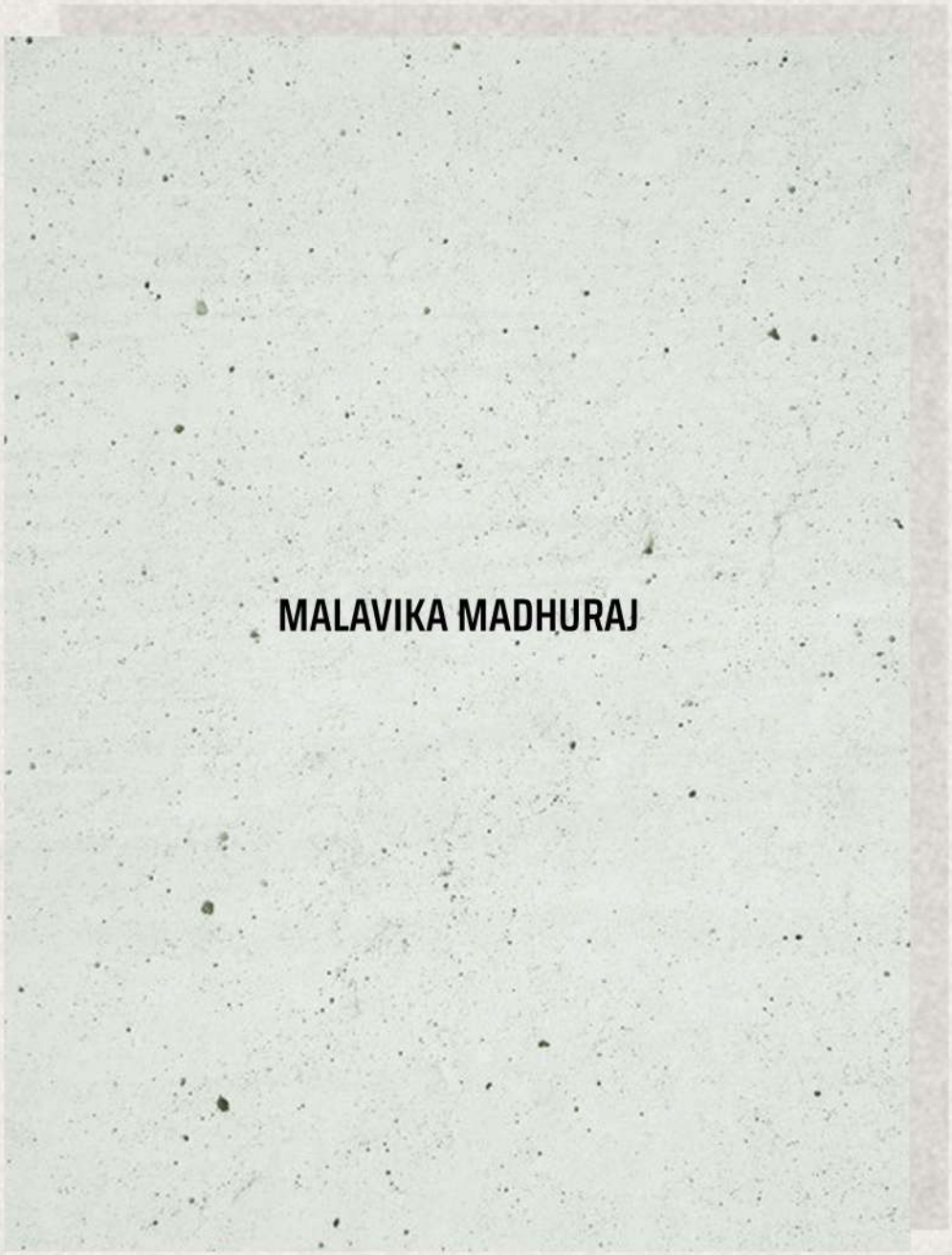


MALAVIKA MADHURAJ

COLUMBIA GSAPP

AAD 2021 - 2022

Time can be thought of as the perception of change. Change in surroundings validate the change in time. How a space changes from little huts to skyscrapers validate the concept of linear progression of time.Had there been no changes, change in time would be a void concept. So architects can be thought of as some sort of time dealers or movers of time.

However, I feel there is an irony here. In the attempt to validate the changing of time, buildings will need to be destroyed and remade. That is, no buildings will stand the test of time. It's as though time and space holds a dialectical relation, where each make and remake the other. Where the change in one would mean the change in other.

So when architects become time movers, to move time, their buildings will have to fall apart. Are architects then time movers and space changers? Do they build things entirely aware of the futility of their actions. Knowing well that their creations will be washed away in the sea of time, they continue to build for the spirit of that certain time...

How can practitioners tackle the unintended co-optation of the rhetoric of the participatory design process by the intolerant and imperialist elements of society? How should the discipline approach the dialectical interplay of ecocentric and anthropocentric approaches? Is the future architect engaged in technocratic or democratic planning and decision-making? My time at GSAPP has allowed me discern a more nuanced understanding of the discipline, beyond discourses that accentuate binary tensions, that can inform these broader questions concerning the future of architecture practice.

CONTENT

RESIDUES IN RUST

AAD Entangled Studio
Speculative City
David Moon, Instructor
Summer 21
in collaboration with Keonhee Lee

Willets Point is a unique business incubator that provides jobs and entrepreneurial opportunities to diverse new immigrant populations from surrounding neighbourhoods. It concentrates on auto-related facilities in an area that is relatively shielded and separate from the residential parts of Corona and Flushing. Presently, there is a government proposal in place for Willets point, but it is met with bitter opposition from the immigrant community as it is going to aid and fast-track gentrification in the surrounding areas, devastating working-class immigrant residents. This project aims at capturing the story of this mini-blue collar economy by trying to retain them.

The project approaches this in 3 stages – Firstly, it focuses on the ecological restructuring of the land. Soil is treated and toxins are eradicated with polluted soil being capped, removed and isolated. Secondly, social structures are integrated into the existing fabric to serve the immigrant community. Lastly, the inevitable transition of automobile industry into the hybrid & electrical phase is taken into consideration, taking a look at how the existing manufacturing industry can be repurposed to adapt to this change.

INITIAL EXCERCISE

Transcending Coloniality 1

After the Indian independence in 1947, the architecture fraternity went through a period of identity crisis. A dilemma whether to hold onto colonial aesthetics or reinvent the lost *indianness*. Doshi's plan for the city of Vidhyadhar outside Jaipur, for instance,involves a synthesis which has to do with a post-colonial re examination of roots, but which also explores a reconciliation of both modern technology and indigenous methods. His graphic images appear to filter modernist ideals through the lens of native India. A negotiation between modernity and tradition echoes in this drawing with indian elements etched in between.

Vidhyadhar Nagar Masterplan
Jaipur, India
1984
Balkrishna Doshi
https://www.archdaily.com/890414/bv-doshis-drawings-reveal-the-identity-of-his-work

Malavika Madhuraj

XS is the new XL 2

Tiny homes are on numerous individuals' psyches as a potential answer for addressing the issue of homlessness. They are under 400 square feet and less expensive than ordinarily constructed housing.They can likewise be assembled quicker. They are being sought after for various reasons, among them is to lessen environmental effects, to address afforable housing concerns, and for downsized way of living. Although a minimalistic home doesn't need a lot of land, numerous towns make it hard to fabricate one because of the zoning laws in place.

Tiny House Movement
United States of America - Primarily
https://www.greenmatters.com/p/tiny-home-benefits-worth-it

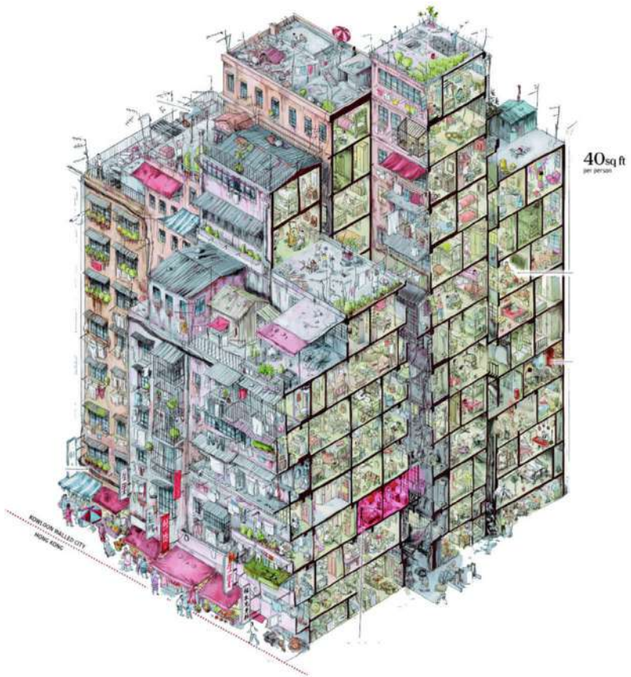
Malavika Madhuraj

(Un)equal Rhetoric 3

After the outcome of Brown v. Board of Education, equalization school were prominent in South Carolina in an effort to forestall integration. These dual school systems based on race were not eliminated until 1970. But presently they remain abandoned and derelict. How can these buildings be repurposed without honouring the logic behind its genesis, but simultaneously preserving the struggles of the African-American community.

Brown v. Board of Education
Topeka, Kansas
1952
https://www.archdaily.com/remnant-schools-faculty-are-repurposing-the-legacy-of-jim-crow-across-louisiana

Malavika Madhuraj

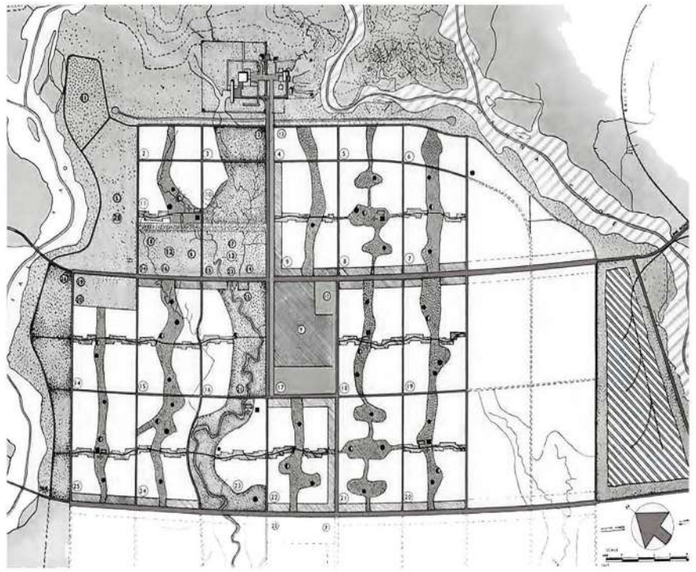


Aesthetics of Anarchy 4

Kowloon Walled City was an ungoverned and densely populated enclave in British Hong Kong. People moved to KWC for many reasons, including bankruptcy, poverty, or to avoid deportation. Kowloon Walled City was demolished and converted into a park. Many of the businesses were forced to close forever as rents in the rest of Hong Kong were not affordable for most of the owners. Despite the lack of space and formal links to utilities, the neighborhood was remarkably productive. KWC functioned as Hong Kong's shadow economy because the hundreds of tiny workshops and factories scattered throughout the site provided products for businesses across Hong Kong.

Kowloon Walled City
Hong Kong
1950s - 1994
https://www.visualcapitalist.com/kowloon-walled-city/

Malavika Madhuraj



Error: *Realpolitik.dwg* missing! 5

It is apparent that the designers of Chandigarh did not deal with the realpolitik, the social, cultural, and economic problems. Inside the real Chandigarh, there is a desperate fight for space and a predominate class struggle. Le Corbusier's plan, has designated thirteen levels of economic classification. These levels have created, within the residential sectors, a system of hierarchical spaces, resulting in the city's polarized imbalance. The more unfortunate in habitants of Chandigarh have devised their own structures—shanty dwellings made from garbage and debris. These subhuman conditions that exist in Chandigarh consciously overlap with the city's formalist architecture.

Chandigarh urban planning
Chandigarh, India
1960
Le Corbusier
https://www.cknl.eu/le-corbusier%E2%80%99s-failed-modernism.html

Malavika Madhuraj

Existential Entropy 6

Chernobyl disaster was a nuclear accident that occurred in1986. The town bore the hallmarks of an intermodal Soviet modernist architecture. Within the generic, concrete street-space lay subtle flourishes of color and uniqueness, such as the Prometheus cinema's stained glass windows casting unique light forms on colorless facades and the amusement park. Following the 1986 disaster, the town was evacuated and remains empty to this day. The current architectural reading of the nuclear site may signify the lengths humanity must go to in order to contain its own mistakes.

Abandoned Chernobyl Site
Chernobyl
https://www.archdaily.com/the-architecture-of-chernobyl-past-present-and-future

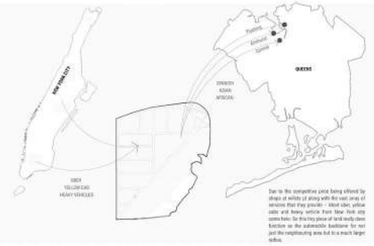
Malavika Madhuraj

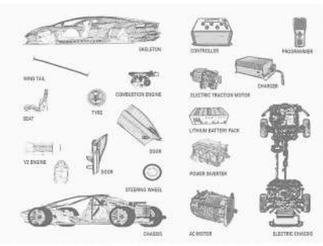
The intention of this analysis is to map out the role that these immigrants play in sustaining this automobile economy.This tiny piece of land function as the automobile backbone for not just the neighbouring area but to a much larger radius. We have mapped out the open spaces within willets pt and this view sort of captures their everyday activity. Besides the mechanical and repair work they provide – there are often these makeshift seating spaces covered with patio umbrellas with and chairs. They often congregate in front of the shop and use it for recreation as well.
Some critical problems associated with WP- There is no sewer/drain and the place suffers from Toxic leak and contaminants – MTBE spill & Gasoline spill.

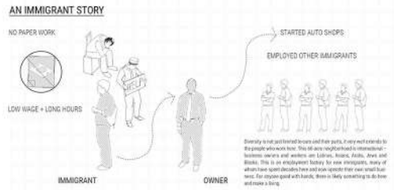
Most of these immigrants come from south east asia and latin amaerica. These influxes are generally met at the eastern sea board of US.

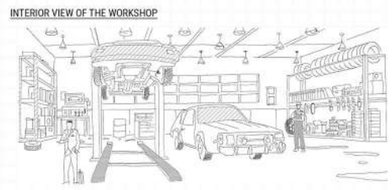
Due to the competitive price being offered by shops at willets pt along with the vast array of services that they provide – Most uber, yellow cabs and heavy vehicle from newyork city come here. So this tiny piece of land really does function as the automobile backbone for not just the neighbouring area but to a much larger radius. These are also the firms that provide jobs for a mostly Spanish and Asian workforce from nearby Corona, Elmhurst and flushing.

This is illustration takes a look at the various parts of a car that can be serviced at Wp. Starting from chassis at the base all the way upto the skeleton and hood. – It also includes wind tail, engine, tyre, windows, seat, steering wheel.
Diversity is not just limited to cars and their parts, it very well extends to the people who work here. This 60 acre neighborhood is international – business owners and workers are Latinos, Asians, Arabs, Jews and Blacks. When immigrants with no paperwork are met with low wage and long working hours- willets point becomes This employment factory for new immigrants, many of whom have spent decades here and now operate their own small business. And they go on to employ more immigrants and the chain continues.



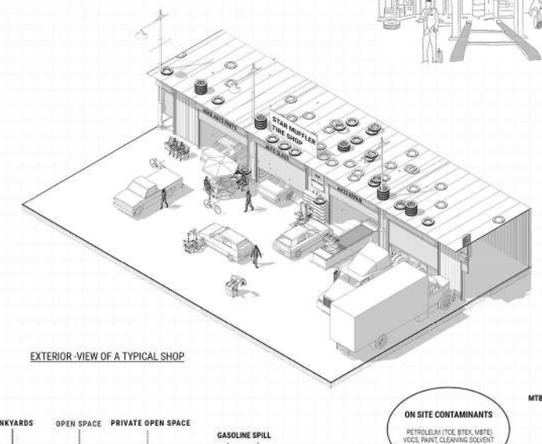


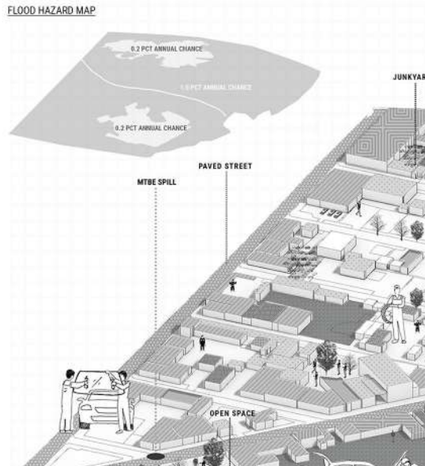


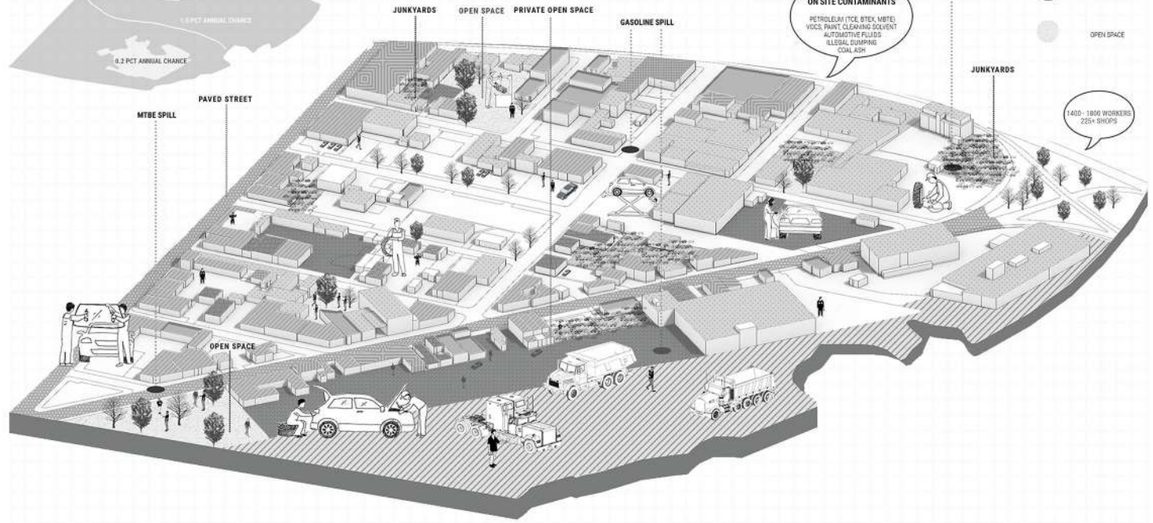


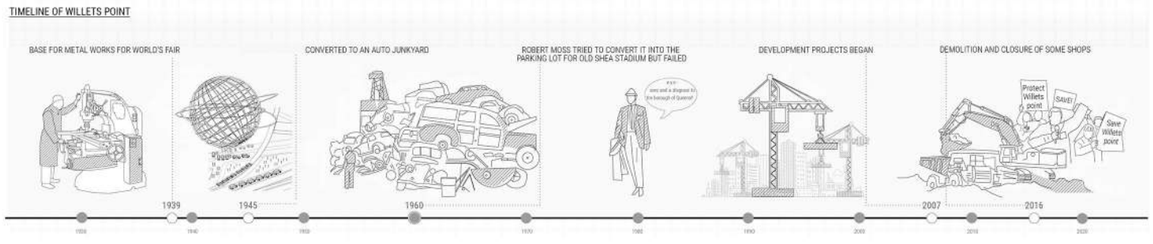
RESIDUES IN RUST

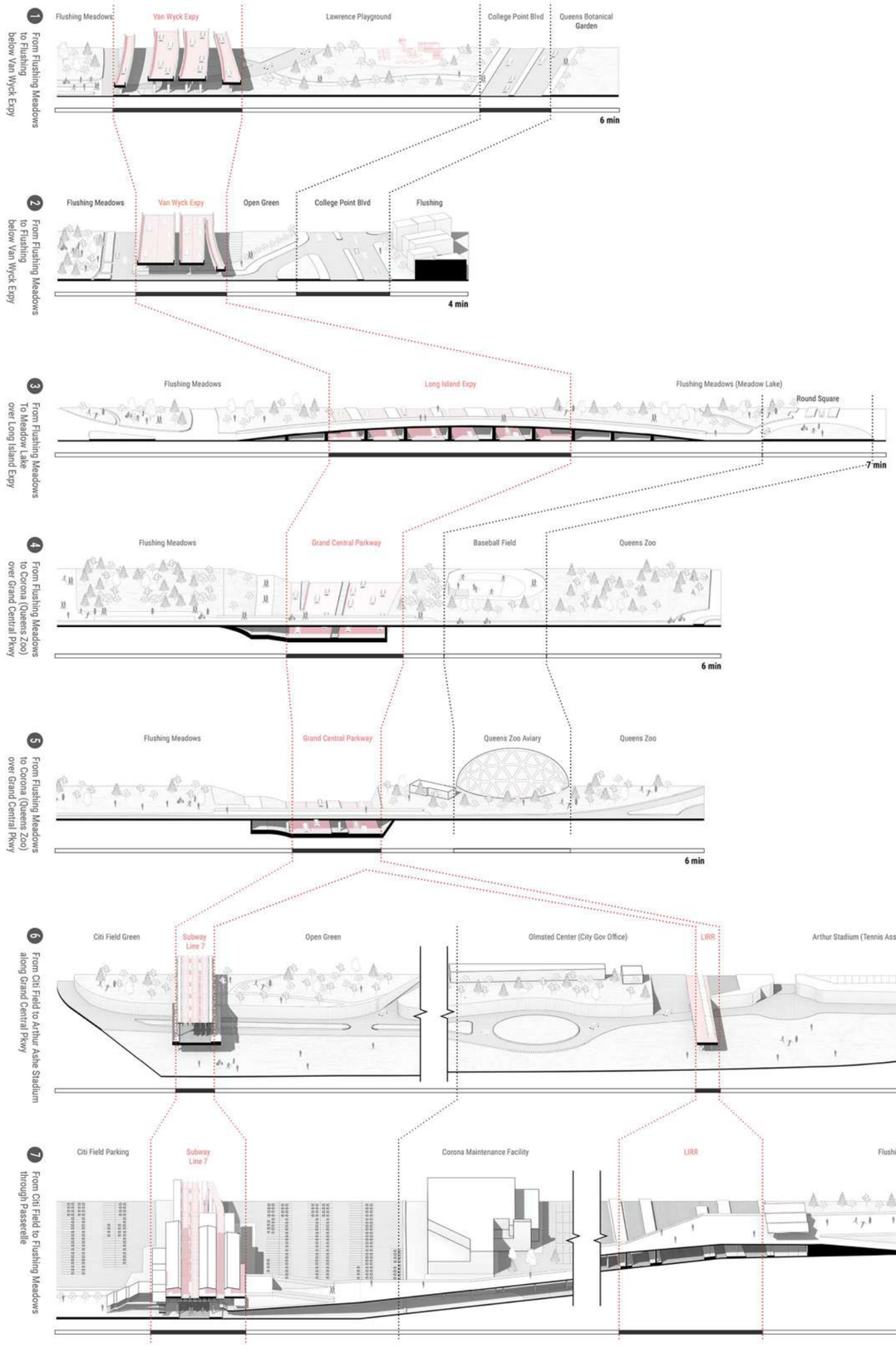
Willets Point is a unique business incubator that provides jobs and entrepreneurial opportunities to diverse new immigrant populations from surrounding neighborhoods. It also concentrates auto-related and waste facilities in an area that is relatively shielded and separate from the residential neighborhoods of Corona and Flushing. However, this mini economy of blue-collar workers, many of whom are immigrants, will soon vanish.The intention of this analysis is to map out the role that these immigrants play in sustaining this automobile economy. This obscure automotive shantytown is surrounded by far more prominent neighbors: Citi Field, La Guardia Airport and the tennis center.

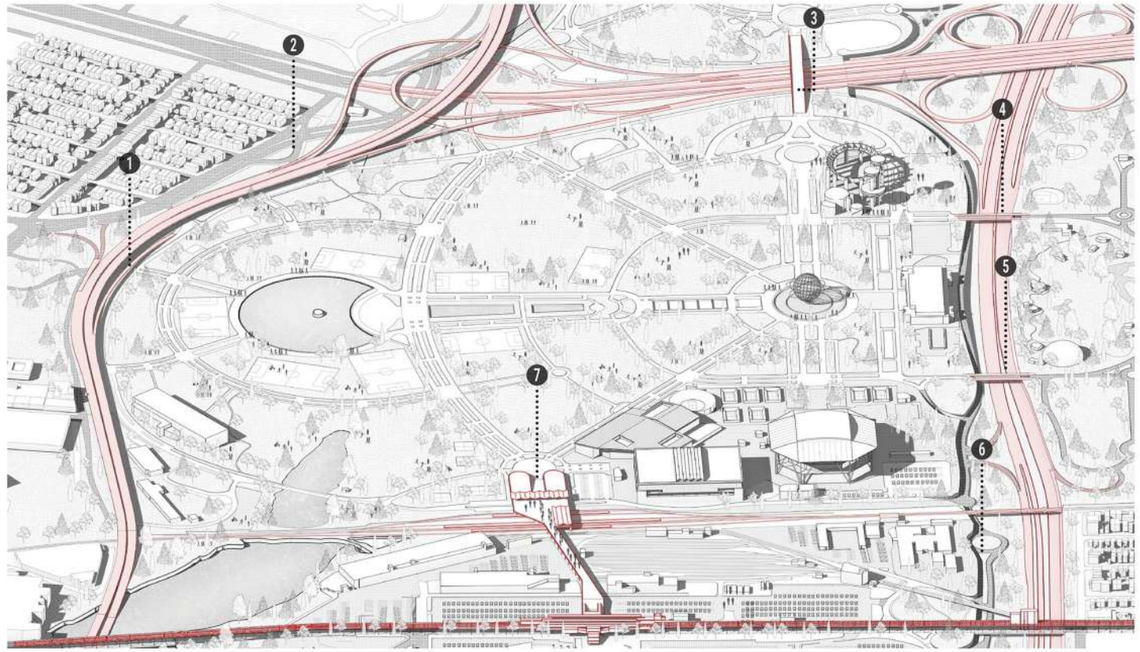








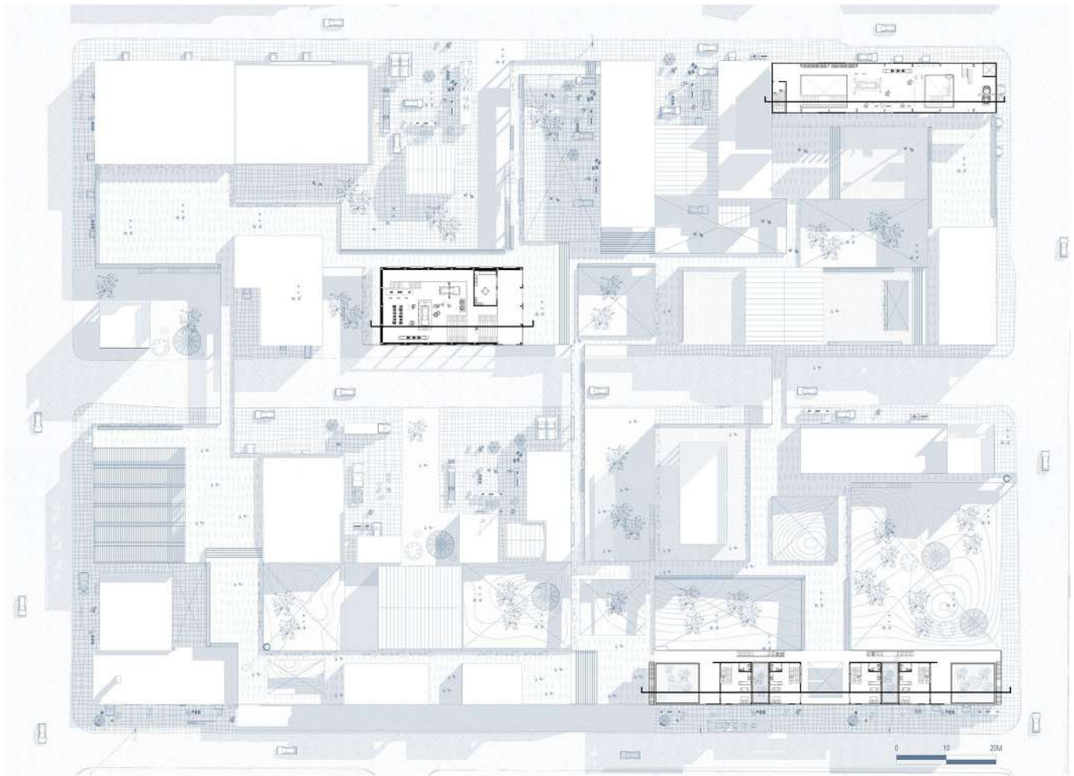


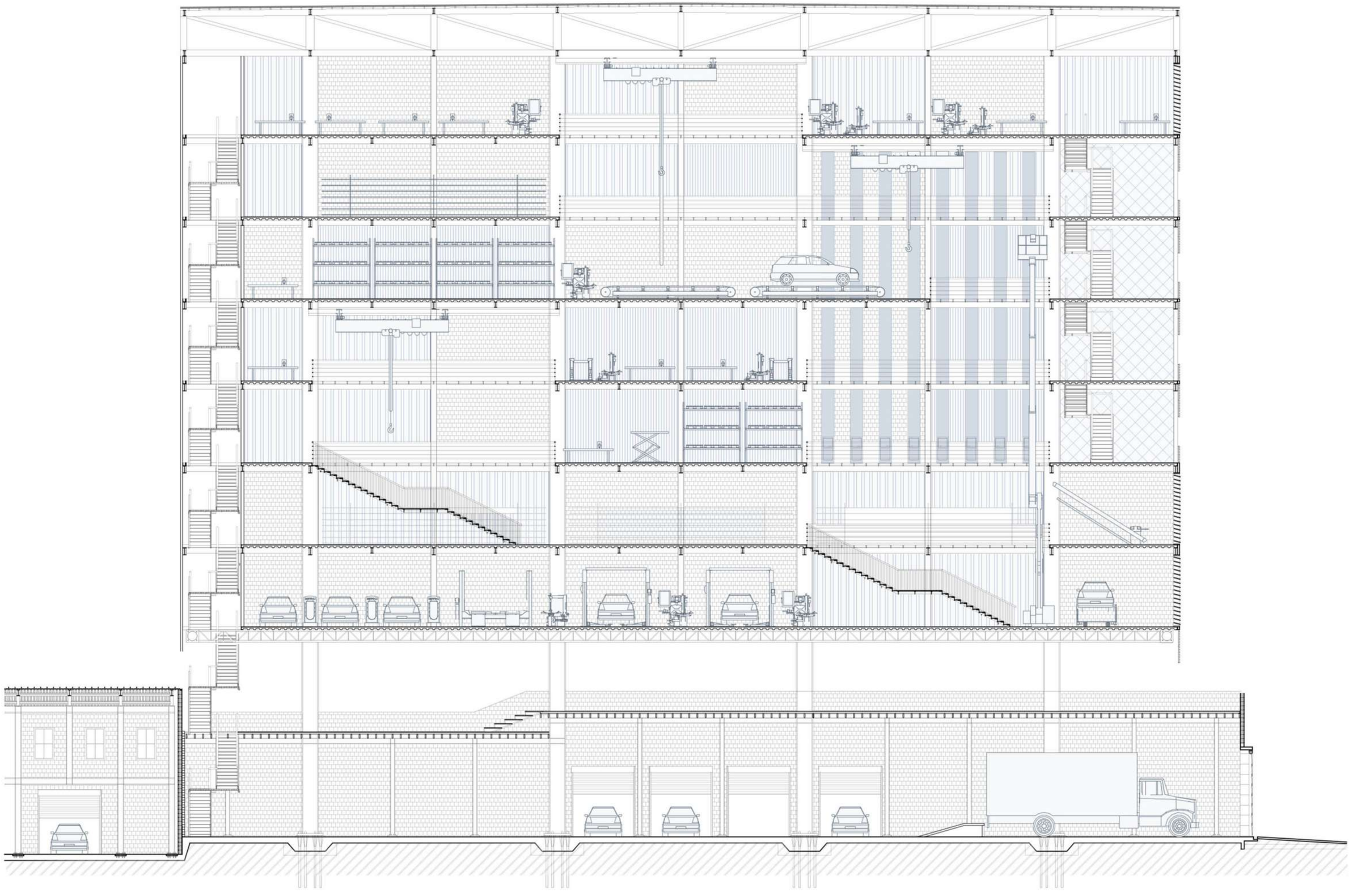


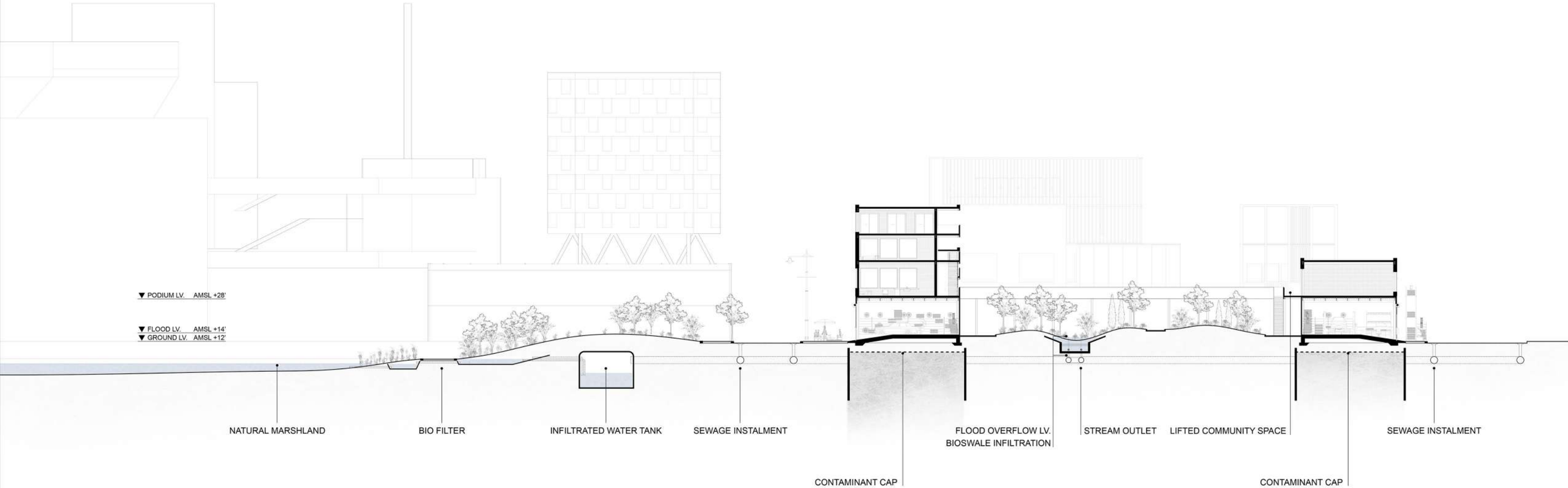
This analysis points out the inaccessibility of the Flushing meadows, how it has become an island of transit through the development of transit infrastructure: Grand Central Parkway, Van Wyck Expy, Subway line 7 and LIRR. The section drawings explore their physical conditions by comparing each other by the size of the structure, the distance and time of the travel.

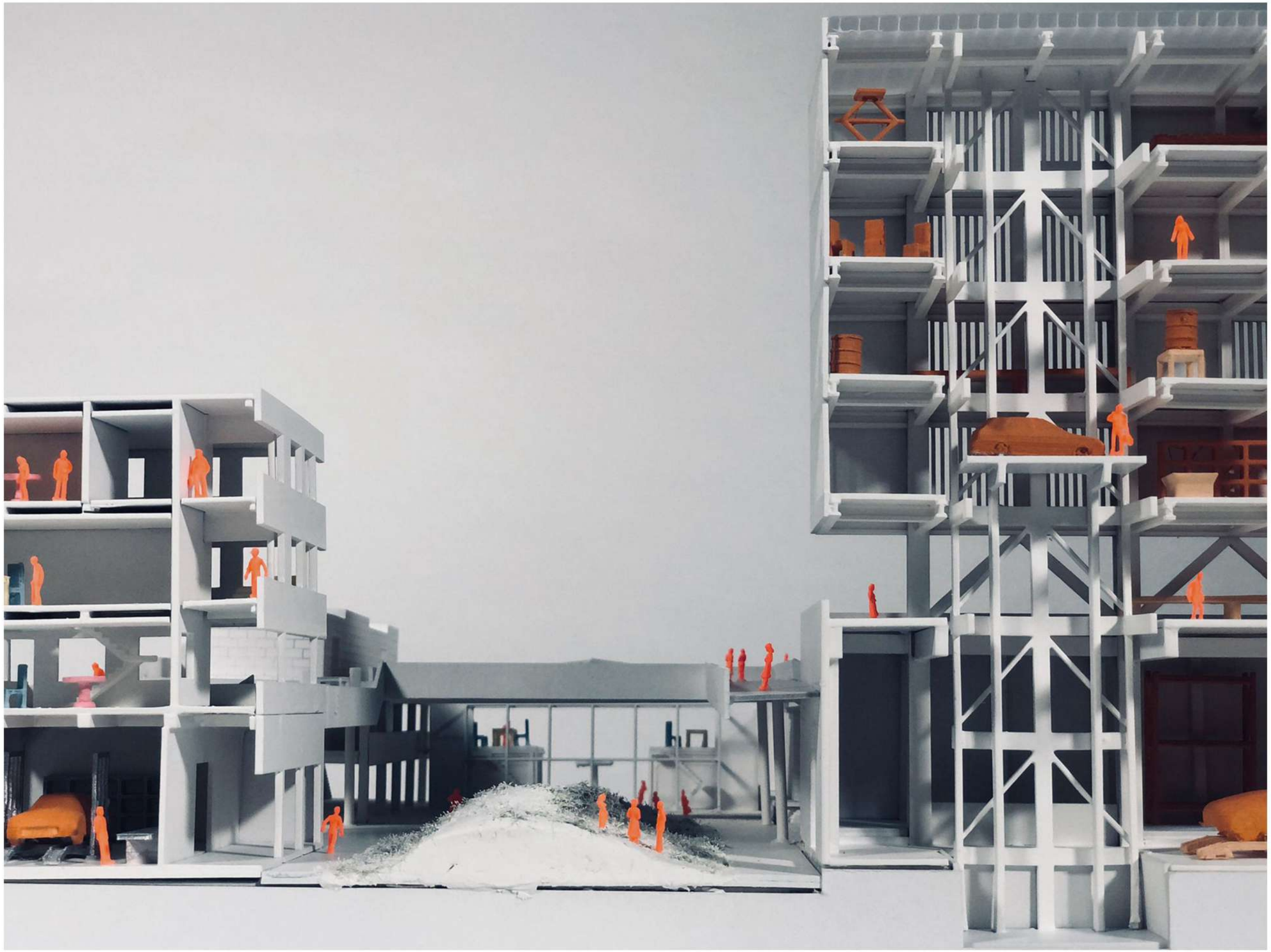
They are product of a politically framed infrastructure meant to serve not the community around, but further visitors of World Fair, La Guardia Airport, Citi Field, Tennis Association.
What is interesting in this Island of Transit is that apart from these macro developments, Willets Point, an iron triangle/island of automobile industry, naturally grew on the north east tip of the site forming a unique identity.

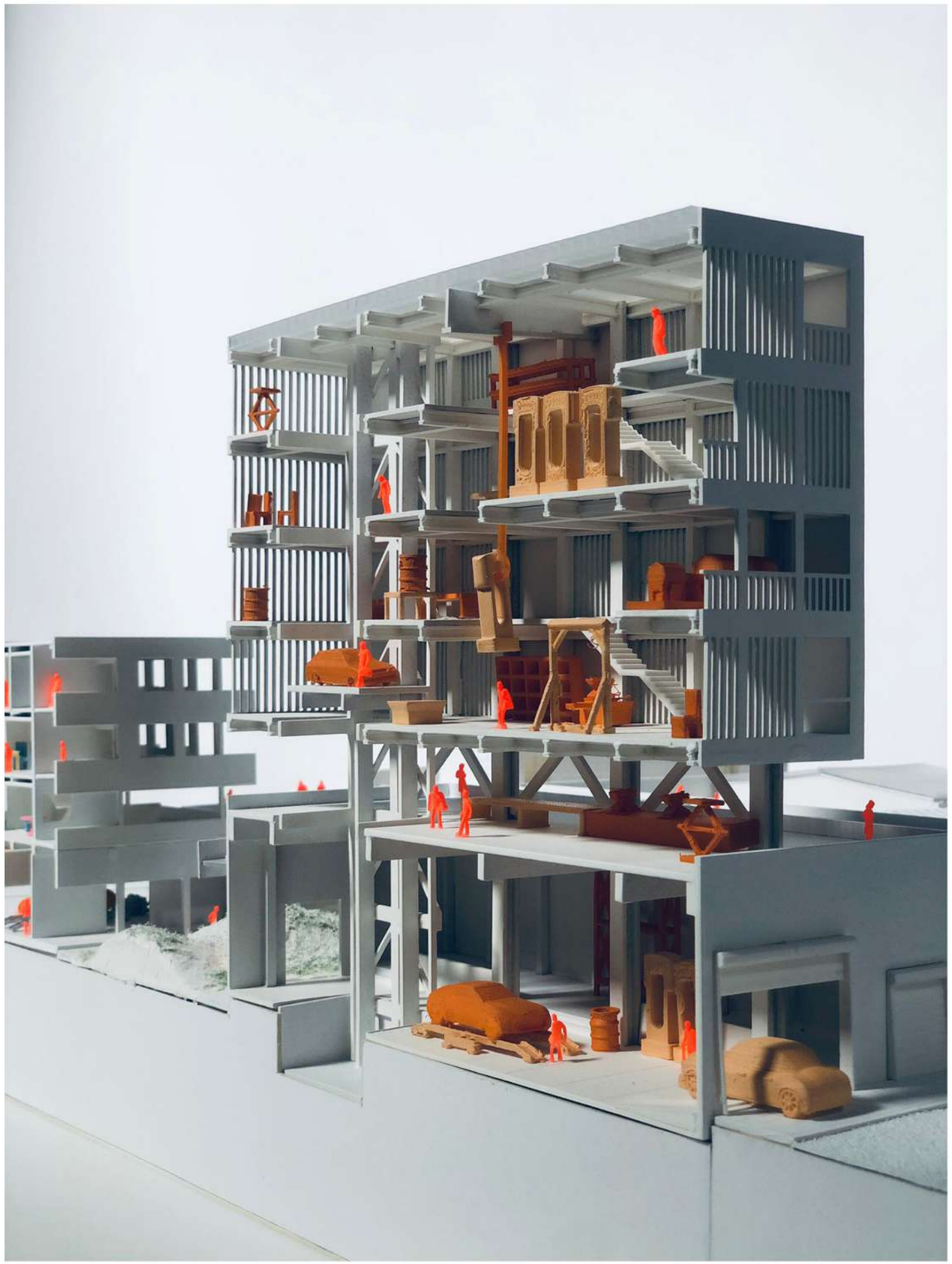

FLUSHING BAY
DEPARTMENT OF TRANSPORTATION
HARPER ST. YARD
CITI FIELD
FLUSHING CREEK
Willets Point Boundary
On-going Goverment Development
Private Property / Business
City Controlled Property
Private Property Willing to Develop
0
50
100
200M
GOVERNMENT
PLAN PHASE 1
MARSHLAND PARK
(FLOOD MITIGATION)
GOVERNMENT
PLAN PHASE1
FLUSHING CREEK
PARK (MTA PROPERTY)
MTA NEW YORK
CITY TRANSIT BUS DEPOT
CORONA MAINTENANCE
FACILITY (7LINE)

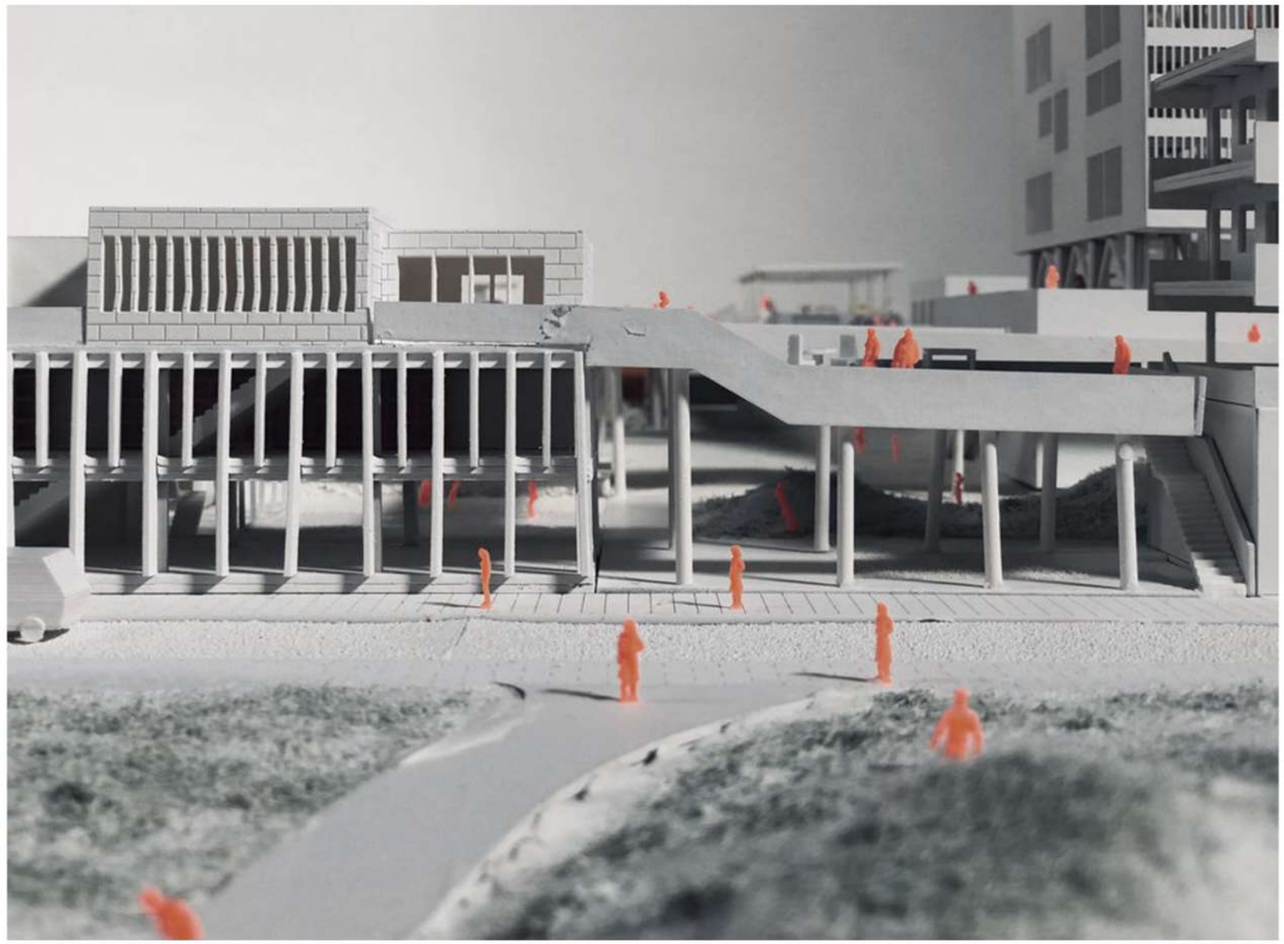

0
10
20M

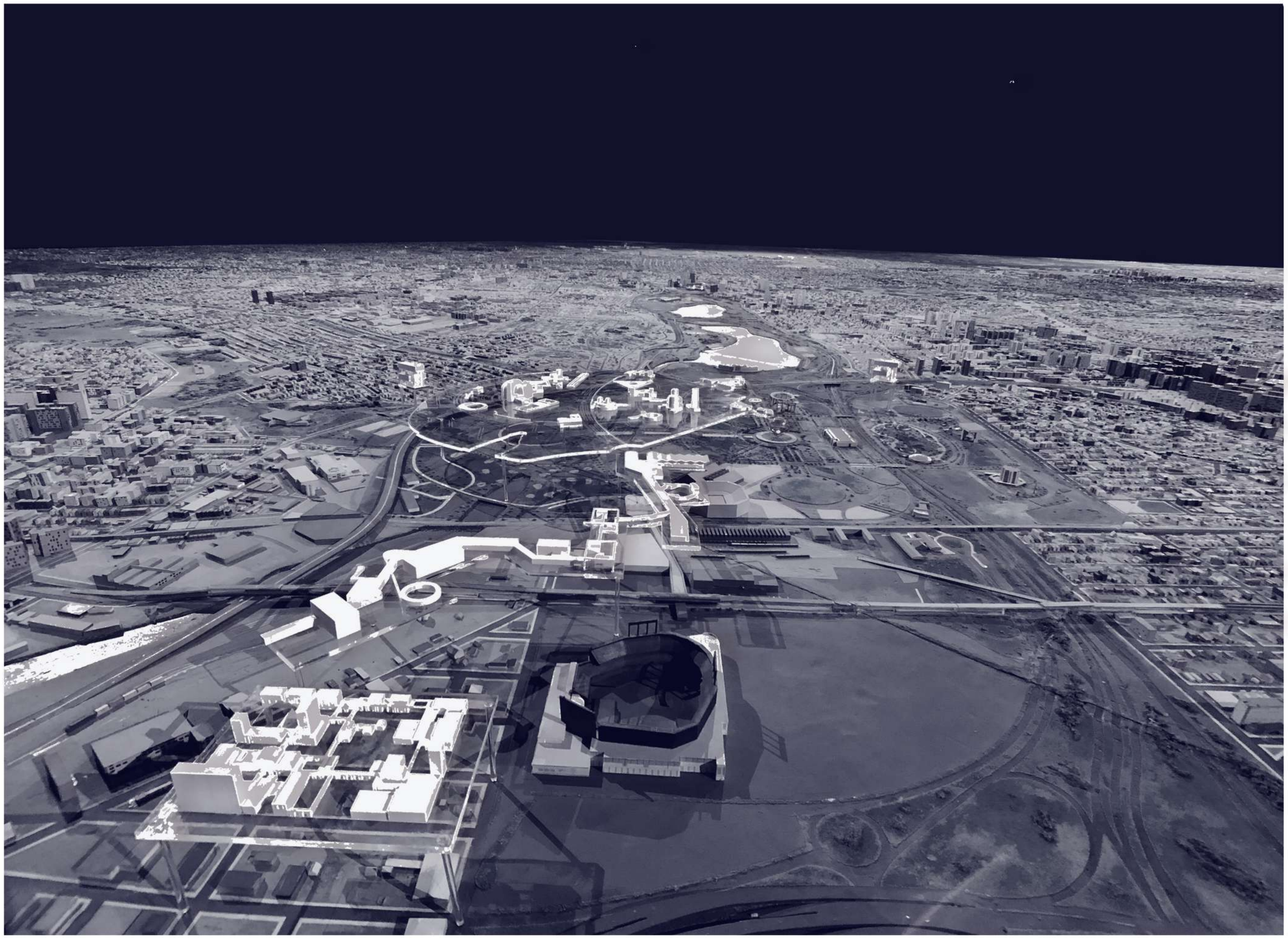



▼ PODIUM LV. AMSL +28'
▼ FLOOD LV. AMSL +14'
▼ GROUND LV. AMSL +12'
NATURAL MARSHLAND
BIO FILTER
INFILTRATED WATER TANK
SEWAGE INSTALMENT
CONTAMINANT CAP
FLOOD OVERFLOW LV.
BIOSWALE INFILTRATION
STREAM OUTLET
LIFTED COMMUNITY SPACE
CONTAMINANT CAP
SEWAGE INSTALMENT









Installation at the Queens Museum

Time Deprived of its Lethality by Nostalgia

ARGUMENTS on Samir Bantal : Beyond Countryside
Prof. Andres Jaque - Benedict Clouette
Summer 21

After dedicating his entire professional journey to urban areas, Dutch architect, urbanist and founder of Rotterdam-based Office for Metropolitan Architecture (OMA) Rem Koolhaas and its exploration arm AMO, led by Samir Bantal, spent the previous decade gathering material about the countryside. They designate the countryside as our future where the most revolutionary and contemporary segments of our civilization will occur. Numerous inquiries surrounding the countryside are presented by Koolhaas in the Countryside, The Future exhibition at the Solomon R Guggenheim Museum (Belogolovsky 2020). Outlined as a remedy to architects' persistent propensity for privileging the metropolitan, the show follows a way through the countryside across the globe, introduced here not as a rustic exterior or compensatory options in contrast to the devastation or brutality of industrialist urbanization but as an oeuvre of energizing and imaginative answers to modernity. The present countryside, as per this show, is a spot overflowing with experimentation, a site of exceptional efficiency and expectant types of lives, a proving ground for revolutionary development free of architectural standards and limitations, a pristine interdisciplinary ‘wilderness’ (Scott 2020).

Transhistorical examination and analysis of non-metropolitan domains that AMO calls the ‘ignored realm’ seem to almost deliberately look past the multitude of layers inscribed within cities (Shaw 2020). The intangible, non-material, and experiential aspects of living in different cities— often driven by history, collective memories, and political and social establishments— are all sidelined to strip cities to only their physical features, reducing their analysis to narratives of development and population size. Wouldn’t the author’s concern that ‘countryside’ is a ‘glaringly inadequate term for all territory that is not urban’ apply equally to the employment of the term ‘city’ to all territory that is seemingly not the countryside?

Why should a population that is operating from a place of privilege by virtue of living in cities decide the future of the countryside? Following 40 plus years of fundamentally working in, and speculating on, urban areas, why should an institution such as OMA bearing the term metropolitan in its name be the dependable expert on the other 98% of the globe (Gerrewey 2019).

Frampton in his essay Towards a Critical Regionalism: Six points for an architecture of resistance contends that architecture has lost its precept because it works within a framework dictated by neo-liberal and capitalist agendas.

Production of places in this regard has generated meaninglessness which has made this profession drift towards universalisation and commodification. Cities lack identity owing to the heightened placelessness and whimsical individualism present (Frampton 1983). How can Koolhaas ensure that interventions in the countryside will not wind up creating a similar tragedy and risk its core? Doesn’t being an ignored realm guarantee a sense of preservation of its identity?

The Countryside is guided by a similar methodology that Koolhaas first researched in his 1978 book Delirious New York, which became an accepted book of scriptures for the discipline in a then recently globalized profession. What is being questioned isn't only the actual show, but a whole scholarly environment—alongside nearly all that came afterwards. The conversation is yet again lingering on some unfortunate possibilities that would soon be neglected and overlooked (Volner 2020).

Bantal and Koolhaas believe urban areas address 'the old pieces of civilization,' while the countryside is the 'new,' arising posthuman topography 'habited by machines' (Volner). They strive to accomplish the prospect of a techno-rural climate, one that would discern the undetectable cycles and frameworks that are rapidly revamping places like America's western desert. However, the reason we are shielded from the operation of data infrastructures is on the grounds that we aren't intended to. The contradiction of this post-human condition is that it is immune, by definition, from the kind of human mediation that OMA desires to execute (Volner).

It is difficult to say if the countryside requires our consideration more than urban areas. We are not shown any genuine proof of that. A remarkable opposite is unfolding as we realize that countless individuals are migrating into urban areas in China and it is anticipated that various metropolitan places in India and Africa will develop into megacities of 50-80 million individuals before this present century is over. There is no question that we need to focus on the countryside, yet not to the detriment of ignoring our urban communities. Both are going through huge changes and we earnestly need to address them head-on. In such a circumstance, is it even advisable for us to try and separate the two? (Belogolovsky 2020).

By exhibiting the show in Guggenheim Museum and producing research and collecting data distant from the actual geographic sites, indirectly OMA is obliging the countryside to exist within the limits and constraints of the urban realm. The enmeshed and inextricable connection between urban and rural are indirectly illuminated here.

Koolhaas conceded that if he had found out about the non-metropolitan world prior in his life, he probably wouldn't have become a designer. It is excessively late for him to turn around the clock, so maybe this is his attempt for freedom from the restraints of urbanism (Roux 2020).

OMA argues that it is critical to engage with the existing circumstance. The exhibition is an effort to signal the need and urgency to shift focus to the pressing climate issues. They are also conscious of the limitations faced by architectural offices in uncovering solutions, and require collaboration across various disciplines such as ecology, agriculture, technology etc (Koolhaas and AMO 2017). The exhibition is said to follow a pointillist pattern, a sharp word choice since it associates the presentation back to the Guggenheim Museum's assortment of impressionist works of art which questioned the validity of modernity. However, this extravagant term is truly a cover for the exhibition's disconnected arrangement of carefully chosen stories and case analyses (Saffron 2020). This pointillist show is neither as socially sharp nor as uncontrollably innovative as Delirious New York. The countryside is a crucial theme, but not in methods adopted here (Zara 2020).

LIMINAL RESIDUES OF CONSUMPTION

TRANSSCALARITIES
Prof. Andres Jaque - Javairia Shahid
Summer 21

This paper examines the trans-scalar unfolding inscribed within Design Earth's shift from an anthropocentric to an anthropocene design approach. Additionally, I investigate how this project intends to redefine our relationship with the environment in an era of ecological anxiety. If cities often take a positivist approach to waste management, this project attempts to negotiate the 'matters of fact' and 'matters of concern' by not only staging the issue but also addressing the entire scenography, how the entire construct holds together. (Latour 2004, 225)

Figure 1. Rania Ghosn and El Hadi Jazairy, Tea ceremony featuring a folding screen, carpet and ceramic tableware, 2017, Seoul Biennale, https://design-earth.org/projects/trash-peaks/

In advancing their response to climate change, Ghosn and Jazairy convey the continuous weakening and decay of the earth by bringing issues on urbanization and waste strategies that have harmed the environment to light. (Ghosn and Jazairy 2015) In their examination of the connections among palaeontology, biology, and urbanization across scales and times, their work investigates the nature and power of design as it draws in its geographic conditions—showing visionary disclosures that sway between the utopic and the dystopic.

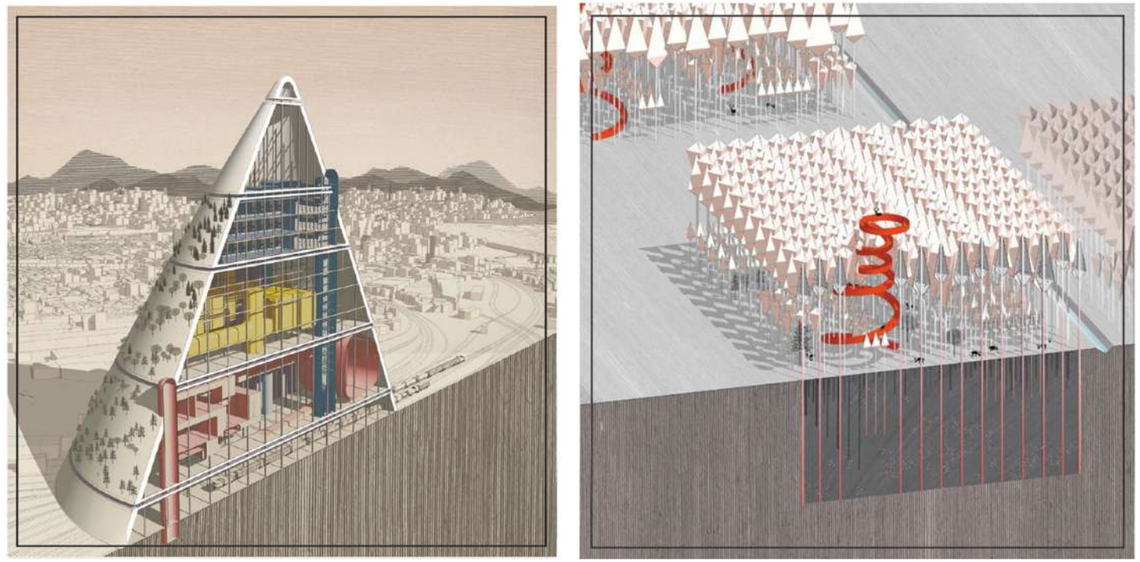


Figure 2. Rania Ghosn and El Hadi Jazairy, The Methane Aviary, 2017, Seoul Biennale, https://design-earth.org/projects/trash-peaks/ - A series of retrofitted methane pipes that become bird habitats.

The exhibition exposes the tremendous but slow and gradual potential of ecological changes and how this slow-burn nature contributes to the abandonment of immediate encounters and actions. (Pastena 2018). As seen in figure 1, the installation comprised of three antiquities: a printed carpet, collapsible screen boards, and 3D-printed tableware. The folding screen collected speculative waste landform projects into one drawing that appropriated the irworobongdo -'painting of the sun, moon and the five pinnacles'. The three-dimensional models in ceramics– chopsticks, serving bowl, stacked plates, cup, salt and pepper shaker – were the articles for a tea ceremony where visitors could discuss the projects and nurture conversations around the concerns of waste. (Ghosn and Jazairy 2020, 32)

The realm of trash has gotten progressively unpredictable, with factors stretching out past conventional constraints of the city. With regards to South Korea, the serious demographic change throughout the long term—with increase of the populace currently living in Seoul—has presented huge difficulties to the administration of waste volumes, its removal, and the topic of landfill regions that will be depleted shortly.

Figure 4. Rania Ghosn and El Hadi Jazairy, The Towering Construction, 2017, Seoul Biennale, https://design-earth.org/projects/trash-peaks/ - A spiral tower that wraps Mount Namsan with the city's construction waste.

Trash Peak proposes six speculative projects as depicted in figure 2, 3 and 4, that situate concerns of waste such as its ecology and logistics at the focal point of metropolitan concerns. They are set in sites around Seoul that once stood as the testament to human progress and the capitalist approach embedded in it, but in Design Earth's drawing, they are transformed into refugee areas for species imperilled by the outcome of this merciless progress. (Seoul Metropolitan Government 2015) By mapping out the materialistic, political and economic geographies of trash in conjunction with the advancement of the economy, they are able to reform and rearrange the cultural assumptions on which trash systems belong to and operate from (Hulme 2009).

The project reminds us that societies can change significantly because of environmental change but that doesn't diminish the human capacity to adjust to these progressions which is significant for social and ecological prosperity. Trash Peaks appropriated existing cultural symbols and ceremonies to disrupt the foundation whereupon environmental impairment rest and created new aesthetics in relation to the climate crisis. They outline the diverse manners by which designers can interact with climate change to establish opportunities for changing our surroundings. (Bachelard 1957, 152)In order to intervene with piles and heaps of waste, one should be aware of the layers of issue buried in the earth's landscape and the impact that they have in altering our planet.

FRAGMENTED PREFECTURE

TRANSSCALARITIES
Prof. Andres Jaque - Javairia Shahid
Summer 21

When refugees become homeless, they are also deprived of a sense of belonging and detached from their familiar culture and ways of living. Governmental lines are drawn to create new spatial boundaries called ‘prefectures into which refugees are relegated. Hence the title of this paper alludes to the fragmented lives of refugees within each prefecture.

What spatial information is gathered at the spot of transience to transform the constructed settlement into a home and how does a collective space aid in that process? How does the process of claiming and assuming a space diverge from humanitarian rationales and technocratic management at sites of emergencies? With these inquiries, this paper focuses on how climate refugees discern, adjust to, and modify their new locale physically and socially. It contends that to foster a homelike space in transitory convenience, displaced people assemble information at the spot of refuge. Inspecting these urban re-figurations consequently assists us with uncovering how the exchange of refugees’ agency and their insight and the technocratic system – as a condition of perpetual transience – influence the creation of a 'home' (Jojima and Nakazato 2019).

Figure 1: A tsunami reaches Miyako City, overtopping seawalls and flooding streets in Iwate Prefecture, Japan, after the magnitude 9.0 earthquakestrucktheareaMarch11,2012,Mainichi Shimbun, https://www.cam.ac.uk/research/news/scientists-explain-scale-of-japanese-tsunami

Figure 2: Torimura, Koichi. Rest house/playground in Kitaiibuchi, Soma-shi. Digital image. Toyo Ito's Post-earthquake Recovery Programme. https://www.dezeen.com/2016/03/11/klein-dytham-architecture-soma-city-home-for-all-community-hall-tohoku-earthquake-tsunami-relief/.

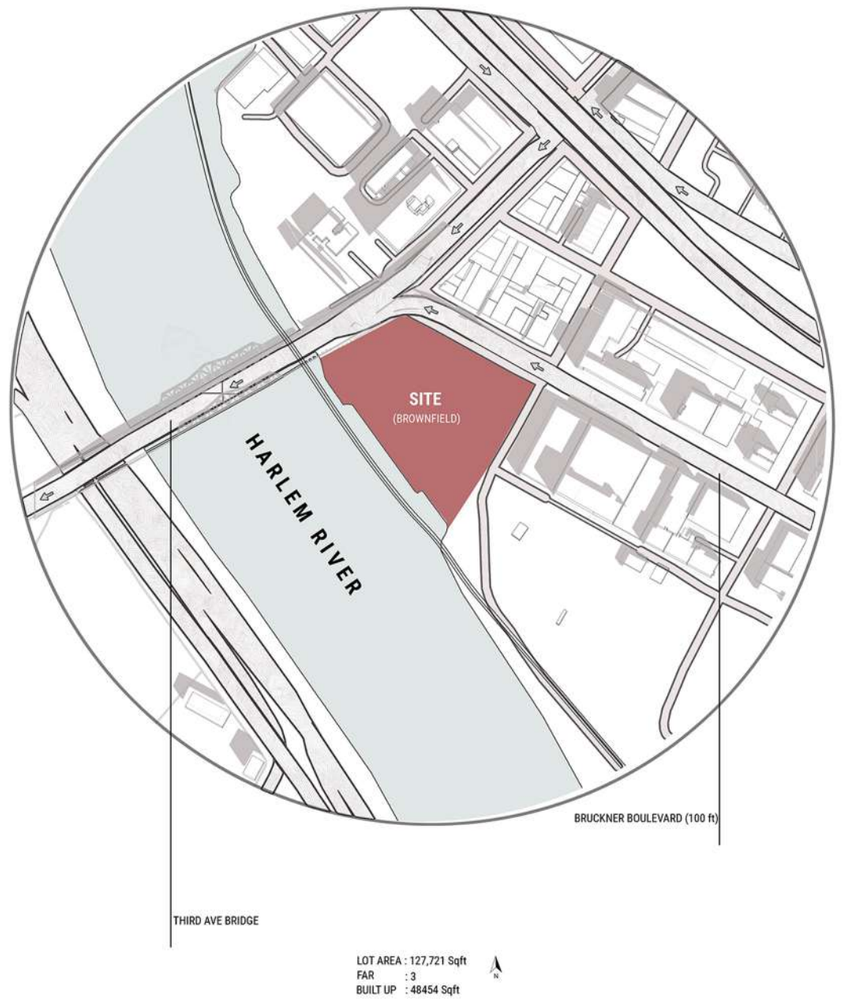
The Home-for-All project was set up not long after the March 2011 Tohoku earthquake, tsunami and nuclear crisis as seen in figure 1 which demolished several coastal communities and annihilated in excess of 250,000 houses. (Taylor 2016). This intervention includes the production of public spaces for discussion and meals in the sites of transitory housing. This design work has caught the attention of many not just as a result of its substantial commitment to the betterment of those experiencing the crisis, but because it bridges in a solitary structure two paradigms of contemporary architecture– the primitive hut, and the public space. By imbuing the insignia of the domestic ("Home") to the feeling of the collective ("All"), the Home-for-All react to the prevalent concerns around the fragmentation of community and the atomisation of social life. (Nygren 2015).

The reason for impermanent arrangements is to help casualties during the recuperation time frame, However, unlike an emergency shelter, zeroed in on giving sanctuary to the period immediately after the catastrophe, these transitory housing permits occupants to get back to their everyday obligations and daily activities. (Bris and Bendito 2019). Therefore, when this project encounters the mission of making collective spaces, it also meets the challenges of recreating intricate imageries of identity and memory encapsulated within 'home.' Within this project, Toyo Ito focused on making individuals' aspirations come true and arrived on an absolutely conventional Japanese house with a gabled rooftop, an engawa and high overhang (Lawrence 2016). For the first time in his professional career, He was prepared to leave Tokyo – the wellspring of his inventive inspiration, a colossal city encapsulating everything the modern system could offer – and instead embrace the disaster-stricken yet nature-rich, antiquated Tohoku. His approach to placemaking that was rooted in participatory mechanics facilitated in shielding the residents from the protractedness of temporary housing. (Didero 2012)

Figure 3: Momoyo Kaijima and Yoshiharu Tsukamoto, Reimagining the erased coastal communities,2017, https://www.archdaily.com/870454/lecture-atelier-bow-wow-architects-in-post-disaster-reconstruction

We live in a society constrained by the worldwide economy. Structures are planned, fabricated and annihilated dependent on the choices made by the enormous capitals that effectively revoke the moral and ethical goals of individual designers. Not only had this tragedy annihilated structures, framework and customer products, yet it likewise left irreversible harm as far as vast measures of non-recyclable substantial flotsam and jetsam, financial debt and a polluted environment. The cracks in the advanced economy and innovation brought about by the catastrophe and this ubiquitous and fragile relationship are highlighted through this project (Turnbull 2012).

Figure 4: Toyo Ito in conversation with the locals developing a participatory scheme, 2012, Domus, https://www.domusweb.it/en/interviews/2012/01/26/toyo-ito-re-building-from-disaster.html



TIMBER CLUSTER

Advanced Studio V
Cultural Matters
Marc Tsurumaki, Instructor
Fall 21

The project act as a shared resource to the fragile arts ecosystem, engaging diverse forms of artistic practice, new conceptions of community space and emergent logics of architectural and material reuse. Looking specifically into mass-timber and its process of dismantling and reassembly. The overarching theme is that trees, rather than buildings, will serve as the catalyst for construction. Vegetational clusters rather than building complexes will provide the site's identity

The property was once used for coal storage and as a vehicle repair, paint shop, blacksmith shop, bus depot and crane yard. These past anthropogenic activities have turned the site into a brownfield. The paradigm currently employed for remediation of site is "tabula rasa", i.e., remediation of the entire site before its repurpose. However, this method is not economically, socially sustainable: it delays the reuse of large areas. Hence a site-specific phased phytoremediation approach is adopted here.

LOUISE NEVELSON --- Louise Nevelson (September 23, 1899 – April 17, 1988) was an American sculptor known for her monumental, monochromatic, wooden wall pieces and outdoor sculptures. Born in Czarist Russia, she emigrated with her family to the United States in the early 20th century

In her most iconic works, she utilized wooden objects that she gathered from debris piles to create her monumental installations - a process clearly influenced by the precedent of Marcel Duchamp's found object sculptures and readymades.

Nevelson carefully arranged the objects in order to historicize the debris within the new, narrative context of her wall sculptures.

Sky cathedral

Sky Cathedral consists of boxes stacked against a wall, each compartment filled with wooden scraps including moldings, debris, and furniture parts. Nevelson then covered the entire assemblage with black paint, both unifying the composition and obscuring the individual objects.

She purposely painted the entire sculpture black to obliterate the past histories of the pieces and unify the work in the black "silhouette.

She also evokes a sense of depth within these boxes by utilising the inter play between light and shadow.

Image

I intended to extend the depth of these boxes and use these cavities as different apartments within a large megastructure.
While the individual pieces have an intimate scale, but they became monumental when viewed holistically within the combined environment of the assemblage. Similar to her sculpture : Each of boxes here represent a personalised space, much like the various objects she is filled it with.

The rigid orthogonity of the structure is derived from her scultupe that is trying to work within the lines of cubist ideals.

As for the structure , repurposed wood is used. Reappropriation of designers can take advantage of mass timber panel's two-way spanning capability.
revitilized/salvaged CLT for walls – Structural Insulated Panels (SIPs) fixed on the CLT core provide the required thermo-acoustic performance to the house

Mass timber construction, is built using a engineered wood products typically made of large, solid wood panels, columns or beams often manufactured off-site for load-bearing wall, floor, and roof construction.

TYPES OF MASS TIMBER

CLT: Cross laminated timber: Consists of layers of lumber oriented at right angles to one another and then glued to form structural panels with exception strength and stability. It can be used as a load-bearing wall that does not require additional wood framing.
mass timber does not catch fire easily. In fact, cross laminated timber acts more like concrete.

Nail Laminated Timber (NLT): Here lumber is placed on edge with individual laminations mechanically fastened together with nails or screws. Applications for NLT include flooring, decking, roofing, and walls, as well as elevator and stair shafts.

Laminated Veneer Lumber (LVL): They are made up of a number of wood veneers around 3 mm thick, glued parallel to each other under heat and high pressure.

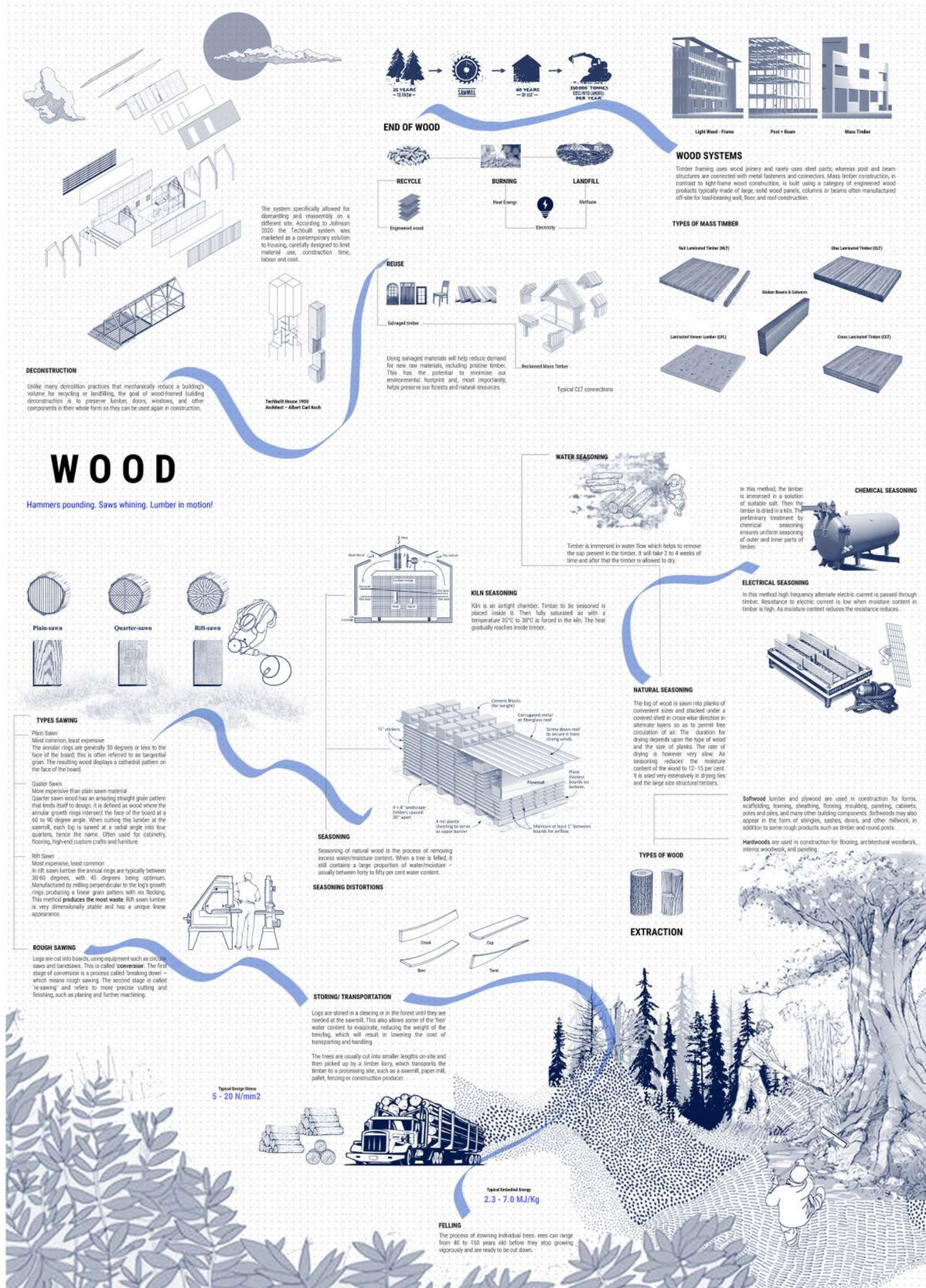
END OF WOOD:

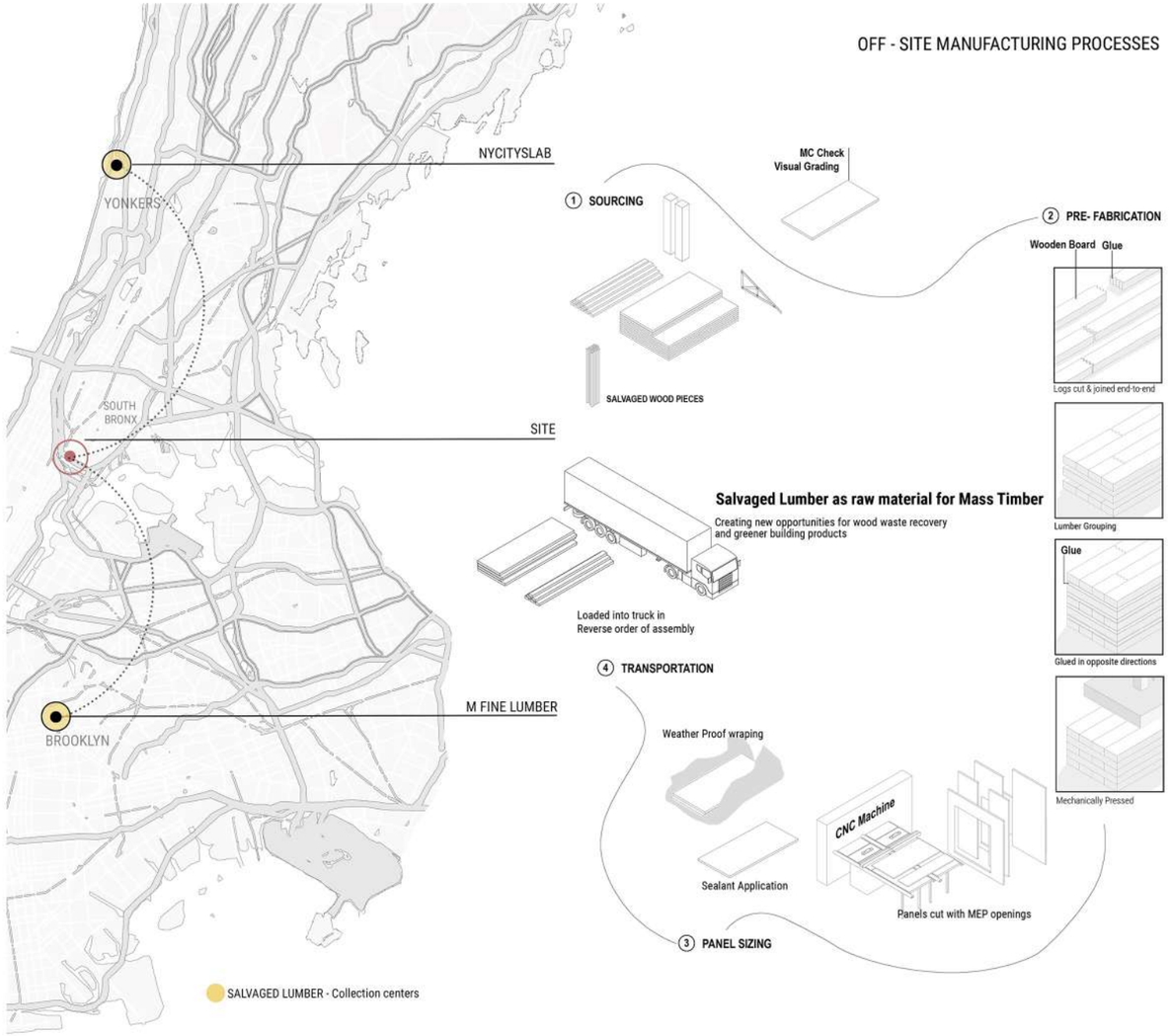
What happens to wood after a building is torn down? While the environmental burden of wood processing has become a quintessential battle cry of the environmental movement —
--- Generally C&D wood Wastes are burned, buried or recycled. For burning, the wood is burned to generate steam heat energy or electricity.

. For burying, the wood is sent to a landfill where methane generated from its decomposition may also be used to generate electricity.
Recycling options include processing wood wastes into engineered wood products and making paper from pulp. -- Markets for recycled wood include landscaping mulch, bedding material, and pellets.

Deconstruction describes a process of selective dismantling or removing material from buildings. the goal of wood-framed building deconstruction is to preserve lumber, doors, windows, and other components in their whole form so they can be used again in construction.—Gives them a second life quality

Reuse: Using salvaged materials will help reduce demand for new raw materials, including pristine timber. This has the potential to minimise our environmental footprint and, most importantly, helps preserve our forests and natural resources.





The 3 art organisations were Identified:

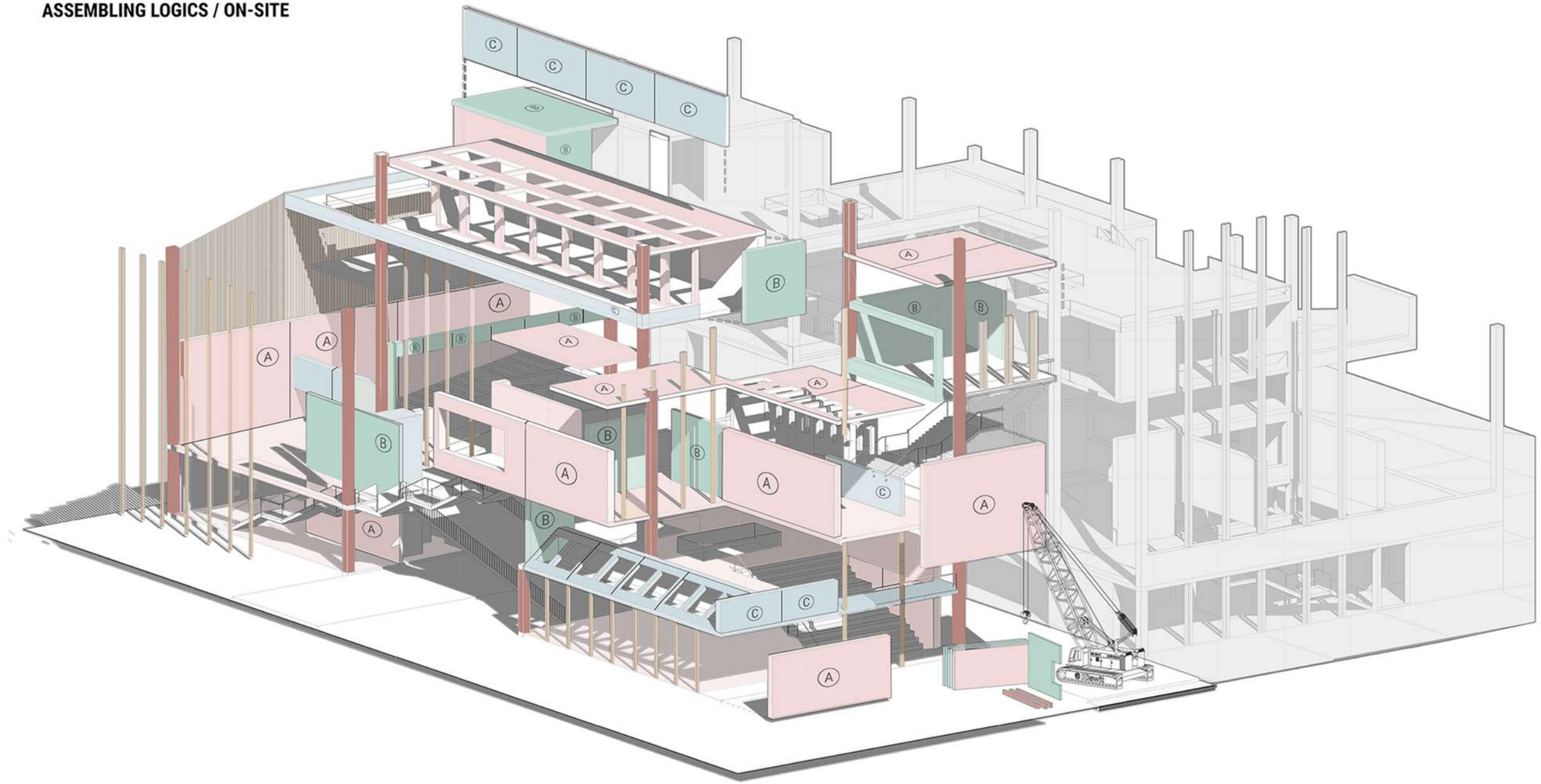
Bronx Documentary Center : *Located in Melrose Neigbourhood*

Bronx River Art Center : *That provides a forum for community, artists, and youth .*

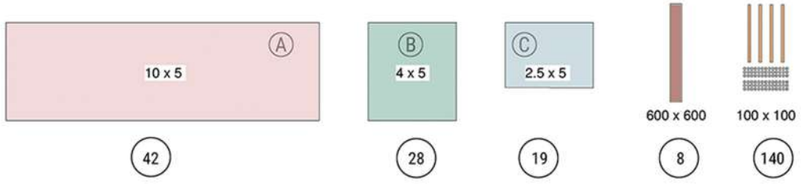
Bronx Art Space *is a gallery that promotes the ideas of underrepresented and emerging artists and curators in Bronx.*

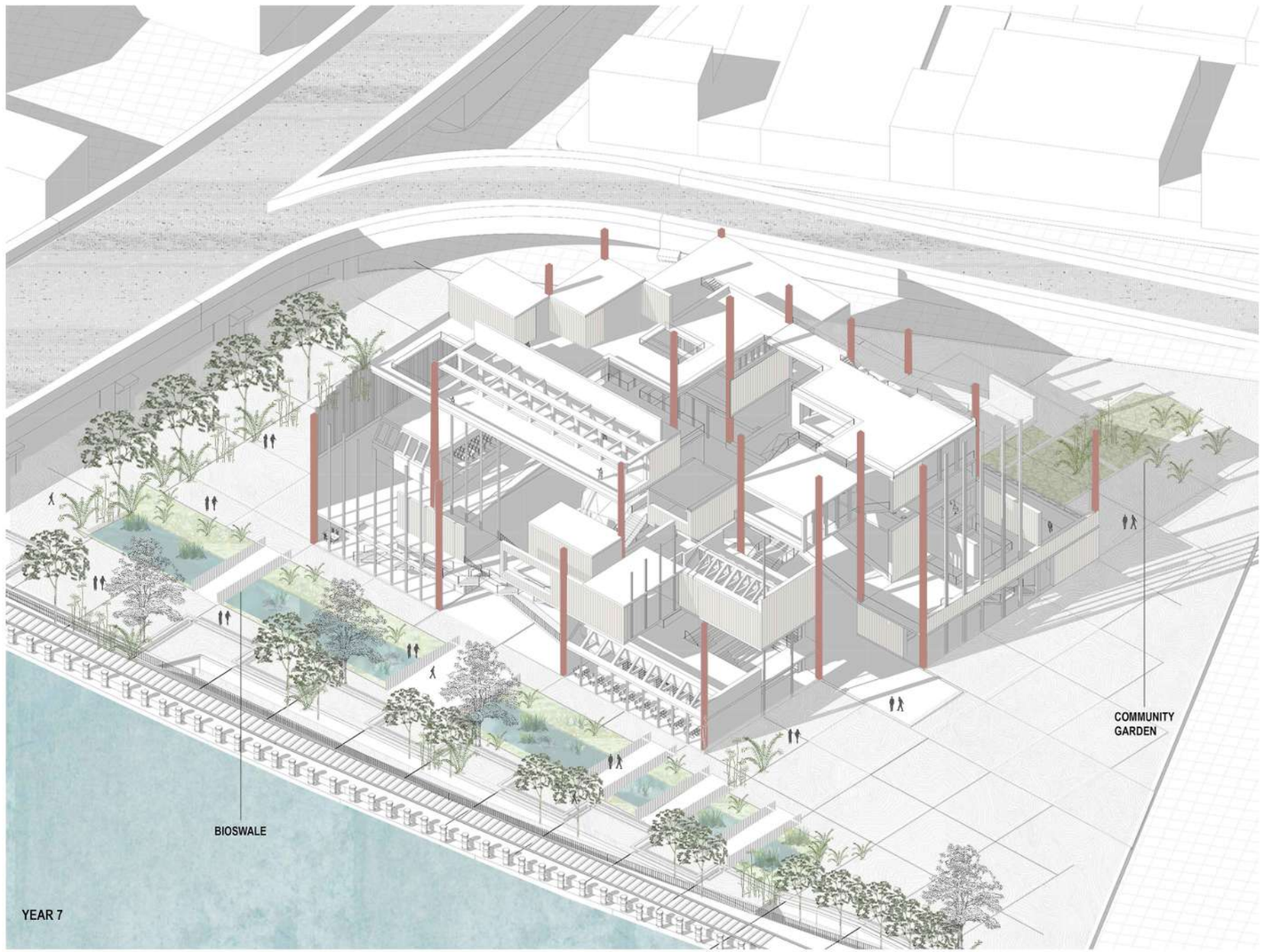
Looking into the sourcing of material - salvaged lumber is used is as the raw material for mass timber.
Firstly two salvaged lumber collection points near the site are identified NY CITY LAB and M FINE Lumber--
then these pieces are graded and prefabrcated into mass-timber and 3 particular panel sizes are used in assembly.

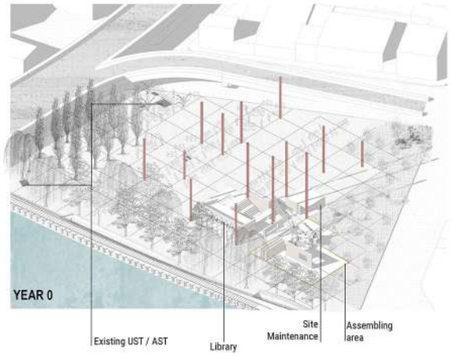
ASSEMBLING LOGICS / ON-SITE

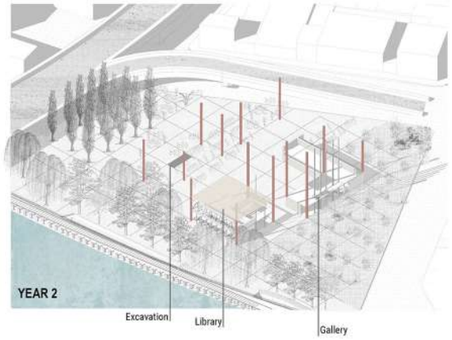


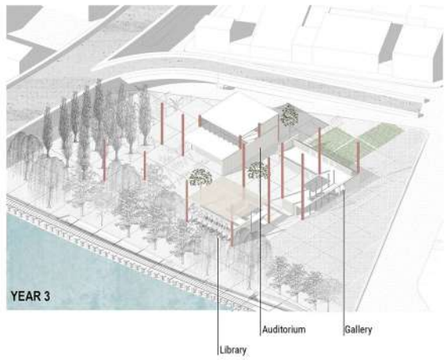
PANEL SIZES

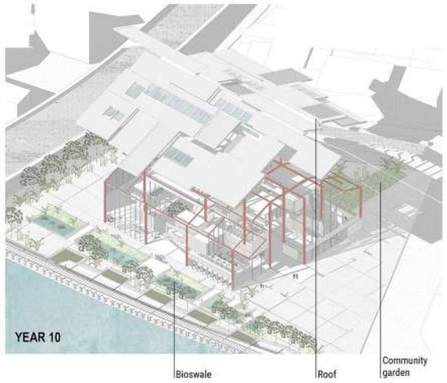












ASSEMBLY SEQUENCE

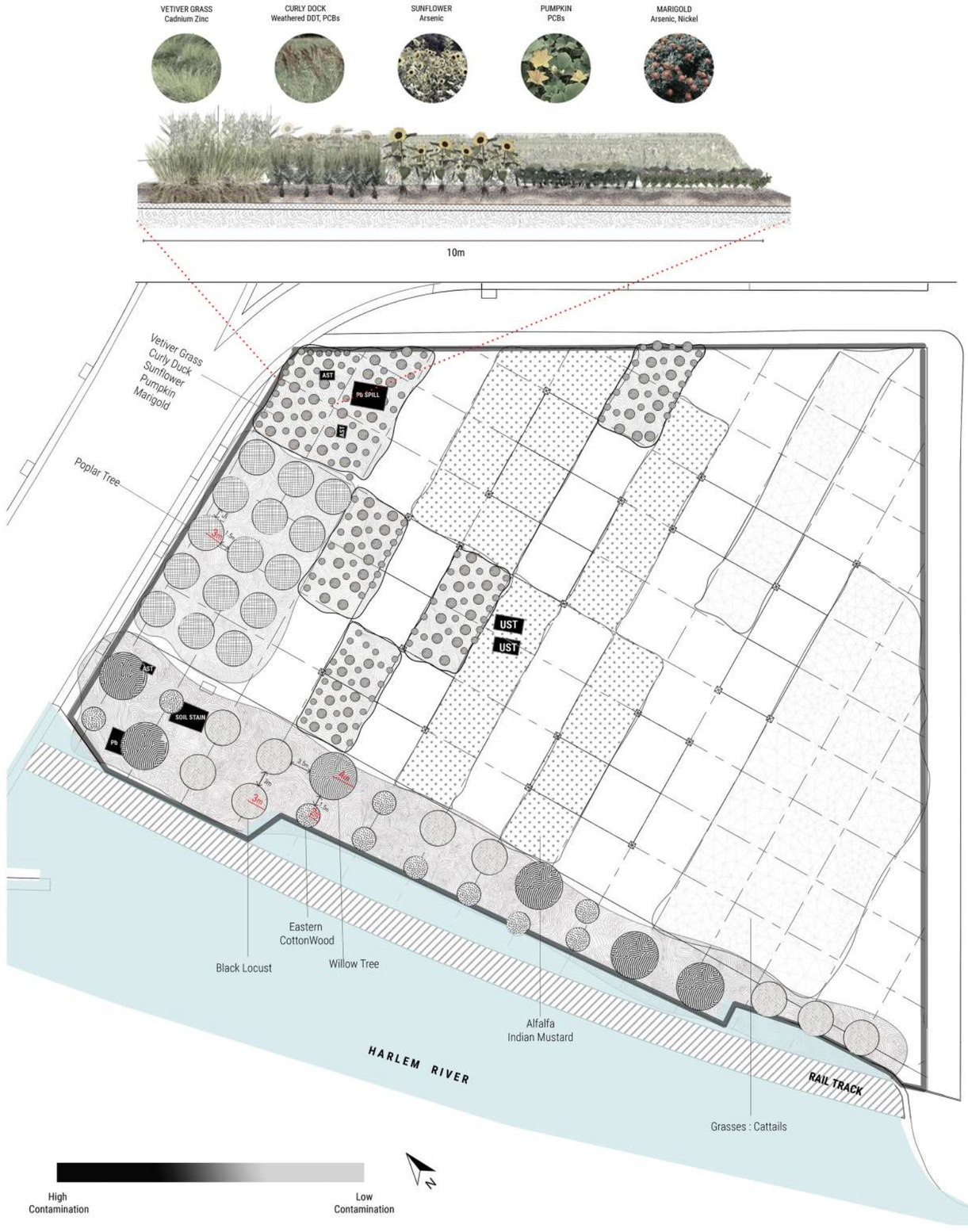
Remediating plants - Grey

New vegetation planted after remediation

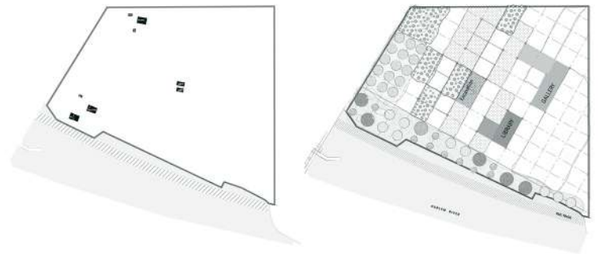
Grid of 10 x10 m formed on the basis of phytormediation process and Mass timber span

Assembly Sequence

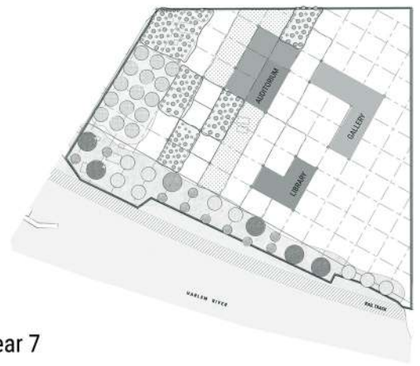
PLANTING STRATEGY FOR PHYTOREMEDIATION



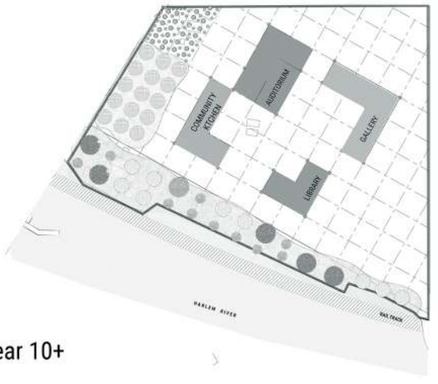
Year 0



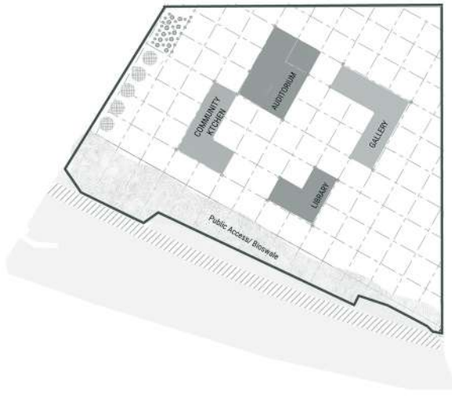
Year 3



Year 7



Year 10+



Phytoremediation system trees

5-8' annual growth
disease resistant
grows in soils contaminated
with heavy metals (nickel,
lead, zinc and cooper,
organics trinitrotoluence (TNT), salt.
Phytovolatives TCE's - BTEX, MTBE.
Uptakes cadmium, hydrocarbons

POPULUS SPP. - SALT TOLERANT HYBRID POPLAR

10'-15' annual growth
disease resistant
Plant as stakes, cuttings
favored for erosion
control, good for wet sites
uptakes ferrocyanides,
rhizodegrades fuel oil,
total petroleum
hydrovarbons (TPH)

SALIX SPP.
SALT TOLERANT HYBRID WILLOW

Typical urban forest species

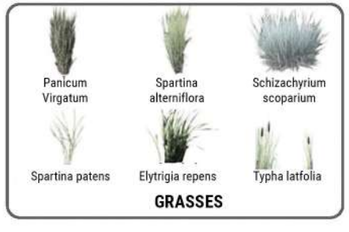
Rapid growth rate
50- 80' high
fast growth
deep-rooting ability, high
evapotranspiration rates
moisture-loving species
salt tolerant
provides stream and
riverbank stabilization

POPULUS DELTOIDES
EASTERN COTTONWOOD

18" annual growth
30- 70' High
salt tolerant
provides soil improvemnt
and useful for erosion control
Widely planted on waste
reclamation sites & landfills.

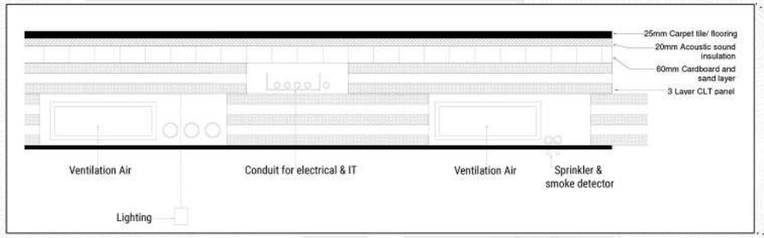
ROBINIA PSEUDOACACIA
BLACK LOCUST

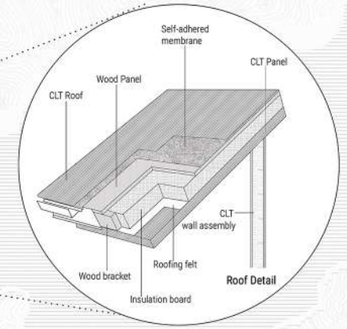
Stormwater, phytoremediative, & erosion control species

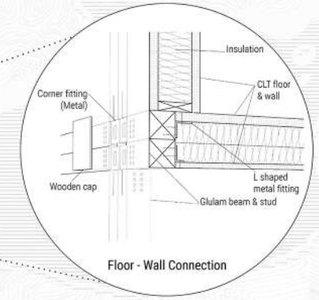


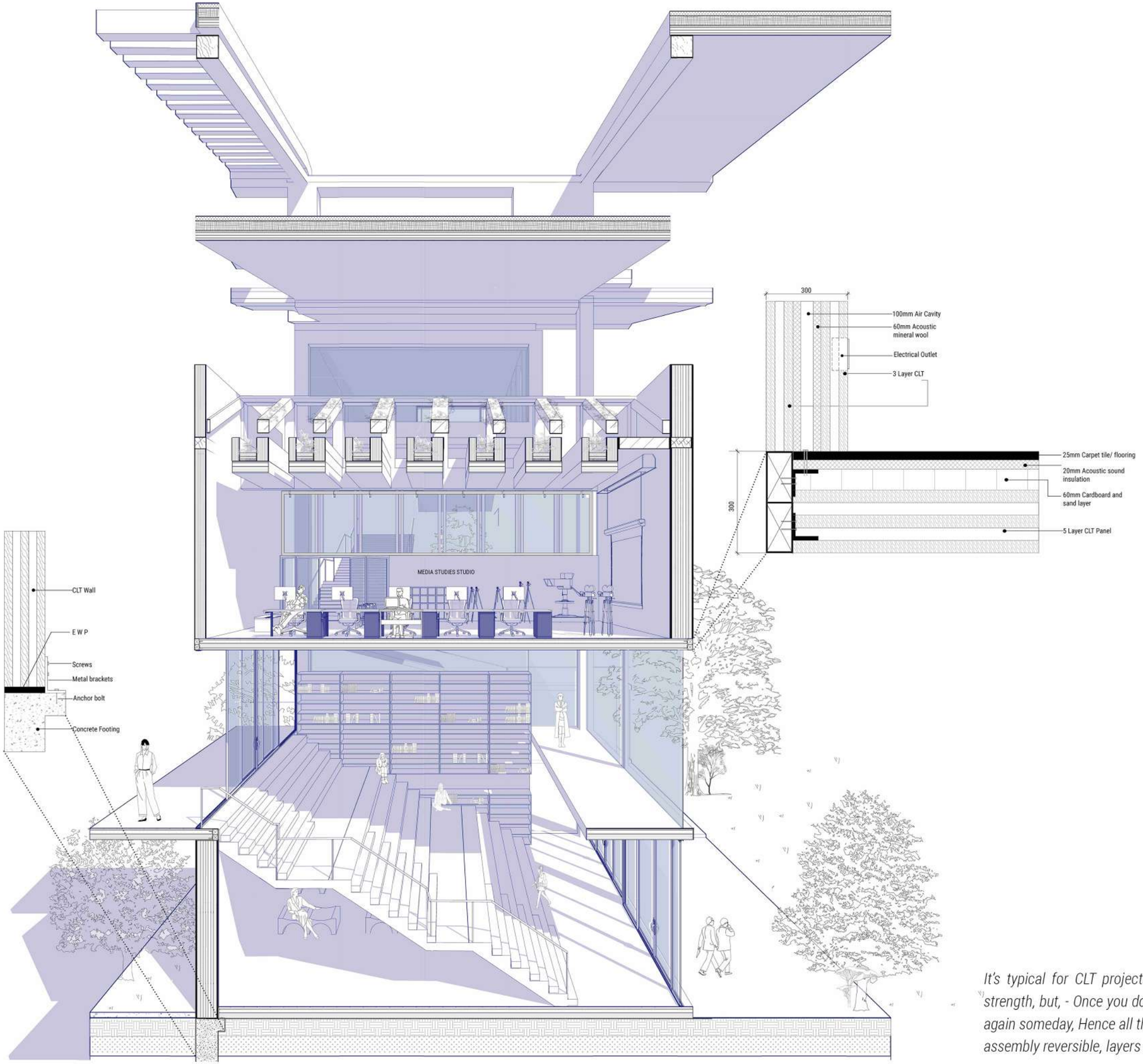
GRASSES

HERBACEOUS & SHRUB SPECIES

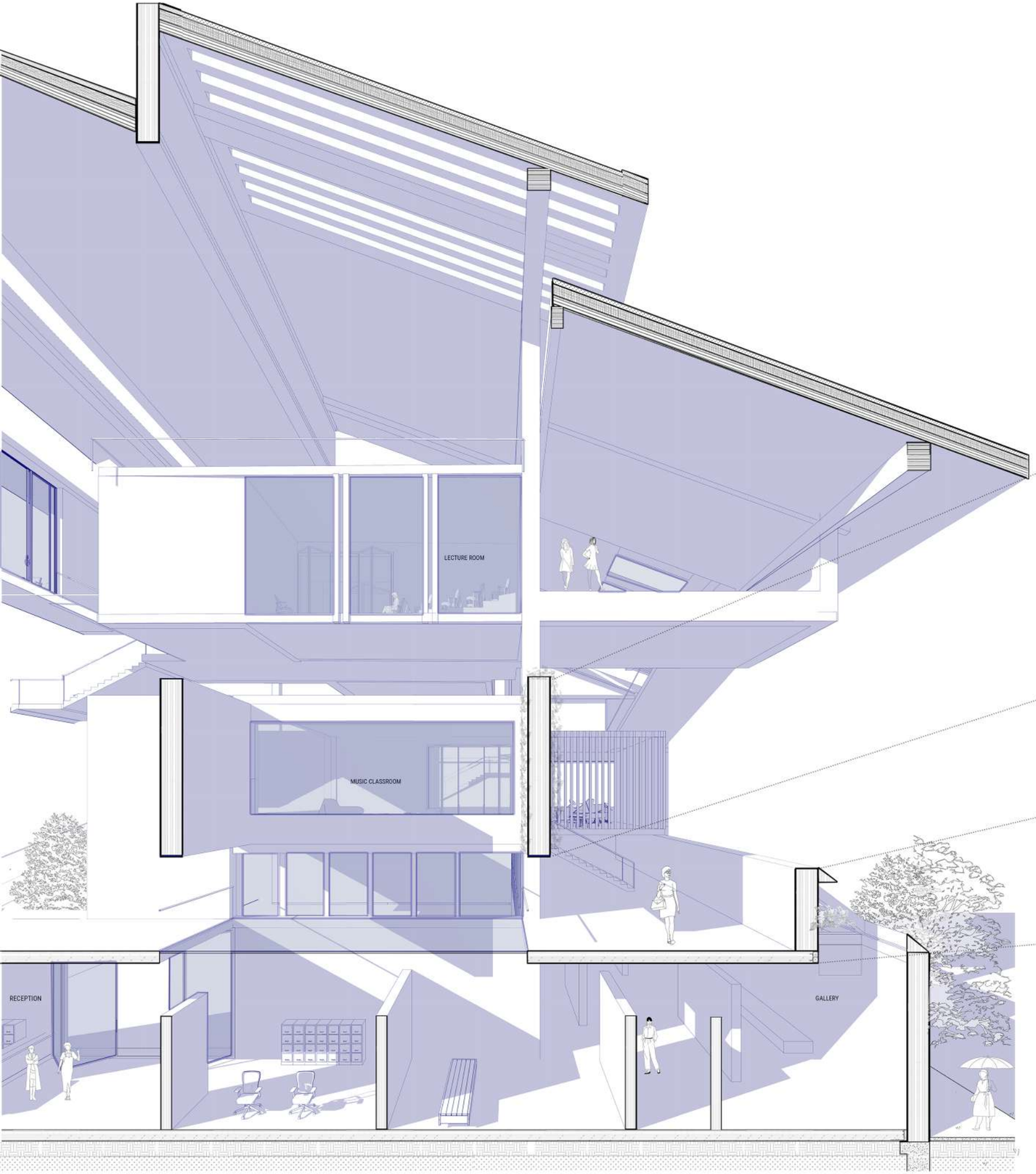

25mm Carpet tile/ flooring
20mm Acoustic sound insulation
60mm Cardboard and sand layer
3 Layer CLT panel
Ventilation Air
Conduit for electrical & IT
Ventilation Air
Sprinkler & smoke detector
Lighting

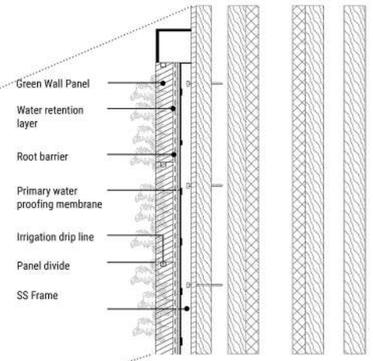

Self-adhered membrane
CLT Panel
Wood Panel
CLT Roof
CLT wall assembly
Roofing felt
Wood bracket
Insulation board
Roof Detail

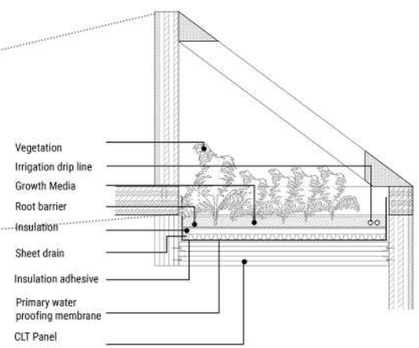

Insulation
CLT floor & wall
Corner fitting (Metal)
L shaped metal fitting
Wooden cap
Glulam beam & stud
Floor - Wall Connection

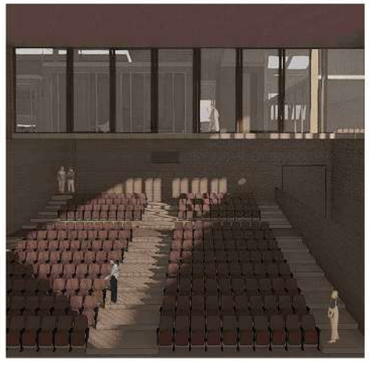


It's typical for CLT projects to include concrete toppings on every floor to efficiently add compressive strength, but, - Once you do that, you then bind the wood assembly to the concrete, making it hard to reuse again someday, Hence all the mass timber structural elements will be mechanically connected, making their assembly reversible, layers of wood are attached together with dowels instead of with glue or nails.

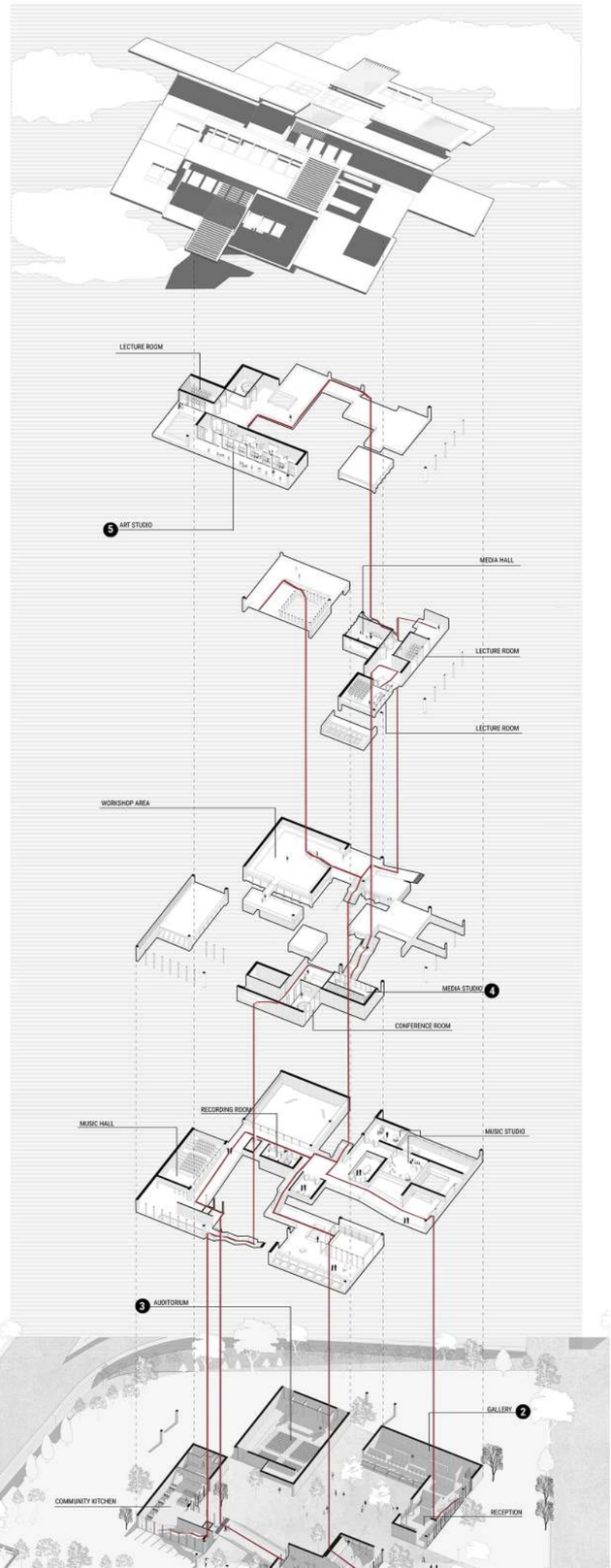

LECTURE ROOM
MUSIC CLASSROOM
RECEPTION
GALLERY

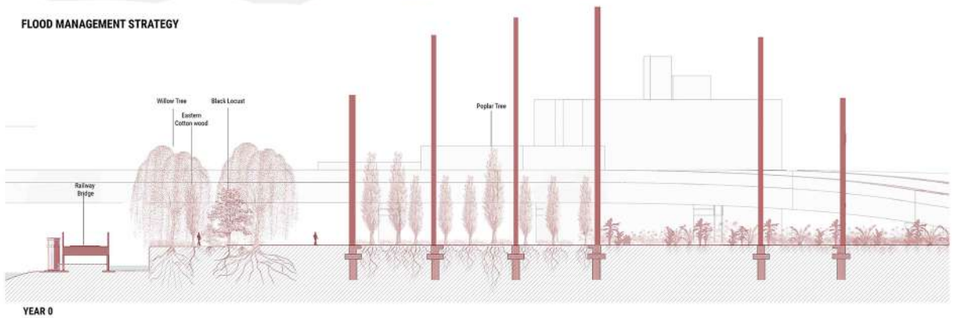

Green Wall Panel
Water retention layer
Root barrier
Primary water proofing membrane
Irrigation drip line
Panel divide
SS Frame


Vegetation
Irrigation drip line
Growth Media
Root barrier
Insulation
Sheet drain
Insulation adhesive
Primary water proofing membrane
CLT Panel



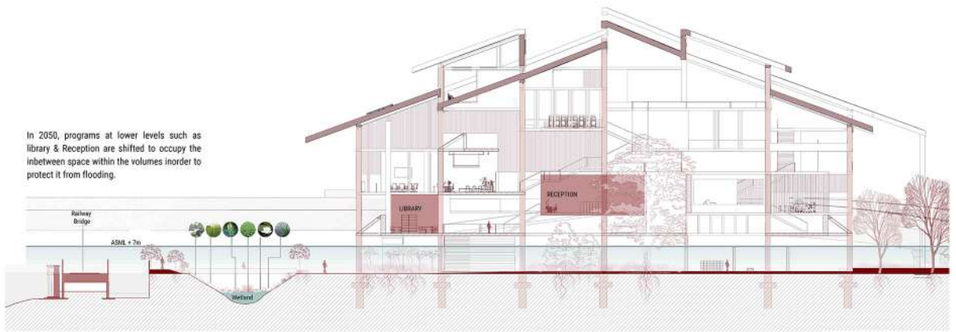
PROGRAMMATIC DISPOSITION





YEAR 0

YEAR 2030

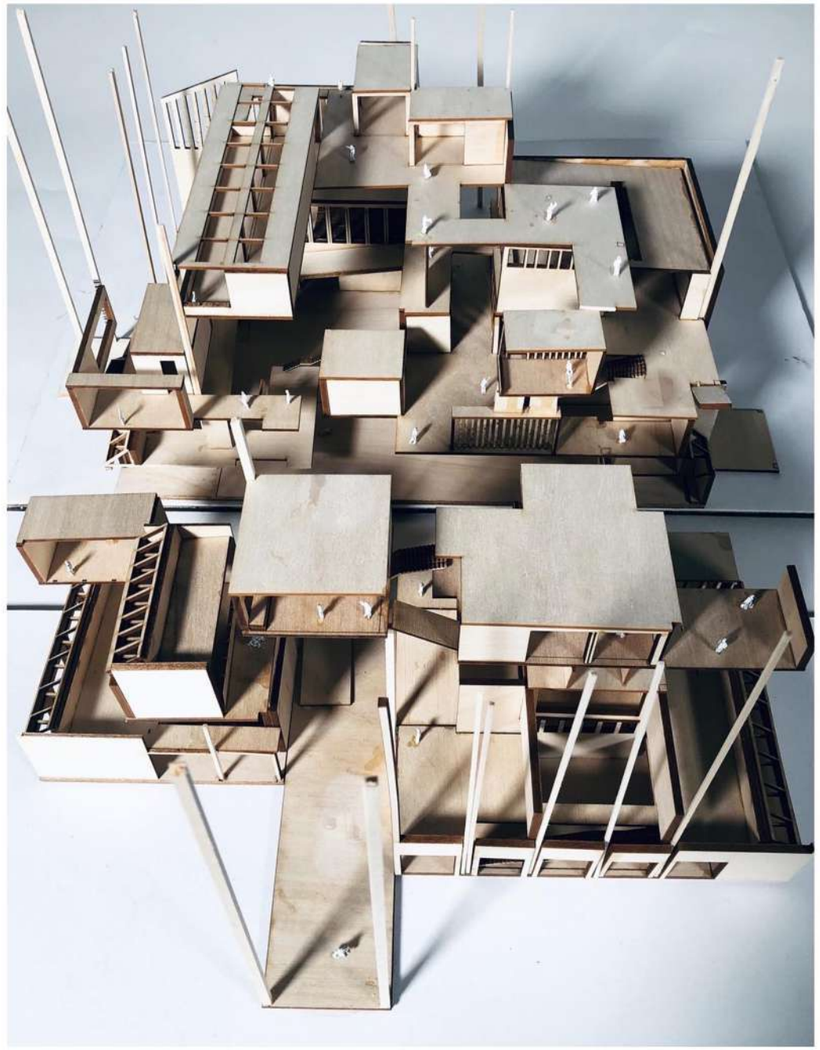


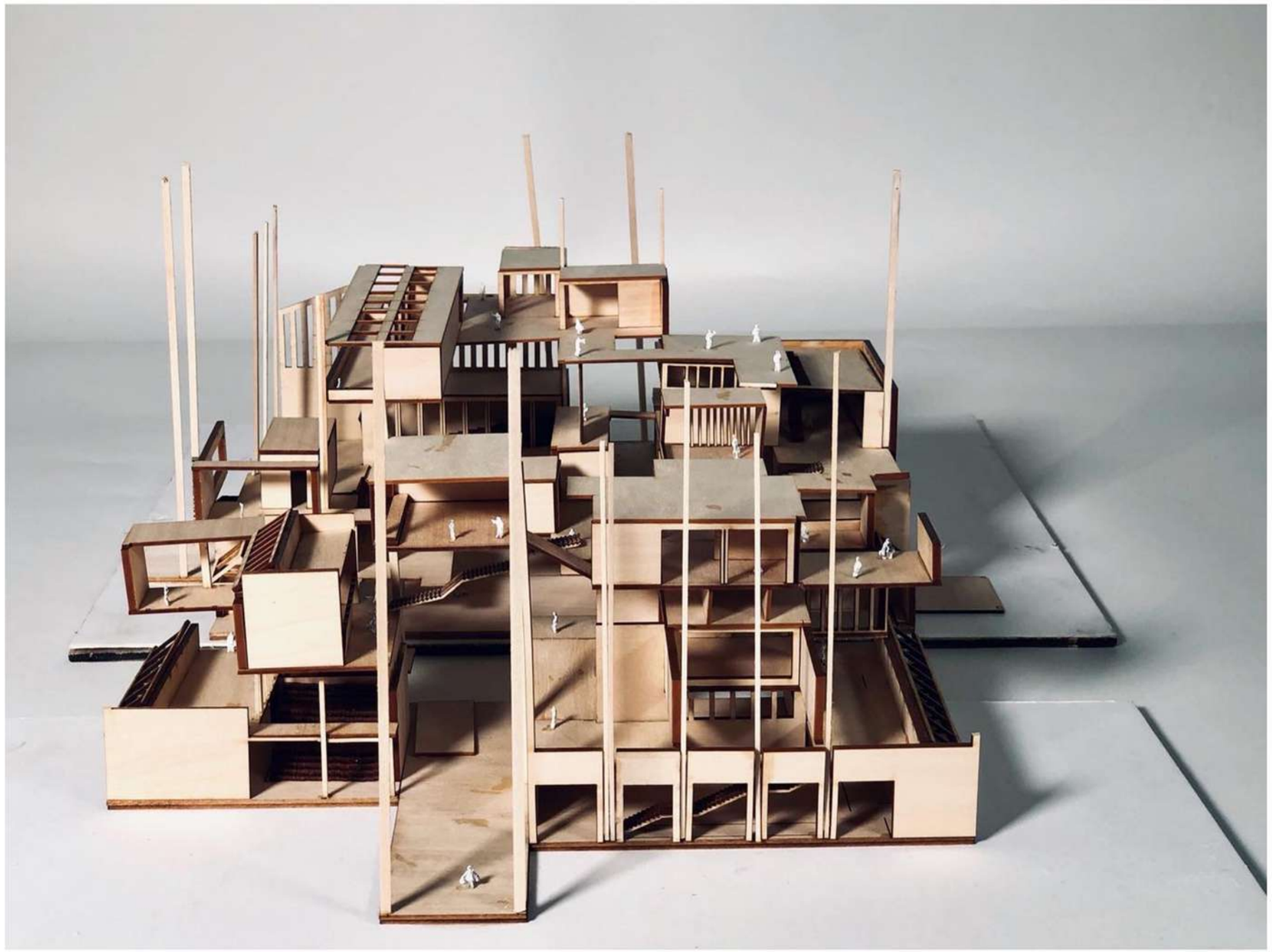
YEAR 2050

Now by the year 2050 the site is expected to flood. Moreover looking into long term urbanistic effects, the future demographic projection shows that this locality will have more number of older population. so programs at the lower level such as lib and reception they are shifted to occupy the inbetween spaces within the volume to prevent it from flooding and the ground becomes more regiouressly programmed for old people primarly by ways of employing more vegetation/ community garden etc.

The overarching theme is that trees, rather than buildings, will serve as the catalyst for construction. Vegetational clusters rather than building complexes will provide the site's identity - Site as a living and productive landscape.


ART STUDIO SPACE
MUSIC HALL
COMMUNITY KITCHEN
MEDIA STUDIES STUDIO
GALLERY





Enigmas in Mathematics of the Ideal Villa

Re-examining Colin Rowe's Mathematics of the Ideal Villa

Recombinant Renaissance: Transformative Modes of Authorship
Mark Rakatansky
Fall 21

In his seminal thesis "The Mathematics of the Ideal Villa", Colin Rowe introduces the explicit correlation between Andrea Palladio's Villa Foscari, in Malcontenta and Le Corbusier's Villa Stein in Garches. In this 1976 work, he presented an interpretation that attempts to move importance from its conventional spot inside mathematics and design to a now prevalently acknowledged spot of inference and implication. Rowe analyzes the mathematical, relative similarities and the underlying frameworks between the two buildings. This paper set outs to re-examines the comparative unfolding inscribed within this text. (Rowe 1976)

This book since has opened up a conversation on the continuity of modern architecture from the past, which was mostly absent from academic scholarship until then and had a tremendous influence on the advancement of postmodernist architecture in the 70s. (Rowe 1950)

While these two buildings appear to be mutually exclusive in nature owing to their separated disposition in time, the likenesses of their massing and structural bays are quite easy to see. (Rowe 1994)

Both the Villas are conceived as single blocks with distinctions in the form of roof, each estimating 8 units long, 5.5 units in width, and 5 units in height. The second level holds the main floor of both the buildings. Moreover, each building follows a substituting pattern of 2:1:2:1:2 on the main and rear elevations and a three-part conveyance (5.5 units) with a protruding component of 1.5 units on the sides. However, When read from front to back – In Malcontenta you are presented with 2:2:1.5 – while in stein there is a half-unit that is cantilevered on either side that inturn compresses the central bay. (Rowe 1976)

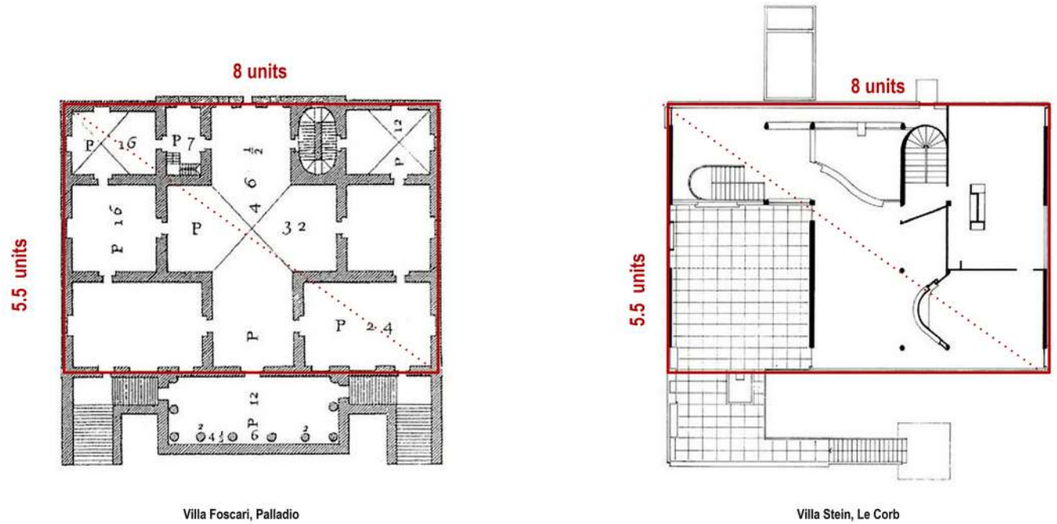


Figure 1. Arithmetical relationship between Villa Foscari and Villa Stein.

Rowe recognizes the diverse architectural techniques that Palladio and Le Corbusier employs to withdraw from an unfaltering propensity for the proportional framework. These distinctions—spatial balance and centralization against the free arrangement, and punched versus strip windows, to give some examples—come full circle in two radically unique building characters—one being firm and unbending, the other undeniably more flexible. Regardless of these variations and distinctions, there is a fundamental geometric and mathematic approach in play. Rowe utilizes this strategy as the foundation in the quest for identifying a supposed ideal villa. (Ockman 1998)

At Villa Malcontenta, the principal floor is evenly and symmetrically coordinated. In the middle, there is a cruciform corridor and evenly arranged with regards to it are two set-ups of three rooms each, two flights of stairs and a patio, which comprises the significant axis. At Villa Stein, the circumstance is perplexing. The main floor is asymmetrically adjusted. Instead of a cruciform hall, there exists a living room that combines with the dining hall and library to form a Z-shape. (Petit 2015) Analogous to the patio in the former, the terrace in Stein lacks a detectable relationship to the primary living hall. The stairs possess positions similar to Villa Foscari, but one of them is rotated 90 degrees. A cross axis development is suggested fragmentally by the windows but is obliterated by the presence of interior walls. By eliminating any semblance of centrality Le Corb creates a much more diffused plan.

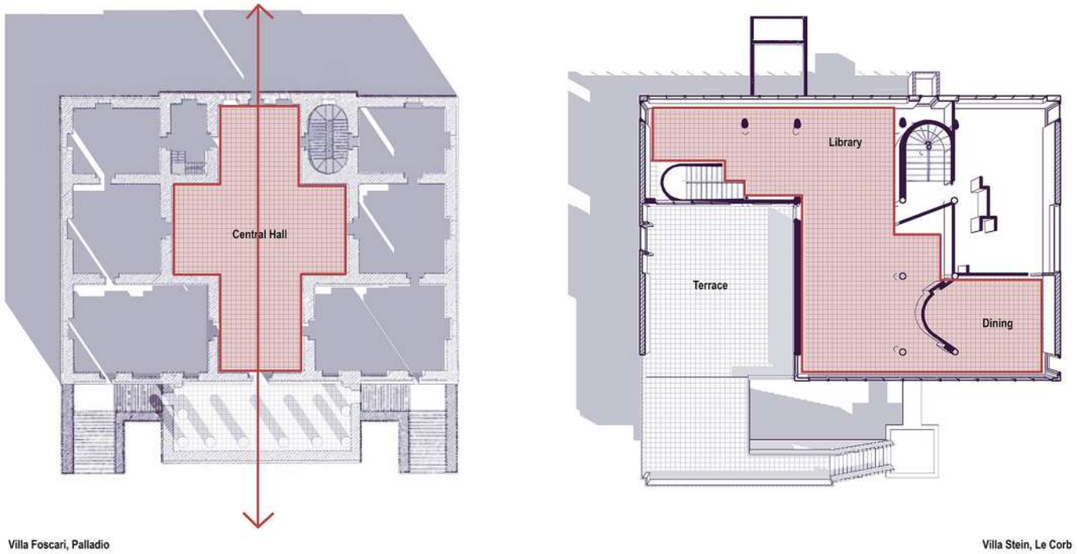


Figure 2. Spatial and structural disposition in Villa Foscari and Villa Stein.

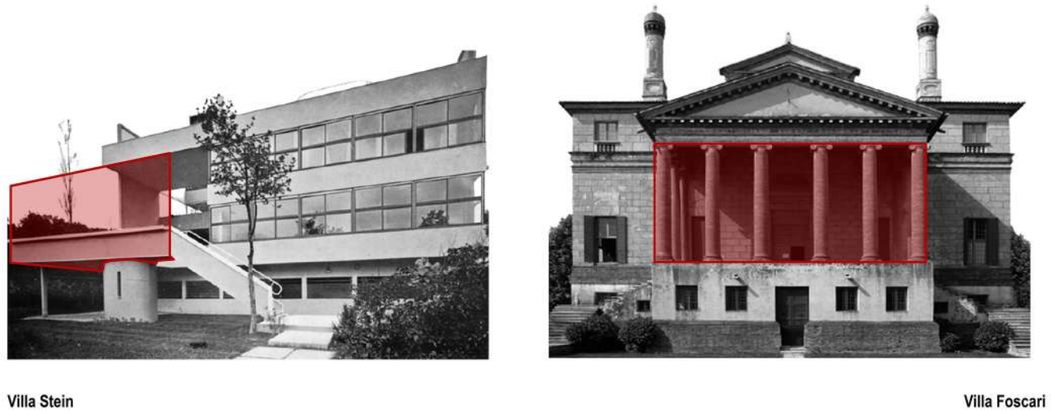


Figure 3. Terrace in Stein and podium in Malcontenta both act as a linkage to the garden below.

Stein has a flat façade and from which a volume opens out into the terrace similar to that of the podium in Malcontenta – and they both act as a linkage to the garden below. However, in stein, the terrace is offset onto one side with an asymmetrical disposition for entry. While Villa Foscari embraces a highly evident central axis for its entry. (Richards 1960)

The structural planning is vastly different, both Corbusier and Palladio rely on structure somewhat as a legitimization for their temperament. Palladio utilizes strong bearing dividers and walls which in turn demands absolute symmetry in the arrangement of his plan and makes it practically unavoidable to repeat a similar arrangement on each level. This structural reason that is dictating Palladio's planning symmetries leads to the clarity of his cross-axis nature. Corbusier, who is demonstrating a case for structure as a formal element of configuration, attempts to oppose the new framework with the old. Villa Garches employs a Point support system and since it's a Frame building there is flexibility in arrangement and floor plan. (Ockman 1998)

Le Corbusier and Palladio, deploy structure as a rationale for their arrangement, however Rowe considers the legitimizations to be unnecessary and ascribes the defenses to each architect's personal demand and propensity.

Probing into the elevations, Malcontenta places focal accentuation on the pediment; and have the windows put towards the limits of the façade, this organizational quality appears to support the cubic nature of the block.

The twofold bay in the centre is communicated by a solitary entryway, and in the back by a Roman decoration, and bears the upper pediments of the rooftop. The wall can be categorized into three fundamental divisions: base; piano nobile, compared to the ionic column of the porch, ended by an entablature; and a superimposed loft with moulding. The base fills the role of an anticipating, reliably supporting solid, whereupon the building rests. However, both the attic and piano nobile are rusticated, while the base lacks any embellishment. A notion of significantly more noteworthy weight being carried here is accomplished by this profoundly enthusiastic reversal of the standard condition. (Weston 2007)

Figure 4. Placement of fenestrations on both the elevations.

In Villa at Garches owing to the flexibility offered by the structural framework, has prompted the origination of the wall as a progression of flat strips, substituting void and solid, a framework which gives equivalent interest in both the middle and limit of the façade. (Rybczynski 2003)

Garden elevation at Garches, presents itself striving to uproot and override both the patio and rooftop structure from the central position. They are isolated, with one possessing the three inlets to one side of the façade. The flat slashes of the windows at the base deny any connecting of the two, rendering the whole elevation appear asymmetric. (Martínez 2018)

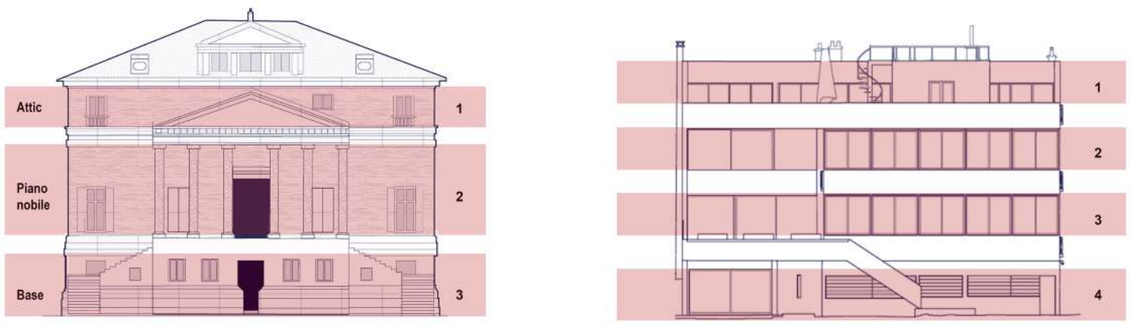


Figure 5. Tripartite and four-part division of Foscari and Stein respectively.

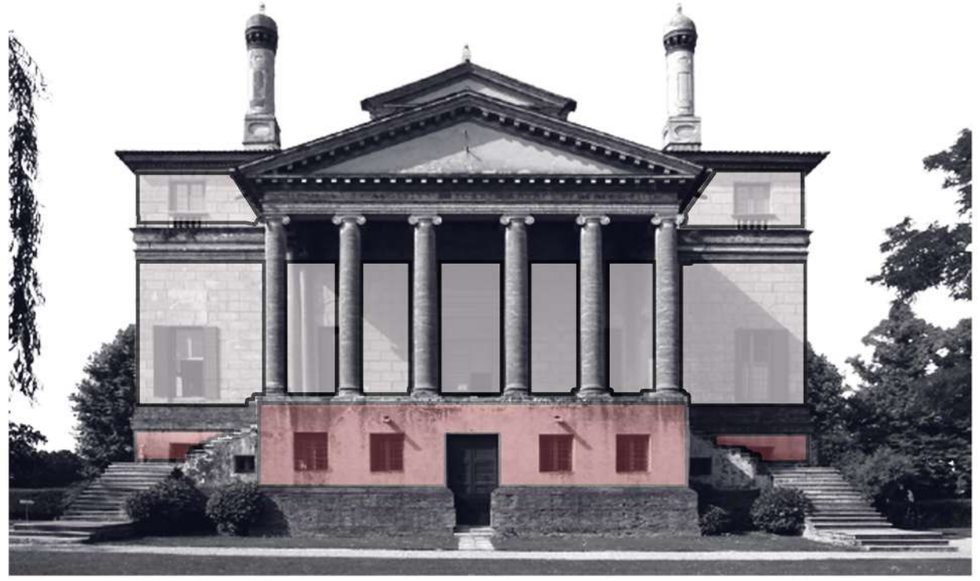


Figure 6. Inversion of rustication on the facade of Villa Malcontenta.

In Villa at Garches owing to the flexibility offered by the structural framework, has prompted the origination of the wall as a progression of flat strips, substituting void and solid, a framework which gives equivalent interest in both the middle and limit of the façade. (Rybczynski 2003)

Garden elevation at Garches, presents itself striving to uproot and override both the patio and rooftop structure from the central position. They are isolated, with one possessing the three inlets to one side of the façade. The flat slashes of the windows at the base deny any connecting of the two, rendering the whole elevation appear asymmetric. (Martínez 2018)

Another divergent aspect lies in the notion of how the roof is conceived. Malcontenta employs a pyramidal superstructure signified by the upper pediments on top of it, and increase the centrality of the main divider. It is further outlined by the profoundly visible chimneys, which has a medieval aesthetic to them. (Naegele 2002)

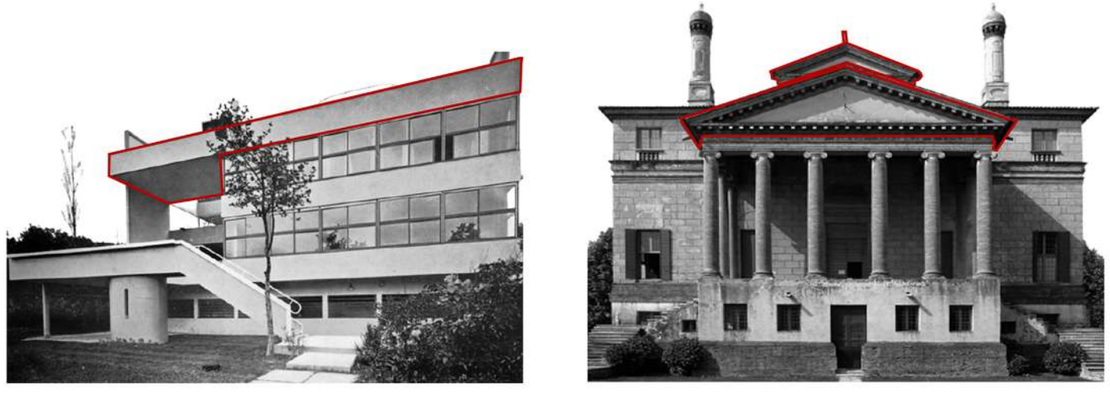


Figure 7. Additive and subtractive nature roof forms.

Figure 8. Front and rear elevation of Villa Malcontenta.

Garches has a fairly flat roof on both levels. The punctures and cut-outs within the roof diminish the volume of the cube. Making the roof subtractive in its appearance.

There are certain specials on the Villa Stein's facade – primarily the roof pavilion and terrace which presently occupy 2-3 bays to the left and right respectively. (Le 1986) If they were extrapolated and displaced to the center of the facade, how would the elevation respond and how does this dispositional change affect the temperament of the facade? In order to allude to a currently non-existent semblance of centrality, this exercise is undertaken.

Along with the movement of specials, it is identified that by breaking up the gashes of windows into two parts, the earlier uniform like interest that was placed on both the centre and extremity of the facade is destroyed. This goes on to prove the potency that was latent in the windows and the power it yielded in resisting the central tendency.

Additionally, in Malcontenta, the inversion of embellishment in the tripartite organisation is identical on both the front and rear elevation. However, in the rear, windows aren't exclusive to the extremities they are positioned even in the middle. If this similar fenestrational circumstance was extended to the main elevation (by borrowing the design of openings from the rear) how would that affect the centrality of this elevation?

As the elements of the rear facade were replicated on the front elevation, one can see the notion of centrality being weakened and diffused with the increase in the puncturing of the wall. As the central solid wall is adorned with more openings besides the door, the perception of a central entryway also gets diluted.

Rowe remarks on how the golden section is employed in Villa stein's elevation and how Le Corb demonstrates his organizational arithmetics through the use of his elevation. By placing his drawing of North and south elevation on the ratio of the golden section we get an approximation of the golden ratio (1.60) but not It is not the ideal ratio (1.618).

Moreover, Roger Fischler, A historical mathematician discovered that Corbusier after finishing his buildings went back to the original drawings, and drew in the Golden Mean. He subsequently reproduced this doctored drawing, claiming that his design was guided by the Golden Mean all along. It is also interesting how the other elevations- East and West are overlooked in the text. If you apply the golden ratio to them it can be found that it's non-compliant there as well.

Villa Foscari, Front elev - EDITED

Villa Foscari, Rear Elv

Figure 9. Front elevation of Villa Malcontenta modified by borrowing fenestrations from the rear elevation.

This makes one wonder how the golden section can be used to endorse the organizational condition at Villa stein within its elevations and to what extent Rowe's comments on the utilization of elevations by Corbusier to demonstrate his mathematical logic can remain true. (Hildner 1999)

For Palladio, It's the plan that makes his mathematical relationships obvious – where he organizes rooms in particular ratios around the central cruciform hall. However, when looking at it closer, the hall isn't a symmetrical cruciform form – as the bottom part comprises of 2 units while on the top it's only 1.5 units as it is abruptly met with a wall. (Hersey and Freedman 1992) Hence for this central space to be truly symmetrical, it needs to extend slightly forward. Further riddling Rowe's analysis and comments on the arithmetic sensibilities of both the buildings.

This particular work of Rowe's was propelled by Rudolf Wittkower, who was his adviser from 1945 to 1947 at the Warburg Institute. Wittkower's investigation of Andrea Palladio's eleven villas (from the mid 1550s to the last part of the 1560s) uncovered a single mathematical equation that seem to underlay their plan. (Wittkower 1949)

Cleansing their singular contrasts and differences, Wittkower's conventional examination of their drawings concluded that the eleven buildings were working under the same logic with minor departure here and there. It is evident that Wittkower utilized a particular set of framework to help his contention. He analysed these plans with a the nine-square configurational attempt. (Wittkower 1974)

Eventhough Rowe was supportive towards the humanist approach of Rudolf Wittkower, he endeavored to broaden those thoughts to express the historical setting to create a more broad and informed proportional framework. (Frith 2010) Utilizing a numerical framework, Rowe had the option to contend for progressions that cut across social, historical and spatial elements. Utilizing this model, Rowe strived to set up a numerical conventional establishment for the correlation of the two villas. (Weston 2007)

His drawings on Villa Malcontenta and Villa Stein represented his systematic approach to their analysis. However the nine-square remained a precursor to his engagement and its interior A-B-A-B-A division became instrumental to his investigation. (Eisenman 2015)

Figure 10. Front elevation of Villa Stein modified by the movement of terrace, pavilion and stairs, to the center and by breaking up the gashes of windows into two parts

He reasoned that the two villas, despite their topographical variation, had a similar volumetric creation solely based on the mathematical standards. These conclusions were aided with drawings of two building that were made in wireframe - stripping away most of its essential characteristics. Following plans in wireframe has a summing up potential. It summarizes the thought and the substance of the design in a drawing and reduce the drawing to be read and perused through a singular dimension. (Corbo 2014)

According to Greg Lynn, Wittkower's and Rowe's comprehension of these buildings through numerically accurate and indistinguishably repeatable elements blocked the importance of their conformity. However, Rowe uses the end addendum to expands his research. (Wojtowicz 1990) The extent of the whole assortment is widened, as the addenda proposes minor deviation from his earlier version of the text which is more rooted in comparing the two building through a ABABA and arithmetical system. (Lynn 1994)

Rowe imagined this relationship between clashing thoughts as an imaginative technique equipped for development, a ceaseless conversation in which both buildings maintain their independence but are continually enhanced by their correspondence. (Giamarelos 2018)

References

Corbo, Stefano. 2014. From Formalism to Weak Form: The Architecture and Philosophy of Peter Eisenman. N.p.: Ashgate.

Eisenman,Peter. 2015. "Palladio Virtuel." EISENMAN ARCHITECTS. https://eisenmanarchitects.com/Palladio-Virtuel.

Frith, Stephen. 2010. "Forgetting Matter Pascal on Rhetoric and the Mathematics of the Ideal Villa." Architectural Theory Review, 149-156.

Giamarelos, Stylianos Stelios. 2018. "Calling Rowe: After-lives of Formalism in the Digital Age." Footprint.

Hersey, George, and Richard Freedman. 1992. Possible Palladian Villas (Plus a Few Instructively Impossible Ones). Cambridge, Massachusetts: The MIT Press.

Hildner, Jeffrey. 1999. "Remembering the Mathematics of the Ideal Villa." Journal of Architectural Education, 143-162.

Le Corbusier. 1986. Towards a New Architecture. Edited by Frederick Etchells. Translated by Frederick Etchells. N.p.: Dover Publications.

Lynn, Greg. 1994. "New Variations on the Rowe Complex." ANY: Architecture New York, 38-43.

Martínez, Raúl Martínez. 2018. The methodological approaches of Colin Rowe: the multifaceted, intellectual connoisseur at La Tourette. N.p.: Cambridge University Press.

Naegele, Daniel. 2002. "The Mathematics of the Ideal Villa and Other Essays by Colin Rowe, London and Cambridge." Harvard Design Magazine, 81-84.

Ockman, Joan. 1998. "Form without Utopia: Contextualizing Colin Rowe." Journal of the Society of Architectural Historians 57 (4): 448–56.

Petit, Emmanuel. 2015. Reckoning With Colin Rowe. N.p.: Routledge.

Richards, Ivor A. 1960. Principles of Literary Criticism. N.p.: Routledge.

Rowe, Colin. 1950. "Mannerism and Modern Architecture." Architectural Review, 30.

Rowe, Colin. 1976. The Mathematics of the Ideal Villa and Other Essays. Cambridge, Mass: MIT Press.

Rowe, Colin. 1994. The architecture of good intentions : towards a possible retrospect. N.p.: Wiley.

Rybczynski, Witold. 2003. The Perfect House. N.p.: Scribner.

Weston, Lindy. 2007. "Review - The Mathematics of the Ideal Villa: Colin Rowe." Lindy Weston. http://www.lindyweston.com/2007/10/review-mathematics-of-ideal-villa-colin.html.

Wittkower, Rudolf. 1949. Architectural principles in the age of humanism. London: Warburg Institute, University of London.

Wittkower, Rudolf. 1974. Palladio and Palladianism. N.p.: G. Braziller.

Wojtowicz, Robert. 1990. "Lewis Mumford: The Architectural Critic as Historian." Studies in the History of Art.

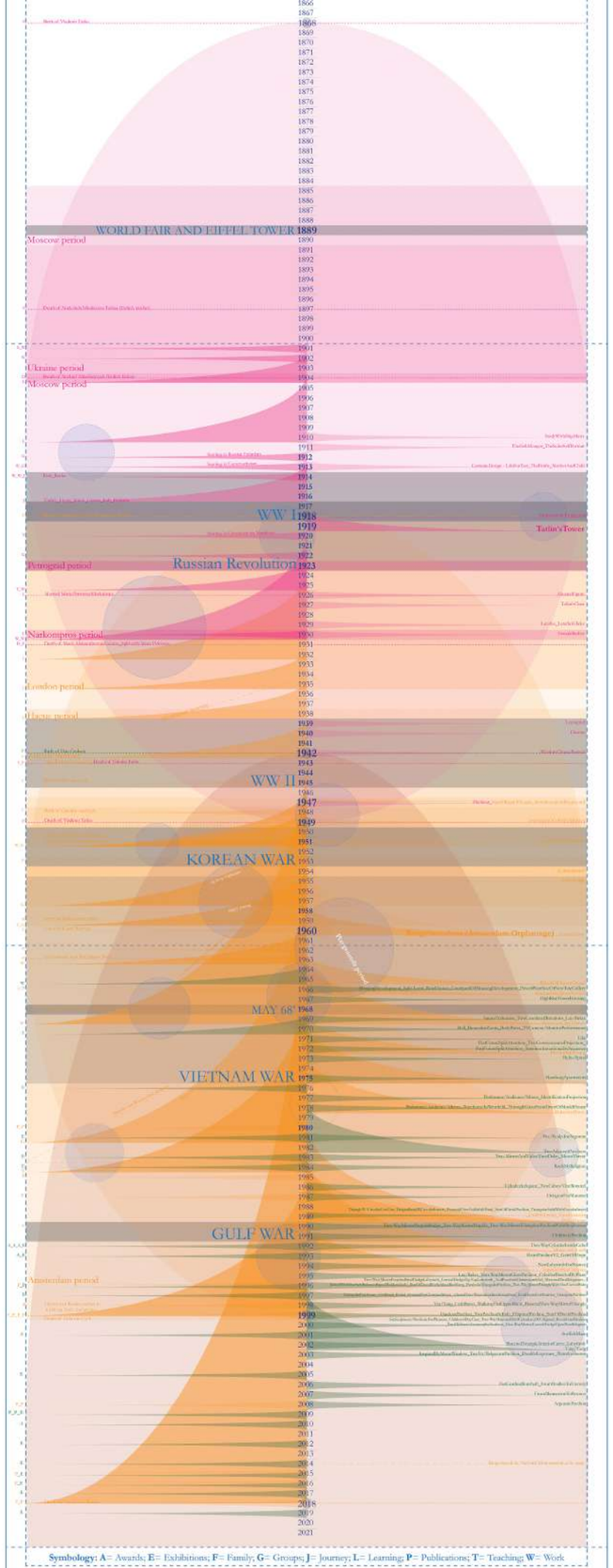
CATHEDRAL OF SOCIALISM

HETERODOX ARCHITECTURE

HETERODOX ARCHITECTURES
Juan Herreros, Instructor
Fall 21
in collaboration with Leon Duval

ART / ARTISTIC ARCHITECTURE / ARCHITECTURAL ART / ARCHITECT

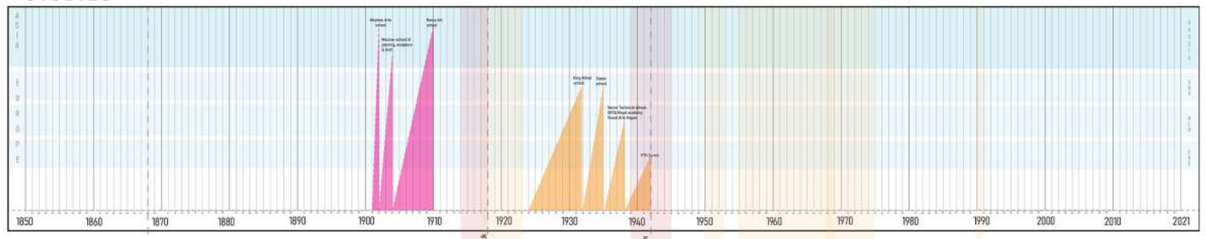
The seminar sets out to provide a committed view of the present through a series of heterodox projects in the history of architecture. The intention is not to retrieve singular works from the history of architecture that might be described as visionary, but rather to understand the critical attitude which their authors adopted in the face of a moment of crisis



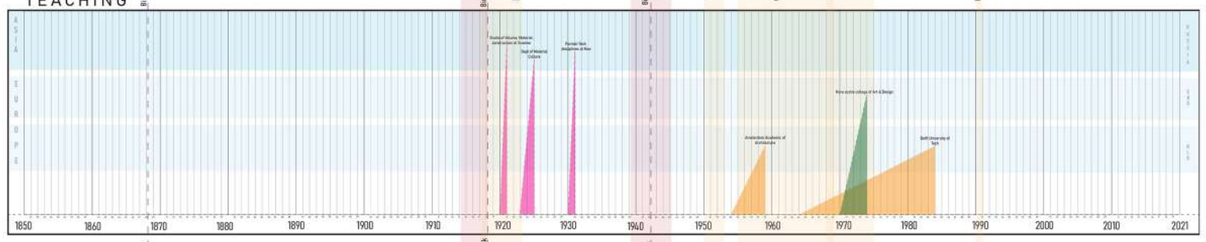
ENTANGLEMENTS / ENACTMENTS

VLADIMIR TATLIN / ALDO VAN EYCK / DAN GRAHAM

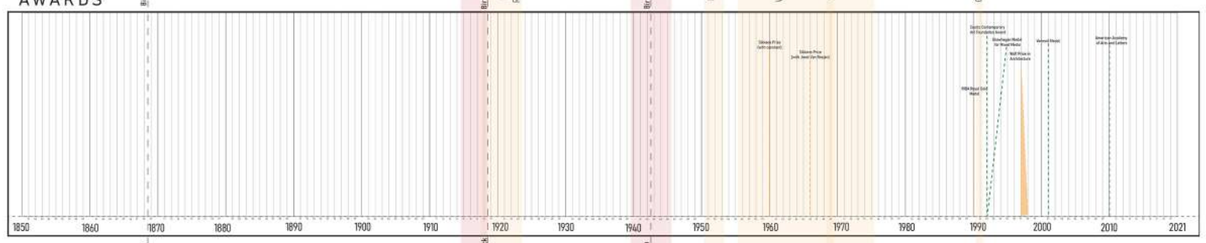
STUDIES



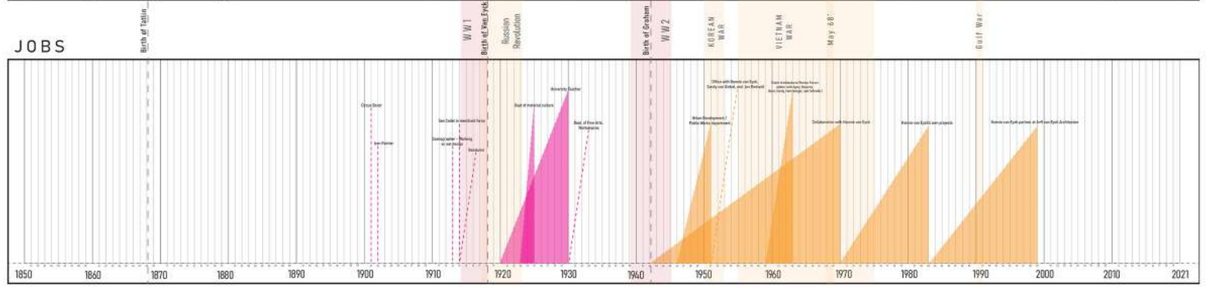
TEACHING



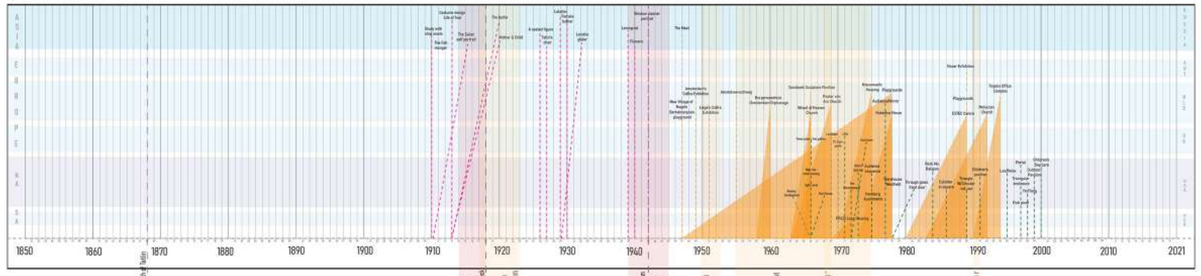
AWARDS



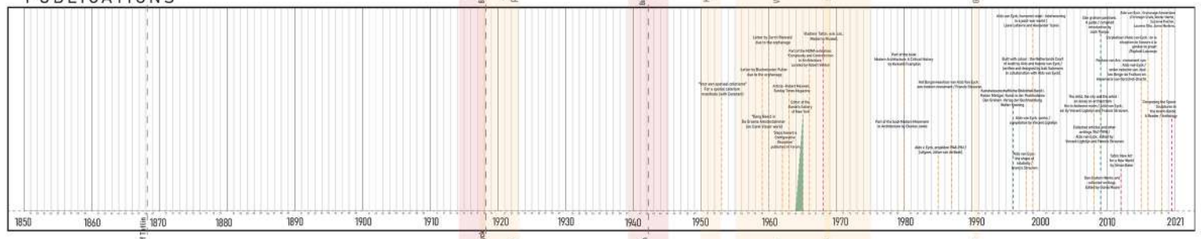
JOBS



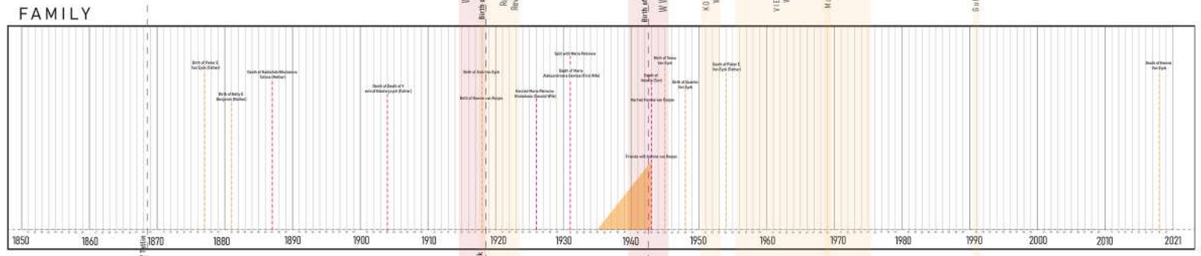
PROJECTS



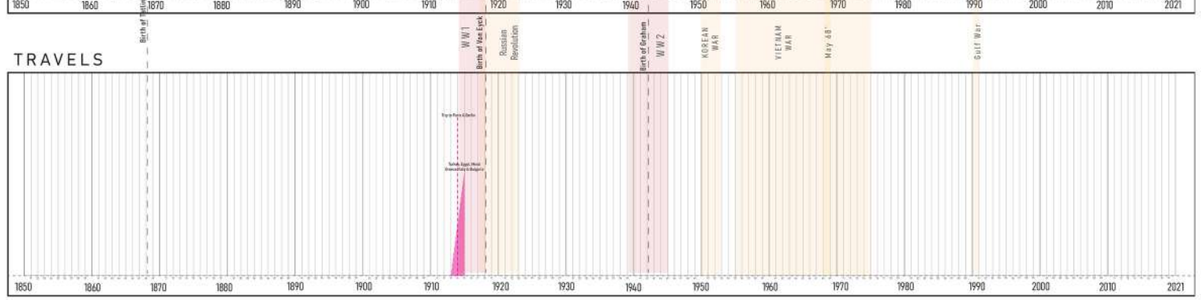
PUBLICATIONS



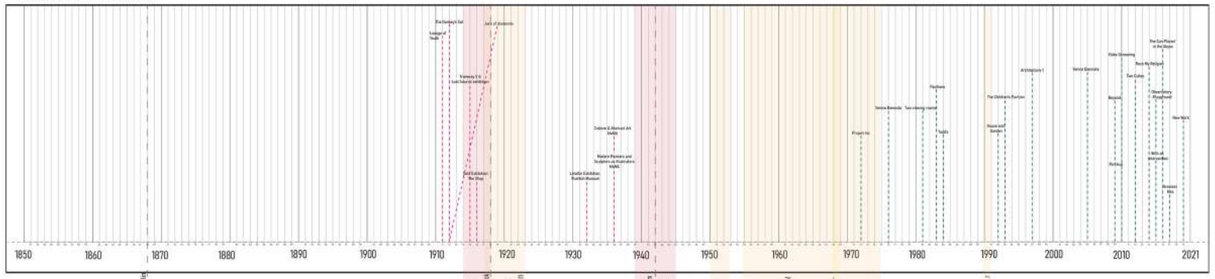
FAMILY



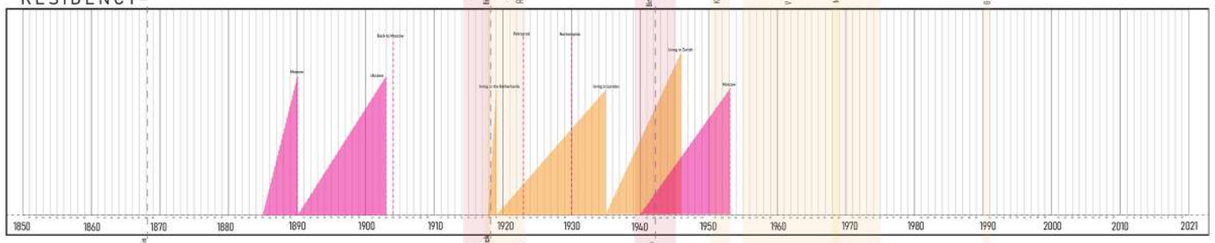
TRAVELS



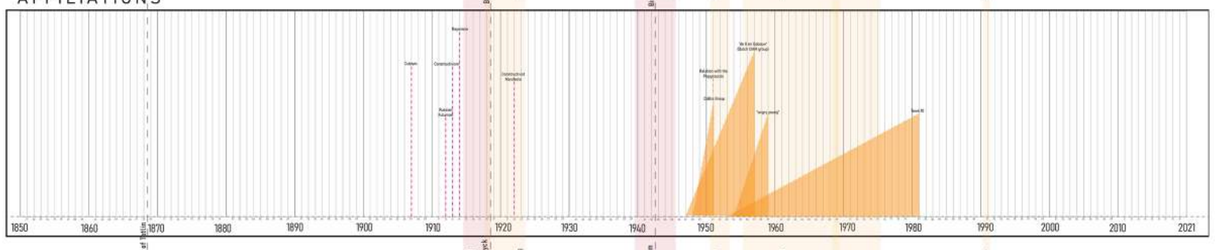
EXHIBITIONS



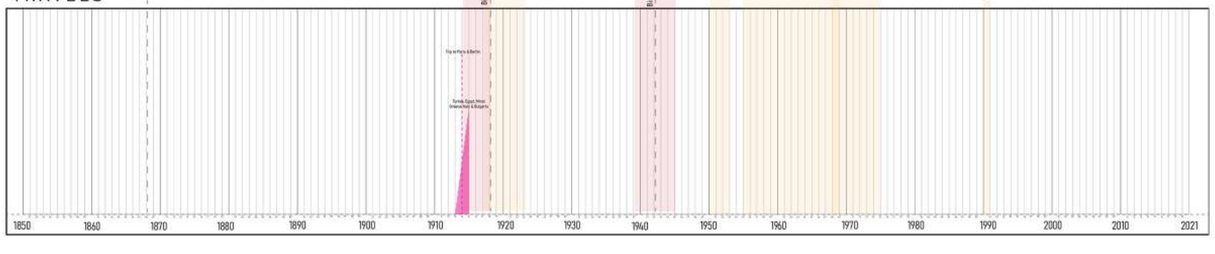
RESIDENCY



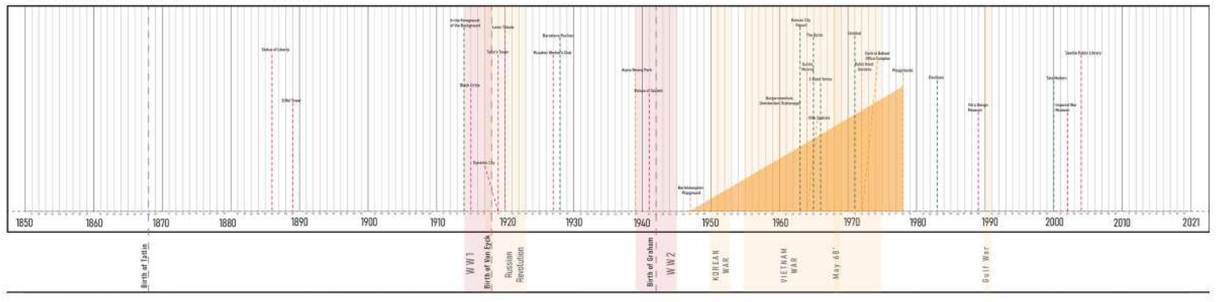
AFFILIATIONS



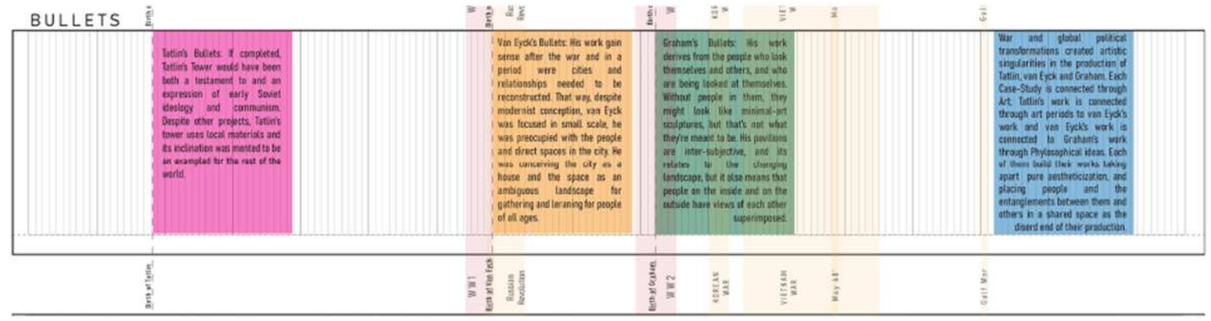
TRAVELS



RELATION TO OTHER WORKS



BULLETS

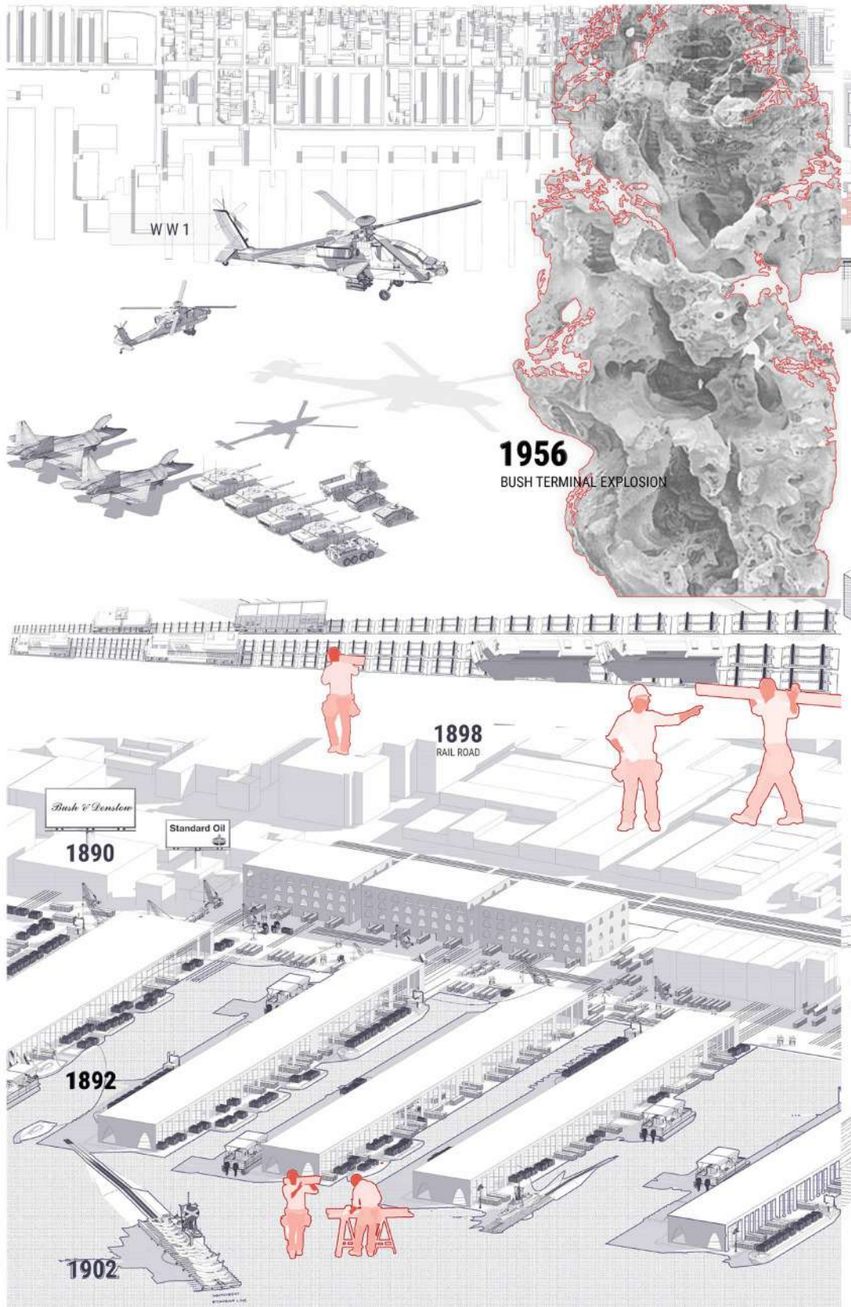


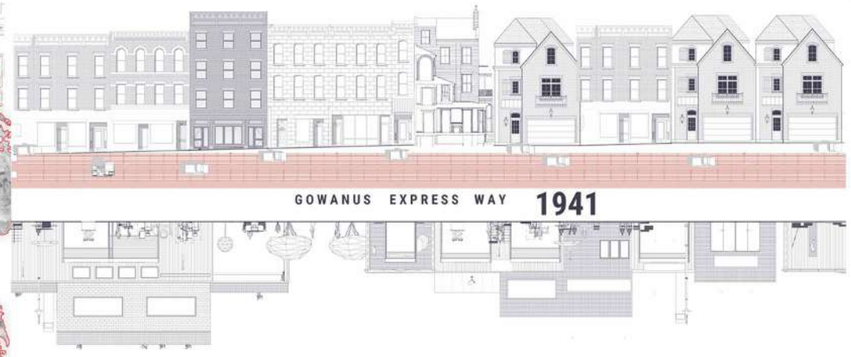
UNDER ONE ROOF

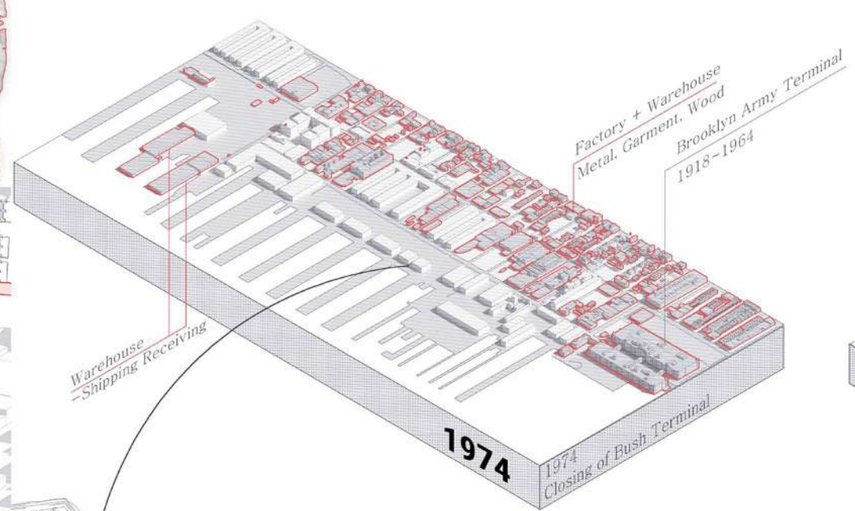
Advanced Studio VI
A Factory As It Might Be
Mimi Hoang, Instructor
Spring 22

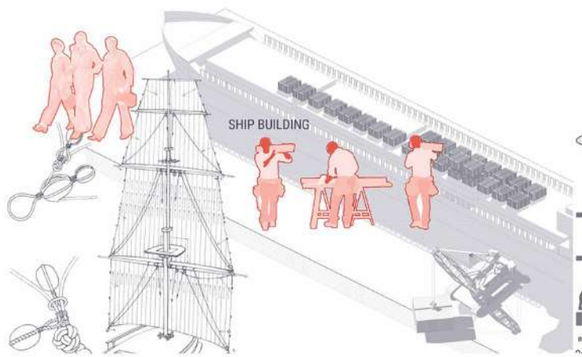
The proposal is located at Bush Terminal – A historic intermodal shipping, warehousing, and manufacturing complex that prospered at one point due to its proximity to the water. The proposal consists of three projects that focus on the factory as a complex. They are distributed across the area and from an urbanistic point of view, they try to revive the defunct rail line into a new green spine. The spine acts as a connecting element between them, thus a linked workflow between the projects is created. The aim is to bring back the intermodal complex that used to exist but also the urban regeneration of the area. The projects explore and respond to the site by sharing the concept of "Under one roof", using the roof as a main performative element with different activations of roof and ground.

SITE HISTORY

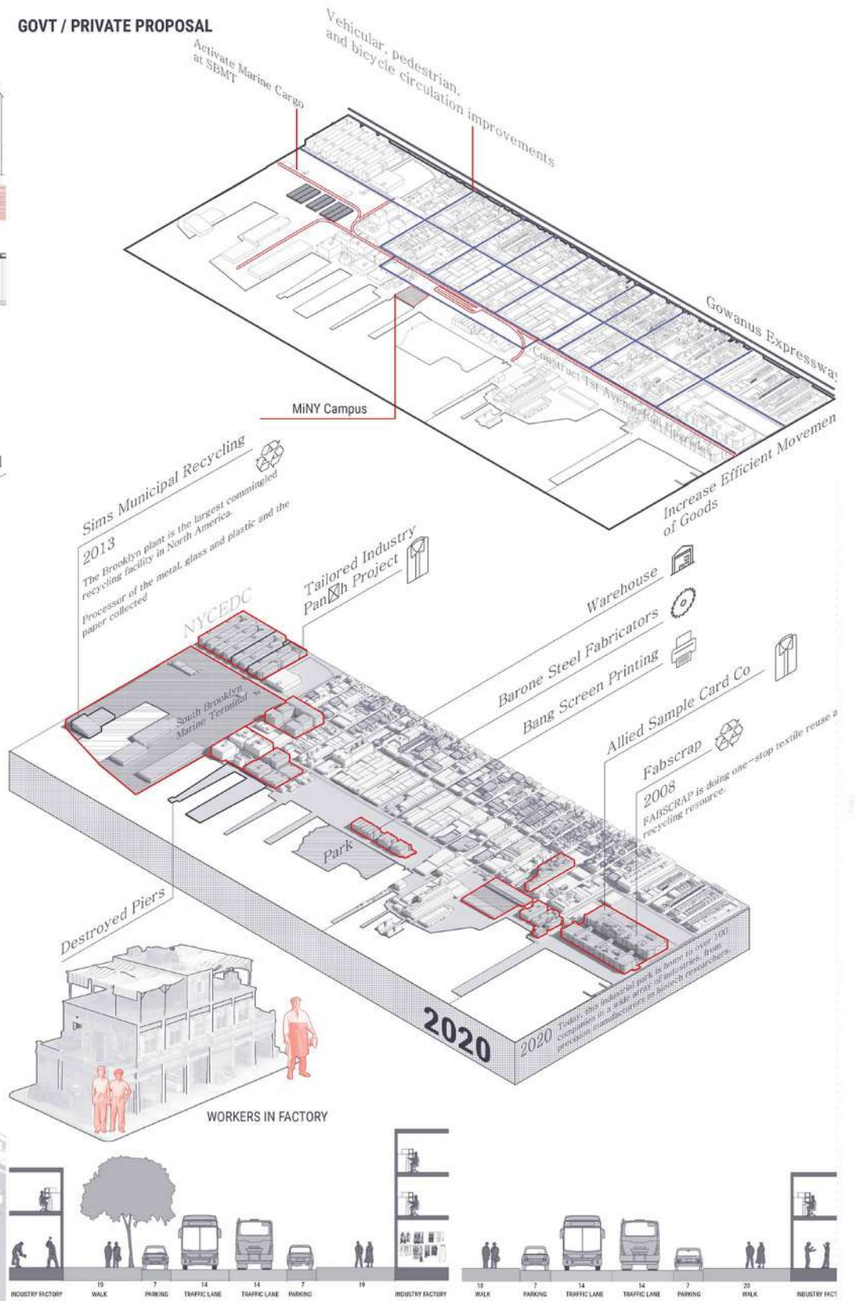






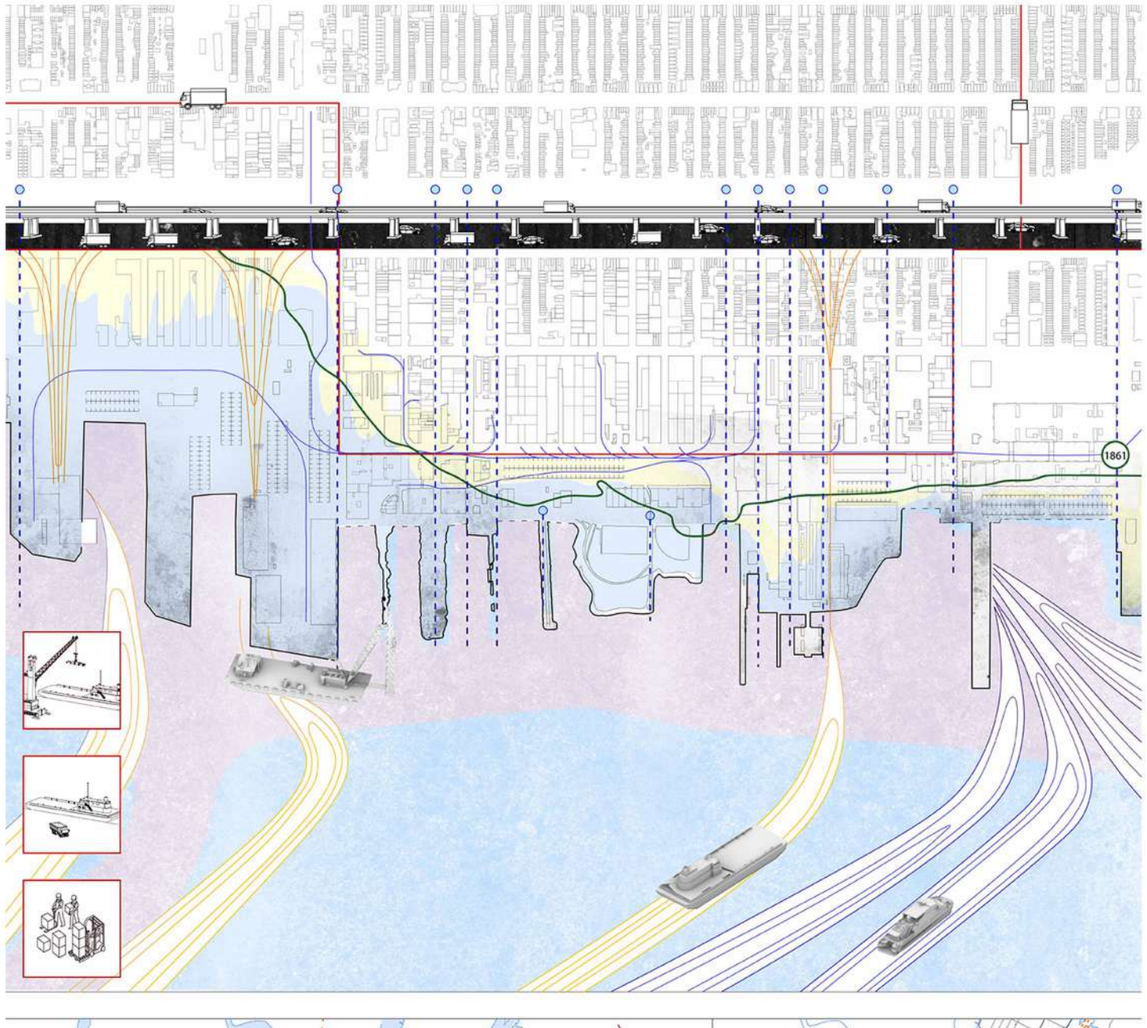


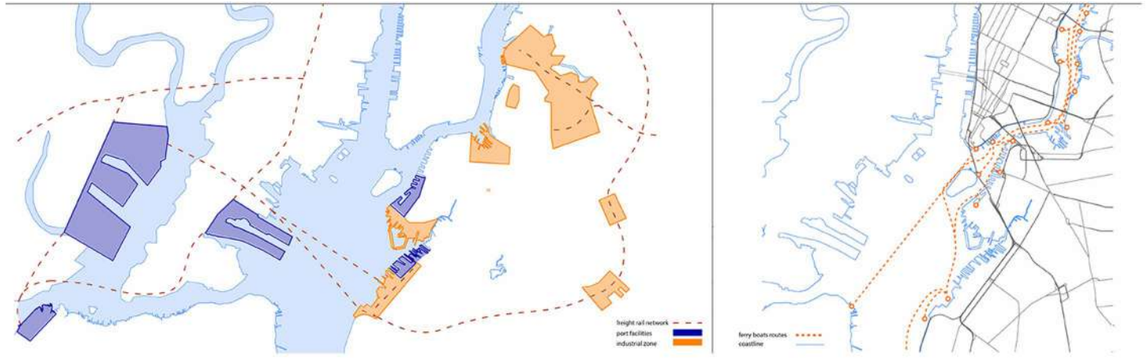
GOVT / PRIVATE PROPOSAL



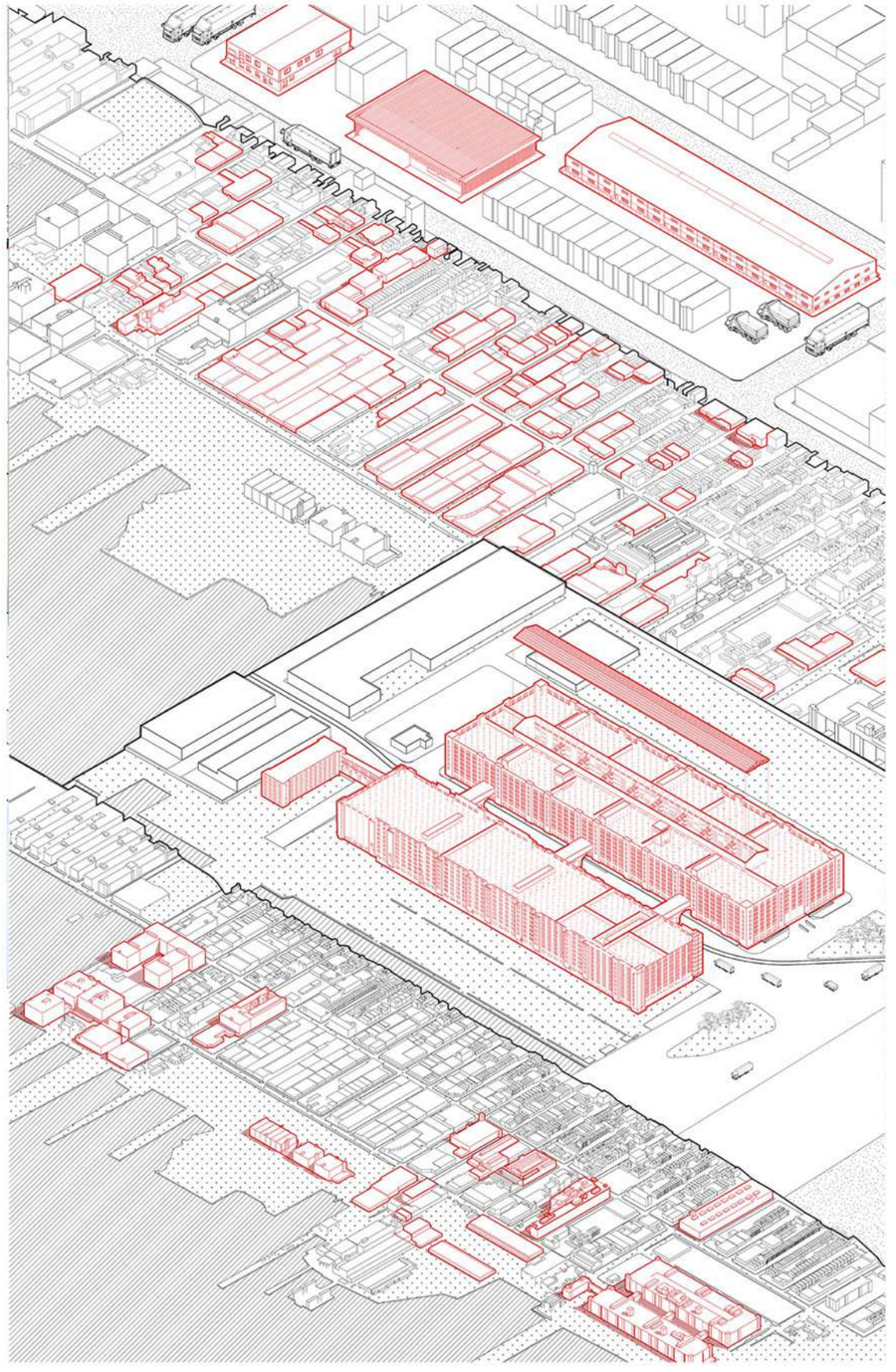
Historical and Site research for Bush Terminal was produced in collaboration with SeokHyun Kim and Malvina M

WATER NETWORK AT BUSH TERMINAL

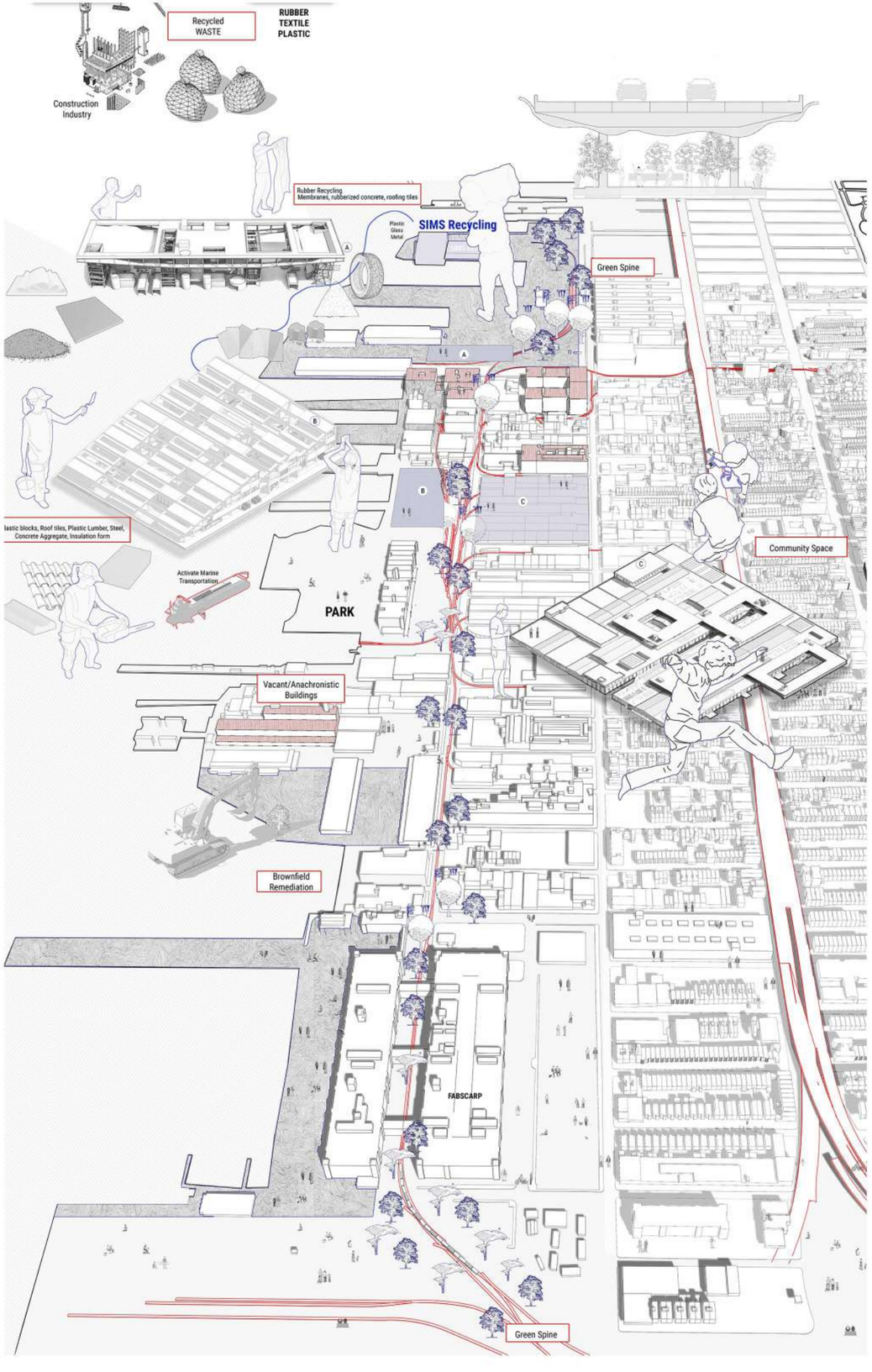




TYPOLOGIES PRESENT AT SITE

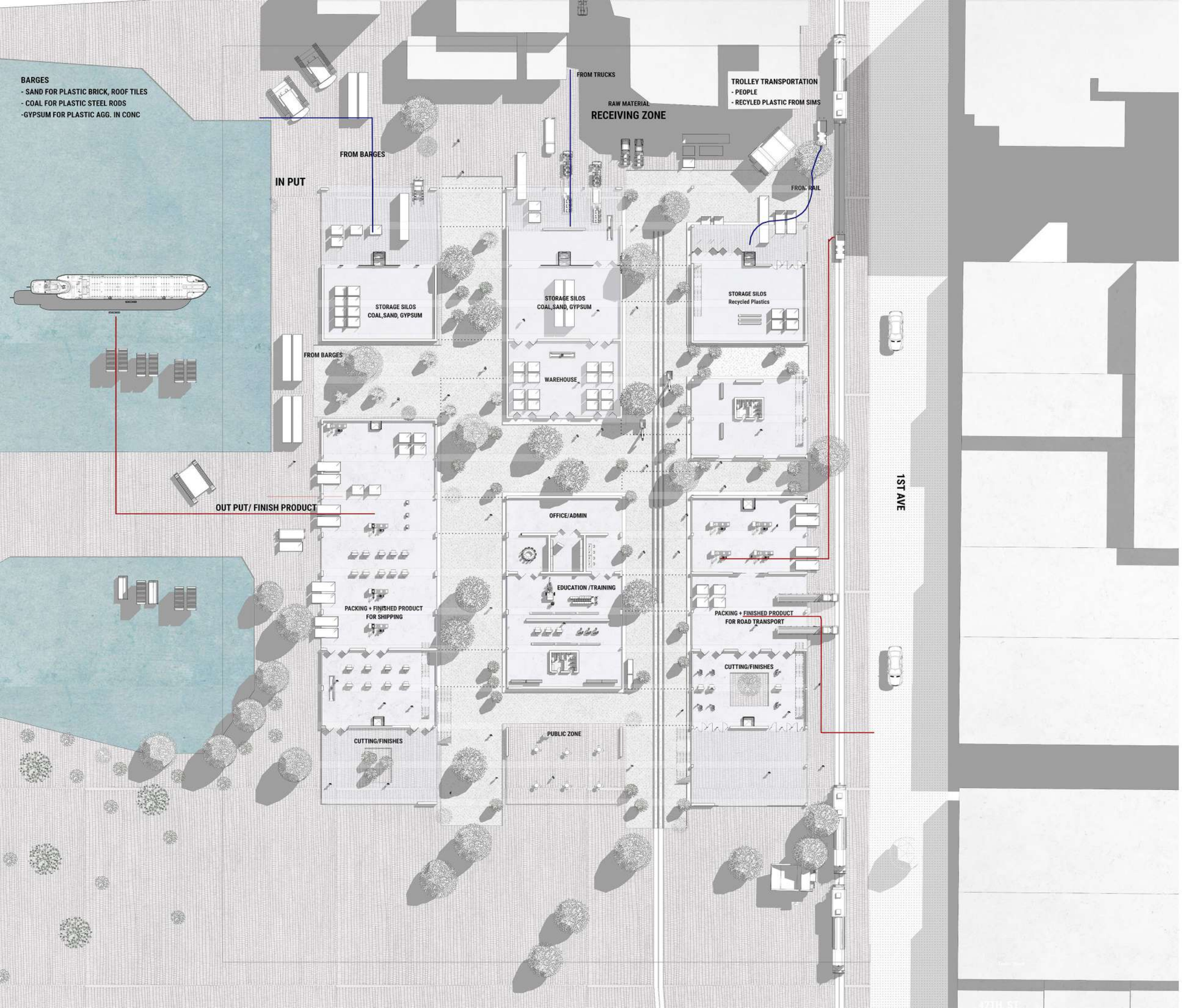


Historical and Site research for Bush Terminal was produced in collaboration with SeokHyun Kim and Malvina M



The proposal is located at Bush Terminal – A historic intermodal shipping, warehousing, and manufacturing complex that prospered at one point due to its proximity to the water. The proposal consists of three projects that focus on the factory as a complex. They are distributed across the area and from an urbanistic point of view, they try to revive the defunct rail line into a new green spine. The spine acts as a connecting element between them, thus a linked workflow between the projects is created. The aim is to bring back the intermodal complex that used to exist but also the urban regeneration of the area. The projects explore and respond to the site by sharing the concept of “Under one roof”, using the roof as a main performative element with different activations of roof and ground.

Historical and Site research along with Master Plan for Bush Terminal was devised in group of 3 . Following which, three distinct projects are produced individually. Hence this portfolio only entails the project that was made by the author.

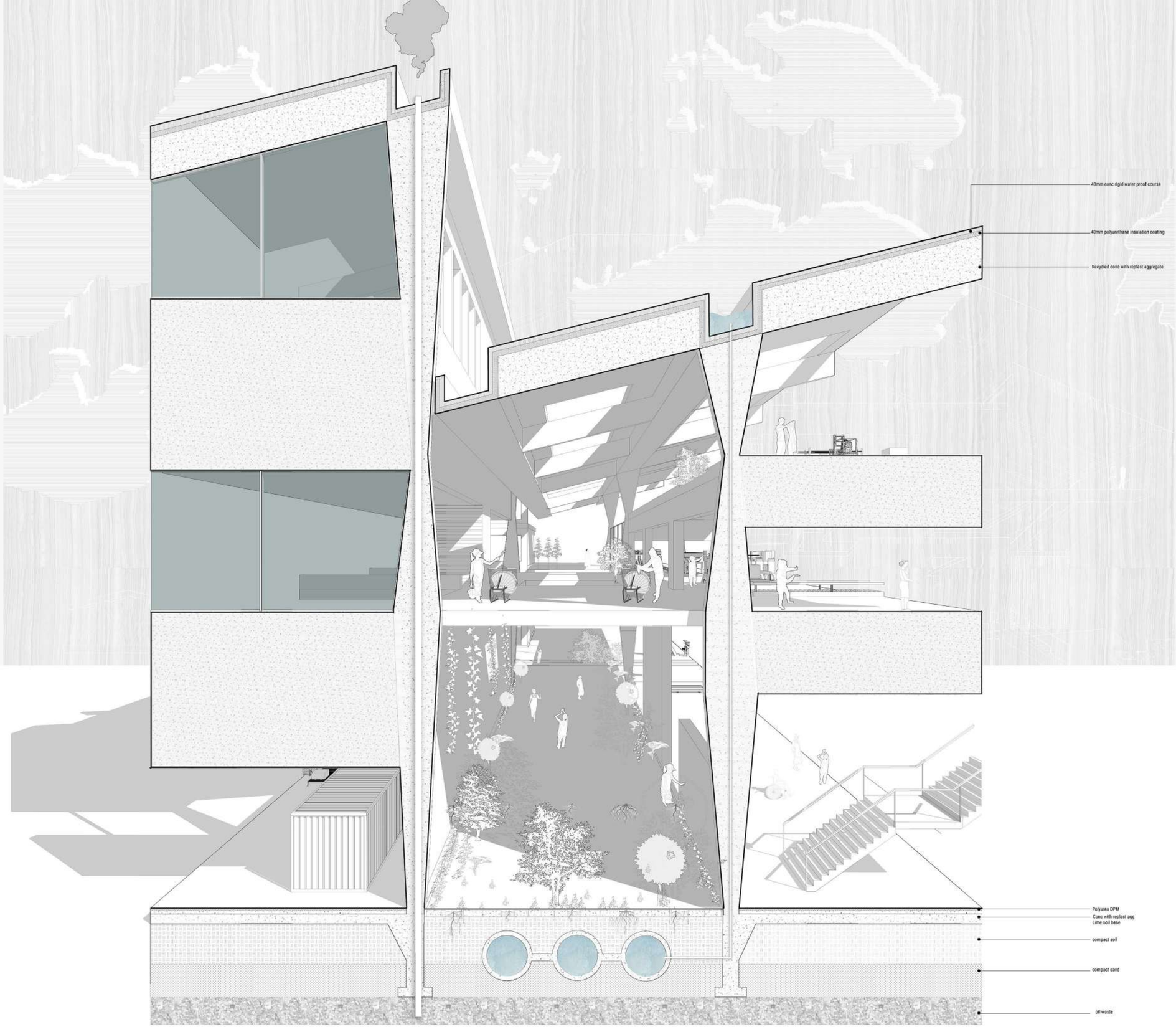


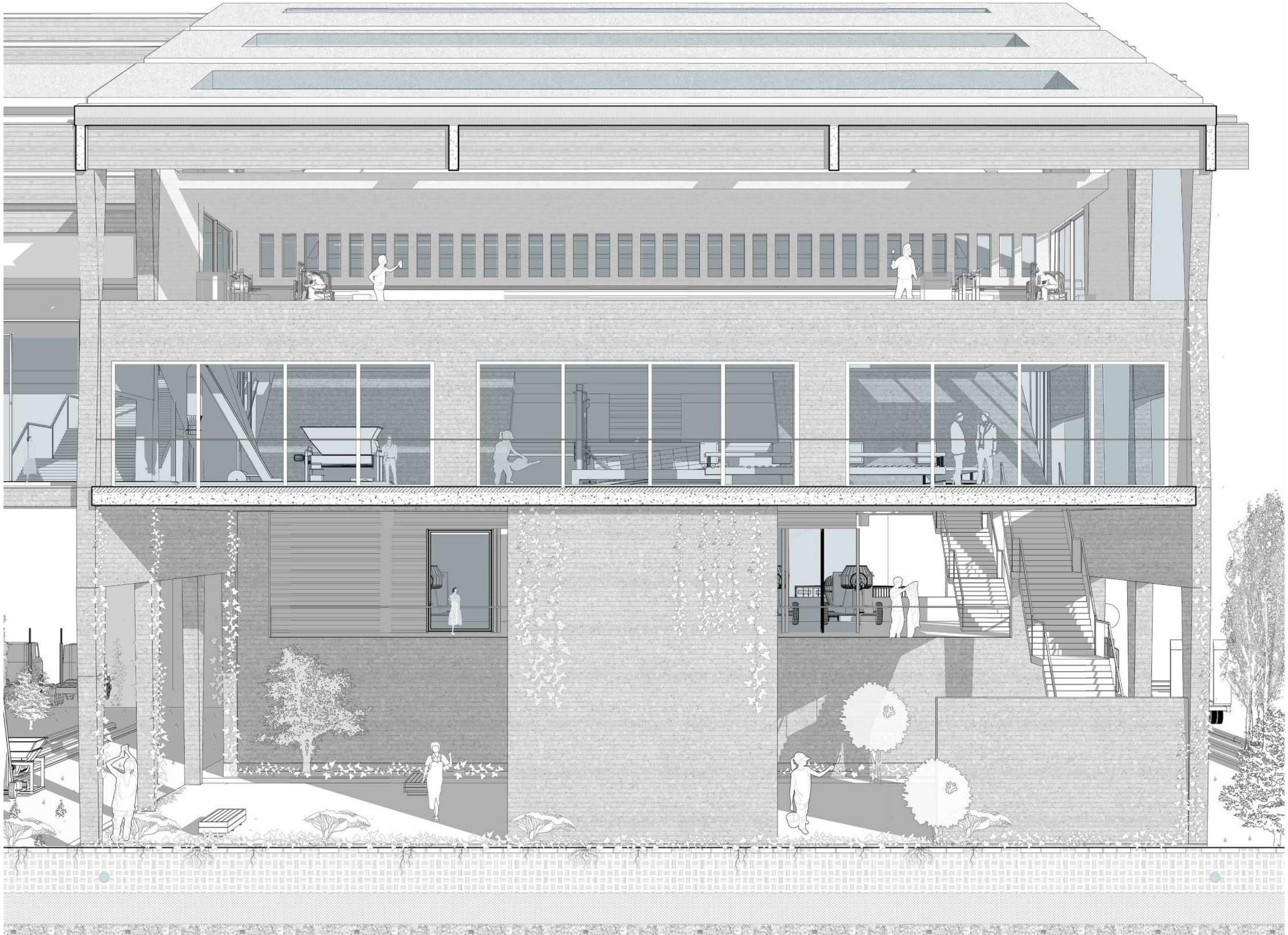
This project essentially critiques the undifferentiated floor plans of factories and aims to look at gradient scales of work spaces. While simultaneously exploring the diaeletic between nature and machine.

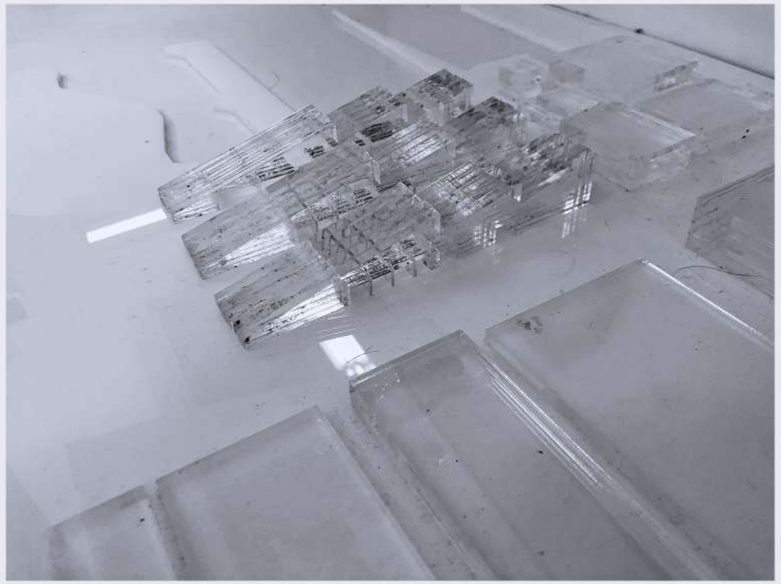
Openings on the ground are made in response to the motion of materials that are coming in and going out. Hence different scales of opening are oriented towards the 3 nodes of network – rail, water and road. Connections are constructed through landscape, making the ground rigioulessly programmed for the public with outdoor spaces becoming an extension of work place.

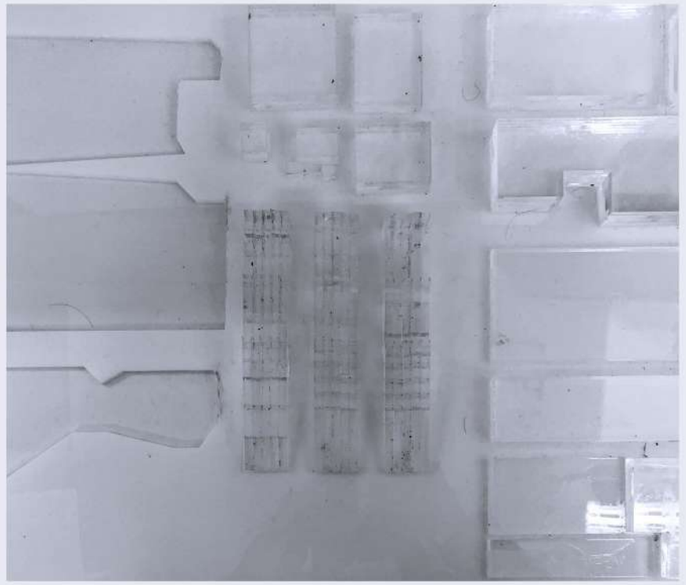
75 People
2000 Units/day

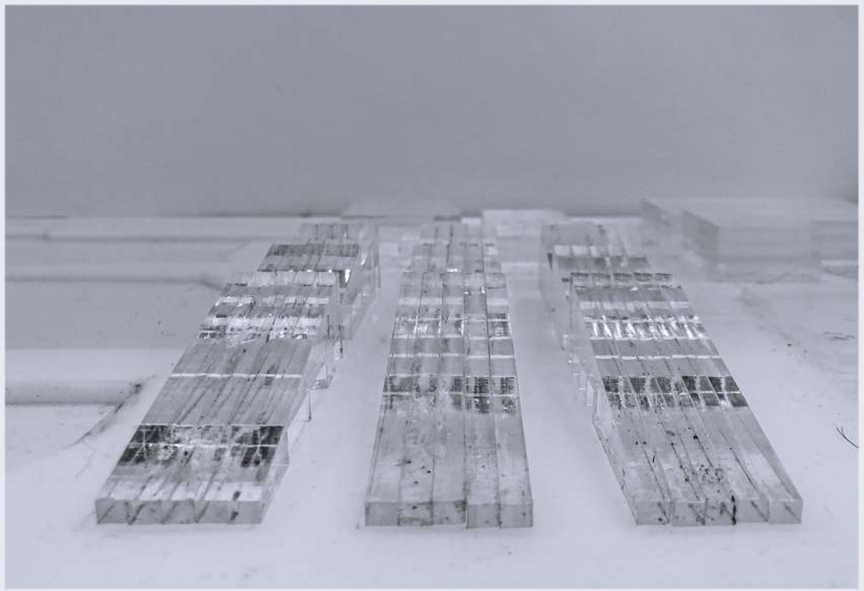
In an attempt to increase the engagement with public through factory and to lend visibility to the processes of manufacturing, training spaces are provided. There is an intention to let the products that's being produced in the factory dictate and inform the tectonics of the bldg. material. This building's form is essentially the multiplication of the ground that's made of recycled concrete with replastic aggregate.


40mm conc rigid water proof course
40mm polyurethane insulation coating
Recycled conc with replast aggregate
Polyurea DPM
Conc with replast agg
Lime soil base
compact soil
compact sand
oil waste









A Casualty of Modernist Insensitivity

Le Corbusier's Planning of Chandigarh City, India

The Urban Image: Maps, Surveys, and Plans in 20th Century Urbanism
Benedict Clouette
Spring 22

Abstract

Chandigarh, the new capital of Punjab, following the partition of British India is often memorialized in planning theories as Le Corbusier's utopian vision for Indian modernity, as well as a casualty of modernist insensitivity. It was planned on the principles of CIAM that demarcates cities into four functions— living, circulation, working and care of the body. For some, Chandigarh is a testament to the progressive planning and the socialist approach embedded in it, for others, it is a symbol of Western planning ideology inflicted upon India without any regard for its context. Such questions disunite most conversations on Le Corbusier's work in India.

This paper sets out to analyze the genesis of this master plan and the significant changes and evolution pertaining to it while scrutinizing some of the critical deficits present in the fundamental planning of Chandigarh city. Additionally, this paper hopes to look at the development of non-planned settlements in the city and the effect of the plan on the lives of the settlement residents and the implications of retrofitting planning concepts that were constructed for the west.

Ultimately, instead of collapsing into a simplistic dichotomous gaze of modernism as European vis-à-vis native, this paper is compelled to subscribe to the notion of multiple and modernities. Elevating the creation of Chandigarh as the inception of Indian modernity— an episode of a radical and clean departure from India's colonial history and influences— would be delusional. However, characterizing it as solely a western imposition, aided by political technocrats, would be a disservice to the agency of today's residents of Chandigarh who continue to shape this breathing, living, mutable, and shifting city.

The Making of Chandigarh

With the independence in 1947 came the partition of India, laid out along communal lines, into two countries, India and Pakistan. This meant the former capital of Punjab was moved to Pakistan leaving the Indian counterpart without one. As opposed to laying out another capital in the previously existing town, the choice was made to begin with a completely new city— Chandigarh. As Prime Minister Jawaharlal Nehru made sense of, 'free from existing encumbrances of old towns and old traditions; Chandigarh was to become both the 'symbolic of the past.... [and] an expression of the nation's faith in the future.'

There were obviously practical as well as emblematic contemplations for the choice to construct a totally new capital city. None of the current towns could house the new capital, for not a single one of them appeared to be equipped for supporting the kind of expansion that was integral to sustaining governmental functions, especially since the region saw an exponential increase in its population as a direct result of migration of displaced population from Pakistan.

Nehru and the Indian government previously charged architect Matthew Nowicki and planner Albert Mayer to make an outline for a new city. However, Nowicki's passing in a plane accident prompted a quest for a substitution. The officials had approached English architects Maxwell Fry and Jane Drew who had extensive involvement in planning for tropical conditions in West Africa. They, however, recommended Le Corbusier, who acknowledged the commission, in part to procure the space and financial plan necessary to appropriately test his speculations and theories on architecture and planning. He worked with a group of different architects, including his cousin Pierre Jeanneret, who remained in India through the planning and development stages.

CIAM played a critical part in the advancement of the European design, especially concerning the philosophical premise of modernism in the relationship between design and urban planning. A theory that outlined the idea of urbanism. Professedly overwhelmed by Le Corbusier and the Swiss architect Seigfried Giedon in its initial period, the association was shockingly diverse as far as the people and thoughts that it came to address over its 32-year life-length.

CIAM saw itself as a vanguard organization that consolidated logical investigation with political and imaginative radicalism. Its techniques for the design included semi-logical examination of both old and new urban communities against a pragmatist functionalist classification of human existence into 'dwelling, work, transportation, and recreation.' In turn, these classifications had an immediate connection to the association and type of proposed urban areas that would reflect these functionalist divisions, giving the essential components of the purported 'Functional City'.

Another strange type of conceptual instrument for the creation of urbanism developed by Le Corbusier and CIAM is focused on the demonstration and act of drawing, which starts with the creation of a plan that indicates and situates an urban issue or problem. As per Maxwell Fry, this is the key technique utilized by Le Corbusier as he forms his own all-inclusive strategy for Chandigarh.

The planning of Chandigarh ignited conversation with respect to the notion of modernity in India as numerous researchers contend the possibility of a unique Indian modernism separate from the Western comprehension of the term. While European modernity dismissed antiquity, Indian modernity reuses history to shape its present. It is fascinating how a conspicuous modernist architect, Le Corbusier, applied European theories of the same to a new, 'other' climate. He mixed European notions with Indian social character. Is Corbusier's design a portrayal of the legitimate Indianness or is it rather a projection of Indianness seen exclusively through the European lens? The idea of modern and Indian civilization appears to be both in conflict and coalescence.

Modernist Assertions

Corbusier had the option to adjust Mayer's underlying masterplan into a symmetrical grid with Nehru as his main inspector. As Maxwell fry wrote much later 'Corbusier, with the three of us (Jeanneret, Drew and Fry), more witnessing than assisting, created the plan of Chandigarh in about four days […] he laid out the main lines of the city from which he never departed.' Enthusiastic about executing his universal arrangement and theory such as La Ville Radieuse, zeroing in just on the physical features of arranging and overlooking the social parts of his project.

This new plan moved its concentration from Mayer's design, which acknowledged variety and range of densities, to one rooted in order, hierarchy, and discipline. This hierarchical framework was coordinated as the capitol complex, the university, the city center, and the industrial areas accentuated with enormous areas of green breathing spaces.

This was conceivable because Nehru, the founding member of this new country, shared similar beliefs on the intended results. Indeed, the personal relation between Corbusier and Nehru was important. Scriver and Srivastava note the 'special relationship he developed with Nehru as the de facto client for the new state capital.' Nehru, Cambridge educated and well-adapted to the British training and general set of laws, bought into Corbusier's image of orientalism and obtained his nationalistic standpoint to assemble a new India from the same school of thought. David Kopf termed it as 'Indigenous orientalism,' where the thoughts regarding the orient are reprocessed back to the orient, frequently taking on the appearance of an independent thought, and by subscribing to these extended ideas of stagnation, Nehru was, in some sense, complicit.

Indeed, the official decision to infuse architectural modernism in the creation of Chandigarh was an attempt to capture India's desire to catch up to the west and demonstrate the state's 'ability to equal the West on its own terms' . It is forward looking. Nehru firmly expressed the country's intention to 'chose modernist free expression over a state-driven revivalist style.' In many postcolonial countries, including India, the power to decide and formulate this new national identity rested with certain 'hybrid predecessors' of the colonial regime rather than then citizenry at large. An important aim of this paper is, therefore, to also explore to what extent did Nehru's primacy in dictating the vision and architect for Chandigarh compromise the interests and aspirations of the community?

Kalia, for instance, have analyzed the design of residential areas as a spatial mapping of old configurations of power, with great resemblance to the colonial planning of New Delhi. There are certainly likenesses that one can undoubtedly draw between Chandigarh, the intended modern capital isolated from the constraints of the past, and New Delhi, the imperial capital intended to show colonial British power. Both were planned by foreign architects. Both direct outcomes of the theories of the garden city movement. Both were hierarchical in planning and utilized local motivation to decorate their imperative designs. They might appear to be very unmistakable in their conventional appearances. Despite the fact that the projects were constructed just 30 years separated, the underlying inspiration and view of their subjects are fundamentally aligned with each other. With a hierarchical layout that places poor and marginalized groups further from the capitol, Kalia likened Chandigarh as 'social inequality plotted onto the physical terrain.'

These binary conceptualizations of Chandigarh— as a western interpretation of imposed modernity or as the manifestation of a progressive utopian Indian modernity— stops short from asking precisely what 'architectural modernism' entails. The literature on (post)colonial architectural and urban history in South Asia is well-placed to inform and lend nuance in furthering this discussion. Duanfang Lu, for instance, looks at the role of national identities and vernacular identities in shaping borrowed and transplanted methodologies of modernism. Therefore, beyond regarding modernism as a detached mass-produced aesthetic enabling Western imperialism, it can also be regarded as variously localized into nation-building agendas. Indeed, driven by the imperative to overcome the imagination of India as a third world in the periphery, the built environment served as a manifesto for embedding nationalist pride, global aspirations, and promises of development.

Indeed, there even are attempts to describe later projects in India as moving away from the machine-age, hierarchical, centralized city, and coming to embrace, in the words of Dutta, a unique 'second modernism.' Many newly independent states in the Global South were operating under high-deficit and privileged rapid modernization over careful and prolonged planning. For Levin , this 'action-planning' is seen in Mayer's involvement in the rural development of Uttar Pradesh in the 1950s. Moving away from high-modernist planning that aimed to produce a fixed blueprint of the future, the language and methodology of action planning prioritized a more user-responsive, flexible design, with master plans becoming a tool of action in the present rather than goals for the future.

In a similar vein, Dutta notes the sense of incompletion of the Ford Foundation's planning mission in Calcutta, reconceptualizing master plans as a teleological apparatus to manage and map future expectations and contingencies. Indeed, following the financial shock and administration of the Structural Adjustment Plan in India in the 1967, a fiscally conservative approach to planning led to this 'incompleteness' in Calcutta. Indeed, in the words of Dutta, the crux of this incomplete planning style 'lay not in professions of ruling out uncertainty and unpredictability in the future but in their claims of bringing uncertainty within a viable range of calculability and rationality.' This trait of 'action planning' and 'incompletion' in the mid-1960s, closely interlinked with the political and fiscal prerogatives of the newly independent India, is in a certain sense the 'second modernism.' A reaction to the uniformly divisible, homogenous Corbusierian approach. A style of planning that 'dwell not on outputs but on the processes of output.'

This paper is, however, not attempting to erase the role of the system of colonial knowledge and practices in shaping the post-independent building and environmental technologies and manifestations. Jiat-Hwee Chang, in his genealogical exploration of the rhetoric of 'tropical modernism,' described it as a 'conceptual category deployed in standard modern architecture to incorporate Third Word modernism into what is essentially still a Eurocentric narrative.' He argues that tropical architecture and contemporary climate and sustainable designs are influenced by the socio-cultural constructions and imaginations of the geographically remote tropical spaces, the biopolitics of colonial governance, and the endurance of post-colonial networks. Tropical architecture is regarded by Chang as a 'power-knowledge configuration inextricably linked to asymmetrical colonial power relations.' However, I believe some credit should be granted to the role of indigenous knowledge and practices in the subsequent shaping of tropical architecture.

Multiple Legacies: Entangled Modernities

The creation of Chandigarh is neither ahistorical nor apolitical. Elevating it as the inception of Indian modernity— an episode of a radical and clean departure from India's colonial history and influences— would be delusional. However, characterizing it as solely a western imposition, aided by political technocrats, would be a disservice to the agency of today's residents of Chandigarh who continue to shape this breathing, living, mutable, and shifting city.

This paper is compelled to subscribe to the notion of modernity as unfolding over time while simultaneously encapsulating competing interpretations and narrations of cultural contextualizations. By dismantling the linear progression of modernity, in the words of Lu, this paper attempts to turn from 'singular, Eurocentric, linear, teleological models of the modern to those of 'multiple', 'alternative', 'global', or 'other' modernities.'

Modernism, masquerading as uncontestably European and universal, silences the multiple configurations of modernity rooted in complex, local, and disjoint realities. The violent outcome of the denial of this multiplicity for a simplistic dichotomous gaze of European vis-à-vis native is the dismissal of other knowledges and other constructions of existences. The West is not the sovereign of the modern architecture and the values it is supposed to represent.

In the period immediately after independence, modern architecture was a convenient vehicle to visually and spatially demarcate a transition from the period of the Raj— a period of subjugation and supposed inferiority to the metropolis. Modernism was utilized for its capacity to call forth and induce ideas of progress, democracy, industrialization, and liberalism. To express to the world that modernism can be nurtured and grown in these previously relegated geographies, whose inhabitants and their existences were until then regarded as antithetical to modernism. However, the creation of Chandigarh was as much a search for roots as it was a leap to the future. The Indian grammar embedded in the design peeps from the 'parasols, brises-soleil, terraces, tanks etc.' The funnel of the Assembly is a crossbred with the old solar observatory. The crescent roofs and cosmic imagines in the design are also attempts to integrate the spiritual and rural values of the region.

Chandigarh, planned with the goal of emulating Western ideals, have over time become used and appropriated in Indian ways much different from that intended by the planners. Today, multiple households dwell in areas designed for single-families. Meanwhile, an informal economy operates within the interstitial spaces. Parts of the green belt have become demarcated for non-green activities. The prominence of city monuments has become displaced by others, like the folk-art Rock Garden, that has become more important for residents. With the creation of Haryana as a new state, the Capital Complex was adapted to the new political reality of housing two government bodies. The eastward expansion of the court buildings to facilitate more public access has also meant greater infiltration of the space by food vendors and local traders. The vibrant street life is intimately in conversation with the built space— mutating it to accommodate to the unique demands and changes of the inhabitants. Ropes and cloths are attached to the edifice to create makeshift partitions and rooms. Sidewalks are stacked with vending stands. Today, the spirit of this planned city is undoubtedly Indian. The thick dusty layers of the modernist past have become accumulated and engulfed by the perpetual unfolding of the contemporary urban life.

Bibliography

Brolin, B.C. (1976). The failure of modern architecture. N.p.: Van Nostrand Reinhold Company.

Brown, J. M. (1994). Modern India: the origins of an Asian democracy. N.p.: Oxford University Press.

Budhraja, M. (1968). Sociological Bulletin 17, no. 2: 239–42.

Chalana, M, and Sprague. T. (2013). 'Beyond Le Corbusier and the modernist city: reframing Chandigarh's 'World Heritage legacy.' Planning Perspectives 28, no. 2, 199-222.

Chalana, M (2015). 'Chandigarh: City and Periphery.' Journal of Planning History 14, no. 1: 62–84.

Chang, J.H (2011). 'Building a (Post)Colonial Technoscientific Network: Tropical Architecture, Building Science and the Politics of Decolonization' in Duanfang Lu (eds) Third World Modernism: Architecture, Development and Identity.

Chang, J.H (2017). A Geneaology of Tropical Architecture: Colonial Networks, Nature and Technoscience. Routledge.

Cohen, J-L. (2009). Le Corbusier, 1887-1965: The Lyricism of Architecture in the Machine Age. N.p.: Taschen.

Corbusier, Le. (2020). The City Reader. Edited by Richard T. LeGates. N.p.: Taylor & Francis Group.

Correa, C. (1987) 'Chandigarh: The View from Benares.' Architecture Plus Design 3, no. 6: 73.

Curtis, W. (19887). 'Modernism and the search for Indian identity.' The Architectural Review.

Dutta, A. (2022). 'Incompletion: on more than a certain tendency in postwar architecture and planning.' In Aggregate Architectural History Collaborative. Architecture in Development: Systems and the Emergence of the Global South.

Evenson, N. (1966). Chandigarh. N.p.: University of California Press.

Fishman, R. (1982). Urban Utopias in the Twentieth Century: Ebenezer Howard, Frank Lloyd Wright, Le Corbusier. N.p.: MIT Press.

Fitting, P. (2002) 'Urban Planning/Utopian Dreaming: Le Corbusier's Chandigarh Today.' Utopian Studies 13, no. 1: 69–93.

Fry, E.M (1995). 'Chandigarh- a New capital City.' Architectural Record, June: 139- 148.

Fry, E. M. (2022). Le Corbusier at Chandigarh. In The Open Hand.

Hall, P. (2014). Cities of Tomorrow: An Intellectual History of Urban Planning and Design Since 1880. N.p.: Wiley.

Holston, J, (1999). Cities and Citizenship. Duke University Press.

Joshi, K, and Fry. E. (1999). Documenting Chandigarh: The Indian Architecture of Pierre Jeanneret, Edwin Maxwell Fry, Jane Beverly Drew. N.p.: Mapin Pub.

Kalia, R. (1987). Chandigarh: In Search of an Identity. N.p.: Southern Illinois University Press.

Kalia, R. (2006) 'Modernism, modernization and post-colonial India: a reflective essay', Planning Perspectives, 21 (2): 133-156.

Levin, A. (2022). Planning for an uncertain present: action planning in Singapore, India, Israel, and Sierra Leone, In Aggregate Architectural History Collaborative. Architecture in Development: Systems and the Emergence of the Global South.

Lu, D. (2012). 'Entangled Modernities in Architecture.' in The SAGE Handbook of Architectural Theory.

Nilsson, S. (1973) The New Capitals of India, Pakistan and Bangladesh. Lund: Studentlitteratur. Scandinavian Institute of Asian Studies 12.

Radhakrishnan, R. (2000). 'Postmodernism and the rest of the world', in Fawzia Afzal-Khan and Kalpana Seshadri-Crooks (eds) The Pre-Occupation of Postcolonial Studies. Durham, NC: Duke University Press, 37–70.

Sagar, J. (1999) 'Chandigarh: An Overview.' Architecture Plus Design 16, no. 2: 118.

Sarin, M. (2021). Urban Planning in the Third World: The Chandigarh Experience. N.p.: Taylor & Francis Group.

Scriver, P. and Srivastava, A. (2015). India: Modern Architectures in History.

Silva, F S. (2017) The Landscape in Le Corbusier Plans for Chandigarh. ESTUDOS DE PAISAGEM.

Vale, L.J. (1992). Architecture, Power, and National Identity. Routledge.

ARCHITECTURAL PHOTOGRAPHY
Michael Vahrenwald, Instructor
Spring 22