an urban and social network. The tea houses were "familiar to nearby residents' ' and gained picturesque appeal from "the audiences of old men with gray beards" who frequented them. Photographs taken of Shibati show sellers utilizing the streets deemed too narrow for walkable urbanism to cart and sell locally made snacks. The village pre-renovation was pedestrian-centered, had a strong social fabric, and contained a diversity of businesses. Photographic evidence and descriptions in older journal articles shows how residents innovated gathering spaces around unplanned sites including "the exit of Jiaochangkou Tunnel," which acted like a "natural air conditioner" in Chongqing's stuffiest days. These separate newspaper recordings and photographic documents portray a vibrant community that has sprung up, appropriating spaces, and establishing walkable, urban networks with a diversity of commerce. Shibati was far from the pedestrian unfriendly mega blocks or the post World War II single use developments in China.



ISA's rendering for Shibati Renovation. Traditional villages act as a framing device for highrises in the background.

**Source:** ISA, Sichuan Culture Communication CO. Ltd. "Masterplan and Urban Design of Shiabti Area in YuZhong district Chongqing" World-Architects. 2009. <https://www.world-architects.com>

While not explicitly stated by Shibati's master-planners, government-backed developers have implemented principles of walkable urbanism within Shibati's new layout. The overall master plan and renderings by Internationales Stadtbauatelier (ISA) shows a planned community that creates a "contiguous development" from the high rises of the commercial center of Chongqing to the historic road at the center.

Surrounding the reconstruction of the historical village are a variety of masses characteristic of mixed use urban development. Renderings display how history can be renovated to fit into an economic paradise. Commercial storefronts under traditional facades activate the district.

**The historic road of Shibati acts as a framing device for the highrises in the background. The materiality and these new constructions indicate their future occupation by new upper middle income residents.**

New Urbanism's concepts are present within the new plan, including "the neighborhood, the district, and the corridor". Gone from the images of this new construction are the rural migrants. The audience for the preservation of Shibati was not its original residents but a separate class. The master-planners of this New Urbanism plan readily admit to their blatant touristic and commercial goals through its design of a "sightseeing corridor along the river" intended "to draw the development of Shibati business streets", whole historical restoration becomes delegated to the realm of construction materials.

As preservation and cultural protection were created by material codification, local architects were enlisted to ensure the historical accuracy within an international master plan. Chinese architects, Beijing An-Design, had been involved in several other historic village restoration projects across China. Their knowledge of the historical qualities of China enable the creation of the image of a genuine historical construction. The process and role of these architects rested solely on aesthetic accuracy on the level of individual buildings. The master plan of the central historic district by local architects, Beijing An-Design, locates sites like "Traditional Culture Experiencing Zone" and "Chinese Fad and Creative



Beijing AN-Design's plans for the historic district.

**Source:** Beijing AN-Design Architects Co.,Ltd.. "Architectural Design of the Core Area of Chongqing Shibati Traditional Style Area [J]". *Architectural Practice*, No. 10 (2021): 90-99.

Experiencing Zone" within the urban squares of its masterplan. In an article published by the Chinese Architectural review, "in order to realize the smart and diverse material application aesthetics of traditional buildings to the greatest extent, architects carefully studied the application process of traditional materials such as wood, bamboo, brick, stone, tile, ash and mud, combined with detailed design and model deliberation, and repeatedly studied with craftsmen in the construction process". Similar to the prescriptive architectural code in New Urbanist villages, Beijing An-Design mentions that a "code ID" was developed for each building. Throughout the main historic road, "the local open space aesthetics of local traditional residences" were kept and celebrated by newspapers as convincing representation of tradition even as those very same spaces were being used as shops for goods, groceries, and restaurants imported from mainland China and business lounges and hotels for travelers. Although the article also notes that the architects were careful in the construction of a genuine history in an area that has "experienced reconstruction and extension" many times, it does not mention the specific era, but chooses the moments and materials and spatial qualities that are kept to appeal to the audience of today. The focus on

aesthetics and use of building codes to accurately represent historical moments degrade the history of Shibati into a pastiche.

If the detailing of these instances of historical accuracy do not function to preserve an urban fabric, they function instead as grounds to enact government protection and cultural control. The completed construction of Shibati has been praised in Chinese media, journals, and newspapers as a respectful and original depiction of the village's Bayu style fishbone layout and the building's "original location, height, scale, and raw materials." Shibati is portrayed as a culturally protected environment. Implied within these assessments is a reintegration of the goals of the UN conference: that historical accuracy contributes to urban vitality and that greater instances of cultural protection will create a more sustainable, vibrant urban community. However, within the original village, vibrancy was not designed, but stemmed from historical events. In the planned development, history is commercialized into a set of curated series of experiences. Urban vibrancy becomes reinterpreted as preconceived sites of discovery along the road. History is determined to be preserved when it is deemed to elicit the most excitement for a spectator. Curated urban exhibits

within the renovation are a mix of what might appeal to visitors: 1127-1279 ancient wells of the Song Dynasty, the Site of the Great Bombing in WWII and an 1835 AD XiangShui Bridge. In its totality, the collection does not harken back to a particular era of history. As a consumerist and ahistorical reconstruction, Shibati Old Road cannot be judged in terms of its historic accuracy, but by how well it furthers the commercial interest of China.

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**By redefining historical preservation as aesthetic replication, cultural restoration becomes retooled as a weapon for displacement.**

The craftsmanship of high-end commercial materials of the new facades requires a level of maintenance and care that could not be provided by the town's previous rural migrants.

**In a proceeding reading up to the renovation of Shibati, it was noted that the "residents in the neighborhood generally have weak awareness of historical preservation." and that the "quality of life in the neighborhood", "social vitality."**

"Regional economic development" could only occur through the renewal efforts of planners. Despite the fact that prior to reconstruction a brochure of villages in Chongqing described Shibati as an area famous for its "teahouses, opera house, and rural migrants", the lifestyle of rural migrants, whose maintenance of their dilapidated living quarters is unsupported by developers, are implied to be detrimental to the historical preservation of the city and a danger to the sustainable and cultural infrastructure of China. It hardly needs to be said that rural migrants who come to villages to seek job opportunities do not have incentives for bourgeois improvement projects that accurately capture historic charm. If Shibati has grown dilapidated, it has been due to a lack of investments and its contrast to the development that had started to boom up around it. If it appears dilapidated, it is in contrast to the development that had started to boom up around it. Although the village had been characterized as a "dirty old slum", external analyzers have noted that these "low-income areas...were not as bad as those found in the slums in many developing countries" and provided "reasonable living conditions" for residents integrating into the urban economy. Existing

rural urban residences offered little incentive for developers while their demolition redevelopment as areas within China's central business district could provide higher investment returns. However, by associating progress and cultural creation with the craftsmanship of consumable historical artifacts, rural villagers are disqualified as caretakers for the rural villages by their impossibilities to meet the coded standards of protection and historical accuracy.

Despite the vibrancy of Shibati's unplanned development, its inability to function as a future international and commercial hub within Chongqing has caused the original layout of the village to be called problematic. Studies and proceedings which claim to analyze Shibati through the lens of historical protection call for a "reduction of residences, a widening of the streets, and a restoration of the original layout and material of historic buildings," commercial requirements that are location rather than historically based with historical studies operating under the precondition of "promoting vibrancy". However, constructions which house the residents who contribute to the vibrancy of the neighborhood are called to be destroyed. Within these villages, migrants are typically incentivized to add to their income by building out from their original residences and renting out these spaces. It's one of the few privileges that are afforded to them as migrants. This process has resulted in streets filled with ad-hoc construction of living quarters that are deemed by the reports to be too narrow for commercial traffic. Instances of these adaptive innovations of urban fabric such as these are considered detrimental to the planned community that replaced them by not fitting into the preconceived physical requirements of the aspirational, upper-middle development. By connecting historical analysis with the creation of urban vibrancy, sustainable cultural urbanism must include the widening of Shibati's streets and the demolition of these residences. By urbanizing an already vibrant community, urbanism becomes about curating a class of consumers.

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**Even as current commercial trends displace rural migrants, the growth of the city would not have been possible without the movement of rural migrants into the city.**

The buildings of Chongqing had been constructed through the labor of rural migrants. Since the beginning of the 1950's, there has been a sharp divide between urban and rural citizens in China that was determined at birth. Rural migrants had inferior

opportunities including "welfare benefits, such as pensions, housing, medical care, and education" compared to their urban counterparts. Since 1978, China's reform brought an influx of rural migrants into the cities and the strict division between rural and urban citizens was gradually dissolved. In Chongqing specifically, migrants take on construction jobs within China's booming industry. At the time of Chongqing's expansion, Shibati had been in a state of disrepair as a result of the bombings during the and offered a low barrier for entry and low rental costs. The original urban village previously functioned as a distinct community and entry point for rural to urban citizenship. The initial mass migration of rural citizens into the city had several benefits: migrants engage in low-paid work which allowed urbanites to work in more prestigious jobs, migrants contribute to the spending economy. However, as Chongqing enters a new cycle of consumer growth and international connection, the planned development discards the bodies of migrants to the outskirts of the main city while the center of the city grows ever more exclusive.

As a highly publicized project, the compensation received by the residents of Shibati can be considered the equivalent of what will prevent protest and the "embarrassment" of officials. Prior to demolition, the government had enacted a series of public meetings with the village's residents. As reported by several Chinese newspapers, the approval count by the residents was 96.1% in support of the demolition. Government-sponsored newspapers also reported, with a positivity that bears scrutiny, that residents all bore smiles on their faces as they were assigned their new homes. Despite the criticality of these reports, it is likely that many of the residents of Shibati were satisfied with their compensation. For those who "had to wait in line to use public bathrooms," it was a welcome improvement. Compensation by the government had been considered generous. Residents were given 400m of modern housing for 35m of dilapidated housing. The modern homes had running water, electricity, and modern amenities, welcome additions for residents who mentioned that they would often have to wait in line for a public shower. The government made a display of emotional support in the first, and likely highest reported, wave of resettlement of rural residents by presenting them with "a porcelain gift with patterns of steps, air-raid shelters, and kudzu trees." Unlike the demolitions and displacement of past decades and in lesser known projects, large-scale collective protests did not occur in the renovation of Shibati. The design of the village was not just in its physical design, but in the performance of its unproblematic proceedings.

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**In order to curate the central commercial fabric of the city while avoiding protests, the language of care, both for history and the people, has been adopted. The demolition of Shibati, as well as the demolition of similar districts in Chongqing, have been termed "sunshine demolition" by the Chinese press.**

An article published in Beijing in 2011 admits outright to the fact that the reason rural migrants are given compensation for demolitions that are beyond what their houses are worth is to prevent criticisms and active protests. The article asks "how to make 'dark box' into 'sunshine' and "how to make land acquisition win the hearts of people?" The article almost spells out that in order for demolition to be implemented in China, there needs to be a projected showmanship of care for rural migrants enacted by the government. Calibrated care appears to have successfully silenced any possible protests and succeeded to rapid redevelopment of Chongqing's slums. In a map of Chongqing, we have mapped a series of slums from a 2010 document. When these villages were checked in 2023, over half of them had disappeared and had been redeveloped.

If the blatant showmanship of care of rural residents is such a concern for government officials, the principles of New Urbanism should fall under suspicion. Through its international chapters and charter manifesto, the Congress for New Urbanism portrays its principles as universally-applicable methods for creating people-centered developments. However, early instances of walkable urbanism have always been about creating an exclusive commercial urban community with an artificial historic authenticity. One of the earliest examples of walkable urbanism, Seaside, Florida bears remarkable similarities to Shibati. Seaside was also the pet project of a series of early career architects and highly publicized in newspaper and monographs. The majority of the town is priced out of reach for the working class while the town functions as a beachfront tourist destination. Prescriptively coded to a recreate a preconceived image of a traditional village, these new implementations of urban development can be used to exclude anyone who falls outside of the coded class when these instances are implemented. The implementation of walkable



urbanism's strategies in Shibati shows how it can be metamorphosed into an apparatus for displacement used by real estate developers.

Despite the high approval rating and positivity portrayed by the government, reporting by journalists and photographers offer alternative viewpoints. A report by Nikkei Asia notes how the 4,000 yuan per square meter compensation was well below the 10,000 yuan per square meter valuation. An independent photojournalist records that some of the residents had to be forcibly removed and that the location of the three suburbs outside of the city: Bagongli, Lizibia, and Lijia, can be "over an hour away from where they used to live by metro". In another independent film, a barber laments the loss of his loyal customer base after he has been moved into another area following the renovation. These collected stories display that despite Chongqing's stated goals of "human-centered" development and integration of the rural migrant class, rural and urban citizens are not deserving of the same humanity.

**The movement of migrants to houses at the outskirts of cities is in direct contrast to the goals of Chongqing's 2019 World Bank Report, which states that, by 2035, "inclusivity transformation, ensuring equality of opportunity across urban and rural districts and a free flow of people," will be created. While China has seen an increase in the transition of rural citizenship to urban citizenship, the strict caste system of rural and urban migrants that has been predetermined at birth has not been eradicated, but adjusted.**

In contrast to the social community and ties that are found in the city, the outer suburban houses of these villagers are being moved to have poor cultural networks and job opportunities. Within the center of the city, there is greater access to education for children, higher job opportunities, and more traffic for small business owners. Rural citizens are silently excluded as significant producers of Chinese culture, and are relegated to the background, or in this case, the outskirts of the city.

Unlike the decades-old villages of Seaside and other constructions of New urbanism, it is too early to predict how well the renovation of Shibati will sustain an active urban environment. Independent news sources report that "netizens" have remarked that the new village is a "vibrant" theme park similar to other historical mallification projects within Chongqing, while others note that "Shibati has changed beyond recognition" and that "they 'could not detect any trace of its rich cultural heritage'". What links both the positive and negative reviews is the homogenization of Shibati with other mallification projects of "ancient roads" in Chongqing. These collected reviews display the insufficiency of redevelopment project's ability to create a culturally diverse space even for its target audience. While it is also impossible to measure the loss of history and culture of the villages as drawings and plans when much of it remains recorded only through photographs, what has been made apparent is that walkable urbanism, through its prescriptive tenants and language of universal applicability, has started to homogenize diverse environments across the world with little protest.

**The movements by developers and governmental authorities to protect cultural heritage is a move to invalidate and delegitimize the forms of urbanism that knit together the culture and society of rural migrants.**

The demolition and reconstruction of Shibati in Chongqing, China, was enacted through the language of care and protection. New Urbanism's artificially-coded history, portrayal as a universally-applicable science, and people-centered layout were retooled as strategies to displace rural citizens. Its reliance on consumerism as urban vibrancy betrays its limitation. Its continued implementation in China is a continuation of the social stratification between urban and rural residents in China.



Scenes of Shibati prior to the demolition in 2007. "Funkholes" open up and allow people to cool off. Scenes from a hairdressing parlor, chess players, and other signs of social networks portray the village with the same liveliness and people-centered networks that New Urbanism attempts to create.

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FIGURE 9 Chongqing's Vision



BOX 9 Chongqing's World-Class Transportation System

The Chongqing-Xinjiang-Europe Railway, a direct rail route from Chongqing to Germany, was established in 2010 and has brought Chongqing to the forefront of China's trade with Central Asia and Europe. The 11,179-km journey from Chongqing to Duisburg takes only 14 days, compared to 34 days by sea, and is safer, cheaper, and more reliable. Most goods transported using this

route are from multinational computer companies in Chongqing, including the technology giant Foxconn, which is a major supplier of Hewlett-Packard, Acer, and Apple. By August 2016, over 2,100 trains had been dispatched via this rail route, which is currently providing regular rail services to more than 16 Chinese cities and 12 European cities (HKTDC 2016).



Pages from Chongqing World Bank Report showing its position as an international hub and its stated goals for "Inclusivity transformation" despite migrant displacement.

Source: World Bank. "World Bank. 2019. Chongqing 2035; Chongqing 2035 : Spatial and Economic Transformation for a Global City. © World Bank, Washington, DC.

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# ARCHITECTURAL PHOTOGRAPHY

Documenting the  
Built World

Michael Vahrenwald  
Spring 2023

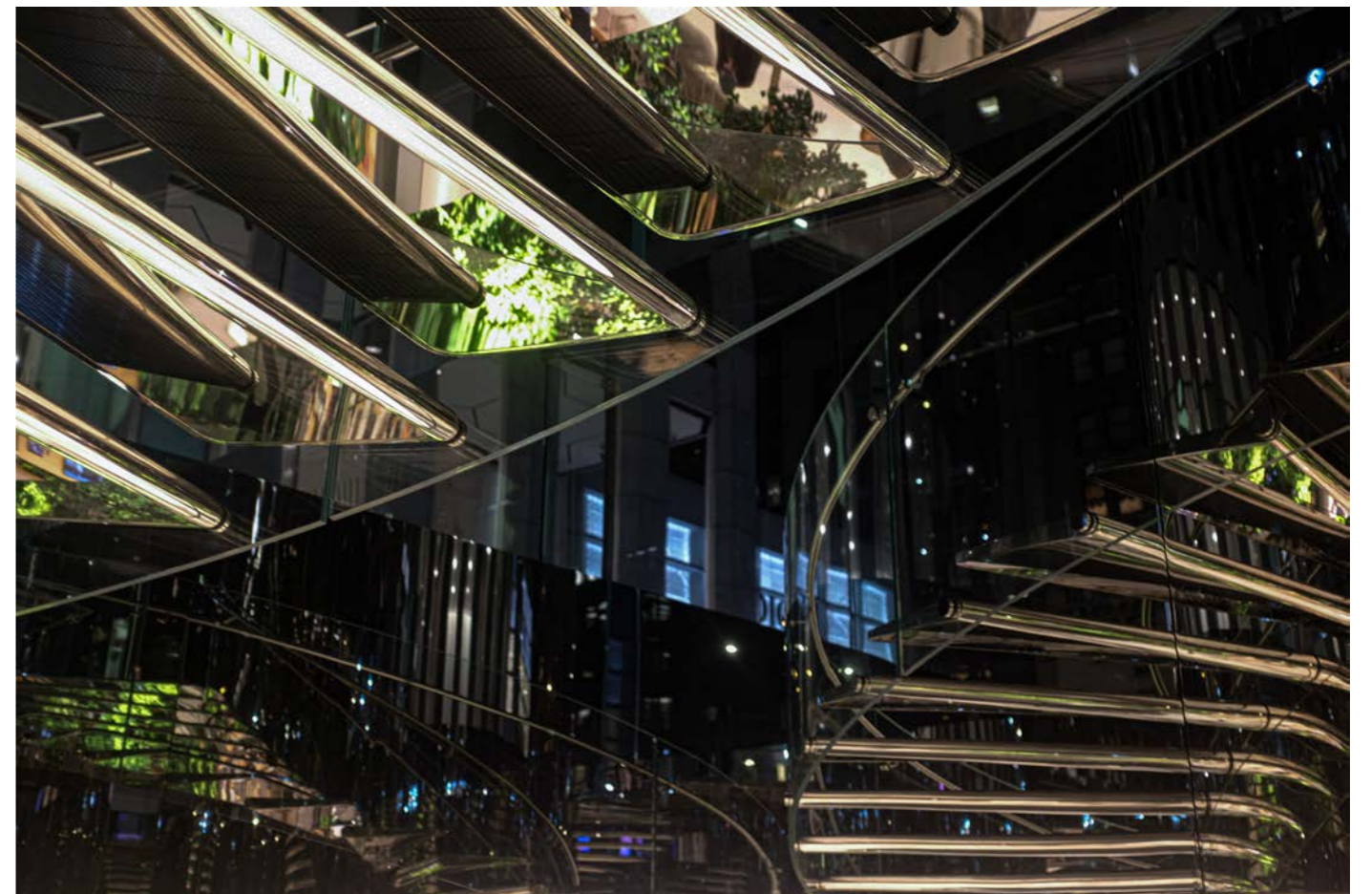
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## JEROME L. GREEN SCIENCE CENTER

3227 Broadway  
New York, NY 10153

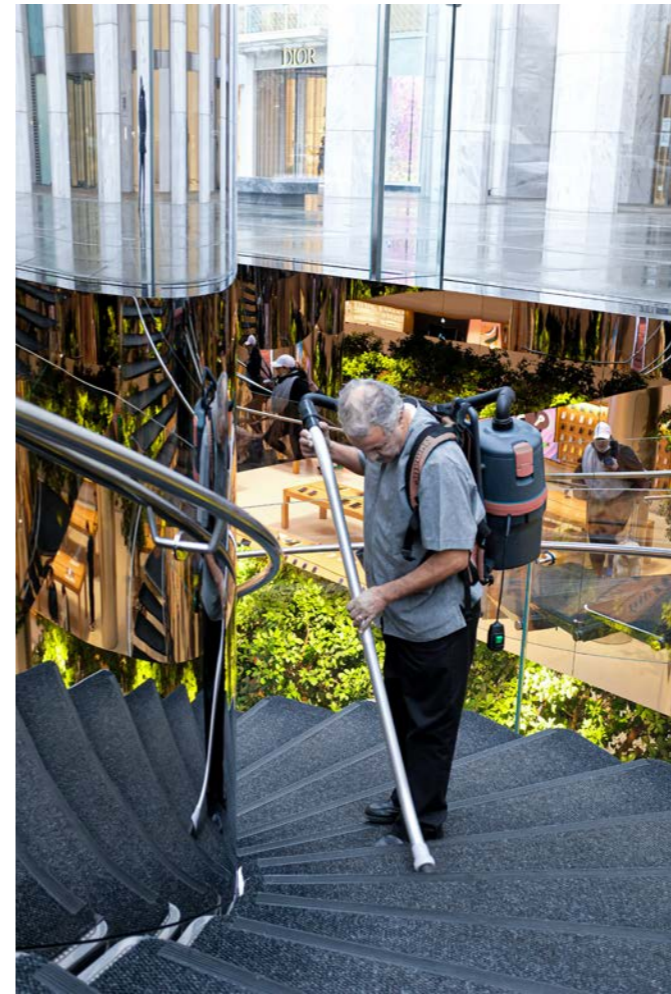
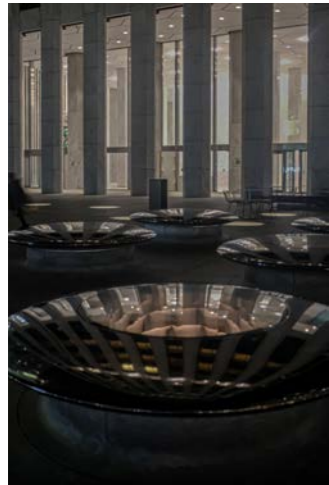
These photos show the new construction and gentrification by Columbia in Manhattanville as well as how the new Columbia Science Center cannot be seen without the presence of the New York Subway



**APPLE FIFTH AVENUE**

767 5th Avenue  
New York, NY 10153

These photographs show the mesmerizing qualities of light in Apple's highly reflective surfaces through multiple visits at multiple times of day.



The seductive qualities of the Apple Store would not be possible without constant upkeep and maintenance.

This photo, taken just prior to opening, shows how the reality of the Apple Store is created by through the invisible labor of caretakers as it is in the design.





**UNITED STATES POST OFFICE**

909 3rd Avenue  
New York, NY 10153



The USPS Station on Third Avenue is a building built for a different era. Its interior, intended for a larger audience, is typically empty. Throughout the room, nameless anonymous statues and signs for self-service adorn the closed service booths.





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# AFFECT AND DENIAL IN MOYNIHAN TRAIN STATION

## Bodies and Public Space

Bryony Roberts  
Spring 2023

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Public spaces are not just physical locations, but contain cultural, social, and emotional dimensions that generate collective affective responses in our bodies. When New York's "newest grand civic icon," the Moynihan Train Station, wrapped up construction in early 2021, it continued the trend of designing to disbar non-conforming bodies under the message of modernizing the city. Throughout its design, Moynihan Train Station creates a fantasy of a consumerist society that continues to conceal the capitalism's failures by denying the visibility of problematic bodies. The recent realization of this public space connects to histories of exploitation, exclusion, and control through theories in Lauren Berlant's *Cruel Optimism* and Don Mitchell's *The Right to the City*. The affect produced by the aspirationally beautiful spaces for consumer culture in Moynihan Station, analyzed through descriptions, photographs, and media responses post-construction, reveals how entrenched policies that perpetuate systematic exclusion are masked as well as how the public has the potential to reject these capitalistic ideals.

While not explicitly stated by either the architects or developers, Moynihan Station is a space designed to be hostile to New York's homeless population. Markedly absent in the \$1.6 billion dollar project are any public benches. This inaccessibility to the station's public infrastructure is reinforced by its policy of closing at 1am, even while Penn Station remains open next door. The lack of seating had been a point of contention for the public in the original station and it was hoped that it would be resolved in the renovation. The developers and politicians involved were not unaware of this deficit. Homeless lie scattered along the steps outside the station. Within Penn Station next door, the homeless readily appropriate its public spaces, seeking

shelter in its enclosures at night and panhandling near its entrances during the day. Yet, in Moynihan station, as one reporter notes, the homeless turn away from the station upon entering the space.

It is not to say that New York politicians have completely disregarded the homeless. As part of the construction, Amtrak had planned to donate \$370,000 to homeless shelters and, under the city's 2022 Subway Safety Plan, the NYC government participated in "getting [the homeless] the services they need, into a shelter, and ultimately into housing" all under the rubric of "addressing the safety concerns of everyone who interacts with our subway system." There are a variety of reasons the homeless might prefer to use public spaces instead of shelters. Safety and security concerns can make streets more desirable. By denying the homeless their visibility and contributing privately to homeless shelters, the city has indicated that there is a right way to be homeless and a wrong way to be homeless. Troublesome bodies are ones who do not take charity generously dispensed, but appropriate the spaces for another class. By making it difficult for the homeless to appear in public and ameliorating systemic deficiencies with minor appeasements, the government disguises the roots of poverty and housing inequity. By denying the homeless that right to appear in public, authorities define what it means to be an appropriate and inappropriate body in a democratic society.

The lack of public seating in Moynihan Station is not just an inconvenience, it is part of a historical trend that attempts to limit democracy within public spaces. In *The Right to the City*, Don Mitchell traces how the language of terrorism transformed New York, against "not the threat of terrorist attack but rather the fear of inappropriate users."



"A Grand Skylight - Sun shines through a soaring 92-foot high skylight that holds an acre of glass, 3160 insulating units—carefully housed within complex 3D steel geometrics."

Source: <https://moynihantrainhall.nyc/discover/architecture/>



"A Classic Style - The Ticketed Waiting Room area brings a sense of warmth and hospitality via contemporary amenities and finishes."

Source: <https://moynihantrainhall.nyc/discover/architecture/>



"A Center for Ambitious Art - Three monumental commissions by some of the most important and innovative artists working today offer fresh perspectives reflecting the train hall's past, present and future."

Source: <https://moynihantrainhall.nyc/discover/architecture/>

Mitchell's 2003 predictions on the surveillance and control of public space in New York have been realized in this 2021 construction. In removing public benches that serve as beds for its growing homeless population, New York actively seeks to construct a vision of society that hides its insufficiencies. Mitchell traces the characterization of the homeless as a danger to society to England's Hyde Park protests to Rudy Giuliani's orders to arrest the homeless for existing in public. In these characterizations, politicians equate the appearance of the homeless with that of a rioter, someone who has the freedom of "going where he likes, assembling where he like." These problematic bodies create "the sense of public space as an uncontrollable space, as space in which civilization is exceptionally fragile." The body of the homeless and the body of the rioters are related in that both highlight capitalism's failures. Their need to appropriate areas for an unintended use displays how the architectural design of the capitalist sphere has not succeeded in its promise to create an environment that can provide opportunities and achievements for all as it has promised. In Moynihan Station, their denial becomes critical to curate an appropriate image of capitalist culture.

As a civic icon, Moynihan Train Station deserves scrutiny since it functions not only as a space of utility, but as a cultural tool for edification. At the entrance to one of New York's busiest commercial hubs, the embodied experience of this site becomes reinforced within a citizen's daily environment on their way to work. The space has been touted as "a transformative gateway to the city" by several politicians. Suspended at its entrances are works by Kehinde Wiley, Elmgreen & Dragset, and Stan Douglas, three artists who typically feature in prominent international museums. Over the center, a parametric glass roof by SOM, a feat of modern engineering, floods the station with natural light. Despite all protests over the hostility embedded in its design, officials have perceived the overall construction as iconic, aspirational, and worthy of awards. As a space that 650,000 passengers transverse daily, it actively constructs the affect of New York's citizens. Affect, defined by Berlant as both "an intermediate, non-conscious state of encounters between persons and environments," as well as a thickened present that is the result of historical movements, works in the station by subconsciously reinforcing the goals of consumer culture. Idealistic civic spaces like Moynihan work to construct the public's goals and expectation are constructed in civic space, generating cycles of desire and denial that maintain normative goals and is responsible in shaping the political and social identities.

The affect generated within Moynihan Train Station reinforces the aspirations of a capitalist society.

## **Across unencumbered expanses of marble, daily commuters transfer from station to station, while on the main floor, credit cards and concessions transfer within the many shops and cafes.**

While there is a lack of seating on the main floor, its not to say that public seating does not exist. For customers willing to shell out money at the newly opened overpriced food hall, or for travelers with an Amtrak ticket, a cushy chair and velvet-lined bench will always be available. The spaces of Moynihan celebrate efficiency, cleanliness and control. Using designs by leading designers and artists, the station projects a believable fantasy of a neoliberal utopia. The space emphasizes the idea that an able-bodied, economically-stable consumer is the only body that belongs within future democratic spaces. Its lack of accommodation for people who fall outside of this system impresses upon its daily commuters that vulnerable bodies do not deserve the city's investment. It is a 6.40-acre, glass-and-marble oasis which embodies the 'good life' Berlant warned her readers against.

## **The station's aspirational affect is as key to limiting democracy as the pure of denial democratic spaces.**

While Don Mitchell's theories focus on the outright denial of public space, Moynihan Station demonstrates that when these instances of denial are executed in public, they must also effectively convey the illusion of an alternative aspirational lifestyle. In Berlant's theory of cruel optimism, before the general public feels the achievements of capitalism are out of reach, there must first be "the sense of possibility that the attachment [to the good life] opens up". Berlant shows how this illusion encourages the pursuit of individualistic goals over democratic values: as the vulnerable population continues to expand, public ability to care is turned ever more inwards towards a "constant struggle of self-management and self-improvement that ultimately keeps her from engaging in collective political action." The affective qualities of Moynihan Station function as a form of propaganda against the inclusion of vulnerable bodies. By depriving the homeless of visibility and designing spaces that promote consumerism as grand, beautiful structures, the city creates citizens who are uninterested in creating alternative forms of society.

Despite the goals of the city, the media reaction post-construction shows how the population

of New York has more in kin with the homeless population than with the commercial body that has been projected in the construction. The station opened during the pandemic, a time when many New Yorkers were pushed into situations precariously close to the economically unstable. By removing all non-paying seats in a prominent civic project, the government unintentionally sparked empathy between New York citizens and the homeless. By removing infrastructures of care, policy makers also created an insufficient space for the elderly, the disabled, mothers with strollers, and the general waiting public. These people were physically unable to exist daily in a space without rest and unwilling to pay for that privilege. This shared collective inability to measure up to society's expectations and the anger of being forced into an insufficient economic system led to public disapproval against the state. Since its opening, lawmakers have already filed a billion dollar lawsuit against the city. In pushing homeless people out of Moynihan Station, the development unintentionally created a situation where the affect felt by tax-paying public was closer to the homeless than to the idealistic consumer.

The affective connection created between the economically stable public and the homeless is critical when enacting change. Don Mitchell makes a call to action when he states that "social justice, rights and their relationships are not determined in the abstract, but rather in practice."<sup>24</sup> Berlant, likewise, desires a shift from the "normative habits of social reproduction." However, it is not the truly downtrodden who are the target audiences of their theories, but housed, tax-paying individuals who have the resources to produce the reordering of public spheres. By recognizing that the exclusion of problematic bodies is connected to deeper forms of capitalistic exclusion, the call to action becomes not only an act of charity for the homeless, but a call for an image of care that is different from the sanitized and exclusive image that purports to be an icon of culture. Without collective social action, spaces of privilege like Moynihan Train station will be continue to be replicated while true democratic space grows ever more limited.

## **The acceptance of care and the creation of a more inclusive democracy will include spaces that are unpleasant, chaotic, and disorderly.**

However, the introduction of disorder into the order of civic space become critical in the age of increased surveillance. In attempting to secure their space from the "dangerous" homeless population, Moynihan Station leads to an

immediate constriction of the citizen diversity. The spaces and bodies that incorporate the true population of a democratic society might smell, be disorderly, and unclean. However, their inclusion will provide a more comprehensive image of society than Moynihan's manicured marble floors. As Berlant suggests, the despair experienced in Cruel Optimism<sup>26</sup> can be overcome by creating a shift in understanding of what constitutes a good life and a reorientation of desires to more sustainable and achievable goals. Public spaces, particularly spaces that create cultural production, implies spaces with bodies that we might deem uncomfortable and inappropriate, but spaces that are a part of the reality of our lived environment.

Public spaces need to be critically analyzed as producers of normative ideals in order to provoke, contest, and change legal decisions. Across New York and in other wealthy cities, cities are being refashioned to prize the achievements of the economy over the formation of collective citizenships. When truly democratic public spaces collapse through the constant production of spaces like the 2021 Moynihan Train Station, it becomes vital that the public recognize their shared kinship with vulnerable populations. By calling for spaces that incorporate the bodies capitalism discards, the insufficiencies of our systems can be acknowledged and public goals that are both more realistic and more imaginative can be enacted.

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# RECLAIMING INDIGENOUS PEATLANDS

## Dayak Practices in Central Kalimantan, Indonesian

Nahyun Hwang  
Fall 2022

w/ Simran Raswant

Although peatlands cover only 3% of the earth's surface, they contain twice as much carbon as all the world's forests, about 500 tonnes every square meter. Not only does peat pack in air at a one-to-one scale, the lack of oxygen also preserves bodies, artifacts, and fossils, sequestering culture along with carbon. Our interest began with an exhibit by Patagonia Peatlands, where we became aware of the current risks they are facing globally such as agricultural expansion, canals, and deforestation. Draining water from peatlands dries it out, causing massive underground smoldering fires. Dried peat acts like coals and catches fire easily, releasing all the air contained inside as a toxic haze. Peat cannot be replaced when it disappears as it takes 1,000 years to grow 1 square meter.

While our capitalist system sees peatlands as wastelands to be destroyed for a profit or carbon reserves to be fenced off and sold, indigenous communities have been able to live and grow agriculture sustainably on peatlands.

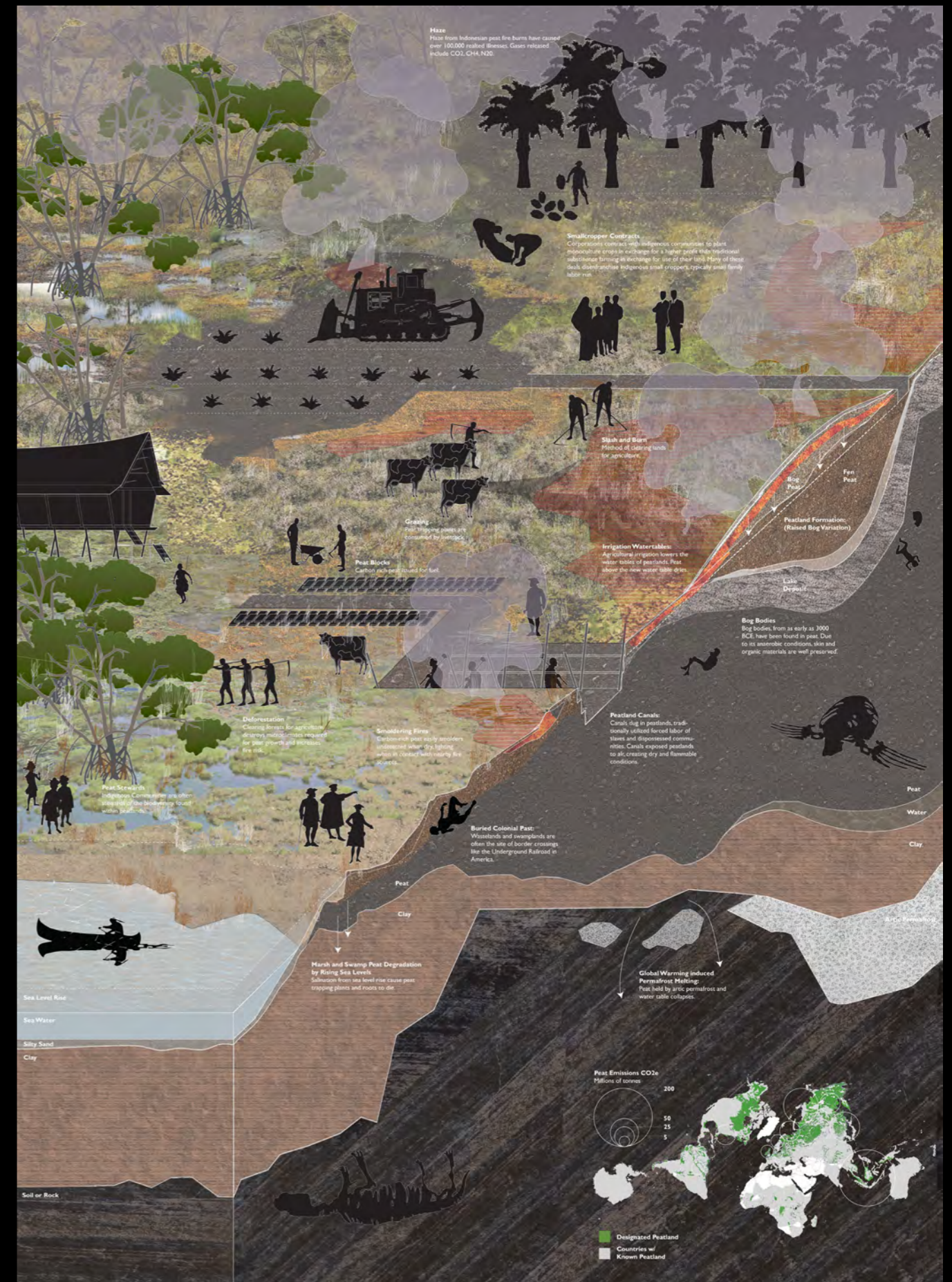
For our project, we looked at the site of the largest and most consistent peat fires, which are in Kalimantan, Indonesia. The peatlands here were predominantly occupied by the Dayak tribe, who formed a sustainable relationship with peatlands. The Dayak tribe was marginalized, first by Dutch colonizers in the 1600's who mapped the peatlands as wastelands. In 1990s, a few decades after the country's independence, the Indonesian government saw this land as a new "frontier for development". Palm oil and cash crops were grown on peatlands and associated with the technology of social and environmental purification. This displaced the Dayak tribe, deforested peatland, and zoned Indonesian land into spaces for monocultural production. The government also cleared over 2.2 million acres of

peatlands for their "Mega Rice project", which failed due to their lack of knowledge of peat composition causing one of the countries major forest fires. Agricultural projects in Indonesia including the failed 1990 Mega-rice Project and the mono-crop production of palm oil continue to drain peat, releasing clouds of chemicals and carbon yearly that spread to other countries. This zone and current plantations now catch fire yearly, creating a toxic haze that envelops Indonesia and travels across borders to other countries.

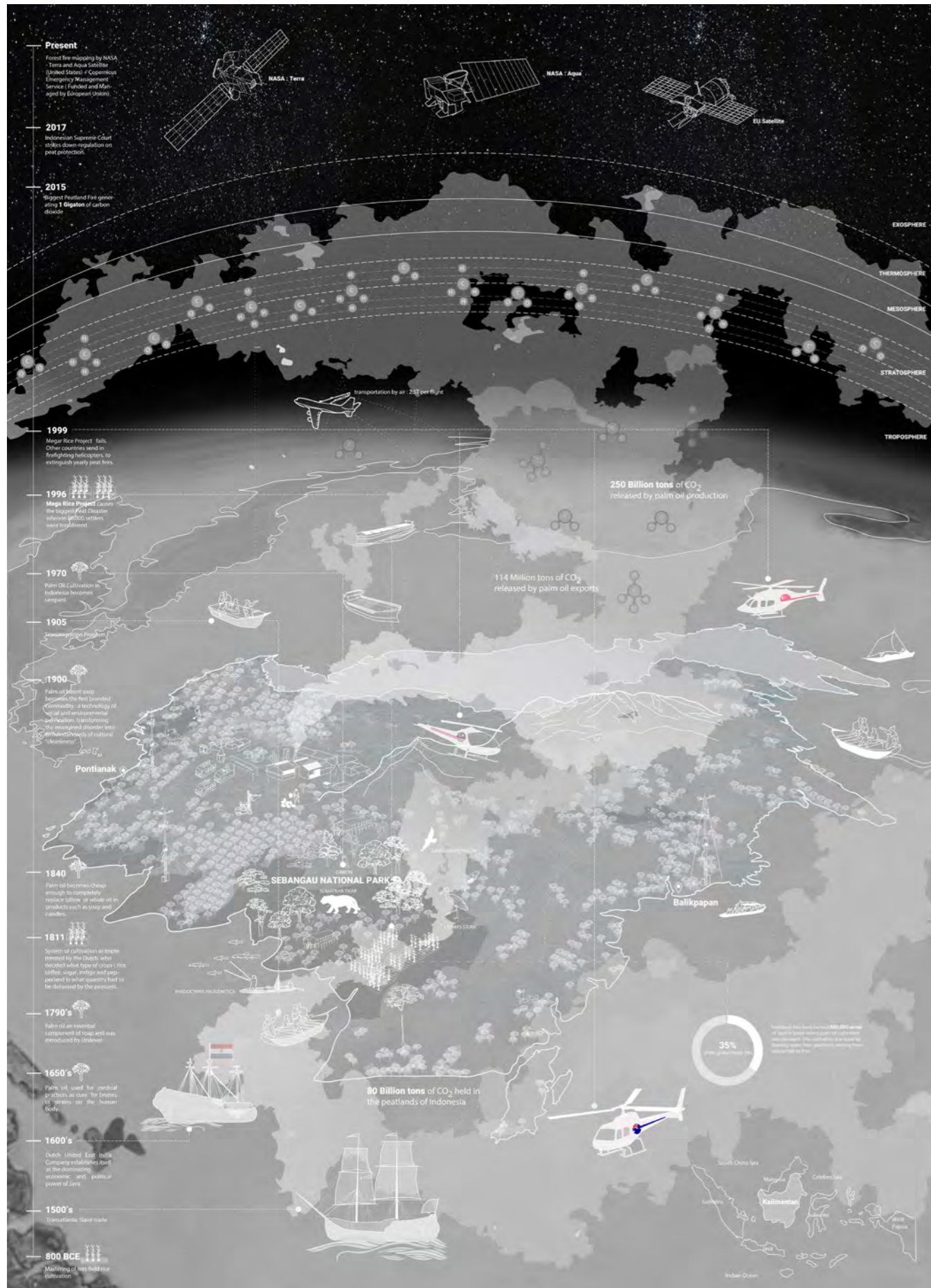
Indonesian peat haze is a transnational problem where countries including Malaysia, and Australia now send out helicopters to put out peat fire.

After studying the slow, but sustainable lifestyle and practices of the Dayak tribe of Indonesia. We then proposed a mode of living and architecture that stems from their indigenous culture to offer an alternative way of addressing environmental concerns outside the binary of preservation or destruction for maximum profit.

While the Dayak tribe has lived on Indonesian peatlands sustainable for 1,000s of years, colonization and capitalist expansion has dis-valued the culture and their lands. They practiced ceremonial planting and harvesting cycles that allowed for the rehabilitation of land. The tribes were primarily nomadic and migrated seasonally to different parts of the sparsely populated Indonesian islands. Their architecture was built to be dismantled and transported piece by piece in boats. Governments and NGO's alike have dispossessed this indigenous tribe of their land through both force and through guises like the creation of national parks. As the government and other countries **(cont.)**



Global Degradation of Peatlands



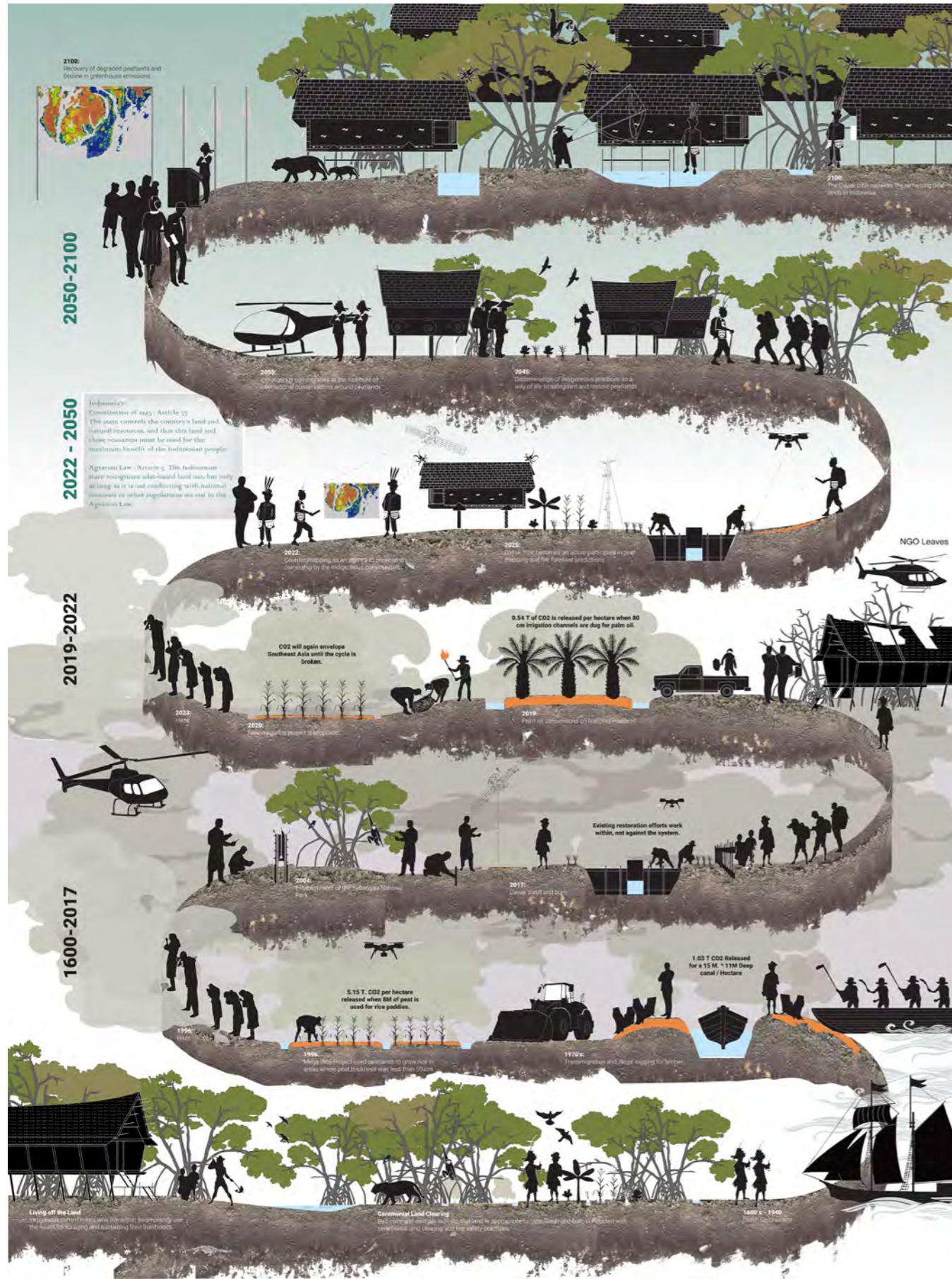
Timeline of Peatland Degradation in Central Kalimantan



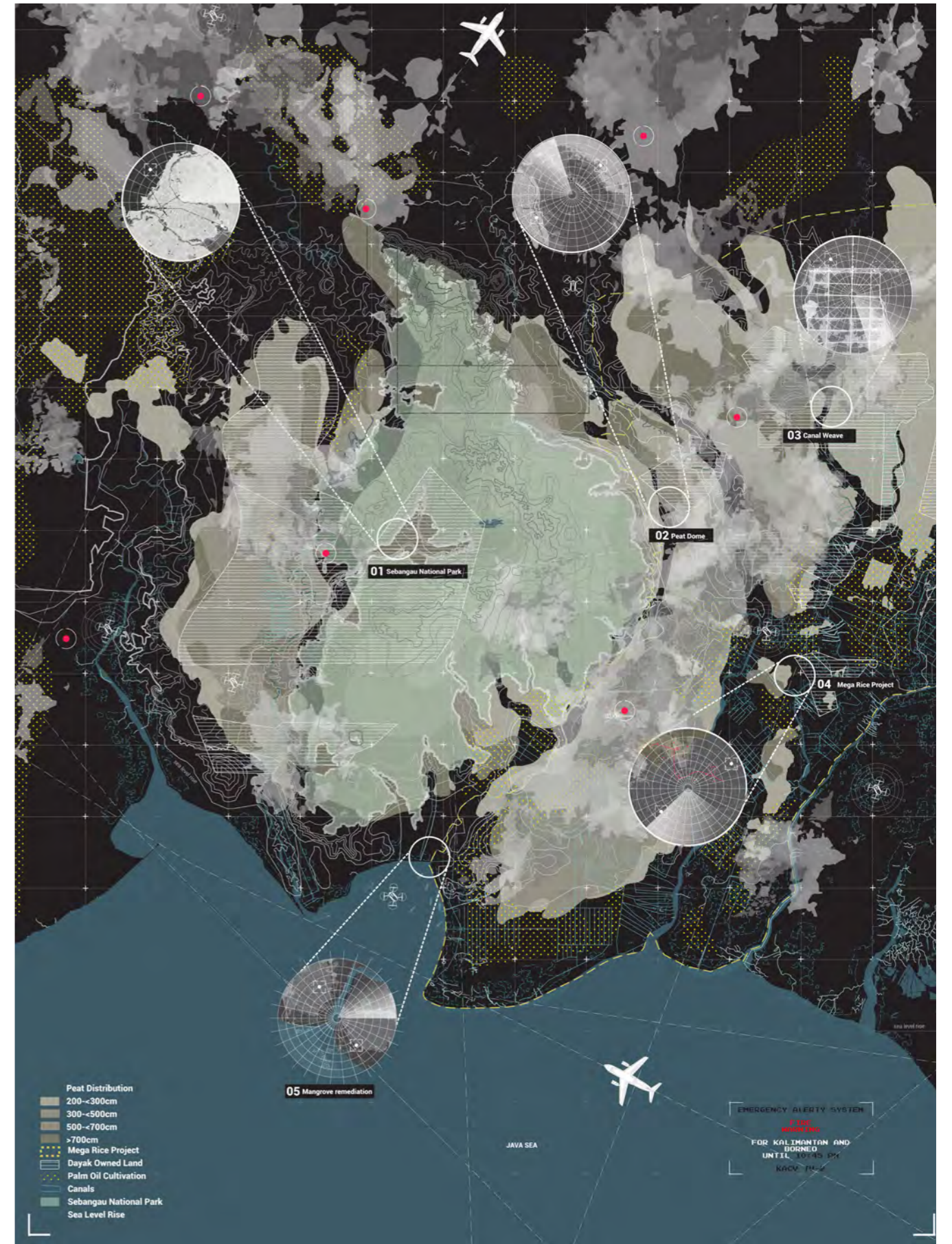
Thesis Collage Portaying the Dayak Connection and Takeover of Their Native Land Through A Control of Digital Infrastructure

**(cont.)** begin to recognize the importance of preserving peatlands, partnerships with indigenous communities are starting to be proposed. Our project proposes an interruption to this cycle of indigenous dispossession and environmental destruction by creating a series of field stations that can only occur with the support, ownership, and knowledge of the Dayak tribe.

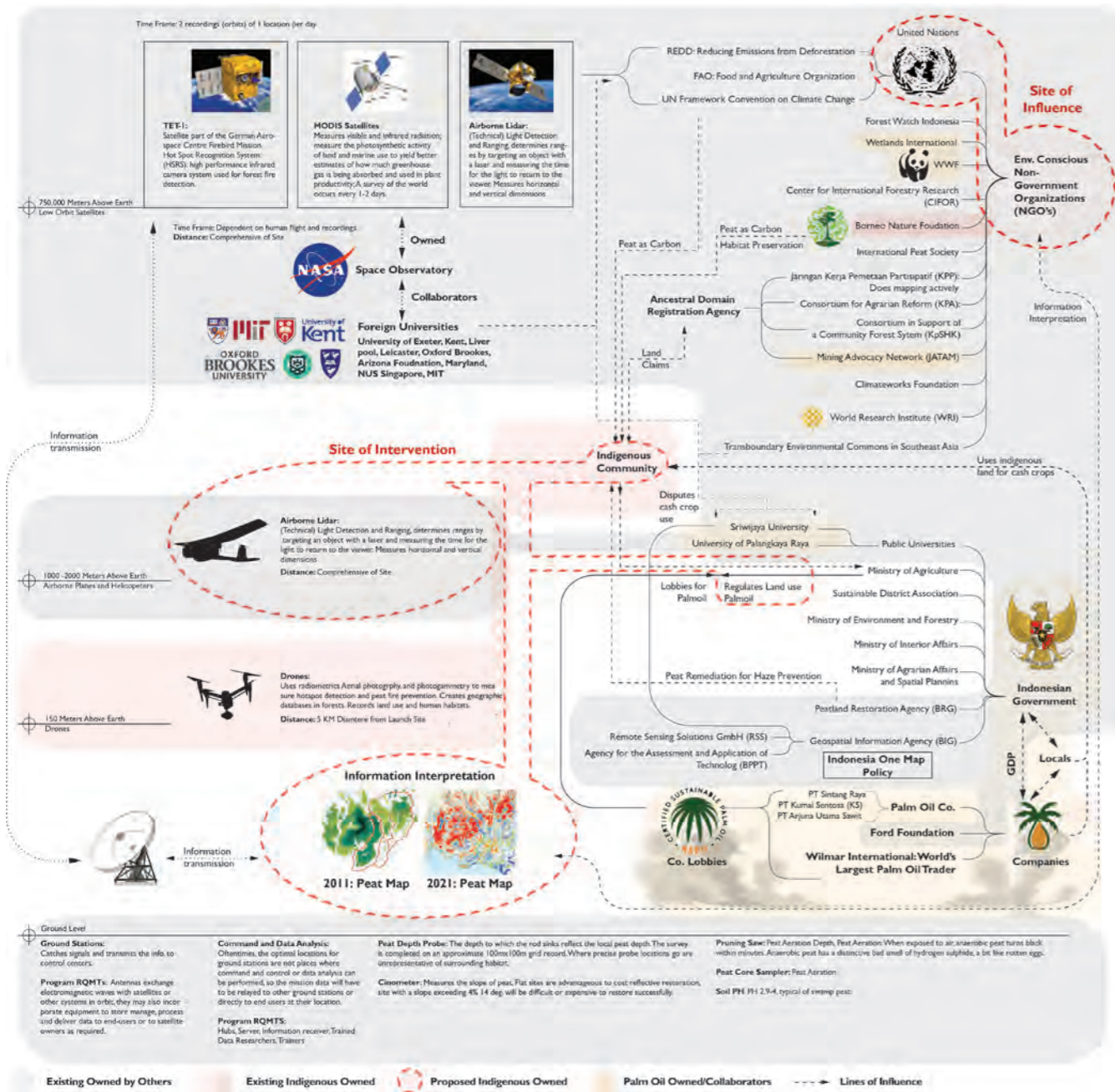
These stations offer a trans-scalar, indigenous-centered approach to address global environmental degradation. Designed to expand as peatlands are successfully rehabilitated, the project allows the tribe to reclaim their territories while disseminating their knowledge to grow and live on peatlands without their destruction.



Narrative of Dayak Disposition of Peatlands from 1600's with our Thesis Proposal of an Alternative Future



Map of Peatlands, National Parks, and Palm Oil Plantations in Sebangau National Park and Megarice Projects



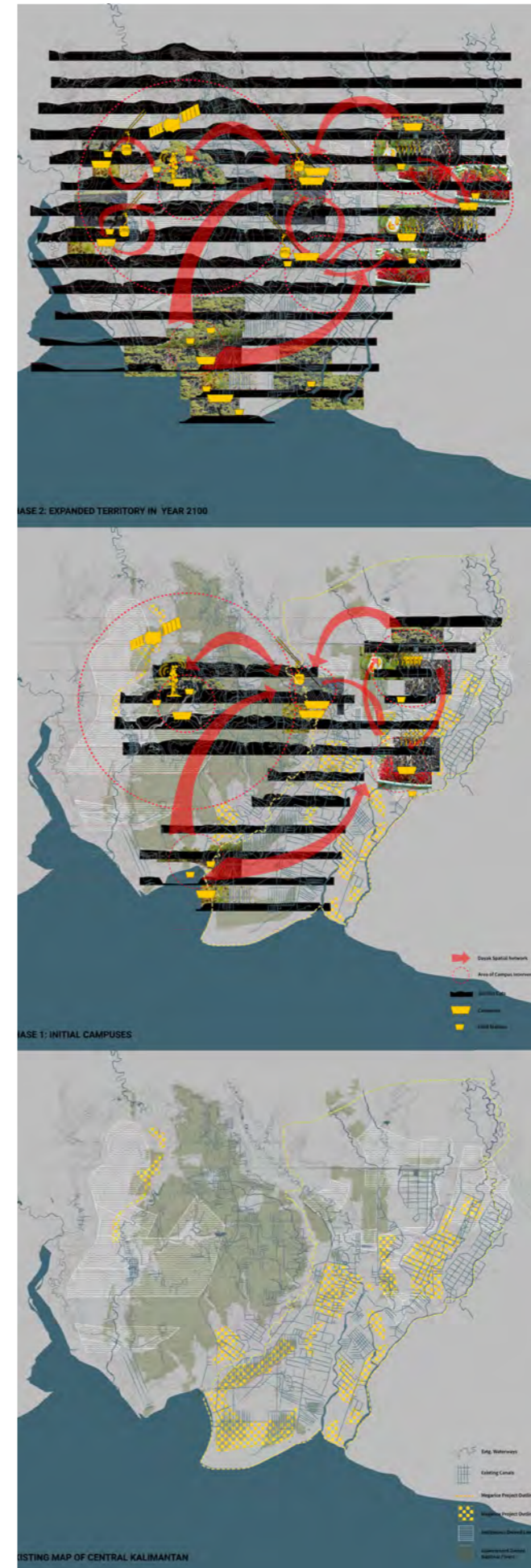
## ACTOR NETWORK THEORY: CENTRAL KALIMANTAN

Currently, the Indonesian government has now recognized the problems associated with growing on peatland as well as the inaccuracy of the existing documentation of peat. They are in the process of establishing agencies and rehabilitating degraded peatlands with NGOs and foreign partners who help map peat with satellite technology and provide funding, the World Wildlife Fund and the Ford Foundation being an example.

However, the Dayak tribe, who have been stewards of peatlands for 1,000's of years, are not included. Their forests are being turned into national parks by the government. Areas of the same forest are sold back to palm oil companies when the government runs out of funding from NGOs.

If the same companies, whose interests are entangled with mega-corporations, continue to take control of peatlands as they have in the past, exclusion and expropriation of indigenous communities will continue along with the ecological degradation of peatlands. The cycle of peat fires and haze will continue.

Currently, national interests involve growing the GDP through cash crops. However, overpopulation, need for accessible agriculture makes understanding how to live on peat a necessity for national interests. Other issues include existing laws by the government and international organizations like the UN negating the tribe's 1,000-year-old knowledge.



## COUNTERMAPPING: SEBANGAU NATIONAL PARK AND THE MEGARICE PROJECT

A potential break in the cycle of dispossession can be through the recognition of Dayak ownership. Current maps used by the Indonesian gov't lack recognition of indigenous land which can be overturned by the act of counter-mapping. Counter mapping for us moves away from the colonial top down gaze such as zoning that looks at mapping geographical features in one dimension. Colonial mapping also negates history and aspects of time. Counter mapping introduces a more dynamic understanding of land that stems from peat itself such that it brings to the forefront human behaviour, soil dynamics and nuances of geological time. We believe will be an essential tool to enable the Dayaks to subvert processes that are hegemonic and static. While most maps are available and open-source, schools that consolidate their interpretation do not exist.

To counter these existing power structures, we are proposing five field laboratories for learning to be created in partnership with the Indonesian government and transnational organizations. The five labs which will be built on Dayak-owned land. There, they will begin to create the counter maps and information needed to determine the appropriate use for peatlands. Here, they can intervene in the existing actor network of Central Kalimantan. In these testing grounds, the Dayak tribe can address the microbiotic and human scale experience of living on peat. This knowledge will allow them counter the appropriation of land by dominant powers.

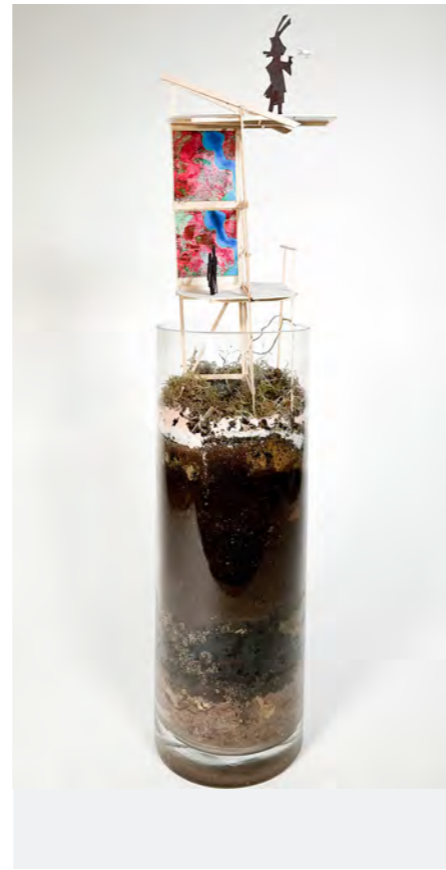
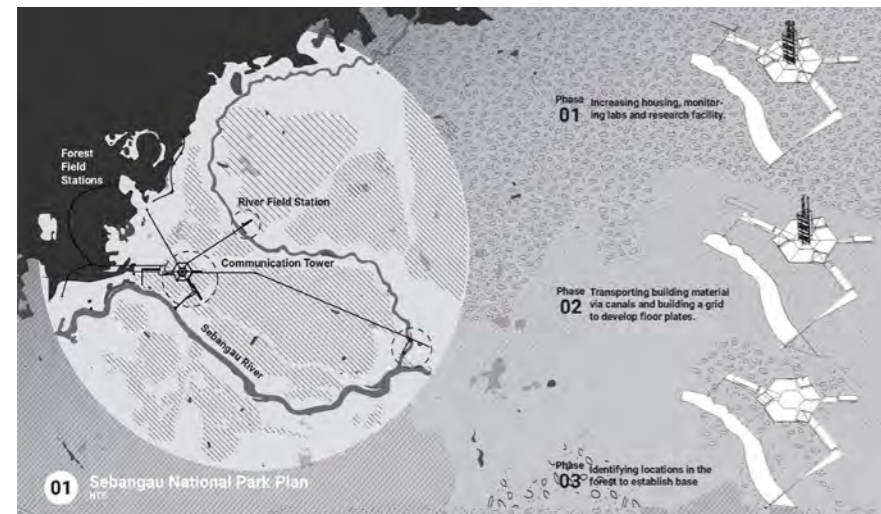
Countermap portraying the takeover of land enacted through their understanding and control of peatlands

## FIELD STATION 1: COMMUNICATION TOWER

Research station 1 is located in a burn zone at the center of the Sebangau National Park. A communication tower built according to indigenous techniques creates a digital network over the entire park, which underground labs study the micro-biotic network of plants underneath. Through research station 1, the Dayak tribe, the infrastructure required to participate in the creation and dissemination of knowledge is placed in the hands of indigenous cultures. Forest and river field stations

(Bottom) Collage + Site Plan showing the transportation + building of the stations.

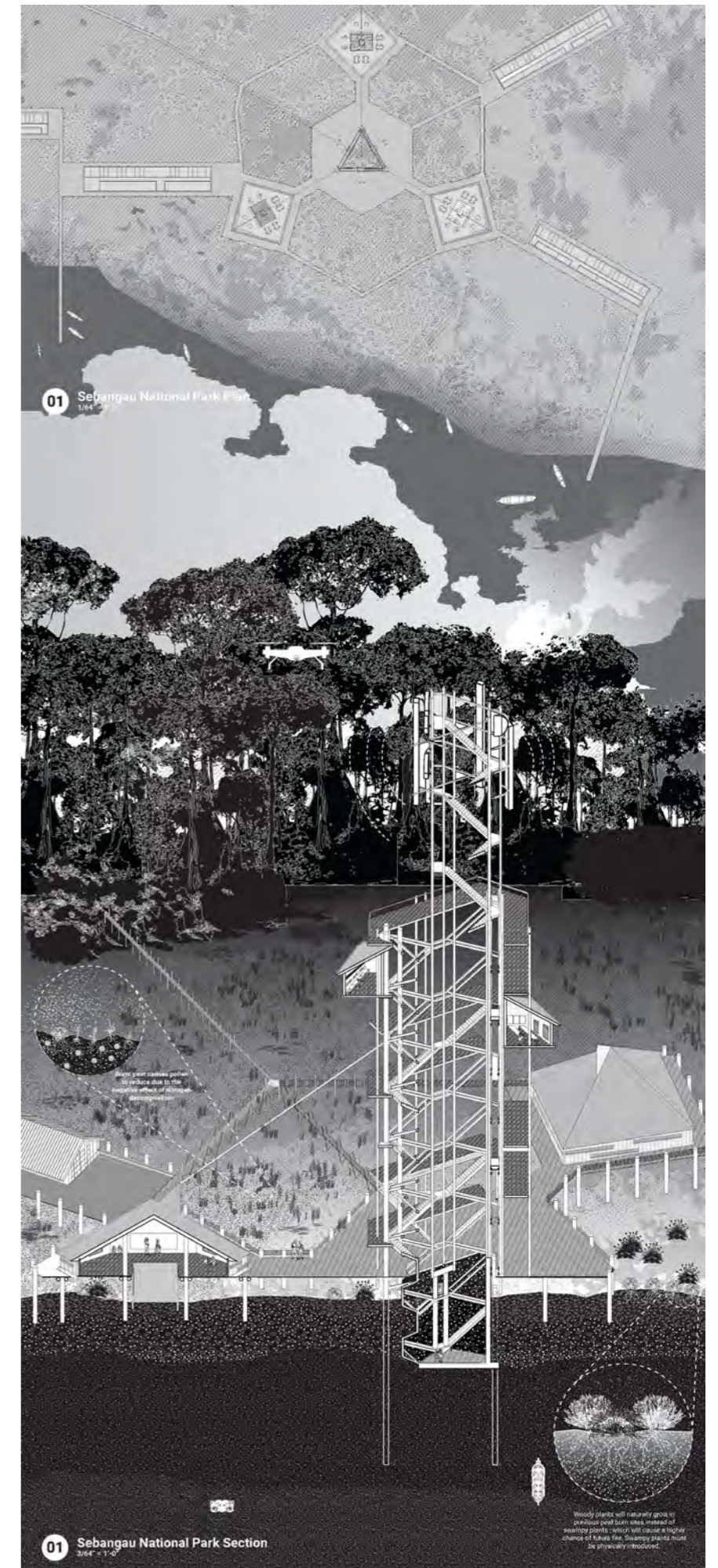
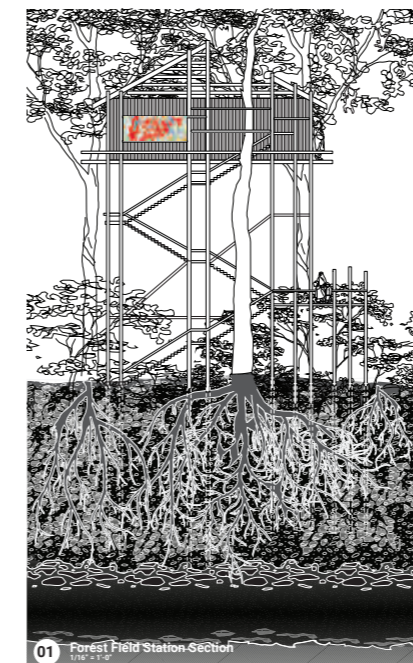
(Left) Model of Deep Peat at Field Stations

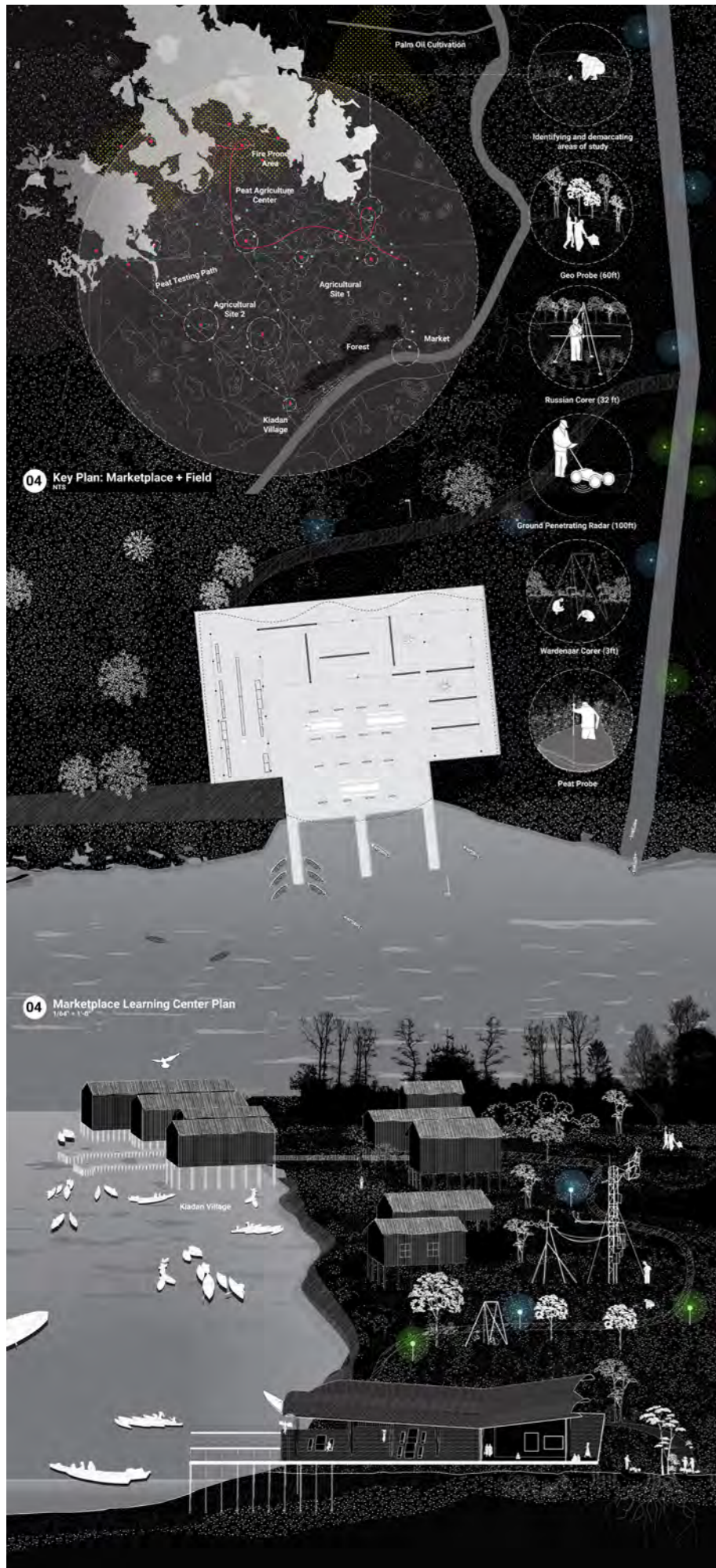


surround the central tower. The surrounding stations allow study of the animal and plant life surrounding peat, recognizing that the creation of abstract information is not enough.

(Right) A communication tower is placed at the site of a previous burn zone in the Sebangau National Park. It creates a digital network over the National Park while recreating the underground network of plants and bacteria in peatland.

(Bottom) Dispersed forest and river field stations, and underground peat labs form across the site an interconnected network that facilitate data dissemination.



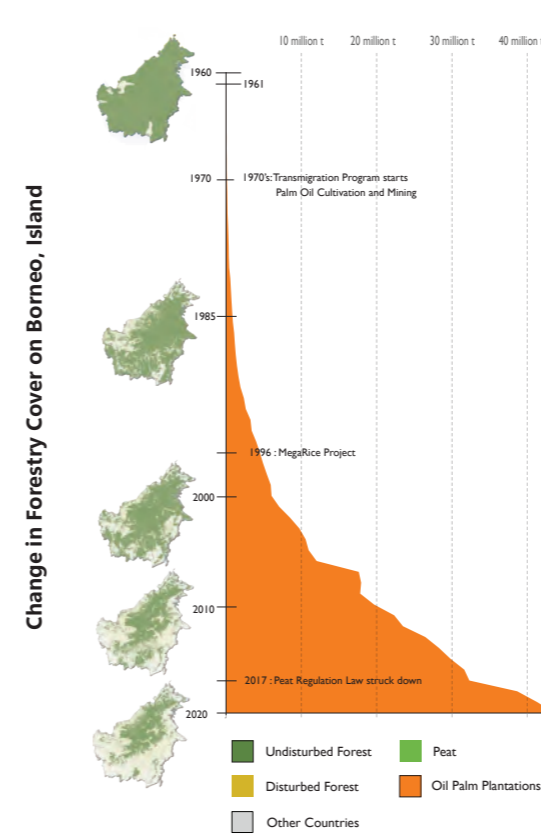


## FIELD STATION 4: MARKET + MONITORING

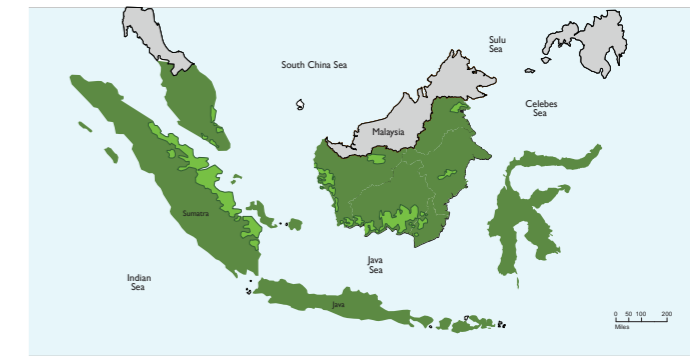
The fourth intervention lies close to a former rice cultivation site and palm oil cultivation zone. Here, we mobilize a network of testing zones that are navigated via technological aids like Geoprobos and Ground Sensing Radars that allow the Dayak's to take charge of these ecological data sets. A field of heat-sensing lights mounted on geoprobos help monitor the underground conditions of peat, thereby alerting the villagers of developing underground fires. This is also mobilized by activating the canals that act as surveillance channels to monitor palm oil companies. Market infrastructure is also provided near an existing village which acts as a space for information dissemination and distribution of crops that can be grown on peatlands.

(Left) Drawing of Market Field Station and Peat Monitoring Practices

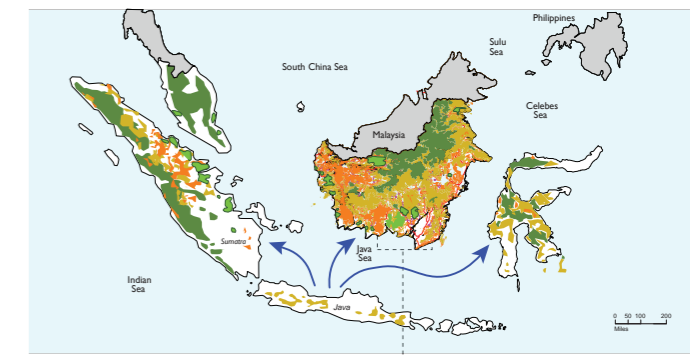
(Right) Collage showing future potential Dayak Monitoring and Training Systems with drones.



## Historical Estimation of Peat and Forestry Cover in Indonesia



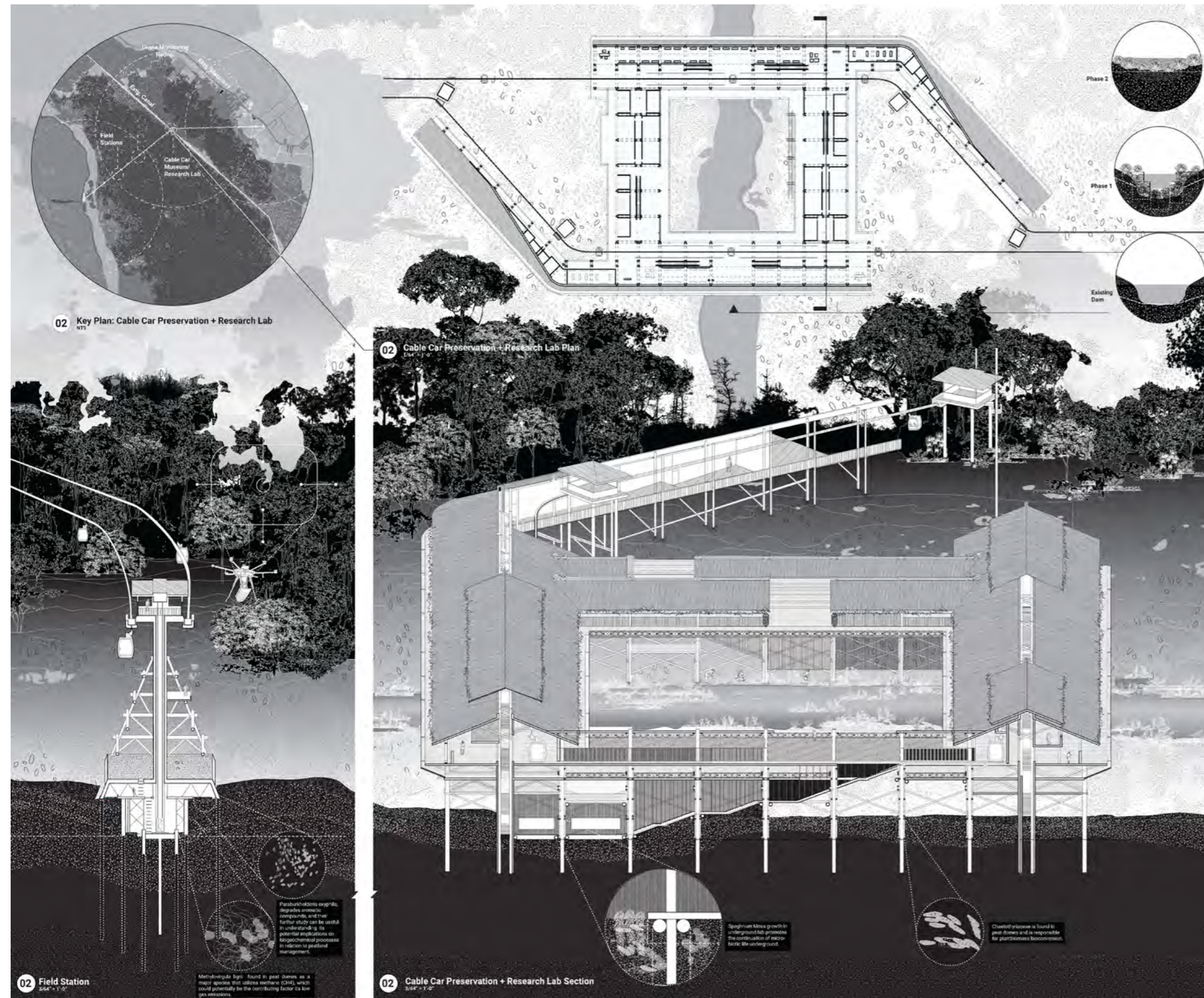
## Changes in Indonesia with Plantation





## FIELD STATION 2: CABLE CAR PRESERVATION CENTER

Our second intervention takes place on the largest peat dome between the national park and major villages. A cable car preservation center creates an alternative to intrusive infrastructure such as asphalt motorways. The center allows visitors and researchers to experience peat from above and below ground. The study of Dayak culture is carried out with the study of peat, linking cultural and geological history.



Drawing of Cable Car Preservation Station with Field Stations located at cable car stands and phases of dam phasing.



Collages showing the museum of Dayak cultural preservation above and the underground preservation lab below.

**FIELD STATION 3: AGRICULTURE + WEAVE FIELD**  
**+ FIELD STATION 5: SEA LEVEL RISE + MANGROVE REHABILITATION**



**(Top)** Collage Contrasting Indigenous Farming Traditional Techniques with Palm Oil Large Scale Slash and Burn Techniques

**(Bottom Left)** Collage Showing the Entrance to the Sea Level Field Station surrounding a Peatland Field with Building Materials acting as a Host for Plantlife.



**(Bottom Left)** Model of Peat Showing Different Types of Plants, Bacteria, Gases, Fungi in Different Levels of Peat, Including:

- Sphagnum** - 15cm ( green)
- Fungi:**
  - G1** - poor competitors in dead organic matter - cladosporium ( brown to blackish-brown or gray-green)
  - G2** - act as decomposers, feeding on dead and decaying wood, leaves, litter, and other organic matter - ( white, beige or grey)
  - G3** - polymer degrading- penicillium (Penicillium spp. are initially white and become blue-green, gray-green, olive-gray, yellow or pinkish with time)
  - G4** - breaks down slow degradingbiodegradable and non biodegradable polymers - basidiomycetes ( reddishbrown or black)
  - G5** - pythium ( honey-brown)

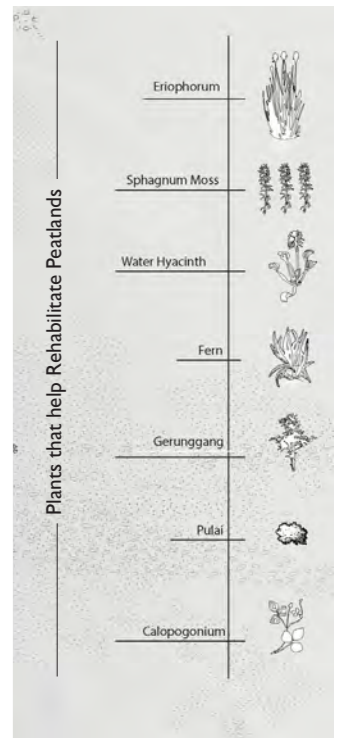
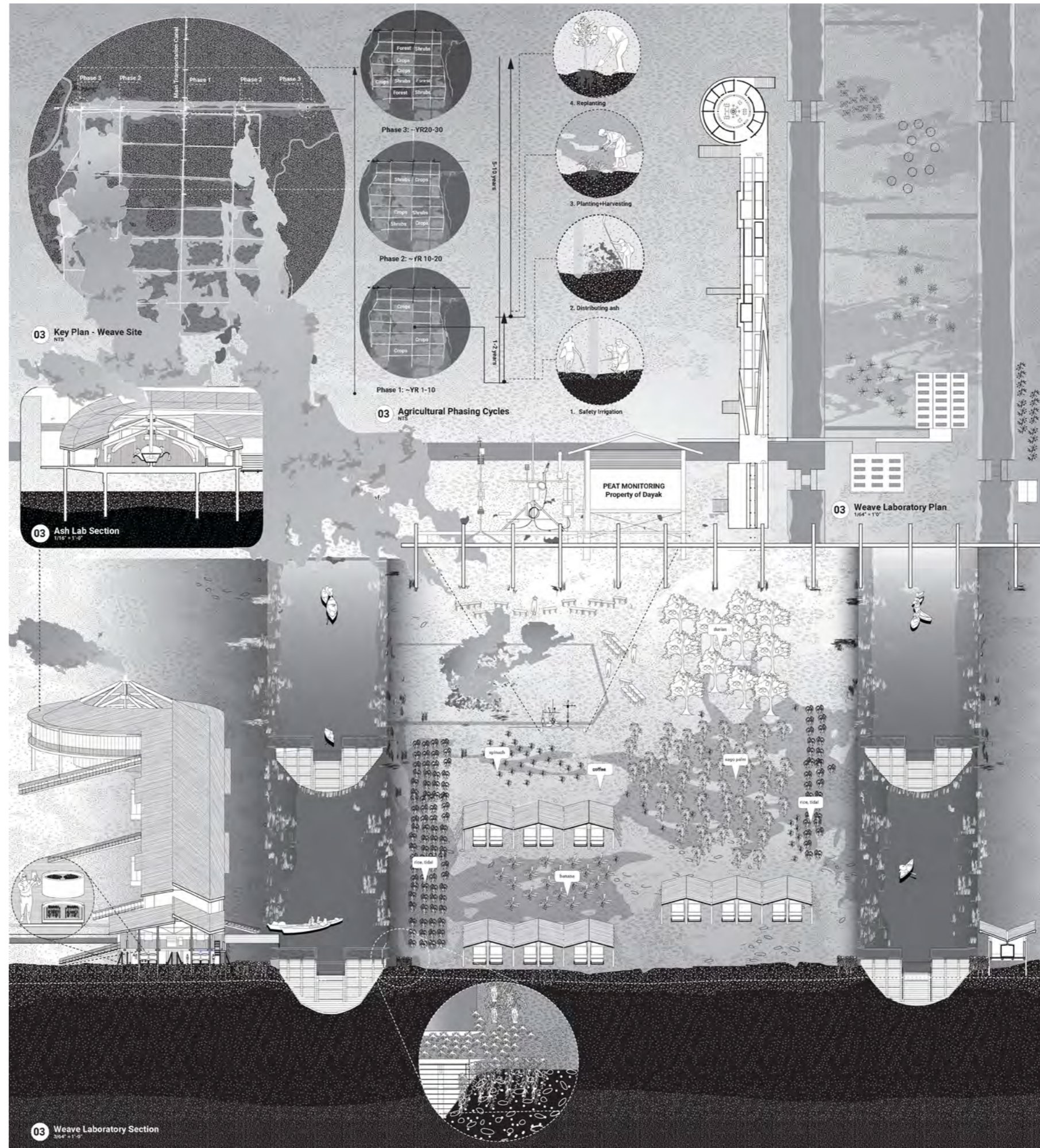
**Methane Gases** - decomposed by typha and phragmites and carbon closer to roots

**Pores** - Pore sizes in undecomposed peat can exceed 5 mm, but significant shrinkage occurs during dewatering, compression and decomposition, reducing pore-sizes.

## FIELD STATION 3: AGRICULTURE + WEAVE FIELD

Research Station 3 occurs at the border of an untouched peat forest and the Ex Mega-rice Project. This mobile station weaves together the degraded peat forest and the naturally occurring peat forest. The large irrigation and transportation canal that drains peat is dammed, raising the water table, and re-wetting the surrounding peatlands. The water table fluctuation in peatlands impeded Sphagnum growth and accelerated decomposition due to fungal proliferation, which consequently compromises the capacity of peatlands to act as a carbon sink. Small Dayak owned boats carrying building materials are still able to pass. Indigenous farming techniques such as slash-and-burn, which have been banned by NGO's, are recognized as a stable form of farming that does not contribute to the mega haze of large scale projects. In cyclical planting phases, trees and sphagnum moss are grown and replanted to rehabilitate land after each agricultural harvest.

(Bottom) Model of Peat levels and dam construction raising the water table near the Mega-rice Project



(Top) Plants that help rehabilitate Peatlands.

(Left) The research field station Integrating and ash study lab. Spaces for slash and burn techniques and plants used in permaculture agriculture.

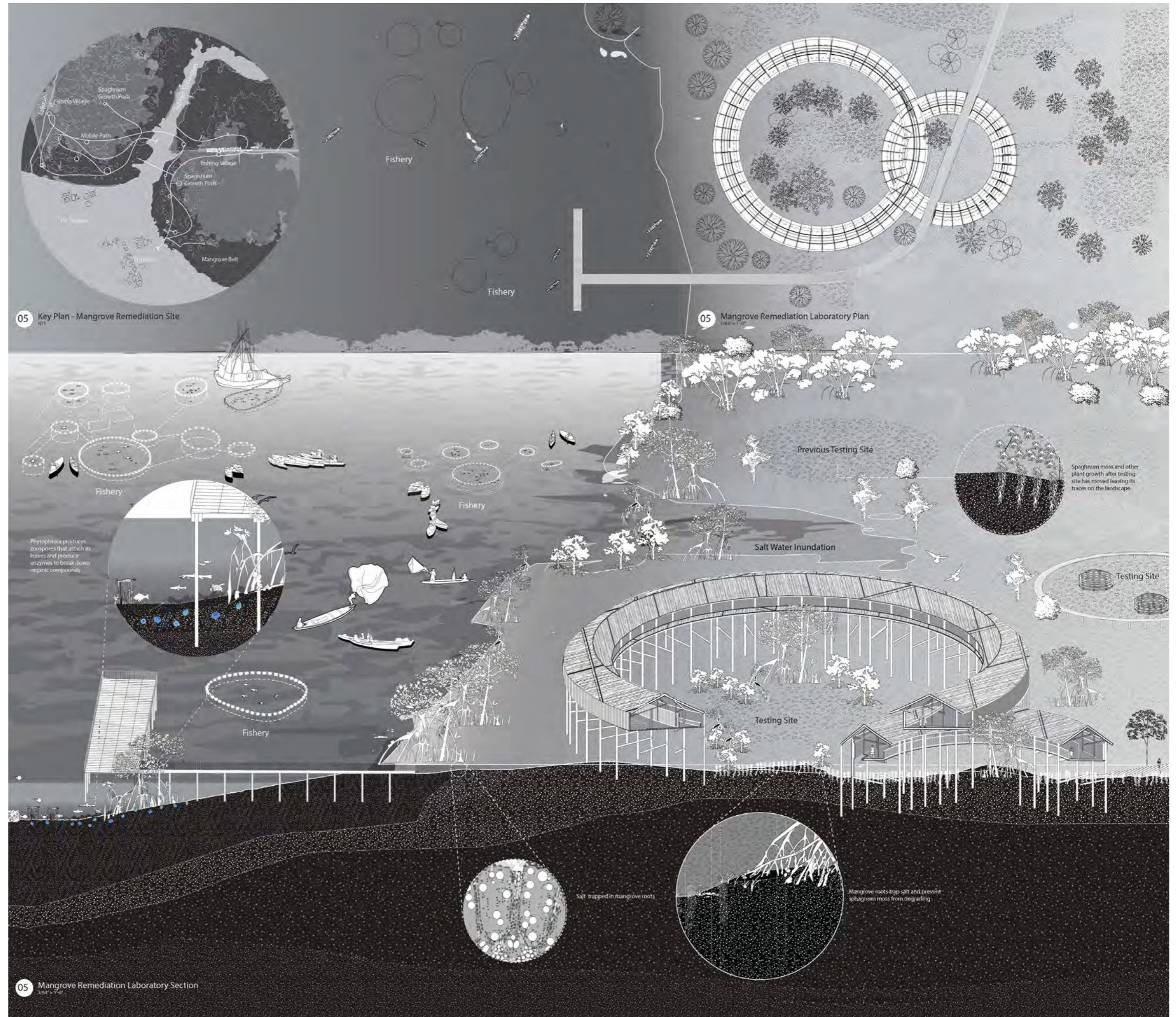
Agriculture plants and restore the old project over the course of Many Years. Every 5-10 years, a new plot is taken while the peatland is allowed to rehabilitate.

## FIELD STATION 5: SEA LEVEL RISE + MANGROVE REHABILITATION

Lastly we look at the edges of the island. As the sea level rises in the future, it will begin to degrade peatlands. We are attempting to counter its effects by mangrove remediation. Mangroves trap sea salt before it travels inland. Salts prevent the growth of sphagnum, a crucial species to keep peatlands intact. Small-scale interventions like mobile testing pods and greenhouses are also proposed to allow the growth of plants like gerunggang, and pulai that help with peatland restoration.

**(Right)** Field Station 5 Drawing showing field rehabilitation, from micro-biotic scale to site change.

**(Bottom)** Research Pod Detailed Architecture Drawings of Movable Greenhouses



# DATA VISUALIZATIONS: GENDERED NOTES

## The Construction of Gender through Fragrances

Jia Zhang  
Fall 2022  
w/ Joe Mihavonic

Gendered Notes

github.com/lc3675/FinalPerfume/releases/tag/DataVisualization

### Gendered Fragrances

Clear gender roles in fragrance are not biologically predetermined but culturally constructed. Although we may recognize floral scents as feminine and musky smells as masculine, these assignments are based on recent marketing. In Ancient Rome, floral scents were associated with men, with Alexander the Great's teacher, "Theophrastus", recommending that "rose-perfume and kypros[...] seem to be the best suited to men, as also lily-perfume."

Although fragrances often sink to our subconscious, they are a subtle enforcement of social norms between men and women. The arbitrary associations in popular fragrances in today's market stemmed from the rise in gendered stereotypes in the late 19th century. They are a part of existing social norms that dictate that men and women should act, look, and smell a certain way.

#### Categorizing Notes

Notes within fragrances are different scent layers that make it unique. They are categorized in three parts.

**Head**  
"Head" notes appear within 15 minutes.

**Heart**  
"Heart" notes appear after 3-4 hours.

**Body**  
"Body" notes appear after 5 to 8 hours and linger the longest.

#### Note Organizations

HEAD	CITRUS: add bursts of sparkle and freshness
	FLORAL: soft, subtly sweet, feminine
HEART	GREEN: fresh, lively, crisp, sharp
	FRUITY: fresh, invigorating, juicy, sweet
	SPICES: warming, strong powerful scents
BODY	WOODED: warm, opulent, smoky, dry, sensual
	BALSAMIC: sweet, soft, and warm, exotic
	GOURMAND: edible, dessert-like notes

How are men and women conditioned to smell? Are the same scents used in women's perfumes used in cleaning products? Are women conditioned to clean?

These were the questions we asked in this study, which looks at the scent profile of the 20 top female and male perfumes and the top 20 popular cleaning products.

### Popular Perfumes

We surveyed the 20 best-selling perfumes for both men and women.

Source: Ulta Beauty

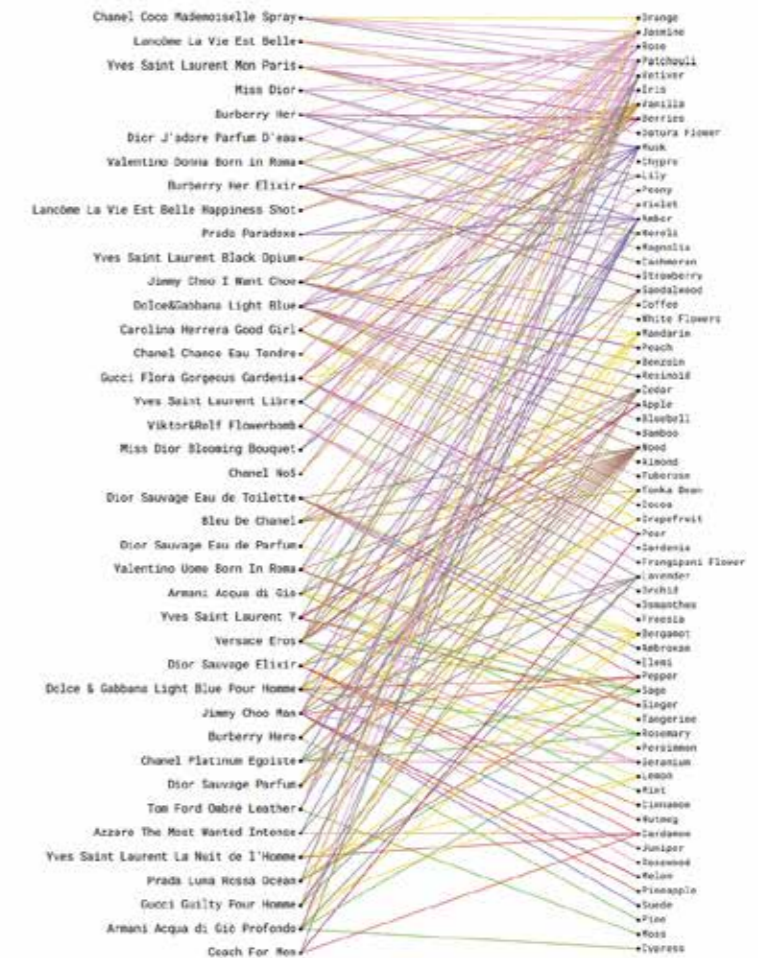


### Gendered Notes

Notes within the 20 most popular perfumes for both men and women were mapped.



### Top Perfume Notes



We used code to break down each fragrance and cleaning product into their separate note profiles, then to compare popular fragrance notes across each genders and across cleaning profiles. up the

bestsellers lists on popular perfume websites like Sephora, Ulta, and Nordstrom.

## GENDERED NOTES NODAL GRAPH CODE

```
//NEW: adding that note type dataset
here
Promise.all([d3.csv("PerfumeNotes_AC-
Cleaned.csv"),d3.csv("Perfume Notes
- NoteTypes.csv")])
.then(function(data){
//NEW: organize note type into a dictio-
nary - see the function declaration
//pass in data[1] which is the 2nd csv
we imported above
var noteTypeDictionary = makeNote-
TypeDictionary(data[1])
//console.log(noteTypeDictionary)
//this is where we are calling the func-
tion and putting the data into nodes
var links = processDataLinks(data[0])
var Perfumes = processDataPerfu-
meNodes(data[0])
var NoteNodes = processDataNoteNo-
des(data[0])
//NEW: pass in all 3 datasets so that we
can draw them, and then we will also
pass in our new color info
drawLines(links, Perfumes, NoteNodes,
noteTypeDictionary)
})
function makeNoteTypeDictionary(-
dataset){
//NEW: here is the dictionary we will put
the note to notetype info
var formatted = {}
console.log(dataset)
for(var i in dataset){
if(dataset[i].noteType !=undefined){
var noteType = dataset[i].noteType
var notes = dataset[i].notes.re-
place(",","").replace(" ","").split(",")
console.log(noteType,notes)
//NEW: once again we will loop through
and make key value pairs
for(n in notes){
var note = notes[n]
console.log(note)
//NEW: make a match between note and
notetype
formatted[note]=noteType
}
```

```
}
}
}
console.log(formatted)
return formatted
}
//this function, which is called above
with the csv, makes nodes between each
perfume and note
function processDataLinks(dataset){
//console.log(dataset)
var links = []
for(var i in dataset){
//console.log(i)
var perfume = dataset[i]["Perfume
Name"]
//console.log(perfume);
//return perfume
}
if(perfume!=undefined){
var notes = dataset[i]["Notes"].re-
place(",","").replace(" ","").split(",")
for(var n in notes){
// console.log(notes[n])
var note = notes[n]
var link = [perfume,note]
links.push(link)
}
}
//console.log(links);
return links
}
//here you can make a similar loop to
make a list of perfumes
function processDataPerfumeNodes(-
dataset){
perfumes = []
for (var i in dataset){
var perfumename = dataset[i]["Per-
fume Name"]
if(perfumename!=undefined){per-
fumes.push(perfumename)
}
}
console.log(perfumes)
return perfumes
}
//here you can make another for a list
of notes
//List of perfume nodes
function processDataNoteNodes(-
dataset){
notenodes = []
for(var i in dataset){
if(dataset[i]["Notes"]!=undefined){
var notes = dataset[i]["Notes"].re-
place(",","").replace(" ","").split(",")
for (var n in notes){
if (notenodes.indexOf(note)==-1)
{
notenodes.push(notes[n])
}
}
}
//NEW: this return statements needs to be
outside of the loops so that you return the
whole array, not the first only
console.log(notes)
return notenodes
}
//console.log(sourceIndex,linkSource,tar-
getIndex, linkTarget)
//NEW: adding a scale here to space out
the y values
var noteTypeColors = {
"Citrus": "rgb(247,218,51)",
"Green": "rgb(75,183,73)",
"Floral": "rgb(237,151,192)",
"Fruity": "rgb(205,26,110)",
"Balsamic": "rgb(135,99,171)",
"Wooded": "rgb(183,123,105)",
"Gourmand": "rgb(209,162,42)",
"Spices": "rgb(240,81,72)",
}
function drawLines(linksDataset, per-
fumesDataset, notesDataset, typeDictio-
nary){
//console.log(linksDataset,perfumesData-
set,notesDataset)
//NEW I took out a portion which is draw-
ing a test line before
var w = 950;
var h = 900;
var padding = 20;
var svg = d3.select("#linechart")
.append("svg")
.attr("width",w)
.attr("height",h);
var margin = {
top: 15,
right: 25,
bottom: 15,
left: 60
};
for (var d in linksDataset){
//NEW here we want to chante the y from
simply d to where the nodes will be
}
```

```
}
}
}
console.log(formatted)
return formatted
}
//this function, which is called above
with the csv, makes nodes between each
perfume and note
function processDataLinks(dataset){
//console.log(dataset)
var links = []
for(var i in dataset){
//console.log(i)
var perfume = dataset[i]["Perfume
Name"]
//console.log(perfume);
//return perfume
}
if(perfume!=undefined){
var notes = dataset[i]["Notes"].re-
place(",","").replace(" ","").split(",")
for (var n in notes){
if (notenodes.indexOf(note)==-1)
{
notenodes.push(notes[n])
}
}
}
//NEW: this return statements needs to be
outside of the loops so that you return the
whole array, not the first only
console.log(notes)
return notenodes
}
//console.log(sourceIndex,linkSource,tar-
getIndex, linkTarget)
//NEW: adding a scale here to space out
the y values
var noteTypeColors = {
"Citrus": "rgb(247,218,51)",
"Green": "rgb(75,183,73)",
"Floral": "rgb(237,151,192)",
"Fruity": "rgb(205,26,110)",
"Balsamic": "rgb(135,99,171)",
"Wooded": "rgb(183,123,105)",
"Gourmand": "rgb(209,162,42)",
"Spices": "rgb(240,81,72)",
}
function drawLines(linksDataset, per-
fumesDataset, notesDataset, typeDictio-
nary){
//console.log(linksDataset,perfumesData-
set,notesDataset)
//NEW I took out a portion which is draw-
ing a test line before
var w = 950;
var h = 900;
var padding = 20;
var svg = d3.select("#linechart")
.append("svg")
.attr("width",w)
.attr("height",h);
var margin = {
top: 15,
right: 25,
bottom: 15,
left: 60
};
for (var d in linksDataset){
//NEW here we want to chante the y from
simply d to where the nodes will be
}
```

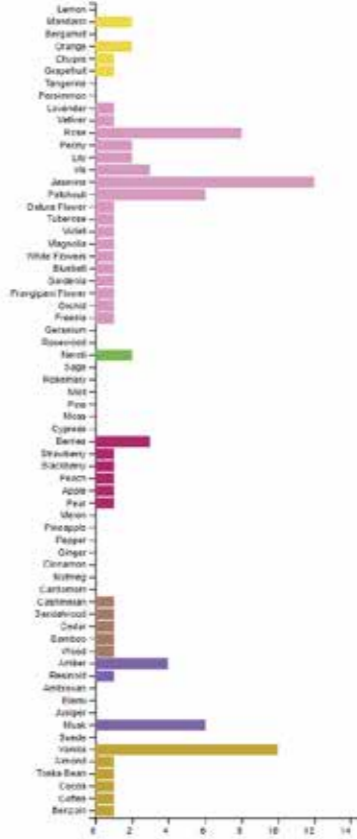
(CONT.)

## Gendered Notes

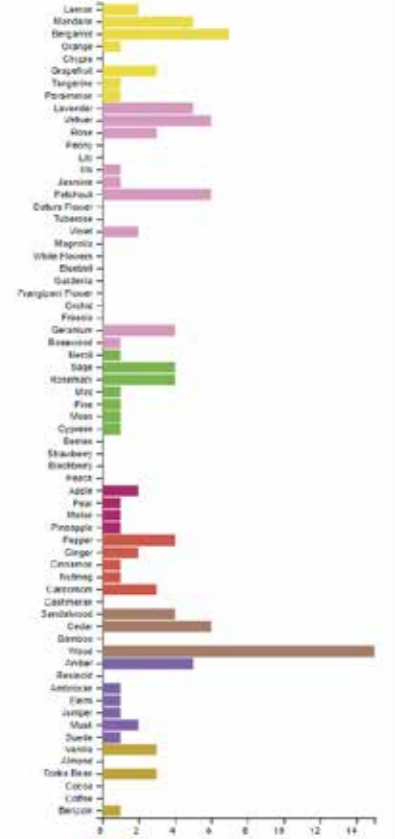
Which notes appear most frequently in male vs female scents? We added all the occurrences of notes in all surveyed perfumes. In women perfumes, floral notes ring high. With men, woody notes are dominant.



### Female Notes



### Male Notes



## GENDERED NOTES BAR GRAPH CODE

```
<script type="text/javascript">
(function (){//draw "female_barchart",
"male_barchart"
var textsize = ["9"];
var font = ["Roboto Light"];
var fill = ["black"];
var noteTypeColors = {
"Citrus": "rgb(247,218,51)",
"Green": "rgb(75,183,73)",
"Floral": "rgb(237,151,192)",
"Fruity": "rgb(205,26,110)",
"Balsamic": "rgb(135,99,171)",
"Wooded": "rgb(183,123,105)",
"Gourmand": "rgb(209,162,42)",
"Spices": "rgb(240,81,72)",
};
// set the dimensions and margins of
the graph
var margin = { top: 0, right: 30, bottom:
40, left: 90 },
width = 380 - margin.left - margin.
right,
height = 820 - margin.top - margin.
bottom;
// append the svg object to the body of
the page
d3.csv("Perfume Notes - Gendered
Notes.csv")
.then(function (data) {
console.log("data:"); console.log(data);
var svg = d3.select("#female_barchart")
.append("svg")
.attr("width", width + margin.left +
margin.right)
.attr("height", height + margin.top +
margin.bottom)
.append("g")
.attr("transform",
"translate(" + margin.left + ", " + mar-
gin.top + ")");
```

```
var x = d3.scaleLinear()
.domain([0, 15])
.range([0, width]);
svg.append("g")
.attr("transform", "translate(0, " +
height + ")")
.call(d3.axisBottom(x))
.selectAll("text")
.style("text-anchor", "end")
.style("font-size", textsize)
.attr("font-family", font)
.attr("fill", fill);
// Y axis
var y = yscale(data);
function yscale(datalnput) {
return d3.scaleBand()
.range([0, height])
.domain(datalnput.map(function (d) {
return d.Notes; })))
.padding(.1);
var yaxisG = svg.append("g")
.style("text-anchor", "end")
.style("font-size", textsize)
.attr("font-family", font)
.attr("fill", fill);
yaxisG.call(d3.axisLeft(y))
.on("click", null);
//Creating Initial Bars
svg.selectAll("myRect")
.data(data)
.enter()
.append("rect")
.attr("x", x(0))
.attr("y", function (d) { return y(d.
Notes); })
.attr("width", function (d) { return x(d.
Women); })
.attr("height", y.bandwidth())
.attr("fill", function (d) {
//console.log(noteTypeColors)
var color = noteTypeColors[d.Type]
//console.log(color)
```

(CONT.)

## GENDERED CLEANING PIE CHART CODE

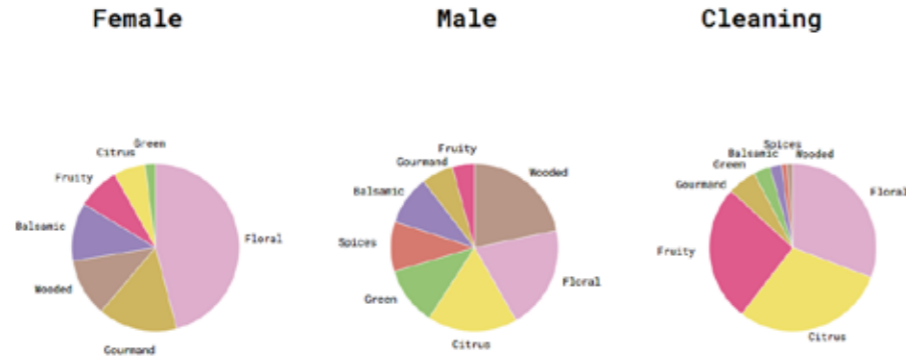
```
(function (){//draw "female_piechart",
"male_piechart", "cleaning_piechart"
var widthPieChart = 400, margin-
PieChart = 60;
var r = 80, margin = 100, size = (r +
margin) * 2;
var colorrange = [
"rgb(247,218,51)",
"rgb(237,151,192)",
"rgb(75,183,73)",
"rgb(205,26,110)",
"rgb(240,81,72)",
"rgb(183,123,105)",
"rgb(135,99,171)",
"rgb(209,162,42)"];
var textsize = ["10"];
var font = ["Roboto Light"];
var fill = ["black"];
// append the svg object to the div
called "my_dataviz"
var svg3 = d3.select("#female_piech-
art")
.append("svg")
.attr("width", size)
.attr("height", size)
.append("g")
.attr("transform", "translate(" + (r +
margin) + ", " + (r + margin) + ")");
// Create dummy data
var femaledata = { Citrus: 6, Floral: 45,
Green: 2, Fruity: 8, Spices: 0, Wooded:
11, Balsamic: 11, Gourmand: 15 };
// set the color scale
var color = d3.scaleOrdinal()
.domain(femaledata)
.range(colorrange);
//console.log(color);
// Compute the position of each group
on the pie:
var pie = d3.pie()
.value(function (d) { return d.value; })
```

```
var data_ready = pie(d3.entries(fe-
maledata))
//console.log(data_ready)
//Now I know that group A goes from
0 degrees to x degrees and so on.
// shape helper to build arcs:
var arcGenerator = d3.arc()
.innerRadius(0)
.outerRadius(r)
var outerArc = d3.arc()
.innerRadius(r * 0.9)
.outerRadius(r * 0.9)
// Build the pie chart: Basically, each part
of the pie is a path that we build using
the arc function.
svg3
.selectAll("mySlices")
.data(data_ready)
.enter()
.append("path")
.attr("d", arcGenerator)
.attr("fill", function (d) { return (color(d.
data.key)) })
.attr("stroke", "white")
.style("stroke-width", ".5px")
.style("opacity", 0.8)
// Now add the annotation. Use the
centroid method to get the best coordi-
nates
svg3.selectAll("mySlices")
.data(data_ready)
.enter()
.append("text")
.text(function (d) { return d.data.value >
0 ? d.data.key : "" })
.attr("transform", function (d) {
var c = arcGenerator.centroid(d);
var x = 2.8, y = 2.2;
if (d.data.key == "Citrus" || d.data.key
== "Green") {
x = 2.3; //1.8
```

(CONT.)

## Gendered Cleaning

Do fragrances condition women to clean more than men? To test this theory, we surveyed the 20 name brand cleaning products. The most popular notes in cleaning products are "citrus" and "floral" scents, popular notes for both men and women. However, "wooded" scents, a defining male scent, was rarely seen.



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## WRITINGS FOR TRANSSCALARITIES

### Class and Gender in Josephine Baker's House

Andres Jacques / Benjamin Weisgall  
Summer 2022

---

In 1928, Adolf Loos designed an architectural costume for the actress, Josephine Baker, in the form of a three-story townhouse. The uncommissioned and rejected house, analyzed by many including Beatriz Colomina as a device for the narcissistic gaze and by Annie Cheng as a dress for a celebrity, is a break from Loos's design principles as well as a play of Loos's conflicted emotions. Loos was reportedly besotted with Josephine Baker(3), yet for him, the "Papuan" was at the bottom of the evolutionary chain and the woman was always the Other. The way Loos constructs visibility, interiors, and facades within Baker's house versus his other domestic interiors reveals how Loos solidified his perceptions of gender and racial status.

When Loos fashioned a house for Josephine Baker, he proposed how she should interact with the world. Loos, who argued for simple white exteriors and spoke often against ornamental dresses, designed for Baker a flashy contrast of black and white marble. Like a masquerade costume, it alluded to exotic facades in Tuscany, disguised the weight of the building mass, and referenced popular striped clothing. Halfway through the interior, the house is still a viewing platform for the public. A wide, straight stair leads an audience to Baker in her swimming pool; Rather than confronting and accepting her race, Loos disguises it using the supernatural lighting effects of the pool which reveal only a silhouette. Baker is conscious of the audience, but holds little control over their gaze.

The easily penetrable spaces of Josephine Baker's house are markedly different from the "costumes" of his other domestic spaces. The complex raumplans of the houses of Rufer, Moller, and Muller layers the inhabitant in facades of textured planes, hiding them from view. While these women are confined to domesticity, they establish control through their ability to command the view of the maze-like spaces and have richly layered interior lives. Whereas past the public realm, Baker's private life is contained within boxes of the back half of the house arranged

almost like an afterthought by Loos. There is little consideration for her interior life. He designed for her two master bedrooms lacking hierarchy, thus dissolving her power as a single female. His other houses clothed his female in layers of armor, while the Baker was offered as much protection as her banana skirt.

Loos designed a theater away from a theater for Josephine Baker, a house which symbolized his own complicated perceptions of race and gender as opposed to a domestic environment for the celebrity. He failed to understand and provide for the actress's inner life. Beyond Baker's exoticized banana dress performances, she worked as a spy during World War II, was a prominent civil rights activist, and adopted 12 children from different races to show how all races would be able to live together. Her chosen costume was a traditional French chateau where she was free to raise her "rainbow tribe".

#### References:

Colomina, Beatriz; "The Split Wall: Domestic Voyeurism", 1992. Sexuality & space. New York, N.Y.: Princeton Architectural Press.

Loos, Adolf, and Adolf Opel. 1998. Ornament and crime: selected essays. Weisman, Inez. n.d. "Tuning into the Void: The Aurality of Adolf Loos's Architecture." Harvard Design Magazine Issue 38.

Denéchère, Yves. n.d. "Josephine Baker's 'Rainbow Tribe' and the Pursuit of Universal Brotherhood." The Conversation. <https://theconversation.com/josephine-bakers-rainbow-tribe-and-the-pursuit-of-universal-brotherhood-172714>.



**(Top)**  
Adolf Loos on his 60th birthday at the Villa Mueller. Loos is standing 2nd from the left.  
Source: <https://www.gettyimages.ca/detail/news-photo/60th-birthday-of-adolf-loos-standing-2nd-from-left-karl-news-photo/56466156>

**(Bottom Left)**  
J. Baker in her banana suit.  
Source: <https://time.com/4342285/josephine-baker-birthday-anniversary-photos/>

**(Bottom Right)**  
J. Baker with her rainbow tribe in front of her French chateau.  
Source: <https://france-amerique.com/the-chateau-des-milandes-josephine-baker-third-love/>

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## WRITINGS FOR TRANSSCALARITIES

### Facade As Infrastructure: Parc Biblioteca Espana

Andres Jacques / Benjamin Weisgall  
Summer 2022

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The architectural invention of the Parc Biblioteca Espana, a library-park intended to revitalize the urban community of Medellin, Columbia both transforms and is transformed across scales, audiences, and time. As one of five such buildings commissioned by major Sergio Fajardo as part of the government's "social urbanism" masterplan, the image of this physical invention has been broadcasted as a symbol of the master plan's effectiveness: since 1991, the murder rate for Medellin has fallen by a factor of 13. The library stands as an icon spurning less successful copies of its image. However, the separate construction details of the building and their inseparability from the overarching urban plan analyzed throughout their transformation across different stages of the building's existence works to dispel the mythological effectiveness of the facade as a solitary object responsible for the transformation of a city.

Analyzing the Parc Biblioteca Espana's elements in three stages: pre-design, constructed design, and publication provides an understanding of which details within its invention are responsible for its iconic power. This invention's success began before construction when Fajardo integrated the society of Medellin into his urban plan by working with citizens to understand what interventions would be most effective. By involving citizens, an infrastructure of cable cars and accessible plazas helped bridge a socio-spatial divided city. The constructed design stands on the hillside of Santo Domingo, the site of one of the highest murder rates for drug cartels. The three programmatic volumes rest on top of one of those accessible plazas while the facade of the library itself is a topological interpretation of the mountainous hillside and existing ad-hoc buildings. Its facade ignores surrounding ad-hoc architecture and shields its interior from surrounding views through small windows and atrium lights. The beauty of the facade, the views it offers, and new transportation system drew tourists and residents to that previously undesirable area of the city, revitalizing the city. As its success is published, the facade is emphasized. Its visual difference makes

it appear as a symbol of the power of government intervention. The less visible, less photographable, but more physical plaza, does not provoke the same attention. Its attempted replications ignore the details of how Fajardo worked with the citizens to establish infrastructure. Tied to the effectiveness of the facade invention is the new transportation system allows easier access. While its initial design is justified and successful in its intentions, the image-centered methods of creating an icon divorce the library from its origins and audience.

This misinterpretation is not an argument against the facade by Mazzanti. When the facade collapsed, it was mourned. The government has, since 2005, been reconstructing it while upgrading the library's programming. Instead, it is a lesson for architects to design facades with an awareness of the malleability of the image and the less malleable but staying power of the infrastructure supporting it. Symbols and icons are never an architect's creation, but created by the people who live with it.

#### References:

Schwaller, Noemie. 2009. Review of Parque Biblioteca España. Architonic. Architonic. October 8, 2009. <https://www.architonic.com/en/story/noemie-schwaller-parque-biblioteca-espana/7000385>.

Capille, Caue. 2018. "Architecture for Politics: Designing Collectivity in Medellin's Library Parks". <https://revistas.unal.edu.co/index.php/bitacora/article/download/69893/html?inline=1>

Anon. 2009. Espana Library. ArchetypeReview. Archetype Review. [http://architypereview.com/project/espana-libraryissue\\_id1090/](http://architypereview.com/project/espana-libraryissue_id1090/)

Peláez, Jacobo Betancur. "Petro Pidió Entregar Hidroituango 'Sin Afanes', Asegura Daniel Quintero." [www.elcolombiano.com](http://www.elcolombiano.com). ElColombiano.com, June 20, 2022. <https://www.elcolombiano.com/antioquia/daniel-quintero-dice-que-petro-apoya-culminacion-de-hidroituango-PK17846238>.



**(Top)**  
Photo taken from 2022 of the restored library among the city and cable car systems.  
**Source:** <https://theculturetrip.com/south-america/colombia/articles/10-stunning-buildings-in-colombia-an-architectural-trendsetter/>

**(Bottom)**  
Photo from 2017 taken of the Parc Biblioteca Espana with the facade currently in repair.  
**Source:** <http://www.elmundo.com/noticia/Asi-fue-la-peliculade-la-Biblioteca-Espana/347193>



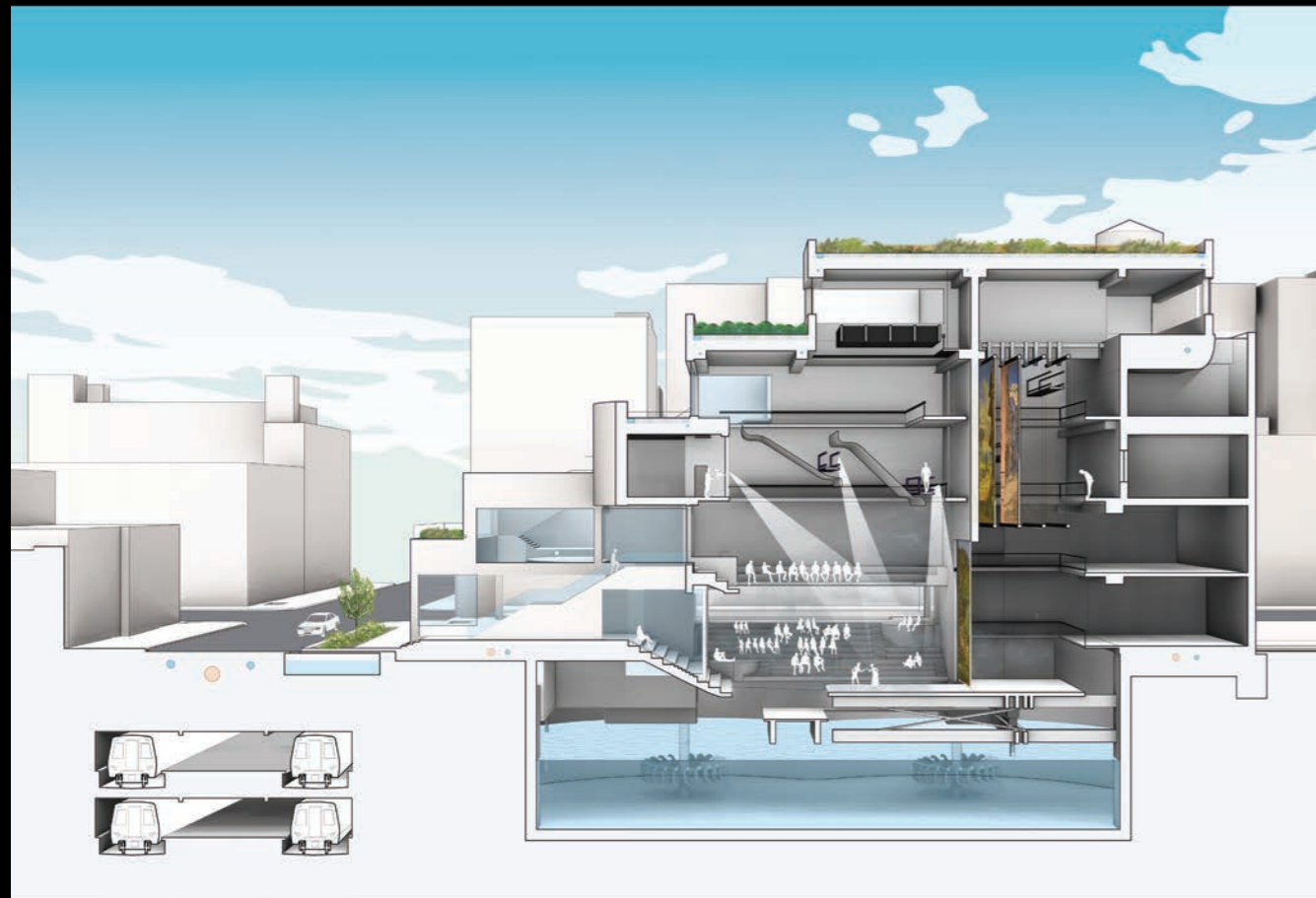
# AGORA CISTERN

## Septic Studio: NYC's Water Infrastructure

Dan Wood  
Summer 2022

My project centers on creating a modern day "agora" which also acts as a water cistern. The modern agora combines the program of the subway, the market, and the theater to create a democratic space. The stage of the theater rises and falls based on the level of water within the cistern transforming the viewing area from seats around a concentrated viewpoint towards one performer and voice into a stoa-like space with unobstructed views in a free flowing space encouraging a range of exchanges.

Global warming has caused increased rainfall in New York leading to combined sewer overflows. The cistern captures storm water from surrounding areas before entering the sewage system and passes the filtered water up a water tower through a series of biofiltration roofs. Infrastructure is made visible and becomes architecture as the flow of water and form of the cistern below is translated into the accessible community programs above.



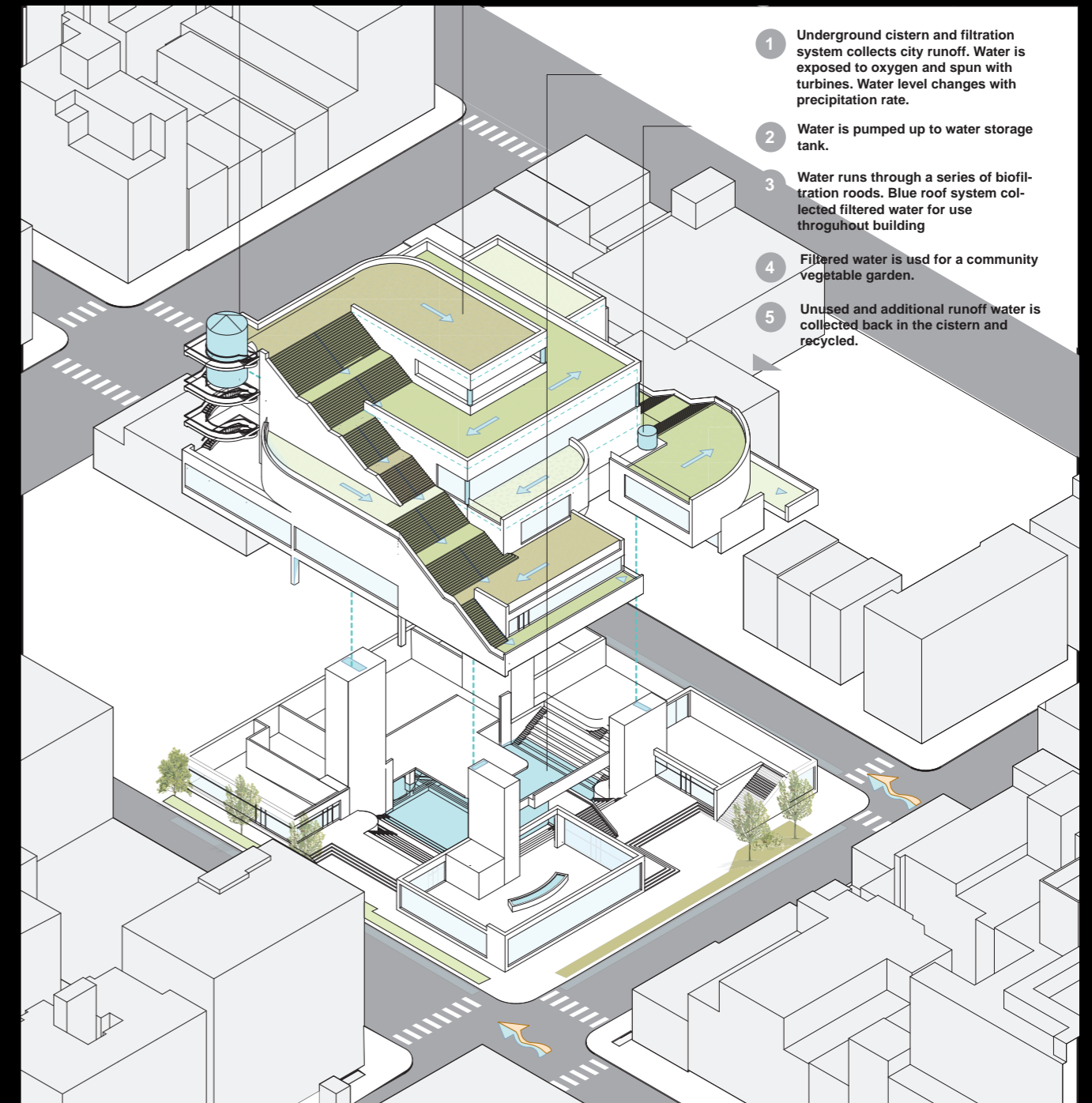
SECTION CUT: THEATER UNFILLED



Rendering from roof looking down steps.



Rendering at water tower looking towards the city.



EXPLODED AXON

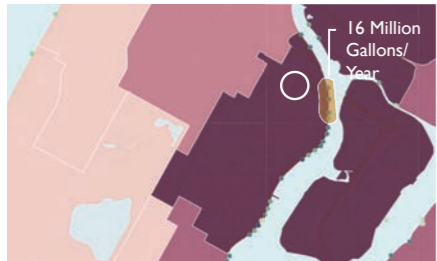
## 1 SITE ANALYSIS

The site is located in an abandoned lot adjacent in East Harlem at the intersection of 125th street + Lexington Avenue. It is within an area with high Combined Sewage Outfalls and a low topography. Any high precipitation event likely contributes to CSOs.

Flood Zone Map:



Combined Sewer Overflow (CSO) Map



Overflow by City Council District



Stormwater Catchment Map + Subway Map



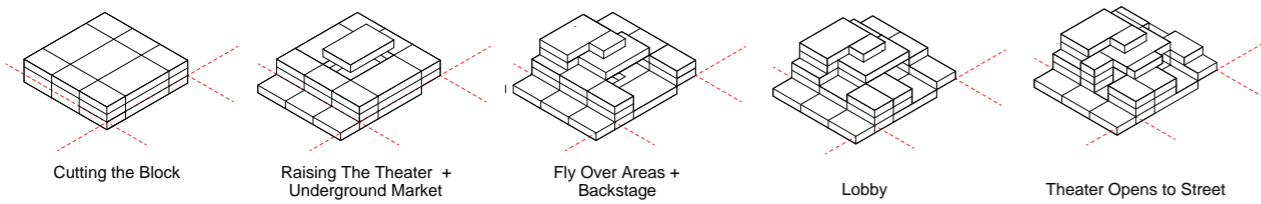
Topography



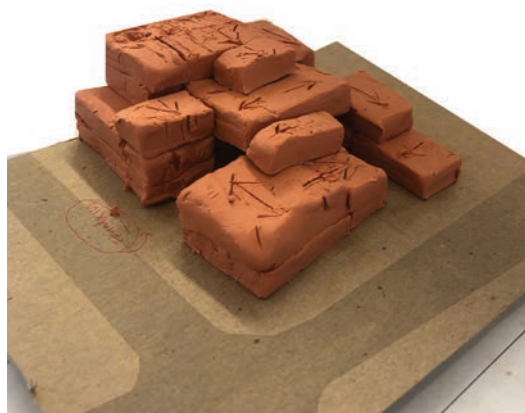
Stormwater flow

## 2 EXCAVATION PROCESS

To arrive at the design, I referenced the way the stone theater is carved out, working with the process of excavation to arrive at the initial massing for the theater. Process centered around integrating the cistern with the theater and biofiltration roofs.



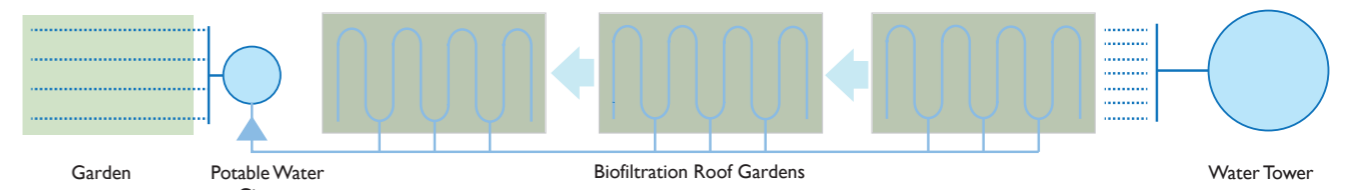
EXCAVATION STUDY MODEL



Roof Garden Study Model



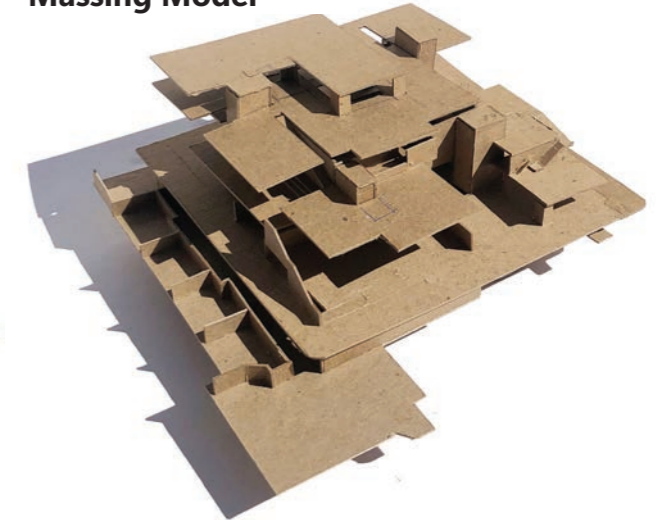
## 3 SYSTEM ANALYSIS



## 4 CISTERN DESIGN + INTEGRATION

The underground cistern at a 8 million gallon capacity, uses the largest S.A. possible. Cistern is exposed to outside air and turbines are placed to prevent stagnation and turbidity.

Massing Model



Cistern



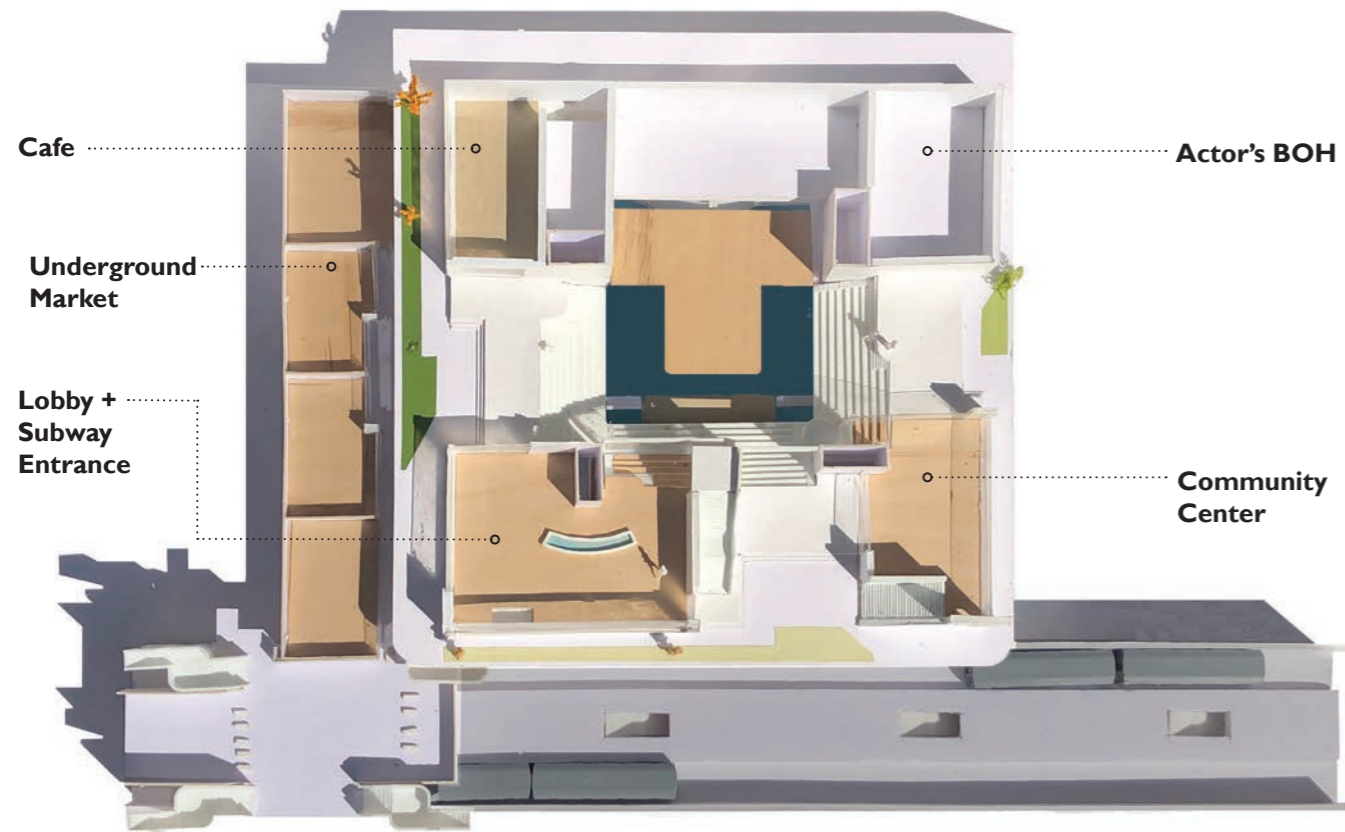
Cores



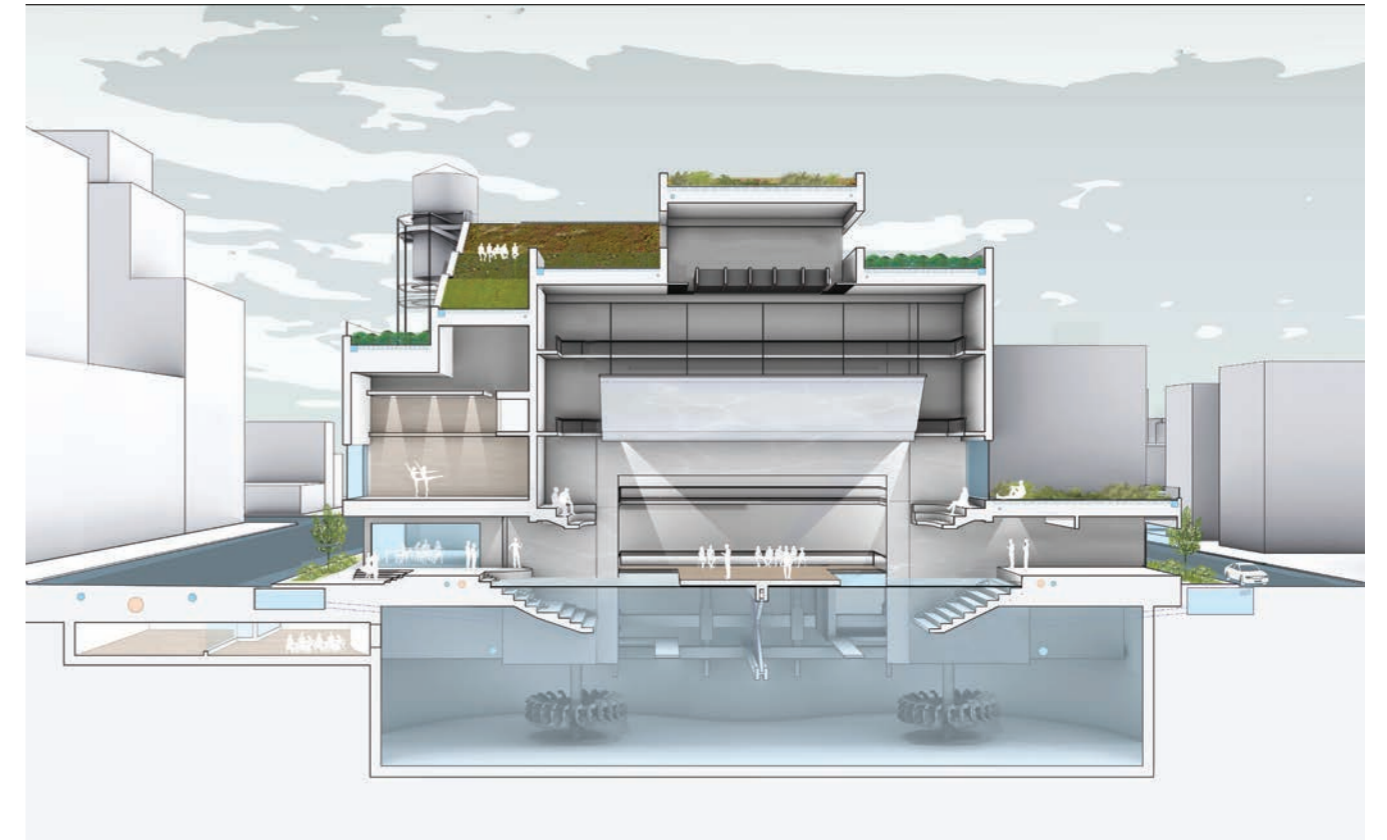
## 5 FINAL MODEL



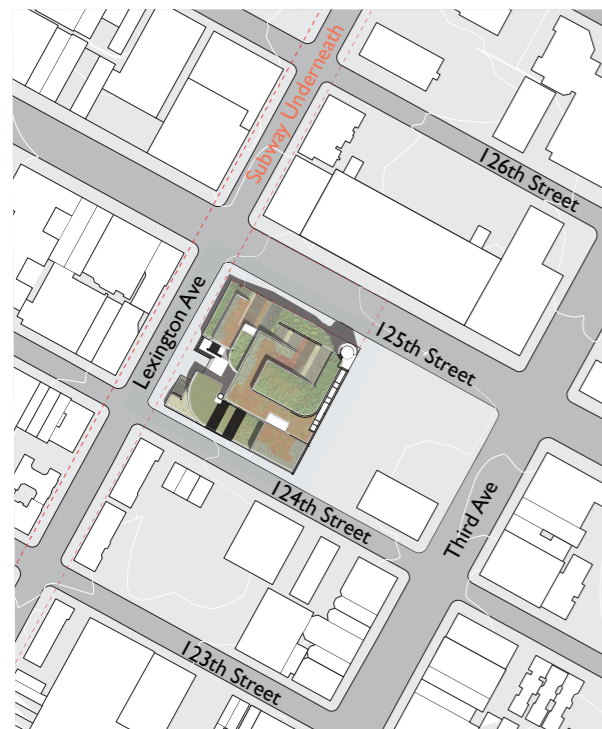
**FINAL MODEL: GROUND FLOOR**



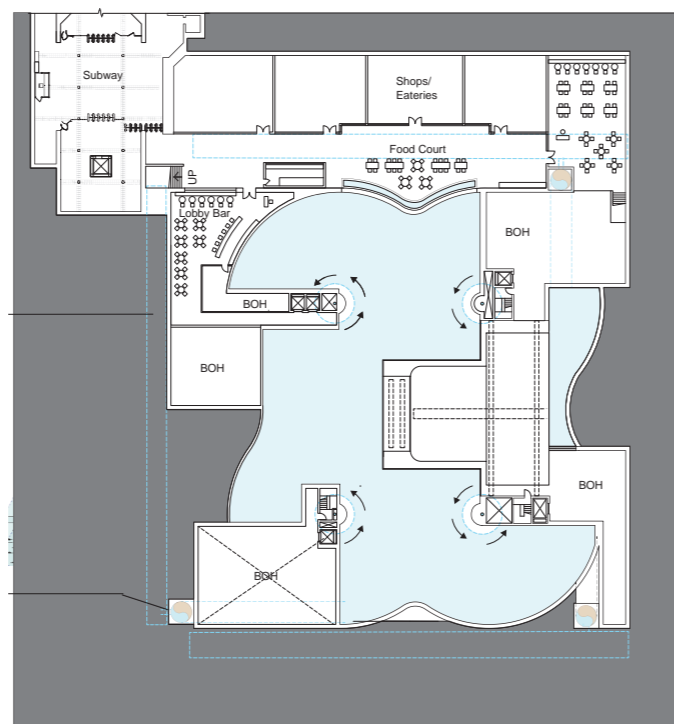
**SECTION PERSPECTIVE AT THEATER: FILLED CISTERN**



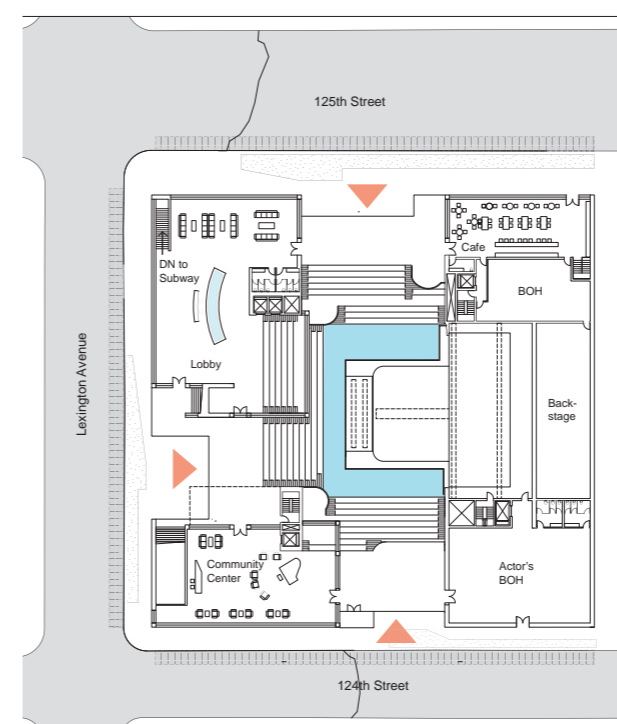
**SITE PLAN**



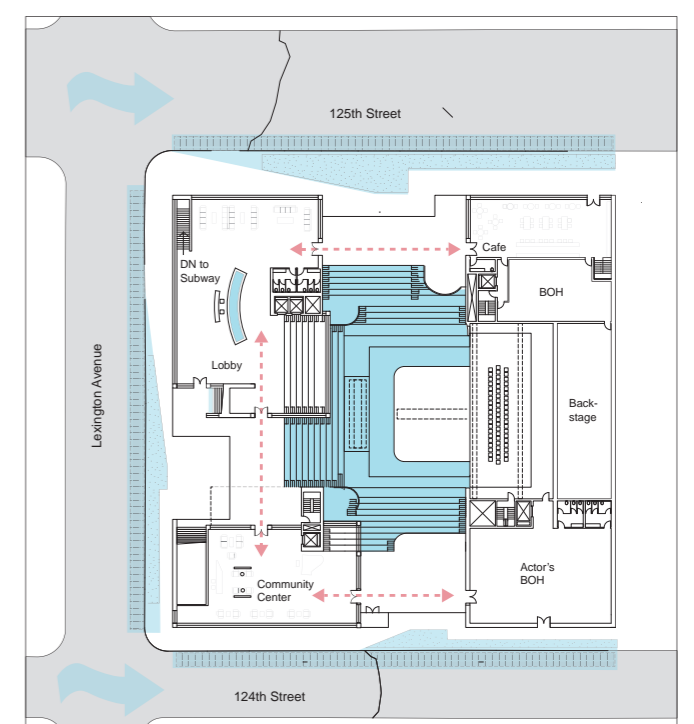
**CISTERN LEVEL PLAN**



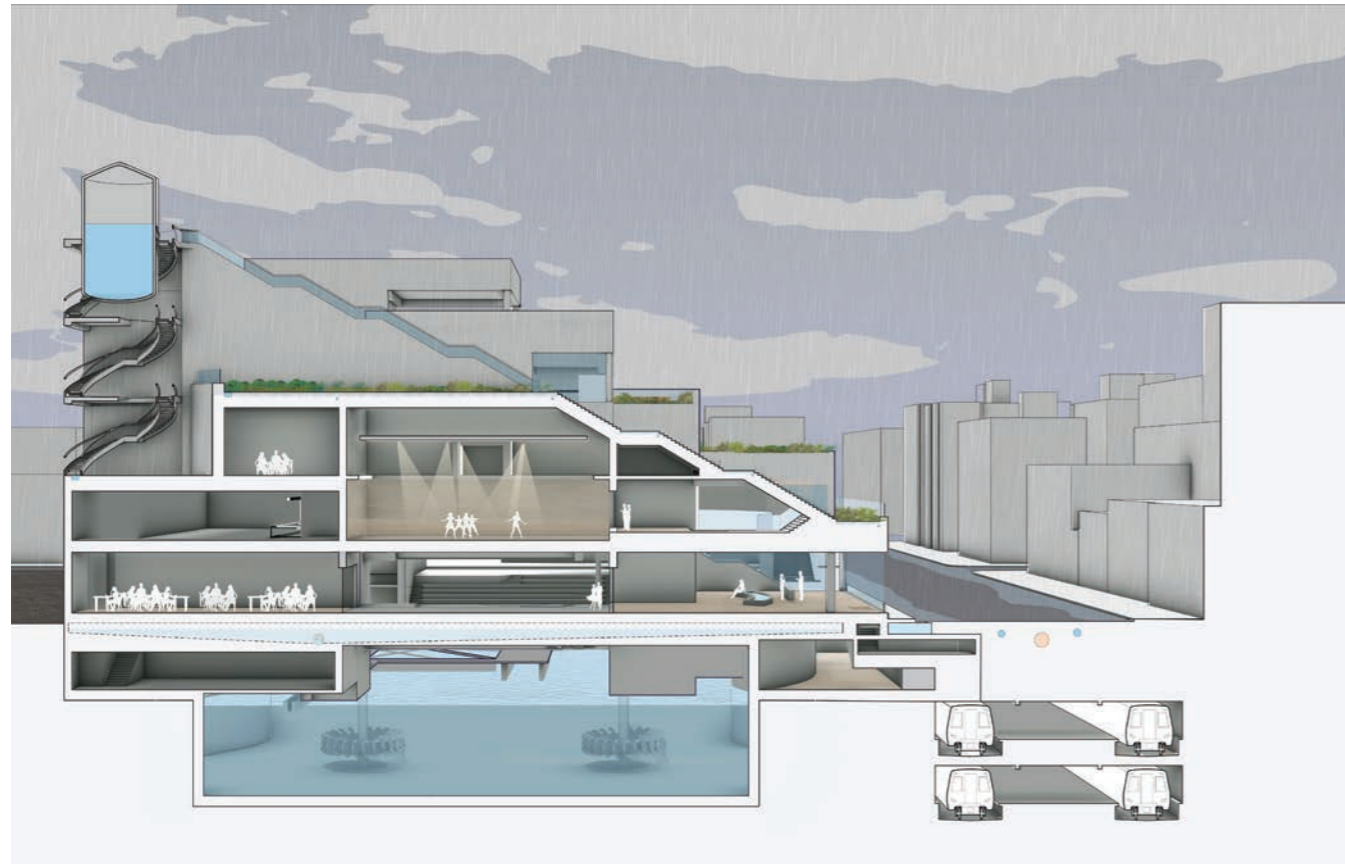
**GROUND FLOOR PLAN : UNFILLED**



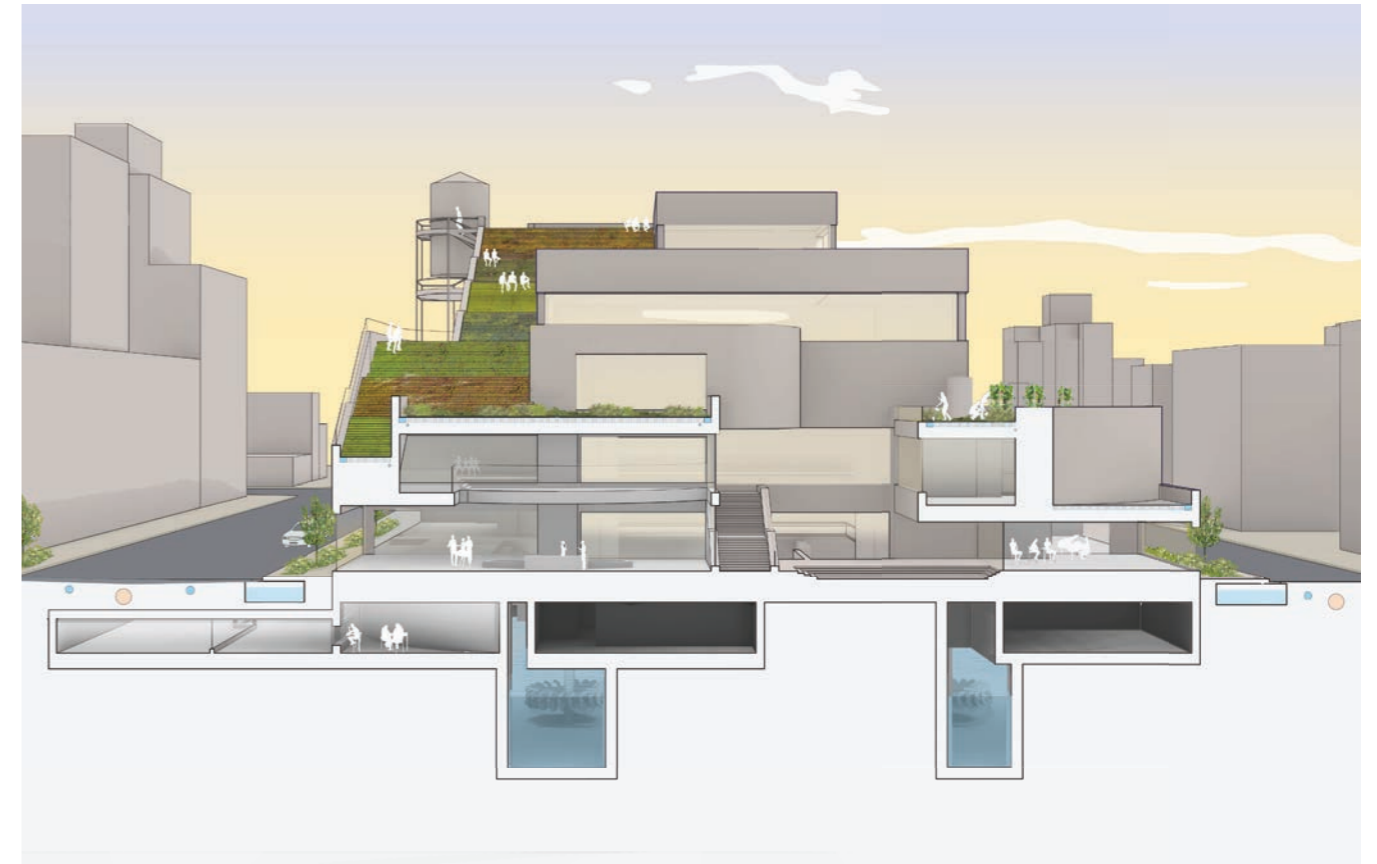
**GROUND FLOOR PLAN : FILLED**



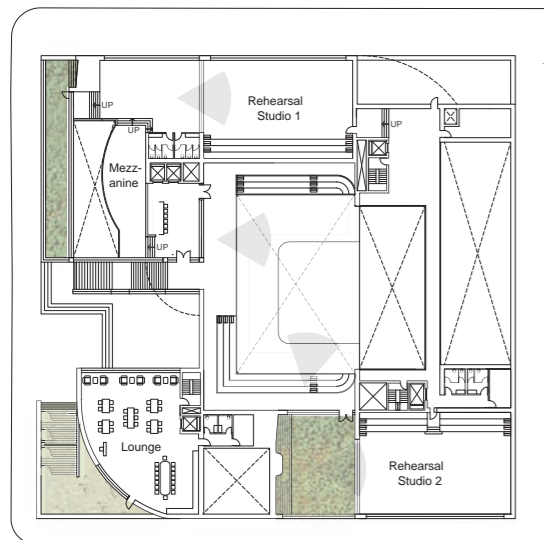
**SECTION PERSPECTIVE AT REHEARSAL STUDIO: FILLING CISTERN**



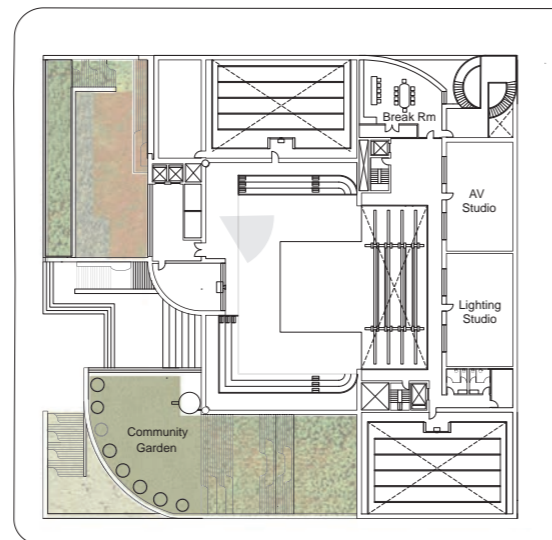
**SECTION PERSPECTIVE AT LOBBY: COMMUNITY**



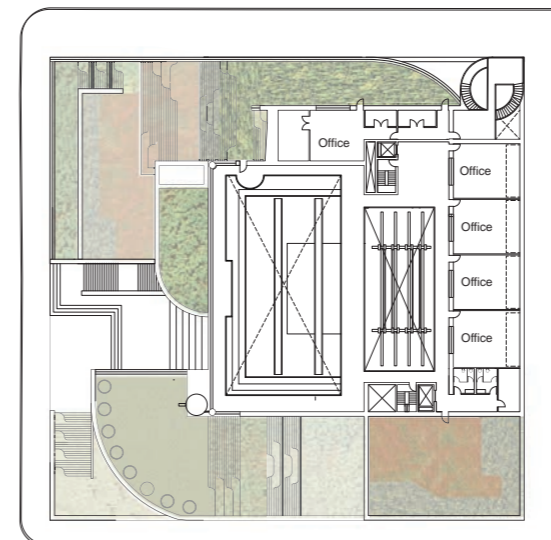
**BALCONY LEVEL PLAN**



**UPPER LEVEL 1 PLAN**



**UPPER LEVEL 2 PLAN**



**TOWER PLAN**



Spaces pinwheel from the cores, reflecting the turbine and allowing unobstructed viewpoints. Rehearsal spaces are viewable from the street, lobby, and diagonally. Theater support, the theater tower, and technical spaces are located near the mechanics of the water tower above, accessible to the users.

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