

M. S. ADVANCED ARCHITECTURE DESIGN

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COLUMBIA UNIVERSITY

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2022-2023

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# 0.1 SPECULATE

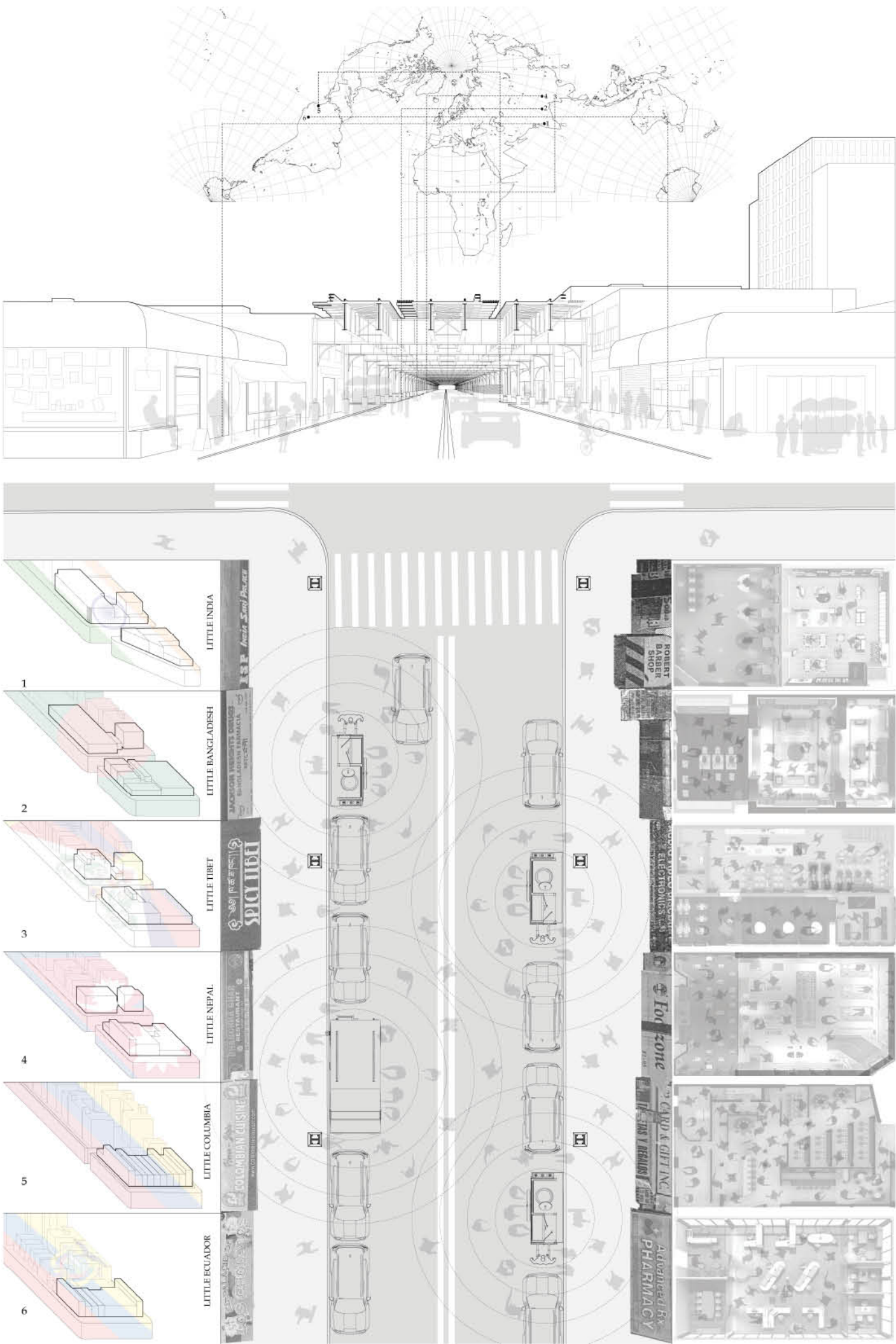
## *Speculative City on the 7 Line*

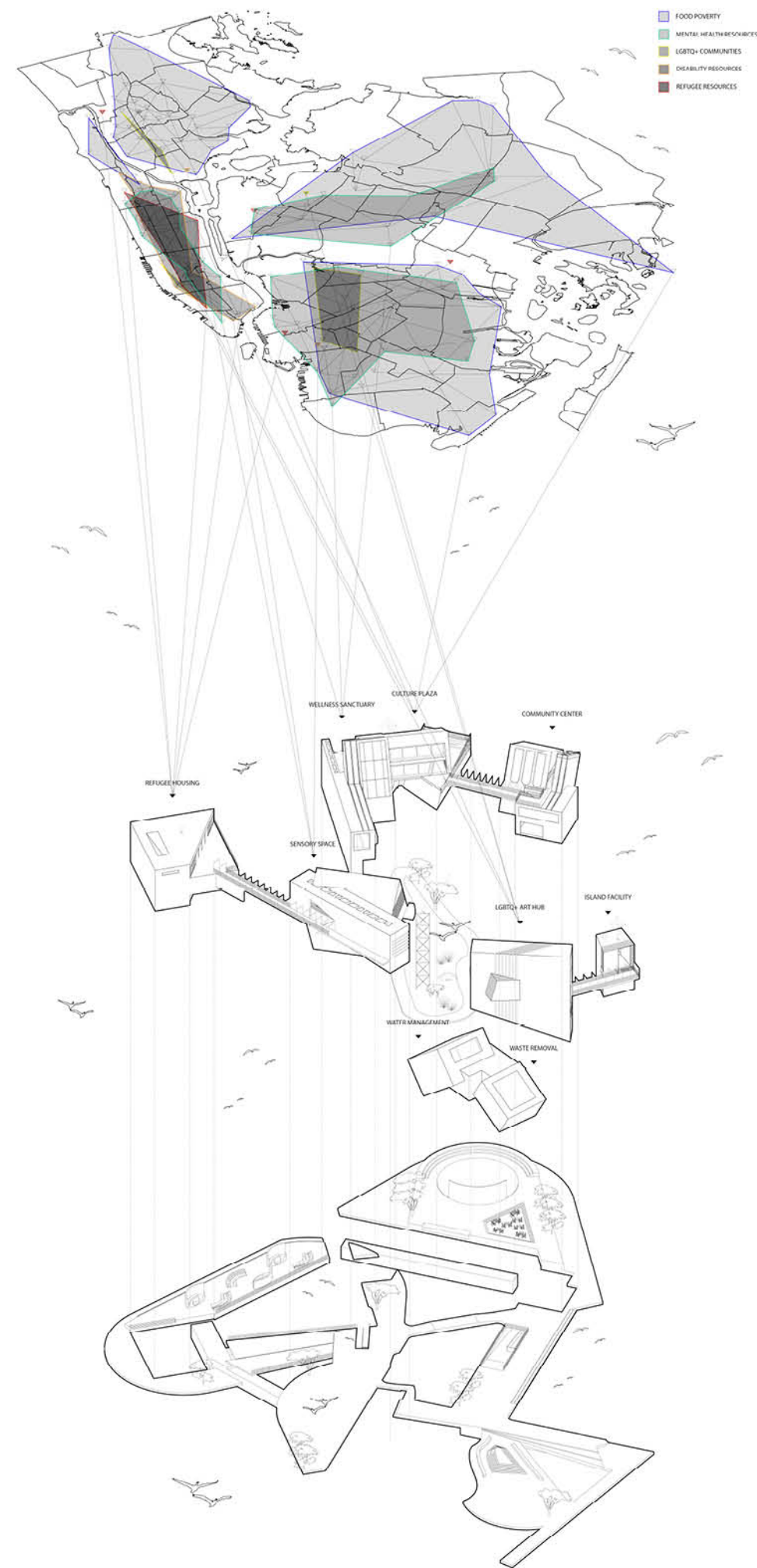
David Eugene Moon

Summer 2022

Belmont Island

Julia Maeviski, Annie Zhou, Xi Jin





## *Assembly Collectives*

Coming out of a pandemic, the city and its people are reuniting, which means the community's needs must be tended to. The focus of the project is creating assembly spaces for various groups of people. When we talk about assembly, conventionally, it is meetings happening in a grand hall, like the assembly halls in the UN. Or, street assembly grew out from the general public and grassroots on the street, protests, and parades. However, Is there an inbetween? Assembly means gathering and discussions, finding solutions. Therefore, we

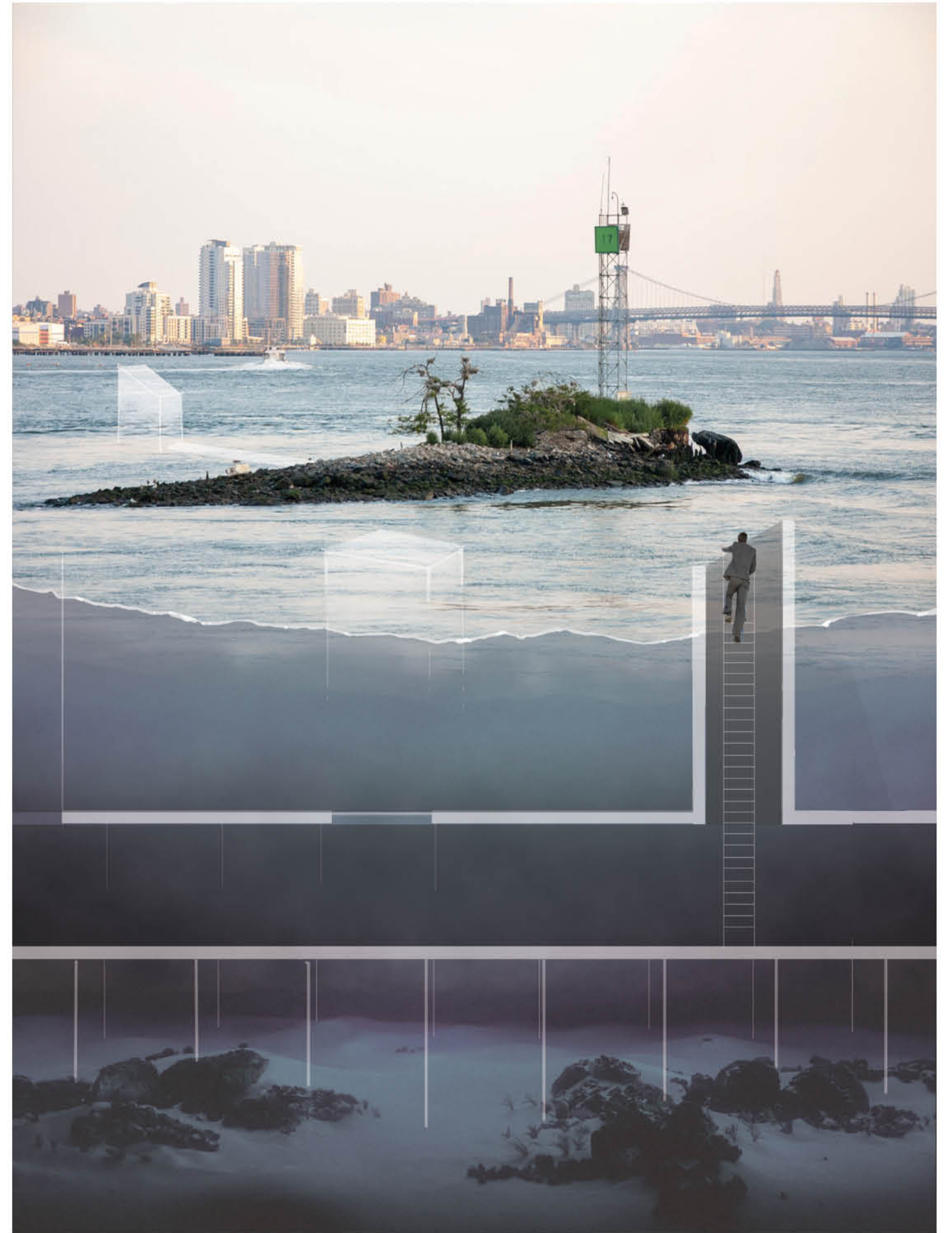
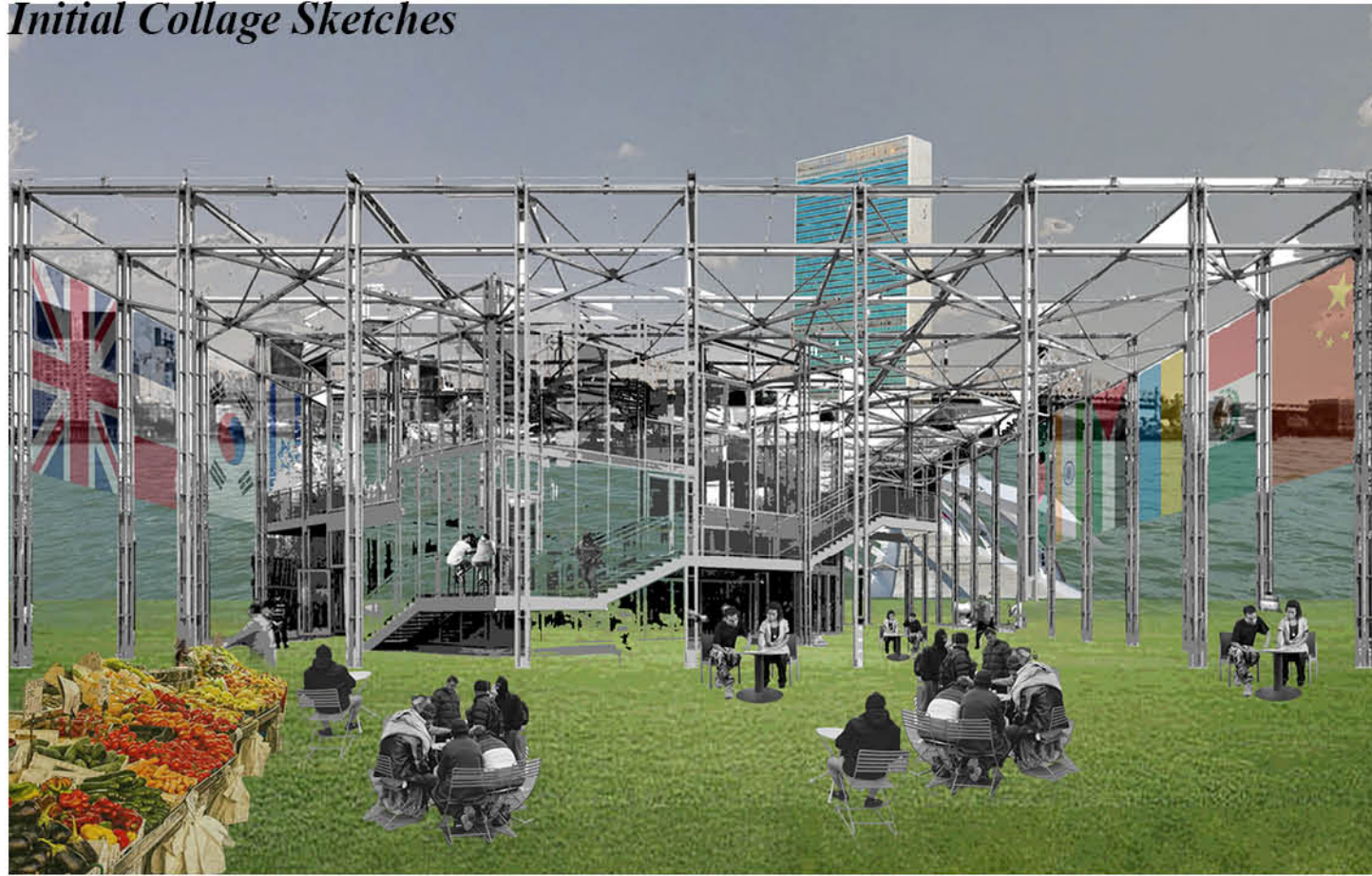
want to challenge what assembly could look like. The project's purpose is to create public spaces for discussions, sharing various experiences, physical, social, mental, etc.

Our site is Belmont Island, an island left abandoned for wilderness to take over. A wasteland created as a result of the Steinway Tunnel construction in the 1890s that was then used by the UN Peace Mediation group to maintain and plant greenery until the 1990s when access to the island was revoked.

As the project is located on the river, it allows us to use the existing ferry lines and subway infrastructure to allow access and expansion, connecting Manhattan to Queens and exploring all of their potentialities to provide a public space.



*Initial Collage Sketches*





*Section*

UNITED NATIONS HEADQUARTERS

UNITED NATIONS GENERAL ASSEMBLY

WATER MANAGEMENT

LGBTQ+ ART HUB

SENSORY SPACE

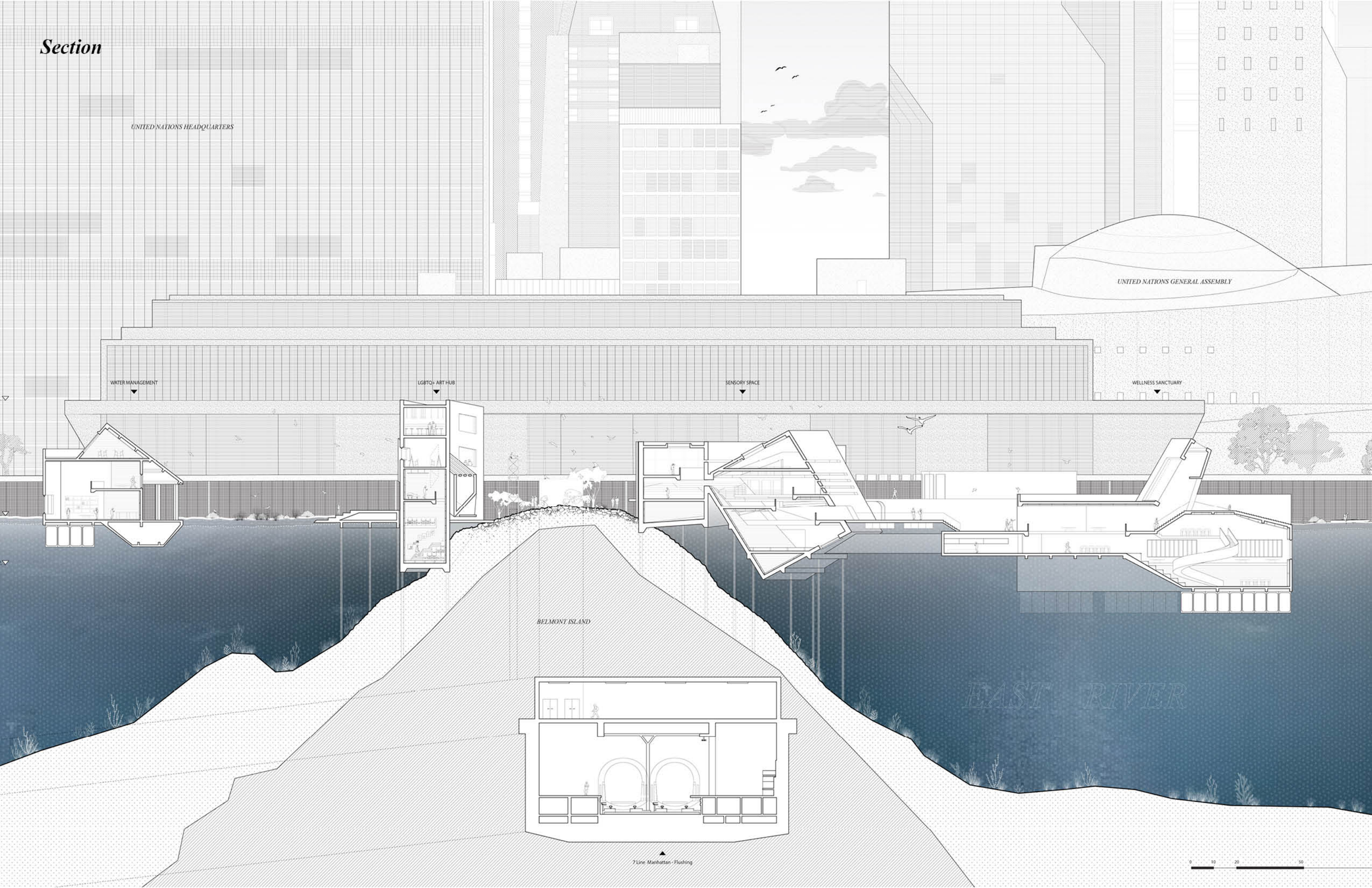
WELLNESS SANCTUARY

BELMONT ISLAND

EAST RIVER

7 Line Manhattan - Flushing

0 10 20 50



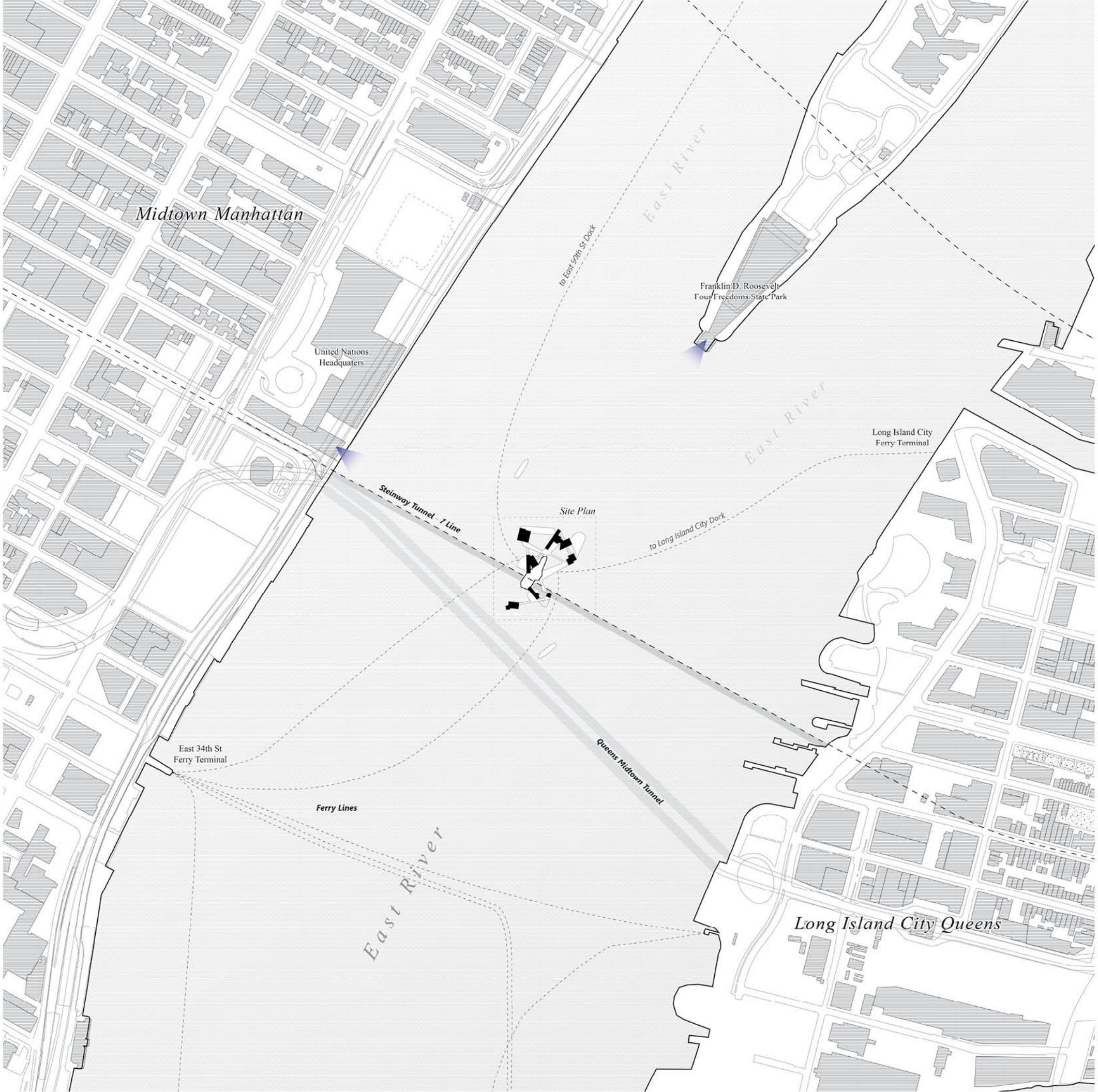


Plan



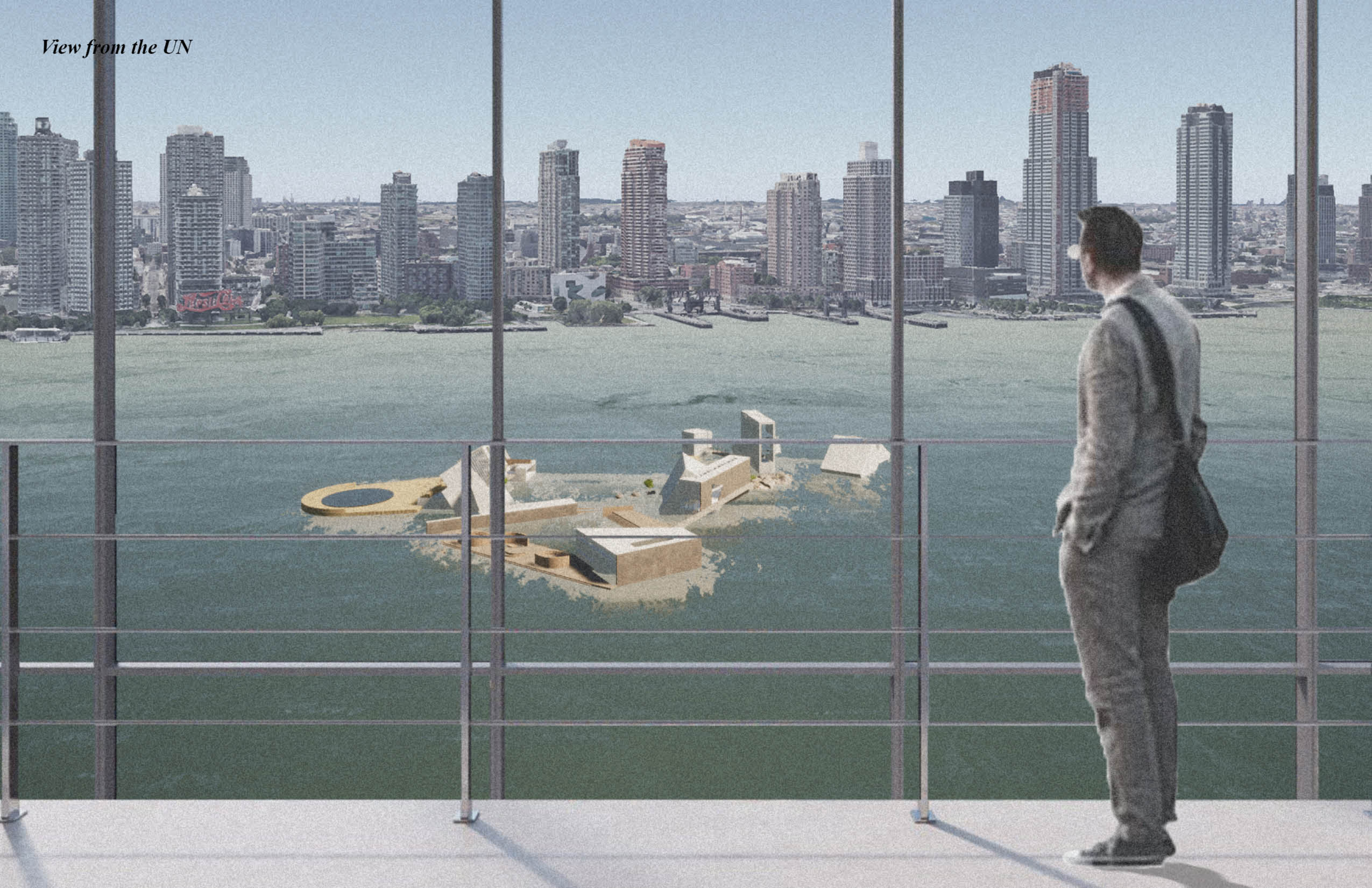


Site Plan





*View from the UN*









*Interior Sensory Space*





*Interior Culture Plaza*





***Built Model***

***Materials Used:***

*Acrylic, 3D Print, Basswood, Cherry Wood, Sand, Foam*





# The Operating Studio

*Spectacular Pedagogies: Mark Wasiuta*



Television blurs the image of what TV may contribute to students and faculty of a medical school. For the purpose of medical education, there are many forms of teaching that pose their own pros and cons. In the case of 1949-1951 hospitals, “industrial” televisions were used to send images over electrical cables between rooms within one building. SKF cameras did just so as they picked up an operation or clinic in one part of a hospital and sent the picture to an audience elsewhere in the building through this closed circuit system. This essay will be discussing the four main roles of this color television system and its adaptation to the surgical field, which are the cameras used for broadcasting, the body being broadcasted, the spatial transformation of the hospital as a result of the cameras, and the instructional image production as a result of the cameras.

The operating theater is a site of performance, observation and education, while also being a site of torture, bias, fear, and crisis. The 19th century operating theater was a large and ugly theater, fitted with wooden benches. The floor beneath the benches acted as a convenient and frequent receptacle for tobacco juice and the walls were tinted with a dirty, bluish color, and on the side nearest the operating table there was an ominous stain of seepage from the floor above. The operating theater has been through many transformations as technology developed post War World 2. This includes the role of the surgeon, the camera, the audience, and the operating space. This crisis

control room posed danger to everybody that was laid out and cut open, prone to infection, disease, and death. The operating theater’s dark history has, however, evolved since the late 1800s, turning into an operating studio.

The turning point between the 19th century operating theater and the 20th century operating studio was the growing concern around hygiene. Spectators, especially doctors from postmortem examinations, carried germs into the surgical space, crowding over the operator’s shoulder causing additional danger to the patient. Upon realization that more bodies in the room meant a greater possibility of infection for the patient, tighter control was exerted on the operating space. This includes better lighting, steel or glass worktables, easy-to-clean tile floors, and very little room for bystanders. Unlike the typical surgical amphitheatres that were on the outer edge of a hospital, new operating rooms were moved deep within the hospital, protecting access from the outdoors and bystanders. The rise in surgery marked a major change in hospital architecture causing the transformation of the old-fashioned operating theater into the post world war 2 operating studio. This modern, secluded, scientific operating studio was no longer a disastrous set designed for live operations, but a private broadcasting studio.

In Post War America, medical color television was sold to American hospital administrators and educators as an enhanced form of vision to improve, modernize and ultimately replace the surgical amphitheatres. The television industry as well as medical educators and administrators argued that the positioned color television is the ideal tool for medical education, creating a more graphic and clear image for students to study. The technology also addressed the crisis of sterility by removing the students/audience from the operating room to other parts of the hospital, or distant locations while continuing their education. Color television systems temporarily transformed the private operating room into a virtual amphitheater with a flexible space that would appeal to hospital administrators.

The American Medical Association demonstrations, organized by Smith, Kline and French Laboratories (SKF), a Philadelphia based pharmaceutical

company who sponsored and promoted medical television, were offered telecourses as a replacement for conferences in surgical amphitheater attendees physically had to attend. A year later, prior to the 1949 American Medical Association meeting, The University of Pennsylvania Institution was the first hospital to use the technology, pioneering surgery through color television.

In the same year, at the Federal Communications Commission Color Television standards hearing, it was testified that clinical demonstrations were transmitted over a closed-circuit five hours a day over four days to an estimated audience of thirty-thousand doctors, students, and other healthcare workers. Life magazine predicted color television would have a significant impact on the medical field, claiming it would “supplant the student-eye view of an operation (too often a row of smock-clad backs) with a surgeon eye’s view.” By 1951, the first seminar in the nation to be broadcast fully in color television took place at Wayne University College of Medicine in Detroit, celebrated as the first surgery to be broadcast in color from coast to coast.

The following excerpt was taken from Times Magazine describing a demonstration of a medical closed circuit color television transmission at the 1951 American Medical Association Convention, taking place in Atlantic City, New Jersey. June 25 1951, the American Medical Association convention at Atlantic City scheduled the first ever color television, over a closed-circuit system, of a birth.

In return for having her hospital bills paid, Mrs. James Gallagher agreed to have her fifth baby before the cameras. At 1:30, the baby’s head became visible on the screen. After a few more minutes Philadelphia Obstetrician John C. Ullery began to think about using forceps to speed the birth and ease the pain. Mrs. Gallagher, wide awake and sipping Coca-Cola, had had only light anesthesia. At the sight of the forceps, several women in the audience of 1,500, gathered around multiple sets, seemed about to faint. But more of the baby’s head appeared and Dr. Ullery laid aside the forceps, deciding that only some cutting of the perineum was needed. A quick snip, and the whole head appeared. The rest of the 9¾-lb. baby soon followed. Ullery said: “This is a boy.” and the crowd behind the screens applauded.

At 2:07, Mrs. Gallagher raised herself groggily, looked at the camera, and took another swig of Coke.

## The Equipment

To achieve these incredible live transmissions, there are many moving parts that make up the system. First, and most important, is the camera, lighting, receivers and other supporting equipment that was first developed by SKF and CBS and later revised by RCA.

The equipment used to broadcast operations consisted of a single camera, control and audio-equipment, and 20 color-television receivers, supplied by SKF and CBS. To enhance safety in operating rooms, the camera was built to be spark-proof. The camera was mounted on a 6 foot boom that allowed it to be moved in any direction relative to the body on the table and required a built-in dolly for simple mobility. The receiver employed a 10 inch tube with a magnifying lens that produces a picture about 12 by 14 inches which allows approximately 50 people to view the image displayed on the receiver. The transmission of the program took place over a closed circuit loop via a coaxial cable, if the transmission took place over less than a mile. However, if the transmission was over a larger distance, the transmission took place over a microwave radio relay and if there were obstacles, the signal was redirected from an intermediate point.

Lighting plays a major role in surgery, (this will come up again later on), and there were two options for surgical lighting depending on the procedure being done. Ordinary room lights were typically adequate for televising surgical operations, but sometimes it was better to supplement them with one or two portable spotlights that diffuse lighting for better viewing.

On top of lighting, the transmitting station needed a minimum of three technicians, one for each camera, control panel, and audio device. If 20 receivers are used, three technicians are required at the receiving point: two men to adjust the receivers and one man to monitor the signal. Additionally, a physician with television familiarity is beneficial for directing the cameraman during the operation and coordinating the program, adjusting speakers, lights, moving



“props”, and the arrangement of microphones while it is on air.

After about a four year trial period with the SKF cameras, RCA, an electronics and communication firm, became the color broadcasting standard and invested in medical color television within a three year span. These new cameras weighed 200 pounds, operated by remote control, and were installed on runners above the operating table in the same overhead fixture with the surgical lamp. Walter Reed Army Medical Center in Washington, D.C, SKF in Philadelphia, and University of Michigan Medical School were the first to order these cameras.

This new color television camera in the operating room was equipped with a group of lenses of varying focal length. The camera looked at the surface of a mirror which was suspended at an angle above an aperture within the center of the operating light, which was always focused on the operating field. The mirror above the lamp allowed the TV camera to focus on the operation as it proceeded.

### **The Body**

What was not concentrated on enough, was the viewpoint of the patient, or as many simply referred to as, the ‘body’. Beneath the RCA camera, if the patient lay awake, they were met with a blinding bright light, a large foreign round object hovering over them, and the surgeon with their assistants looking down at them during the operation, causing an uncomfortable scene for the patient. However, the comfort of the patient was rarely taken into consideration and oftentimes simplified into merely an object that was to be studied.

From an outside perspective, company executives were more focused on using color television to better present the details of the body’s physiological structures and processes, which is key to students and other medical professionals studying the procedure.

As technology developed and the color television was being used more in hospitals, many medical professionals who practiced outside of technologically advanced facilities disapproved of or felt resentment towards the profession’s seeming blind acceptance of such technologies. David Serlin,

professor in the Department of Communication at UC San Diego and faculty at the Center for the Study of Social Difference at Columbia University, notes that concerns regarding the medical profession’s move towards impersonalization and reduction of “the whole body into anonymous and isolated more manageable units” arose from television’s linkages to surveillance functions.

During the virtual surgery sessions, medical professionals and Students were given unparalleled access to the procedures of surgical technique and human functions and virtually moved to an optimum location in regard to a distant body. Because of this, any possible criticism of the technology’s dehumanizing features was discursively avoided or answered. The unique kind of televisual “witnessing” ties viewers to the live event in an instantaneous and visceral way giving viewers the opportunity to be present with the body and experience in real time through television. This sounds ideal to the viewer, however, there was little concern for where the patient was located, the history and other background information and details on the patient that humanized the body laying on the surgical table.

Furthermore, the view of the body’s internal system became of interest in 1968 when the U.S. Army started using CBS developed miniature cameras to transmit live footage from inside the body during procedures, changing the background of the television screen from the operating room to inside the body, also known as endoscopy. The camera was attached to a lens of a telescope that had a light to illuminate. As media scholar Jose van Dijck describes this new imaging technique, it places man in the center of the universe. “Endoscopy signifies the power to extend the human eye to the body’s interior” allowing us to see inside organs and cavities. This new form of viewing was important for the development of the surgical field, but to the hundreds of viewers watching the transmission receivers, it was simply a new and exciting angle of the body that they’ve never seen before.

### **The Space**

As the camera and body were transported around the hospital, new operating rooms were multiplying

and being redesigned within the hospital building to accommodate for the camera and its equipment. Designing operating rooms gave students the chance to see surgery up close and gain a deeper understanding of live tissue through the screen.

Since television cameras have the potential to work in any room in the hospital as long as it has a high enough ceiling for large operating room lights and allows for high quality views of the operative field, medical schools could increase the number of spectators attending lectures, as the audience size would only be limited by the number of receivers available. Although photographs taken of images and professionals crowding around the small receivers to watch the closed-circuit transmissions gave the impression that the ‘ideal sightlines and large audiences’ were still questionable.

These broadcasts ran a program of about three hours in which five major operative procedures could be scheduled which required two or three adjacent operating rooms. This allowed the camera to be moved immediately to the next patient that was already prepared with preliminary steps of the operation. Alternatively, the patient that has already been prepared in the adjacent operating room can be moved under the camera.

When considering the design of a new building, it was important to consider the television camera for operating studios that can be mounted in a room that had sufficient ceiling height to accommodate for any major operating room light. This, on top of the fact that the television camera allowed a high quality view of the operative field that’s better than any viewing gallery, implies that only few new hospitals were able to afford such costly operating amphitheatres. With a television camera set comes a control room that must be no less than 8 feet by 12 feet if two cameras were used, but larger if more than 2 cameras were used. The control room is to be as nearest to the center of all the camera locations as possible, as problems may interfere with the transmission when the camera is at greater distance from the master control monitor.

The operating spaces had explicit instructions on how to best light, choreograph. direct, and perform for the cameras installed in the rooms in order to

produce the most effective and clear image that would grab the attention of the audience behind the receivers. Following the intended lighting for the production, complaints came from both the surgeons and audience. Since operating rooms were no longer on the extremities of the hospital, there was no source of natural light coming from windows or skylights and all lights were coming from surgical lamps. This came into play when surgeons and the audience were noticing a glare reflecting off the white coats of the surgeons and the white walls of the surgical rooms. This was causing a “green ghosting” phenomena when the eyes would shift from red to a white background. It was then, when it was recommended that surgeons switch to wearing light green or light blue masks, caps, and gowns instead of the white ones. Additionally, cool light blues and soft greens were introduced into operating room walls to further improve attention of both the surgeons and the audience. These colors were a way of giving the surgeons’ eyes a break as they looked up or away from the body laid out on the table. The colors affected their tired vision from looking into and working within the red bloody body cavities. Soon after, green and blue smocks were introduced by way of the influence of the closed-circuit television for in house training programs surgeons had to go through.

Instead of a digital recreation of a surgical amphitheater, the operating rooms were said to be more like studio television performance and production sets. This suggests that as surgical spaces moved away from the conventions of surgical theaters and toward the standards of television production, changing the procedures and the meaning of performance within a surgical theater, the social and professional roles of the surgical space now held a different value.

### **The Education**

The introduction of color medical television intersects with and rewrites the history and performance of medical education, the surgical space, as well as the discourse around the relationship between human and television. The human and machine come together relying on one another to perform the procedure and broadcast the information to students and colleagues for



their education and entertainment. In doing so, telemedicine's promise to establish a virtual surgical amphitheater relied on the construction and maintenance of the hospital television studio, which in turn, eventually reconfigured procedures, and visual strategies of the teaching hospital.

Due to the operating room being a semi-publicised event, one can call it an operating studio that incorporated a spectacle for the viewers on the other end of the closed circuit system. Compared to the surgical theater performance which included a speech, pledge, and applause, surgeons required acting training for television presentations including being perceived as relaxed, sincere, direct, concise, and interesting, which I'd argue we still see in surgeons today. In surgical amphitheaters, surgeons took a theatrical flair to entertain their audience as they raced the clock, losing skill in technique, causing a predicament of ethics. In the surgical studio, the surgeon must perform as multiple actors, the teacher and the entertainer, providing commentary, and choreographing his/her body around the camera.

As we know, teaching came with the difficult task of entertaining. SKF promoted their television's liveliness as televised surgery with a factor of suspense that has an unpredictable ending. Students learned most from the unexpected as surgeons battled every case using adaptable approaches as the crisis of the cut open body unfolded on the operating table. One of the most exciting, teachable, and memorable moments, according to the American Medical Association convention in Atlantic City, NJ, was when a needle broke at a crucial point during an eye surgery and the surgeon maneuvered through the crisis and successfully completed the operation through improvisation. After operations, students and colleagues also had the opportunity to ask the surgeons questions with arranged telephone connections between the operating room and remote television site.

However, the performance had many flaws as a result of poor initial adaptation to the studio operation. Surgeons became accustomed to the acoustics of a surgical theater, allowing them to pitch their voice to be heard by the seated audience in the amphitheater and lower their

voice when making remarks to the operative team. On television, this habit had to be broken as the small microphone placed between the layers of the surgeon's mask picked up the slightest sound. Whispered commands gave an impression of nervousness or irascibility which would not be conveyed if spoken in a normal voice.

As a result of teaching operative surgery by means of color television, it was observed that most surgeons miscalculate the size of the surgical field visible to the television audience. The field of visibility is typically very small, only allowing spectators to see the actual site of operation without context. Viewers couldn't visualize the position of the patient or the location of the operative suite. Therefore, surgeons had to demonstrate landmarks as well as indicate whether the camera was placed at the hood, foot, or to the side of the patient. Frequently, surgeons would hold inadequate demonstrations of pathological specimens that were removed at operation and therefore, at a distance from the site of operation with poor lighting and focus of the camera.

Since the camera is placed about 2 to 3 feet above the site of operation, it's inevitable that the surgeon or assistants would obscure the view for periods of time. At these occurrences, the intercommunication system employed a physician to be placed by the receiver and monitored the transmission, informing the surgeon to change position in order to clear the view of the camera once again. A running commentary keeps the audience engaged, but when attention was brought to one detail for an extended amount of time, commentary veered off to unrelated subjects such as the history, physical findings, mortality statistics, etc.

Faculty members of the hospital were the source of teaching programs as well as the essential fabricators of any comprehensive plan for the use of the television in multiple audience areas. This included medical students, practicing physicians, specialists, dentists, nurses and allied scientists. The focus of this essay is medical students and specialists in the surgical field. The instructional image production of the operative field provided its audience with a mechanism of interdepartmental cooperation. A demonstration of an operation would call upon

the department of anatomy, physiology, pathology, anesthesiology and pharmacy for contributions, in order to deepen the meaning of what otherwise might be primarily a demonstration of surgical technique. This was also a great advantage of the televisual instruction compared to the surgical amphitheater that concentrated the focus solely on the surgeon and required quiet and great attentiveness to the patient without other disruption.

It's important to note that education through television was not only used within the space of the hospital; one of its advantages was its mobility. Faculty members were obligated to engage in lectures and discussion with practicing physicians and surgeons. However, many also spent a lot of time traveling frequently many miles apart for meetings and conferences. The power of the television would permit the specialists to teach many practicing physicians and surgeons without ever having to leave their medical centers. This not only saved time, it also gave opportunity for bringing other demonstrational media into the meetings that otherwise could not be brought. At the end of the day, television instructing lessons eliminated the space between these specialists and the medical center allowing them to tend to more patients.

Furthermore, televisions in hospitals cut costs by bringing "visual education" into the classroom and providing access to topics and educators that some schools could not afford to supply, as well as standardizing the medical educational content across the nation. Television also provided opportunities for those in rural areas such as professionals who were unable to hone in on their expertise working far from big city hospitals teaching the latest techniques.

Utilizing state-of-the-art technology, such as color television, supported the trend toward integrating more technologies, including the X-ray, IV treatment, and the ECG, into hospital infrastructures. These technologies replaced the sensory observations physicians or technicians had to make about patients. Color television, however, was the best scientific equipment that transported students into the position of a live surgeon or a large-scale microscopic image, creating

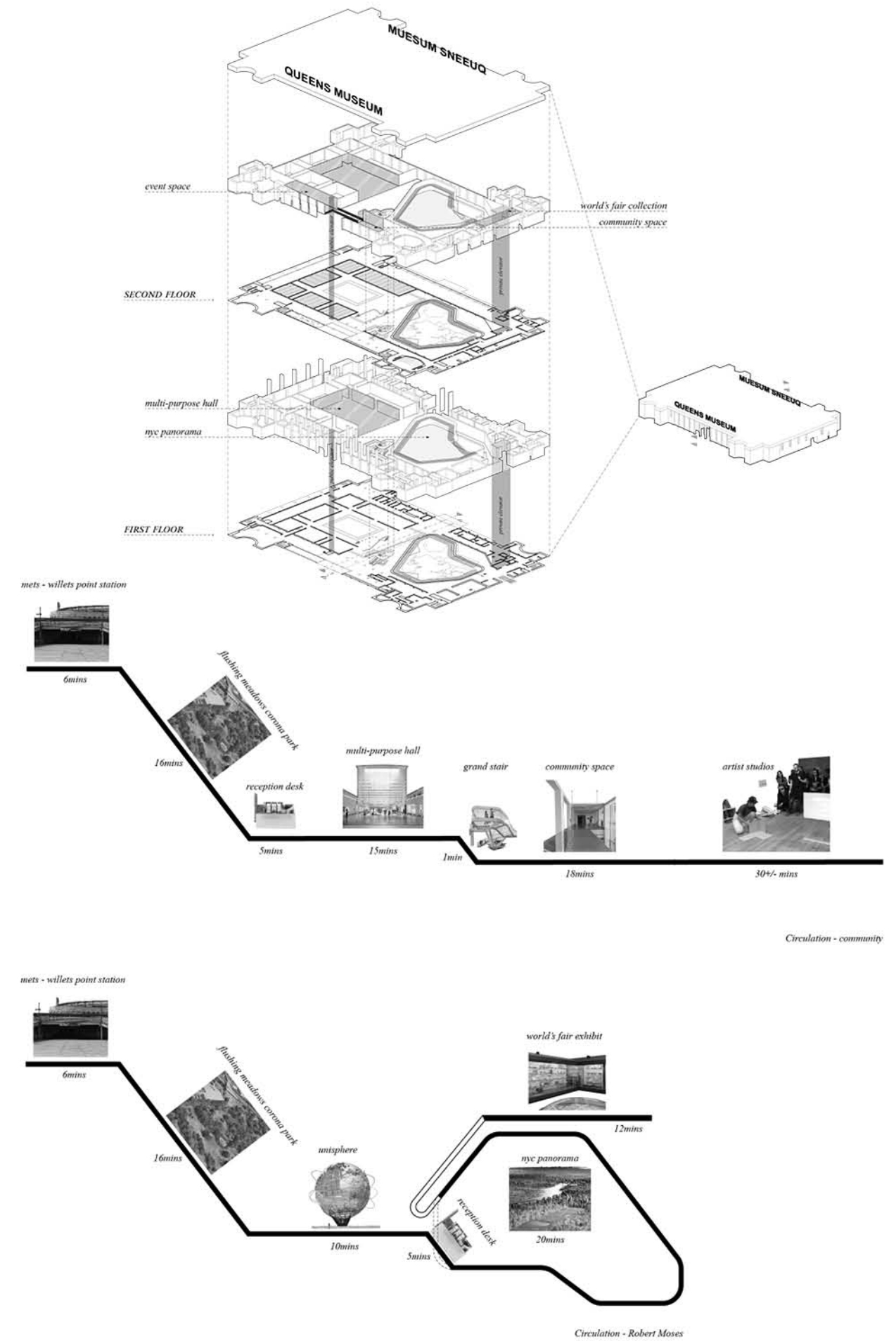
an augmented reality for the viewers. The color television was especially important compared to monochrome as it was too difficult to distinguish between human tissue, making it difficult to analyze the condition of the diseased organ through the screen. Neuropsychologist, Lisa D. Ravdin even stated that it is only possible to use monochrome television if working with cadavers as the color is already drained of the body. Color television was no longer a laboratory toy, it gave higher quality pictures and was versatile in more ways than demonstrations of surgical techniques, which was its primary purpose.

The historical significance of color television may be traced back to the early days of medical television and its effects on operating rooms, hospitals, and general medical procedures. The historical relevance of visual media and technology in the practice of medicine as well as its interactions with the human body, the general public, and the profession may be understood through this method. This early stage in the evolution of medical television also demonstrates how, at the time, it was believed that color television in particular might revolutionize not only medical practice and instruction but vision itself.

In the management of a crisis, discourse through one small screen can't cope with the vastness of information needed to fully experience and understand the needs of the body in the moment of crisis. The operating studio is a compressed physical space containing advanced technology including surgical studio cameras that broadcast surgeries on bodies that produce riveting outcomes using instructional image production, and spatial transformation of the hospital. And only with these technological advancements, studies, and trials, would we get to where we are today, we multiple screens relaying live information to surgeons, new cameras that explore inside the body, and new and improved methods of teaching and viewing the body that even the patient can participate in as they lay on the surgical table.



# 0.2 DECOLONIZE



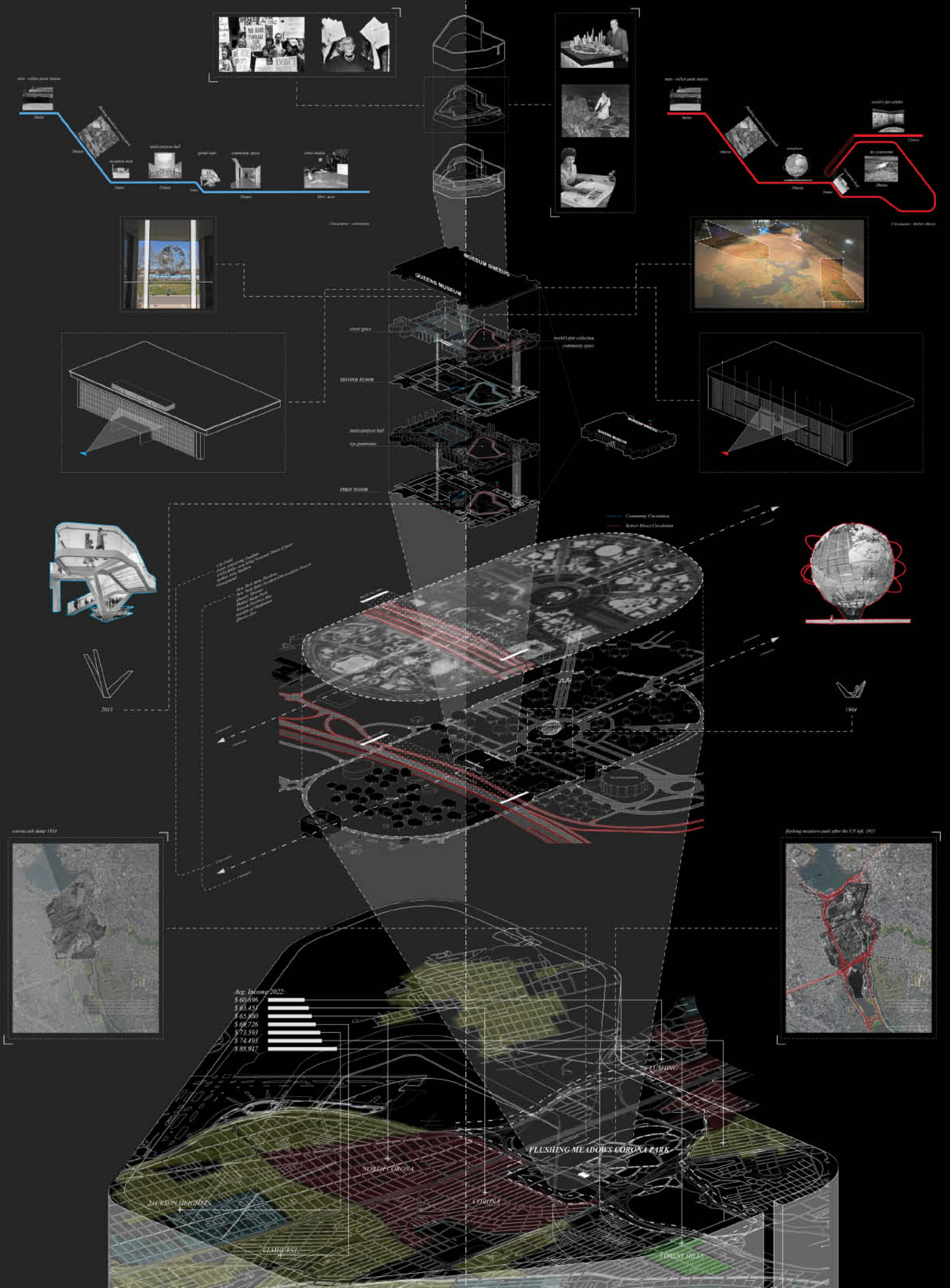
## *Urban Futures/Future Architectures USA 6.0: Post Plantation Museum*

Mabel O. Wilson, Jordan Carver

Fall 2022

Queens, NY

Julia Maeviski & Annie Zhou



## Queens *\*not\** a Museum

Queens *\*not\** a Museum is a post-plantation museum that decentralizes and decolonizes the museum as an institution. It disrupts the organization of its rigid past to situate its identity towards the future of the community.

The Queens Museum is a site of many generations that transcended through history to live up to its new model of resistance,

decolonizing the historic paradigm of a museum. The building was first erected in 1939 for the World's Fair as a part of Robert Moses' urban renewal project, which accompanied the development of highways, exercising racial and cultural violence to the vast immigrant neighborhoods residing in Queens. Serving multiple identities throughout the years

from the New York City Building to the UN to an ice rink and the Queens Museum today, despite the efforts of morphing towards a community based museum is prominent, its ties with the work of Robert Moses is still a central drive for the museum. Cultivating the history of the museum as a commodification for profit while advocating for the community magnifies a cultural

identity crisis as a result of urbicide that stems from plantation logic that calls for our attention today.

Our project Queens *\*not\** a Museum is a proposal for the museum to morph away from its past, de-anchoring the big house, which is the Queens Museum, and magnify the already present efforts for community engagement.



*Corona Park Ash Dump*



*This is a valley of ashes – a fantastic farm where ashes grow like wheat into ridges and hills and grotesque gardens; where ashes take the forms of houses and chimneys and rising smoke and, finally, with a transcendent effort, of men who move dimly and already crumbling through the powdery air.*

*The Great Gatsby*

*Corona Ash Dump, 1924*

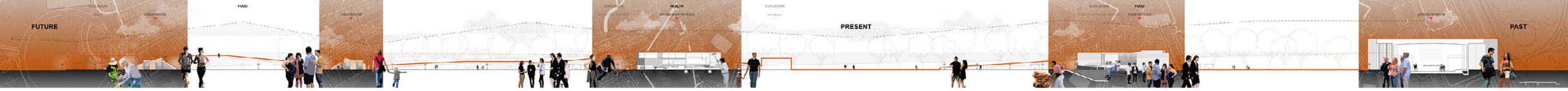
*Corona Park World's Fair*



*The valley of ashes has continued to be used as inspiration to frame urban renewal as heroic effort to turn a wasteland into a Biblical garden*

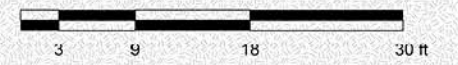
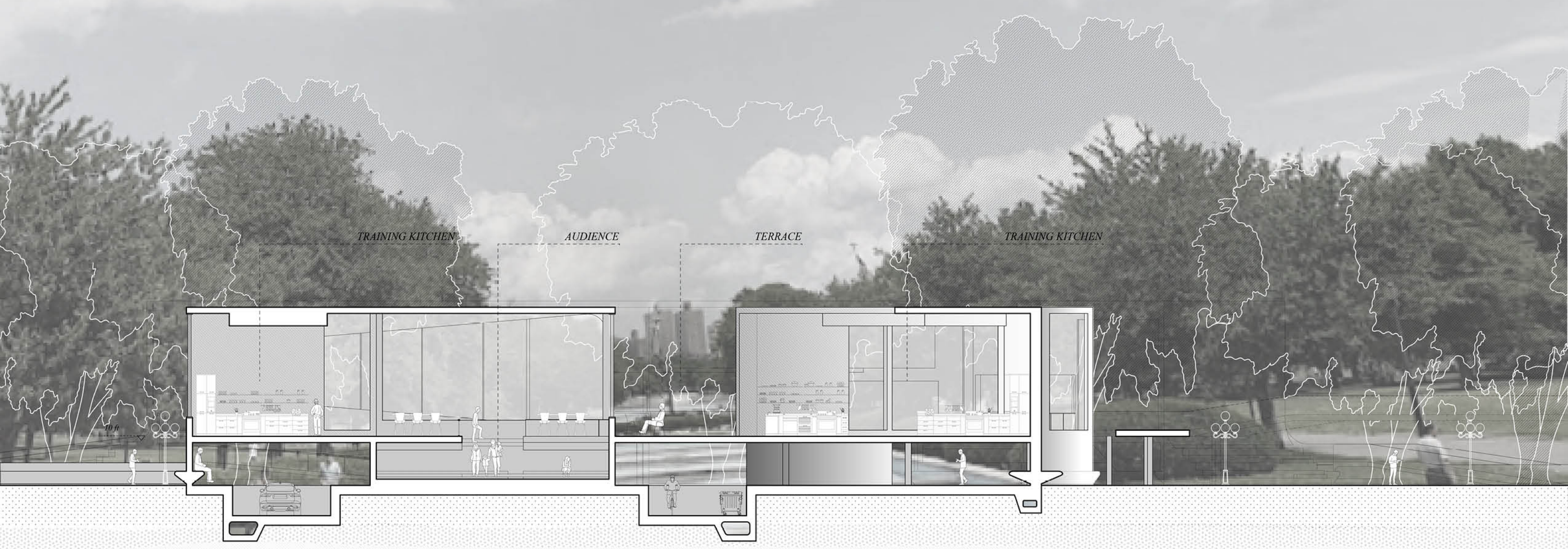
*Flushing Meadows Park just after the United Nations left the area, 1951*



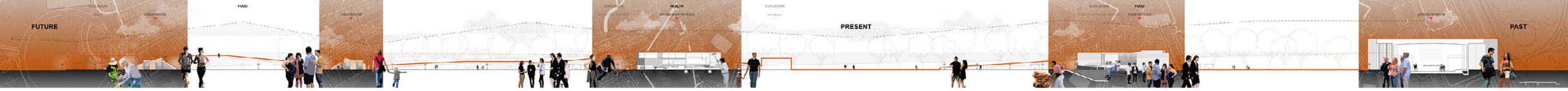


# FOOD

## *Cooking Pavilion*







# HEALTH

## *Art Therapy Pavilion*



MURAL STUDIO

Artist: Tova Snyder

"The Full Spectrum - Health and Well-Being"

EXTERIOR MURAL

ART THERAPY

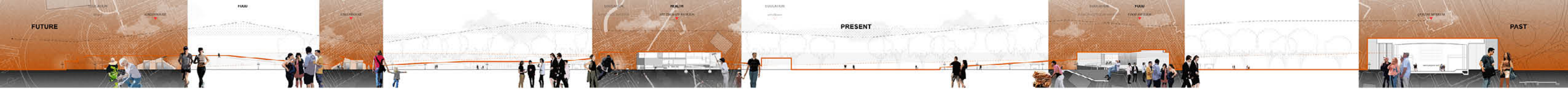
30 ft

19 ft

9 ft

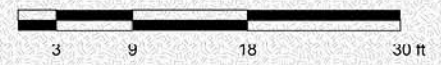
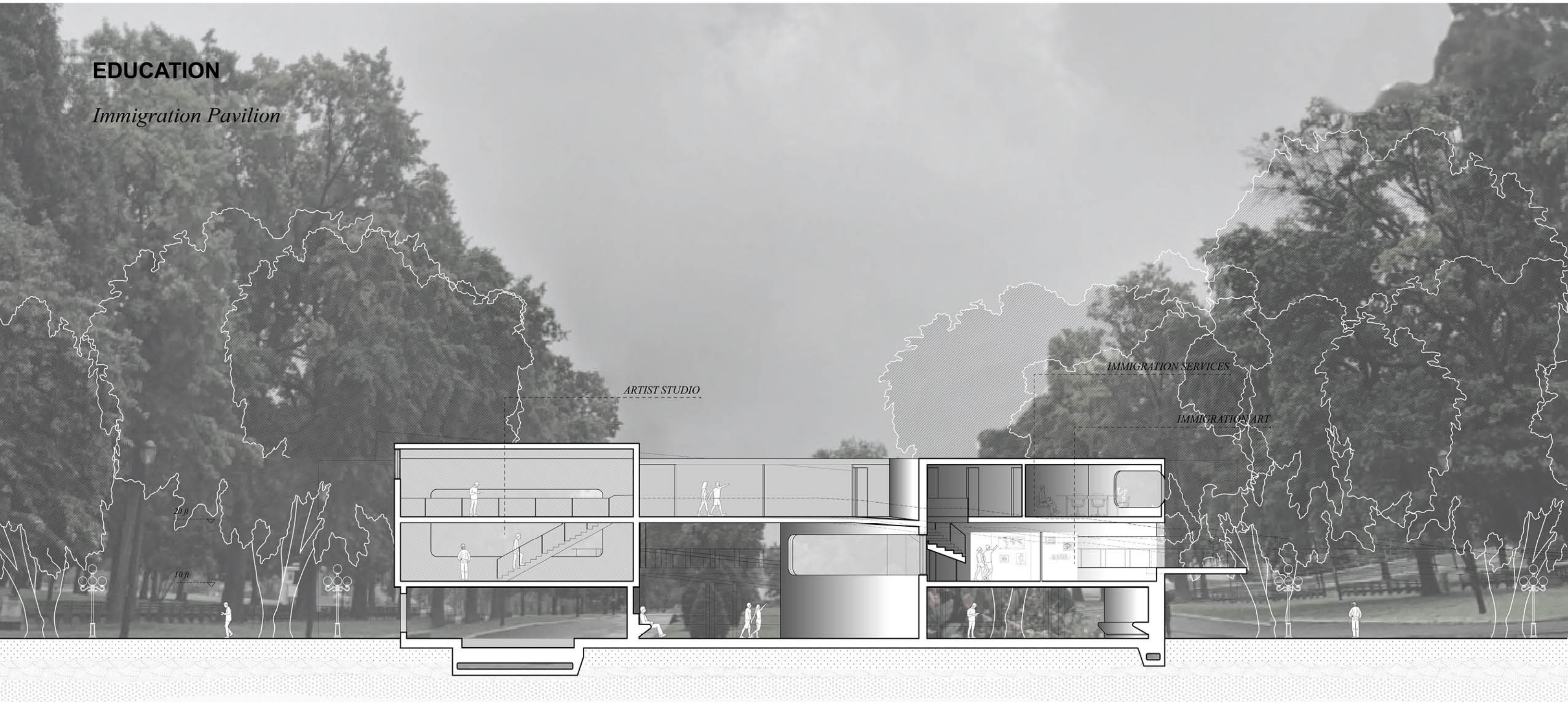






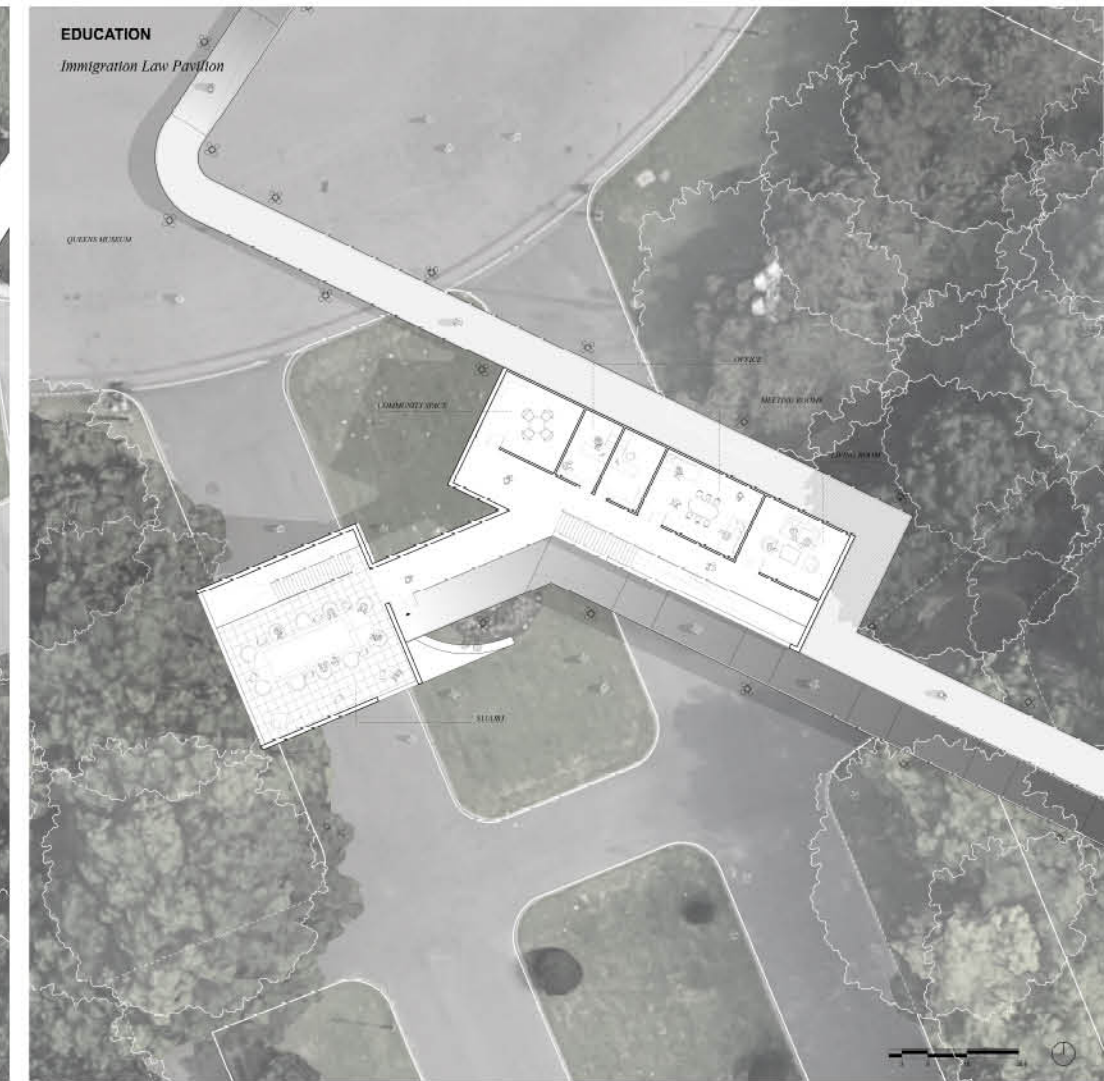
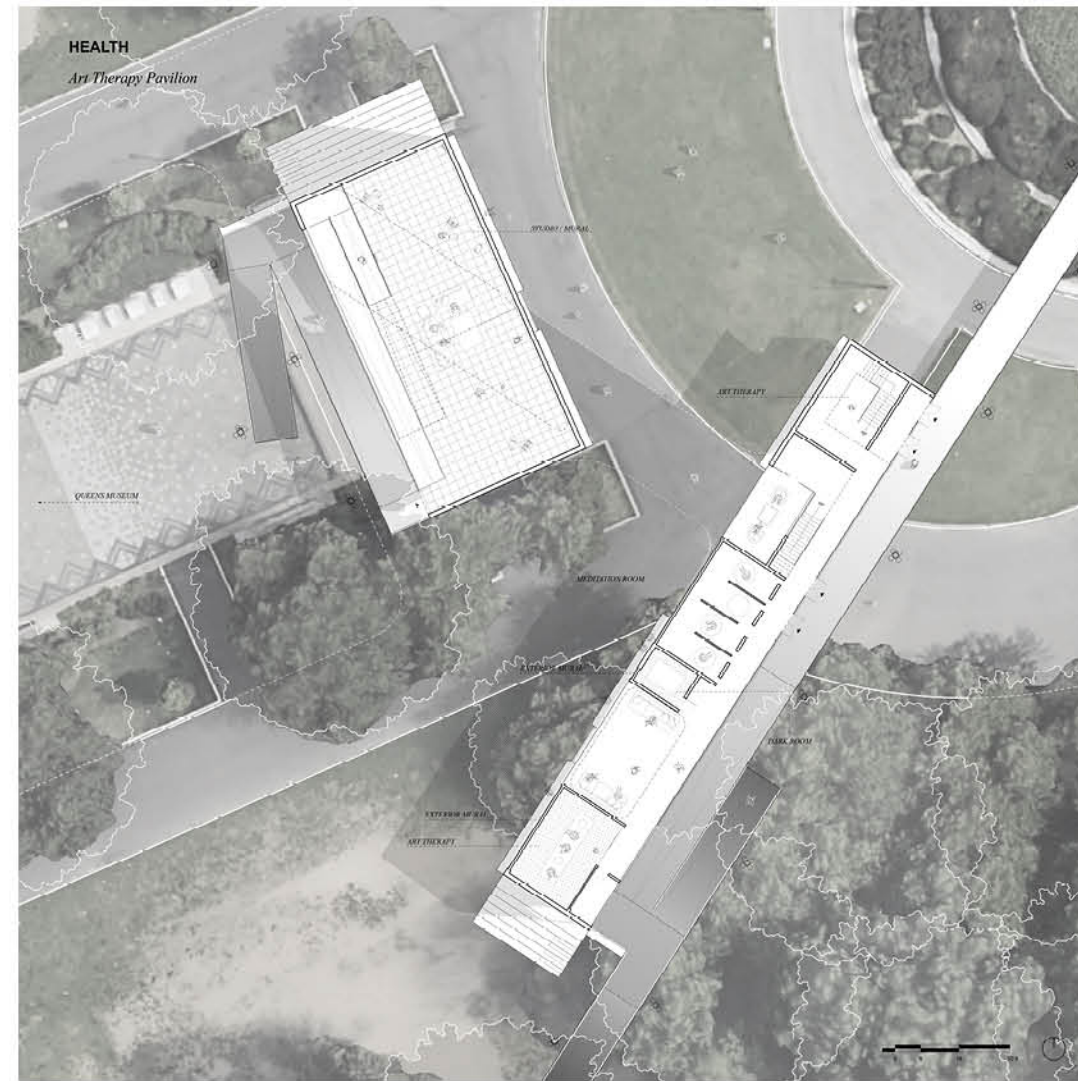
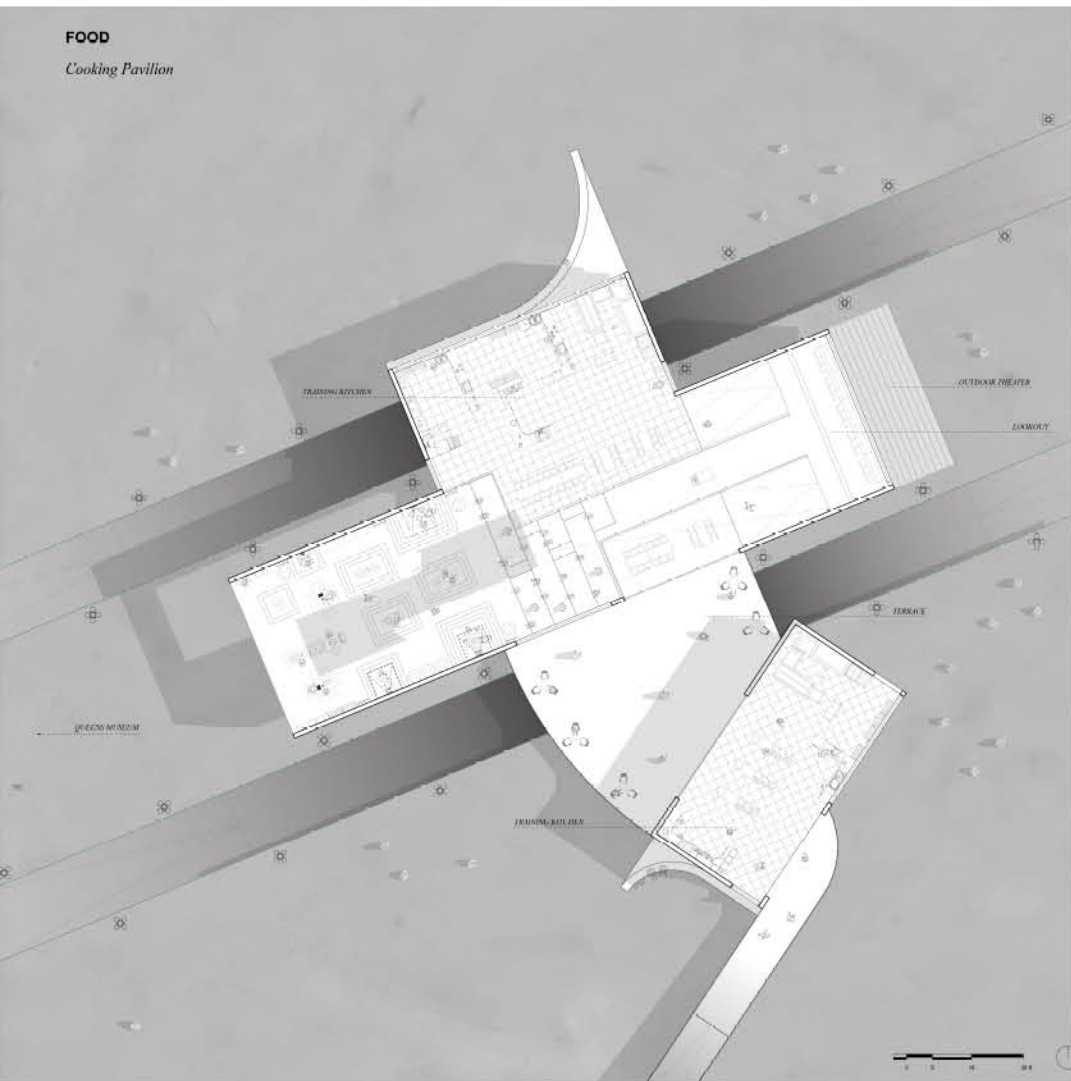
# EDUCATION

## *Immigration Pavilion*





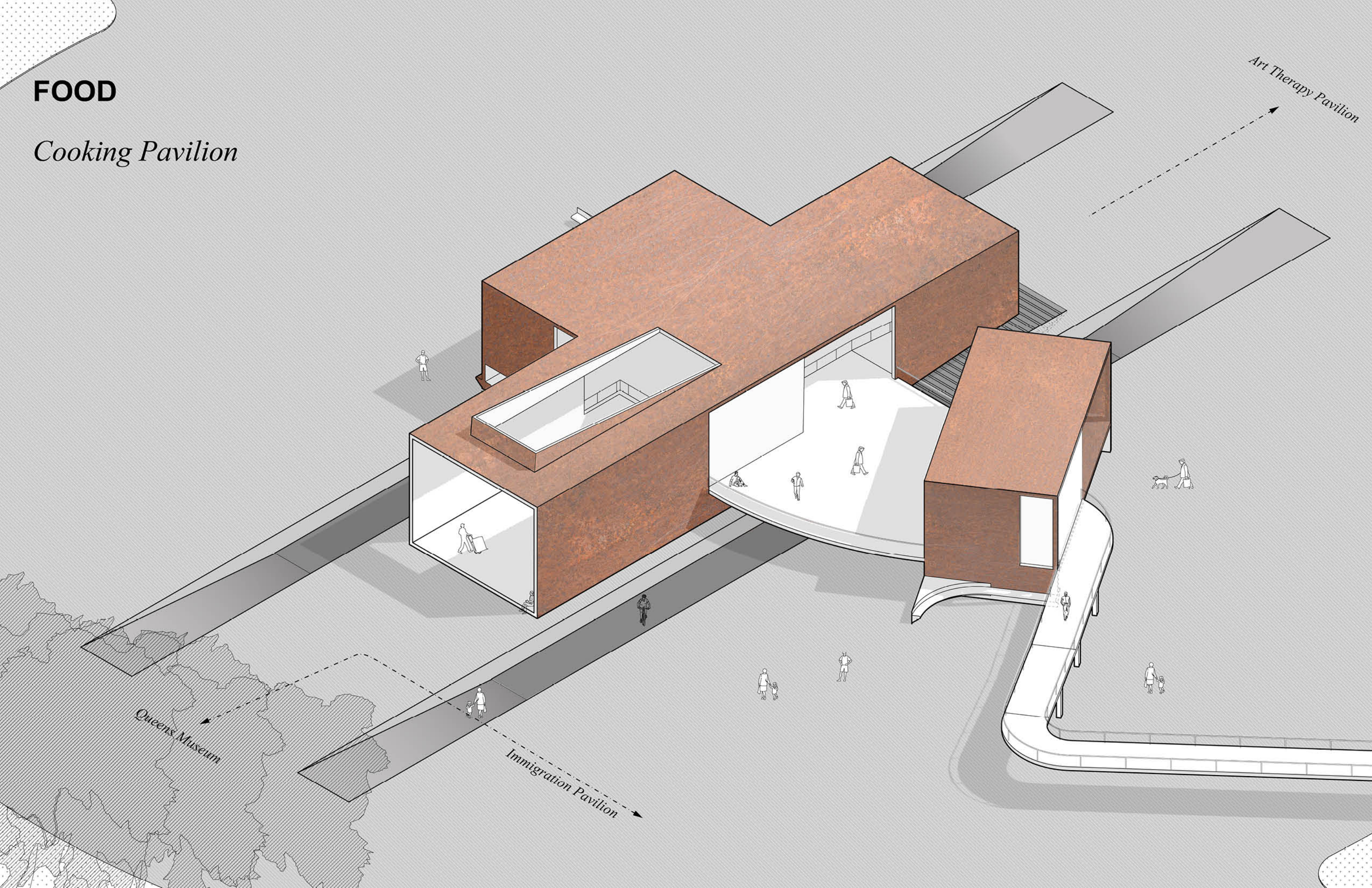
# Proposed Plans



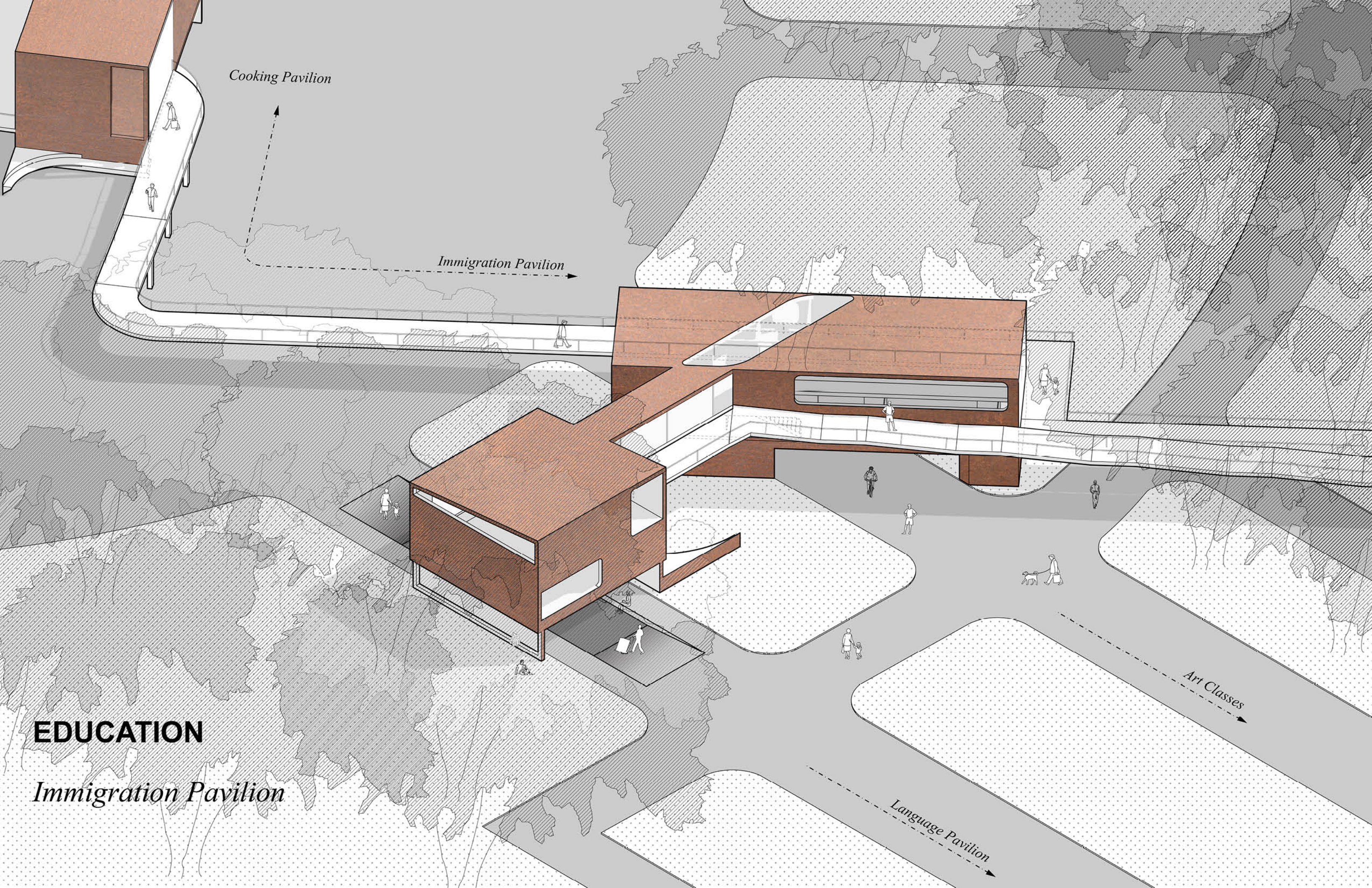


**FOOD**

*Cooking Pavilion*







*Cooking Pavilion*

*Immigration Pavilion*

*Art Classes*

*Language Pavilion*

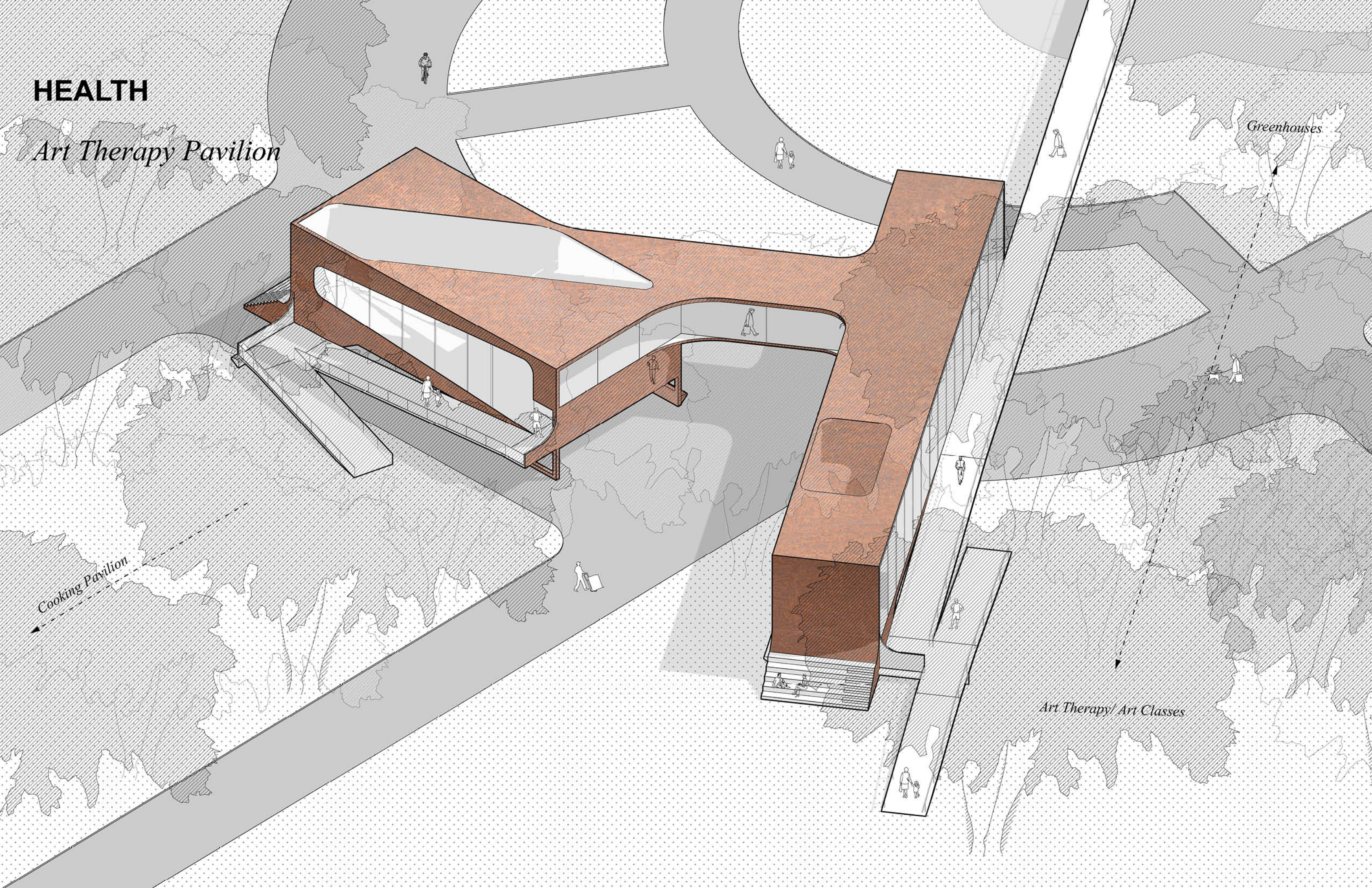
**EDUCATION**

*Immigration Pavilion*



# HEALTH

*Art Therapy Pavilion*



*Greenhouses*

*Cooking Pavilion*

*Art Therapy/ Art Classes*



*View of Cooking Pavilion From Inside  
Queens Museum*





*Exterior Art Therapy Pavilion*





*Interior Cooking Pavilion*



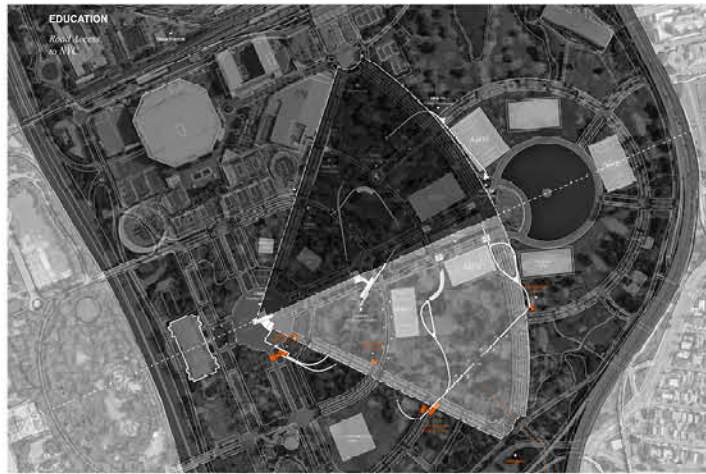
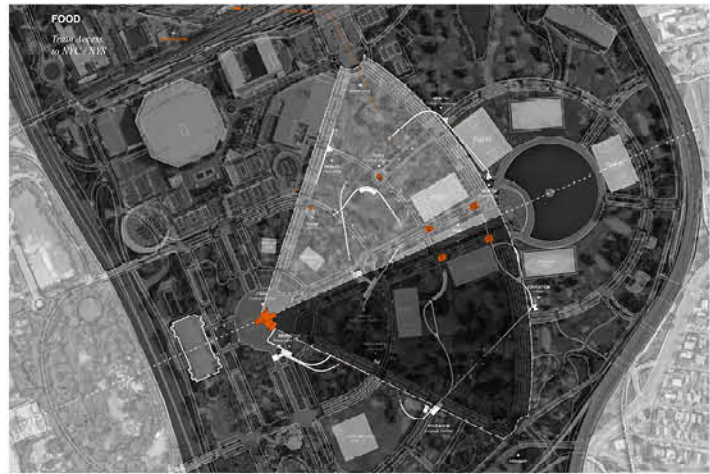
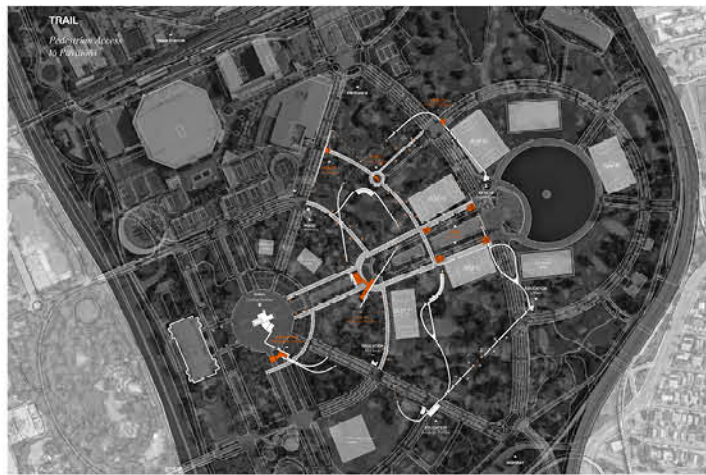
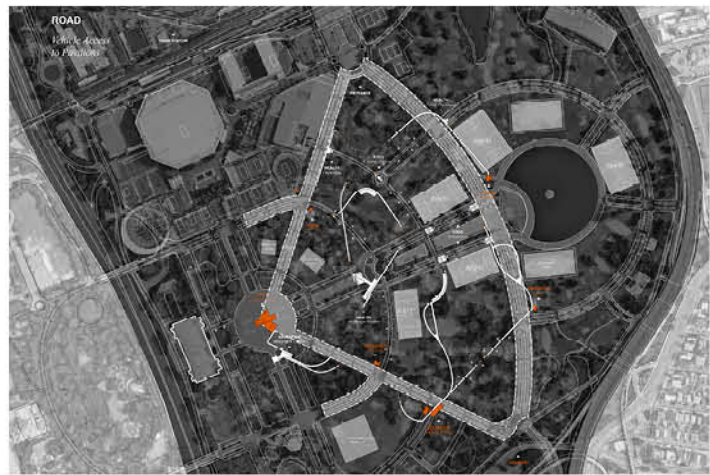
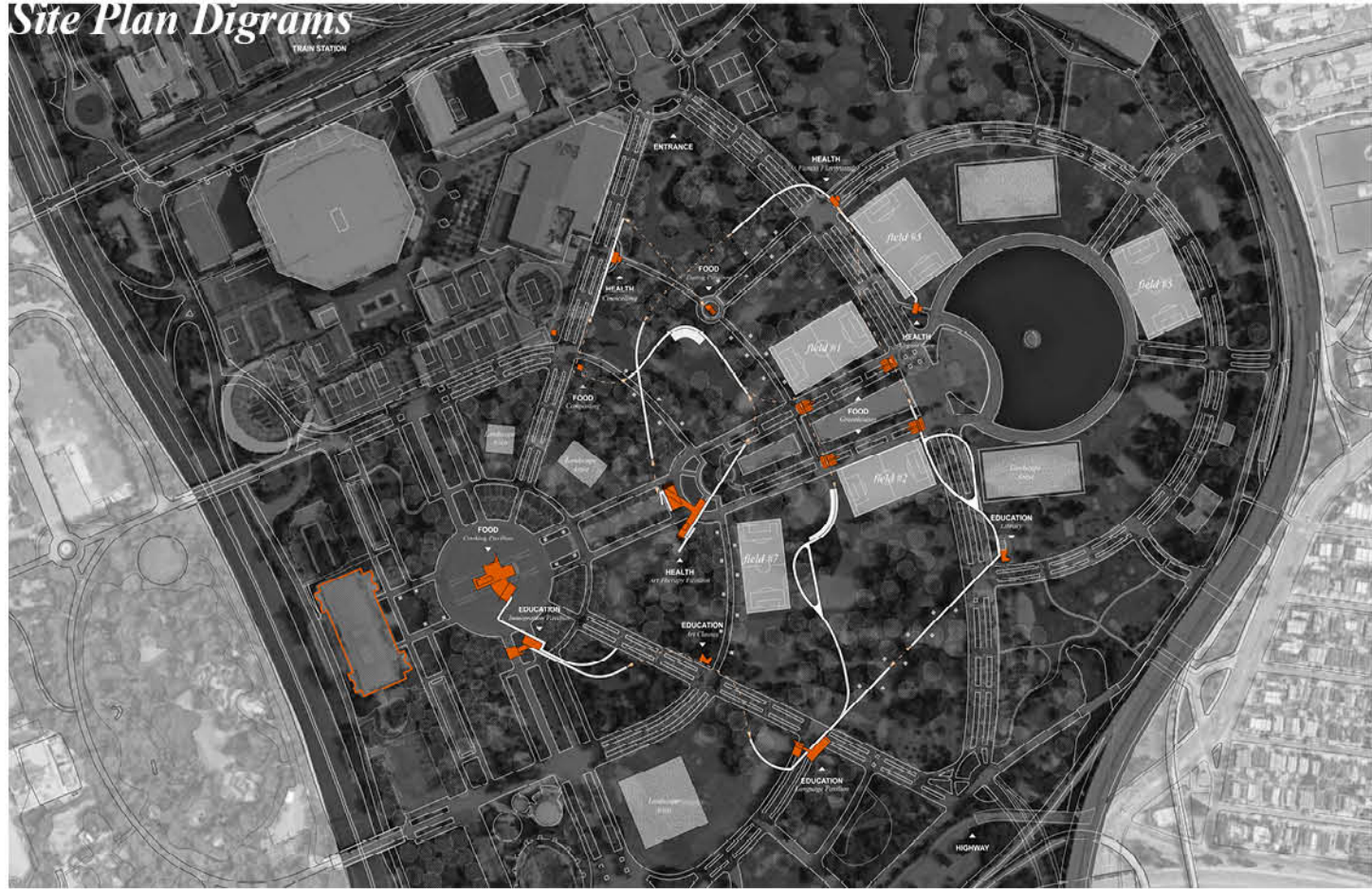
TRAINING KITCHEN

FOOD PAVILION

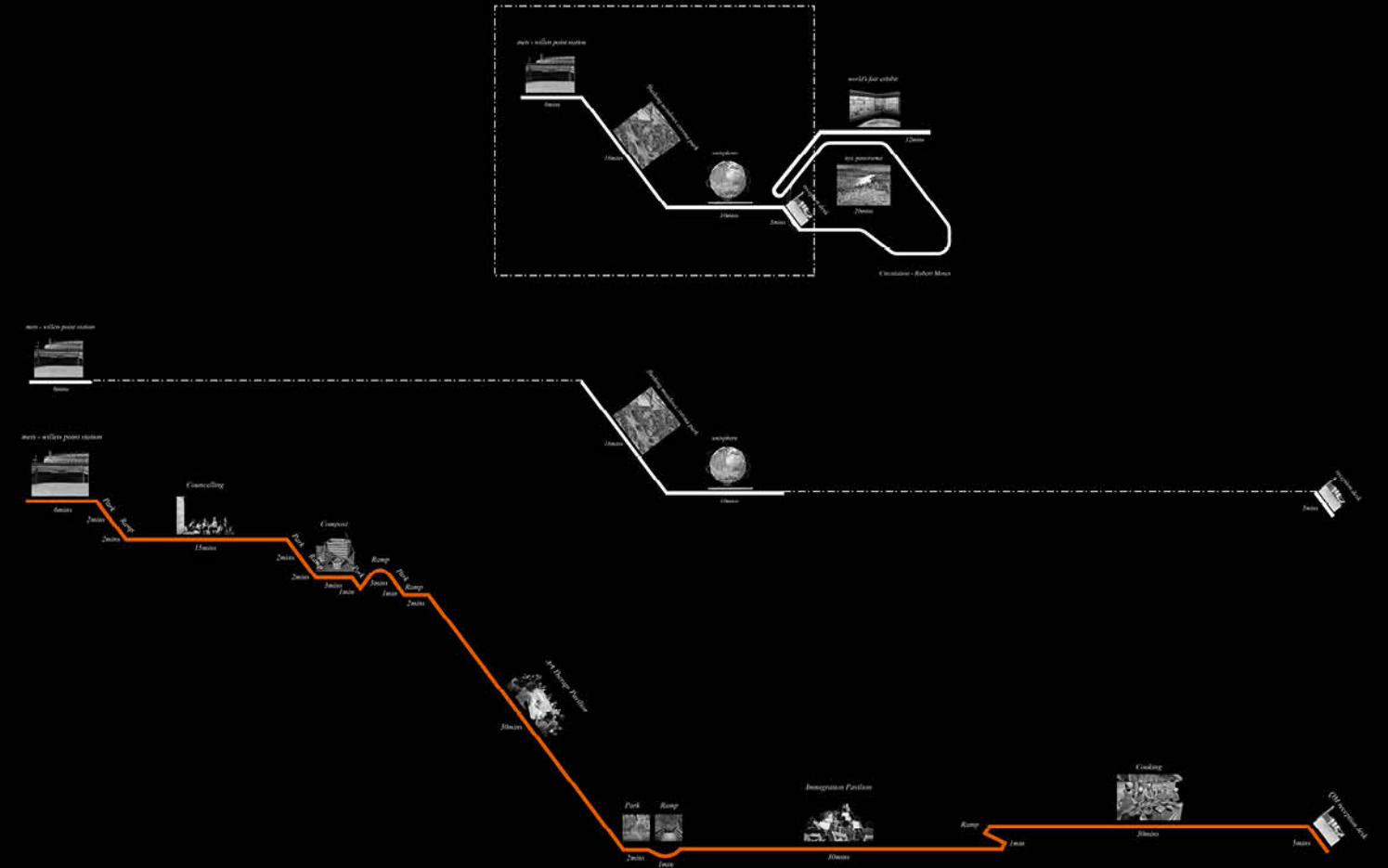
QUEENS MUSEUM



# Site Plan Diagrams

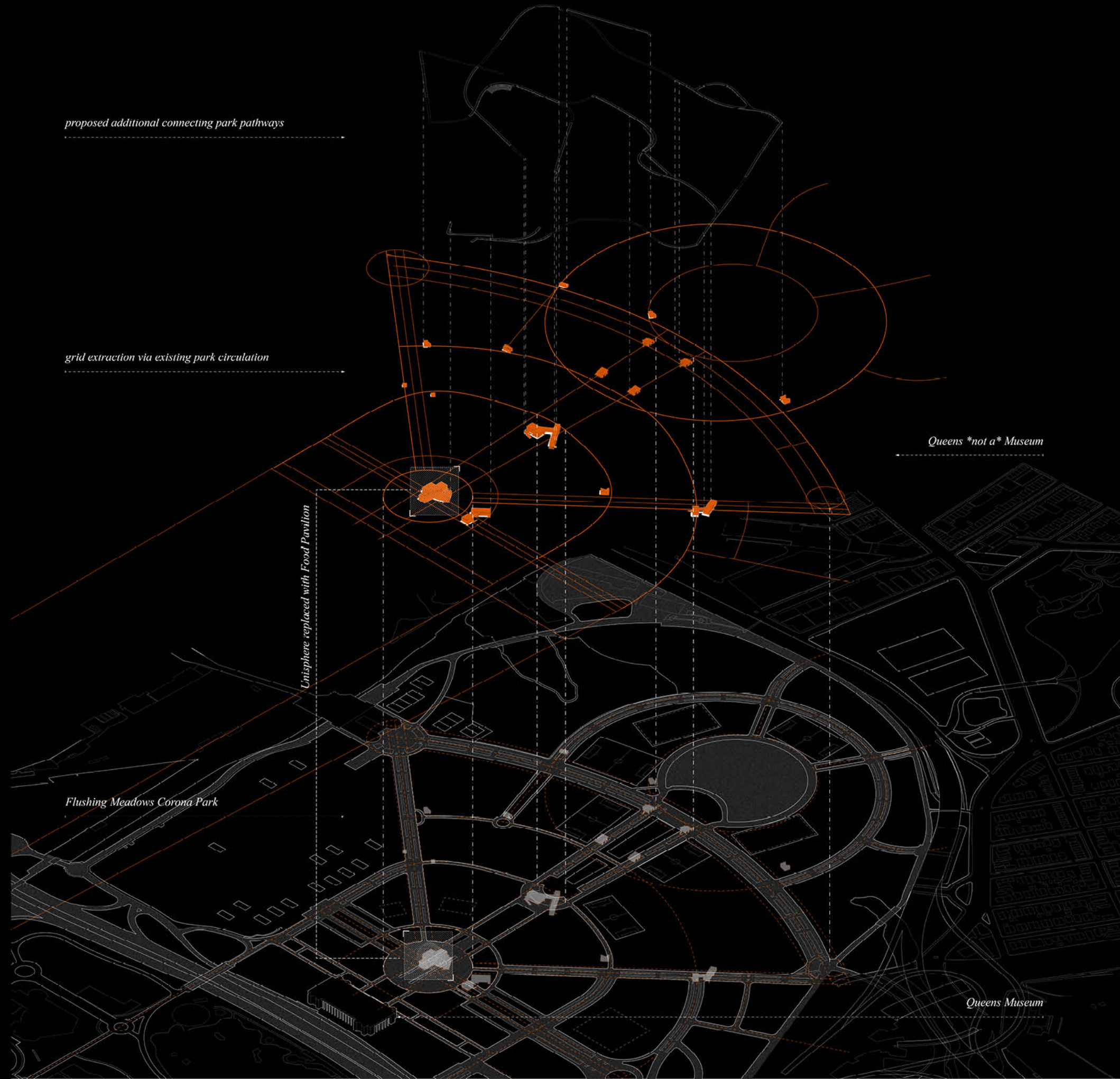


# New Proposed Circulation





# Site Diagram





# Architecture of the Invisible

## MS. AAD Arguments

Comfort relies on its invisibility: you don't see it, you pretend not to hear it. It's just there. Invisibility is the state of being ignored or not taken into consideration; the inability to be seen. Selective concealment is a common function of architecture. Architecture detailing such as complex mechanics of buildings are hidden. Moldings mask wall intersections with floor and ceilings, wallboards cover electricity, structure, and plumbing, and dropped ceilings shield pipes, and ductwork. All of these tactics are acceptable and essential in buildings. Even if we become accustomed to the untruths in architecture detailing, we must not forget architecture's deception that masks suffering. How does the design of the invisible impact class and social divisions of people? Does it blur the lines or create segregation within the politics of gender?

Class distinctions are distinctions of comfort and visibility; they are also economic and geopolitical distinctions. The geography of the industrialized capital and the global territory of air conditioning and domestic labor in the 21st century revolves around access to comfort and visibility that only few have.

Daniel Barber argues, "To be rich means to never be uncomfortable. The life of the poor is awash in discomfort, striving for relief from hunger, from weather, from being a victim of the unexpected. The struggle for comfort is a struggle for equal opportunity, justice, and conditions amenable to growth and self-actualization." Comfort comes from within the walls, hidden from the eye of the public, created for only those that can afford the luxury.

The climb to luxury stems from physical, architectural, and thermal conditions. The evolution of the invisible begins with the physical: protection from the elements, then heat, and finally cooling that is hidden within the wall. Following these come layers of precision, consisting of: filtered air, sealed membranes, sensors, all the elements of the

comfort-industrial complex that aims to wrap itself around the body like a shirt.

However, not all bodies are made the same. Research evidence on gender differences in thermal comfort suggest overcooling likely affects women more than men. Reasons for higher dissatisfaction in cold temperatures for women have been attributed to physiological and clothing differences that are different from men dressed in suits. Temperatures in many US office buildings do not reflect the thermal preferences and requirements of women due to lower metabolic rates, inadvertently positioning women as the problem rather than the thermal environment of offices. According to Dr. Janette Nesheiwat, M.D., prolonged exposure to overcooling can lead to joint pain, asthma, dry mucous membranes in mouth and nose as well as dry skin, and dehydration due to the recirculation of air.

Architecture elicits complex forms of behavioral and physiological interaction in order to achieve its designed promise. Social practices and embodied habits are essential to the proper functioning of the system. Barber states, "Interior comfort is specific to architecture, and the scarcity of comfort is something architects will have to produce. It involves a conscious redesign of the built environment." There are exceptions, but in general HVAC is regulated and required. It is invisible, hidden in drop ceilings, shafted behind walls and under floors. It is like the duct and the decorated shed, concealed, made to be pleasing to the eye.

Compared to the invisible people conditioning caused by thermal conditioning, Frida Escobedo's Domestic Orbits speculative essay explores how global tendencies of architecture conceal domestic labor that shape the trajectories of domestic workers, through a process she called "invisibilization". These domestic workers are mostly women, between the ages of 18 and 60, working "reproductive labor": cooking cleaning, caring for the elderly, and so on. She explores how space is articulated according to specific gendered, classist, and racist configurations of the social sphere. Escobedo looks at the different scales by which domestic labor is erased by architects and planners and highlights the social and economic relationships involved. Despite all, such

practice also disregards the imperatives of honest expression of functions.

The women that work as domestic workers often start young, 'adopted' by the family, being stripped away from relationships, friends, children, and families, locked in the house, doing domestic labor for most of their lives. Though they live in houses measuring hundreds of square meters, domestic workers have the right to be visible in only a few of them: their living quarters, certain hallways, and maintenance spaces such as garages, staircases, closets, laundry rooms, and wet kitchens. "In the spaces where the architecture flaunts itself, though these women travel centimeter by centimeter, invisible during working hours."

Other, broader orbits correspond to the geographies of their lives. Their transitions between the workers' quarters and the rest of the house are analogous to the commutes they make from their own neighborhoods and towns to the areas where they work. As Frida mentioned, the main reason for these women to reside in servant' quarters is due to the long commute from their hometowns making it nearly impossible to keep up with their daily work load.

The invisible creates a social distinction between men and women, high income and low income, and comfort and discomfort. It defines what the users see, do, and feel within the space. This invisibility segregates classes of people as their conditions are impacted by their interaction with the visible users and the visible functions. Women, especially, are most impacted by the invisible as they suffer through thermal conditioning or domestic labor, being hidden from the user's eye. To blur these lines of the invisible, new conditions, new desires, and new frameworks for cultural elaboration must be constructed. We must reimagine relationships to resources, economies, form of exchange, and conditions of equity and equality. As Barber proposes, architecture's new ambition is to condition humans to be less comfortable. We can make domestic workers become increasingly visible moving from the traditionally hidden species to the public realm. We can erase comfort through a conscious redesign of the built environment. We have to reconsider and renegotiate the terms of visibility, comfort, productivity, equity, and equality.



# 0.3 URBANIZE

## *Layered Urbanism*

### *Buenos Aires*

Galia Solomonoff

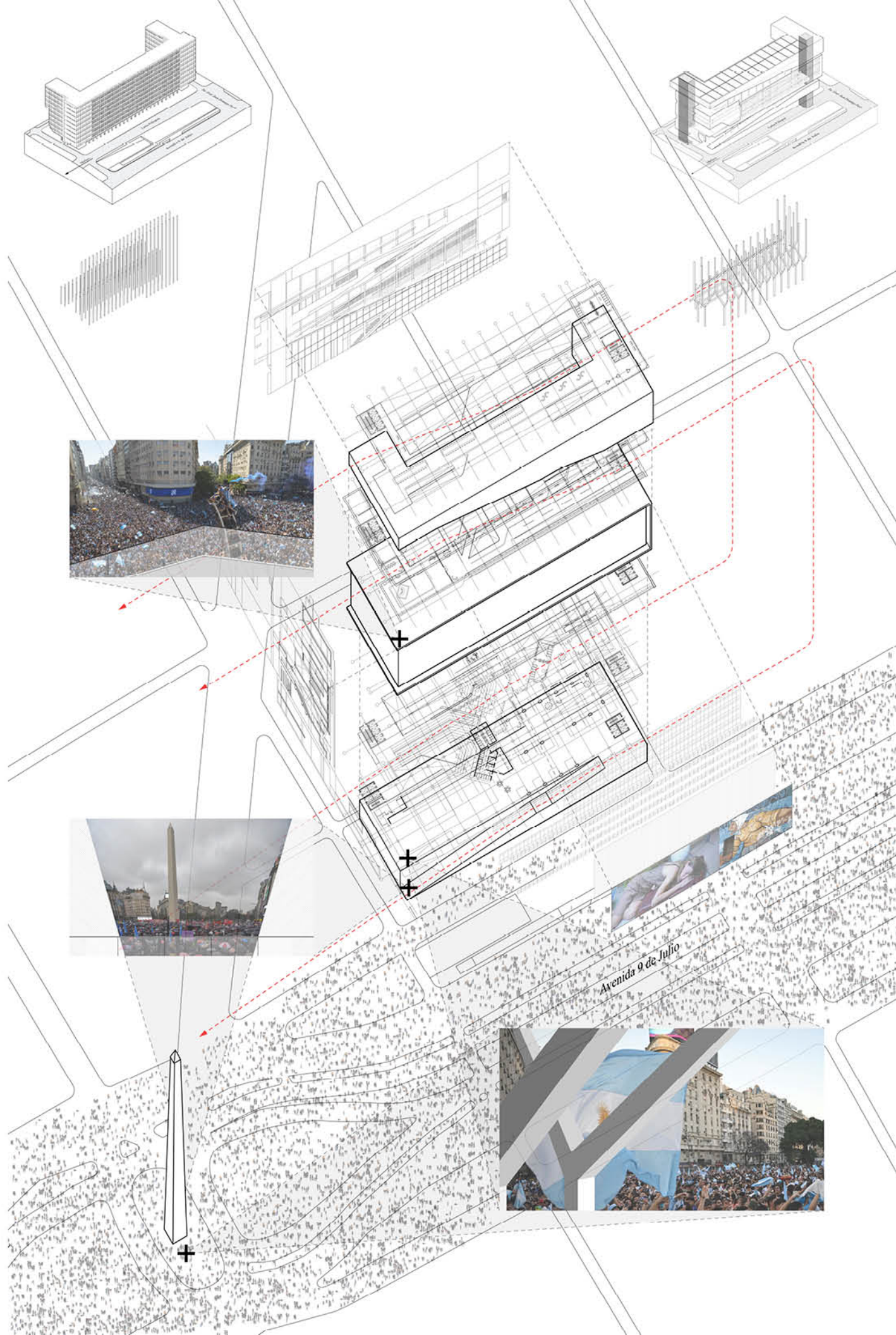
Spring 2023

Buenos Aires, Argentina

Julia Maevski, Annie Zhou, Aiden Ko







## *Mercado de la Cultura*

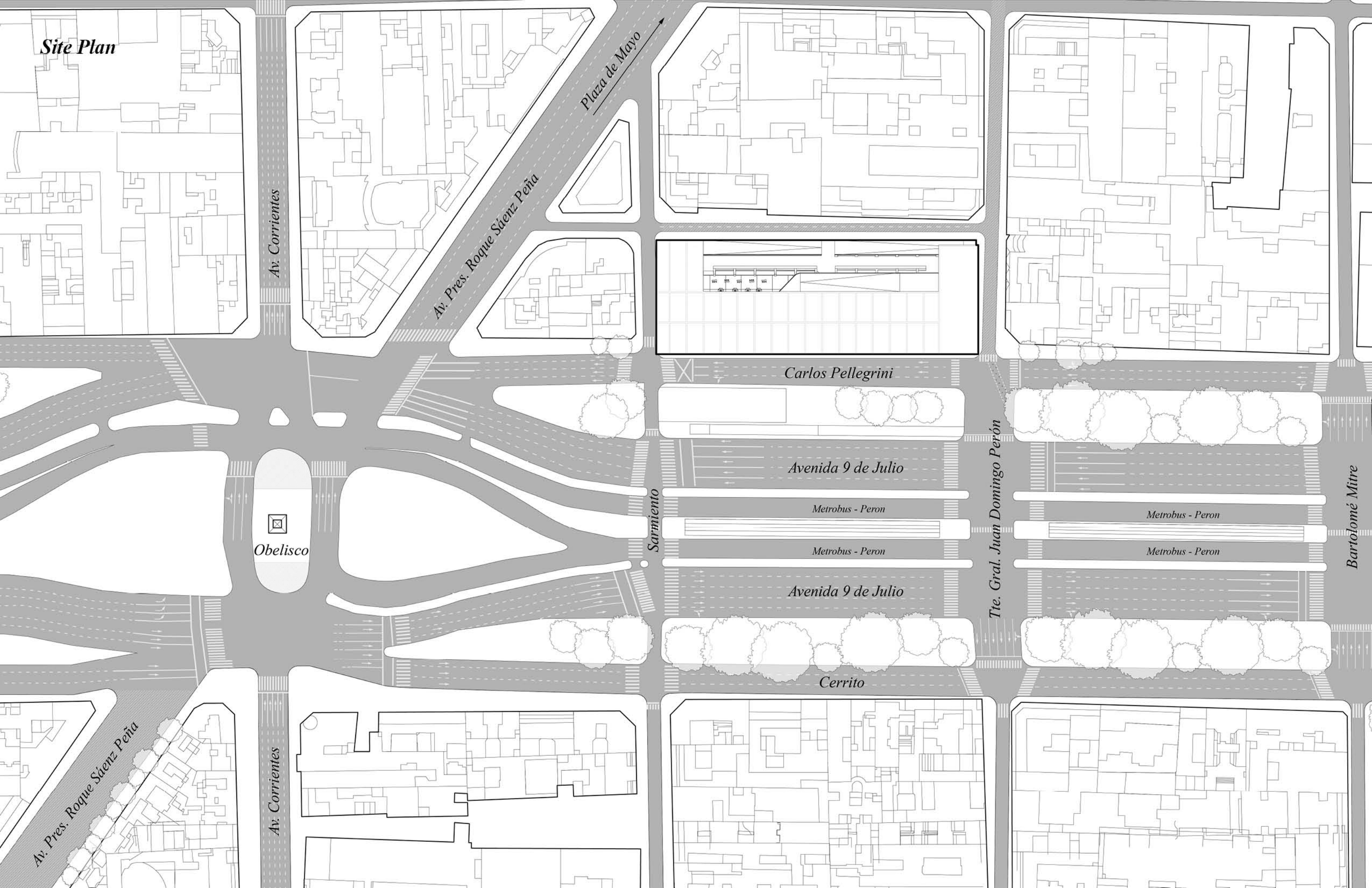
Mercado de la Cultura is an incubator that curates arts and civilization of contemporary Buenos Aires through active civic engagement both morphologically and programmatically, enacting the building as a living species. Buenos Aires being a city renowned for its art culture, Edificio del Plata is located in the prime location of the

celebration for arts, yet the building sits underutilized. With Avenida 9 de Julio also being the main street protesters use, the building is unsustainable in its current state. Mercado de la Cultura proposes a multitude of programs that support the city center's needs for public civic gatherings and to emphasize the importance of its location as a

key point in the route of festivities and protests. Therefore, Mercado de la Cultura brings art and civilization together through new programmatic and formal manifestations to heighten civic engagement.



*Site Plan*



*Av. Corrientes*

*Av. Pres. Roque Sáenz Peña*

*Plaza de Mayo*

*Obelisco*

*Sarmiento*

*Carlos Pellegrini*

*Avenida 9 de Julio*

*Metrobus - Peron*

*Metrobus - Peron*

*Avenida 9 de Julio*

*Cerrito*

*Tte. Gral. Juan Domingo Perón*

*Metrobus - Peron*

*Metrobus - Peron*

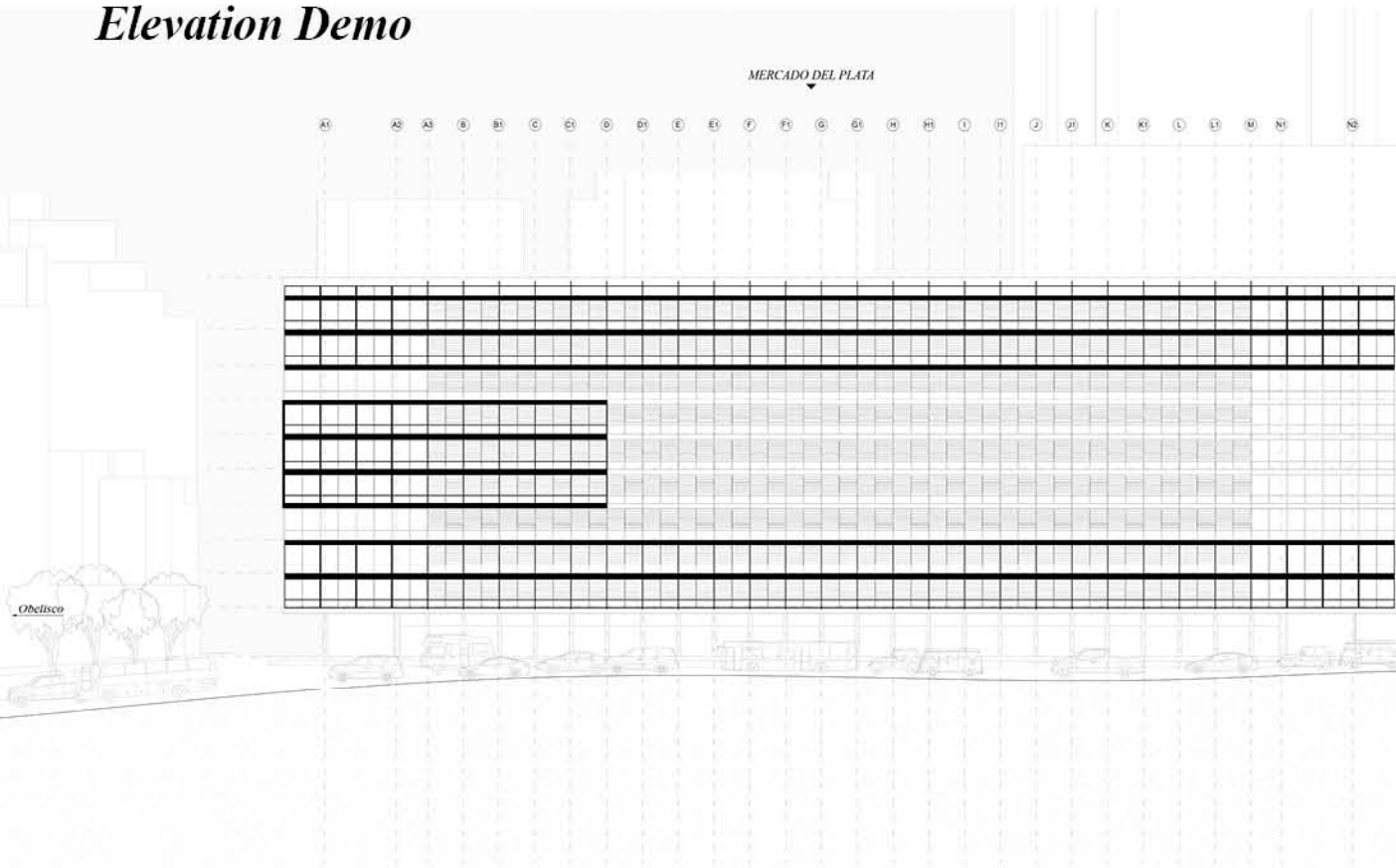
*Bartolomé Mitre*

*Av. Corrientes*

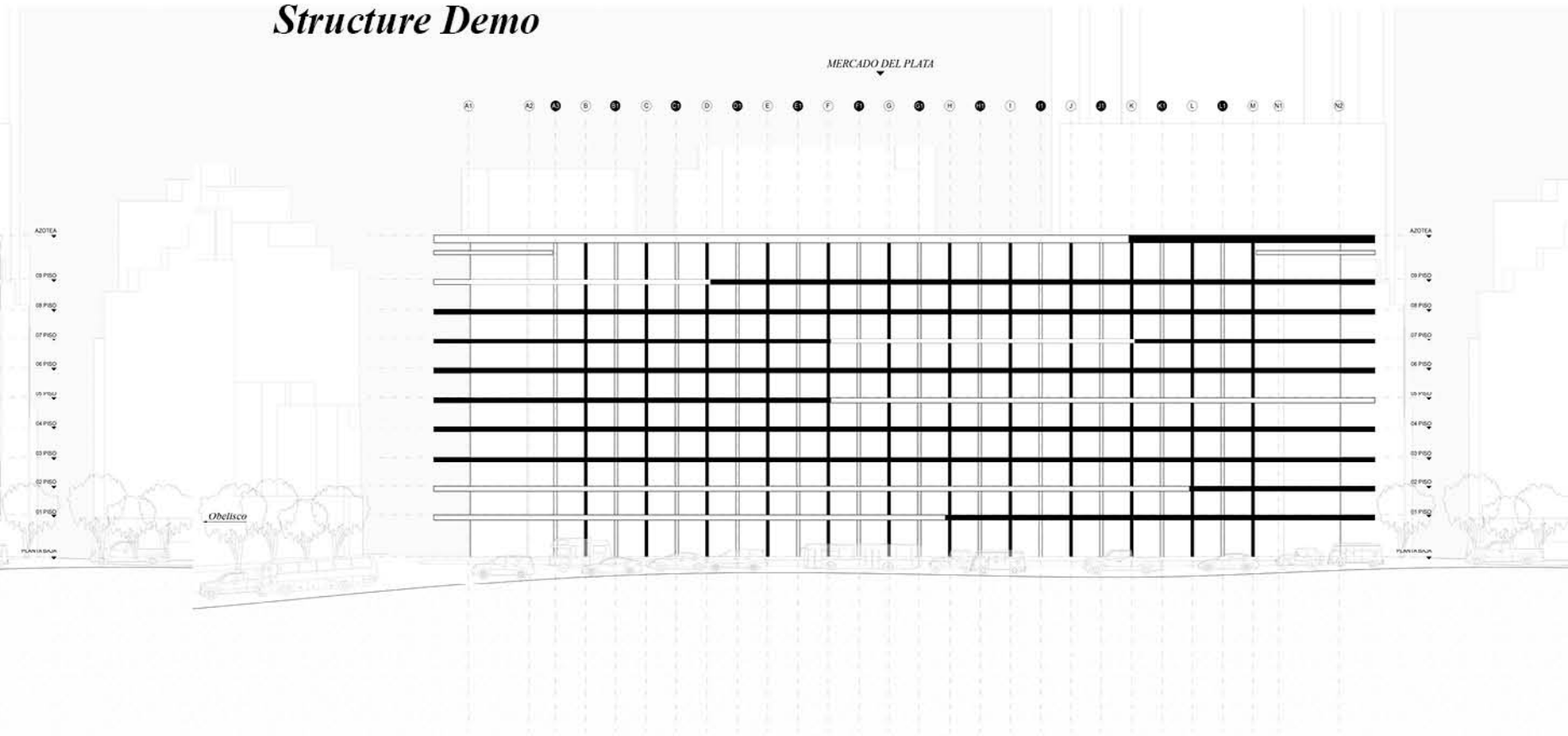
*Av. Pres. Roque Sáenz Peña*



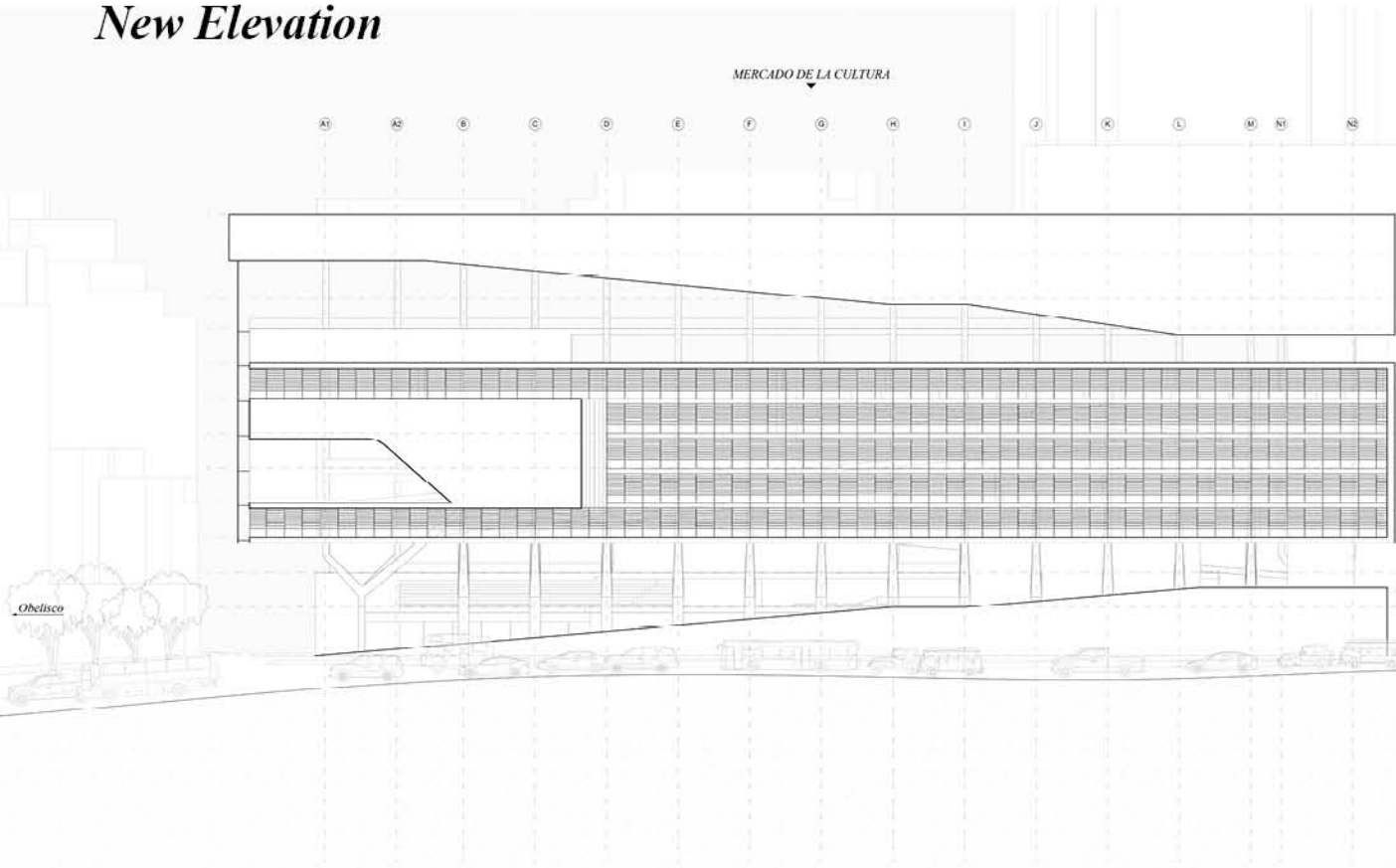
# Elevation Demo



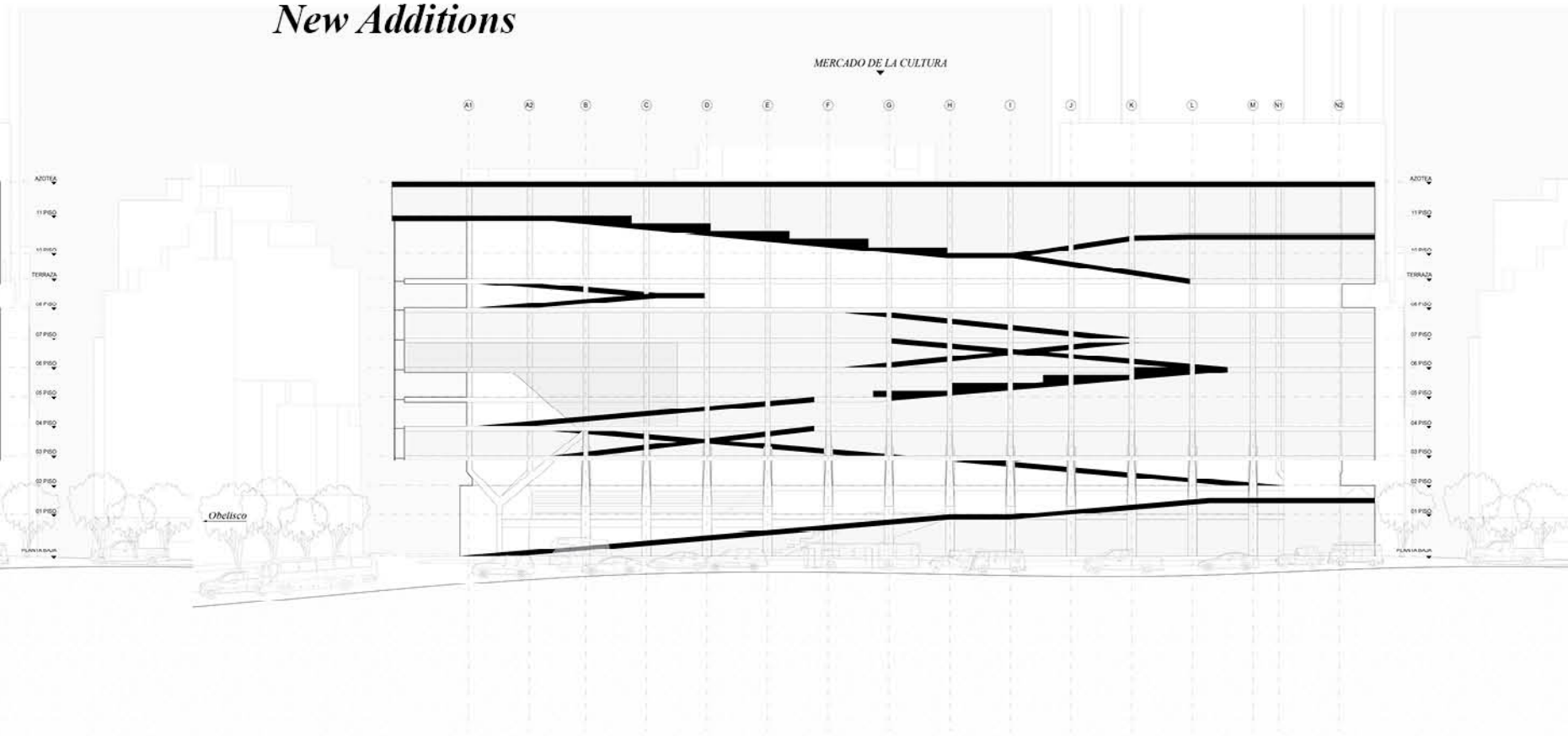
# Structure Demo



# New Elevation

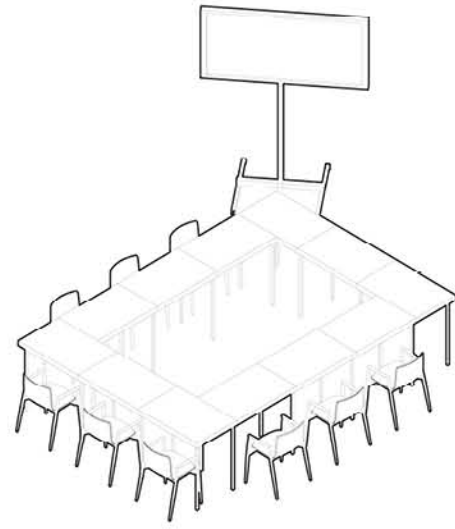


# New Additions

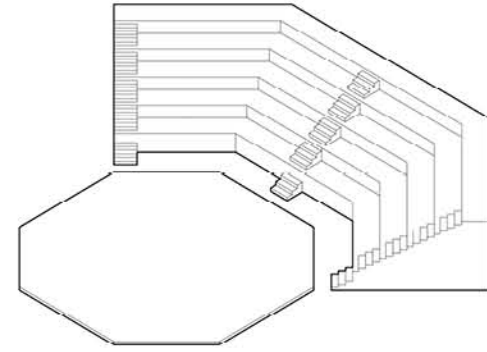




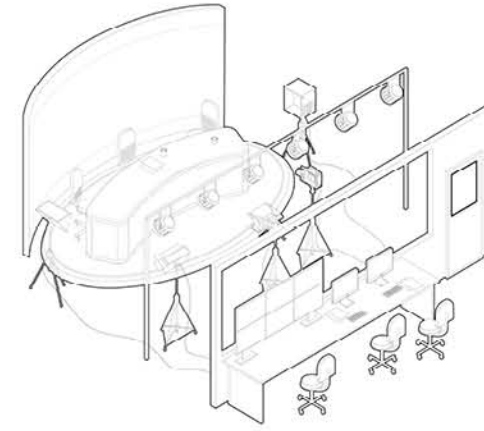
*Program*



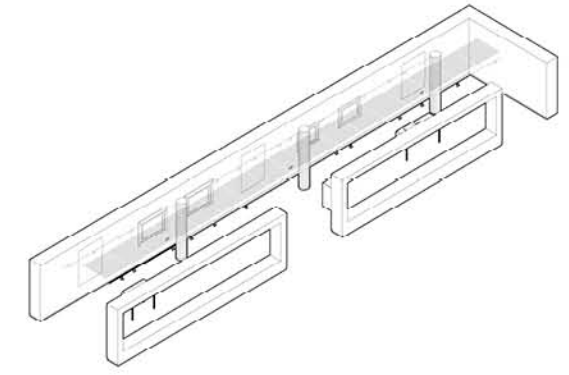
*organization offices*



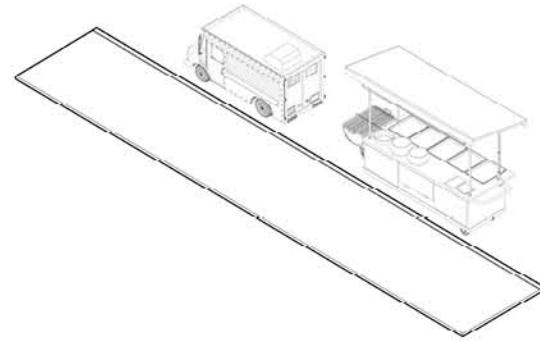
*amphitheater / event space*



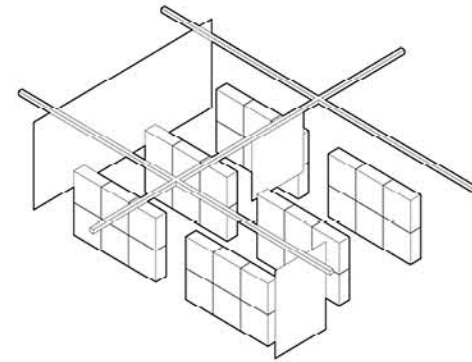
*local / international press*



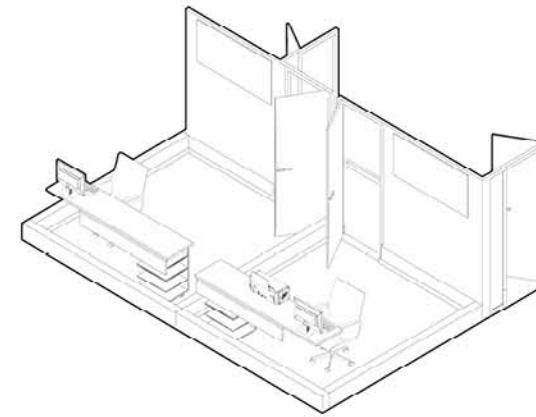
*gallery*



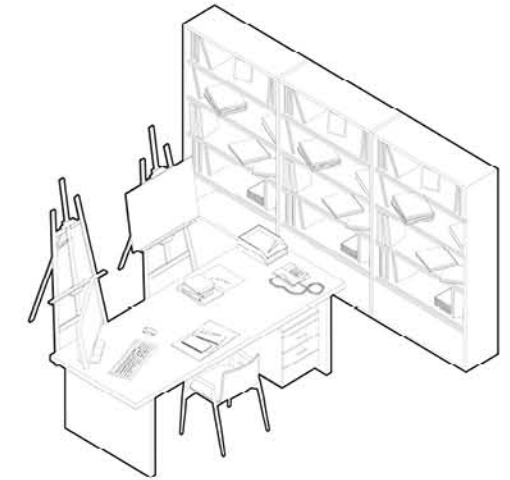
*street vendor*



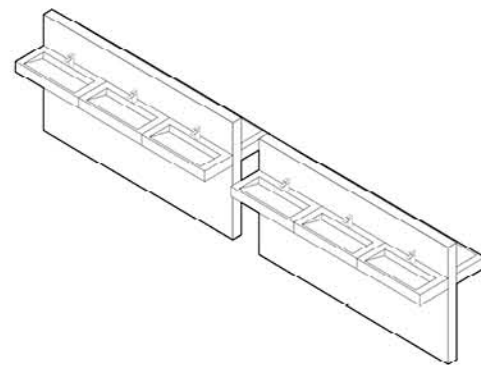
*archive space*



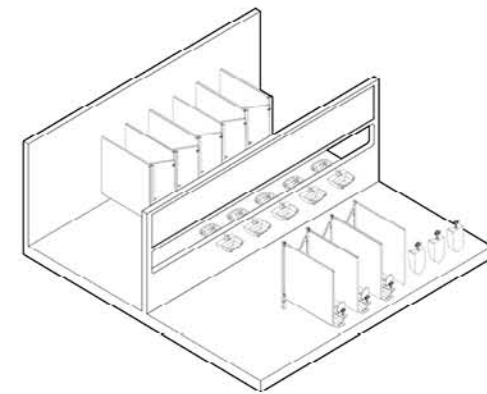
*government office*



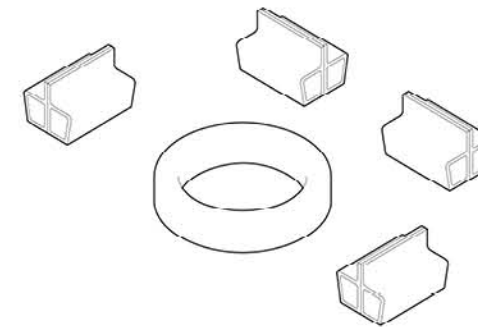
*curatorial office*



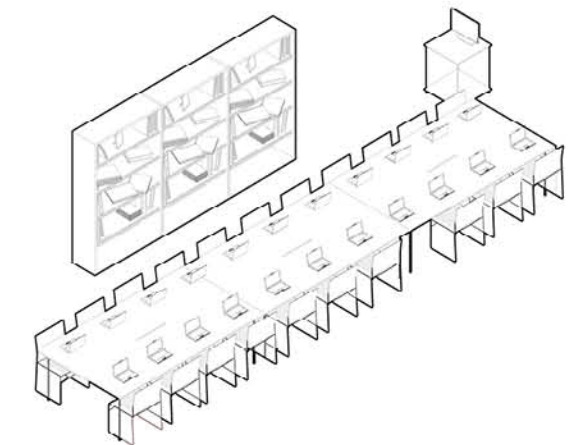
*waterstation*



*public bathroom*



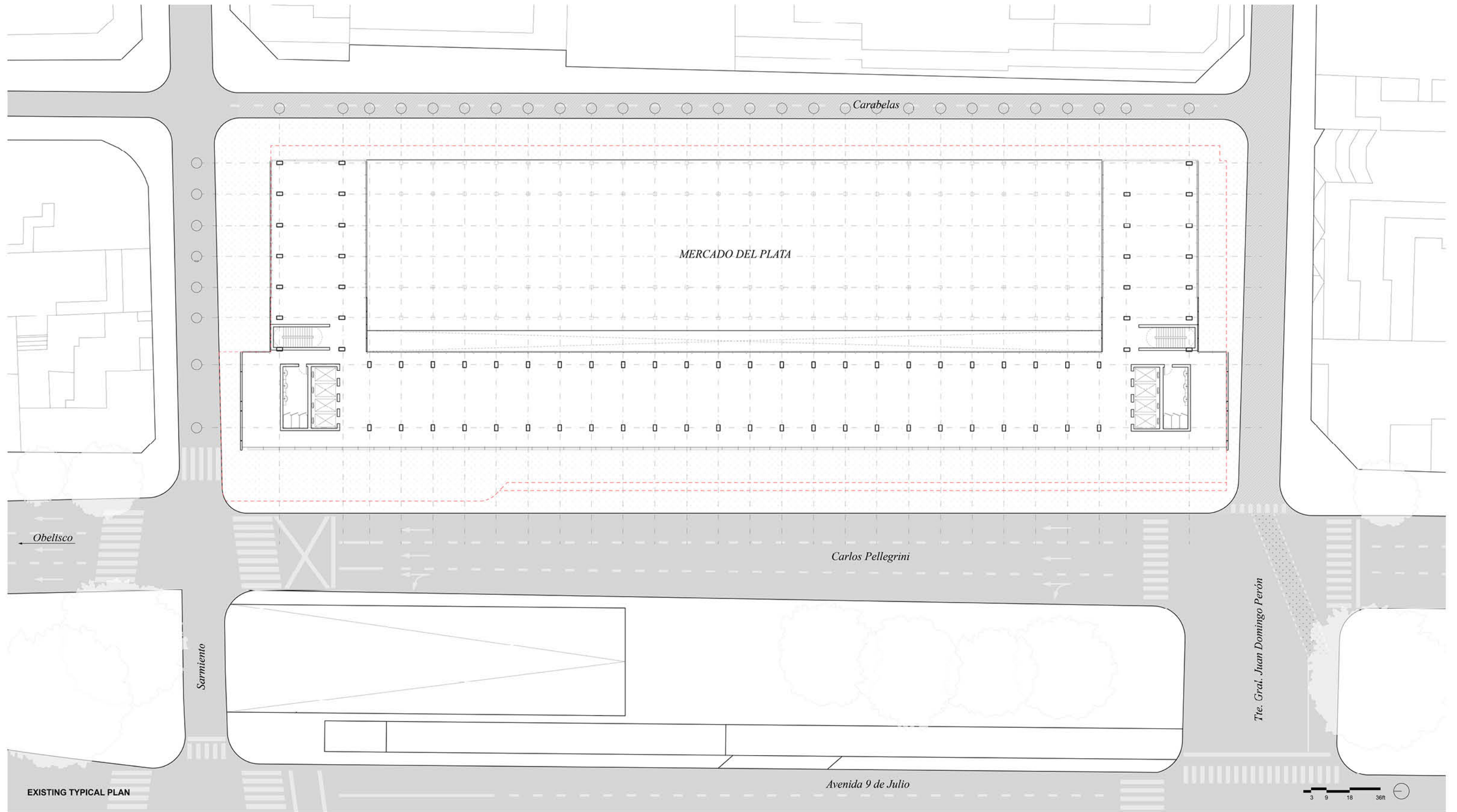
*resting space*



*research office*



**ORIGINAL PLAN**  
*Edificio del Plata Existing*



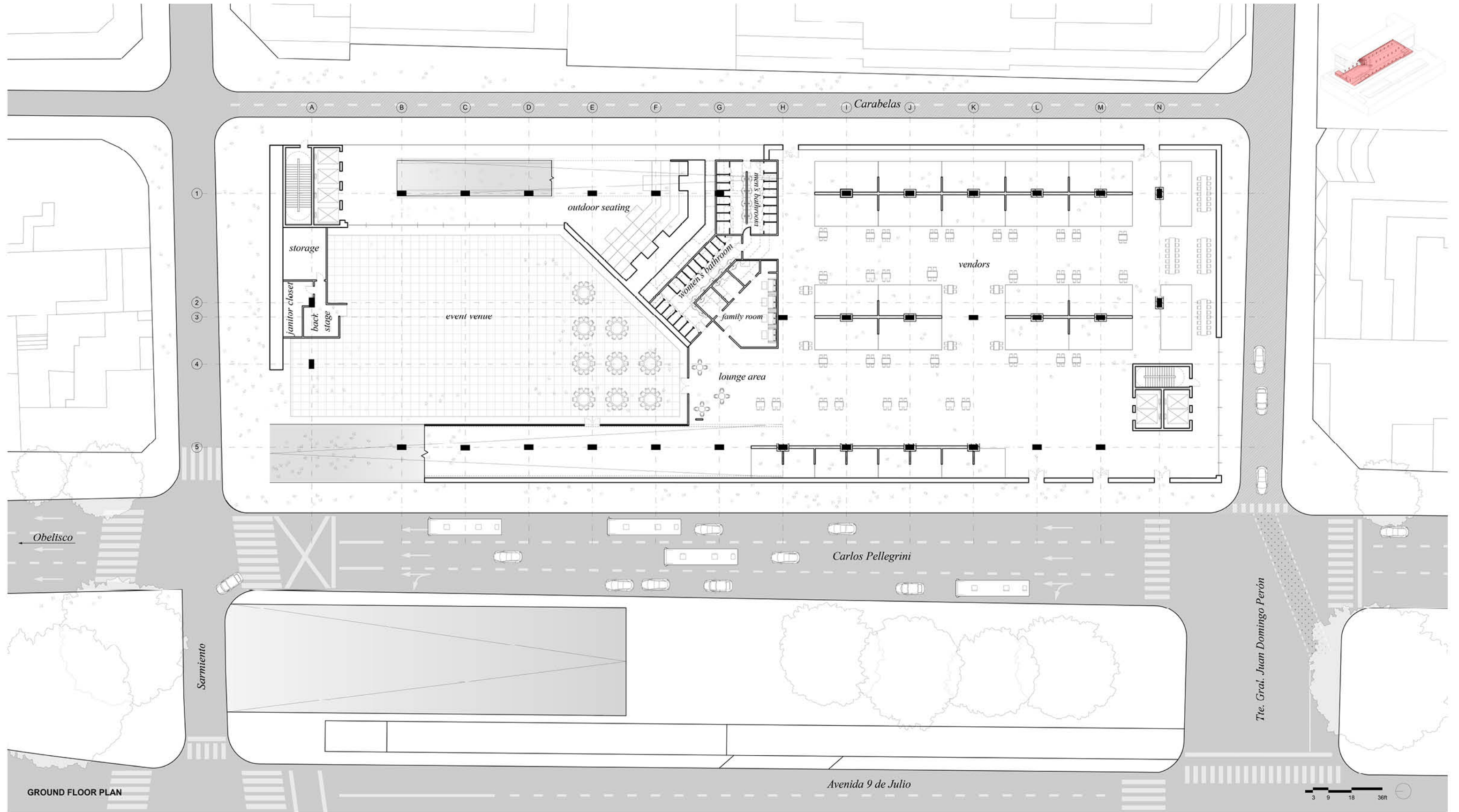
EXISTING TYPICAL PLAN

0 9 18 36ft



# GROUND FLOOR PLAN

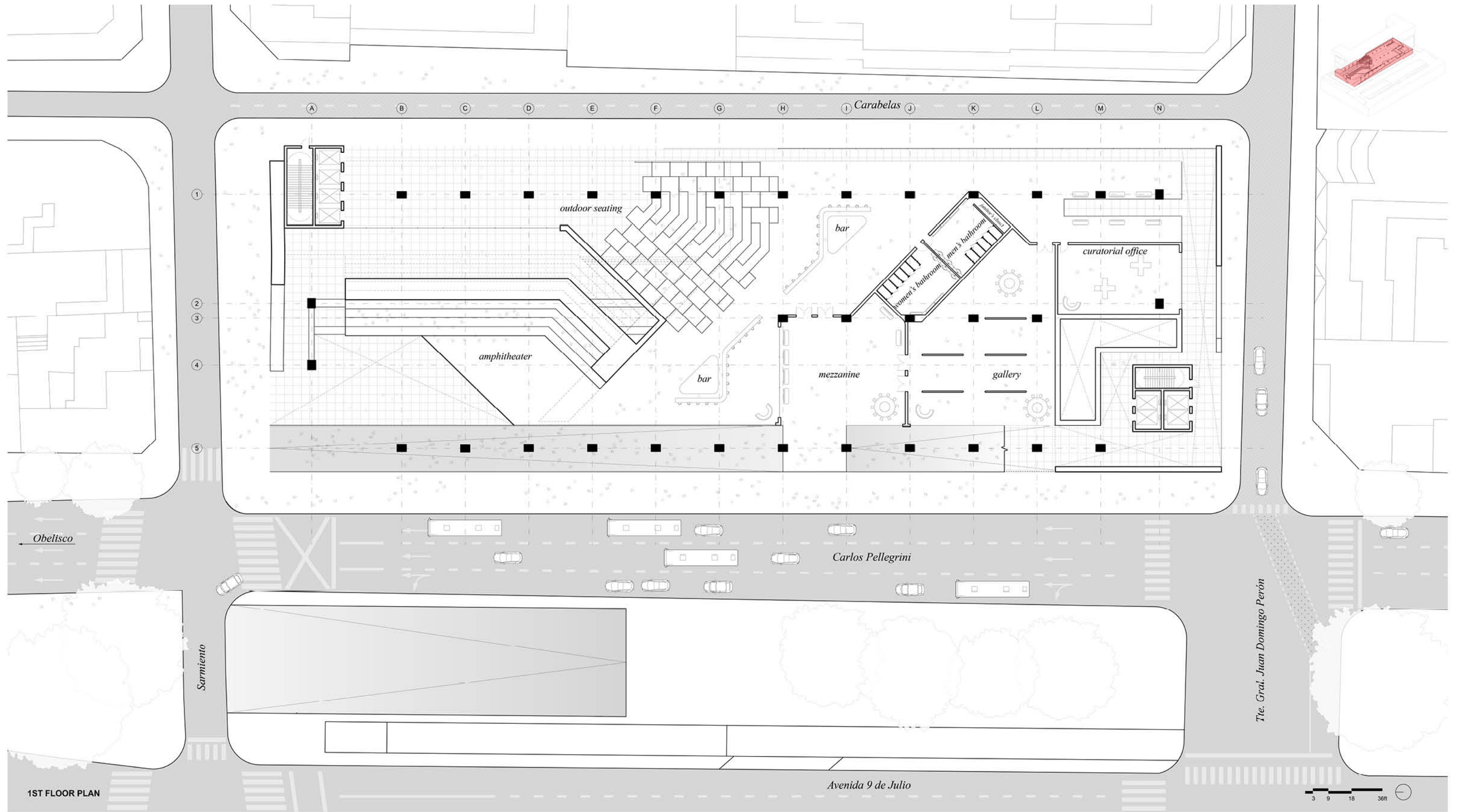
Event Space and Vendors





# FIRST FLOOR PLAN

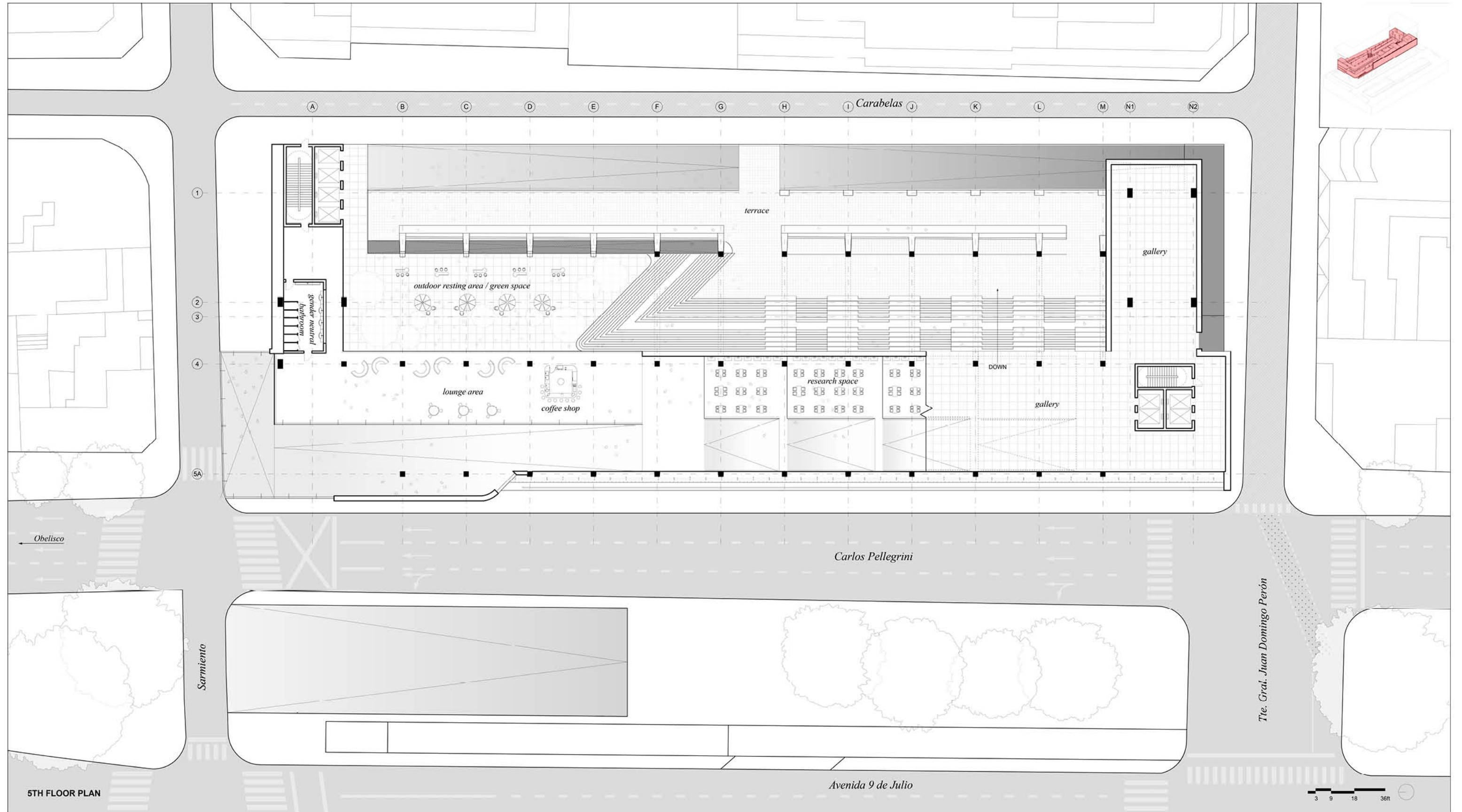
## Amphitheatres





# FIFTH FLOOR PLAN

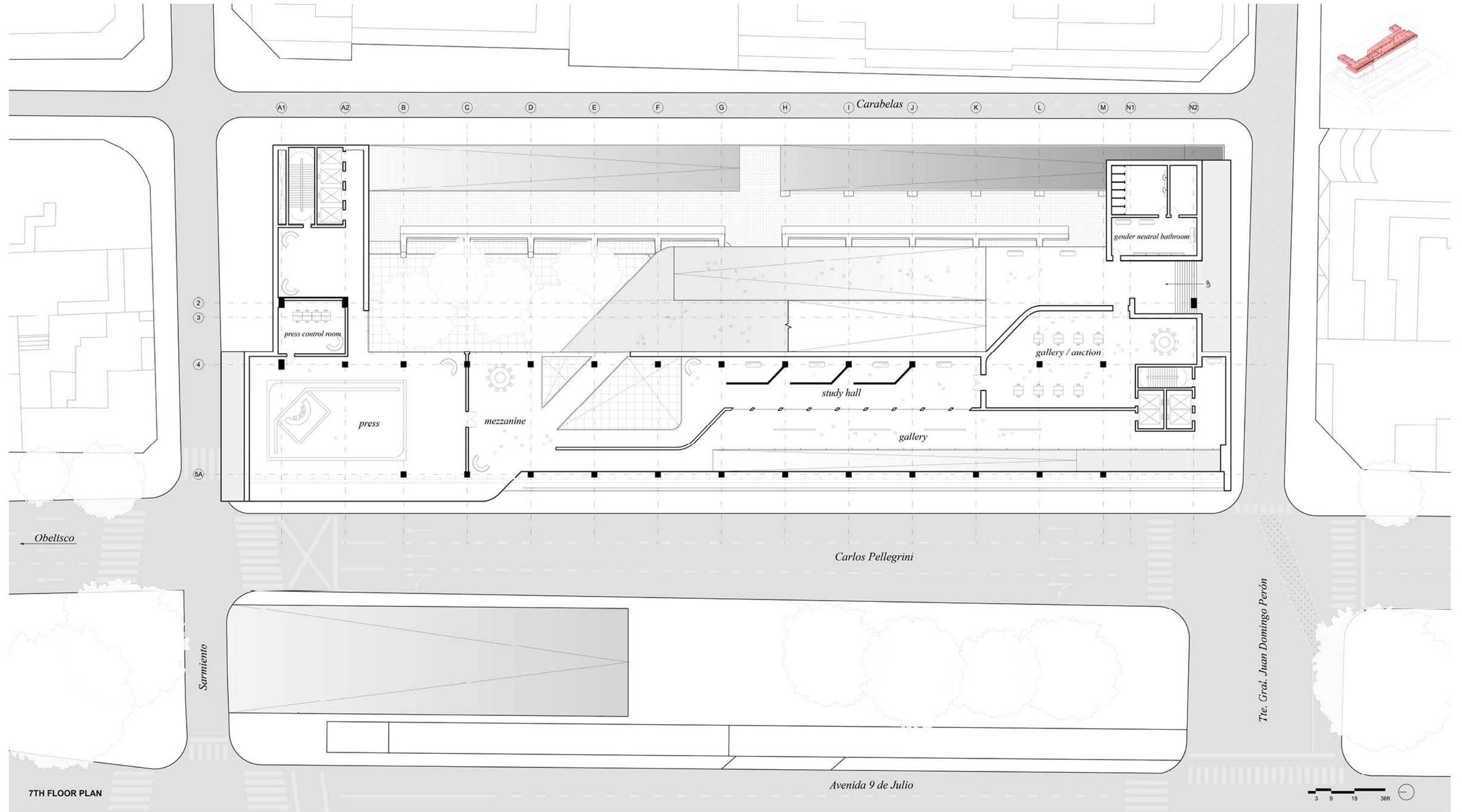
Research Center





# SEVENTH FLOOR PLAN

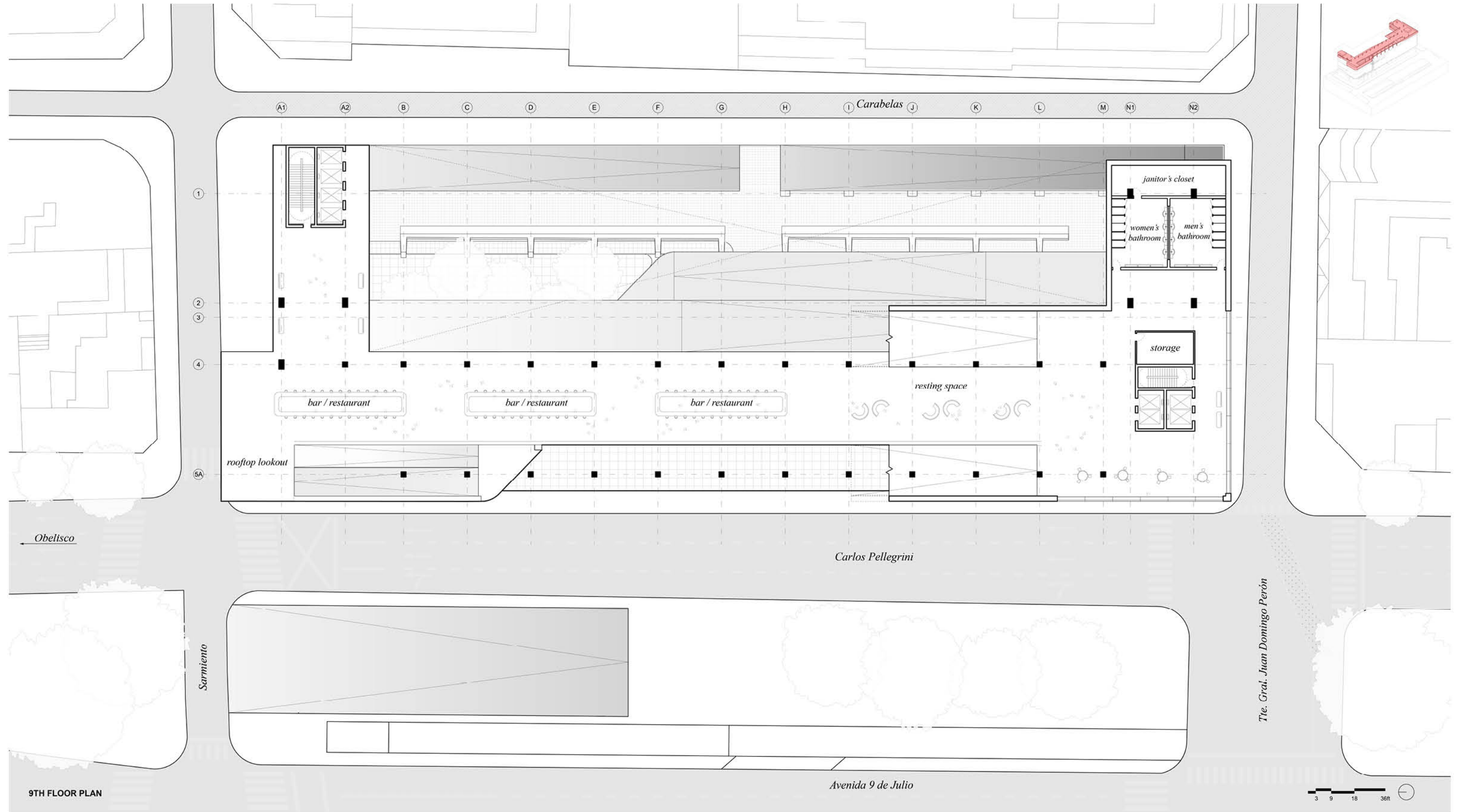
Press and Galleries





# NINTH FLOOR PLAN

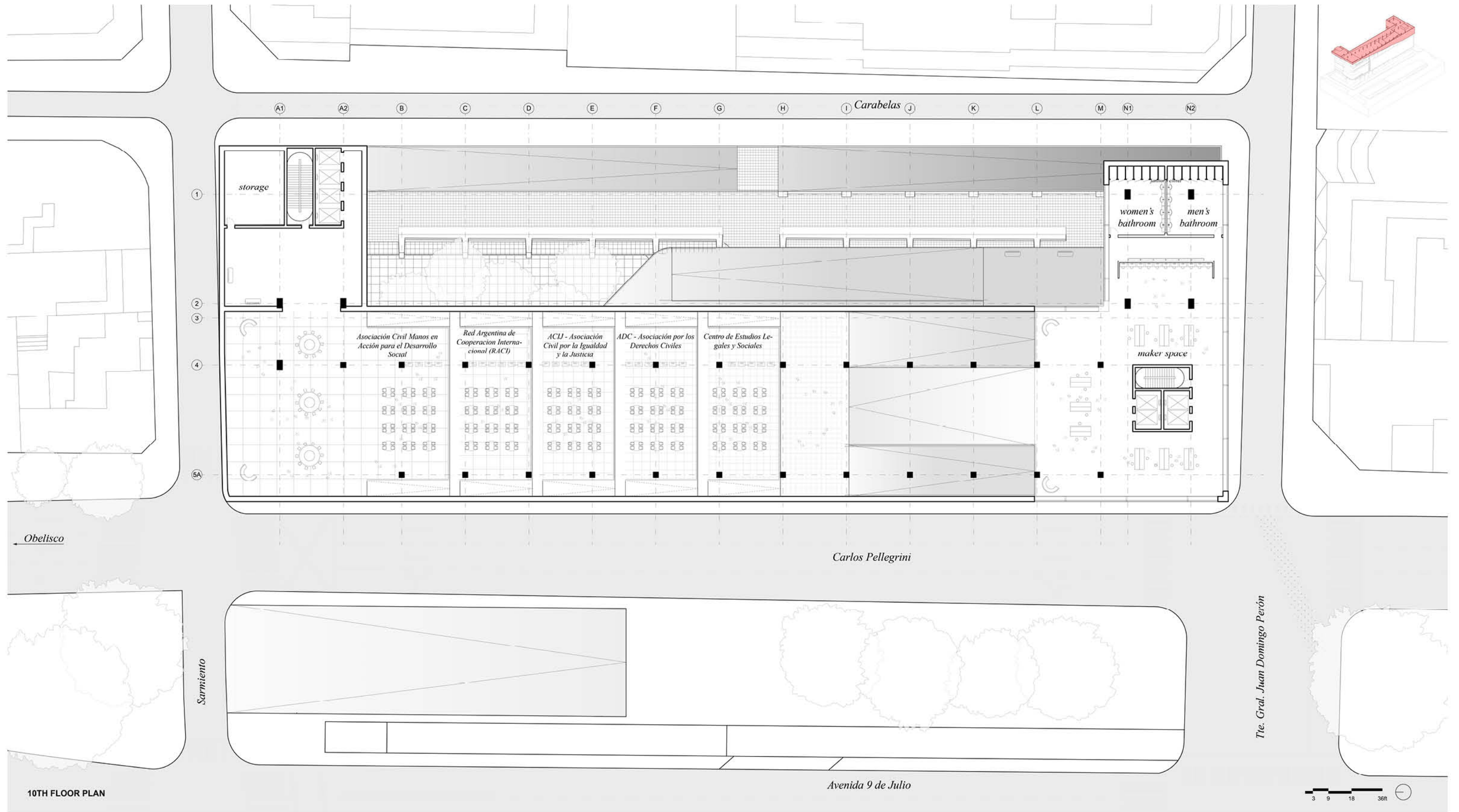
## Observatory





# TENTH FLOOR PLAN

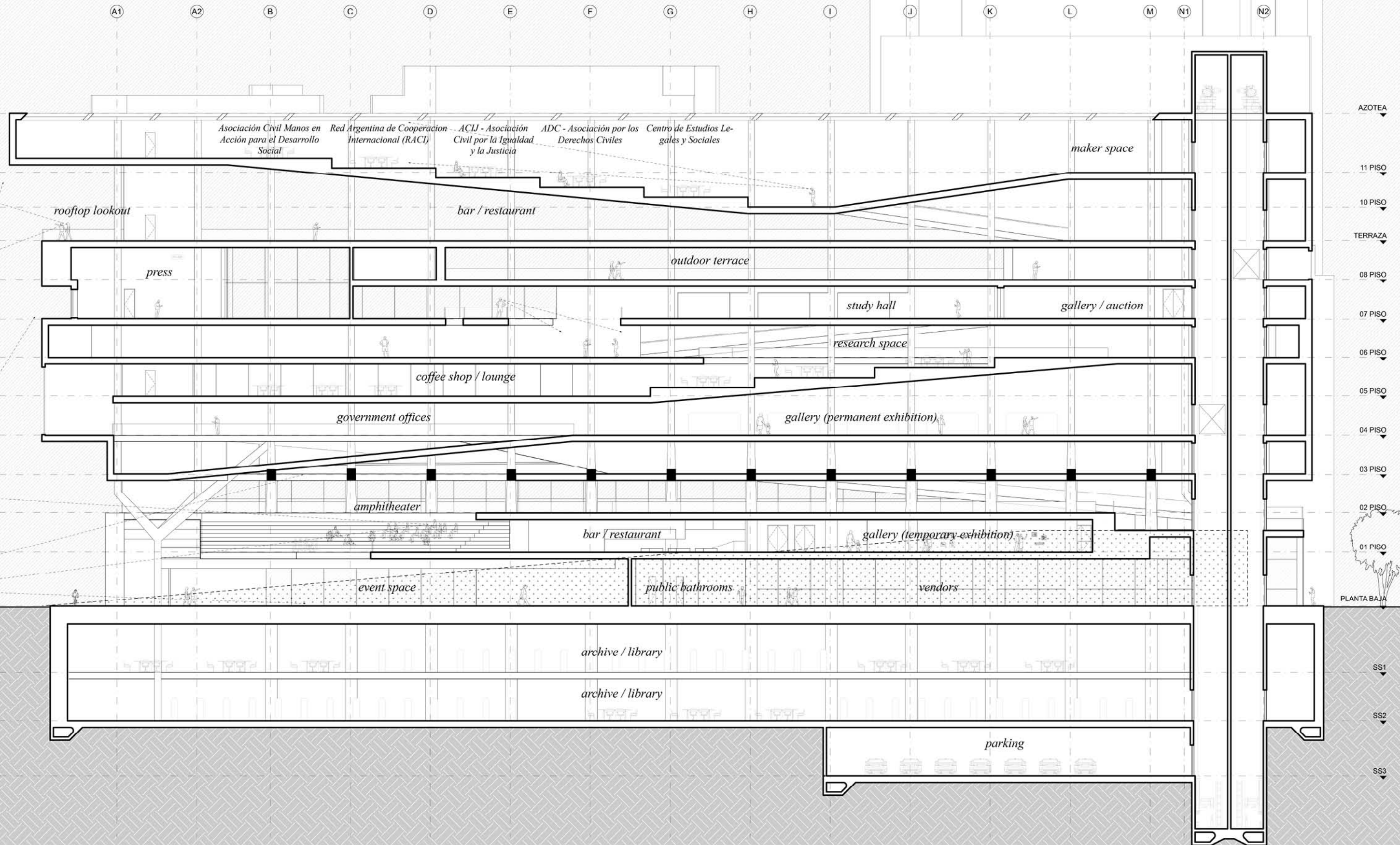
Non-profit Organizations





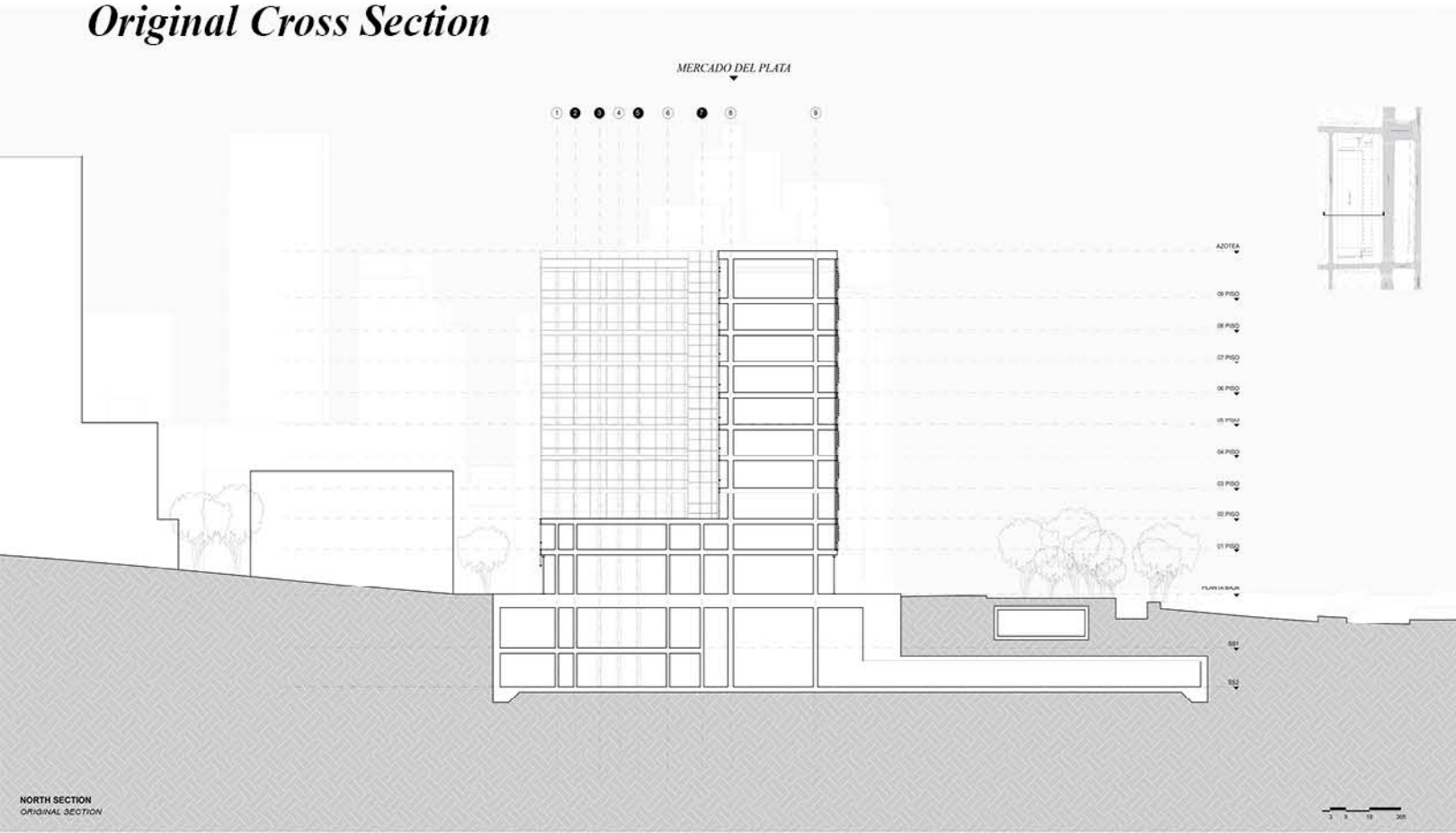
Section

MERCADO DE LA CULTURA

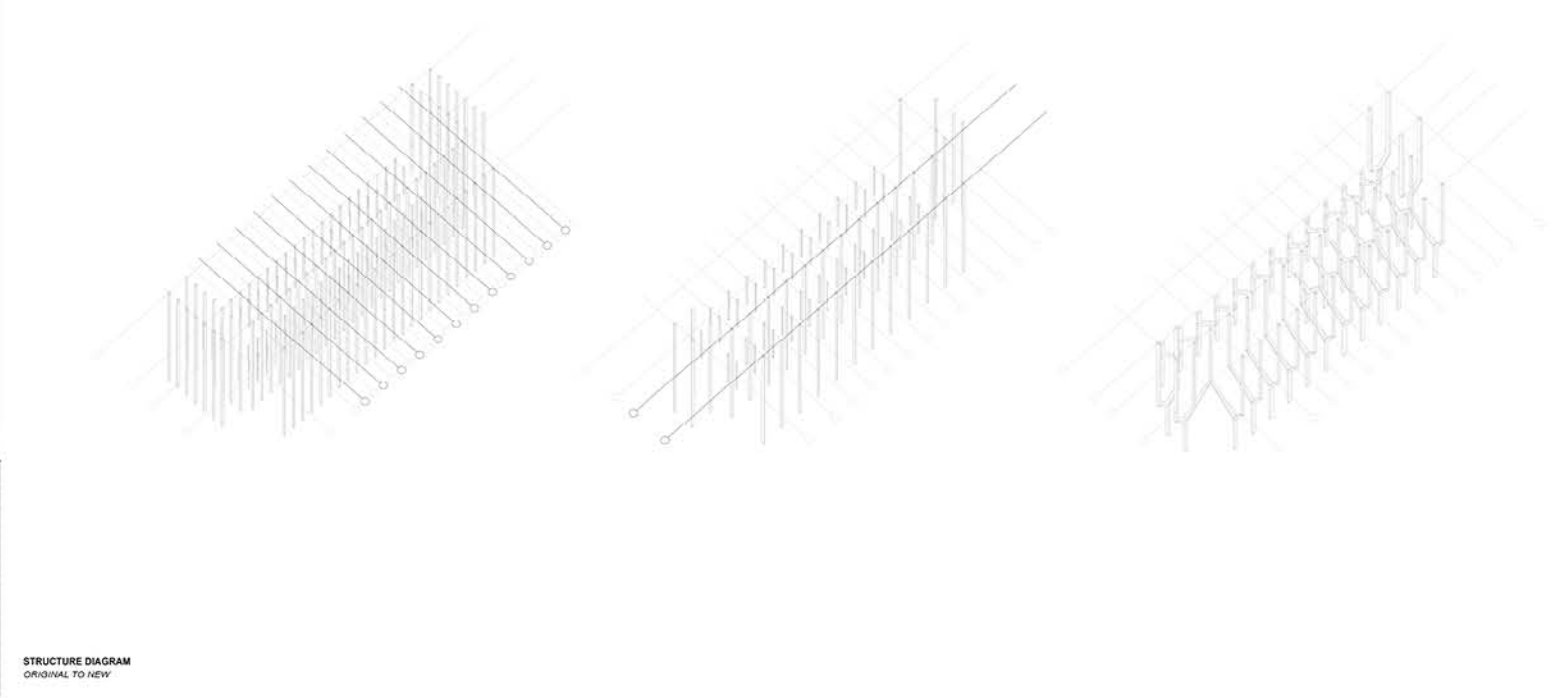




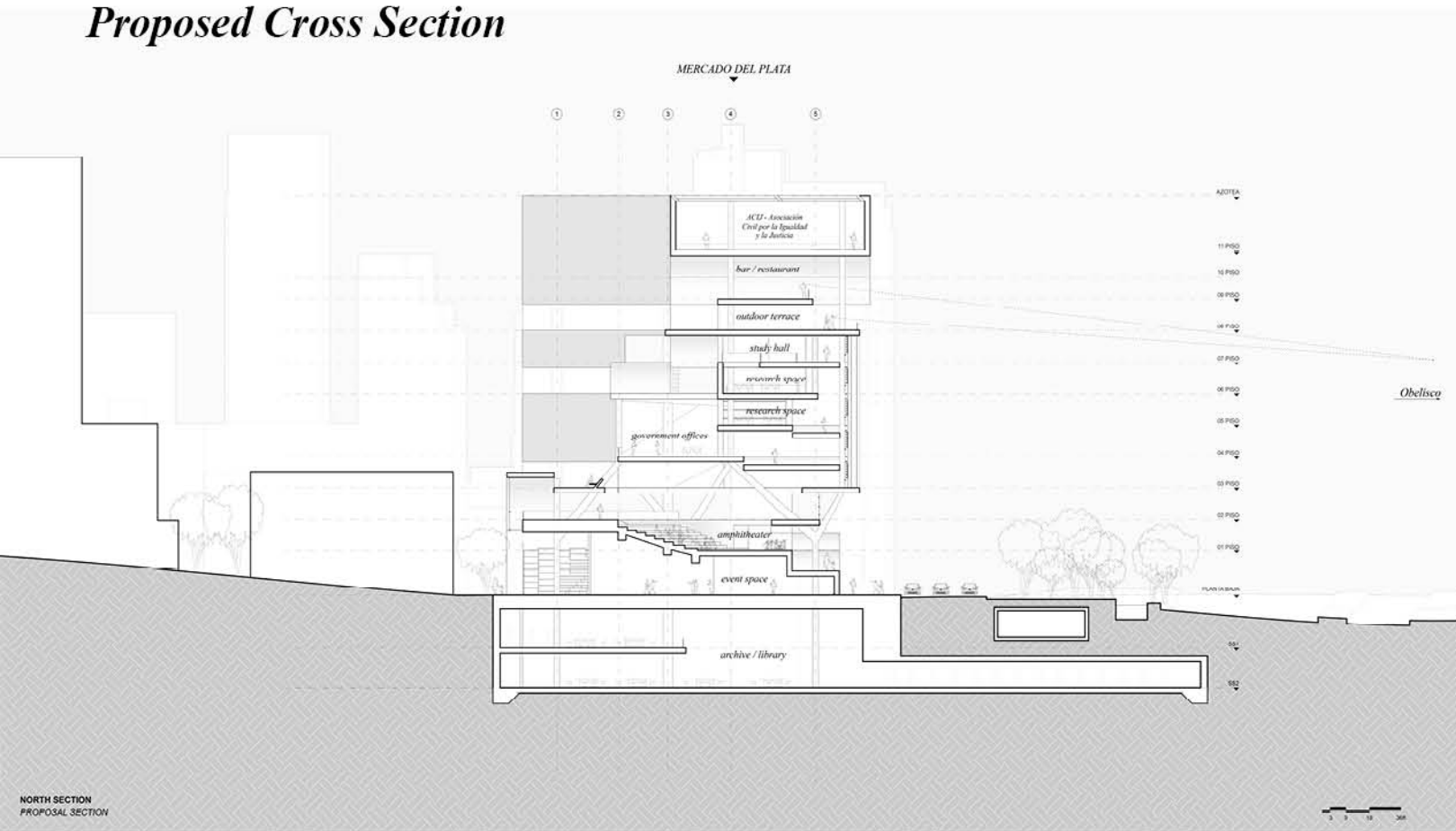
# Original Cross Section



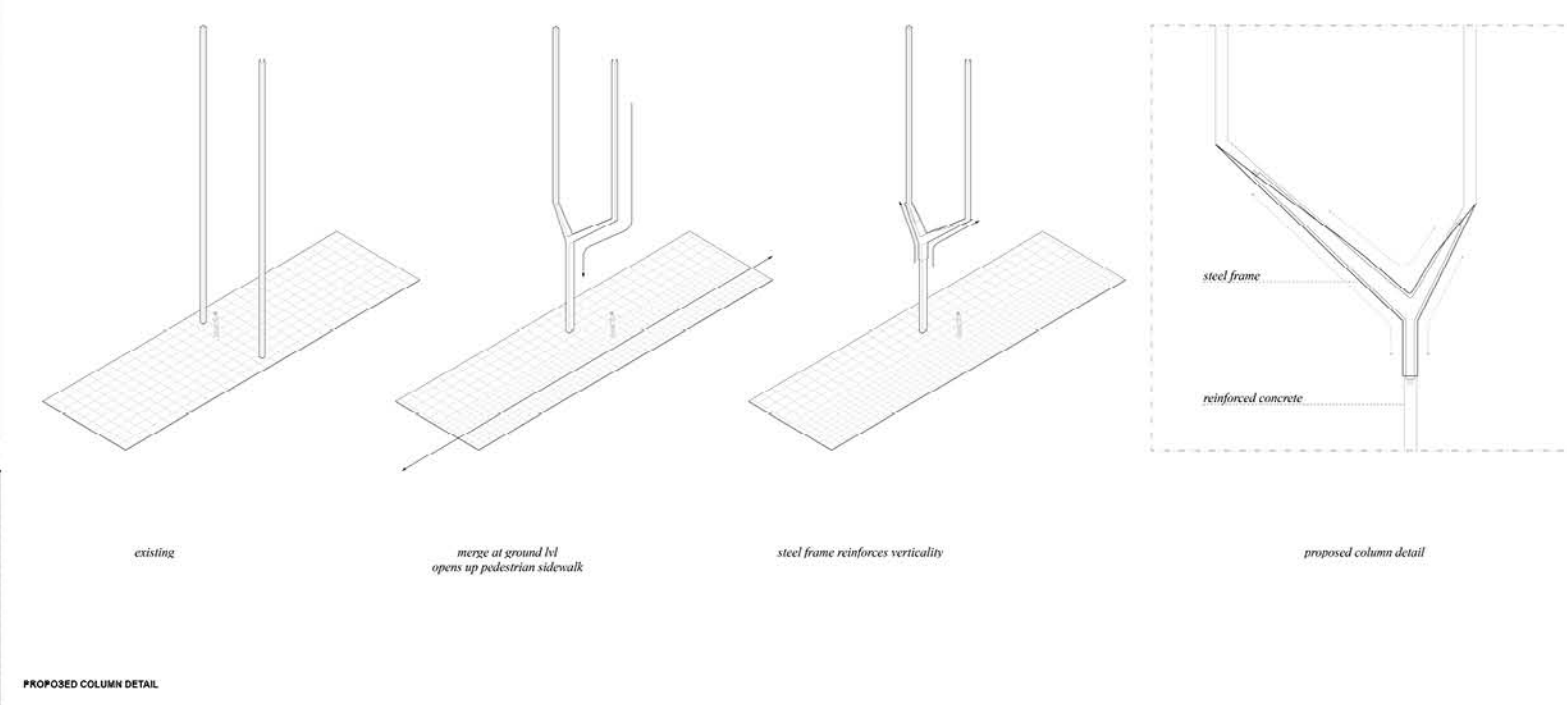
# Old to New Structure Diagram



# Proposed Cross Section

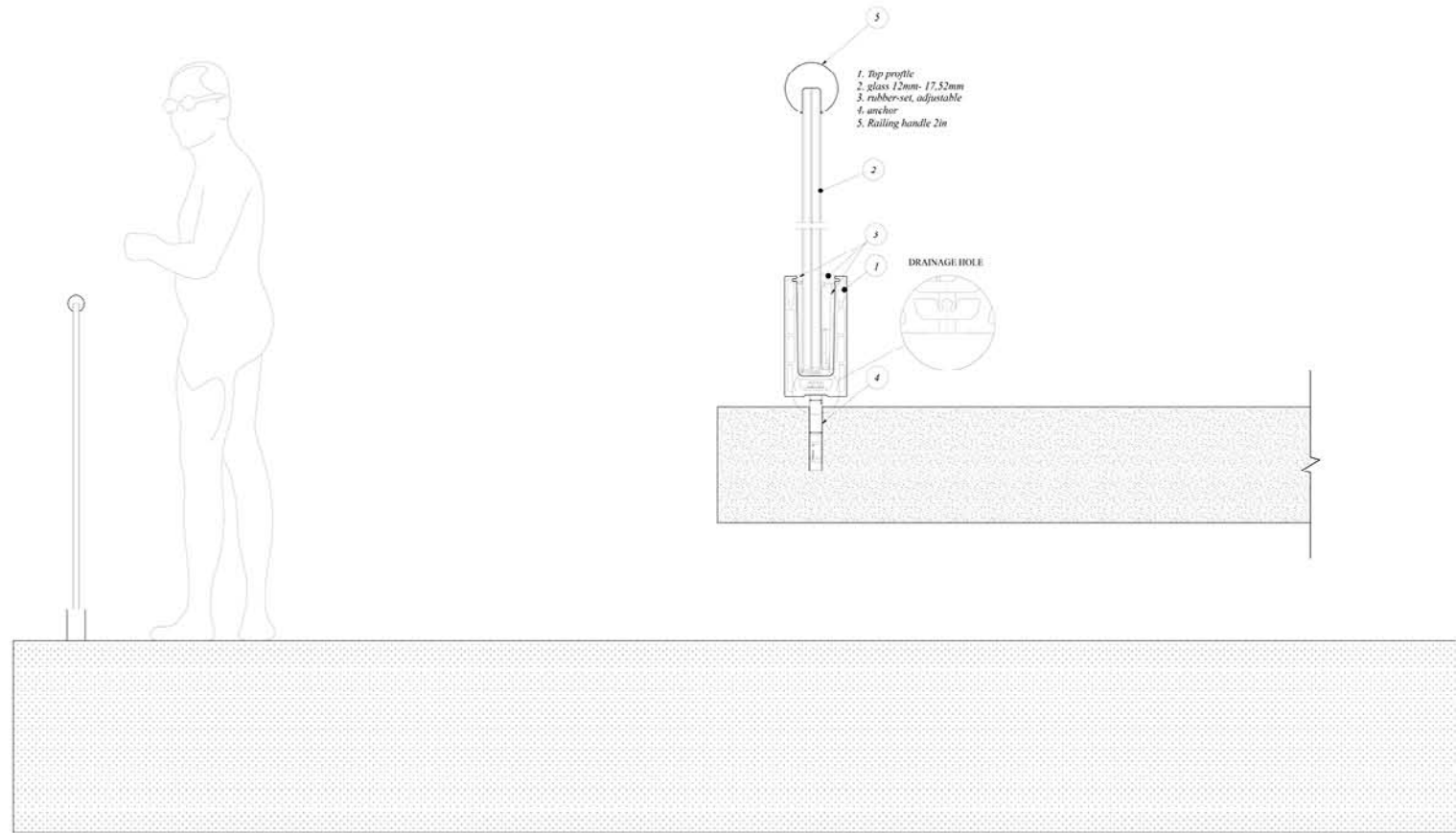


# Column Detail

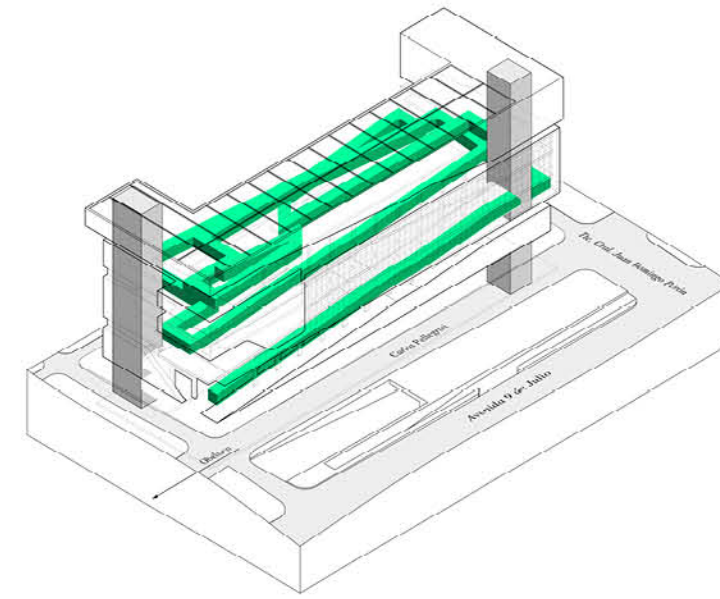




## Railing Detail

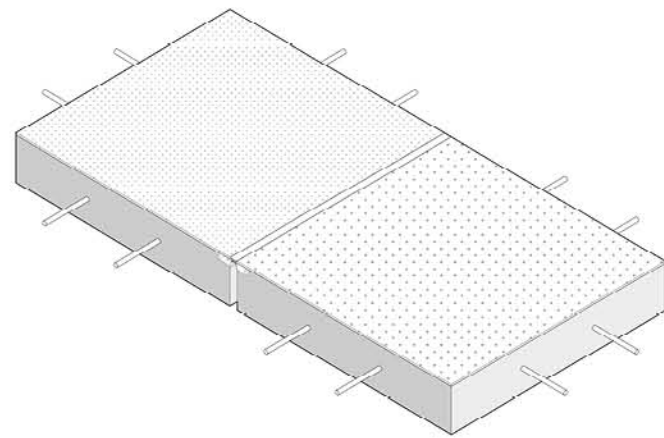


## Circulation

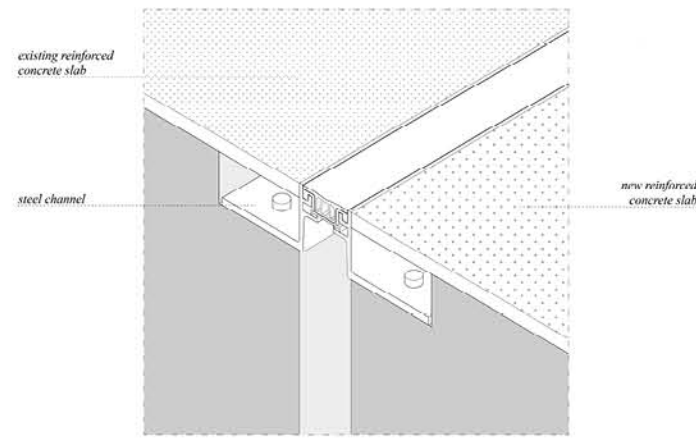


Circulation

## New to Old Concrete Connection Detail

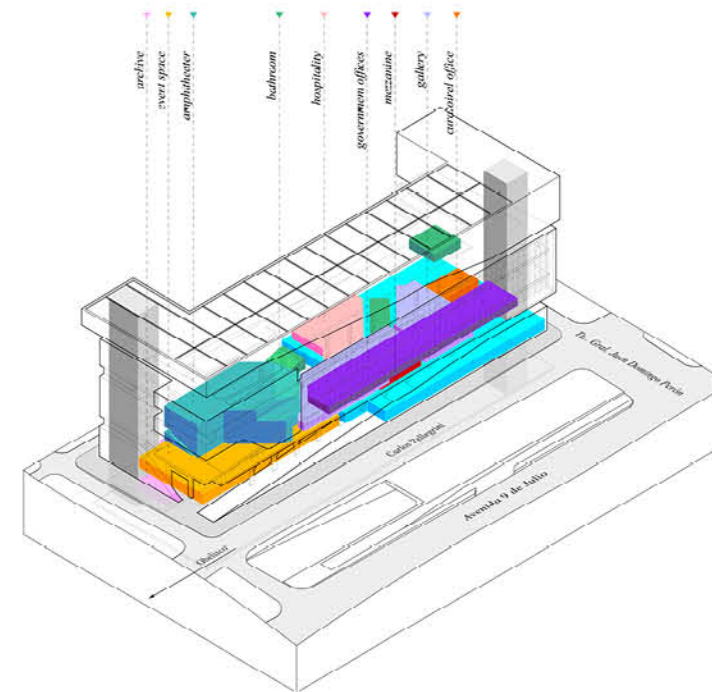


proposed floor slab - existing to new

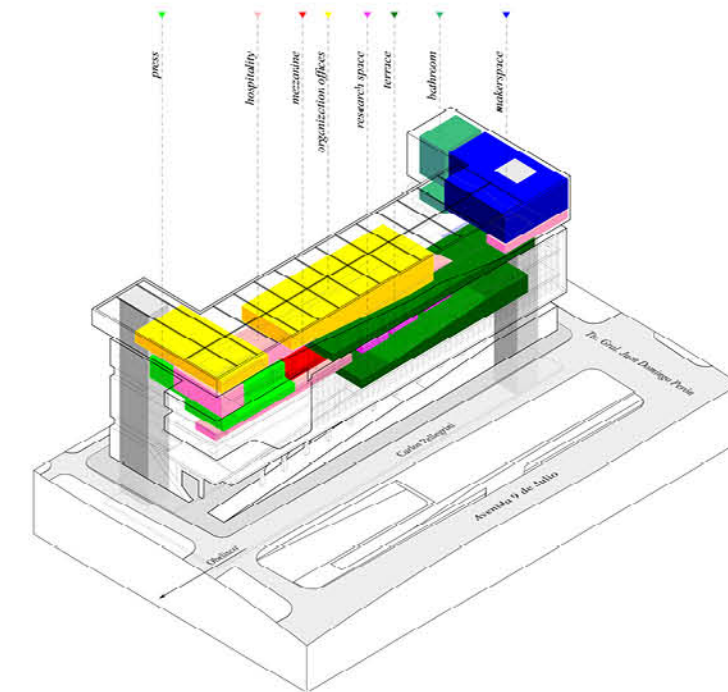


floor slab existing to new connection technics detail

## Program Distribution



basement 3 - 3rd floor

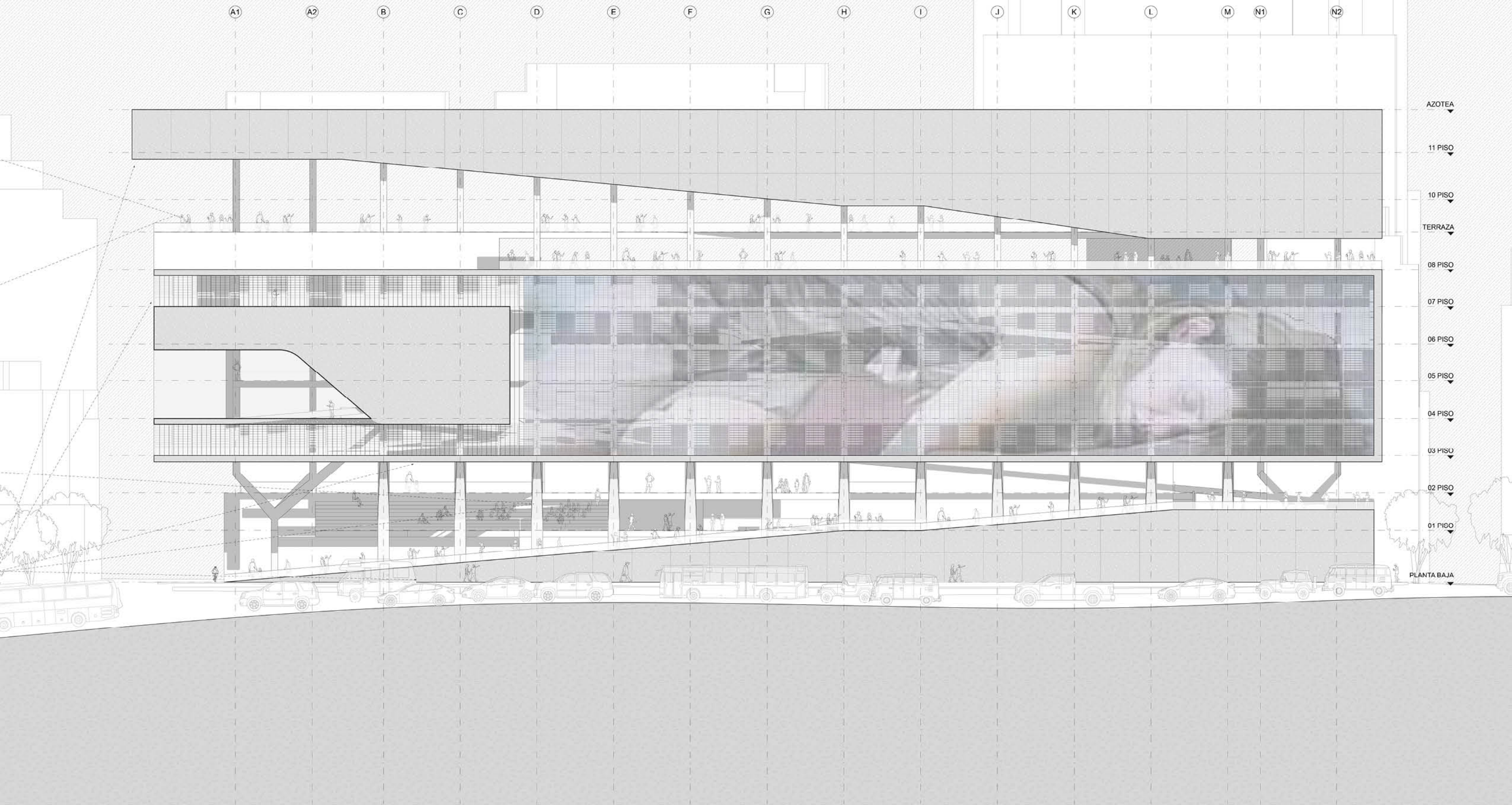


4th floor - roof



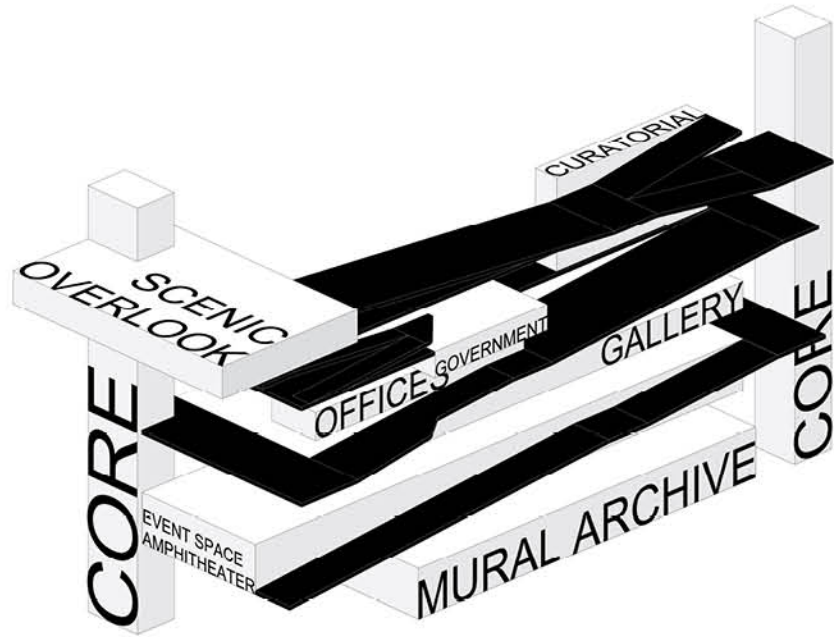
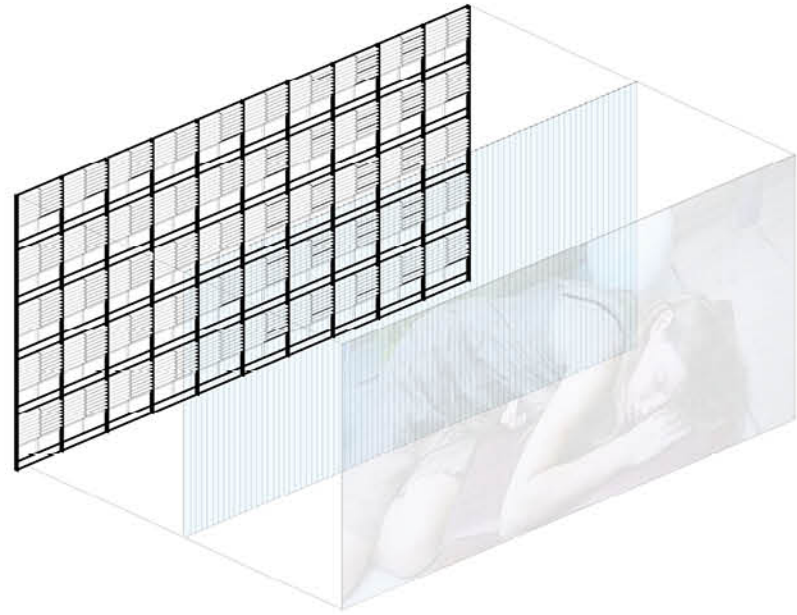
*Elevation*

MERCADO DE LA CULTURA



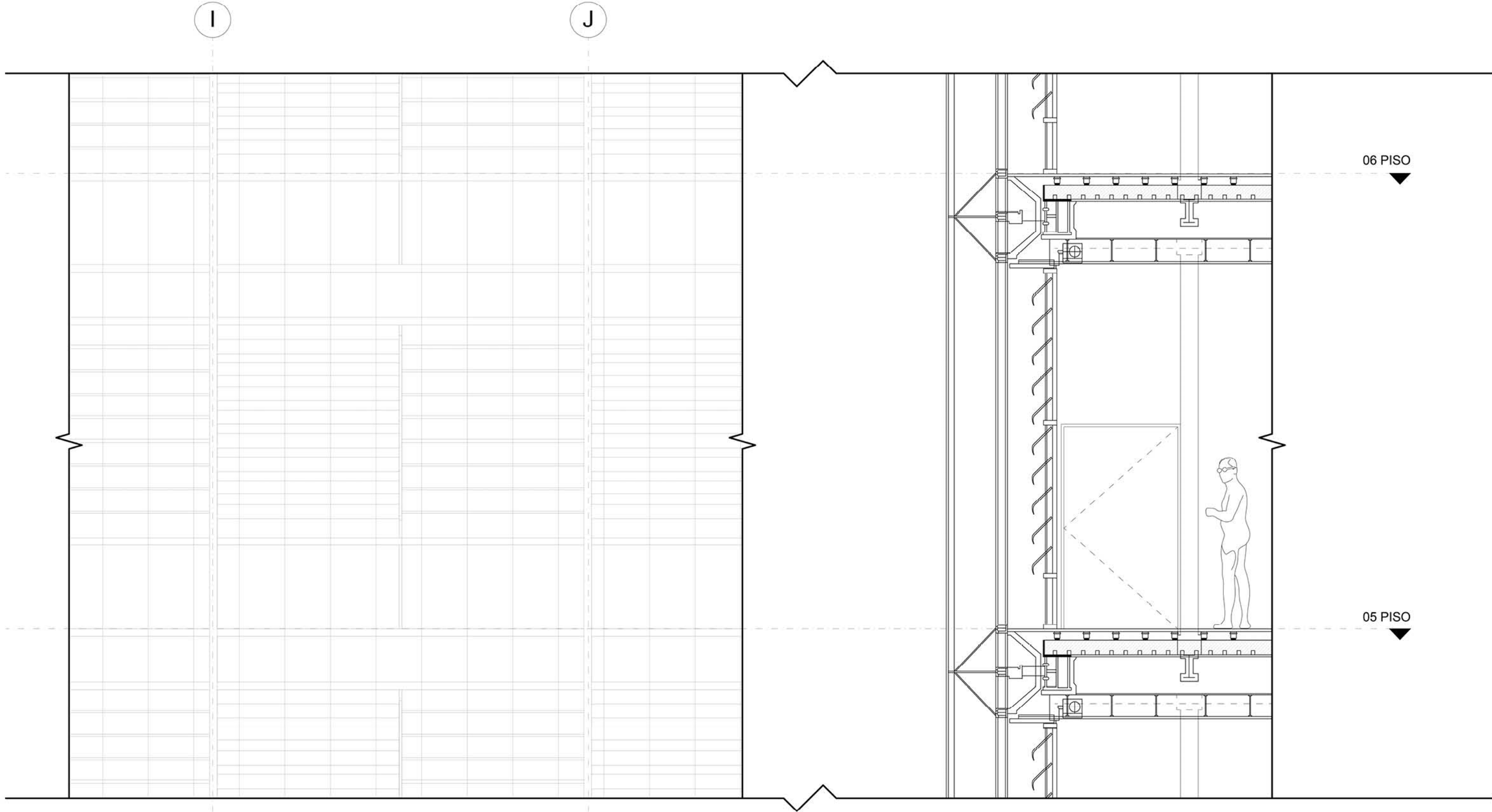


*Layered Urbaism Systems*





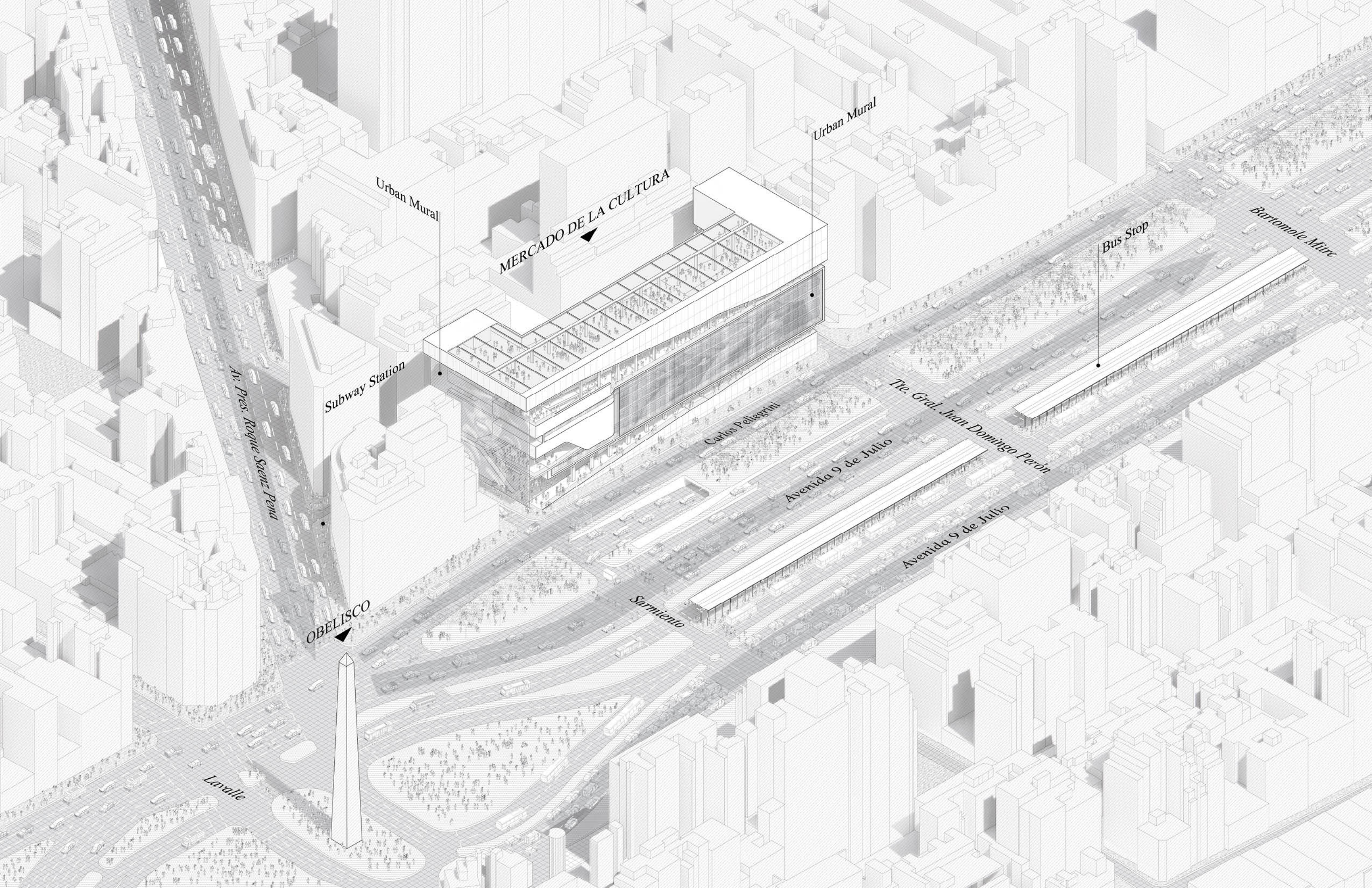
*Facade Detail*



WEST ELEVATION  
LAYERED FACADE

SECTION DETAIL  
LAYERED FACADE





Urban Mural

MERCADO DE LA CULTURA

Urban Mural

Bus Stop

Bartolomé Mire

Subway Station

Av. Pres. Roque Saenz Peña

OBELISCO

Carlos Pellegrini

Tte. Gral. Juan Domingo Perón

Avenida 9 de Julio

Avenida 9 de Julio

Sarmiento

Lavalle

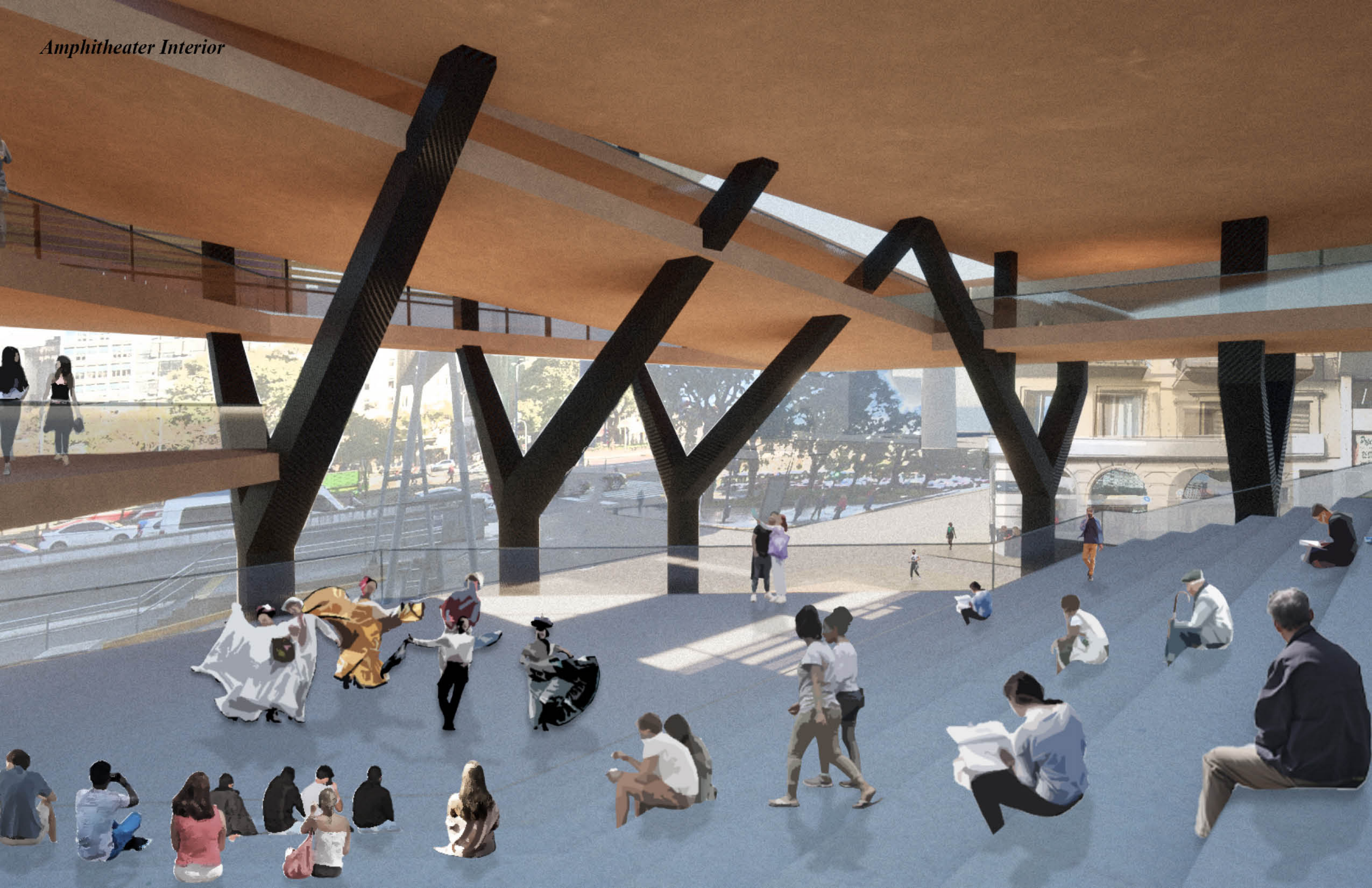


*Art From Street View*





*Amphitheater Interior*





*Research Center Interior*







BUENOS AIRES  
A LA REPUBLICA

EN EL IV CENTENARIO DE LA FUNDACION  
DE LA CIUDAD POR  
DON PEDRO DE MENDOZA  
II DE FEBRERO DE  
MDXXXVI