

Selected Works

7 4

Studio Elective

Retrofitting New York's aging infrastructure to suit community and social needs

↑ 02 world after property

Reimagining a world where tangible values are overidden by culture, community and people

Reimagining a world where tangible values are overidden by culture, community and people

← 04 extractive landscape

Reimagining a world where tangible values are overidden by culture, community and people

← 05 transportation reimagined

Reimagining a world where tangible values are overidden by culture, community and people

← 06 seminar of section

Reimagining a world where tangible values are overidden by culture, community and people



1 ol redefining infrastructure

As these monolithic structures are reaching the end of their structural lifespan, as a nation we are faced with the critical decision of whether we should invest in their repair or consider a new approach. By reimagining the potential for these structures to address the wrongs of the past andpromote the growth of these communities in the future, we aim to remediate the urban, ecological, and social needs of the vibrant communities surrounding urban highways.

Location Flushing, New York, N.Y., U.S.

Year 2021, Summer Term

Instructor

Nans Voron (SCAPE), Sagi Golan (NYCDCP), Austin Sakong (FXCollaborative), Jae Shin (HECTOR)

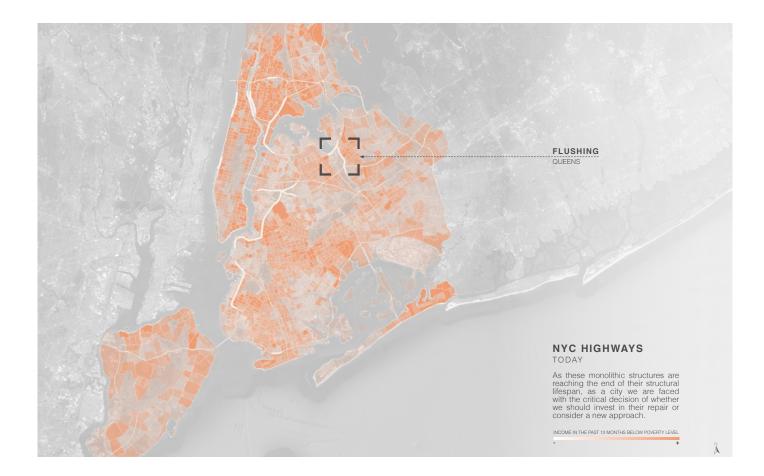
School

Graduate School of Architecture and Planning and Preservation, Columbia University

Team Daniela Deu, Curran Zhang, Achmad Maulana

Flushing creek social context study

Income level of surrounding area and its immediate corrolation with highways in its close proximity. A clear relationship arises where highways intersect neighbourhood induces issues such as low income and poorer living conditions



Flushing creek current conditions

Cataloguing some of the existing conditions generated alongside and below highways, a clear sense of neglect and undermaintenance can be found. Conditions such as homelessness, unsanitized conditions, public dumping, and unsafe environments are byproducts of government neglect.







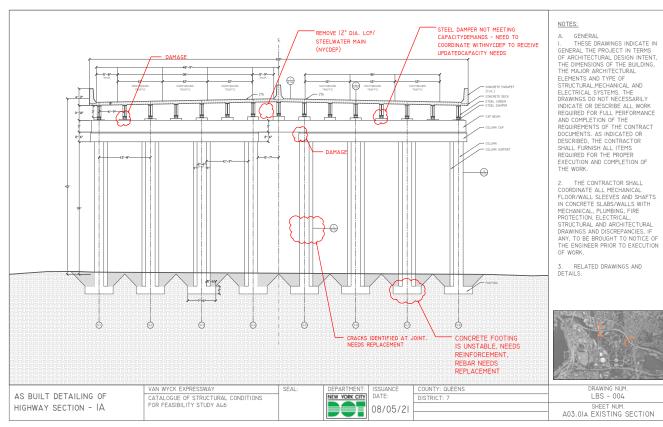
Discarded Industrial Garbage

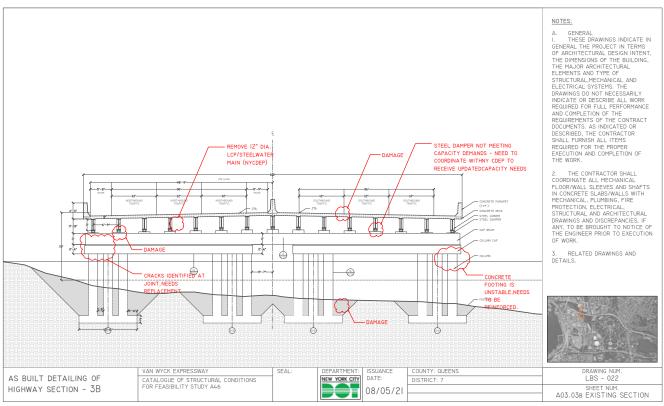
Aged Structure

Poorly Maintained Roadways

Current infrastructure analysis

Extracting documents from the NYC Department of Transportation, the team began analyzing current reports and photographs of deteriorating highway conditions. We can then determine zones of intervention where decommissioning/reusing infrastructure becomes more efficient than repairing.





Community design charrette

The initial approach, as we re-design the highway system, is to include community members to participate in what they think is the best for the local area. Thus, a group of eleven leaders from local organizations were invited to draw out a masterplan of the area.



Design roundup

After communciation with local consultants, the design team condenses and finalized some key issues that were reflected and proposed a new masterplan for the neighbourhood.



Design development and future speculation

Our apparoach is to include community members to participate in what they think is the best for the local area. Thus, a group of eleven leaders from local organizations were invited to draw out a masterplan of the area.

Phase/Zone 1 - Commercial



Phase/Zone 2 - Public Garden

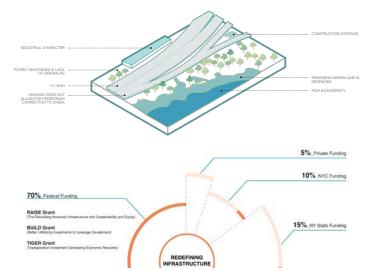


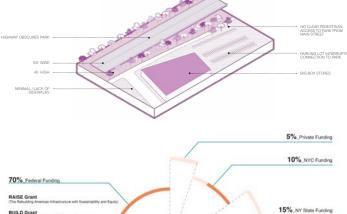
Phase/Zone 3 - Housing

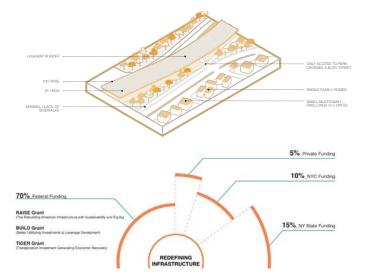


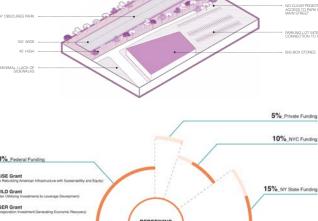
Design support

Along with our design, specific contextual studies and funding strategies will complement throughout development phases

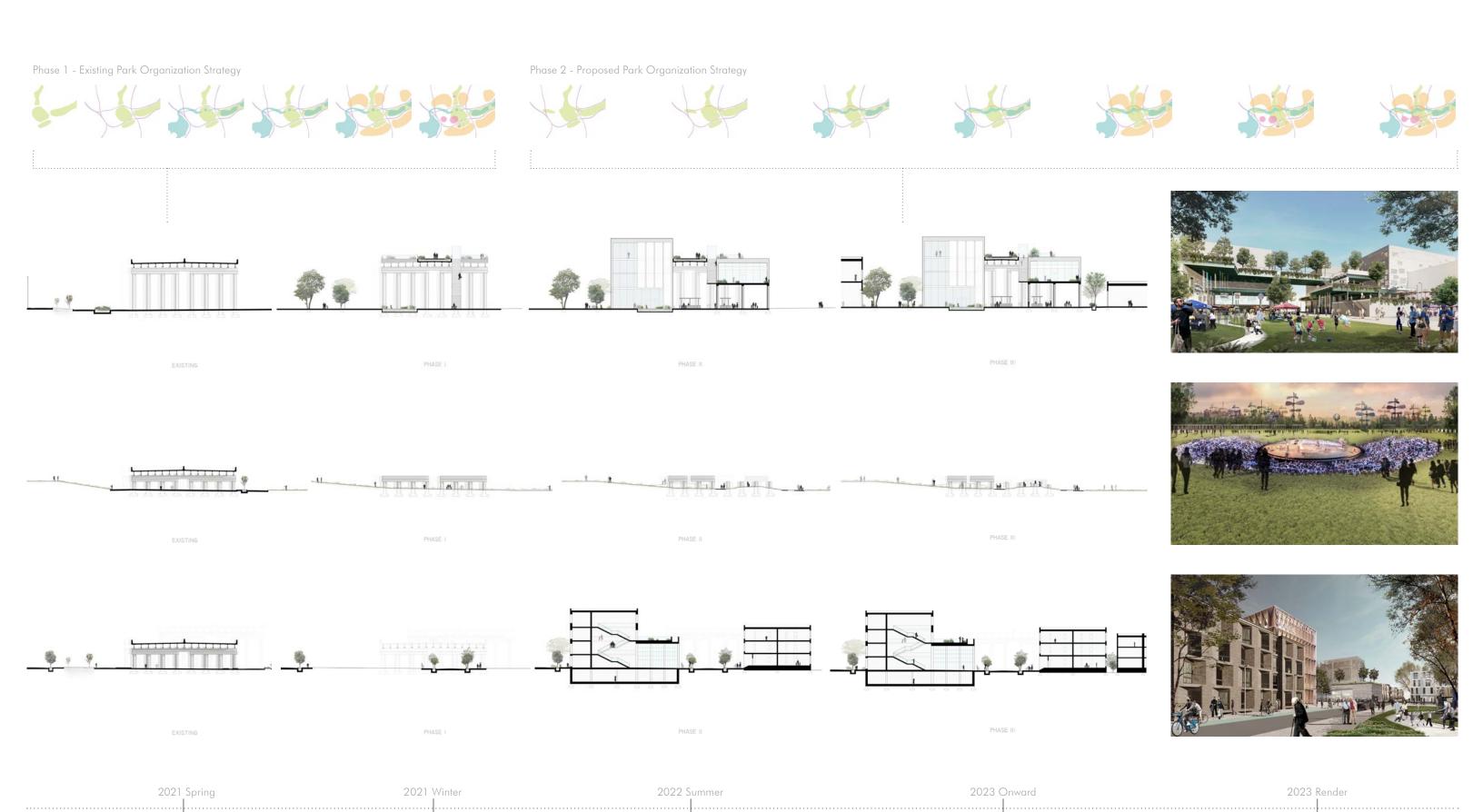






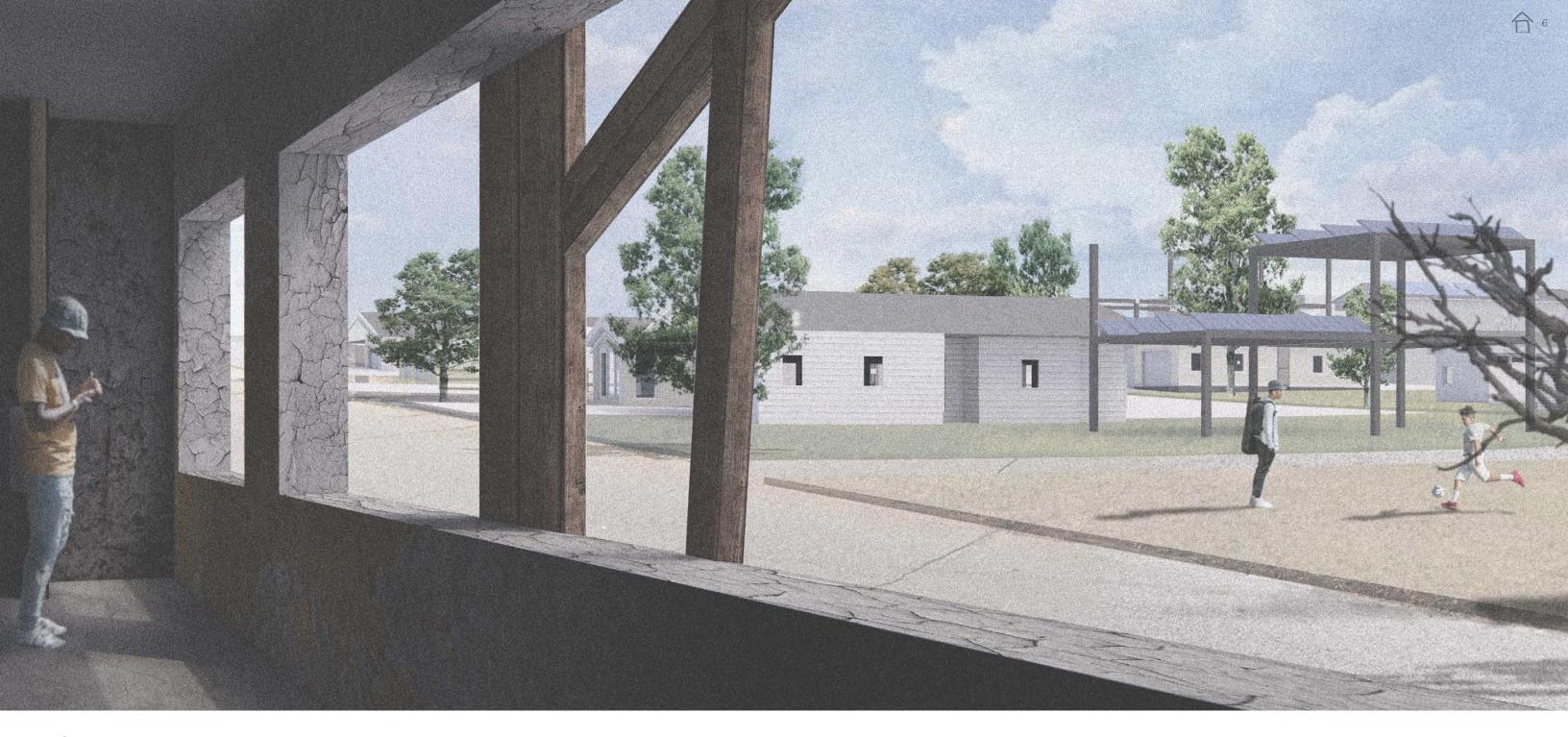


The final design is split into four phases, the initial phase analyzes existing condition. Phase one decides whether the highway is repaired, retrofitted, or demolished. Phase two adds needed programming based of surrounding community. Last phase speculates future developments inserting themselves into this particular context.



The design process does not stop at the completion of our vision - the community and developers can continuously make an impact in what the outlook of the community look like. Within the housing block, and the commercial corridor, there are limitless possibilities in how the neighbourhood is shaped based on community need.





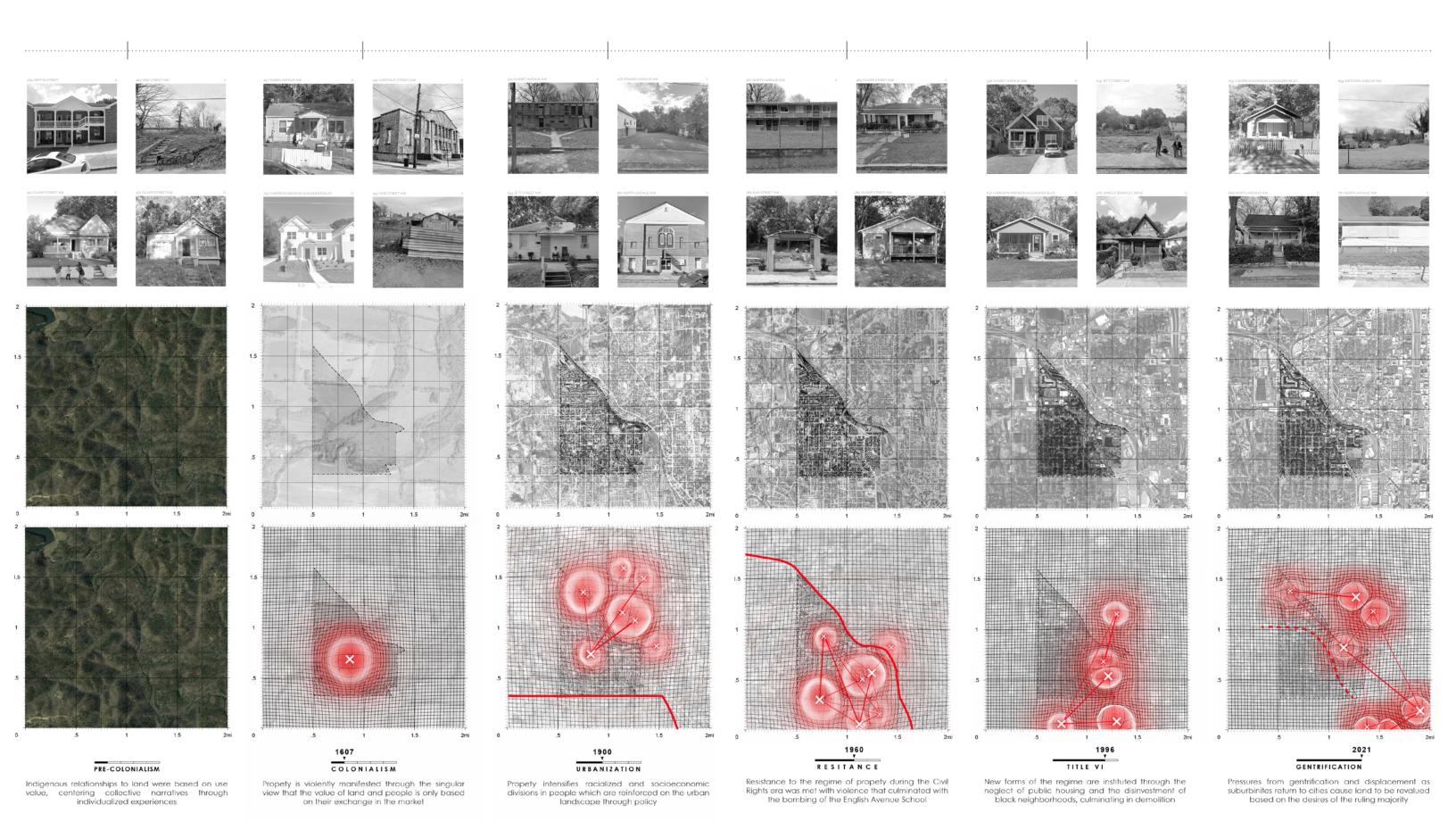
The world of property centers individual value on our relationship to land possession. Land has thus transitioned from a space where life occurs, to a space of financial exchange and gain in the market system. By viewing land as a commodity that can be accumulated and hoarded until maximum value can be extracted, property has been weaponized to perpetuate existing concentrations of power in the hands of a few, at the expense of the many.

Location English Avenue, Atlanta, Georgia, U.S.

Year 2021, Fall Terr

Instructor Emanuel Admassu (AD-WO), Nina Cooke John (Studio Cooke John), Chat Travieso (Yeju+Chat), Alexa Tsein-Shiang (Soft-Firm)
School Graduate School of Architecture and Planning and Preservation, Columbia University

Team Daniela Deu, Samuel Dye, Minsung Kim

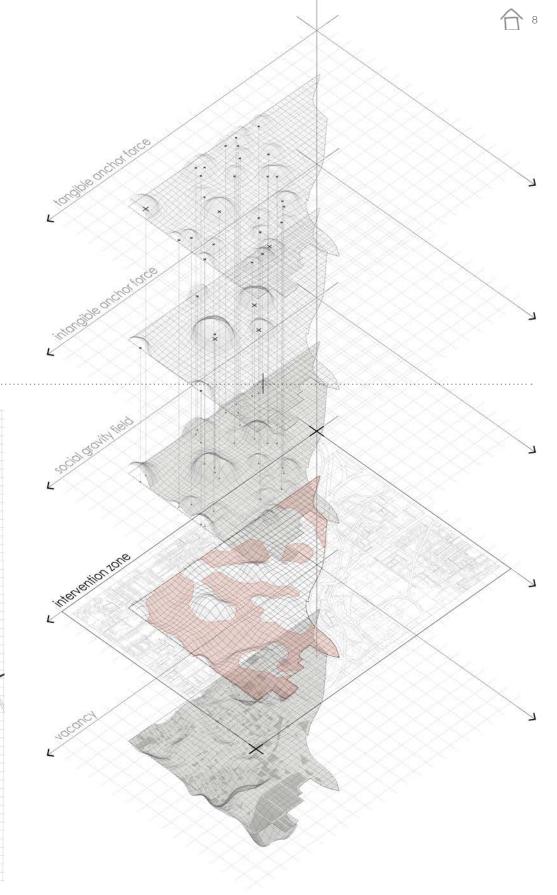


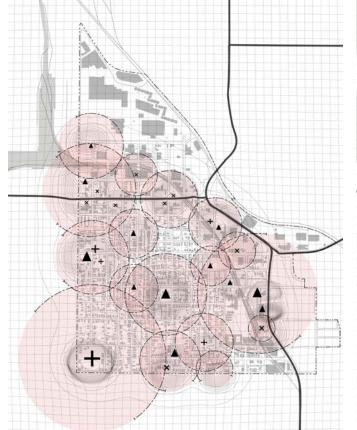
Neighborhood Anchor Map

In our pursuit of a world after property, we seek to challenge our understanding of value; to prioritize human intangible forms of wealth building over financial gain.

Our aim is to target vacant lots, and redefine vacancy as spaces that require care because they have historically been neglected and devalued, and transform them into spaces that generate a new type of wealth centered on collective and communal growth.

We hope for this set to become a resource with meaningful and tangible approaches that the community can truly implement to reach the world after property.









Tangible Anchor Map

The Tangible Anchors located within English Avenue include current churches, parks and schools in which local citizens can physically identify. These space are important to investigate as they are physical locations in which people find reliable, comfort and are moving towards/around.

Intangible Anchor Map

Intangible Anchors include places and spaces of historical and/or emotional significance. As an example, The St. Mark's church is no longer a church - only the facade of the church remains. That being said, the space is still being used as an open activity ground where the the operation of the space is dictated by the need of the community.

Intervention Zones

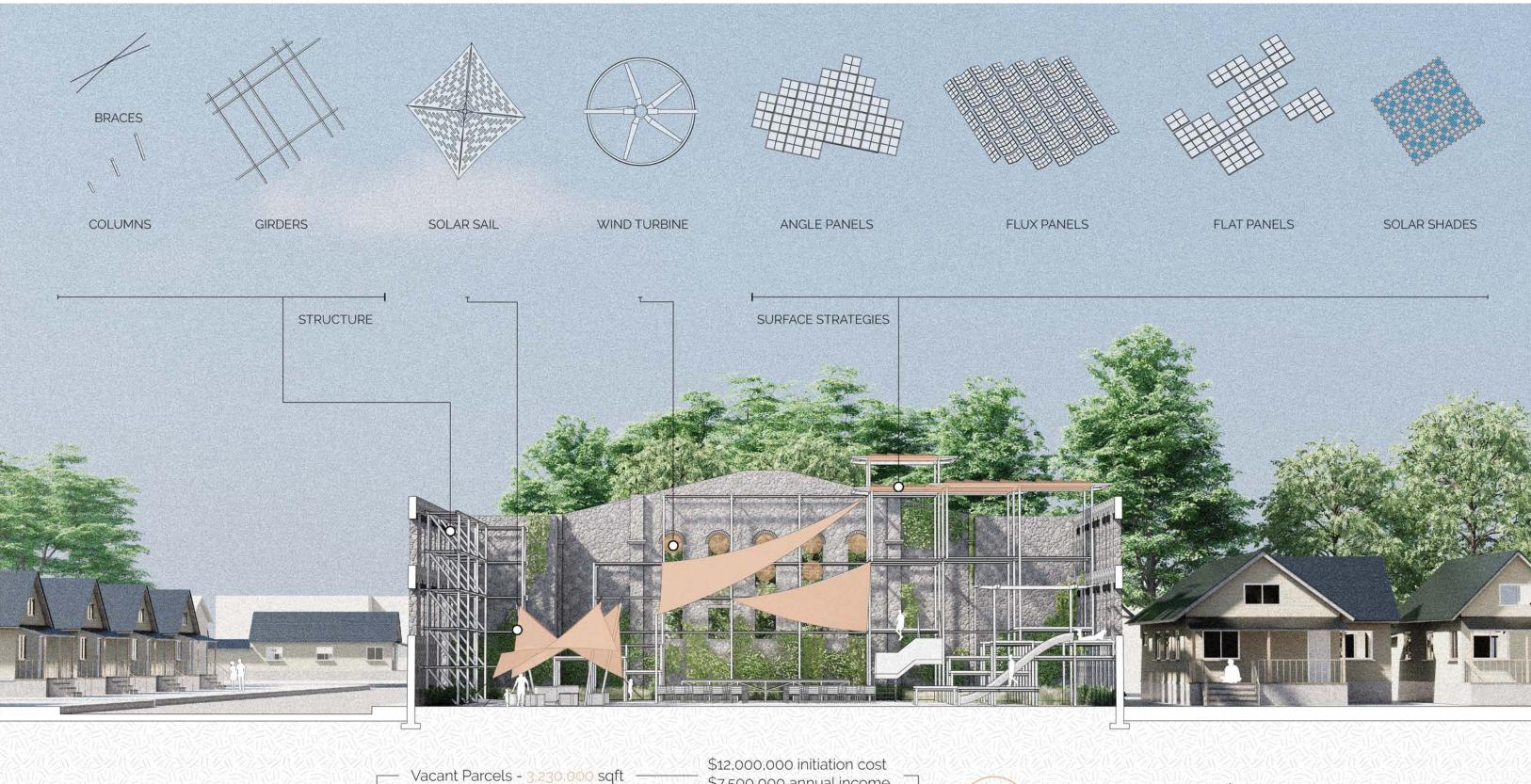
Overlapping the tangible, intangible, and vacancies (marked in black), we can see a significant corrolation. Spaces in which many tangible and intangible anchors overlap are zones in which very little vacancies occur. The red zone indicated above shows the lack of anchors surrounding residential areas and its corresponding vacancies.

Why This Zone?

The axonometric view of English Avenue shows the gravitational pull of tangible and intangible forces. The red zones are determined by the overlapping relationship of the anchors.

Intervention: Modular, Solar





\$7,500,000 annual income Combined Vacancy \$1,600,000 initiation cost Abandoned Roof - 463,000 sqft \$1,000,000 annual income

\$5,100,000 generated at year 2 60% Payback at year 1

To reclaim stewardship over what value means and an individual's relationship to land will require resistance to the deeply rooted forces of the regime of property. Counter property is the journey of co-opting the tools of the regime to carve out the space for the world after property.

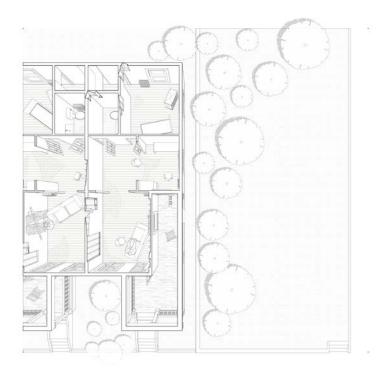
Our strategy starts with redefining vacancy - is it not a space of exploitation, nor purely trade value. It is a space in which more care needs to be put in, and where the community begin to foster unique relationships with. In addition, people's awareness of the anti-gentrifying nature of community space can become an opposing force against the regimes of capitalism and retainment of culture and self.

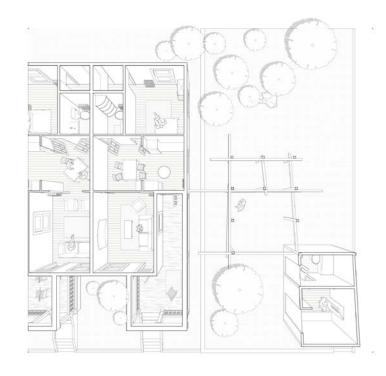


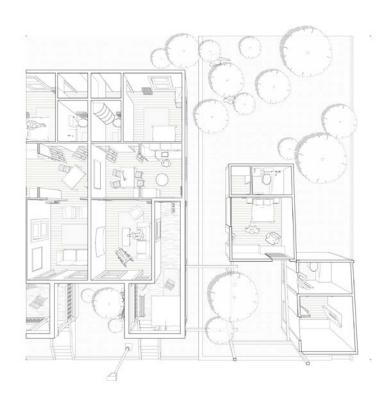


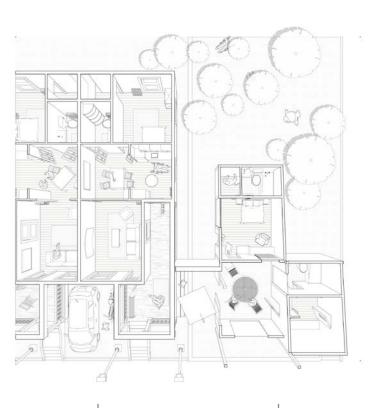












Abandonment

Empty Houses

Vacancy

Empty Lots

Renovation of existing housing, then used as affordable units

Rehabilitation

Addtion

Adding basic structure for energy generation and simple housing units

Improvement

People will start to pay more resposibilities as they find physical and emotional attachment to their living spaces Addition

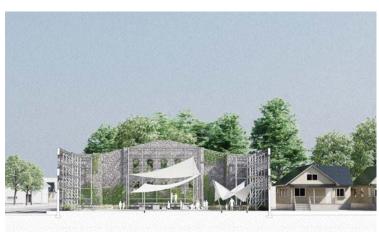
More units can be fitted, for either housing needs or community needs Maintenance

As people gain attachment, they are less susceptible to selling homes by capitalistic pressure such as land gathering for condos Involvement

As more people use and share the spaces, more use values and complex relationships can be built within neighborhoods

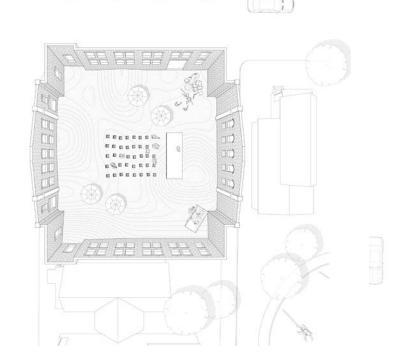
Our intervention starts with modular design of components that can be added into existing vacancy which then evolves into spaces for community needs. In four phases, we start by building spaces which reinforces current programming on site. After that, as people are invested within the spaces a clear idea of use can be formulated. Last phase of the project involves building new programming based off from renovation/retrofitting existing structures.

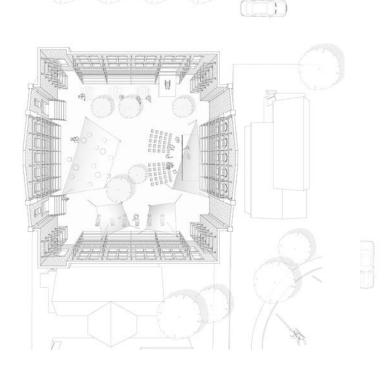


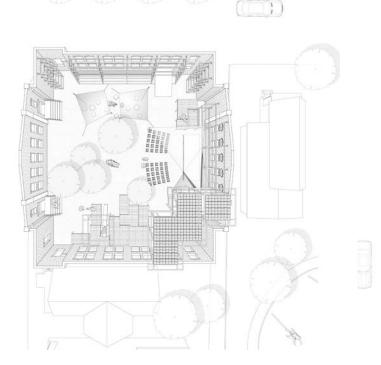


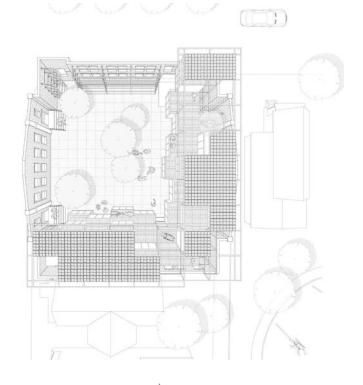












Abandonment

Dilapidated Church

Reintroduction

Public components such as chairs and sunshades are provided so the space can be utilized as public gathering space

Collective Ownership

As more people use the space, the next stage of how the space evolve is decided among local community members

After Property

The space continues to evolve over time as it becomes an irremovable piece of the community. In this scenario, the structure becomes a community heritage site where its land ownership is collective





The world after property centers the communal needs of people within nature as a means to reconstruct the relationship between man and land.

This allows for a diversity of personal and collective narratives expressed through individualized relationships to land primarily based on use value. Land is no longer a commodity, but the space where community and identity is formed and maintained.













Our project started with the Mesoamerica scale, we looked at key issues of mangroves and coral reefs loss. Pollution, as an example, has reduced the coral coverage from 60% in areas to 10%. We then zoomed into the Belize and its 33 watersheds, especially mango creek, where our site resides, and focusing deeper on the end of the watershed as it is the location with the most human, industrial, and tourist activities.

Location Seine Bight, Stann Creek District, Belize

ear 2022, Spring Term

Instructor Kate Orff (SCAPE), Geeta Mehta, Thaddeus Pawlowski

School Graduate School of Architecture and Planning and Preservation, Columbia University

Team Minsung Kim, Changbin Kim, Shirley Chen

Mission Statement

Belize

Tourism and agriculture, the two major industries in Belize are heavily dependent upon its natural bio-riches. However, due to a lack of regulations and enforcement, these natural resources are being exploited and rapidly deteriorating.

According to the Coastal Zone Management Authority & Institute (CZMAI) of Belize, "Coastal planning is the process used to make better decisions about the use of the coastal zone. It allows for consideration of many different uses of the coastal zone at once which allows for better decisions about uses and reduces potential conflicts that may arise from overlapping sectors."

Proposing a Watershed Scale Coastal Zone Management strategy (IWCZM)

While CZMAI's current coastal development strategy is limited to the coastal zones only, this project proposes enhancing that with a watershed scale strategy that can go beyond zone boundaries for a more holistic impact.

What does Seine Bight look like?



What is current happening on-site?





Water Pollution

Housing conditions in some areas in Belize are one of the significant issues. The lack of maintenance needs to be adjusted within the community support. Wastewater from farming affects the quality of water in Seine Bight. Hotels and resorts may also contribute to the water quality.





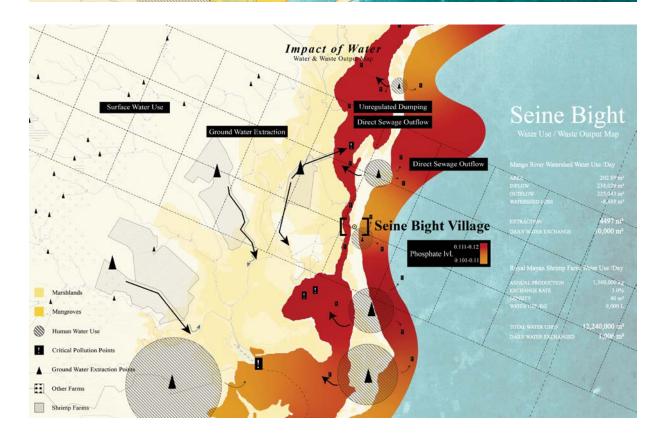


Fair Employment

Coral reefs are in a vulnerable situation due to the rapid growth of tourists in Belize. The wage gap between local workers and employees is one of Belize's enduring issues. Appropriate wages are needed.

Water Waste







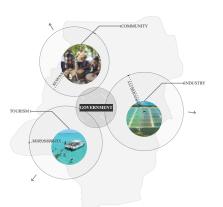
Water Ranger

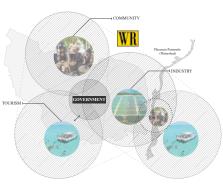
The Water Ranger Program aims to foster a team made of local citizens, corporate representatives, volunteers, and local industry students to monitor pollution, develop plans for fauture watershed growth, and enforce existing water protection policies.

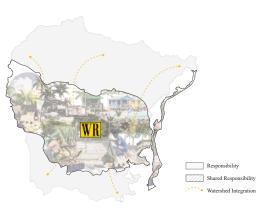


Who are the Water Rangers?









Currently, each sector interacts with the government policies independently with little effort in developing congru-

Water Ranger program developed alongside ICWZM provides a model for unifying the sectors with a

The Stann creek district boundary is slowly transforming into the watershed boundary as the root of solutions.

The Water Ranger program will be led by someone with ample knowledge, such as Mr. Pepe Garcia. We can foster a team made of local citizens, corporate representatives, volunteers, and local industry students to monitor pollution, develop plans for future watershed growth, and enforce existing water protection policies.







Water Ranger -Leader

"The major source of waste to the lagoon is human waste."

"Shrimp farm fifiltration system exist, but the head of the shrimp and the fifilters, where do they go?"



Kalene Eck

Water Ranger - Mitigation Officer Resilience Officer [Belize] Belize Coastal Zone Management Authority & Institute (CZMAI)



Water Ranger - Volunteer Surveyor

John

[Seine Bight] Belize University Bachelor of Marine Biology



Josué Aké

Water Ranger - Quality Control

[Belize] Science Department, Faculty of Science & Technology, University of Belize, Natural Resource Management Program



Theresa

Water Ranger - Compliance Officer

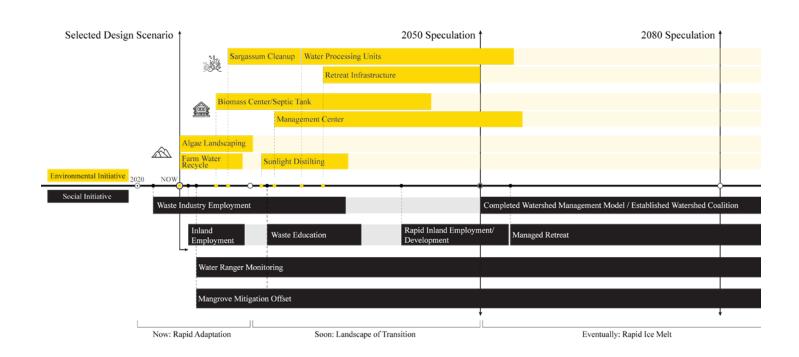
> [Belmopan] King Mayan Shrimp Farm

What are our actions?



Our designed support structure splits into three parts, monitoring locates the source of the problem and enforces policy, filtration actively tries to solve the problem, and mitigation sets up infrastructure for future. The water rangers are integrated throughout the design applications, with specific personelles targeting each sectors.

How does this work long term?











01 Ridge - Shrimp Farm

An algae farm that filtrates nitrate and salinity issues created by fertilizer is introduced. Algaes collected on-site will be transported to Seine Bight for bio-fuel.

Monitoring towers will also be located at the inlet and outlet of the farm.



02 Roof - Seine Bight Community

The design intends to build biofuel facilities alongside continuous education for residents.

Locally, septic tanks are built connecting to biomass refinery. Wastewater treatment plant will integrate with the community and education center.



03 Reef - Coral Reef

The coral shield are installed to block sargassum.

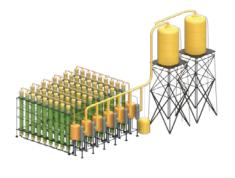
Floating water monitoring stations indicate water contamination and alerts rangers.



Monitoring Tower (Land) collects water samples from the watersheds



Monitoring Tower (Water) Water Ranger - Leader



Algae Farm Vertical algae farms absorbs salinity of the water



Biofuel, Education, and Monitoring Center Water Ranger - Leader



Tetrapod Water Ranger - Leader



Rectrapod Water Ranger - Leader



Treatment Center and Community Center Water Ranger - Leader



Water Ranger - Leader

How do our design support the existing systems?

Ridge - Roof - Reef









What does the future look like?

2030 / 2050 / 2080







Algae farming modules and monitoring towers are first implemented on our site. In 2050, as the community builds economic and social wealth, a long-term managed retreat can take place where housing plots are being prepared in conjunction with government plans. 2080, as the sea level rises and endangers the current seine bight village, the upland will grow together in residents, more incorporated tourism activities, and diversified job opportunities.

What does the future look like?

2030 / 2050 / 2080



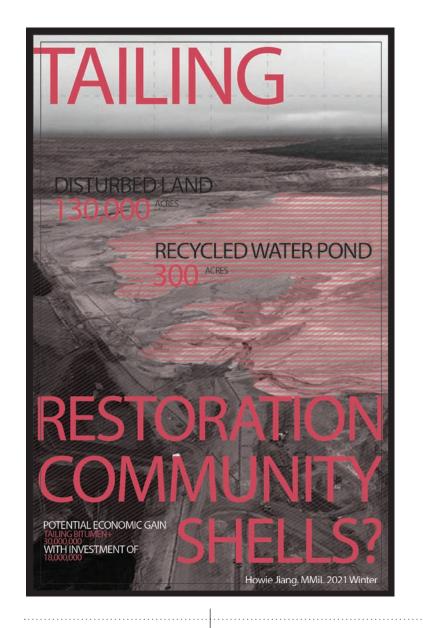


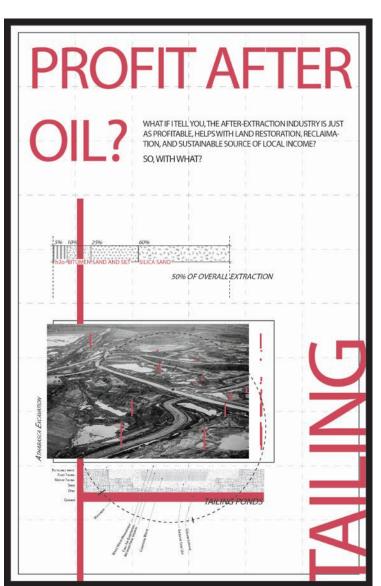


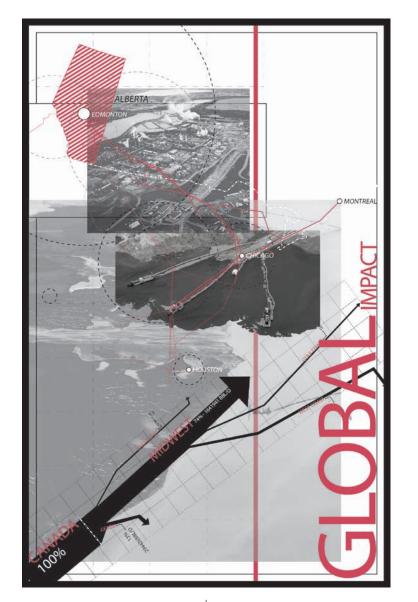
4 04 extractive landscape

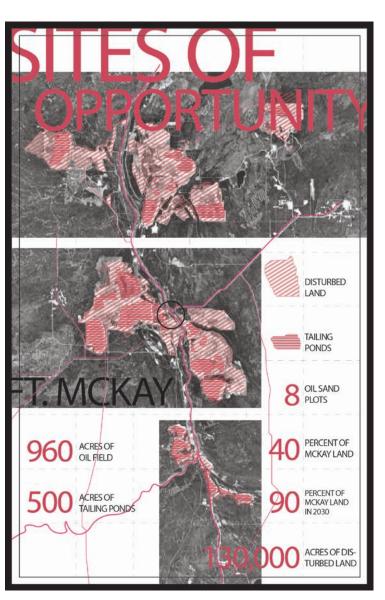
Athabasca, Alberta, has seen a boom of population due to its crude oil industry. That being said, the longevity and sustainability of this town is heavily dependent on the extractive industries. This project seeks a solution in which sustainable development methods can be incorporated alongside environmental restoration through specialized agriculture practices.









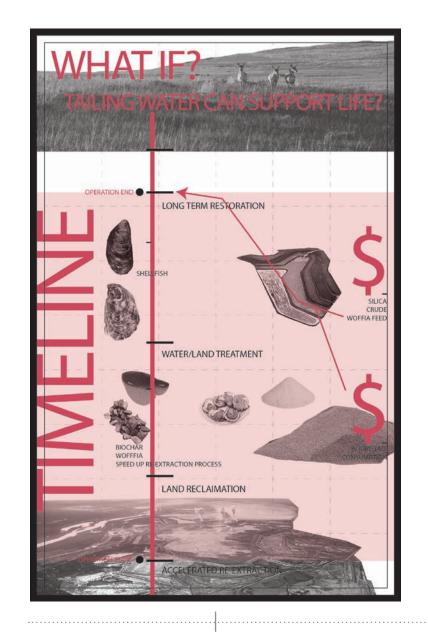


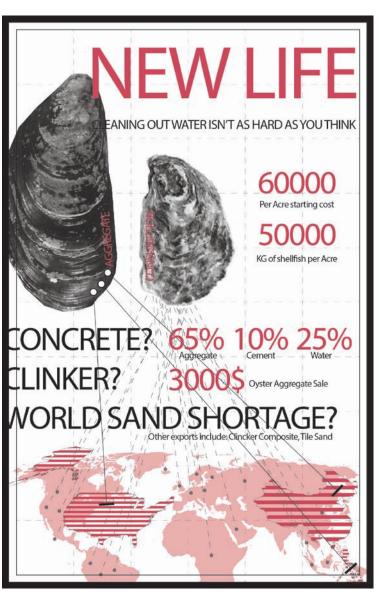
Athabasca Context

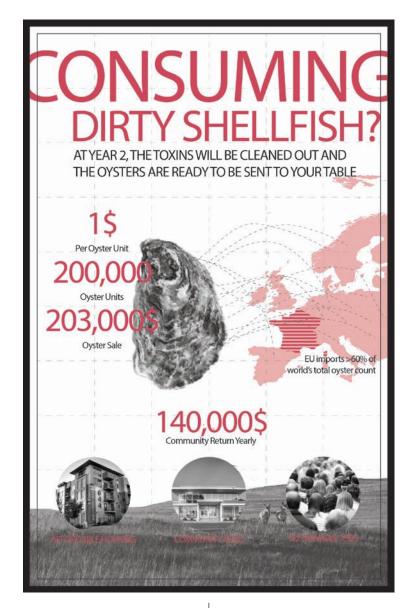
Conposition of tailing ponds

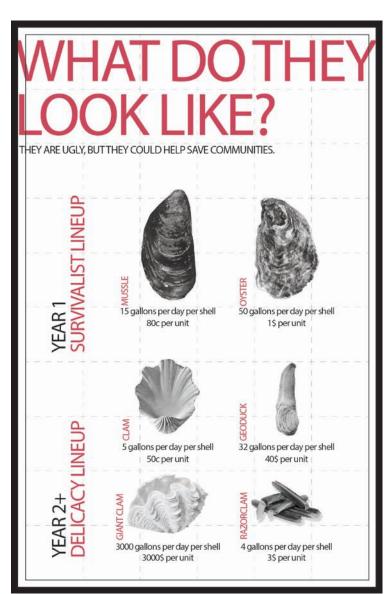
Oil distribution to North America How much land is disturbed?











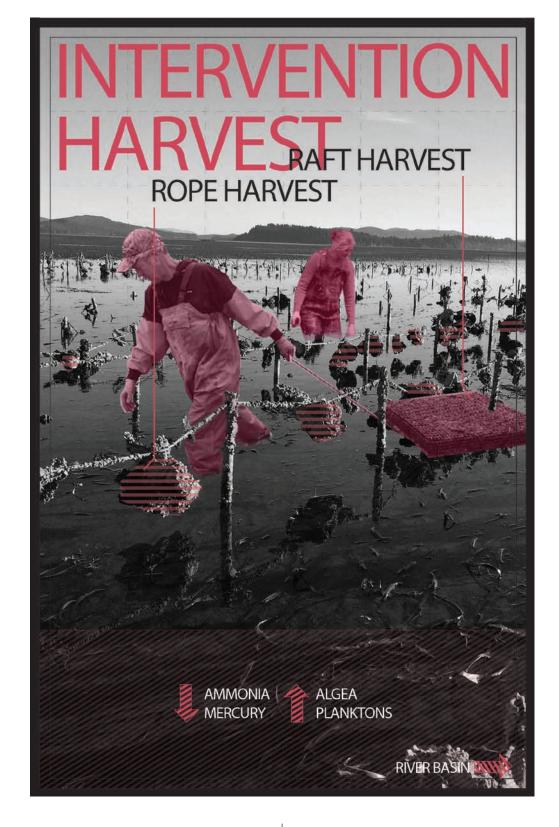
What is shellfish is the solution?

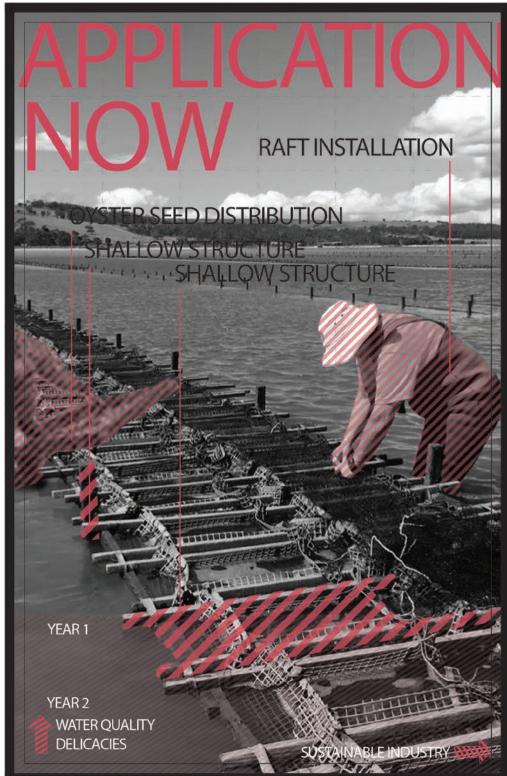
Uses of shellfish beyond consumption

Financial gain

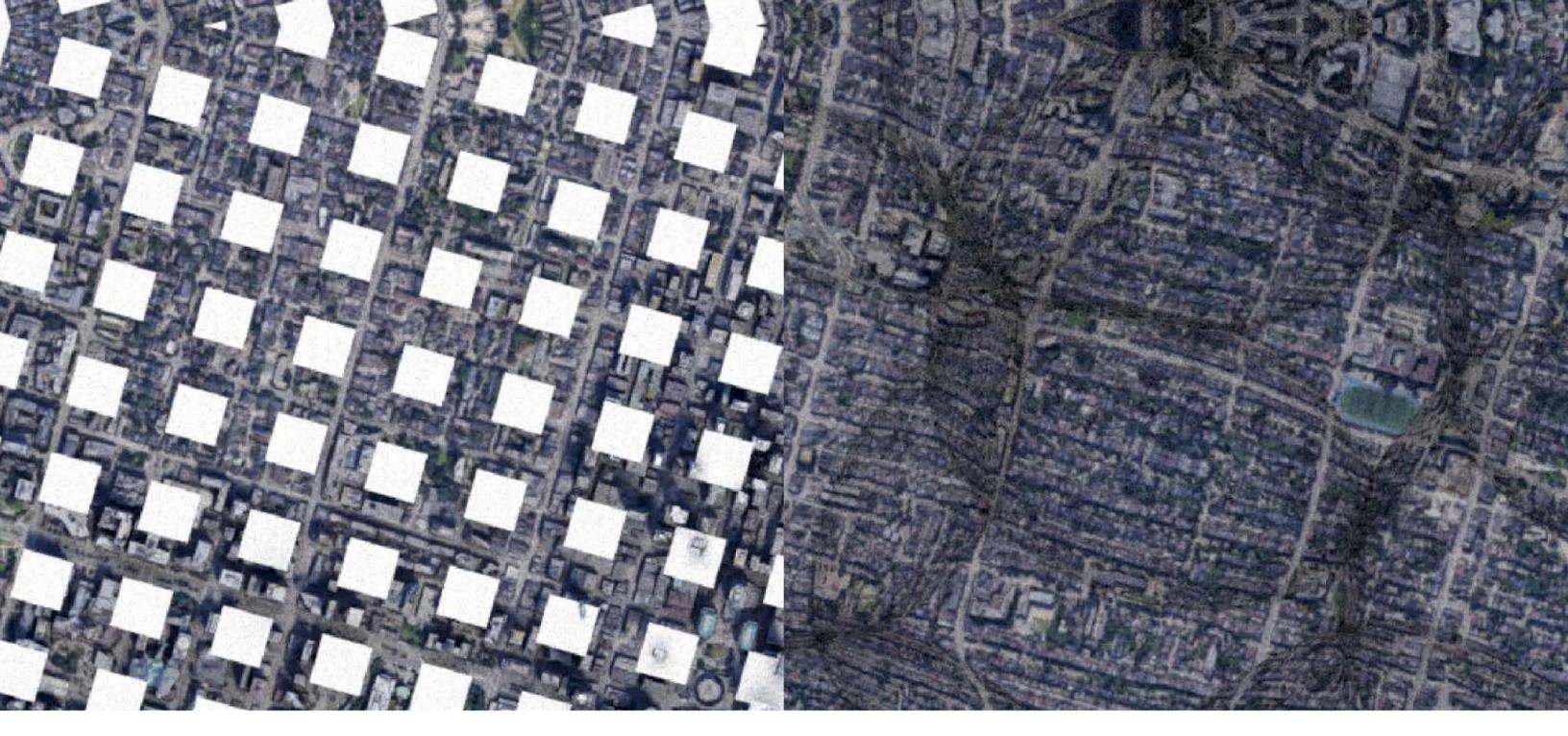
Why can this work?











← 05 transportation reimagined

Toronto, Ontario is a city where the downtown core dominates the development fabric of the city. As a financial powerhouse, city infrastructure tend to deviate to those who work, provide capital value and dismisses cultural and social values. This project intends to use Michel Foucault's heterotopia as a framework, where the intended design proposals uses a mirror to reflect on the current systematic injustices and prejudices.



nomic advancement, but fundamentally ignores the general public's interest in reaching the inner city for the opportunities of work and schooling.

A comparison can be made where under similar distance, an individual from a predominantly African American area can take upward of 25 percent more time and three more stops than those who live in a predominantly White neighborhood. This increase in stalling time will create workplace fatigue, lowering efficiency and other undesirable quality of life indica-





INTRODUCTION

Among many glaring issues associated with the transportation system in the world, one that is easily extractable is the idea of equity. In specific, the transportation system is the immediate adjacency to fulfilling almost all human interactions. As a medium, transportation is responsible for the spatial and temporal connection between what is desirable and achievable. As an example, if humans need to socialize, transportation becomes an object of connection. If humans want to work, transportation becomes the pre proposition to earn. And if humans want to eat, transportation determines how, what and the quality of consumption one may be able to produce.

"Social mobility is an important part of the story we tell ourselves as Americans. But historically, it has not been available to all, or available only in a way that has channeled some people to specific places and inequitable opportunities, sometimes involuntarily and even in chains. Ideas and their implications also have to get from one place to another."

Playing such a crucial role, the transportation system then becomes an undeniable factor in the fluidity of a human life. When political agendas and economic segregation takes place in inserting itself in the development of the transportation system, a problem arises where the fundamental principles of transpor

tation, which is to serve people and provide convenience, becomes obsolete.

CONTEXT

Looking at the TTC system within the greater Toronto area, there are a very concentrated demographics gathering at specific locations. Referring to the city development map, a clear pattern of the transportation system developing solely alongside important economic corridors emerges. This specific pattern very much assists in the city's further growth in eco-



Difference in train quality in different areas

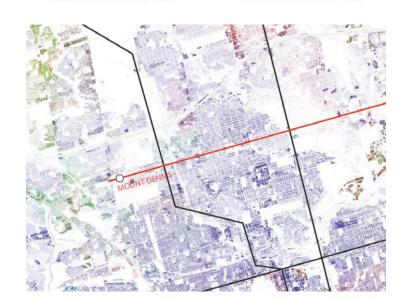
FRAMEWORK

Being able to extract the fundamental weaknesses of our current transportation system, which are heavily dependent on economic value and trade worth, there are several philosophical steps in which a more equitable, sustainable construction of the transportation system can take place. First, technologically, we can re-design transportation "devices" in a way that each human being arrives at a certain location in an equal amount of time in regard to its distance. Second, socially, humans are able to conform to the current hub of systems while re-designing the composition in which factors of value, such as jobs, housing prices, school qualities, are at an equilibrium distribution throughout the inhabitable city. Lastly, personally, a person is able to reach either hyper anonymity or be defined by an infinite-amount of indicators where evaluation of the transportation hubs can be determined based on the indicators provided.

In the spirit of empowering/de-franchising individualistic power, exceed beyond property, and reach personhood equity, the focus of the project is to look at the last example, where the space of construction either fundamentally removes a person's visibility so that everyone is equal - or that each person's individuality is so magnified that it is impossible to evaluate based on current criteria of self-worth based on social/economic value.

So what does this compound space that is seemingly juxtaposing itself look like? Breaking down Michel Foucault's "Of Other Spaces: Utopias and Heterotopias," Foucault mentions the idea of Heterotopias being a place for reflection, and complexion. He explains that Heterotopias are locations where the place is "other." Heterotopias are constructed within each other, mirroring each other, independent to the "outside," and often "parallel" (as opposed to "sublime"). As Walter Russell Mead indicates: "Utopia is a place where everything is good; dystopia is a place where everything is bad; heterotopia is where things are different - that is, a collection whose members have few or no intelligible connections with one another." And this sets the premise as the fundamental philosophical framework, as it essentially represents a space for social reflection, critique in an independent environment, and allows evolution within itself through the temporal axis.

WOODBINE TO UNION STATION VIA JANE STATION SHERWOOD TO UNION STATION VIA LAWRENCE STATION AREA OF HIGH BLACK POPULATION AREA OF HIGH CAUCASIAN POPULATION 9:13 PM Q Jane St at Dundas St West South _ Jane Express to Jane Statio 9.43 PM 9.52 PM Union Station 9.8 MILES OF DISTANCE 10 MILES OF DISTANCE 36 MINUTES OF TRAVEL TIME 46 MINUTES OF TRAVEL TIME 15 MINUTES OF WALKING TIME MINUTES OF WALKING TIME O PITSTOPS AND PITSTOPS AND POINTS OF DELAY



Top: Time of travel in different neighbourhoods Bottom: Scarcity of stations based on demographic data



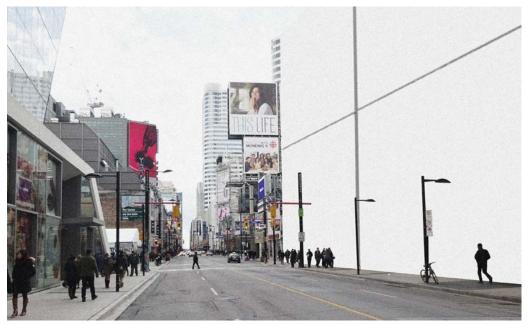






- 1 SOCIAL CONDITIONS
- 1.1 HETEROTOPIA
- @ TIME
- OPPOSITION

Levels of heterotopia and their applications



Space of Annonymity: Speculation

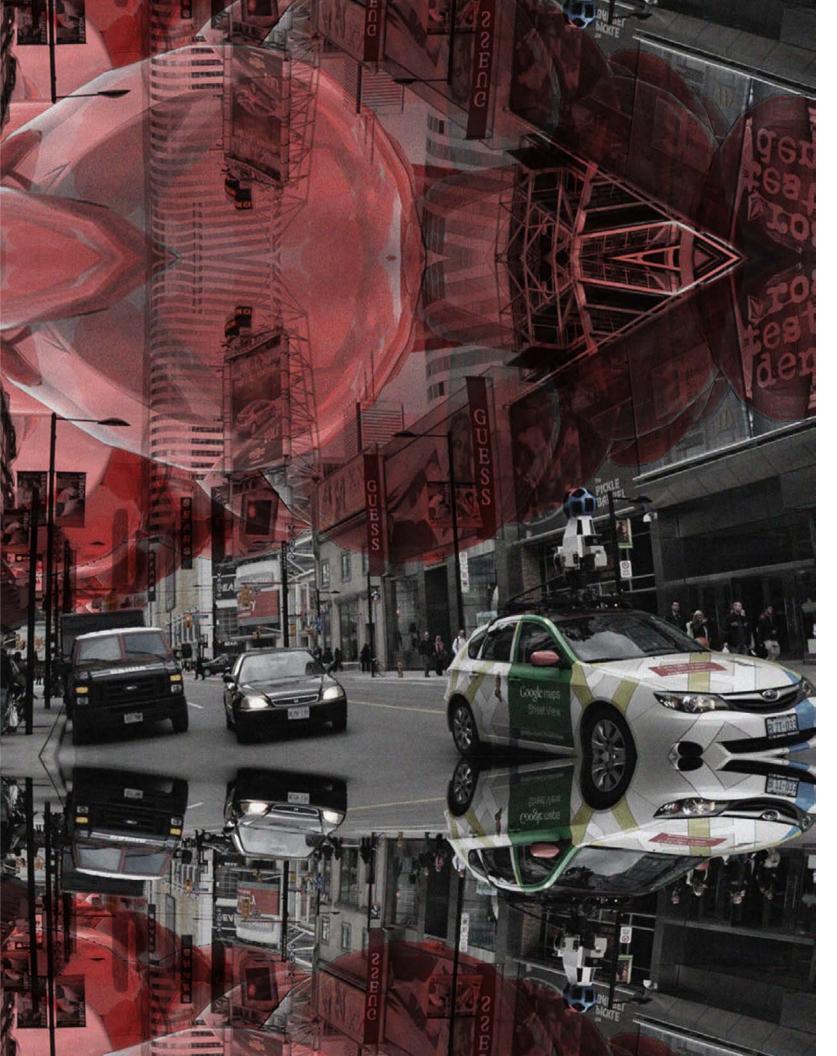


Space of Annonymity: Plan View



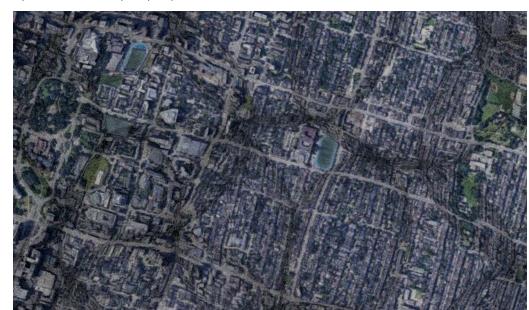
Space of Annonymity: Bird Eye







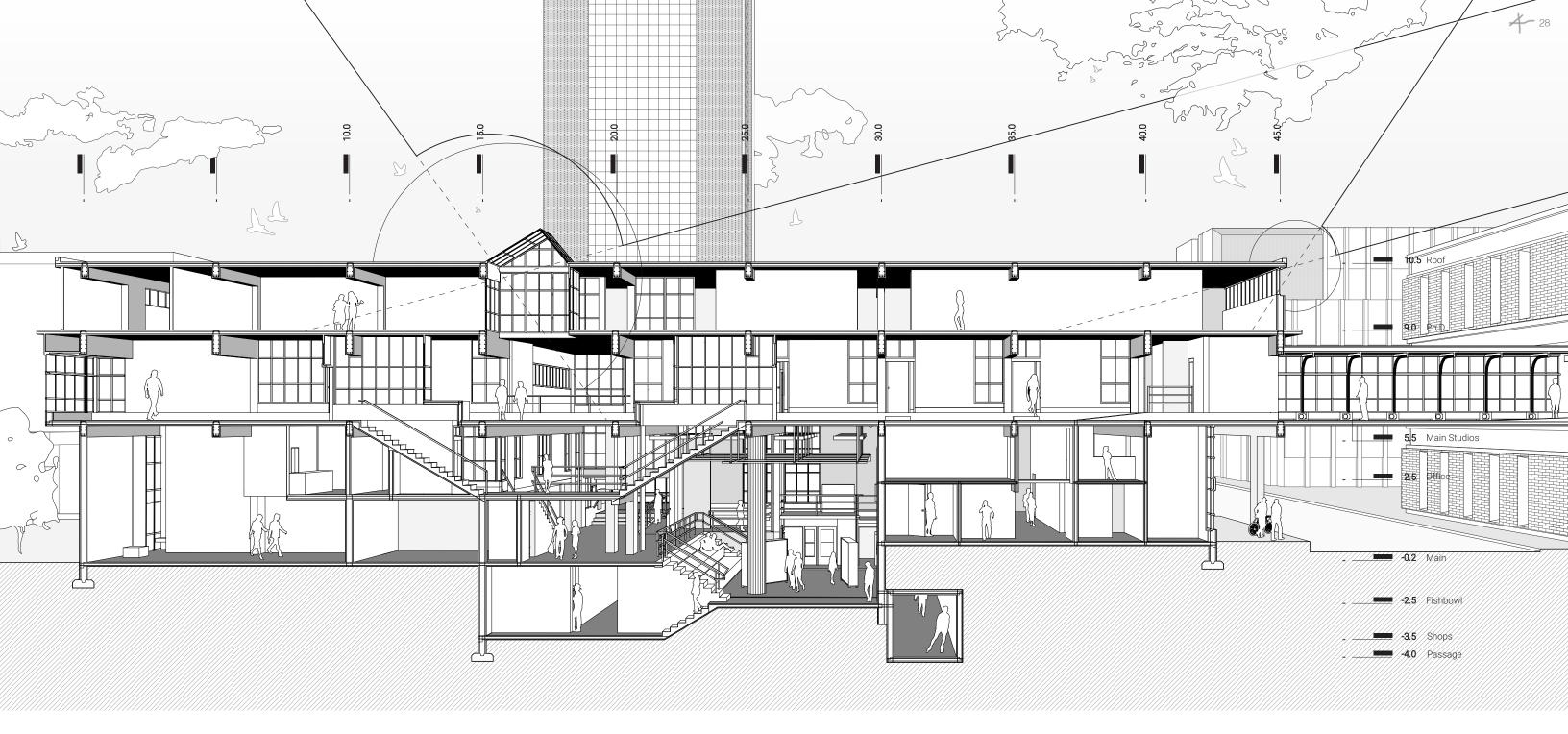
Space of Annonymity: Speculation



Space of Annonymity: Plan View



Space of Annonymity: Bird Eye



← 06 seminar of section

Azrieli School of Architecture and Urbanism is one of the top architecture schools located in Ottawa, Ontario. This course explores the sectional plane of the structure displaying unique characteristic and sensibility within the built form.

Ottawa, Ontario, Canada Location 2022, Spring Term Year Marc Tsurumaki (LTL Architects) Instructor

Graduate School of Architecture and Planning and Preservation, Columbia University School