### **RUI CHEN** PORTFOLIO

M.S.Advanced Architectural Design Columbia University

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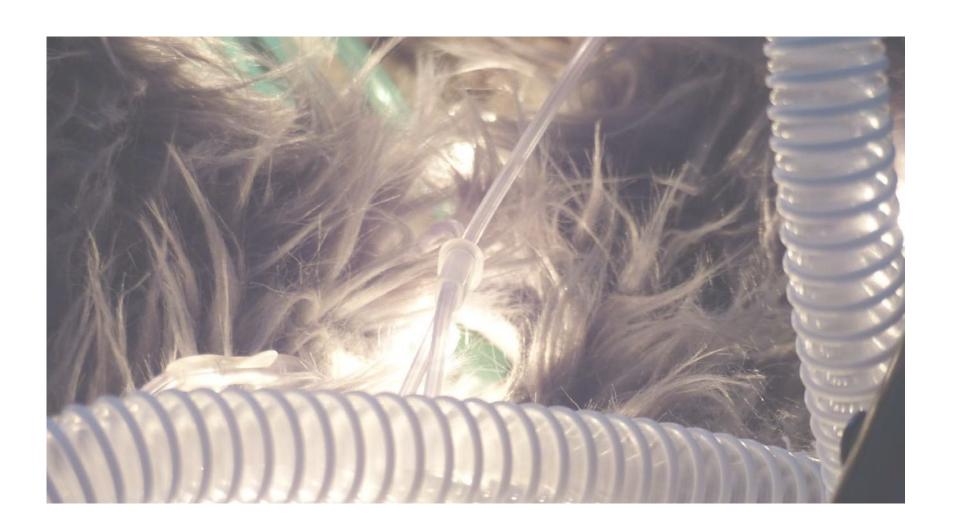
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### **01** Productive Fuzziness

Artist Incubator Village Design

Advanced Studio VI Semester: Spring 2024 Critics: Irina Verona, Jennifer Carpenter, Jerron Herman Partner: Xinze Xu

Our design process is initiated by our analysis of disabled artists' works. We observed that the set boundary between senses could be unsettled, for instance, sound which usually perceived through hearing could also be felt as a vibration from skin.

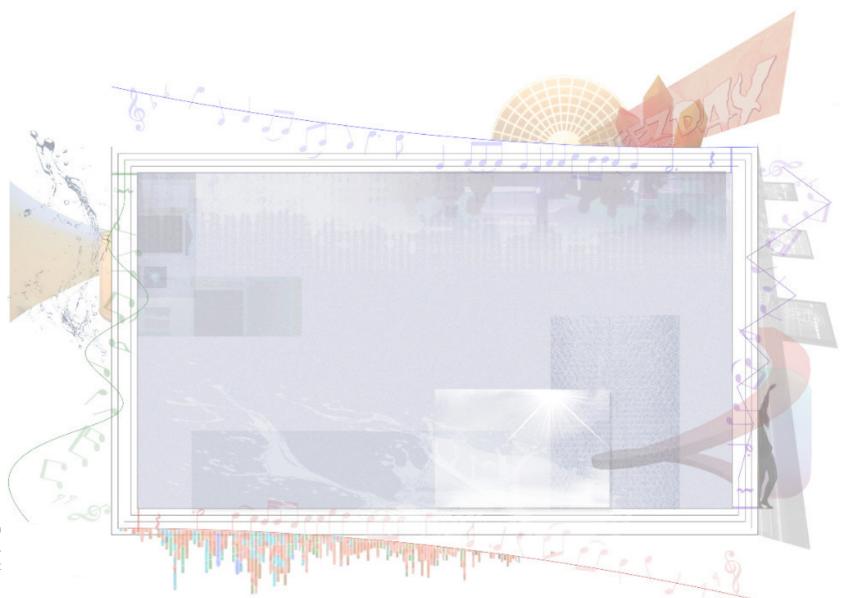
Thus, we took inspiration from the fuzzy boundary between diverse senses and developed it into our definition of disabled space. We define disabled space as a space with fuzziness embedded in its form, the interfaces it constructed, and the relationships it mediated. This fuzziness becomes a tool for contaminating the established boundaries among the trilogy of humans, space, and spirit, leading to retrospection on the definitions, including "disability," "human body," and "nature." The in-between spaces resulting from the fuzziness then become the sites of intriguing juxtaposition and rich opportunities.

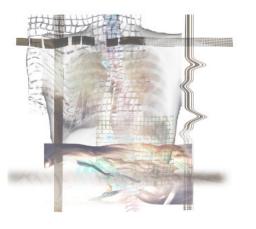


The walls of my room are curved, Yo-Yo Lin

'The walls of my room are curved' is a movement-generated sonic performance of the body living with a connective tissue disorder.

We thought disabled spaces would contribute to fuzzifying the boundary between neurodiverse individuals on the site, generating spaces and modifiable frames for the emergence of different levels of intimacy. In this sense, the fuzzy design transcends the concept of physical accessibility. It brings it to the spiritual level of how different people enter each other's worlds and inhabit collectively to establish a web of care.











### Disabled Space

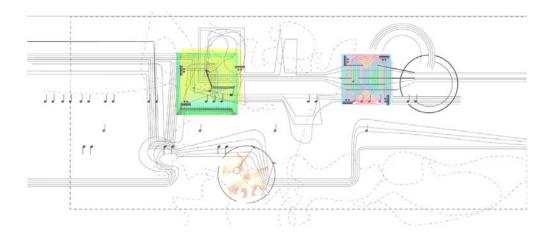
Space with fuzziness embedded in its form, the interfaces it constructed, and the relationships it mediated. This fuzziness becomes a tool of contaminating the established boundaries among the trilogy of humans, space, and spirit, leading to retrospection on the definitions, including "disability," "human body," and "nature." The in-between spaces resulting from the fuzziness then become the sites of intriguing juxtaposition and rich opportunities.





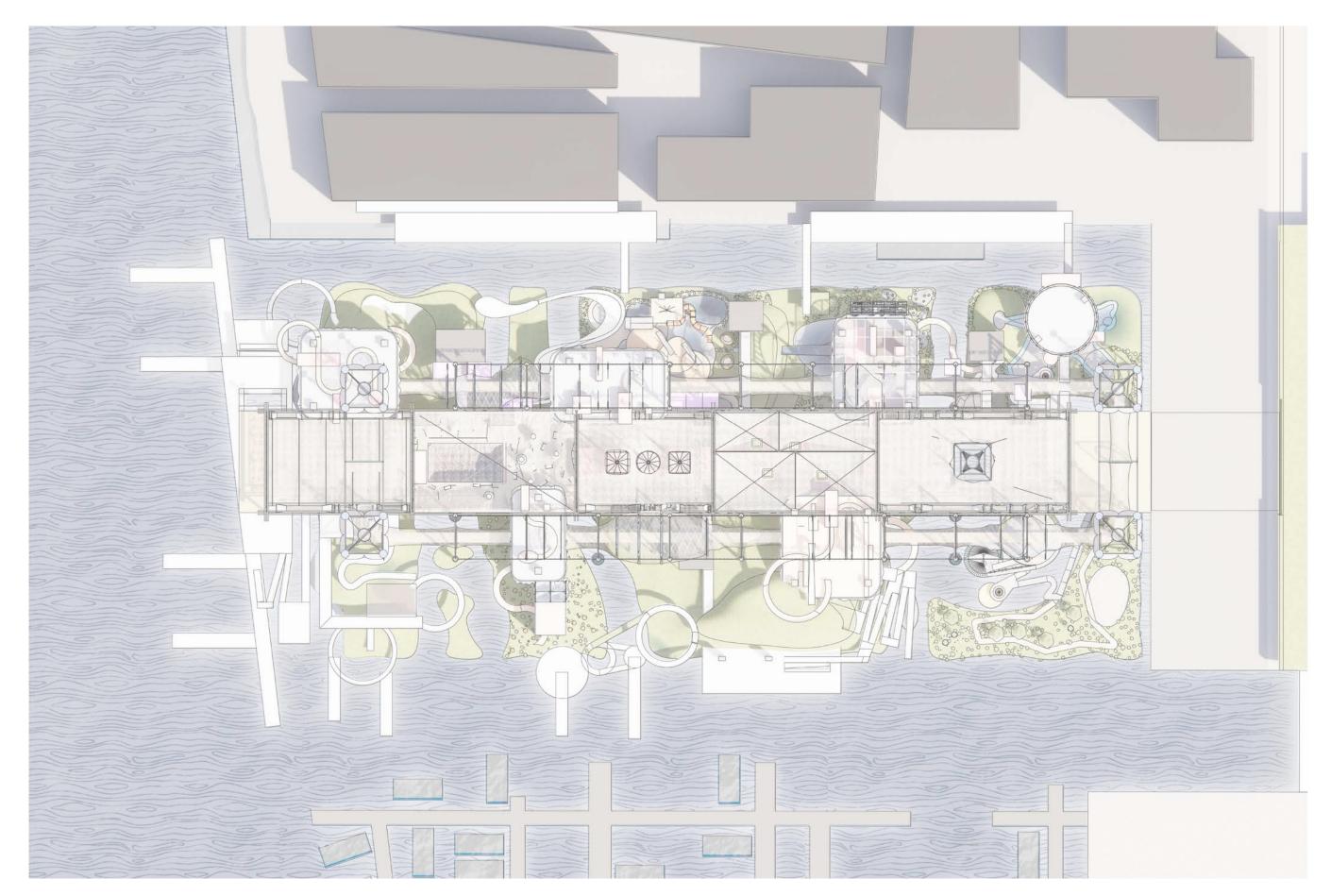
Beyond Access

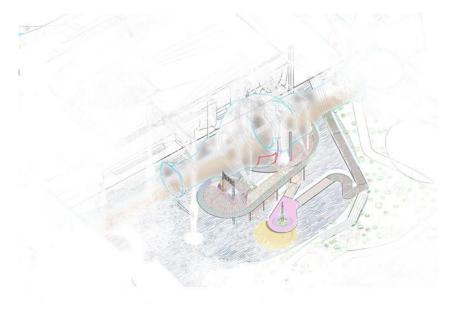
Норе



### **Notation Systems**

Diverse tensions formed by the entanglement of the notations shed light on how we mediate bodies within our site.





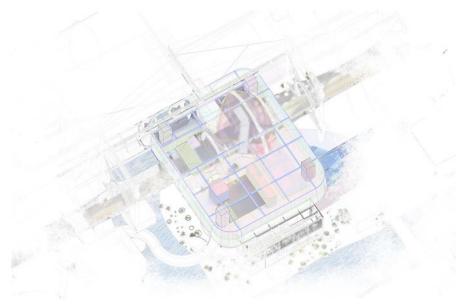
### Contamination of Land/Circulation

A series of platforms and ramps with a floral wall could be observed within the boundary between the circulation and land system. These would lead to a floating deck on the water.



### Contamination of Building/Land

In the space between the buildings and the land, there would be an outdoor kitchen/public dining area. Electronics and windpipes would be extended from the building and connected to the kitchen facility.



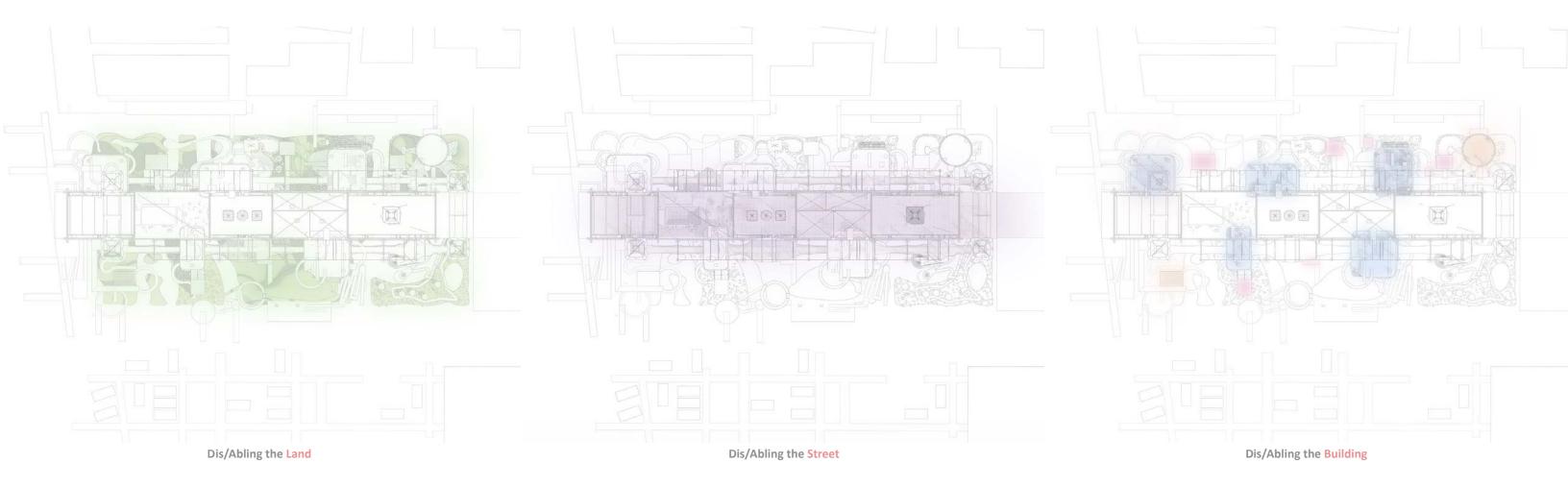
### Contamination of Circulation/Building

When the circulation system meets the buildings, its form would be inflated to progressively evolve into a platform that connects itself to the indoor public space compound.

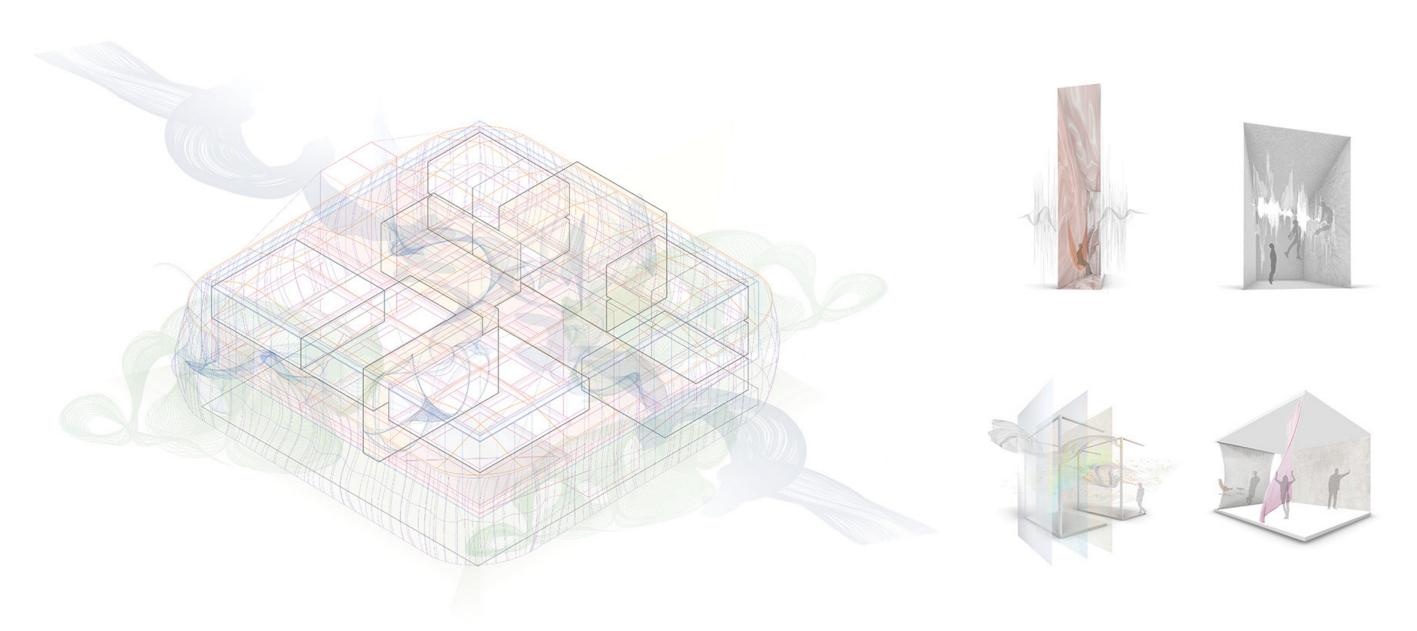


### Contamination of Systems

conceived a series of moments of conductive contamination among those systems to achieve the complexity and richness that are compatible with the neurodiverse community.

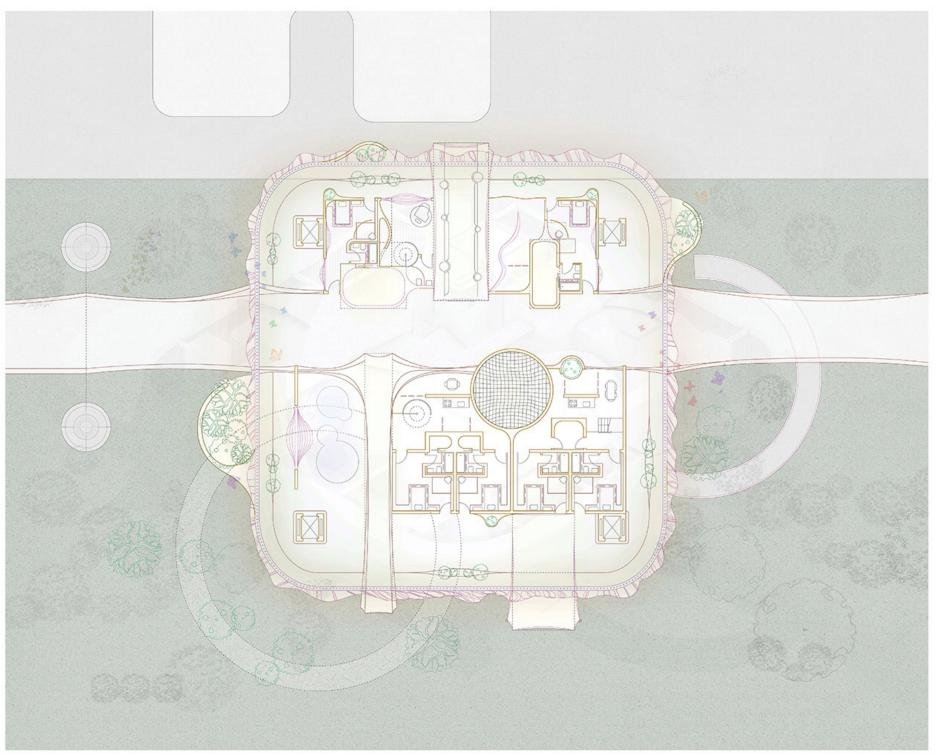


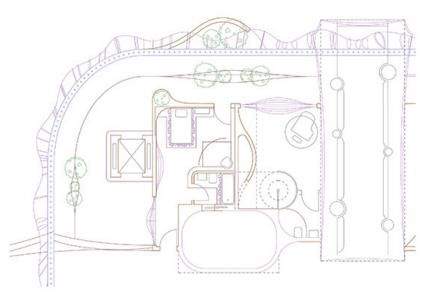
Inspecting from a more detailed level, there are fuzziness characteristics and in-between moments in each system.

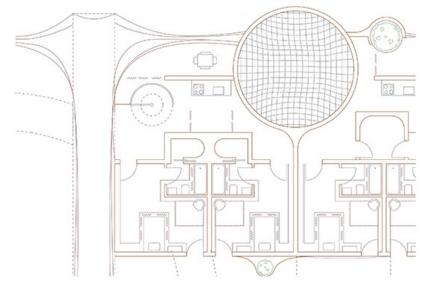


Fuzzy Buildings

Such fuzziness is also demonstrated in buildings, no matter residential, practicing or performing. In the residential nexus, a serious of sensory spaces are integrated into the structure and the residents' lives. You can always find a place to rest, to communicate, to gossip, to bounce on and off a fabric surface, to find nearly absolute silence, and so on.



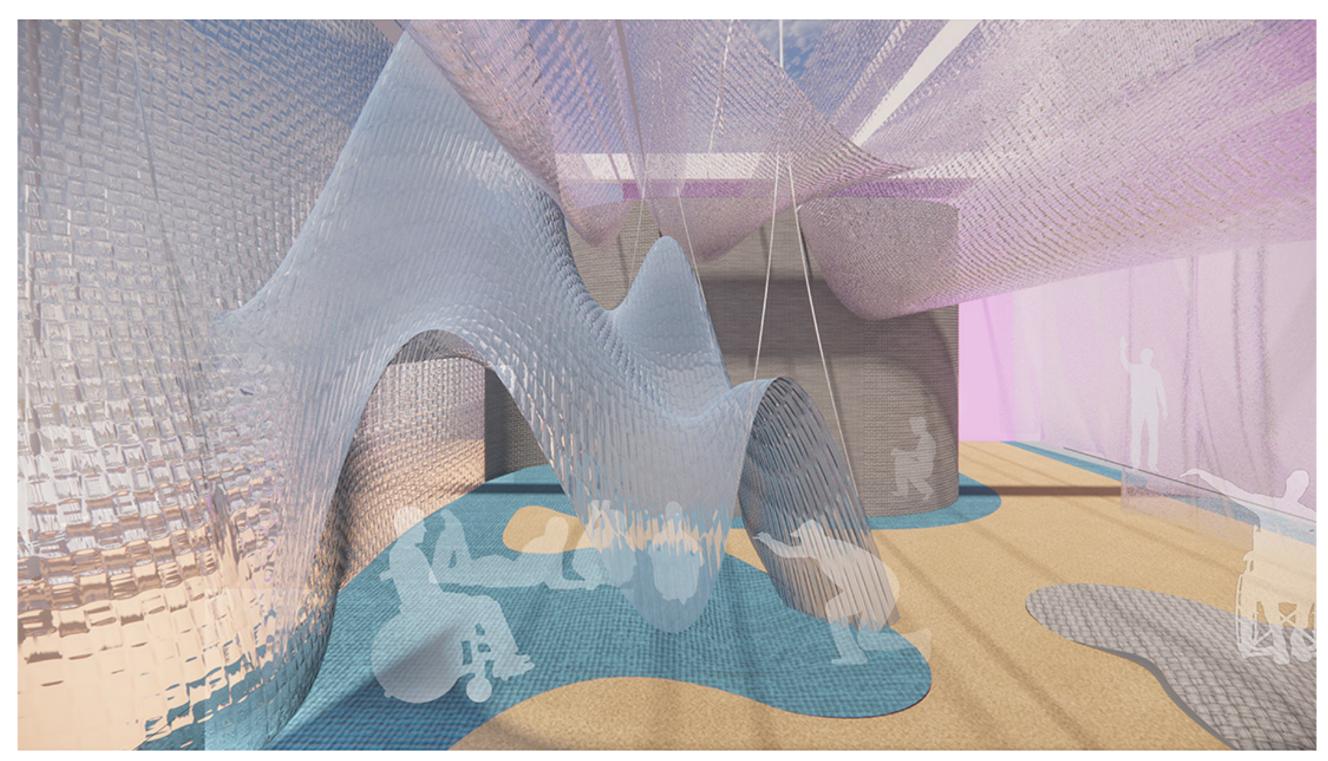




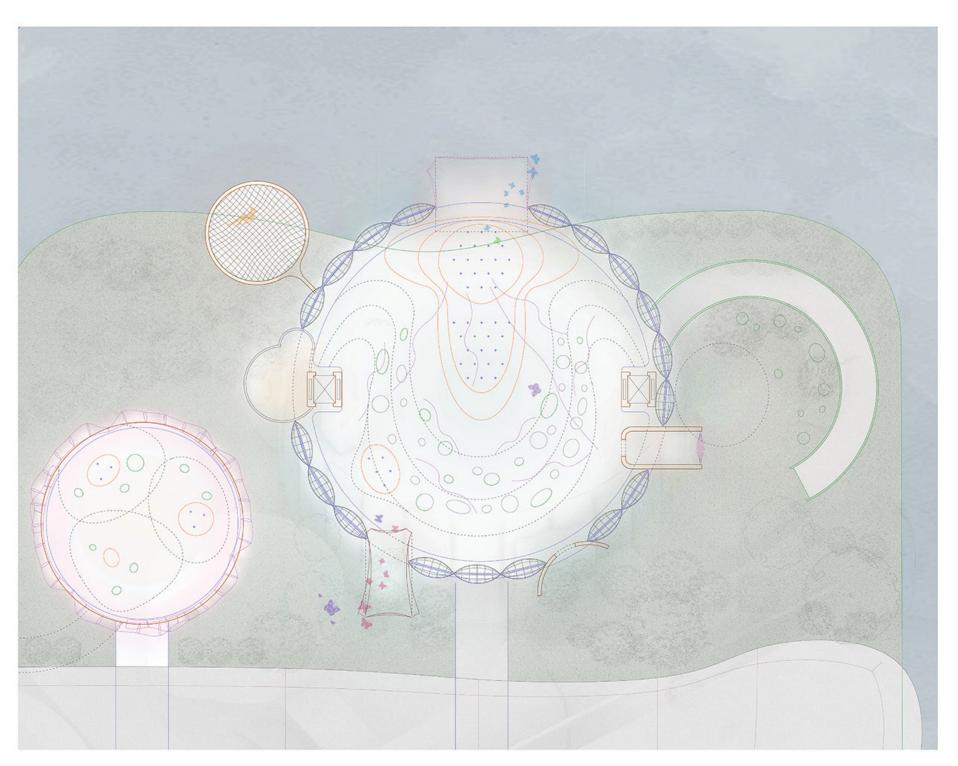
We envisage a series of scattered residential units would be contained by a permeable envelope and linked by a series of platforms and ramps. Then, numerous sensory spaces are conceived in the larger envelope. The plan also depicts how we design a sensory place characterized by its softness in the typical structure. Fabric, meshes, trampolines, and vegetation are employed to reimagine the physical definition.



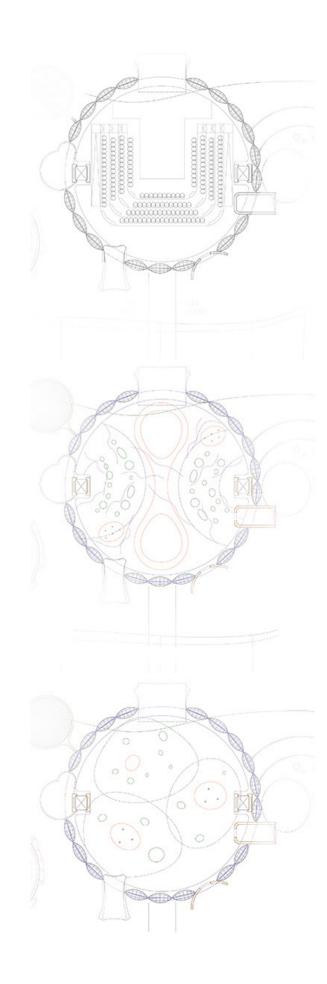
The bed is surrounded by a curtain attached to bells. Its adjacent surfaces are decorated with a different texture. You would also know your relative relationship to that bed by sound or texture. Safety and comfort are generated. The walls are curved and soft so you can lie down. And this structures are covered with greenery.

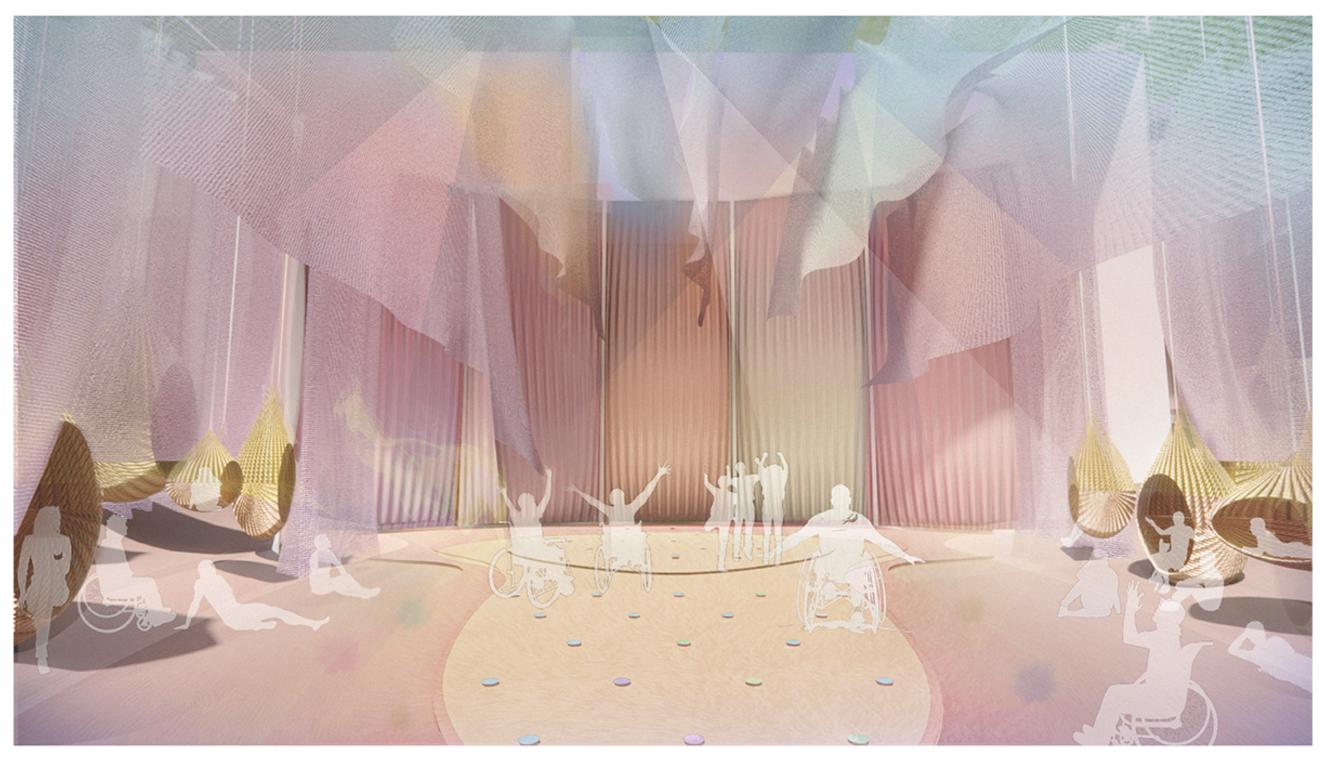


For the practice, different lightness, intimacy level, sound condition, and physical space could be imagined through the placement and rearrangement of the curtains. The freedom is given to the dwellers to recalibrate their practicing environment.

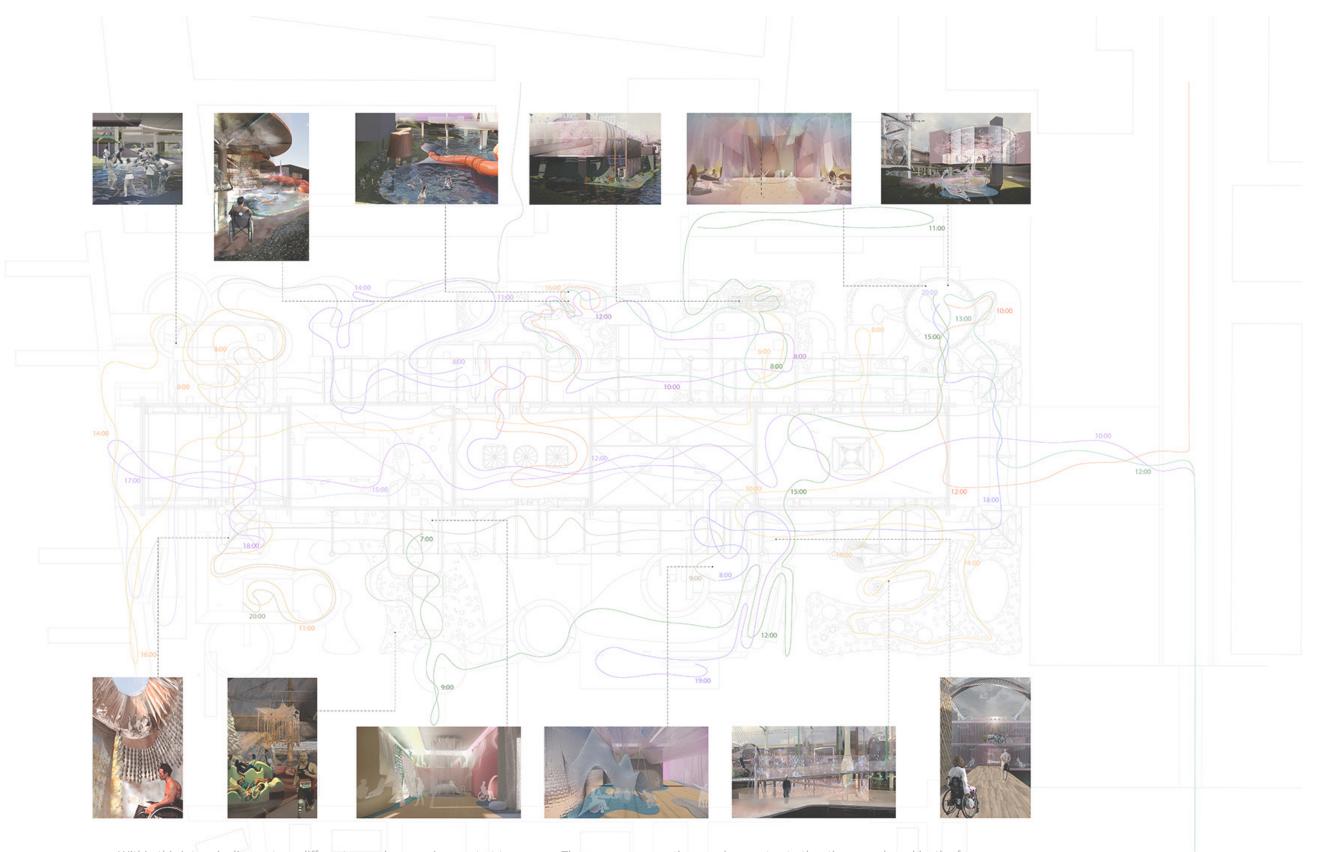


In the performance spaces, the concept of decentralizing is crystallized. The performing space could be rearranged so that the stage might no longer be the center but scattered among the audience. This allows for different ways of appreciation and conversation within the performance. Also, holds the potential to provide multi-sensory ways of perceiving the piece.





The anchor points on the stage serve as tactile singles for performers to roughly depict their location and the space around them. and the atypical seating is designed to release the tension of the participants' bodies. Their different forms also allow them to accommodate different bodies



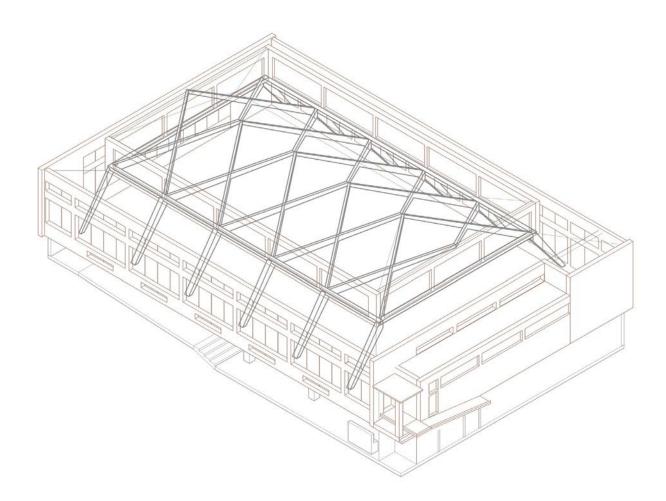
Within this intermingling system, different everyday experiences start to emerge. They converge sometimes and separate at other times, anchored by the fuzzy moments collaboratively constructed by the dwellers and us.

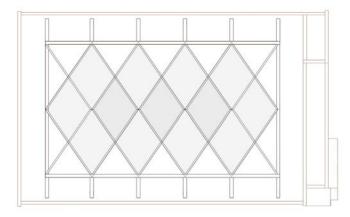




Multi-Sensory

Fragrance, warmness, softness, embracement, and tranquility, these scattering notes resonate with neurodiverse bodies, interweaving into a concerto of disabled spaces.



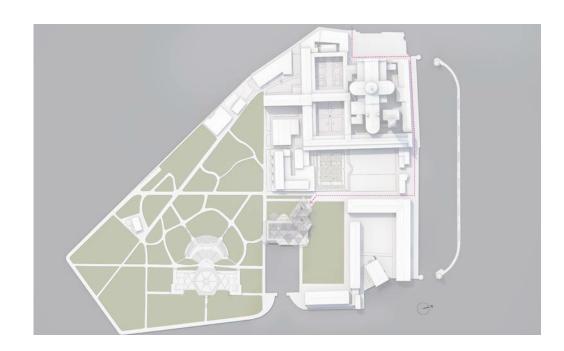


# 02 Museum of Water

Adaptive Redesign of the Building on the Venetian Island

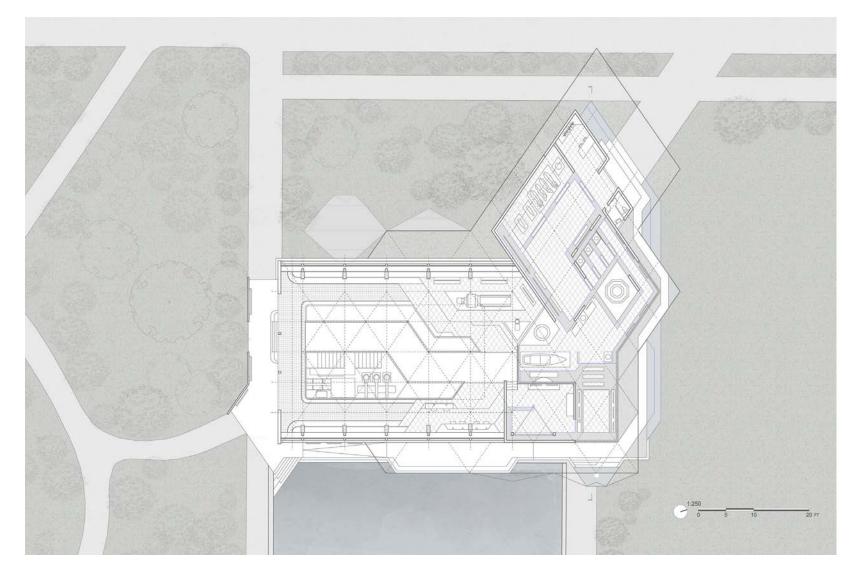
Advanced Studio V Semester: Fall 2023 Critics: Mark Rakatansky, Jorge Otero-Pailos Individual Work

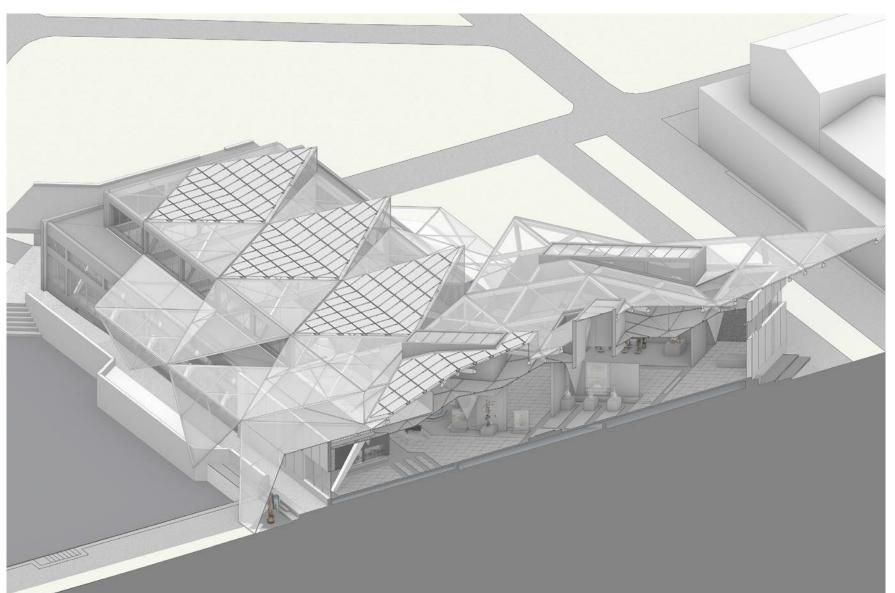
The project is to design a Museum of Water through the adaptive redesign of the Gandini Pool Building (Piscina Gandini) on the Venetian island of San Giorgio Maggiore. My design is derived from the extraction of the main geometry of the original building. From the perspective of plan, it can be seen that it forms multiple diamond shapes. I want to use the diamond shapes as the geometric element of the new building and use it to create relations between the old and new buildings.



For the site, I used diamond-shaped diagonals as the directions for the building entrance according to the main flow of people from the side. On the plan, the diagonals are also used to guide the directions and create space.

The new building mainly displays the history of Venice and the traditional way of collecting water. At the corner where the old and new buildings connect is the exhibition about plagues and floods. The traditional way of collecting water therefore needs to be changed. I give an implication through the transformation of diagonal and orthogonal to the way of collecting water from traditional to modern. And the exhibition in the old building is the exhibition of aqueduct and other modern water systems like water purification and drainage systems.



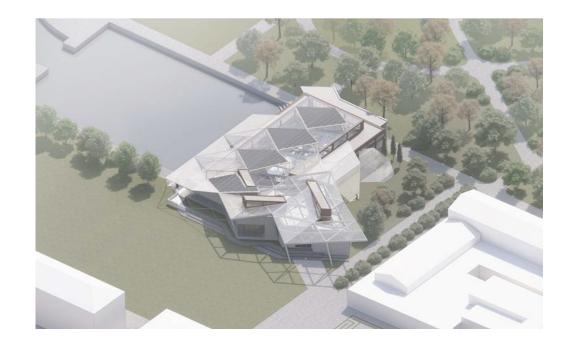


In the interior space, the geometry on the roof will extend indoors and form the exhibition together with the walls, and to bring the exhibition message to people.

There are two rainwater collection troughs on the roof. I placed a stepped water storage tank at the base of the new building, extending to the water purification system area of the old building, and providing water flow to guide the circulation of indoor exhibitions. And for the roof panel, new structure, ceiling, and the floor, I used the diamonds to form different modules.

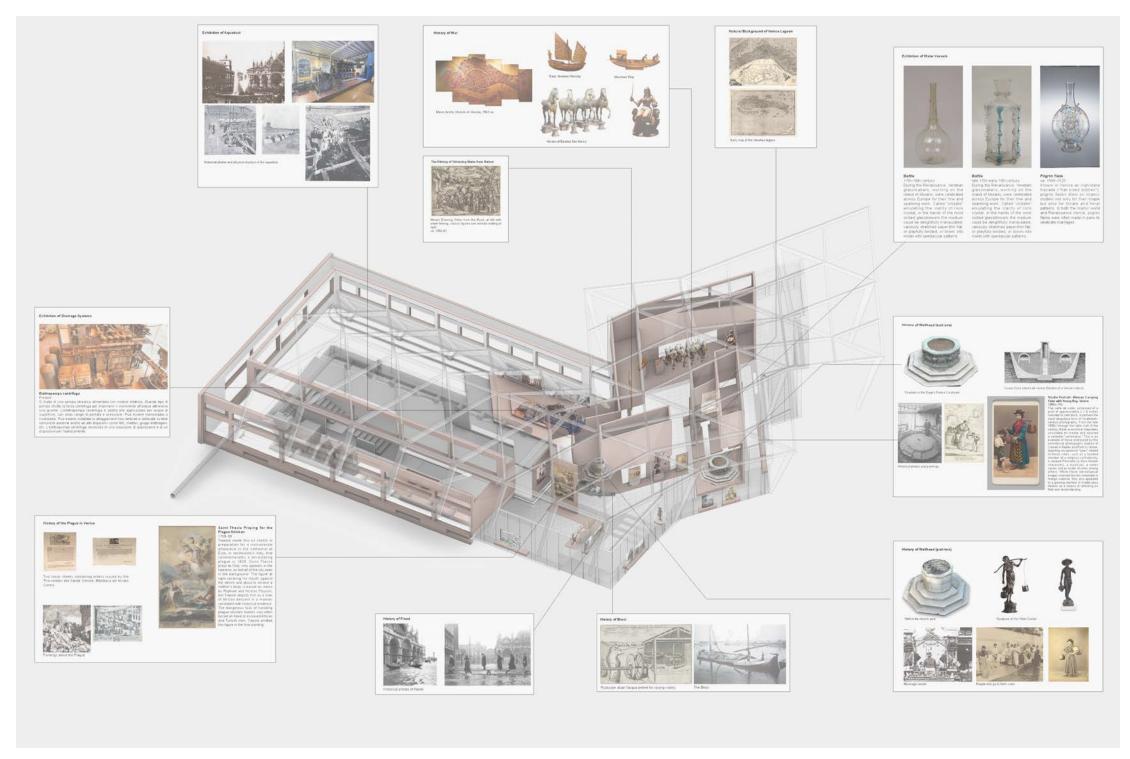








The geometry also makes the old and new buildings blend together externally. It extends to the roof and facade, which is mainly composed of solar panels, glass and metal mesh.

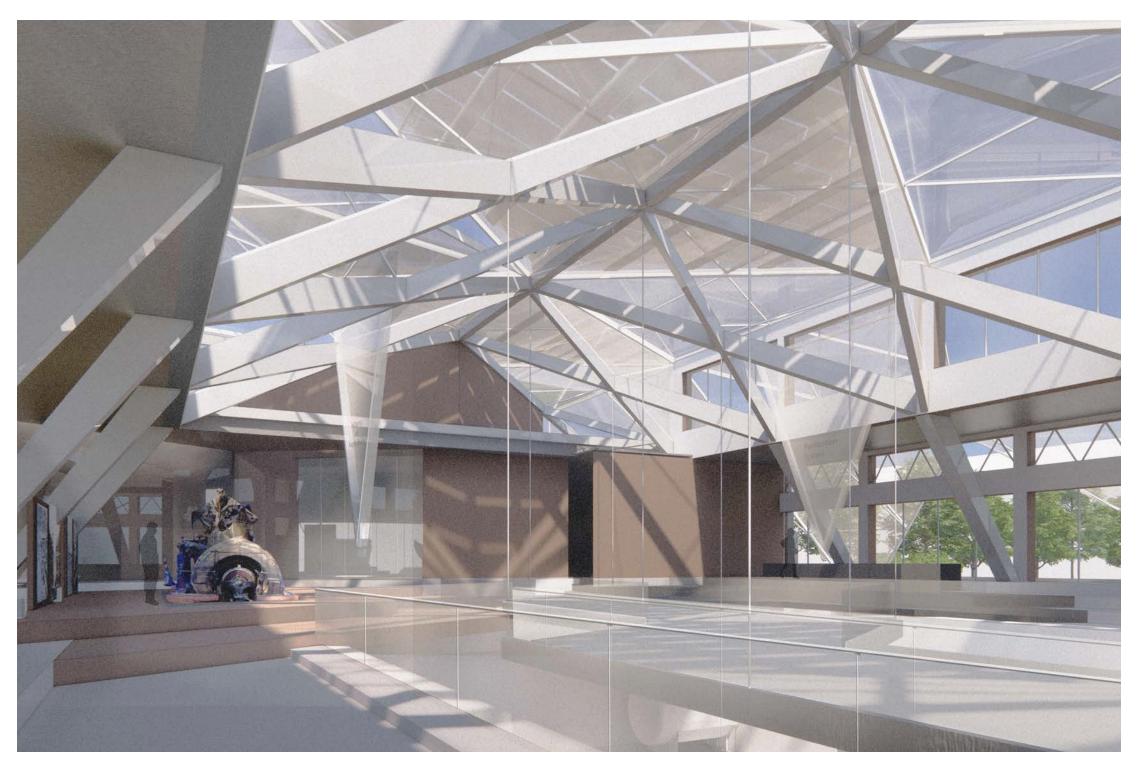


In addition to the geometry, I am also interested about the separated relationship of the structure and the wall in the old building.so I try to create the relationship between the walls and structure from the original building to the new building, allowing them to have a richer relationship and jointly create the exhibition space.

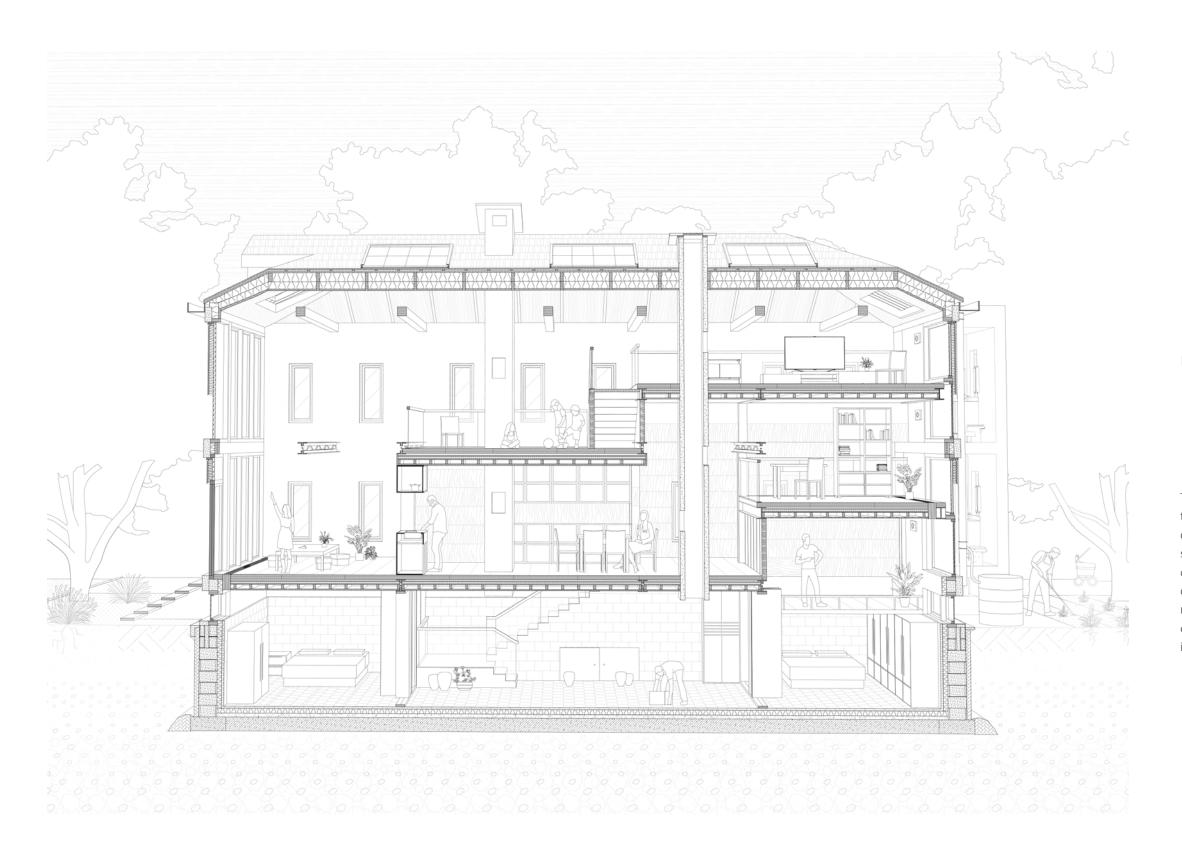


The interior renderings mainly show the diamonds extending indoors and forming the exhibition with the square wall.





A rendering of the old building. People can feel the difference in spatial experience when entering the old building from the new building.



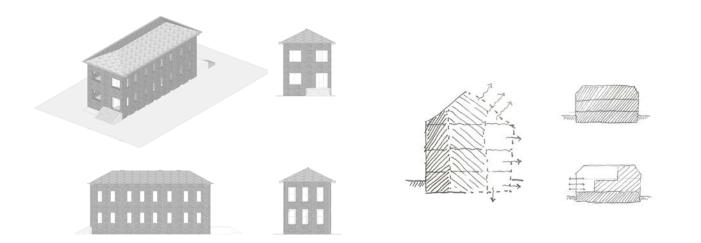
# **03 Season House**Residential Renovation in the Kensington

Advanced Arch Design Studio Semester: Summer 2023 Critic: Fuminori Nousaku Individual Work

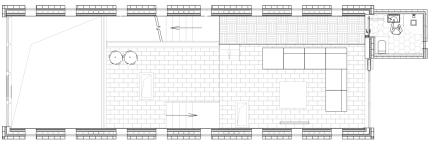
The project is to renovate the existing building, try to combine the passive house approach and the concept of eco-friendly to renovate the old house, so as to provide a return to the traditional lifestyle option without air conditioning or refrigerator, in order to create a residential prototype that can be replicated to impact the larger environment, for example, saving electricity and reducing the heat island effect.



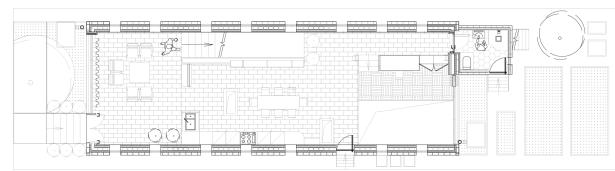
The location of the project in the Kensington area.



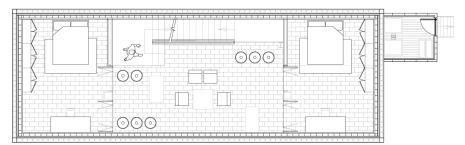
The main structures of the building are concrete masonry unit and brick veneer. I want to demolish some of the original structure, to turn the original space into a stepped form and to reduce the space partition, making the space more open and increasing the overall adjustment efficiency of the house.



Second Floor

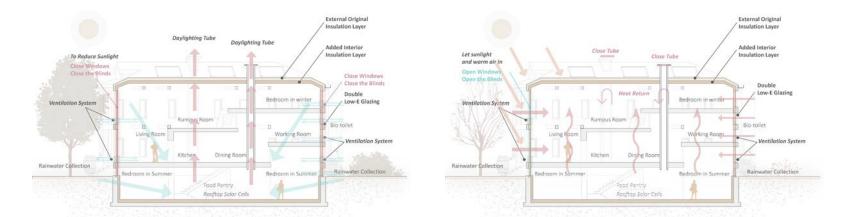


Ground Floor

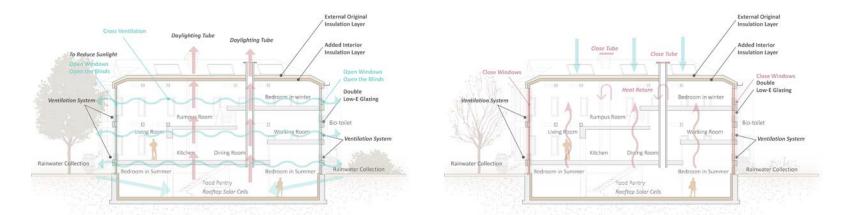


Basement

For the structure of the house, I demolished two walls facing the front yard and the backyard, and replaced them with double glazed glass. And add a new insulation layer on the basis of the original insulation layer.

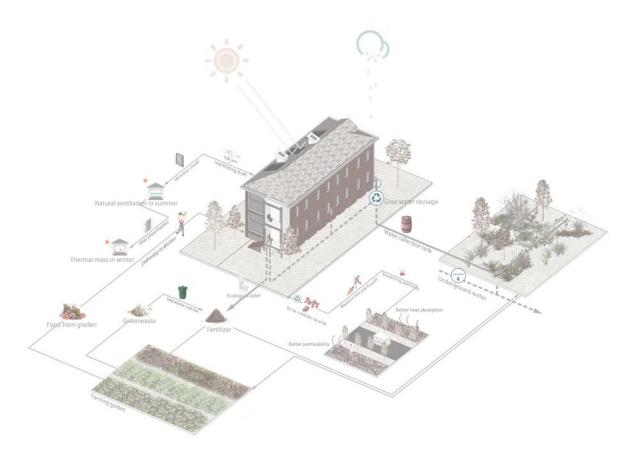


During the daytime in summer, the windows and shutters are closed, and the trees in the front yard are covered with leaves so that the indoor temperature is raised as little as possible by sunlight; at night, open the windows and shutters on both sides to ventilate the room and reduce the temperature. In winter, it is the opposite.



Combined with passive adjustment, the main living space will change spatially in different seasons. On summer days, the main living space is towards the lower half of the house.

Combined with the principle of cold air flow downward and Soil temperature-reducing properties to cool the room, it also has brick on the walls and ground of the basement to absorb heat. On winter days the main living space is towards the upper part of the house.



The space is switched between seasons. For example, the bedroom in winter may become a utility room or a laundry room in summer. In addition, I arranged two lighting wells and the visible light is refracted to the basement to bring lighting to the basement and help the indoor ventilation through its openings.

For the outdoor spaces, the front yard is used as one part in the passive regulation system, and the backyard is used as the space for planting crops.

### 04 Case Study

Transscalarities Semester: Summer 2023 Instructor: Iván-Nicholas Cisneros

# The National Museum of African American History and Culture: A Recognized Racial History

The development of the United States is inextricably linked to the multiracial makeup of American society. The National Museum of African American History and Culture, a recently built high-profile museum in Washington DC, seeks to symbolize a marriage of architectural form and political ideology that gives visibility to a marginalized people. Its location has built a bridge between the United States and African American culture, which seems to imply that an important but unnoticed history is now being recognized through the difficult process that harkens to the use of architecture as a gesture of reconciliation.

There are some special windows in the museum that the architect wanted to create as a metaphor for a connection, through which you can see the Congress, the National Archives and other monumental frames of the United States. The formal gesture framing congress harkens to the process by which the government decided to establish this museum. Due to social development and political needs, the government promoted the construction of the museum and appointed David Adjaye, a Ghanaian British, to design the museum but seemingly ignoring Adjaye's African British identity. They want to perceive the museum as emblematic of the community, but being designed by a person who is not part of the community. This approach seems to be a sweeping generalization and neglect of the intended target group.

When looking out the window to the National Archives, there seems to be a metaphor for the interweaving of African American history and American national history. The exhibition in the museum, from the brutal slave history in the

in the basement hall to African culture and art in the ground hall, aims to reflect a kind of atonement for the atrocities of the past, and the call for the attention of African culture in the present. The government hopes to let people see this neglected history and culture through the establishment of the museum, but ironically, the museum is partial and one-sided to the history and culture it is meant to represent and symbolize. They attempt to construct the overall narrative of African American with some personal collections and tiny stories.

In an architectural gesture, the museum used the Yoruba sculpture as a reference in an attempt to symbolize African American peoples, but the region from which this art form comes - Nigeria - is only one region in the whole West African slave trade network, which seems to be a practice that marginalizes or even ignores other African cultures from the time of slavery. Moreover, this problematic design approach seems to interpret African-American cultures as a cultural monolith.

In addition, the slaves sent to the United States were also sent to other colonial countries and regions in the Americas, so can we think that this museum can also be built in those colonial countries and regions to symbolize and commemorate the local history of African slaves? While the building creates the symbolism of the group which is meant to represent, this symbolism can sometimes be misleading. Keith Eggener mentions in a critique of critical regionalism: "Even so subtle and sophisticated a label as 'critical regionalism' could not help but devolve into a relatively facile and "misleading mechanism." Due to its hasty generalization, the museum inevitably falls

into critical regionalism's contradictions, and becomes a "misleading regionalism".

It is also important to note that the museum does not present a complete history and culture, and there is something missing from the target community it is meant to symbolize. As is the case today, although in this society that promotes political correctness and freedom, racial injustice and neglect still exist silently.

#### Reference

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### 05 Before & After-Hotel 91

PowerTools Semester: Spring 2024 Critic: Jelisa R. Blumberg Partner: Leslie Li

Our project centers on the transformation of the East Broadway Hotel 91 into a shelter. The left side of the booklist revealed that this is the twelfth shelter for single adult men to enter Manhattan's Chinatown, prompting a strong response from the local residents.

Following the government's announcement of the new shelter, Dragon Real Estate, the former owner of Hotel 91, sold the property to a shelter-operating company. Residents' protests have been significant, influencing the government to scrap two other planned shelter projects, although the conversion of Hotel 91 is now an undeniable reality, with construction currently underway.

This research compels us to contemplate if there's another way for local residents and the homeless to coexist beyond protests and marches. The community's need for more affordable housing raises the question: could we envision the shelter, upon fulfilling its social mission, transforming into low-cost housing to give back to the residents? Our project aims to explore these possibilities, seeking a harmonious solution that addresses both immediate social responsibilities and long-term community needs.















To address the transformation of the former Hotel 91, We've put together two models that show what the building used to be and what we want to do with it in the future. Our plan is to use the space on the ground floor to create a place that brings together the shelter and the neighborhood. When we looked around the area, we saw that not only is there a mall called east broadway mall nearby, but also a lot of great places to eat.

Our goal is to make a place where food festivals can happen, where local sellers can share their food. This would help the people living in the shelter feel like they're a part of Chinatown and even give them a chance to work for a while, which helps everyone in the neighborhood help each other out.

### **06 Obscured Path**

Subject\_Object Semester: Spring 2024 Critic: Suchitra Reddy Partner: Deliang Chen

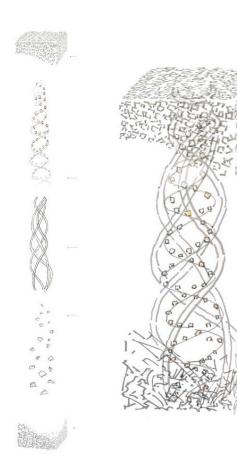












The main subject we are exploring is the internal process one encounters when navigating through more than one cultural identity growing up. And how that process would look if it was visualized into an object. Going through life one thing that always stays and evolves with you is your heritage. Whether it is clear or not everyone has a heritage that they either consciously follow or go against.

Our heritage or culture is what defines us as a person. For some it is easy to define what culture they are from for others it becomes an internal battle to accept one over the other. For our project, we started with coffee and tea. We picked these two objects because they can both be traced back to two distinctive cultures. We picked them not to directly compare the cultures to one another but to use them as analogies to demonstrate two different cultural identities within a person. So that we could analyze how two different objects would contrast and compare to one another.











When we started the model we wanted to show a clear start and end with one end of the model being almost empty and you are only able to see the layers of complexity looking at the object and the other end is this great mass that is comprised of these wooden beads and bits and pieces of shattered coffee mug and teacup.

We thought the clear end would be the start representing how a person at the beginning of the journey is typically a blank page waiting to be filled but this blank page already has a multitude of layers from their surroundings. The mass at the end with color is the saturated page or person who has gone through the journey to find themselves. But as we made the model we realized that it could go both ways if you look at it from a different perspective. Both could be the final for a person and both could be the start.

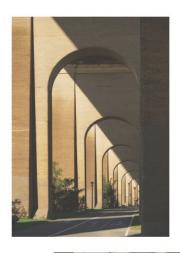
### 07 Shadow & Light

Architectural Photography Semester: Fall 2023 Critic: Michael Vahrenwald Individual Work











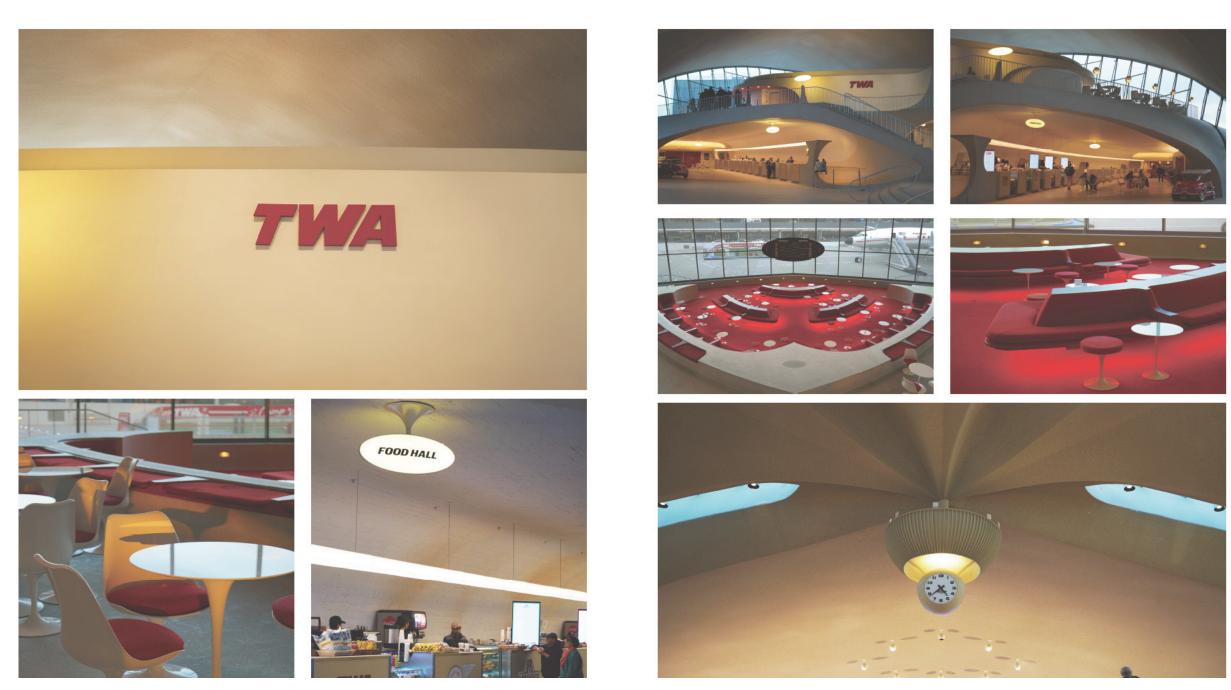








Discovering the relationship between light and shadow through the lens.



Internal open and airflow-like curve design try to add some "flying" feeling in every aspect. The illusion of being in different worlds in the same time and space was created by using unique colors.







