



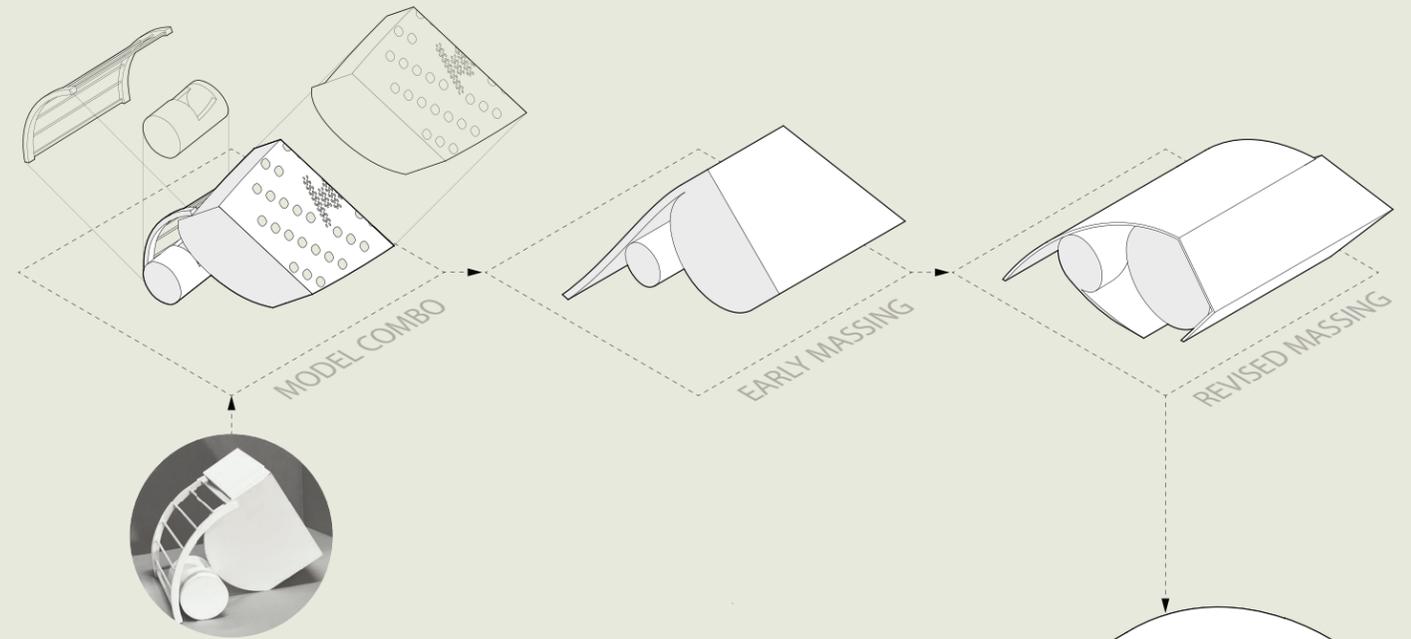
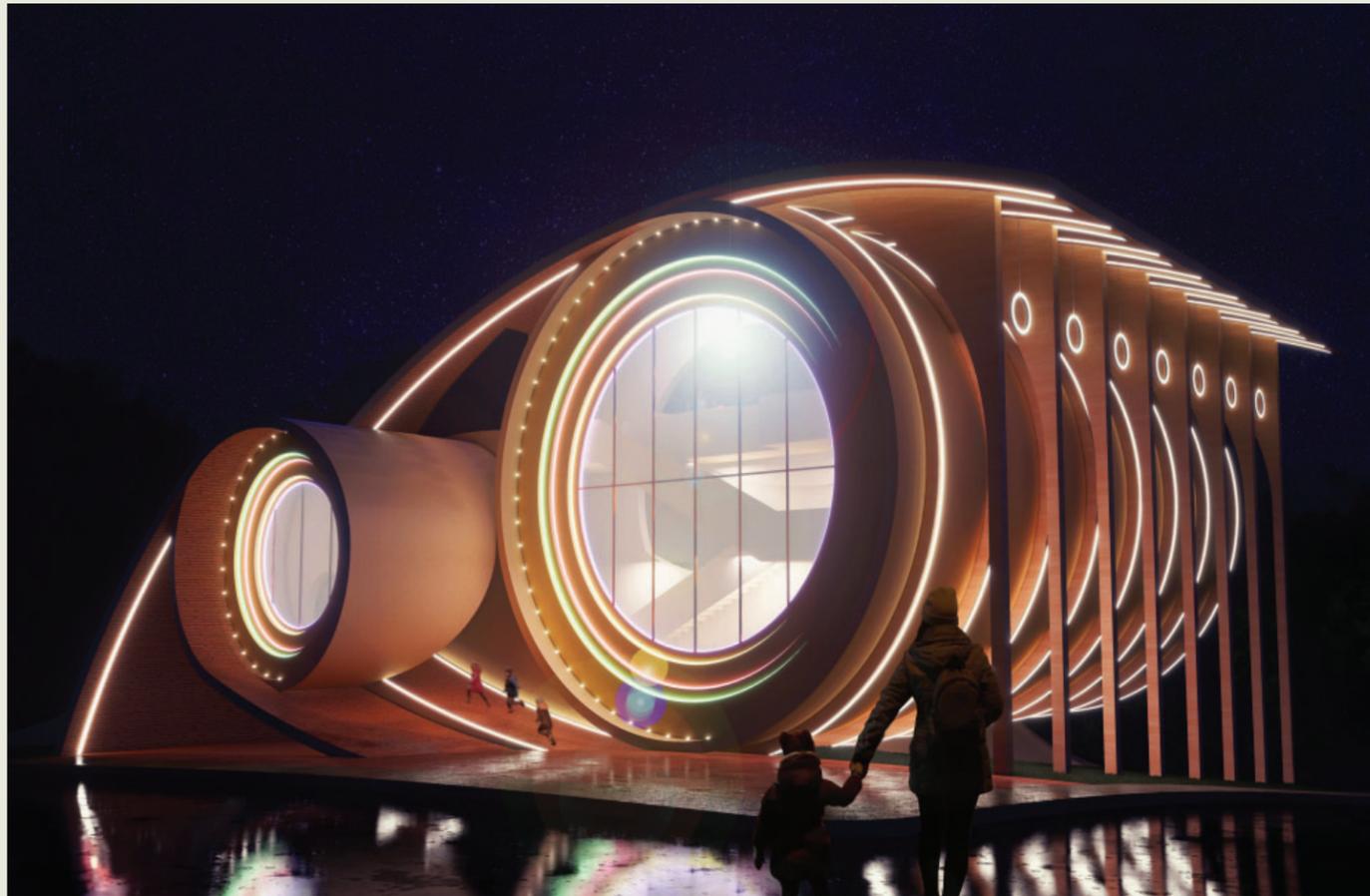
01

FALL 2023

UNIVERSITY OF MICHIGAN - INSTITUTIONS STUDIO

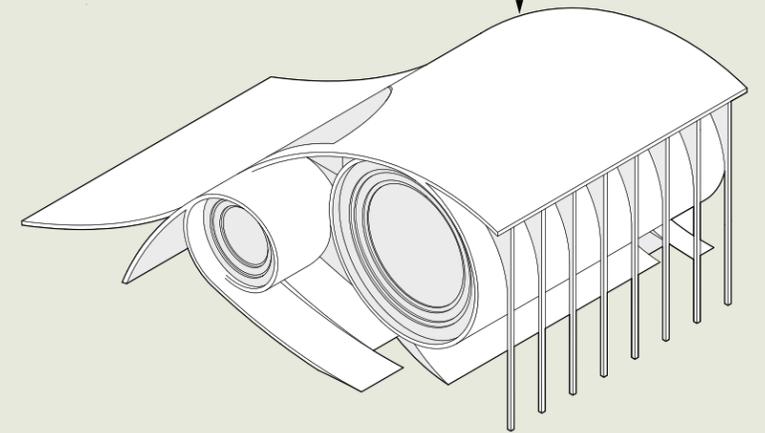
THE CHILDREN'S THEATER

MOVIE THEATER - PLAY SPACE - CONTINUOUS LANDSCAPE



FORM FINDING

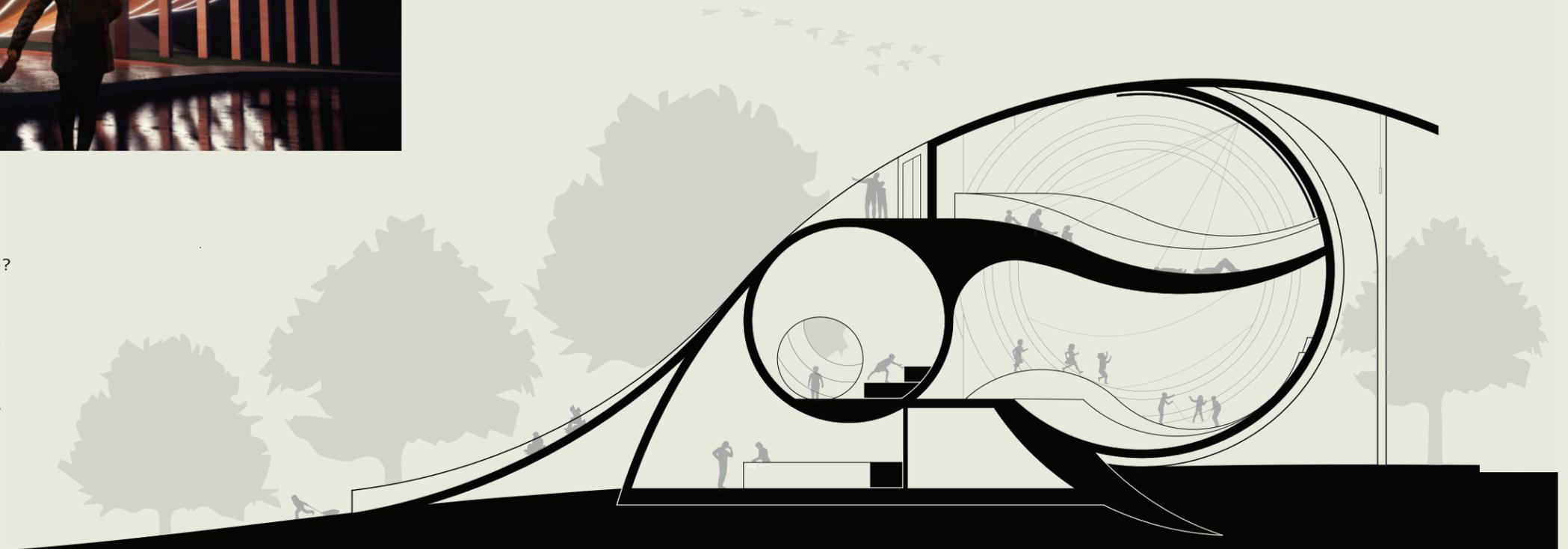
Coinciding with the playful nature of the project, the forms used to generate the massing were abstracted chunks from other cinemas combined together like toy building blocks. This assembly was then refined based on site conditions to produce the ultimate design of the Children's Theater.



How can a movie theater be reinvented for its intended audience?

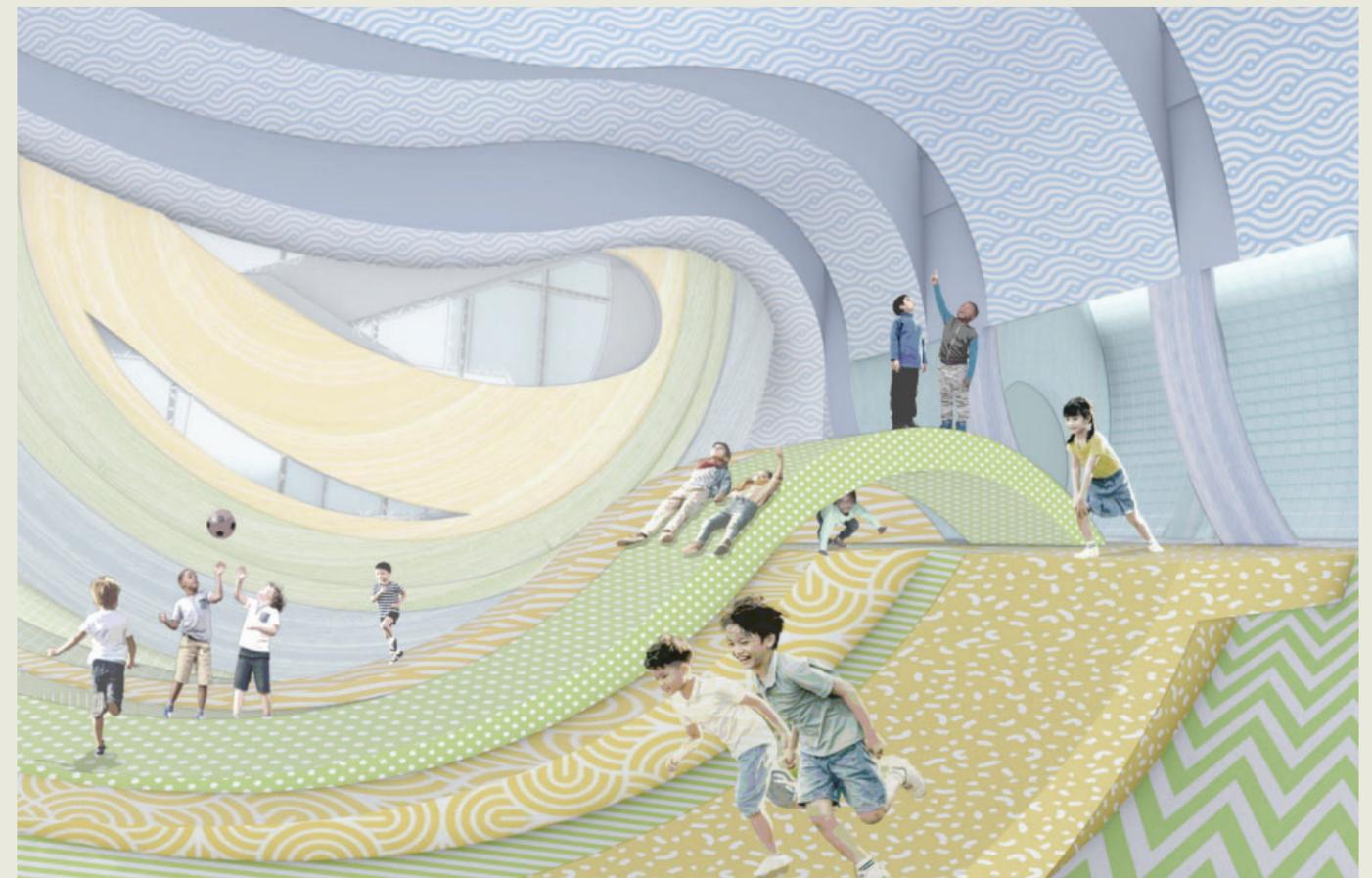
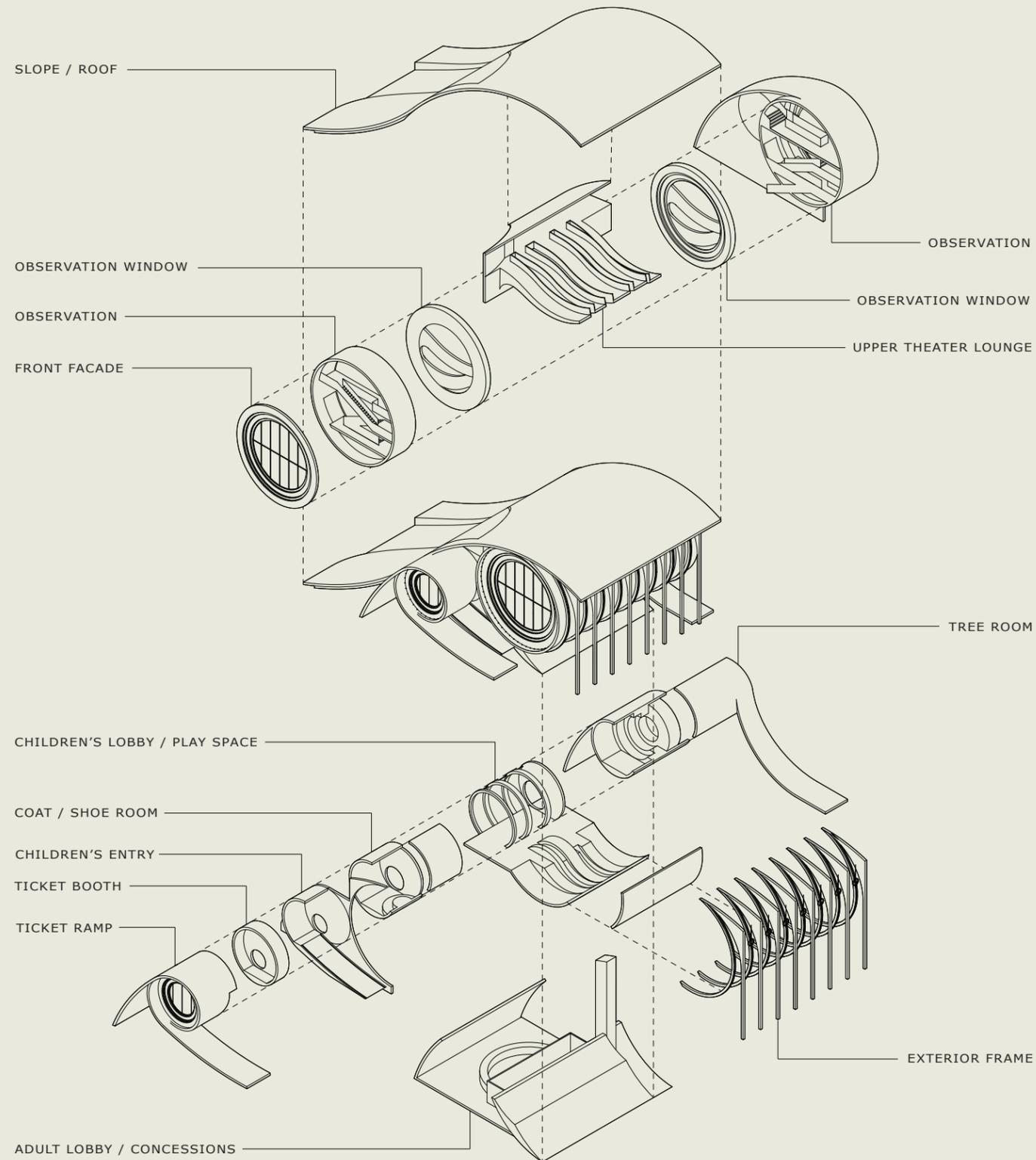
In 2023 over half of the top ten highest grossing box office hits were movies targeted toward children. Despite this fact, movie theaters around the world are often inhospitable spaces for kids. The typical cinema design features static seating arrangements, dark uninviting rooms, and zero opportunities for play.

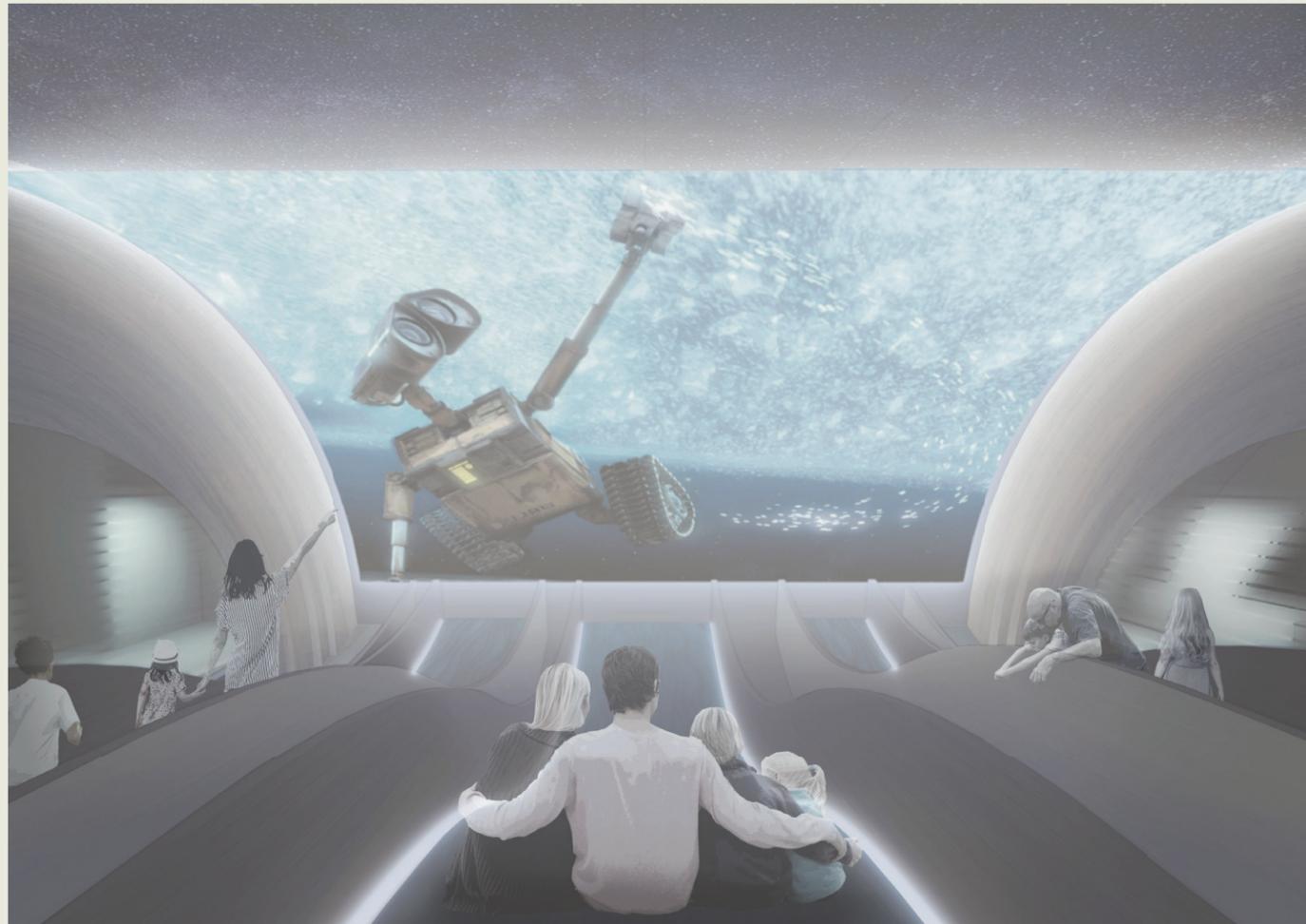
The Children's Theater is an attempt to redefine this typology by providing a fun, engaging, immersive cinematic experience for young children and their families.



PLAY AND IMMERSION

The interior is divided between lower and upper theater spaces with distinct movie-watching experiences. The lower theater is a play space with engaging "interior landscapes" for children to explore. The upper theater is composed of sloped lounge areas for families to lay on with the screen overhead, mimicking the experience of laying out under the stars. These spaces are linked through perforations in the second floor, which allow children on the more active lower level to observe the film in the background.





CONNECTING TO THE SITE

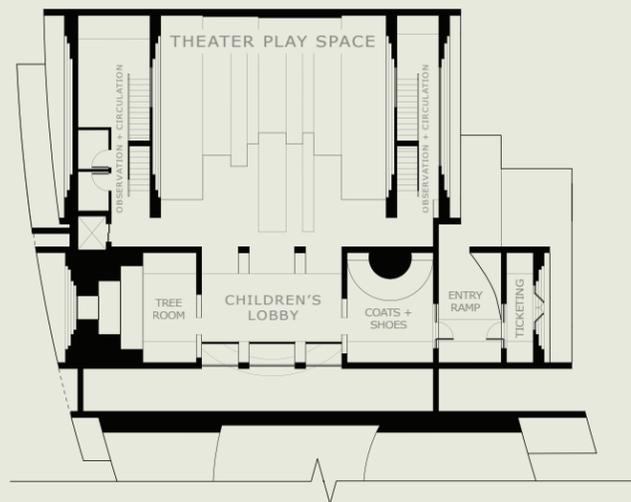
The exterior of the theater is designed to directly connect the surrounding landscape to the building. The two main cylindrical forms wrap portions of the envelope around them, which extend directly to the ground and create gentle slopes.

The southern slope houses an artificial hillside that children can utilize for outdoor play. Whether its sledding on a snowday or laying out under a summer sky, the hill provides another opportunity for children to directly engage with architecture in a fun, playful manner.

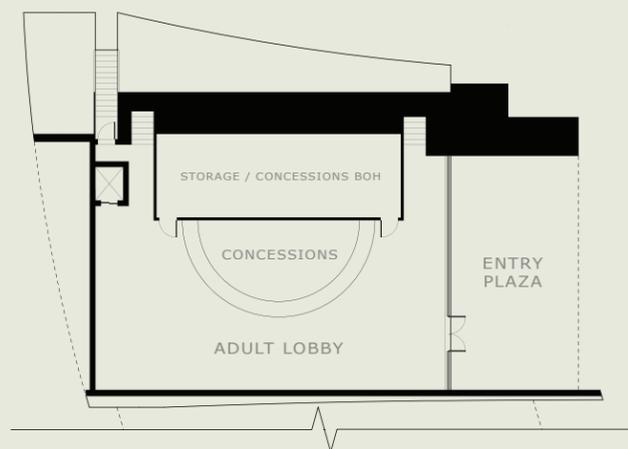


INDEPENDENCE AND SAFETY

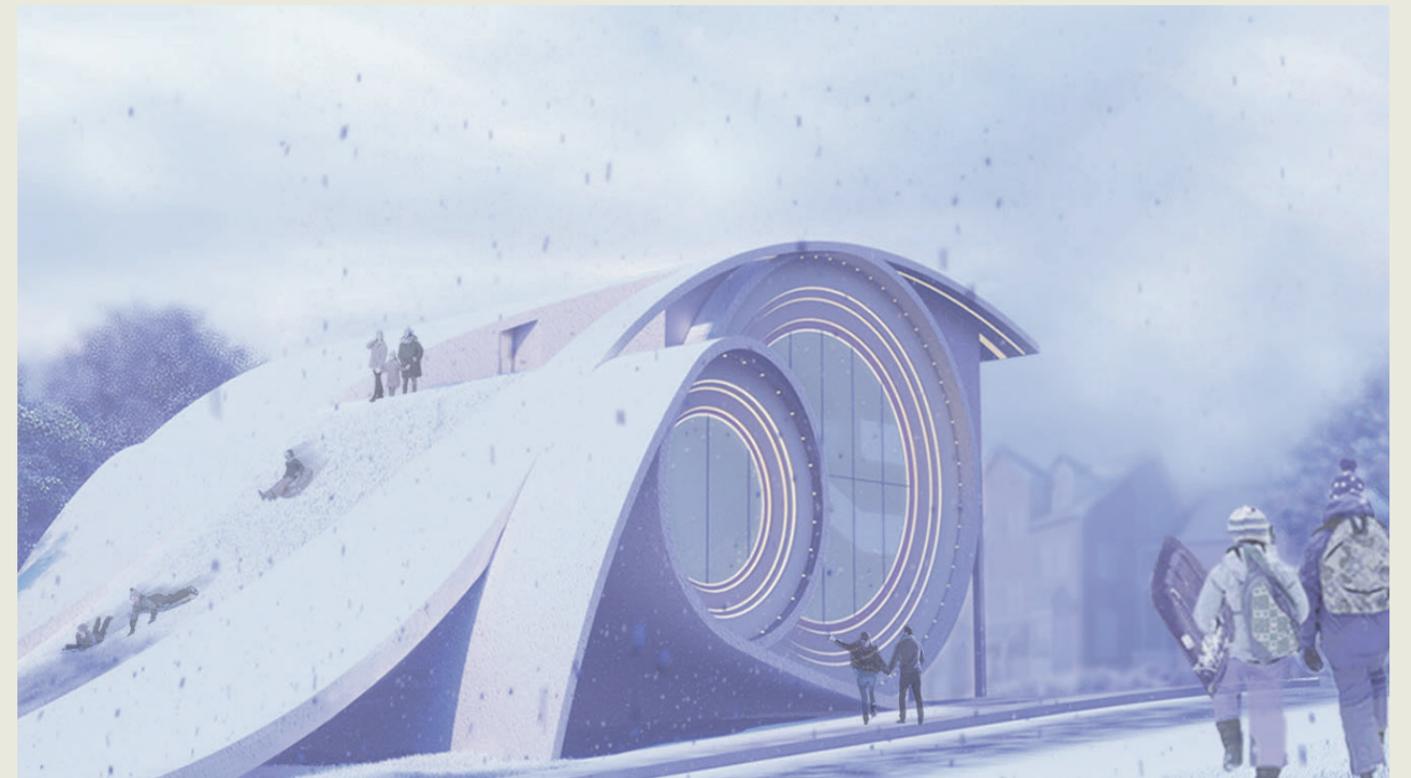
To allow attending children a level of autonomy, the theater has separate entries and circulation pathways for parents and their kids. Children access the building through the upper ramp entry, which connects directly to the theater and adjacent play spaces. Adults, on the other hand, can enter through the lower level, which feeds them into observation zones flanking the theater for supervision.



LEVEL 2 - CHILDREN'S ENTRY

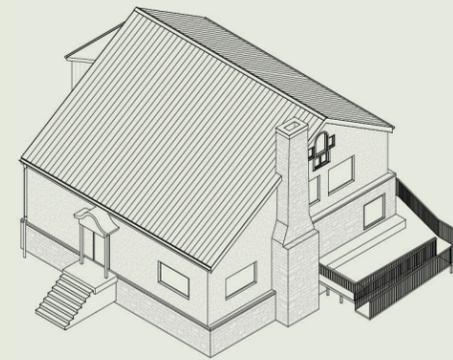


LEVEL 1 - ADULT ENTRY

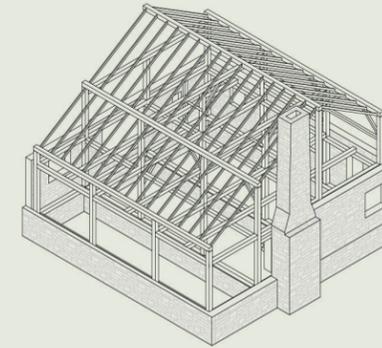


JEREMIAH MORROW BARN

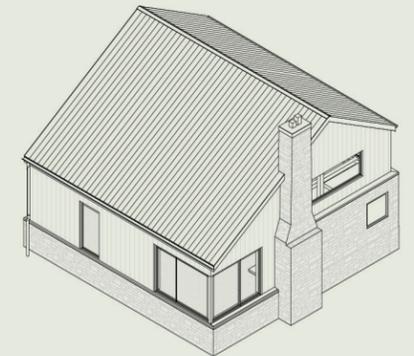
HISTORIC RESTORATION - ADAPTIVE REUSE - NATURE CENTER



a.) EXISTING BUILDING



b.) COMPONENTS TO REMAIN



c.) REVISED PRODUCT



While the barn's walls and cladding have been periodically destroyed and updated, the structural components of the building remain remarkably intact. The original timber frame, stone foundation, and chimney of the barn have endured for centuries with negligible damage.

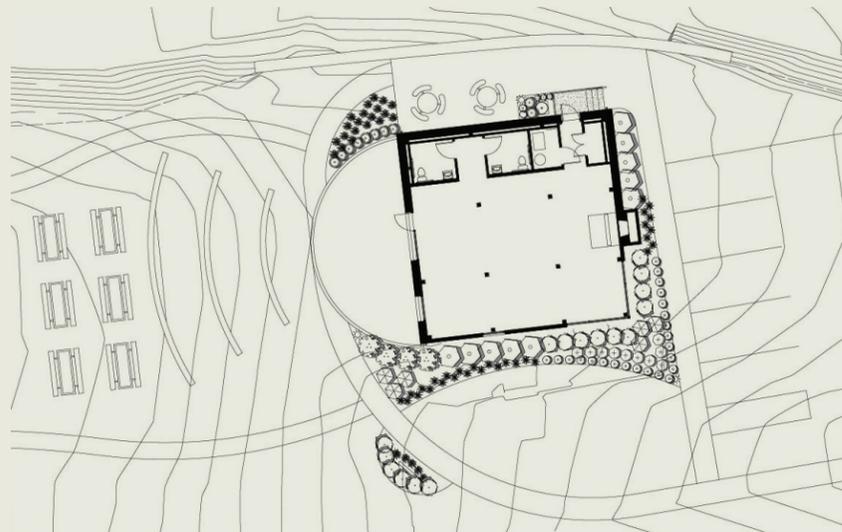
As such, these components were chosen to not only remain in the building, but to serve as a living exhibit for guests to experience. The open floorplan puts the timber frame on display, allowing it to even be seen from the exterior now via large swaths of curtainwall.



How can a historic building be adapted to modern life without diminishing its cultural significance?

The objective of this project was to repurpose the historic Jeremiah Morrow Barn into a high performance modern nature center. The barn was erected by Ohio's first Congressman Jeremiah Morrow, and is among the oldest standing structures in the state. After purchasing the property from its most recent tenant, the local municipality chose to renovate the building to preserve its historical significance and adapt it into a functional amenity for the community.

I contributed to the conceptual design of the renovation, created renderings for our client, and produced the project's construction documentation.

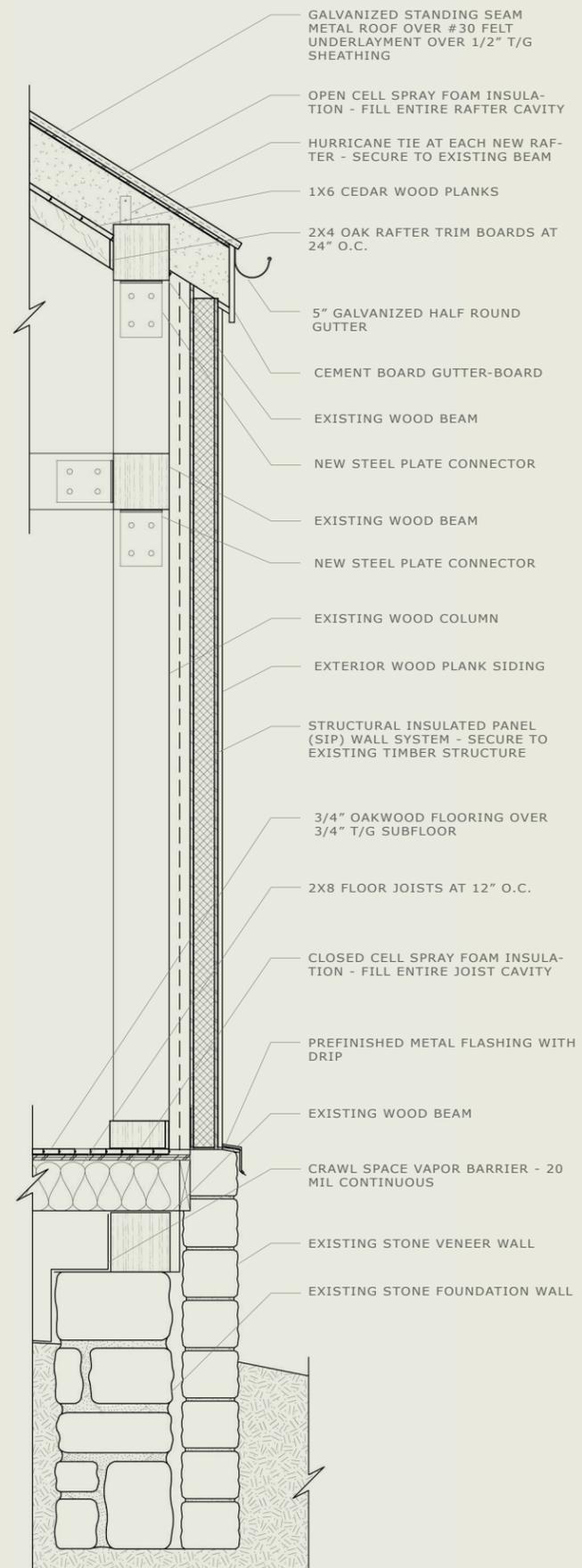


INNOVATION MEETS TRADITION

The exterior wall system of the renovation is comprised of Structural Insulated Panels (SIPs). This innovative technology provides numerous benefits to the building that enhance its performance.

SIPs form an airtight barrier and considerable insulation for the building, optimizing its energy efficiency. The panels come pre-manufactured to the site, saving on labor costs when compared to more common stick framing methods. The panels also provide a perfect substrate for custom wood siding, allowing the barn to maintain its traditional rustic look without inhibiting the building's performance.

SIPs are just one example of how modern construction technology can be utilized to enhance historic buildings. Subtle strategies like this are vital for blending modern architectural standards with traditional aesthetic qualities.



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FALL 2019

COE LEE RODGERS (CLR) DESIGN

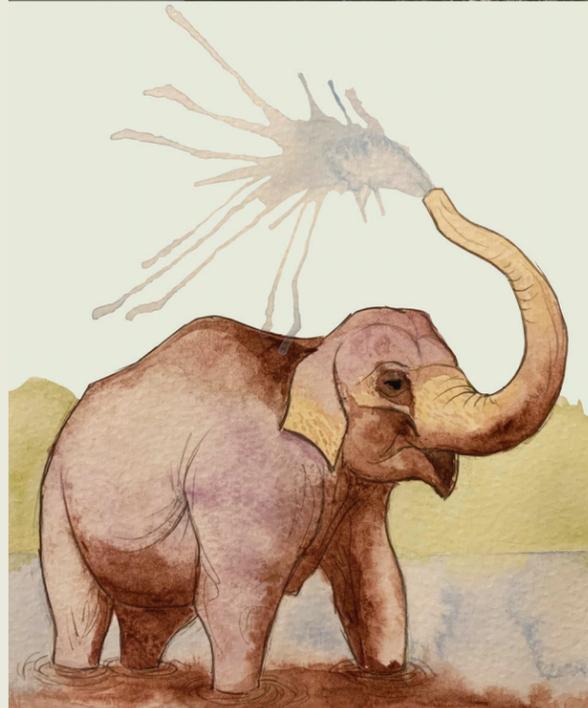
RIVERBANKS ZOO

ORANGUTAN HABITAT - RESTAURANT - VIEWING DECK



How do we bring the jungles of Borneo to South Carolina?

At CLR Design, I worked on a massive expansion project for the Riverbanks Zoo in Columbia, South Carolina. This development will add new exhibits featuring diverse animal species, as well as several new structures for veterinary care and guest entertainment. My focus was the visual presentation and of an interconnected orangutan habitat and visitor restaurant, joined by a viewing platform overlooking the Saluda River. I also provided watercolor studies of many species we designed for that were used for client marketing purposes.



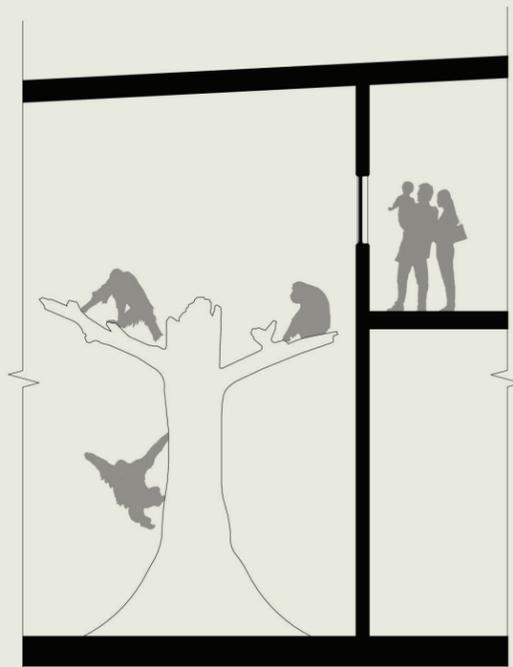
MULTI-SPECIES DESIGN

The project grapples with the key issue underlying all zoological design; the fission and fusion of spaces for humans and other species. The primary goal of modern zoos is the care and conservation of their animals. Nonetheless, zoos are supported and funded by guests, and the interface between exhibits and human spaces must be engaging, inspiring, and immersive.





The indoor housing connects to a vast outdoor exhibit nestled within the site's existing forest, where native foliage mimics the dense vegetation found in the orangutan's natural habitat. The viewing deck serves as a conduit linking all these spaces together, providing a seamless walkway between indoor and outdoor exhibit views as well as the restaurant. By designing for the environmental needs of animals and the experiential preferences of guests, zoos can become a captivating space where the human and natural worlds collide.



AN OBSERVABLE JUNGLE

A key ambition of the project was to provide guests with a unique view of the orangutans in their arboreal habitat. Since orangutans spend roughly 90% of their lives in trees, the main viewing windows were located at the same height as the exhibit's "canopy" level.

The indoor exhibit houses a variety of naturalistic elements to simulate the jungle habitats of orangutans in the wild. Artificial trees, vines, and ground cover create an enriching environment to promote natural behavior in the animals. Skylights further enhance this by providing a natural light source, and help heat the exhibit to tropical temperatures during colder months.

SANCTUARY TOWERS

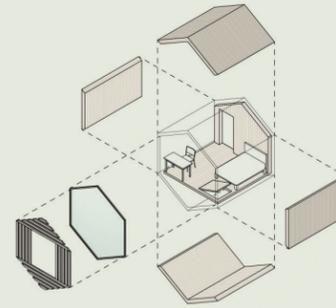
REFUGEE SHELTER - ECOLOGICAL SCAFFOLD - POLLINATOR OASIS



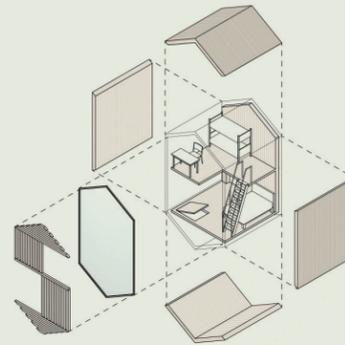
Can humanity develop a symbiotic relationship with the natural world?

Climate change and the degradation of ecosystems have unleashed a multifaceted issue upon modern society. Millions of people around the world are now refugees as a result of catastrophic floods, fires, droughts, and famines created by a rapidly changing planet.

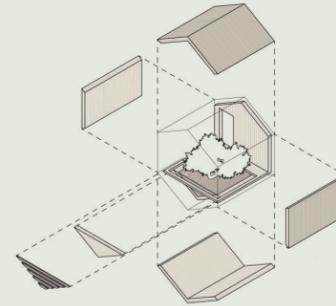
The Sanctuary Towers are a vision for a symbiotic future. They are designed to comfortably house and integrate climate refugees of not only our own species, but the myriad of other organisms displaced by human development.



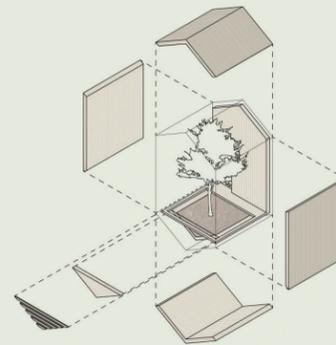
a.) SINGLE / DOUBLE MODULE



b.) FAMILY MODULE



c.) POLLINATOR PLANTER MODULE



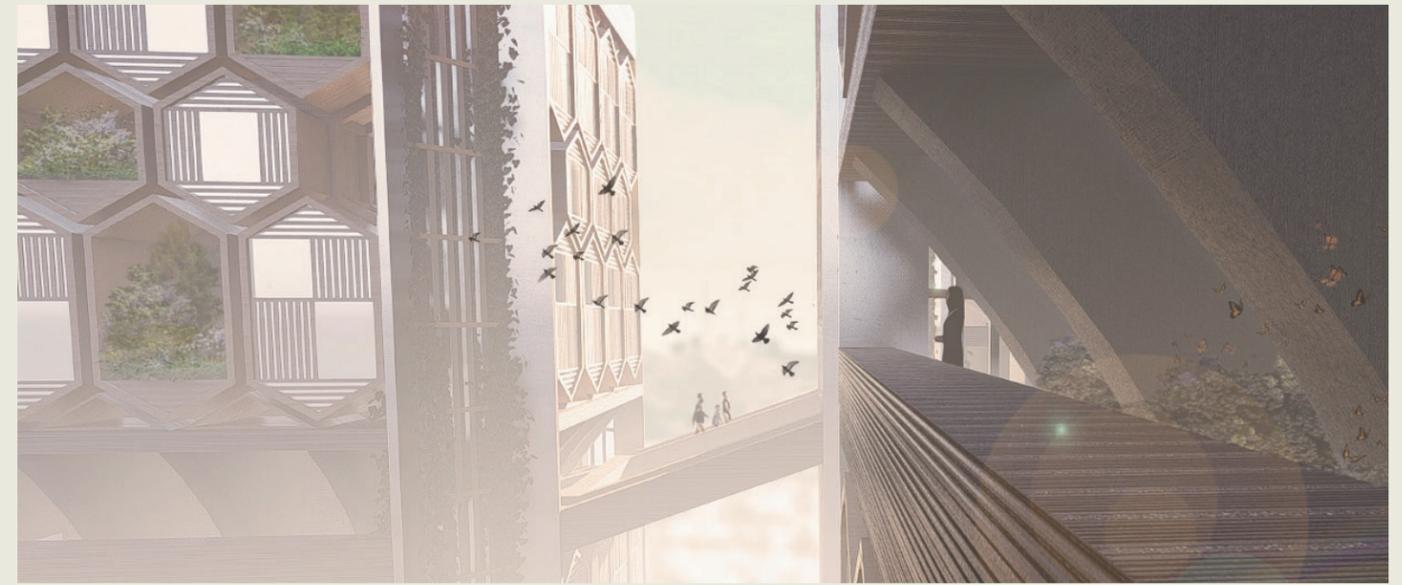
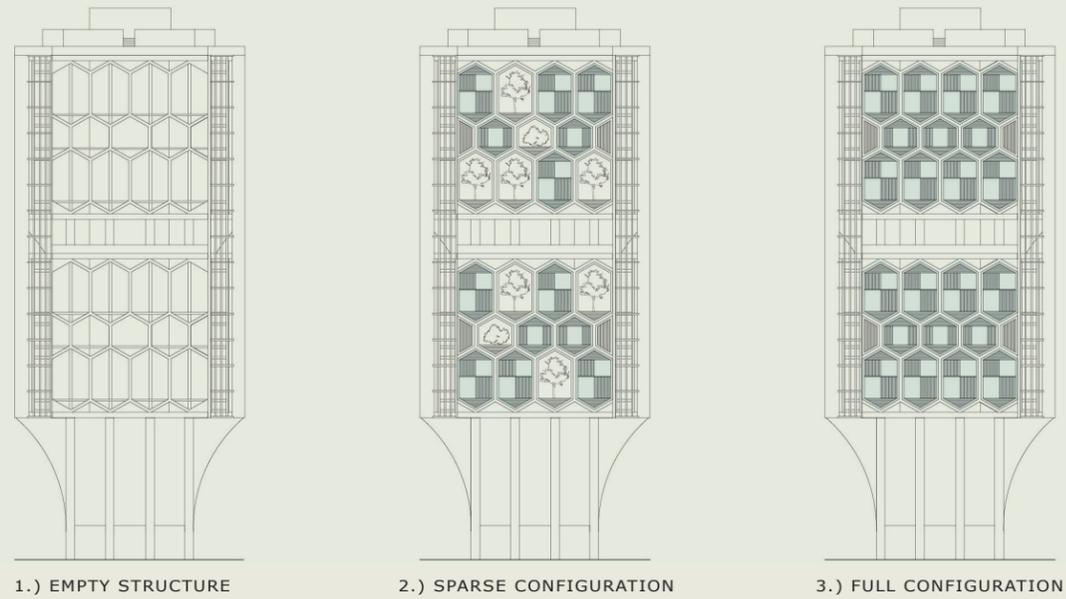
d.) ARBOREAL PLANTER MODULE



A MODULAR SOLUTION

The temporary housing units of Sanctuary Towers are modules that can be assembled in various combinations. Their distinctive forms provide flexibility to accommodate a wide range of refugee group sizes.

Since the number of arriving refugees is constantly in flux, the towers can also house specialized "planter modules" during periods between migration waves. These units provide a sheltered, soft-surface environment for native ecologies to occupy, and can be safely removed and stored onsite during refugee influxes.

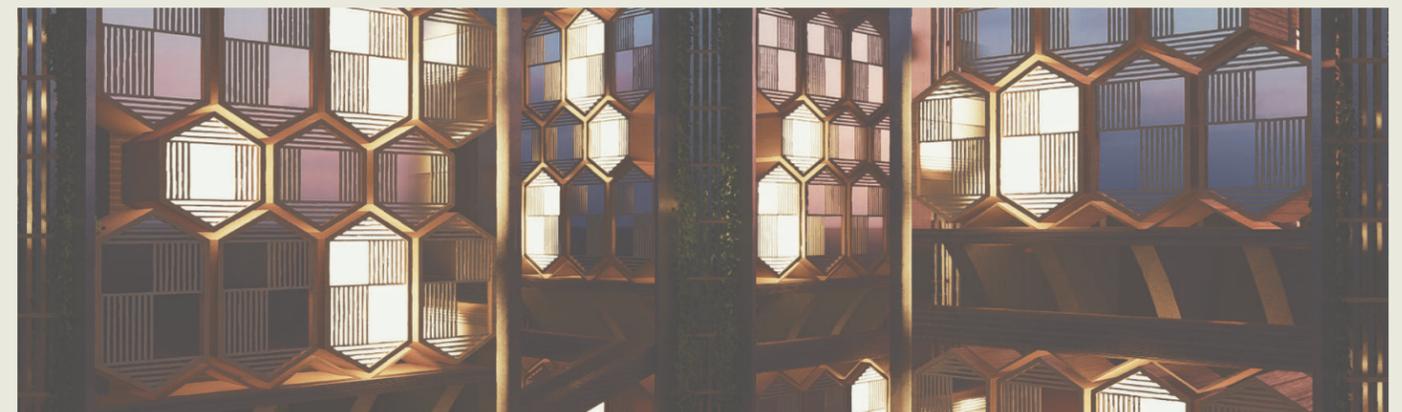
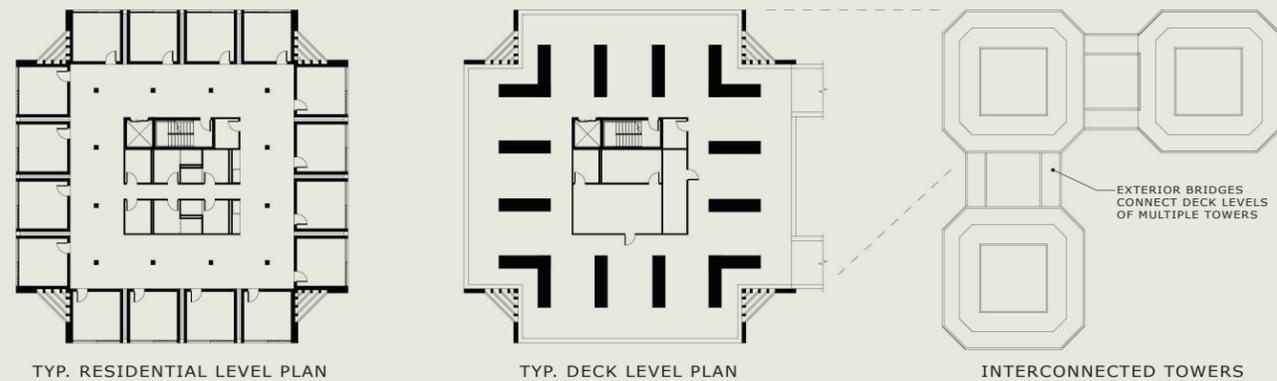
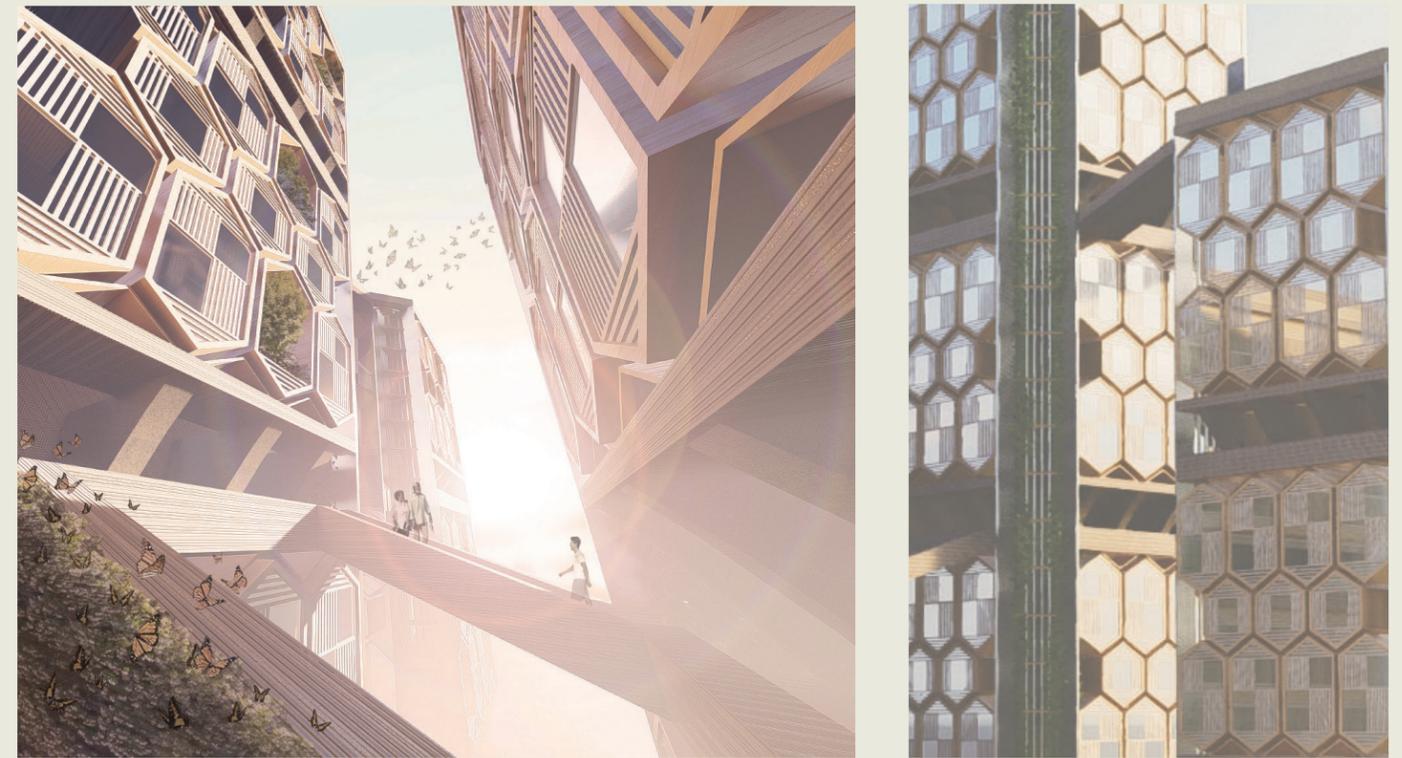


URBAN GAPS

The goal of The Sanctuary Towers is to create a respite for climate refugees of all species. For humanity, this entails the provision of flexible housing arrangements and utility access within the city. While modular units provide privacy and security, the tower core provides basic utilities and spaces for communal gathering.

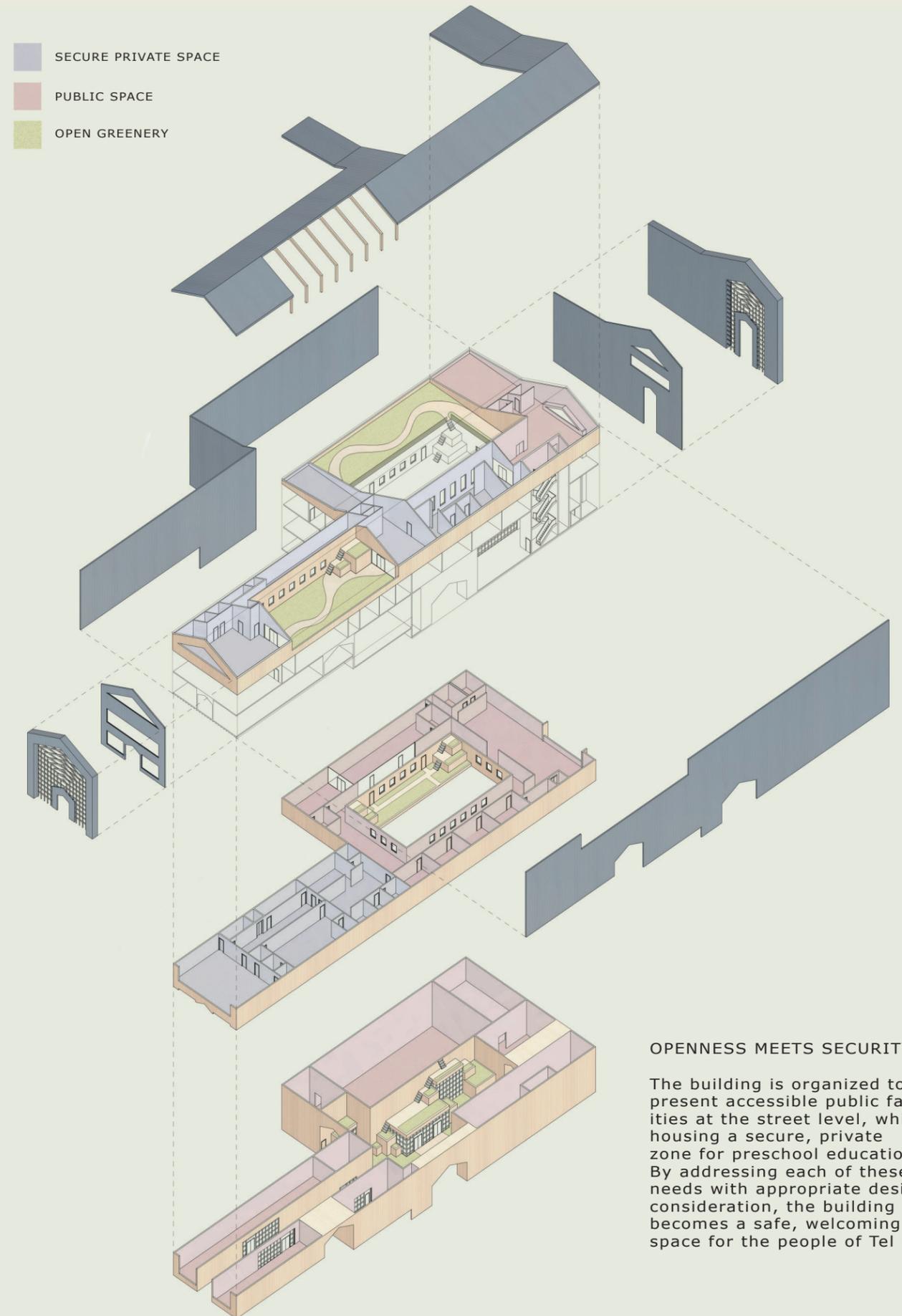
For the native ecology, the solution is gaps of wilderness in an otherwise brutally urban landscape. Planter modules allow an array of species, ranging from small pollinating insects to fierce raptors, to coexist with humans. Vertically oriented "living walls" and soft surface rooftops augment these habitats. Even the footprint of the tower itself is designed to take up minimal space on the ground level so the remaining site can be repurposed for storage of module units or overtaken by local ecology.

These simple strategies create a framework for humanity to seamlessly coexist with the natural world. The integration of nature into urban life is not only benevolent, but can bring beauty and inspiration into the city.



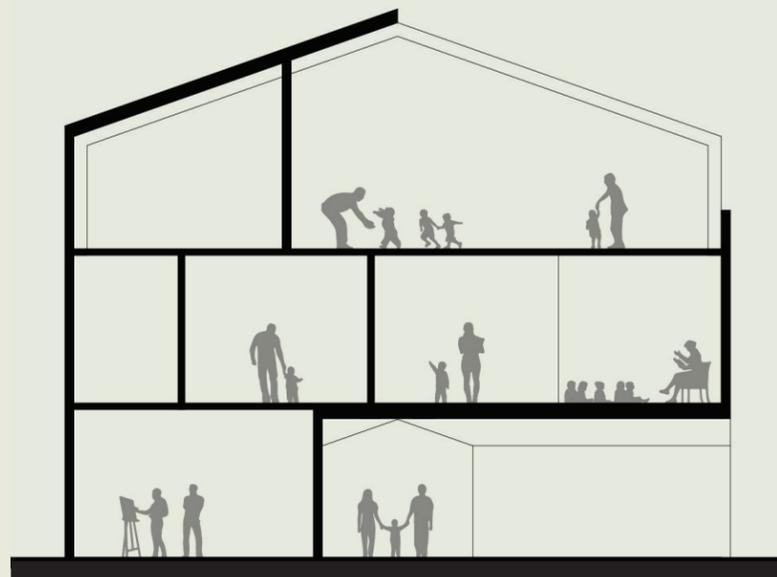
TEL HI TERRACES

COMMUNITY CENTER - PRESCHOOL - PUBLIC GARDEN



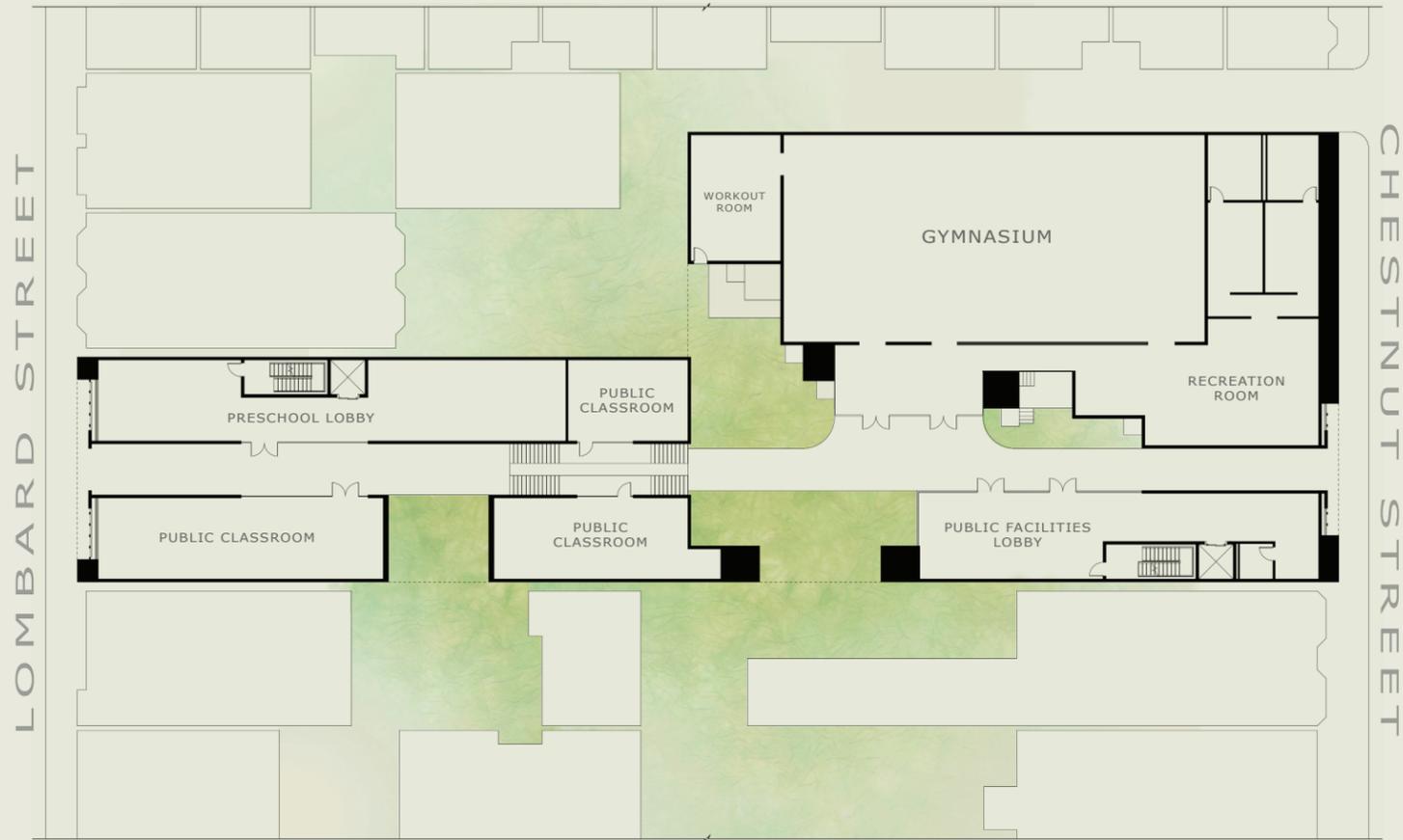
Can a building connect a community?

The Tel Hi Terraces seek to answer this question by providing an environment for residents of San Francisco's Tel Hi neighborhood to explore, learn, and play together. The goal is to create a building that actively encourages the community to engage with both each other and architecture itself.



OPENNESS MEETS SECURITY

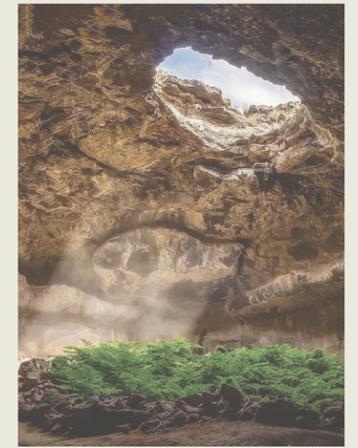
The building is organized to present accessible public facilities at the street level, while housing a secure, private zone for preschool education. By addressing each of these needs with appropriate design consideration, the building becomes a safe, welcoming space for the people of Tel Hi.



TERRACE GARDENS

In many cities, considerable effort is made to prevent the public from disturbing or engaging with architecture. The Tel Hi Terraces reject this approach, and instead invite the public to playfully interact with the built environment. These terraces are a simple strategy to create a serene, interactive “playground” for the community to enjoy. They also form a unique circulation method through many of the building’s public spaces.

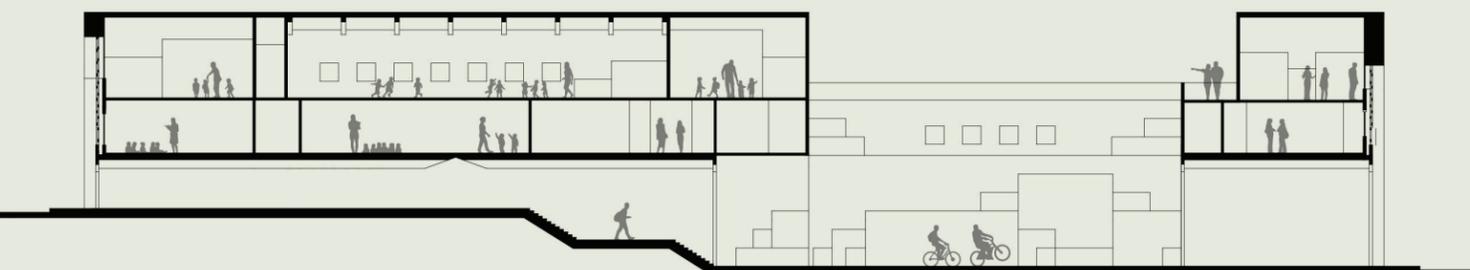
Inspiration for the courtyard came from examples of similar phenomenon found in nature. Caves and grottos often evolve into distinct forms that create a dramatic interplay of light and earth. Such features are not only beautiful, but can provide unique conditions for life to thrive in an otherwise desolate environment.



THE UNITED YARD

By pooling resources together a community can empower itself in remarkable ways. The Tel Hi Terraces reimagine how a neighborhood might utilize precious yard space within the city by creating linkages between several isolated plots. In doing so, the community center forms a unified, continuous greenway that is far larger than any individual yard.

By linking these plots together, the enormous yard becomes a more practical space for outdoor recreation. The greenway also creates a direct corridor for the tenants of surrounding residential buildings to mingle and connect. The community center thus not only facilitates activities for the neighborhood, but even orchestrates opportunities for new social connections to be formed.



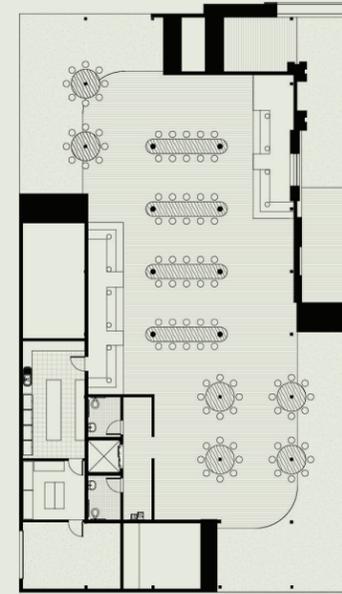
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SPRING 2018

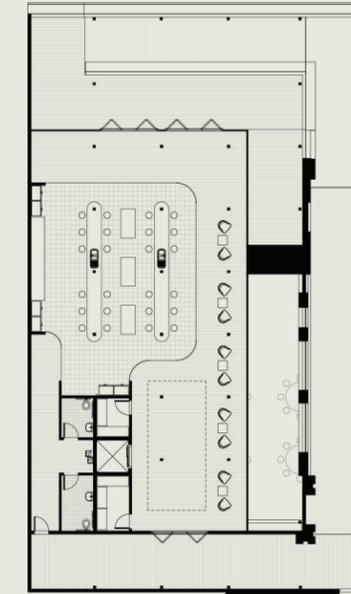
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THE HANGING GARDEN

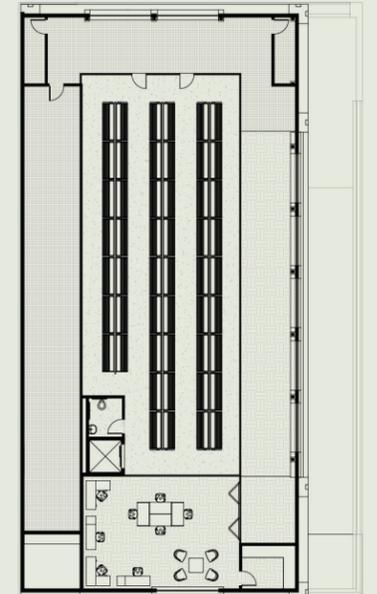
PUBLIC MARKET - VERTICAL FARM - CLASSROOM KITCHEN



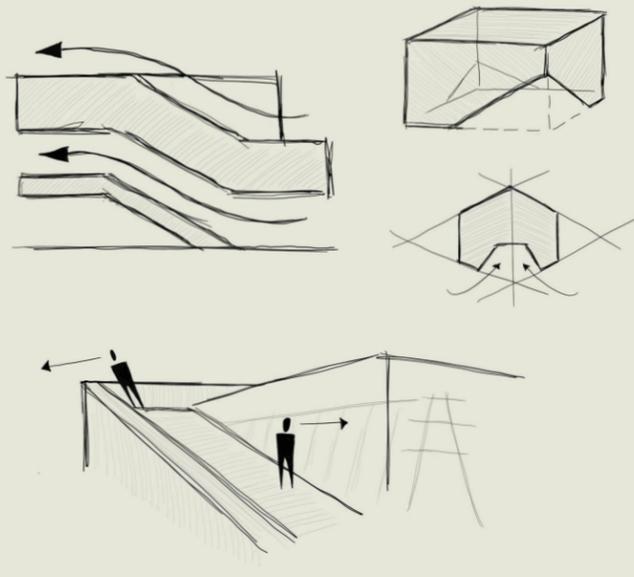
LEVEL 1



LEVEL 2



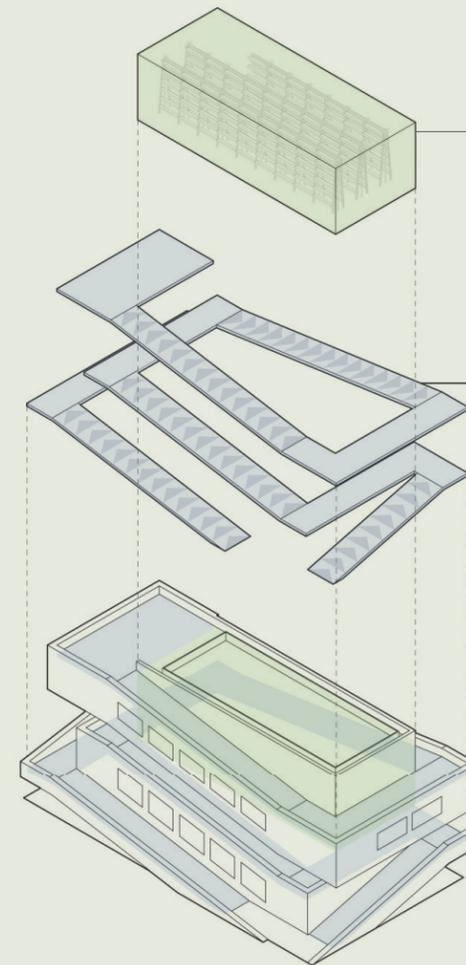
LEVEL 3 / 4



How can architecture expose people to big ideas?

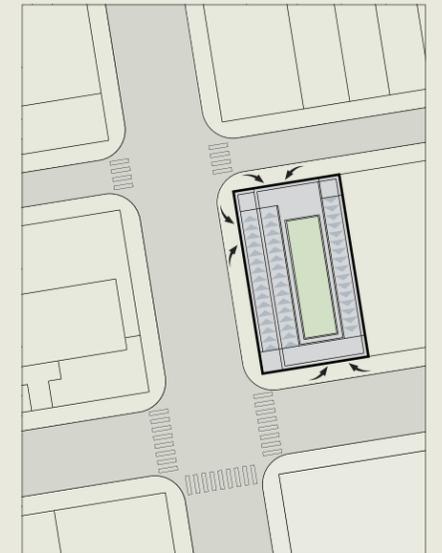
The greatest barrier to cutting edge innovation is often the public's knowledge and perception. New technologies can be limitless in their potential, but struggle to capture the imagination of the public on their own.

The ambition of The Hanging Garden project is to connect the people of San Francisco with innovative urban farming practices. The design openly displays high-tech vertical crop production, provides accessible amenities to encourage pedestrian traffic, and features an abundance of soft surface elements for greenery to flourish. The Hanging Garden creates a unique learning experience in the hope of inspiring interest in sustainable, localized foodsourcing.



a.) VERTICAL FARMING CHAMBER

b.) EXTERIOR RAMP SYSTEM



THE URBAN RAMPWAY

The Hanging Garden is defined by an exterior ramp system cantilevered from the core structure. This rampway engages the surrounding sidewalks, enabling pedestrians to circulate the building and observe its functions from the outside. The forms generated by the ramp provide shade and definition for interior spaces.

Vertical farms are housed within a large greenhouse chamber, encircled on all sides by the rampway. This chamber, and the hydroponic farm systems within, are visible from every angle as visitors traverse the ramps.

a.) MANAGEMENT



b.) PRODUCTION



c.) IMMERSION



d.) CONSUMPTION



e.) EDUCATION



f.) SYMBIOSIS

FUNCTIONALITY

The programmatic arrangement of The Hanging Garden is driven by the concept of "farm-to-table" taken to its absolute extreme. Food items can be grown, processed, prepared, sold, and consumed all within a structure comprising of a single city block. The building additionally provides spaces for facility management, a public kitchen for education, and an abundance of planter space for green infrastructure.