

Architecture of Connections

M.Arch Thesis 2018

Virginia Polytechnic Institute
and State University

SHEEMANTINI PAIK

Architecture of Connections

Co-working Hub and Art Gallery at Roanoke, VA

by

Sheemantini Paik

Thesis submitted to the faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements
for the degree of:

Master of Architecture

James R. Jones, *Chairman*

Christopher Pritchett, *Committee Member*

David Dugas, *Committee Member*

May 2018
Blacksburg, VA

Keywords: connection, context, juxtaposition,
interpersonal, adaptive reuse, workspace

Abstract

This thesis is an investigation into the role of architecture as a medium for establishing connections. This idea is explored at four scales: **the urban, the immediate context, the building and the interpersonal.**

Architecturally, it addresses the complexities of an intervention into an urban fabric and embraces the contextual. It is an attempt to re-animate the core of Downtown Roanoke, through the adaptive re-use of an inert built mass by putting it in conversation with its surroundings.

Programmatically, it responds to a collaborative transient workspace catering to individual entrepreneurs or small groups of independent start-up enthusiasts, or simply mobile workers.

The thesis focuses on connections as the language through which these stories find their expression.

Acknowledgments

Thank you -

To life, for being complex and meaningful, which lead me to this thesis exploration.

To my parents and brother, for always believing in me and having my back.

To my committee, for all the passionate conversations, inputs, guidance, support and encouragement throughout the journey.

To Jim, for being the perfect balance of inspiring and grounding and always keeping the door open whenever I ran into a trouble spot or had a question. He consistently allowed this thesis to be my own work, but steered me in the right the direction whenever he thought I needed it.

To Chris, for always asking the difficult questions and pushing me to think deeper and explore farther.

To Dave, for all the reality checks and for always being there to solve any matter related and non-related to my thesis.

To all the professors who have made me the architect I am today and shaped my sensibilities.

To my friends, Dhawal, Niloo, Shubham, for giving me company during sleepless studio nights, laughing with me through the fails and celebrating the wins.

Contents

Abstract	ii
Acknowledgements	iii
Introduction	01
Intent	02
The Big Picture	04
Connection::Contextual	06
Connection::Juxtaposition	18
Connection::Interpersonal	26
Connection::The Common Thread	30
Connection:: The One that Matters	58

Disconnected Dystopia

Introduction

With modernism, urban architecture in the United States began to translate into a collection of isolated fragments in a network of automobile dominated roads. This created isolation of built form as well as of the inhabitants of cities. Public places became imposed planned spaces in the urban fabric. People receded into the indoors and commuted to and from various points of interest. Pedestrian activity reduced, while crime increased. Downtowns became 'dead' and inert.

With the advent of Post-modernism architects started to question this disconnect. In *Complexity and Contradiction in Architecture*, Robert Venturi summarized the kind of architecture he wanted to see replace modernism:

"I speak of a complex and contradictory architecture based on the richness and ambiguity of modern experience, including that experience which is inherent in art. ... I welcome the problems and exploit the uncertainties. ... I like elements which are hybrid rather than "pure", compromising rather than "clean", ... accommodating rather than excluding. ... I am for messy vitality over obvious unity. ... I prefer "both-and" to "either-or", black and white, and sometimes gray, to black or white. ... An architecture of complexity and contradiction must embody the difficult unity of inclusion rather than the easy unity of exclusion."

Crafting Connections

Intent

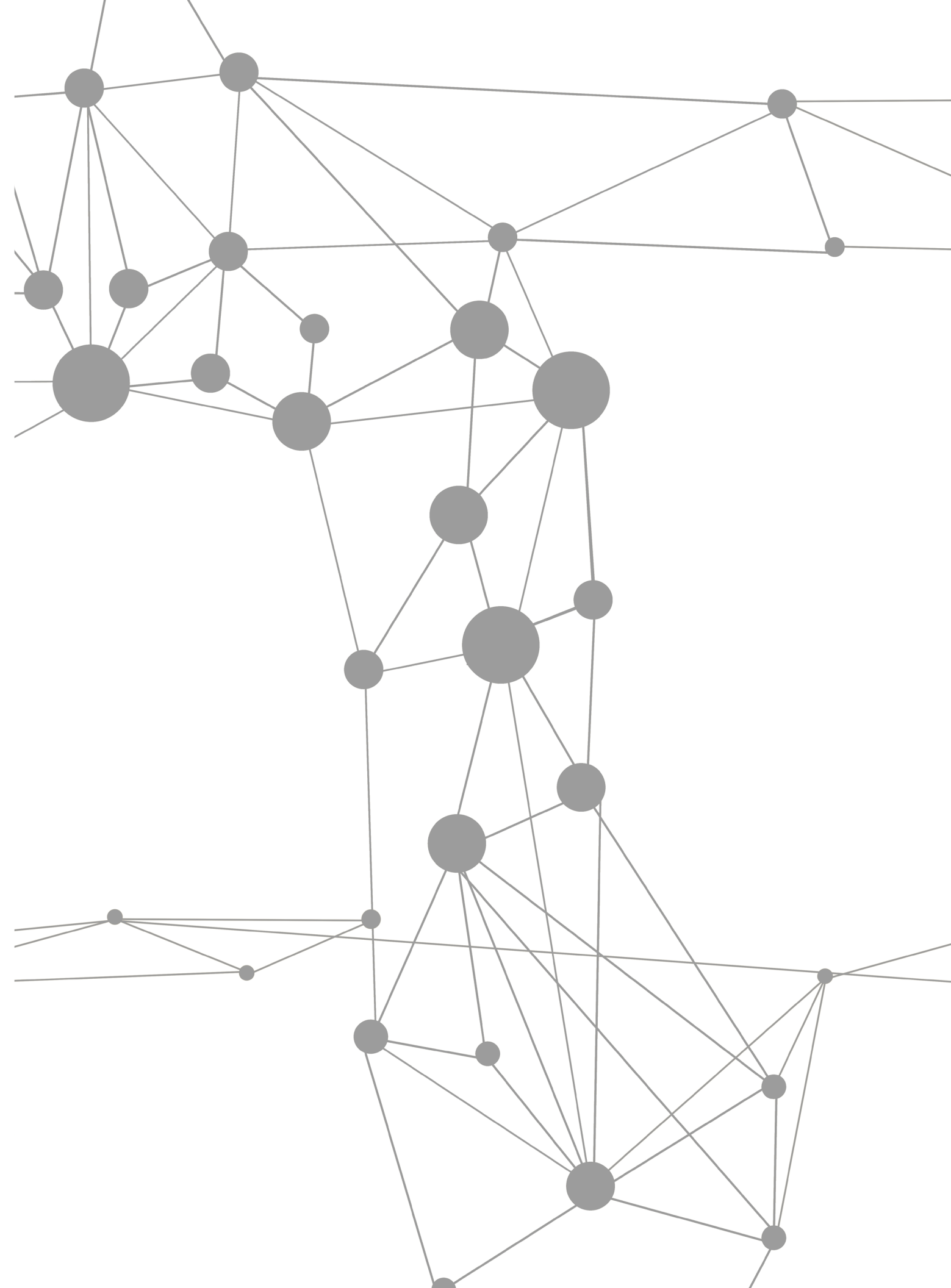
Connection

*A tangible link between two objects or elements;
a joint.*

*A tangible or conceptual relationship between two or more parts.
A step in the act of making that can either be physical or conceptual;
a compositional decision.*

Viewing architecture as bounded space reminds us that the experience of the built environment is primarily the experience of spatial boundaries and connections.

Space flows, and is primarily experienced in time. This narrative and sequencing of connections and boundaries can be described as the poetry of movement. Rhythm, focus, contraction & expansion, darkness, light, scale, material and color come together in a wholesome composition. The raw building blocks begin to interact in the orchestration of spatial boundaries and connections.



What do we want/need to succeed?



The Need to Connect

The Big Picture

How important is it to connect?

The moment you put a window in a wall you start to craft endless connections. You immediately have a visual and sensory connection to the world outside. The transient nature of time becomes evident, the pace of the surroundings pull you in and just this small move of adding a transparency to the otherwise confining architectural feature creates possibilities of connection. The thesis takes this idea into different scales and dimensions trying to unify the architecture through connections.

The need for human beings to connect are as fundamental as their need for food and water. Our bodies need human connection to prosper, we were created with a sense of need for connection. Social relationships—both quantity and quality—affect mental health, physical health, and mortality risk.

As Jon Krakauer remarks in his book 'Into the Wild', "Happiness [is] only real when shared".

The City of Roanoke hosted an Open House meeting to display the major themes and key ideas being proposed within the new Downtown Plan. Public meetings were held on October 27th and November 29th, 2016, at the City Market Building. Utilizing surveys, public input, and information from stakeholders, the City has begun drafting the Downtown Plan and hopes to establish policies and goals that help add new life and maintain the vibrancy of Downtown Roanoke.

In the published Public Meeting #2 of the Downtown Roanoke Plan, the following were the proposals to improve connection in the city:

- Connectivity
 - Jefferson Corridor
- Streetscape
 - Pedestrian only areas, wide sidewalks
 - 2-way streets
 - Expand west
- Wayfinding
 - Better transit, Improve bus station
- Bike friendly
 - Transit to star
- Neighborhood connectivity, Regional Connectivity

Connection :: Contextual

Place + Space

“Every new work of architecture intervenes in a specific historical situation. It is essential to the quality of the intervention that the new building should embrace qualities which can enter into a meaningful dialogue with the existing situation. For if the intervention is to find its place, it must make us see what already exists in a new light. We throw a stone into the water. Sand swirls up and settles again. The stir was necessary. The stone has found its place. But the pond is no longer the same.”

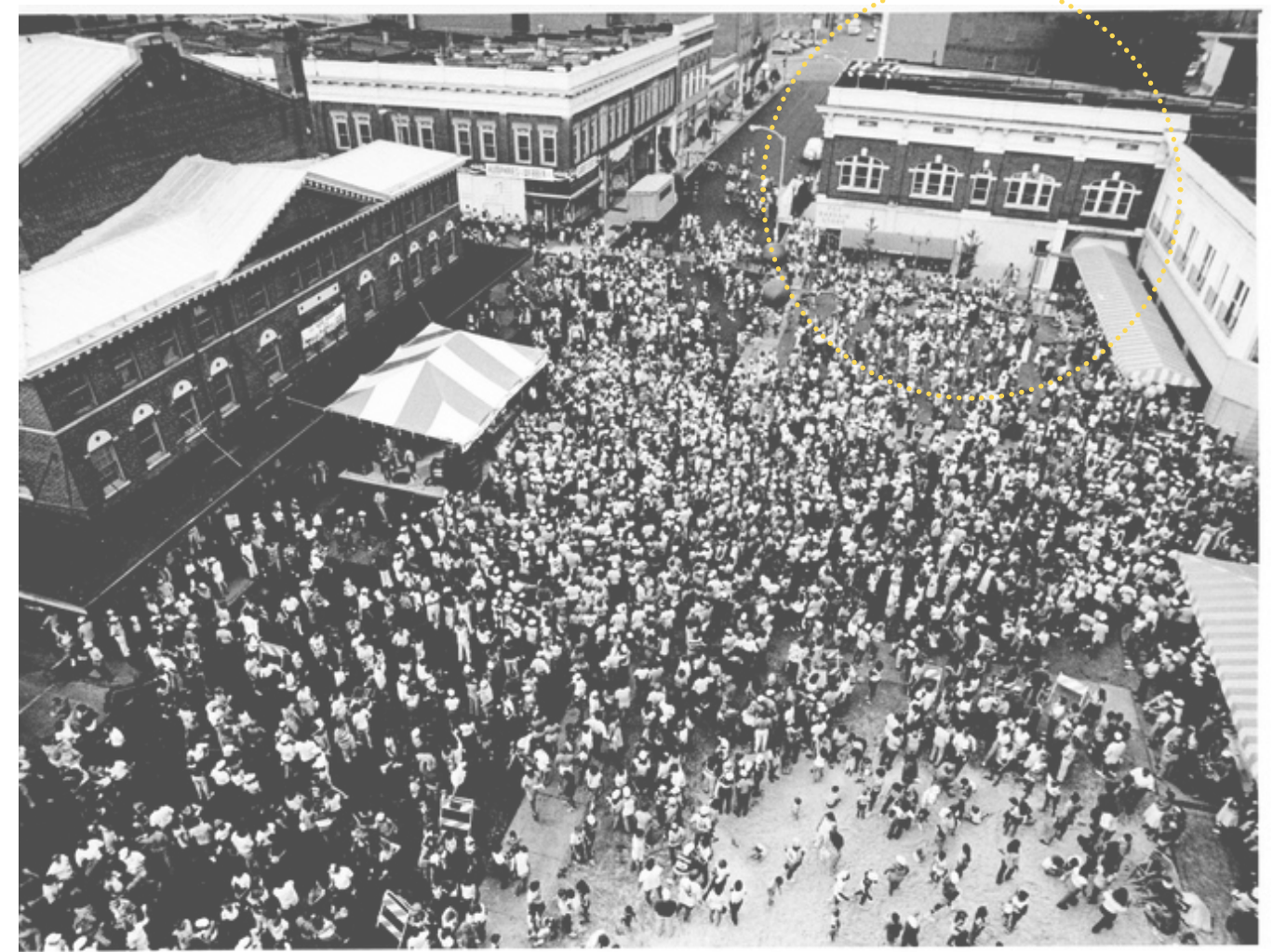
Peter Zumthor
Thinking Architecture

In architecture, context is circumstance. A building fitting in its context is a building that grows out of its site. The situation in and around the site informs the way of building, generating an ‘architecture of place’.

The selected site sits in the center of Roanoke’s Historic District in Downtown. The Roanoke Greenway which was started by John Nolen as a part of the ‘City Practical’ movement in 1907 cuts through the area. The urban plaza has been developed adjacent to the existing building in an attempt to connect this Greenway through the site.



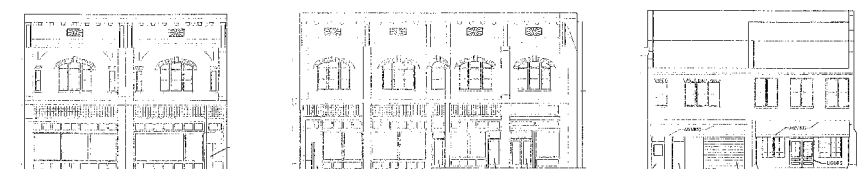
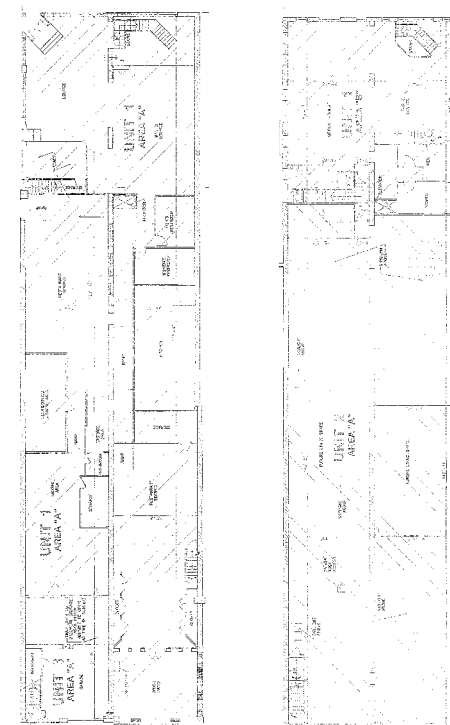


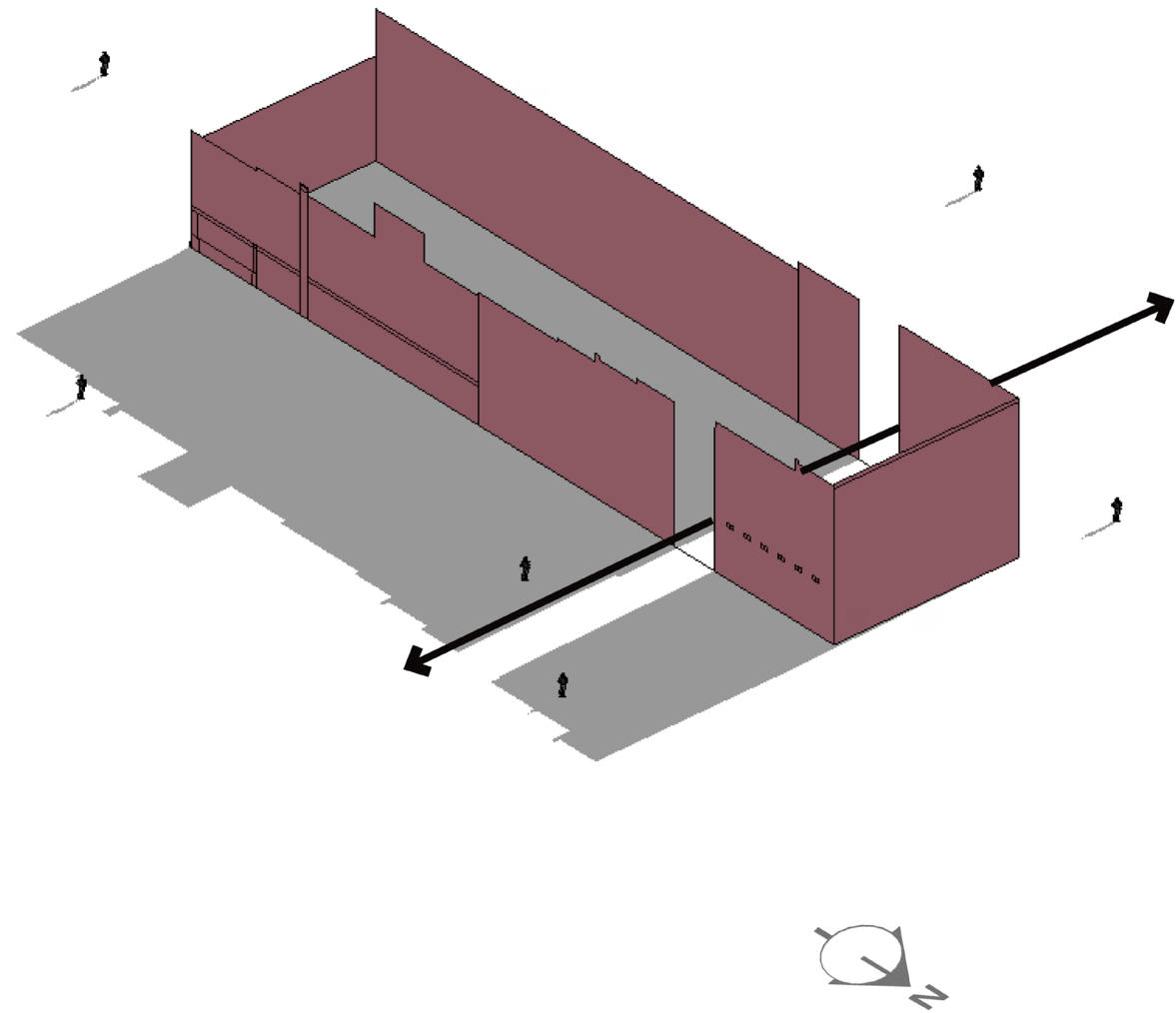


Obliteration of the Decaying

The structural wooden beams and flooring of the existing building are in a dilapidated condition and instead of replacing them to create 'false history', the intervention becomes an opportunity to partially remove the old.

The roof, floor structure and the arched wall running through the center of the building is removed from the original building. Only the load-bearing brick shell and a part of the series of arches belonging to the central wall is preserved as a connection to the past.

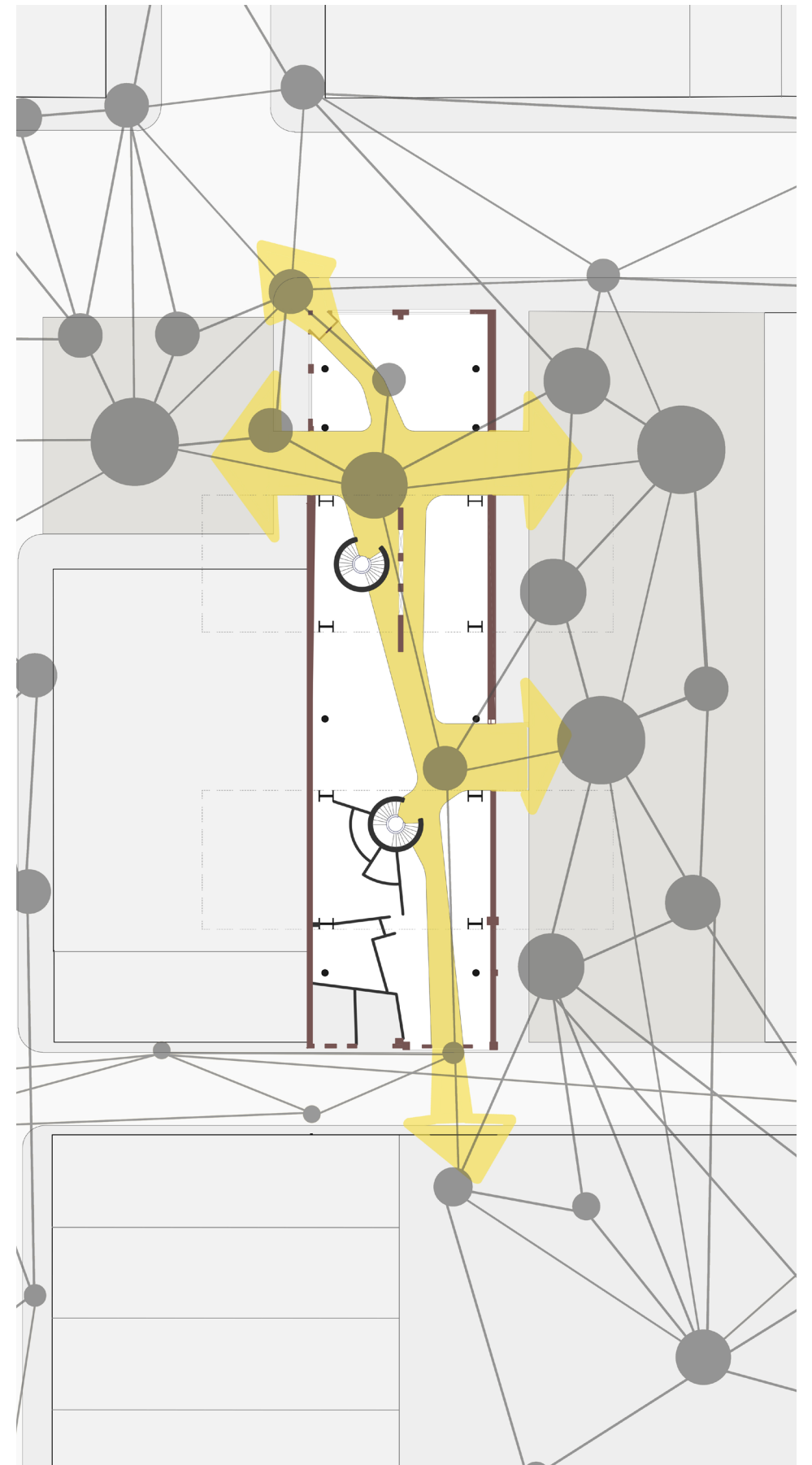


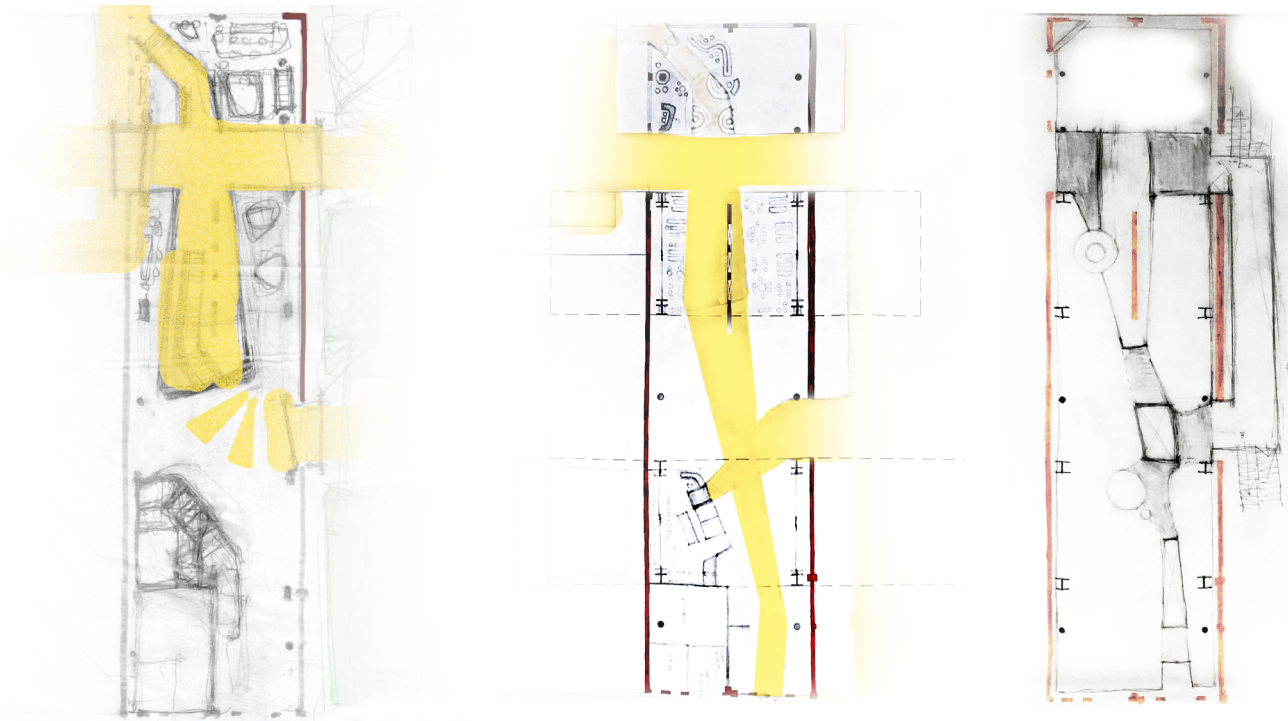


Dissecting the Enclosure

A set of subtractive cuts are made on the inert shell that puts the building in conversation with its surroundings. This bold move is an attempt to translate an enclosure into a perforated shell which allows connections between inside and outside.

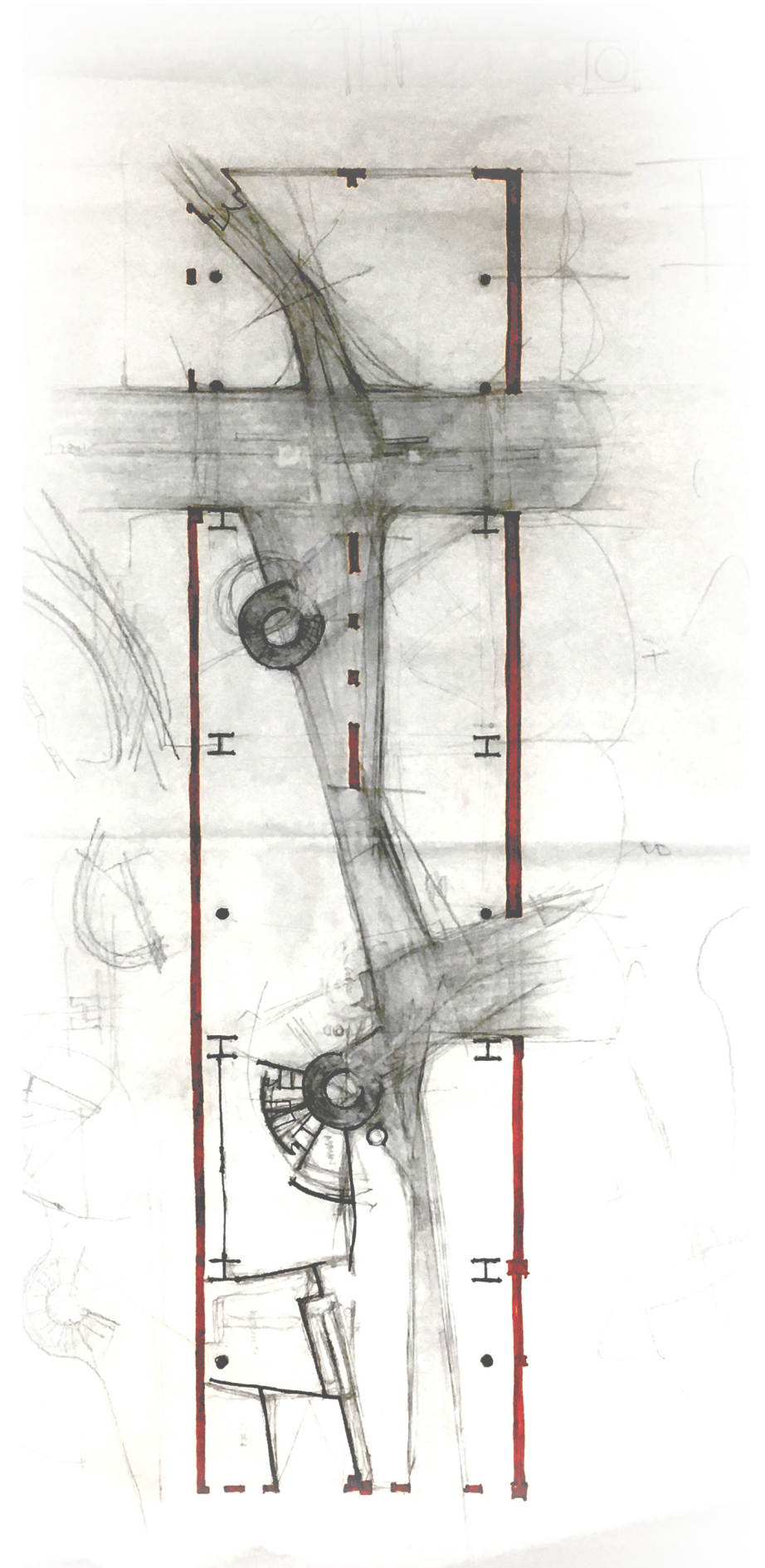
These cuts are strategically placed in order to draw people into the building and connect various activity nodes in the vicinity. This allows for a better and more efficient circulation for the ground level, both inside and outside the built form.

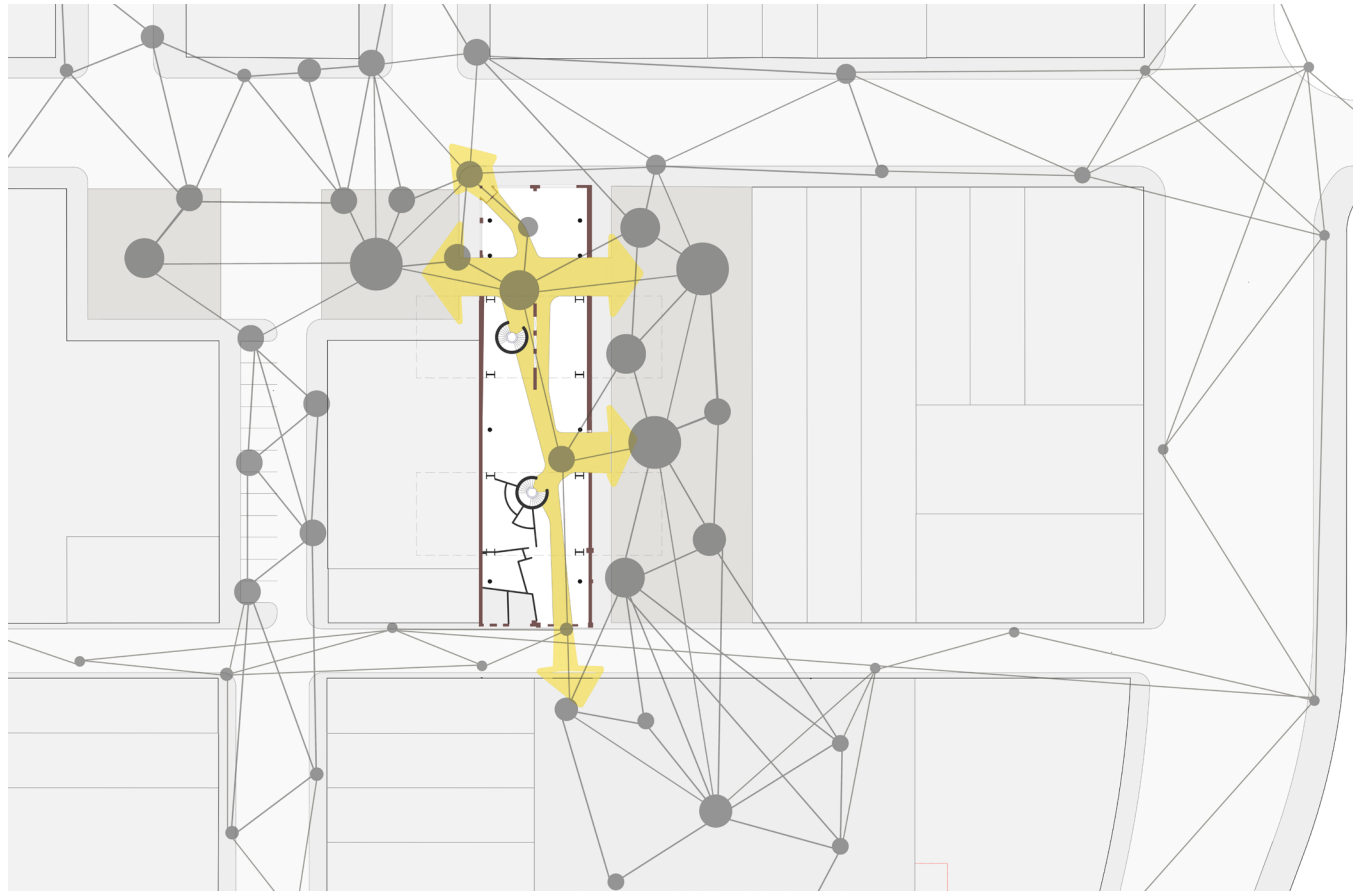




Indoor Street

The 'street' is the urban public interface through which human connections occur. The paths connecting the cuts in the external shell become streets inside the building through which the primary circulation takes place. These streets permeate through the interior spaces and create pockets of static zones or 'plots' which generate different scales of workspaces. These plots elevate into the second floor and circulatory "bridges" connecting them into a cohesive floor plate. This amplifies the character of the indoor streets making their presence significant in three dimensions as they become double height spaces and establish visual connections to the upper level.



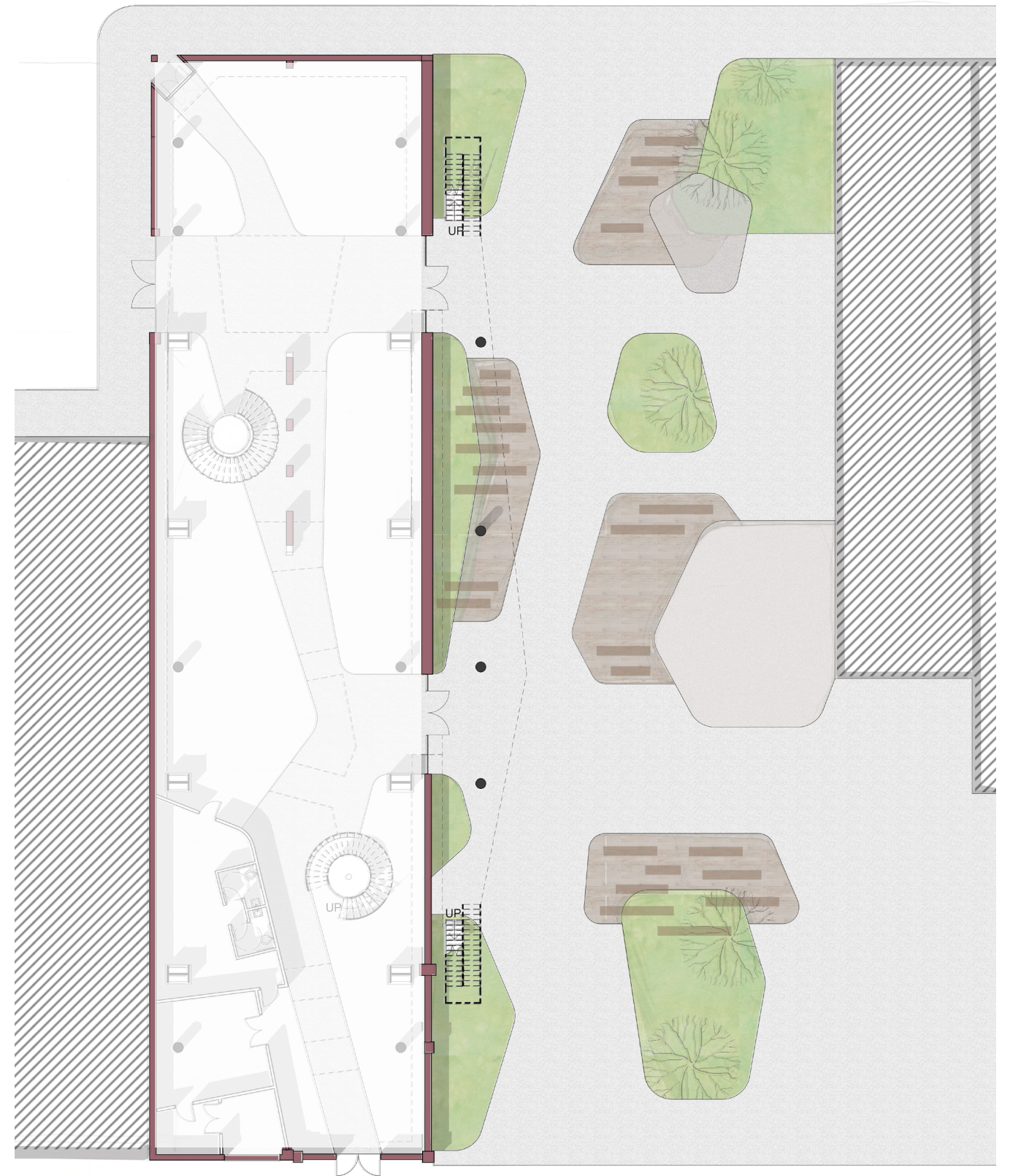


The Space Between Buildings

The plaza being situated between two built masses become a release in the urban fabric for people to gather. The indoor streets spill out onto the proposed plaza through the shell slits and create a circulation network outside. This increases 'transparency' of the built form to the plaza. It consists of meandering circulatory paths to slow the pace, affecting 'movement' through the space.

A platform for performances, gathering and seating areas broken down into levels promulgating interaction create an 'imageability' and make the area more fine-grained and human scale. It also adds to the 'nature of place' and add vibrancy and activities to the plaza. Pockets of green bridge the missing connection in the greenway and form a softer connection in the space.

Gehl in his book 'Life Between Buildings' argues heavily for public space, and more specifically, for public spaces and areas for interactions between buildings. He talks about putting socially similar people together and providing the opportunity for them to interact through communal spaces. The urban plaza becomes such a public space and a canvas to creative place-making.



Connection :: Juxtaposition

Interweaving Dichotomies

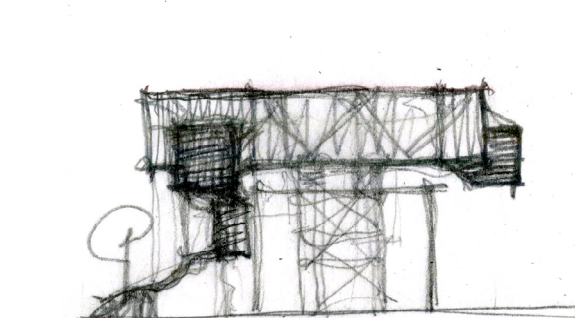
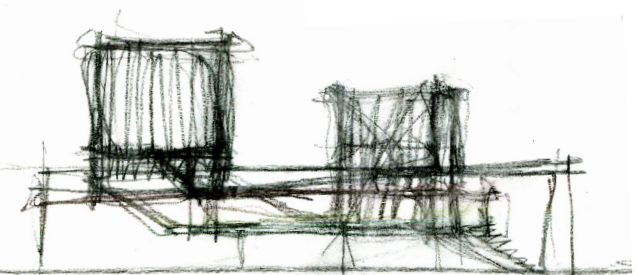
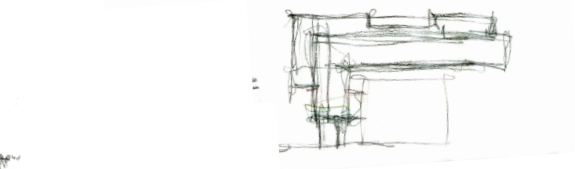
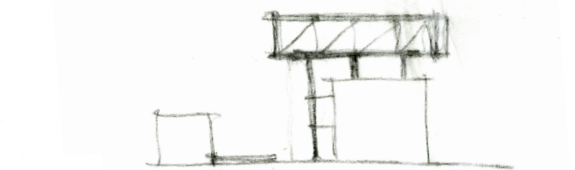
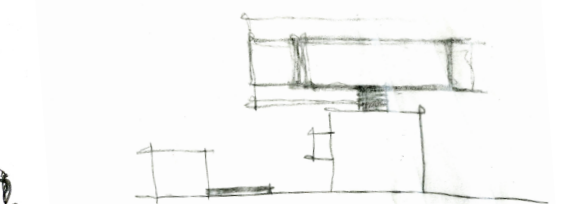
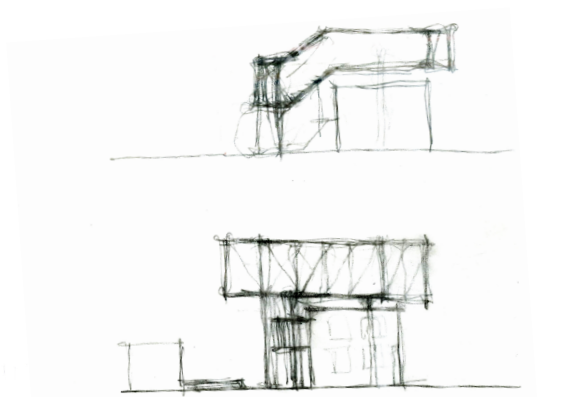
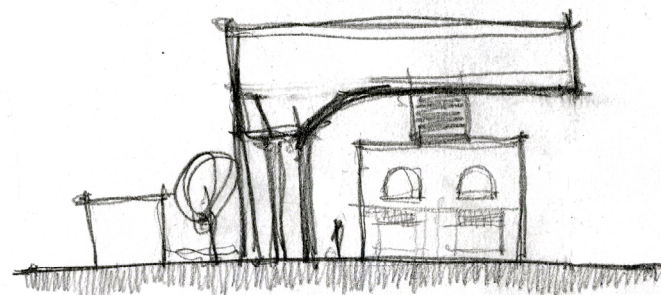
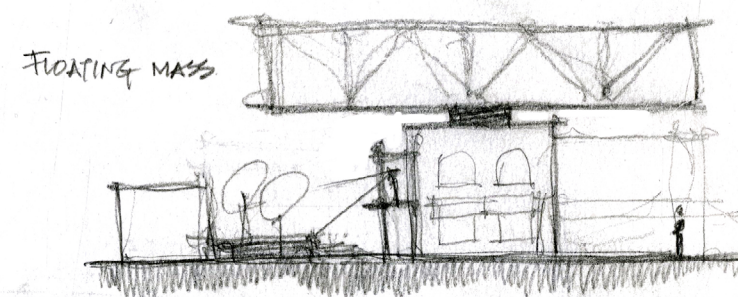
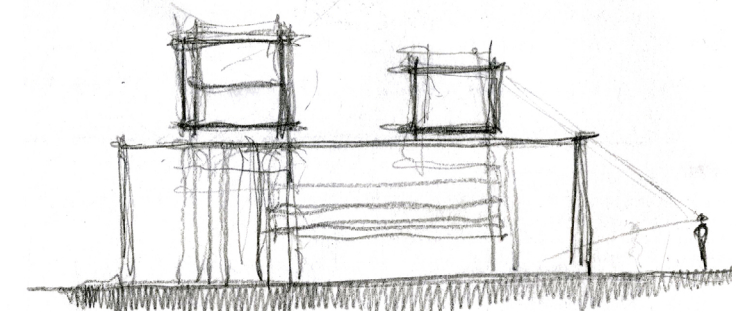
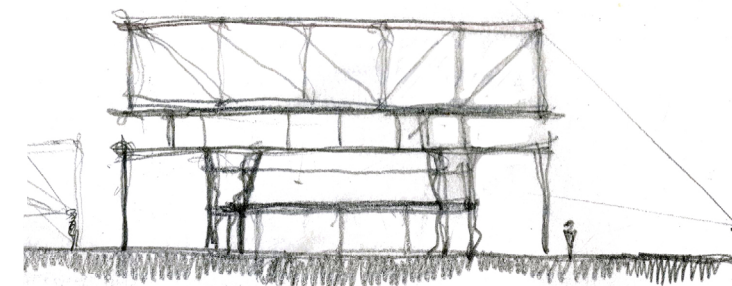
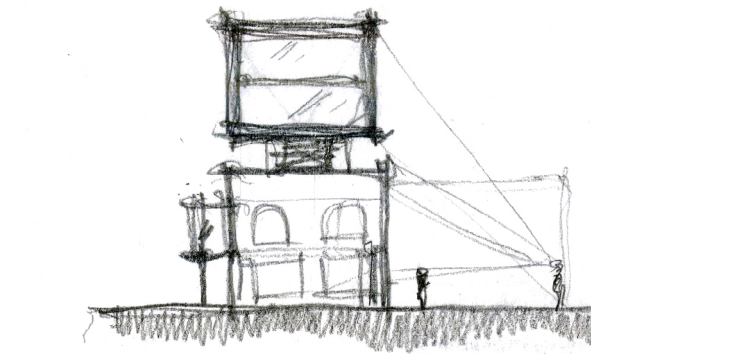
"See how a building inevitably establishes new identities over time – once acknowledged, this basic principle makes it fundamental for the architect to leave conspicuous and characteristic evidence of his own era within the historic fabric, trusting time to fuse it into a comfortable whole."

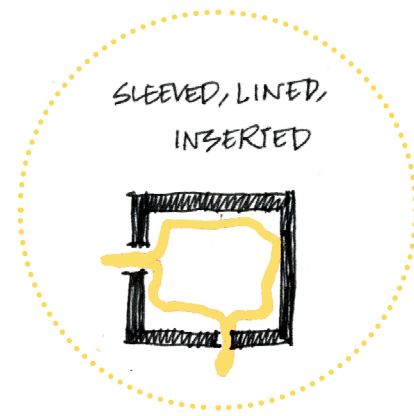
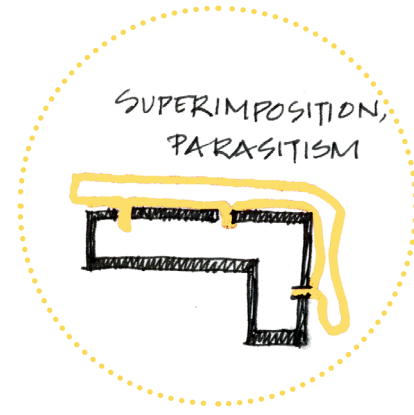
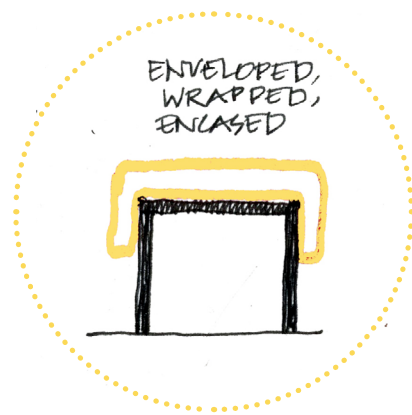
Carlos Scarpa

Roanoke, initially called the Big Lick, was established in 1852 and chartered in 1874. In the 1850s it became a stop in the Virginia & Tennessee Railroad and during colonial times it was a hub of trails and roads in the region. Thus, the city has a rich historical significance, and physically the selected site is located in the heart of the historic City Market District in Downtown Roanoke.

With time the city has evolved an unique character of juxtaposed architectural projects which have popped up at various points in the timeline of the development in the area. Therefore this dichotomy becomes an important aspect in dealing with the making and inserting of the new intervention in the existing layered context.

The act of juxtaposition brings together elements which would otherwise not exist in close proximity with each other. This creates contrasting characteristics and an unique visual dynamic.



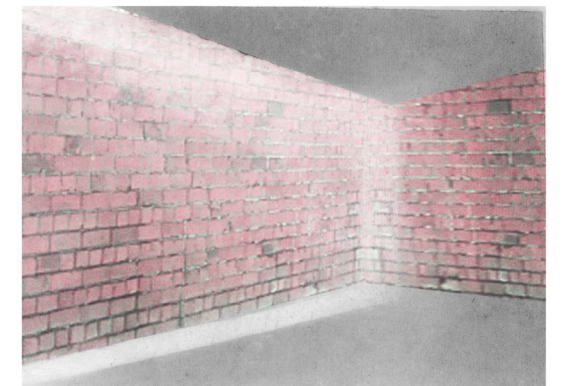
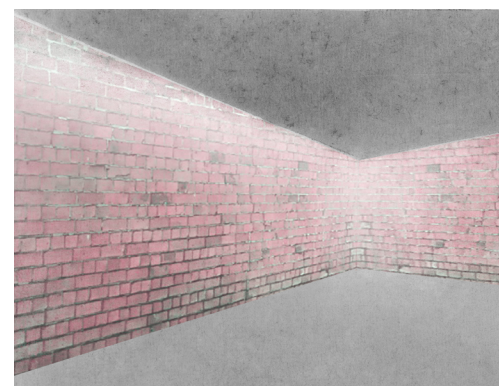
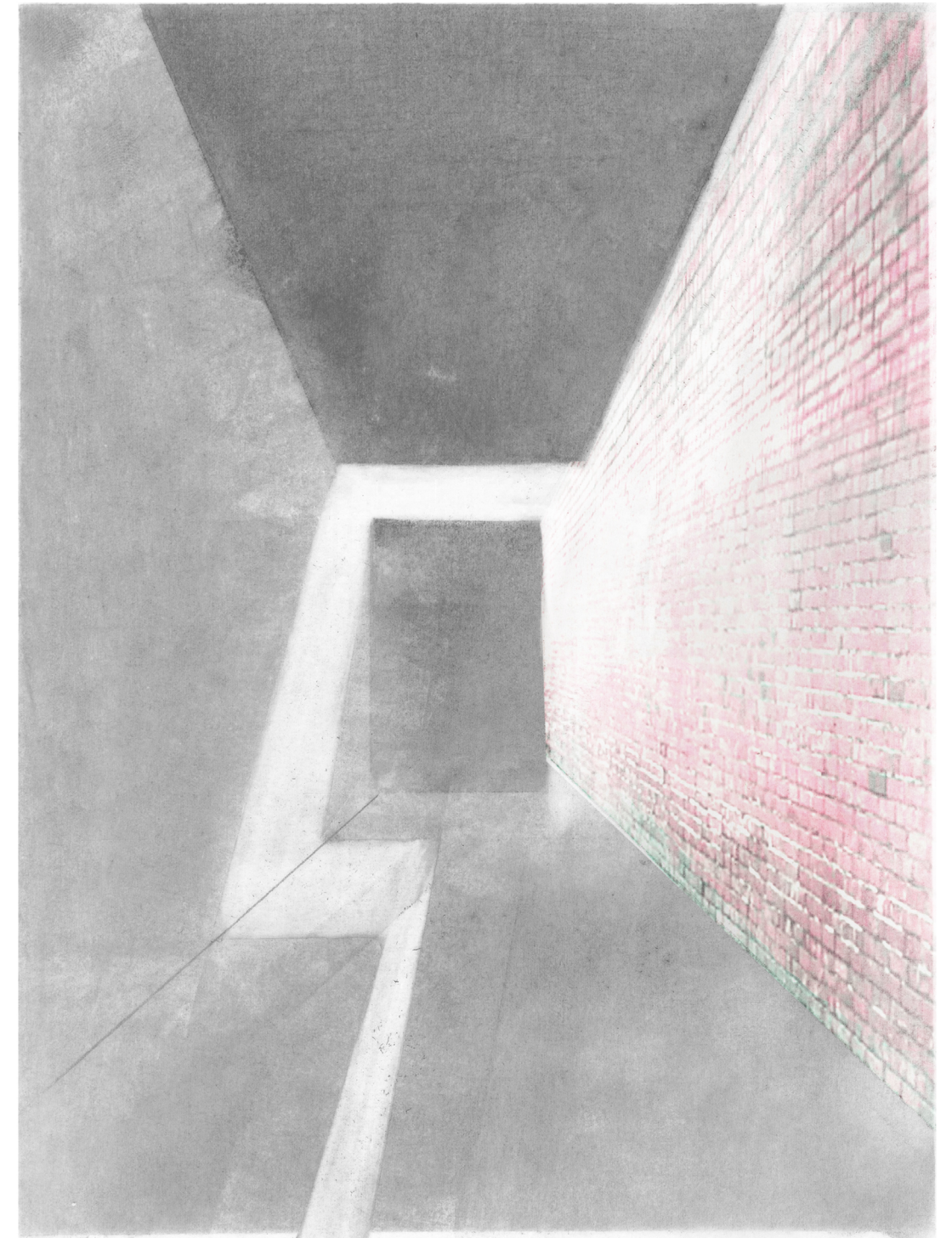


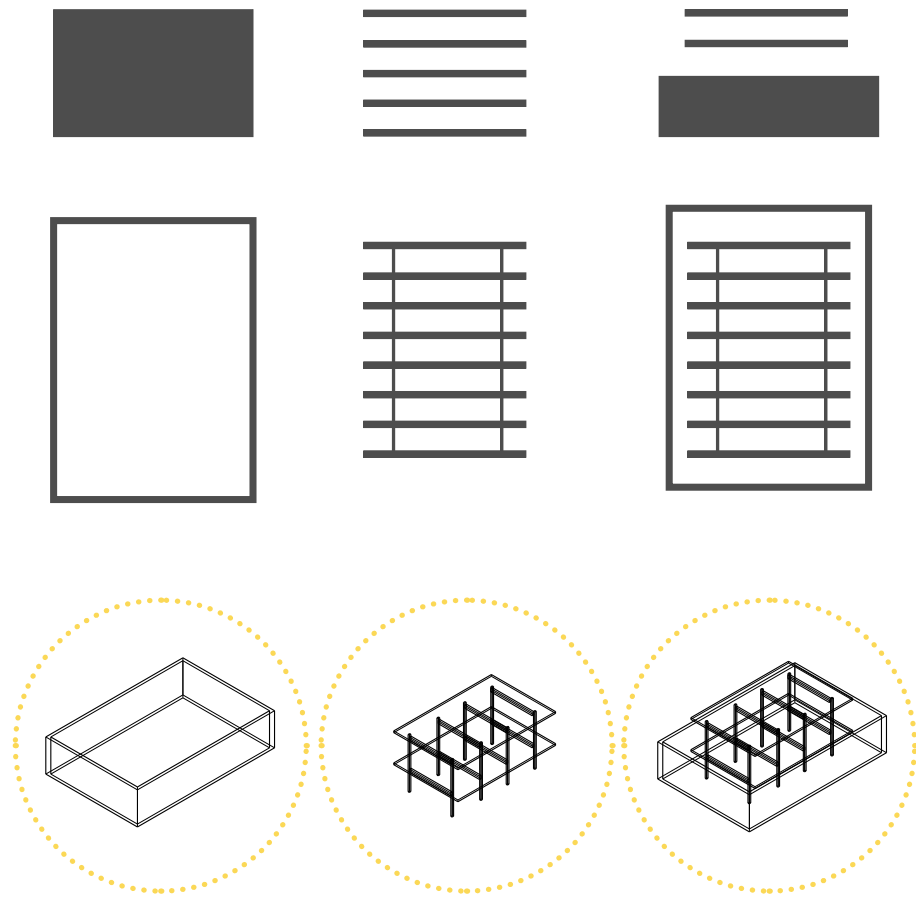
...In Time

"All matter exists in the continuum of time; the patina of wear adds the enriching experience of time to the materials of construction."

Juhaani Pallasmaa, The Eyes of the Skin

The adaptive reuse of the existing building adds a layer of time to the architecture and in the future this addition too begins to age, adding a third layer of time to it. This added layer transforms the building into a different experience and connects the old building to the new design.



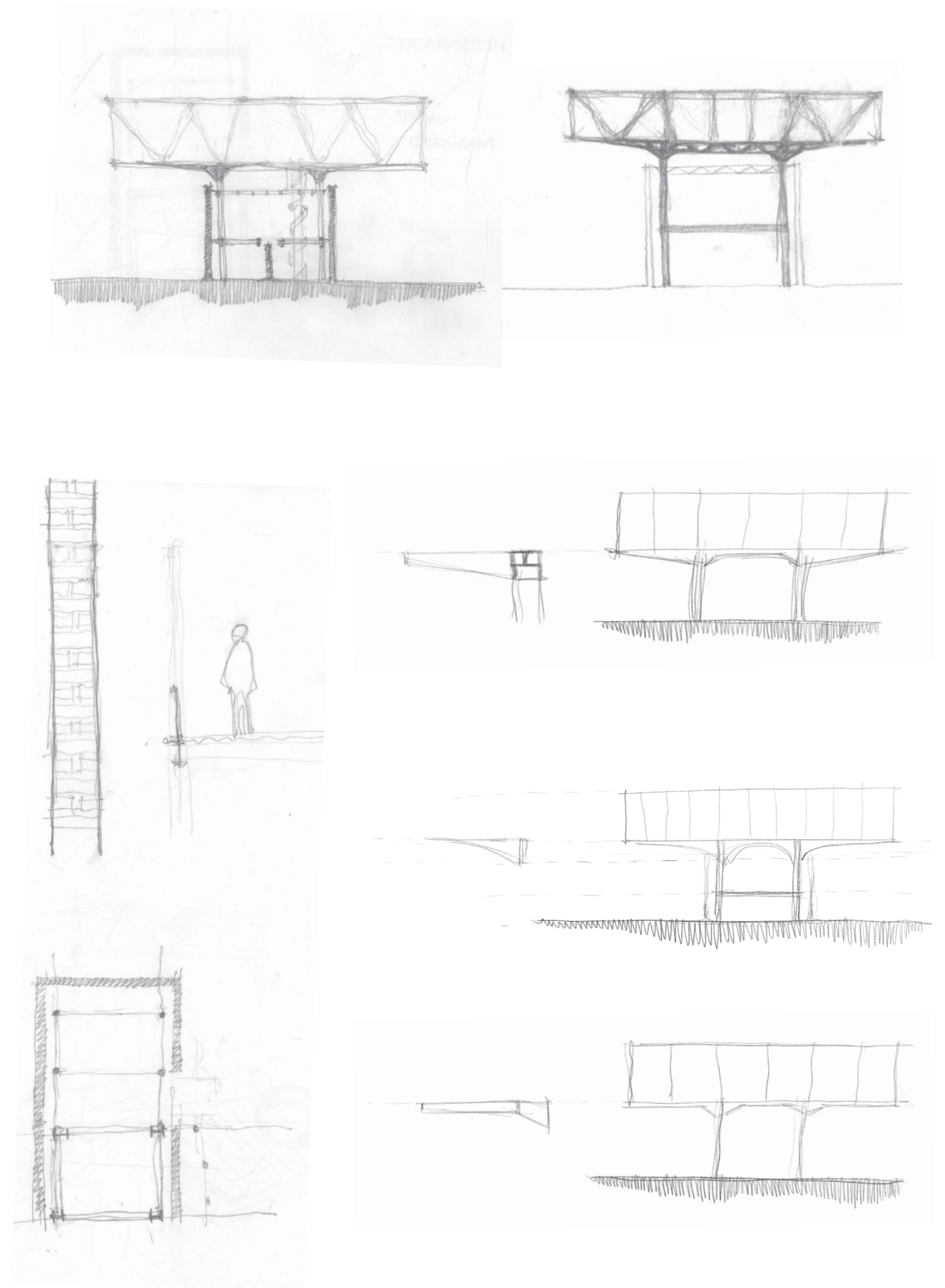


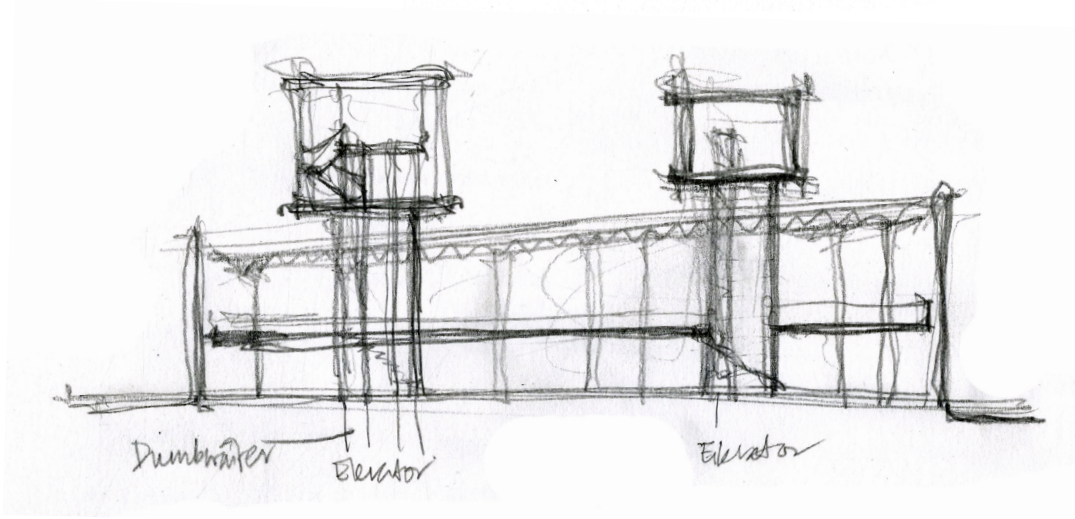
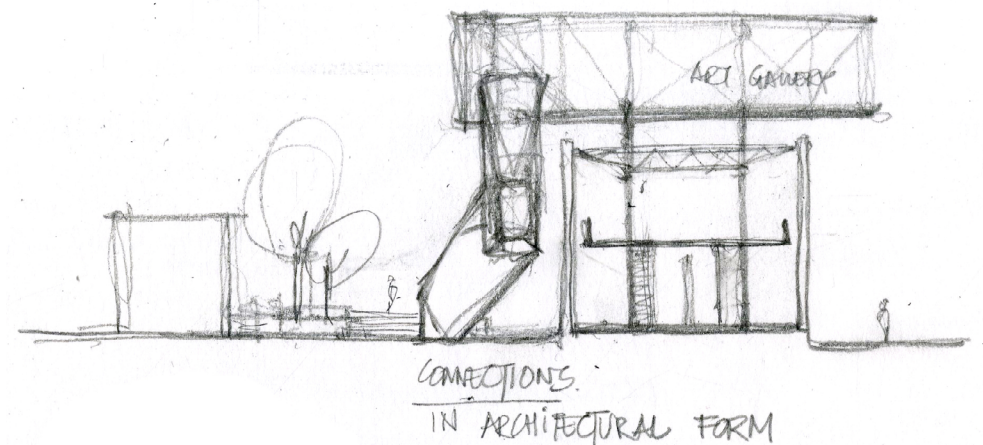
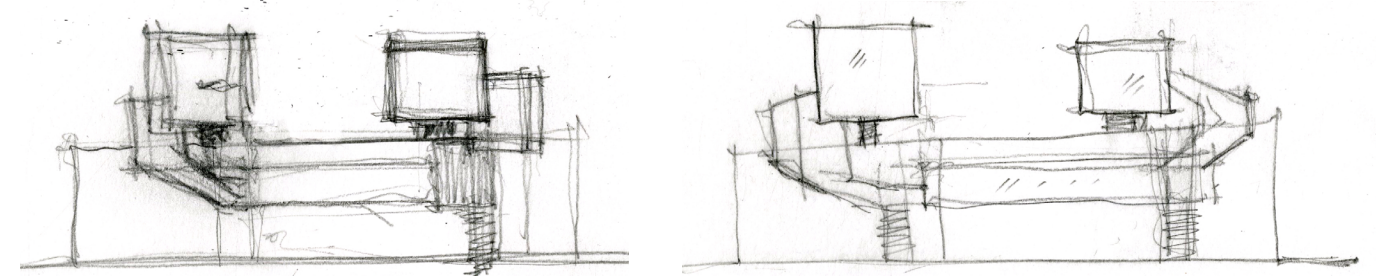
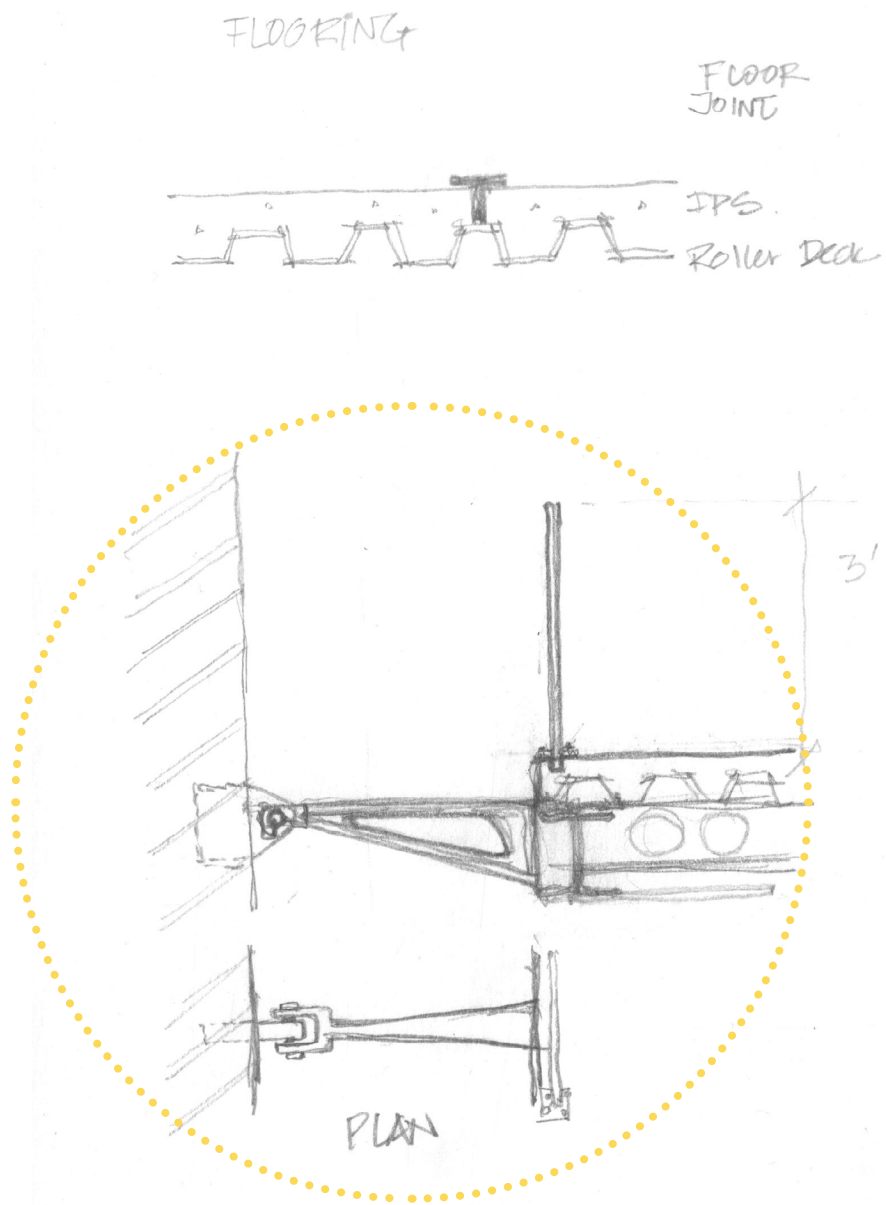
...In Mass

The existing shell and arches become a part of the ground and with its stacked heavy building blocks seem to grow from it. It is carved away in a subtractive manner and expresses its seniority in a robust manner.

On the contrary, the insert builds up as an additive tectonic assembly of sleek components which become a framework for the contemporary. The solid enclosure interacts with the structural voids of the interior expressing the polar connection of their making and craftsmanship.

The floating masses growing out of the insert add a new layer of time and development on the existing strata.





...In Material

Materials convey the meaning of a space through how they come together. In 'Thinking Architecture', Peter Zumthor talks about how architecture is about creating situations for materials to interact with site and people, in order to fully express their poetic possibilities. Materials in themselves have no real poetics, but it is how they are composed that articulate their meaning.

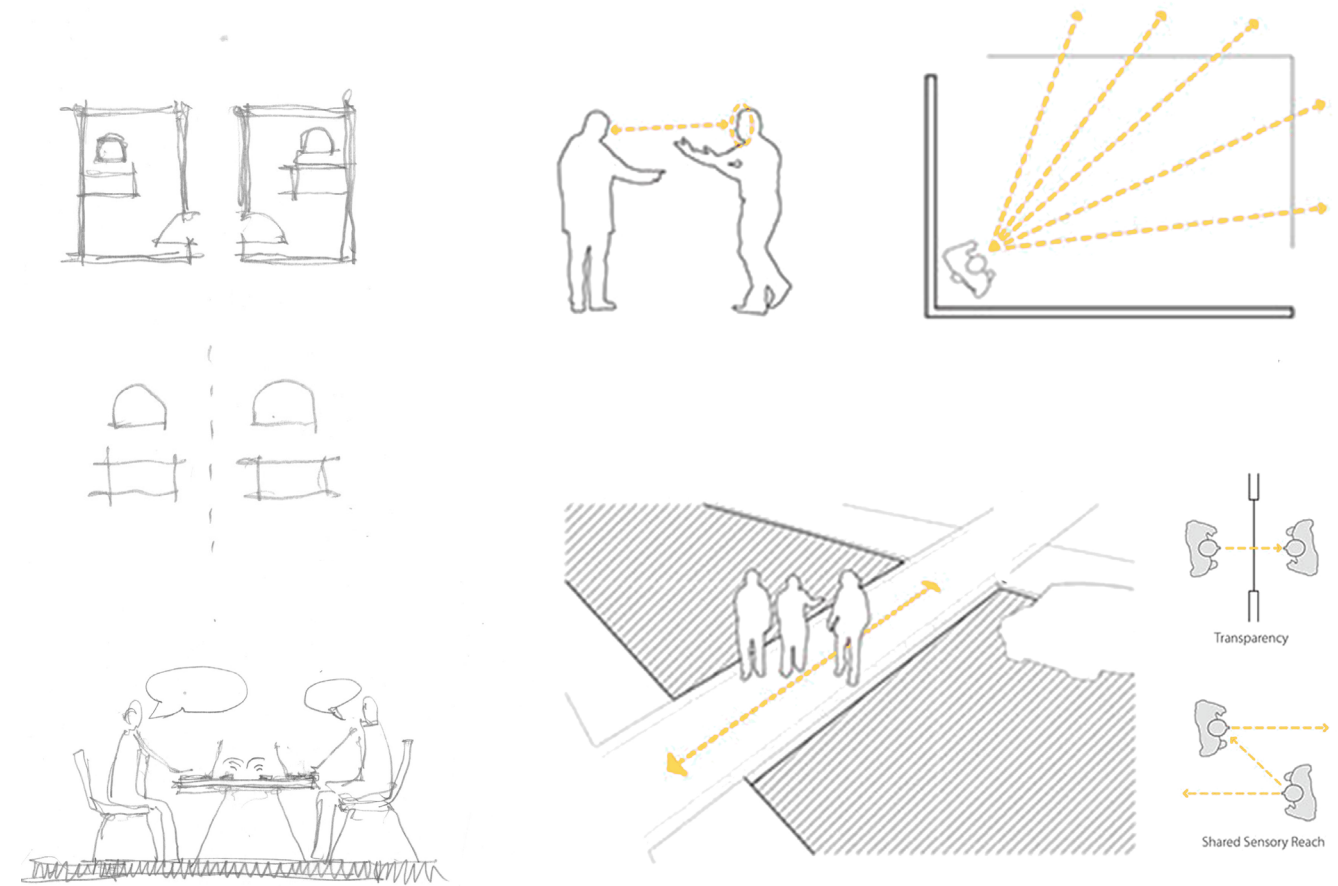
The brick shell and arches remains as a memory of the past. The steel insert rises from the ground as a symbolic gesture of progression, a connection to the railroads and train yards of Roanoke's industrial past.

...In Enclosure

"If we view buildings as shelter, inevitably they become immovable barriers separating us from the environment, but if we think of buildings as new environments, perhaps we can find alternative ways for them to endure."

-Junya Ishigami, *Another Scale of Architecture*

The architecture mediates the outside and inside in a way that is interwoven and unexpected. The enclosed shell opens up to the outside through the glass roof adding a temporal quality to the inside. In contrast to the shell, the floating masses held above stands out as semi transparent volumes which are more interactive to the outside. The parasitic addition creeps in and out of the shell bridging the inside and the outside along with their designated functional uses.



Connection :: Interpersonal

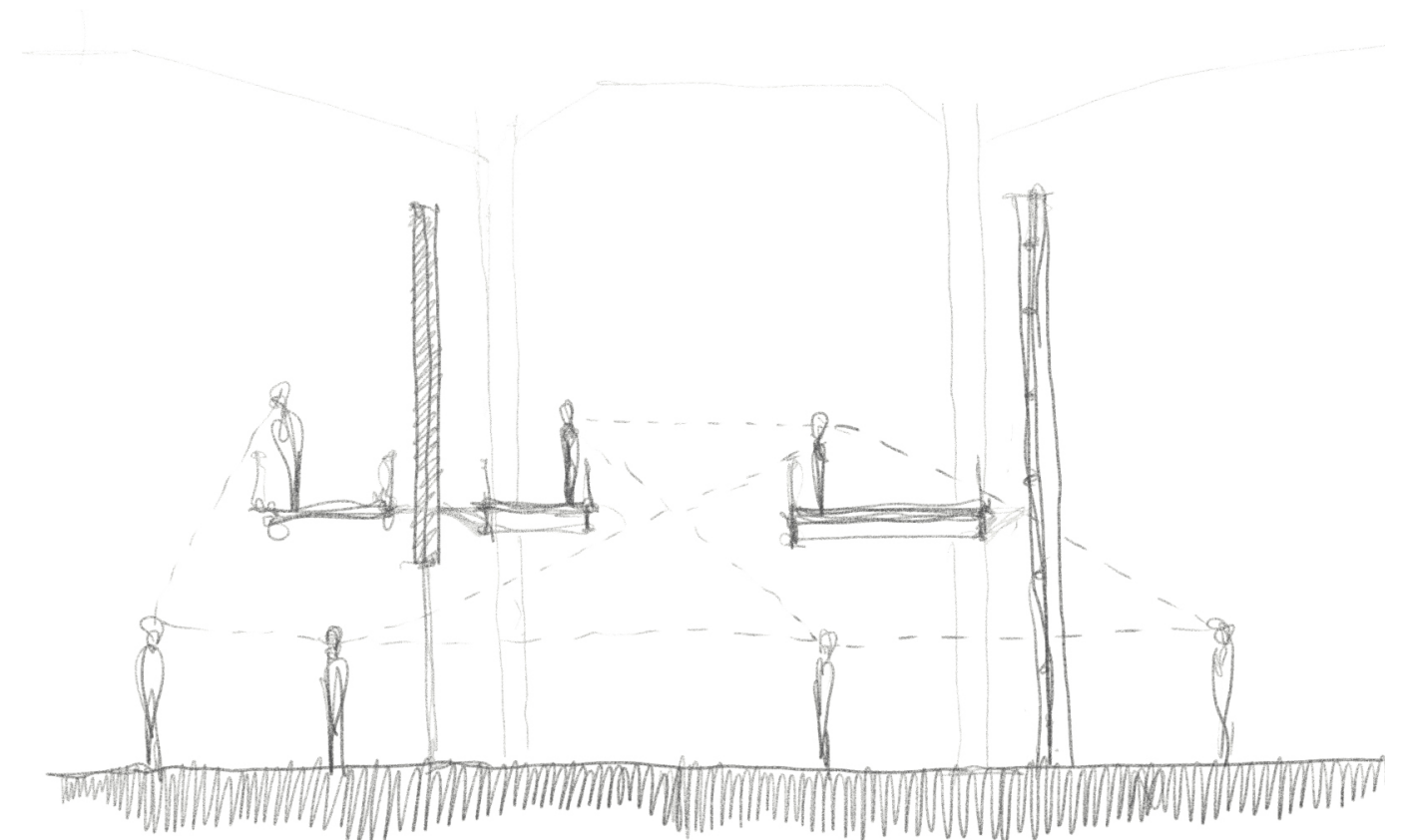
Chance Encounters

"Architecture can't force people to connect, it can only plan the crossing points, remove barriers, and make the meeting places useful and attractive."

Denise Scott Brown

Architecture fosters human relationships. It is a social act as it provides a platform for human interactions to occur. By changing the nature of the space, therefore, we can change the nature of the interactions. The great British Prime Minister Sir Winston Churchill once said, "We shape our buildings; thereafter they shape us." Knowingly or unknowingly, architecture has a direct role in the behavior of its users. It not only affects the relationship of the user to the building but also that between two or more users.

In essence, architecture is about crafting relationships. It is about encounter, crossing of paths and unexpected connections.





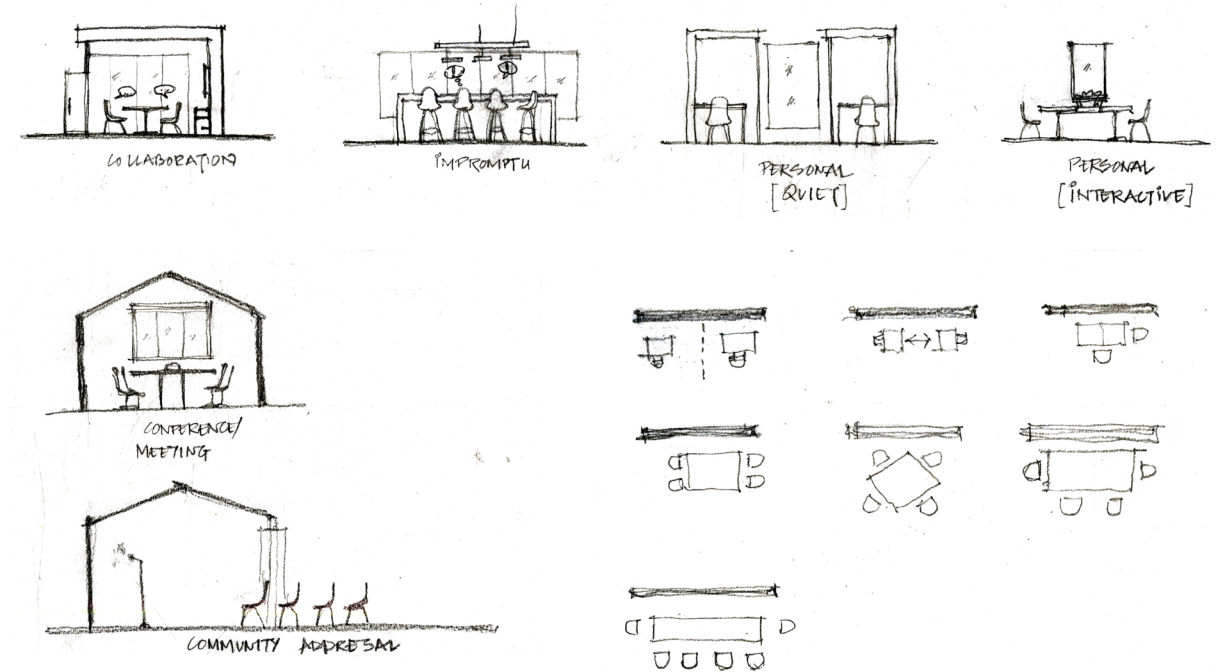
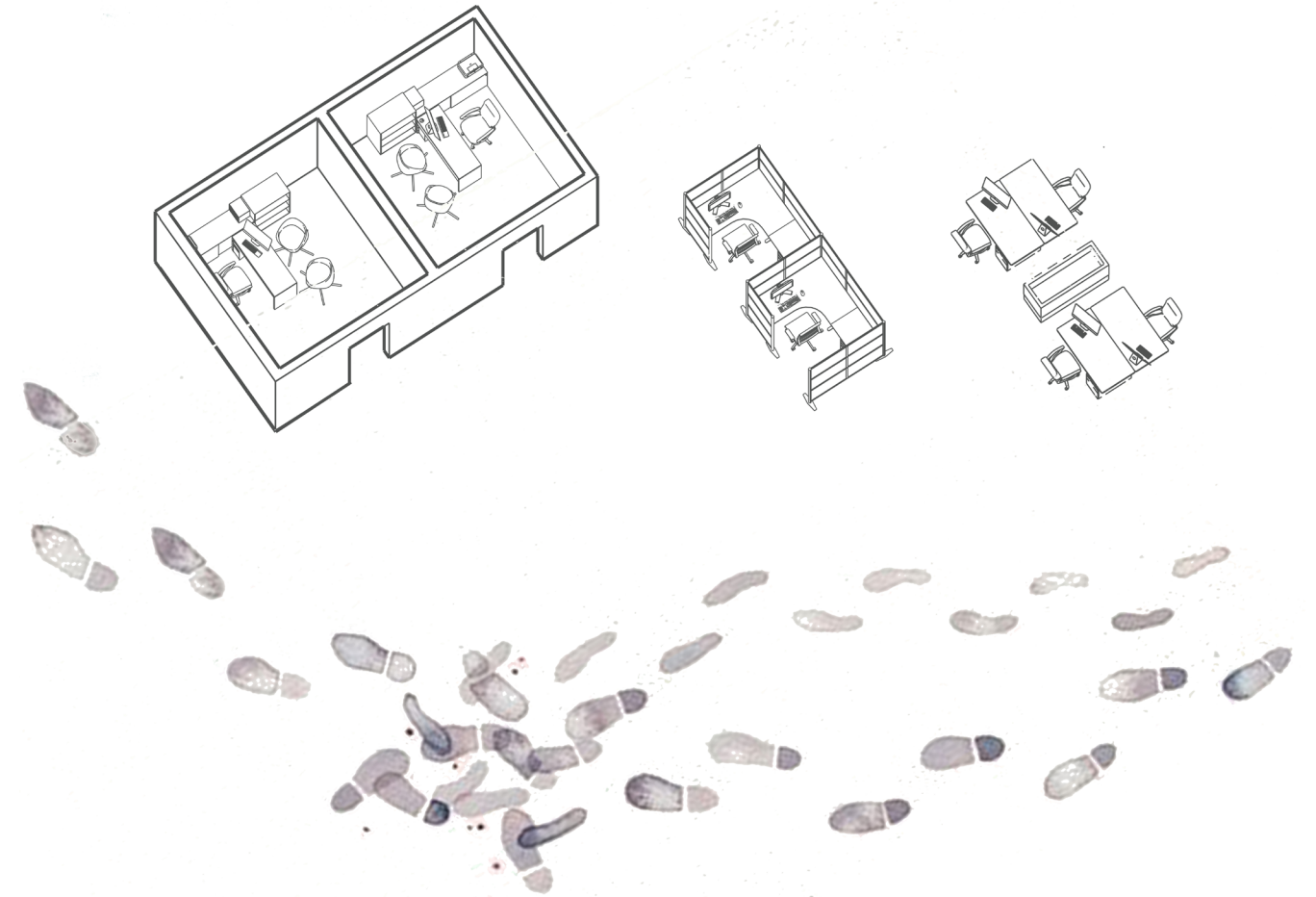
The evolving nature of work

The late 19th century saw the emergence of the first commercial offices in the industrial cities of the United States. Imbued with the ideas of Taylorism, workspaces were designed in a strict order, which was rational and functional, and employees were essentially arranged in line.

During the 60s, the service economy exploded along with the development of the computer business, ultimately changing the image of work. Spaces that were once strictly hierarchical and rigid could now prove to be motivating for employees. The Herman Miller company set up the "Action Office Series 1", which included the first offices consisting of panels. This was the first step towards the creation of a work environment that aimed to foster interaction amongst employees.

In 1968, Robert Probst designed the "cubical", still widespread in the United States, which was followed by the now famous open space. The latter has its origin in the "office landscape", imagined 20 years ago by brothers Eberhard and Wolfgang Schnelle. They had a very different view of the current open space, which is now more human, artistic and often includes plants.

Since the year 2000, the push to create, innovate, and find the "next big thing" became the obsession of IT companies. Areas prioritized in the open-plan space, moved toward favoring more informal spaces as meeting rooms. It was seen that chance encounters and interactions between knowledge workers improve performance. It created a platform for interactive work and collaborations.



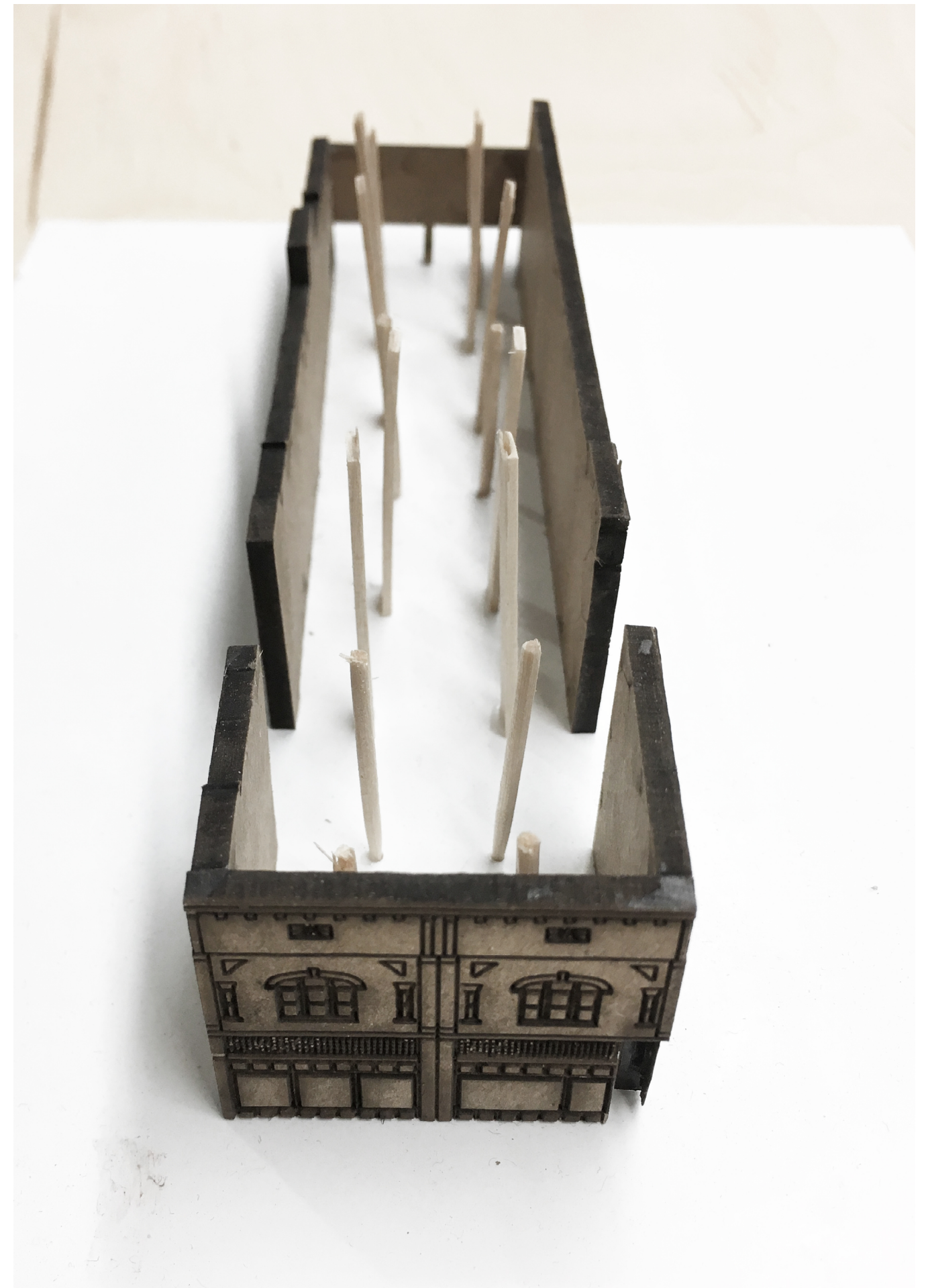
Connection :: The Common Thread

Synthesis

The workspaces plug into the urban core (downtown) bringing the disparate workforces into the limelight and weaving them with the society while increasing interactions and creating possibilities of mutual impact. The design sits in the middle of the historic district of Roanoke and has a rich background. The location itself tells a story and adds to the narrative of the city.

The greenway connects through the site and creates opportunities for a public plaza. The workspace becomes a collaborative environment between workers and non-workers through public gathering spaces such as art galleries and event and performance spaces.

The Centre for Public Space Research/Realdania Research in the School of Architecture at the Royal Danish Academy of Fine Arts observes in their study: Close Encounters With Buildings, that "When new buildings are planted in places people frequent, the buildings must learn to make meaningful conversation with city spaces."





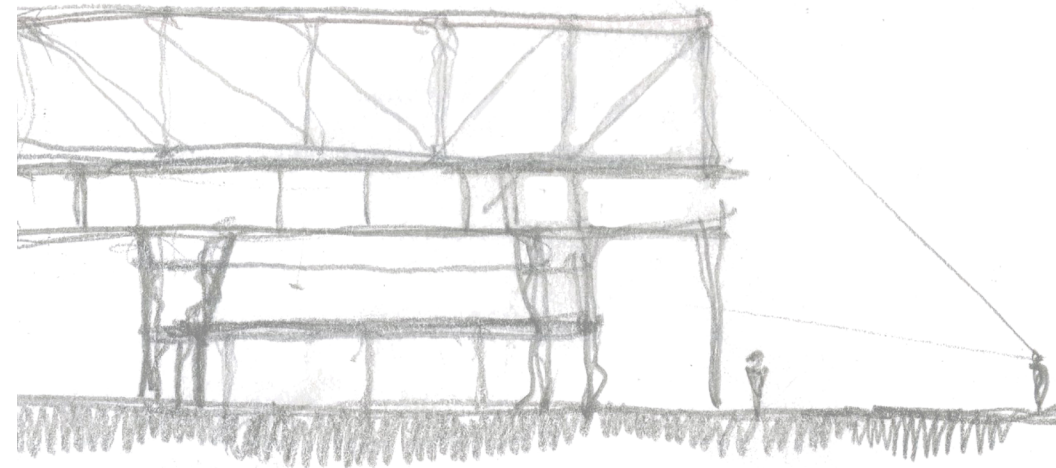
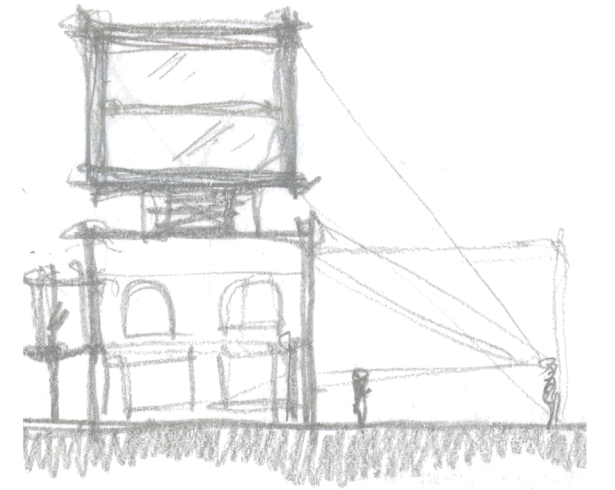
1953



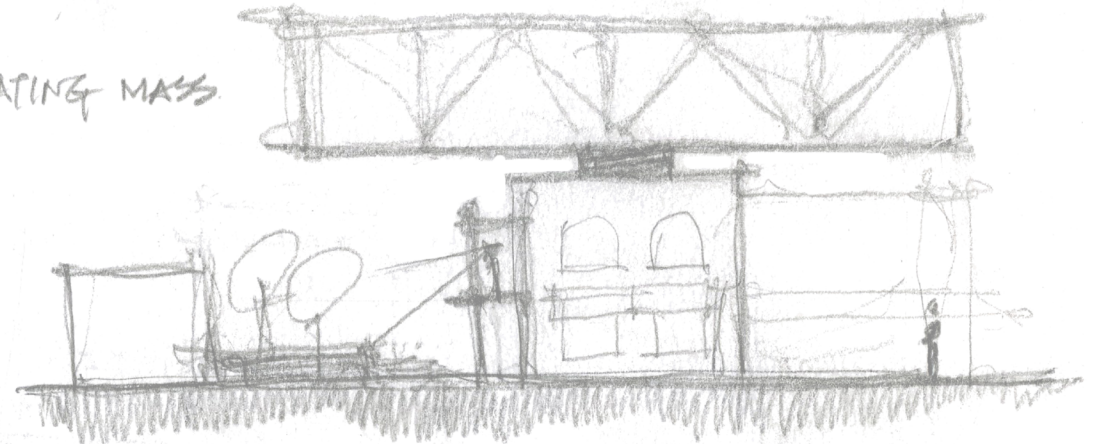
1995

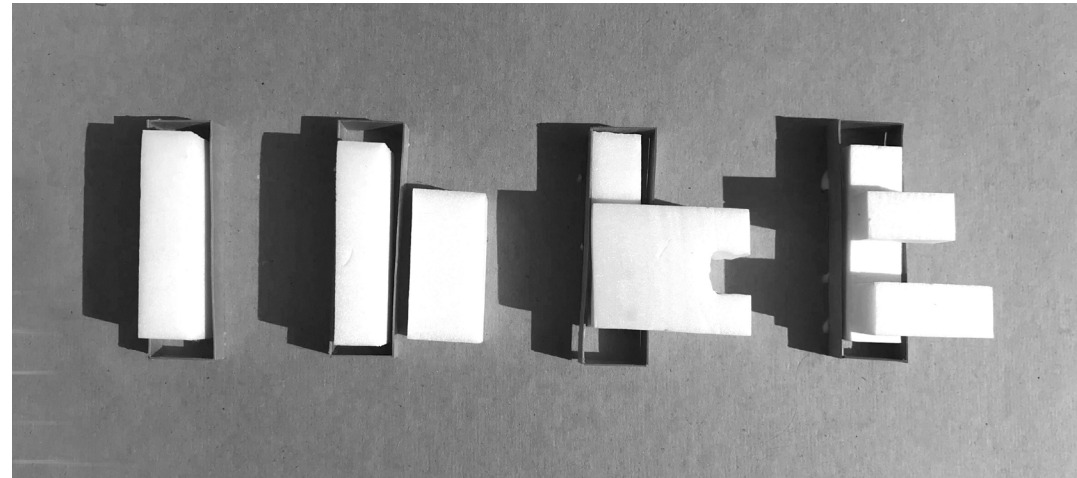


2015

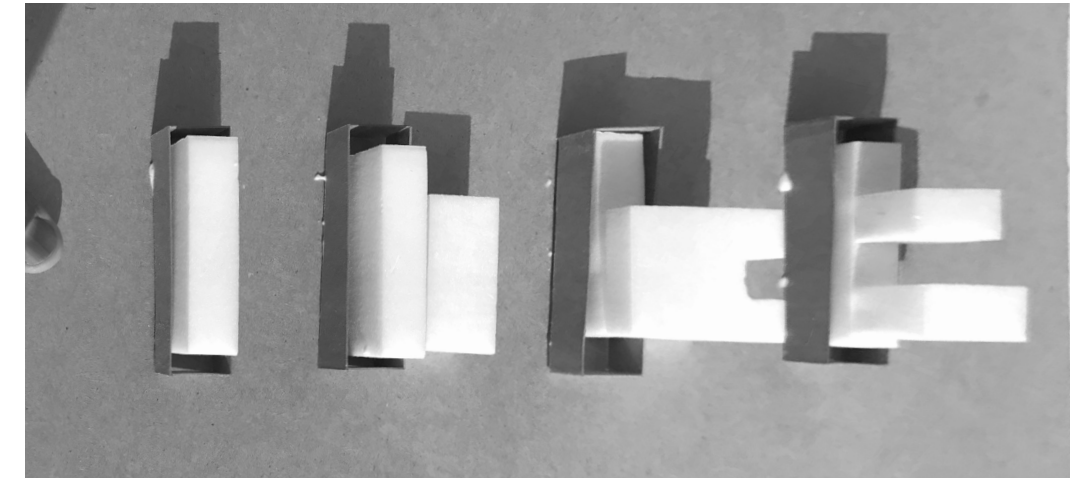


FLOATING MASS

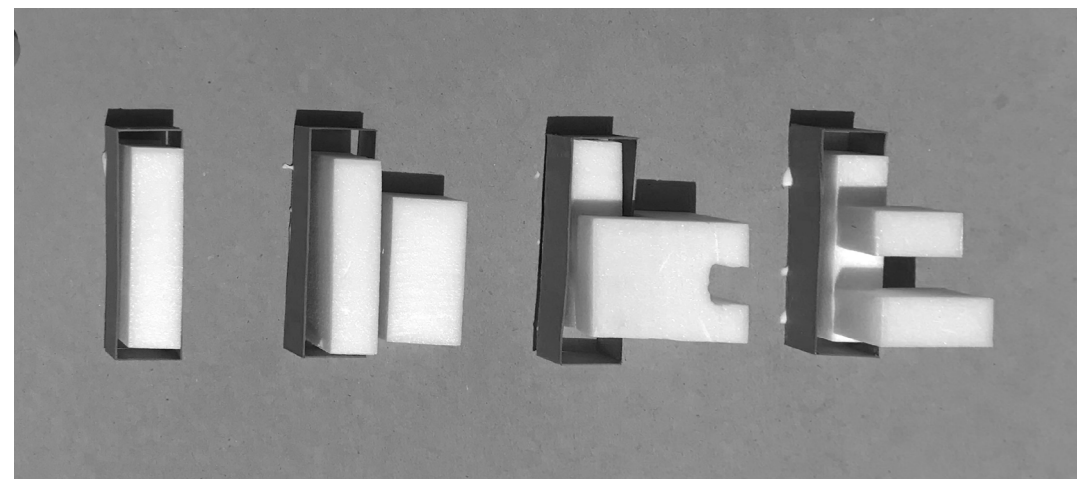




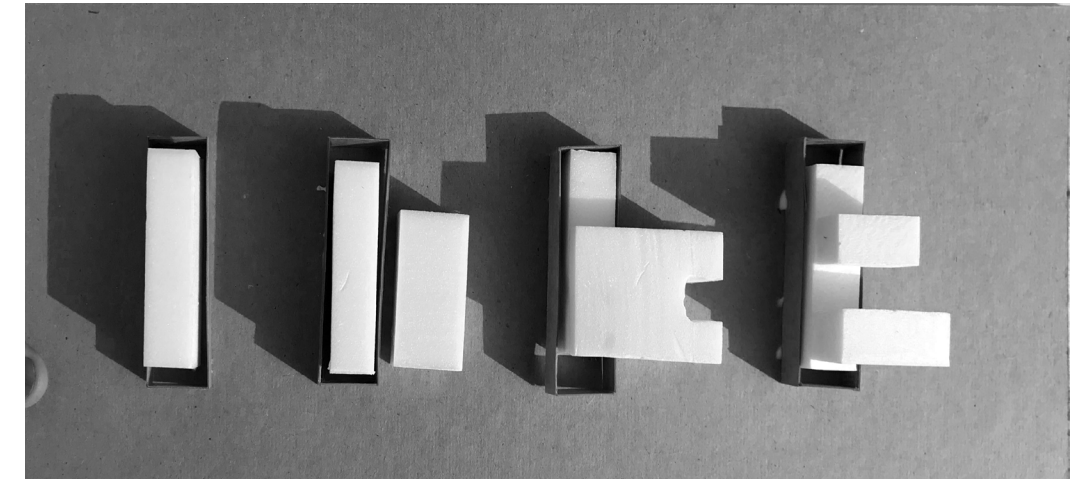
May/July [8:15 am]



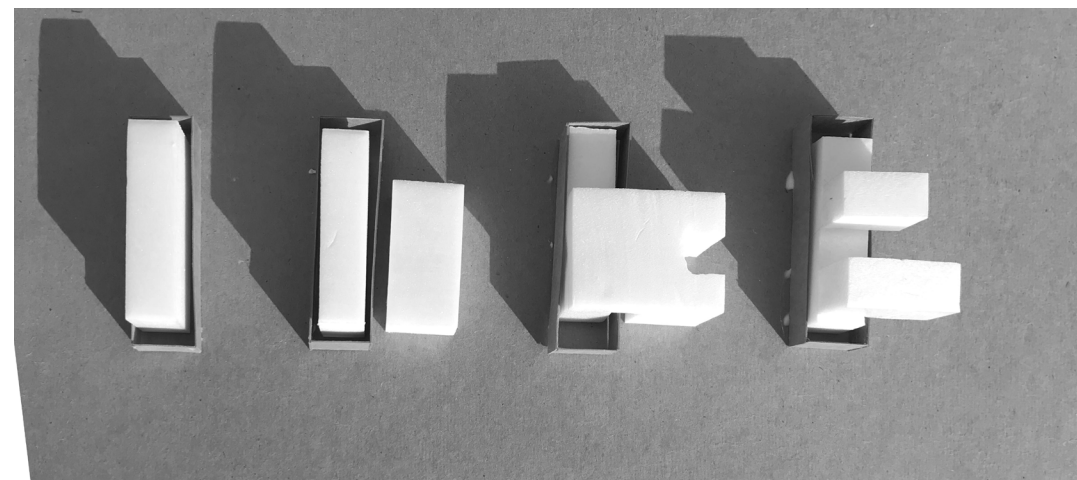
January/November [1:15 pm]



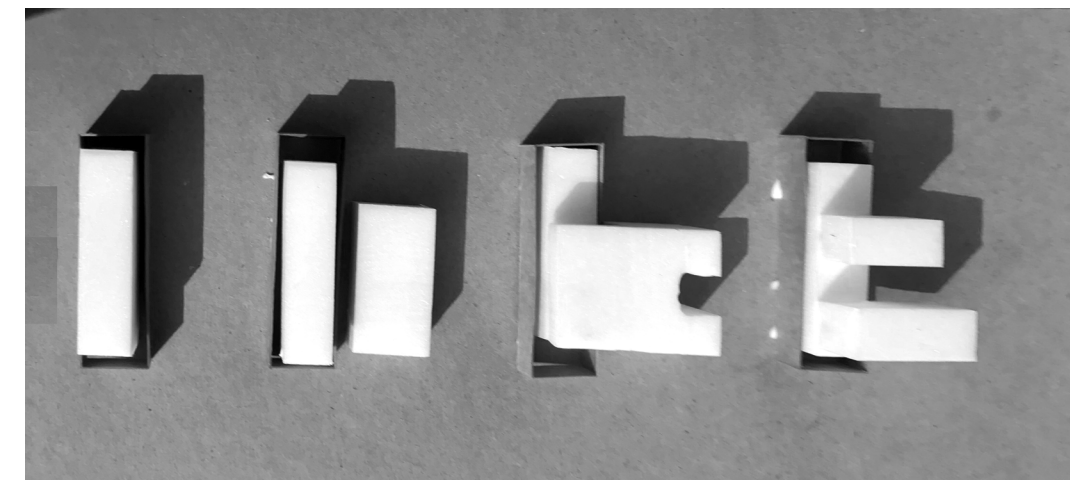
May/July [12:30 pm]



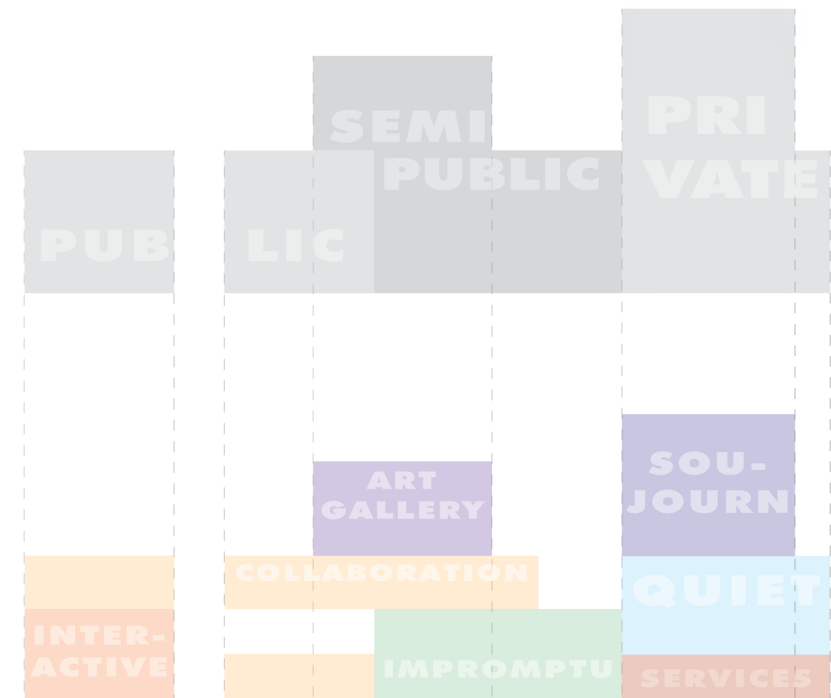
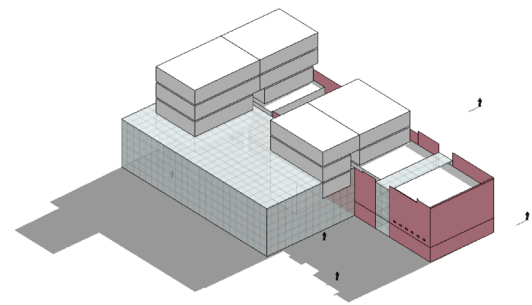
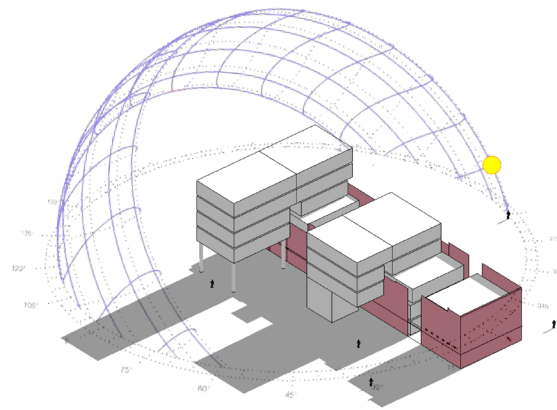
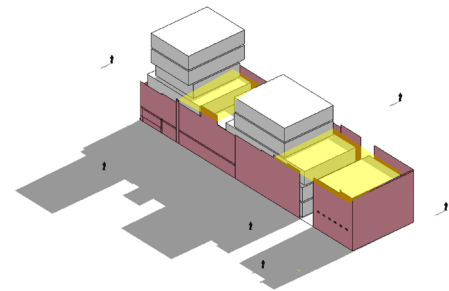
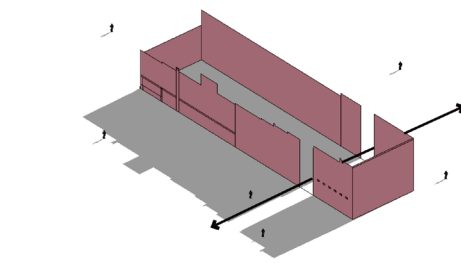
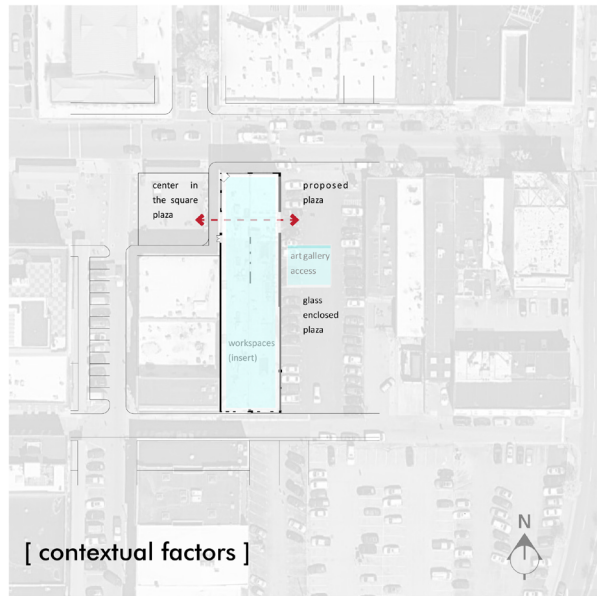
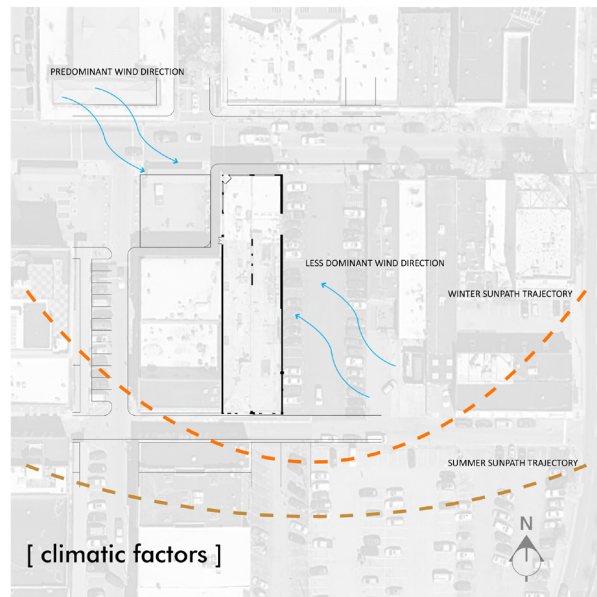
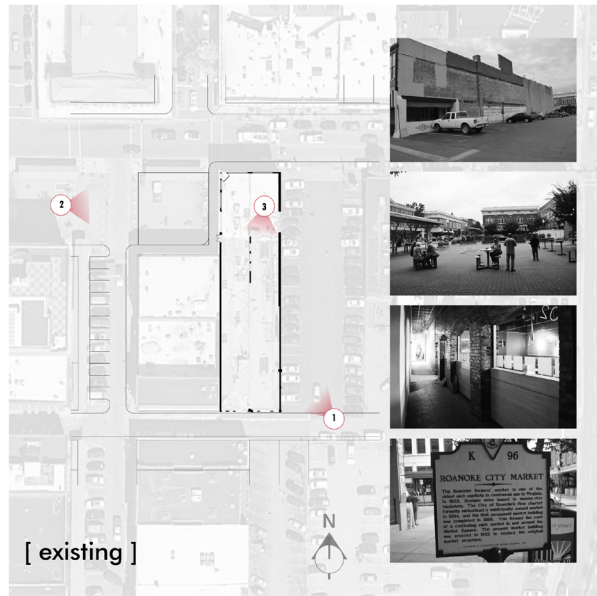
February/October [8:30 am]

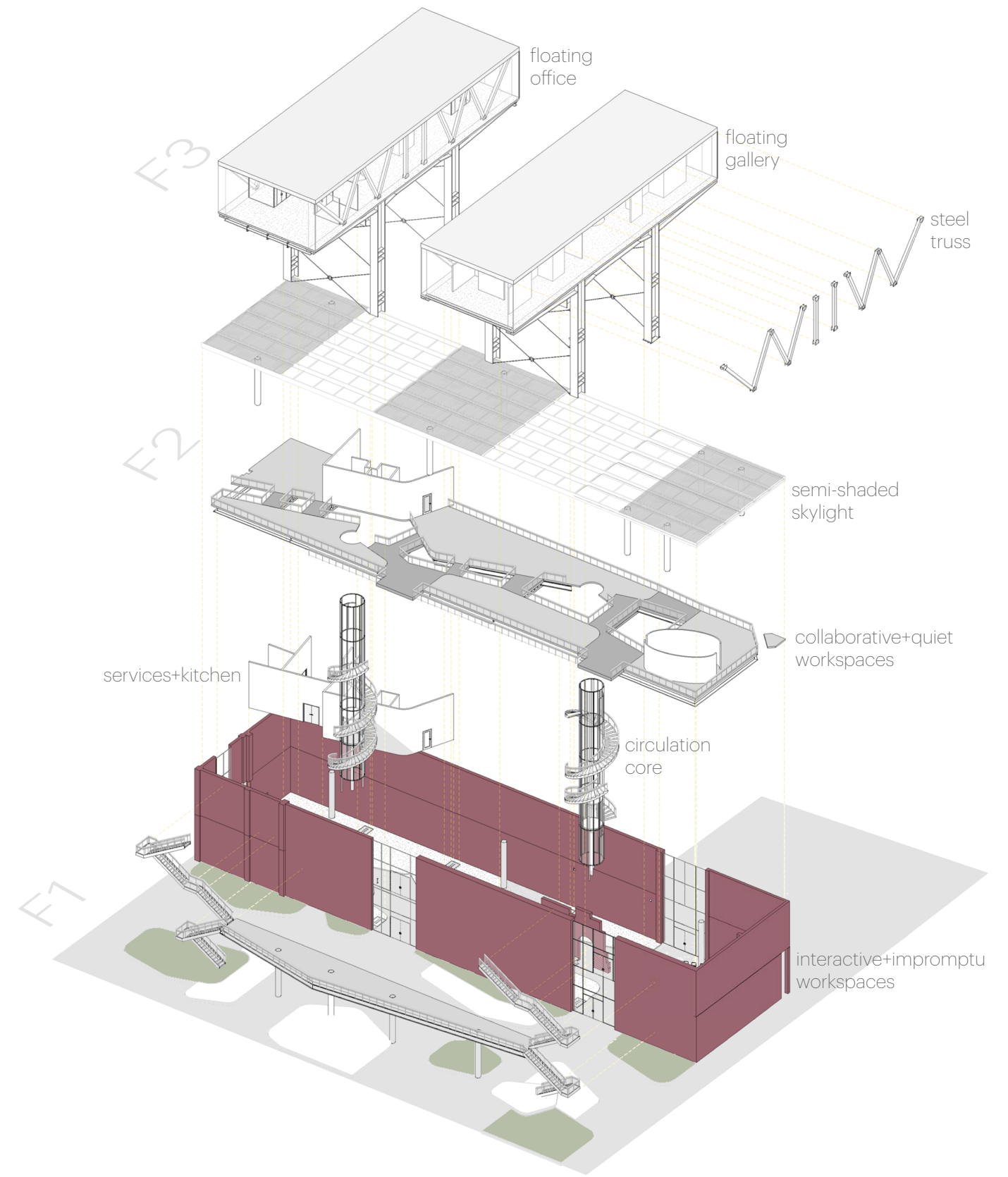
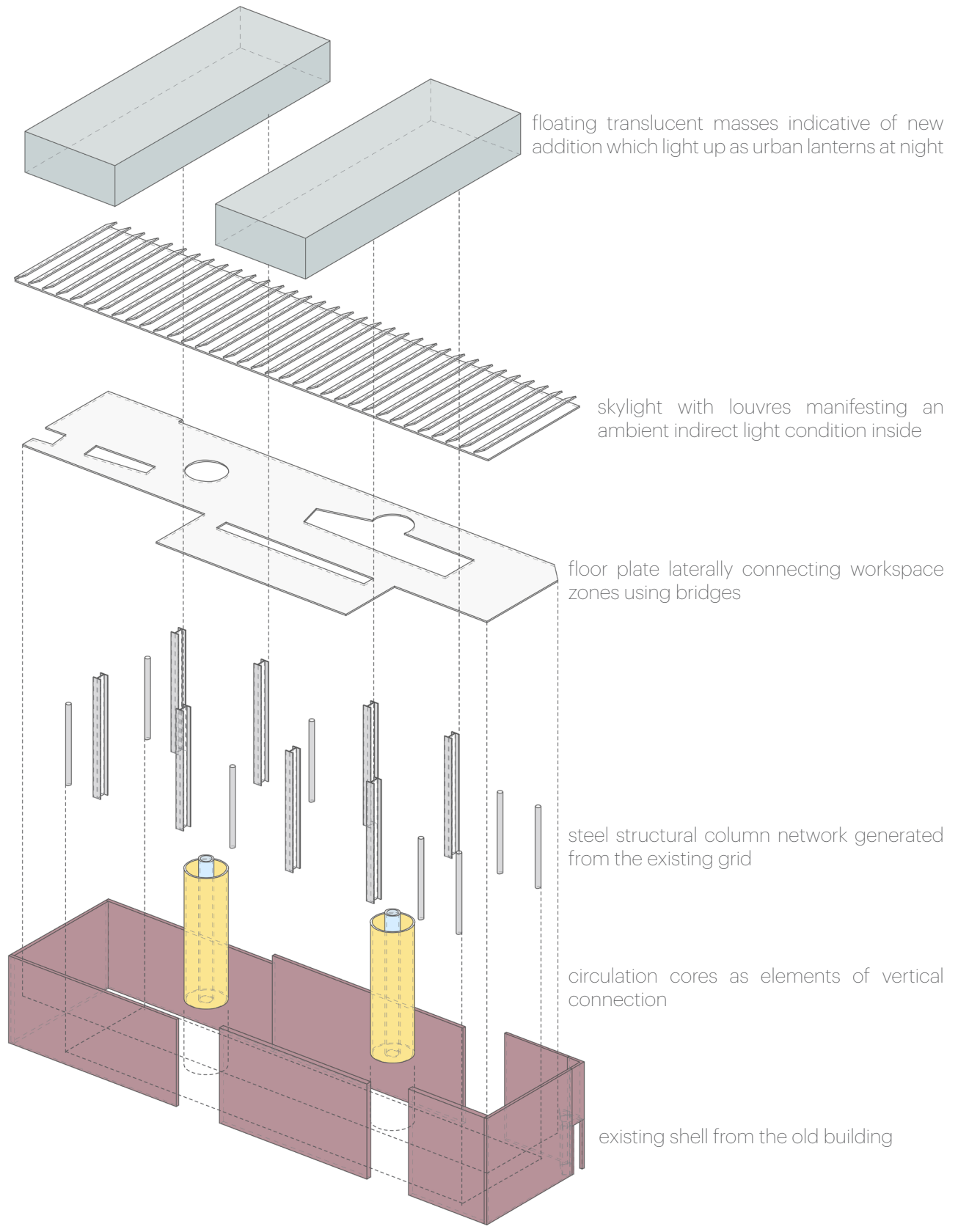


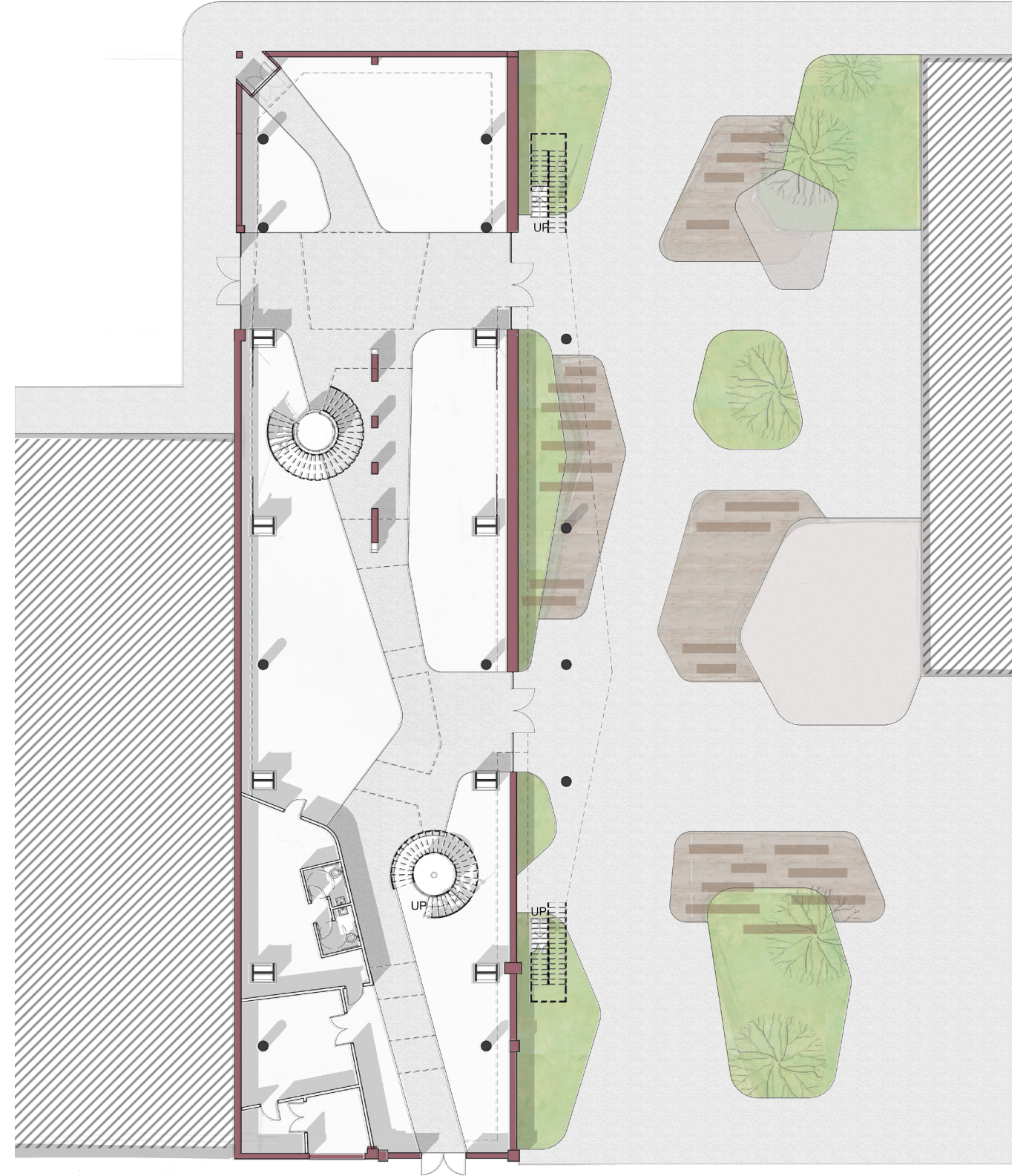
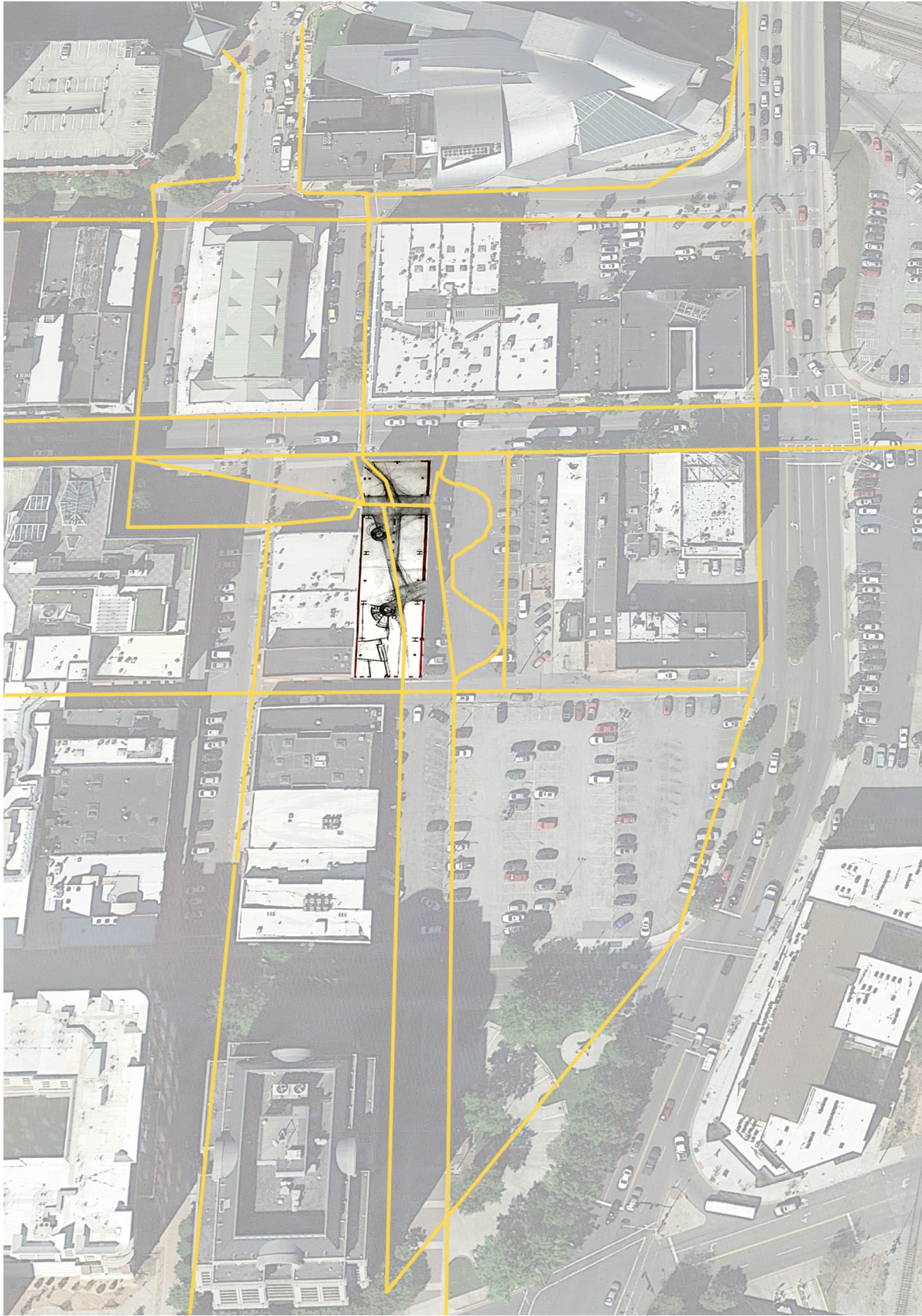
January/November [9:00 am]



February/October [2:30 pm]

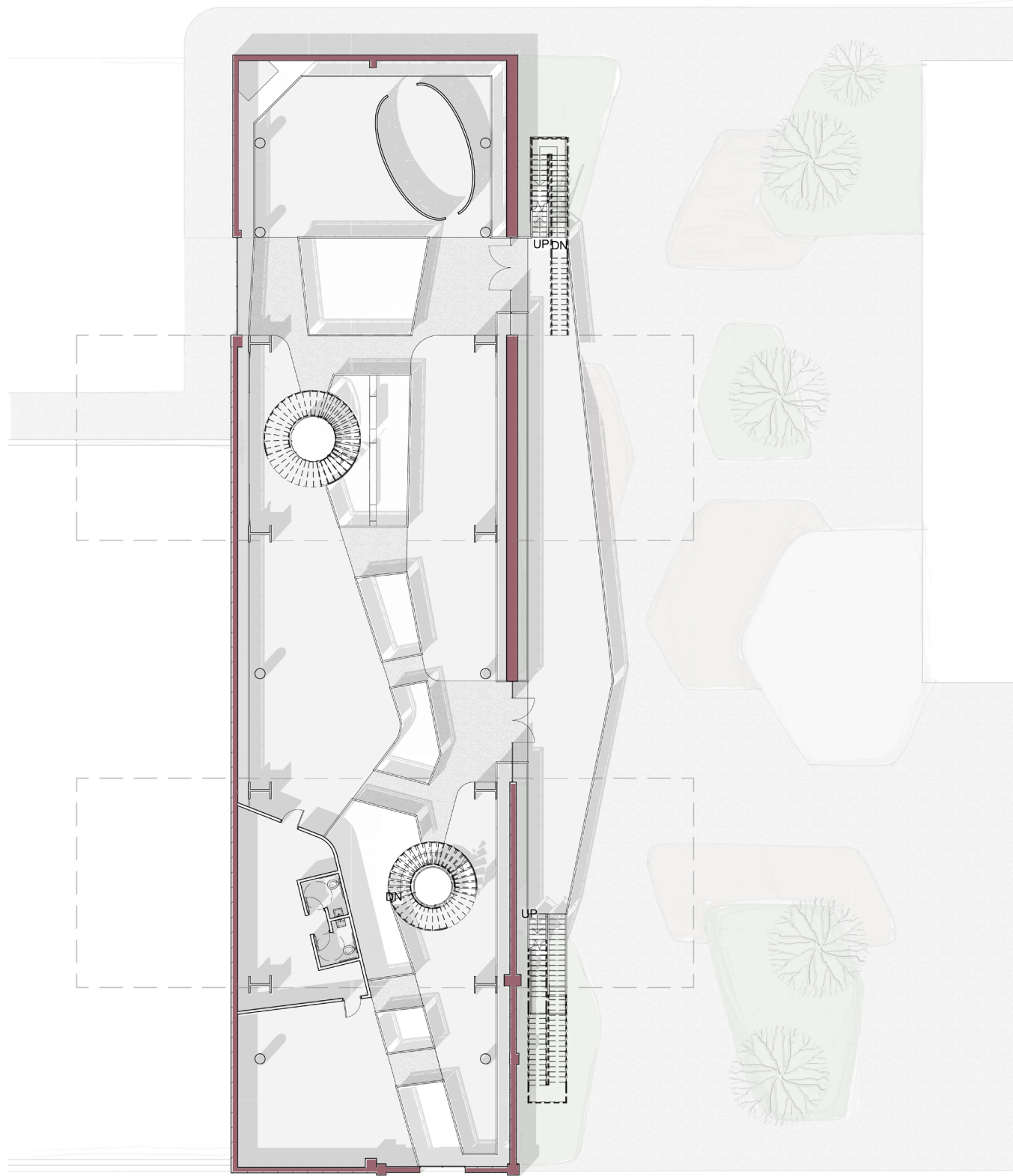




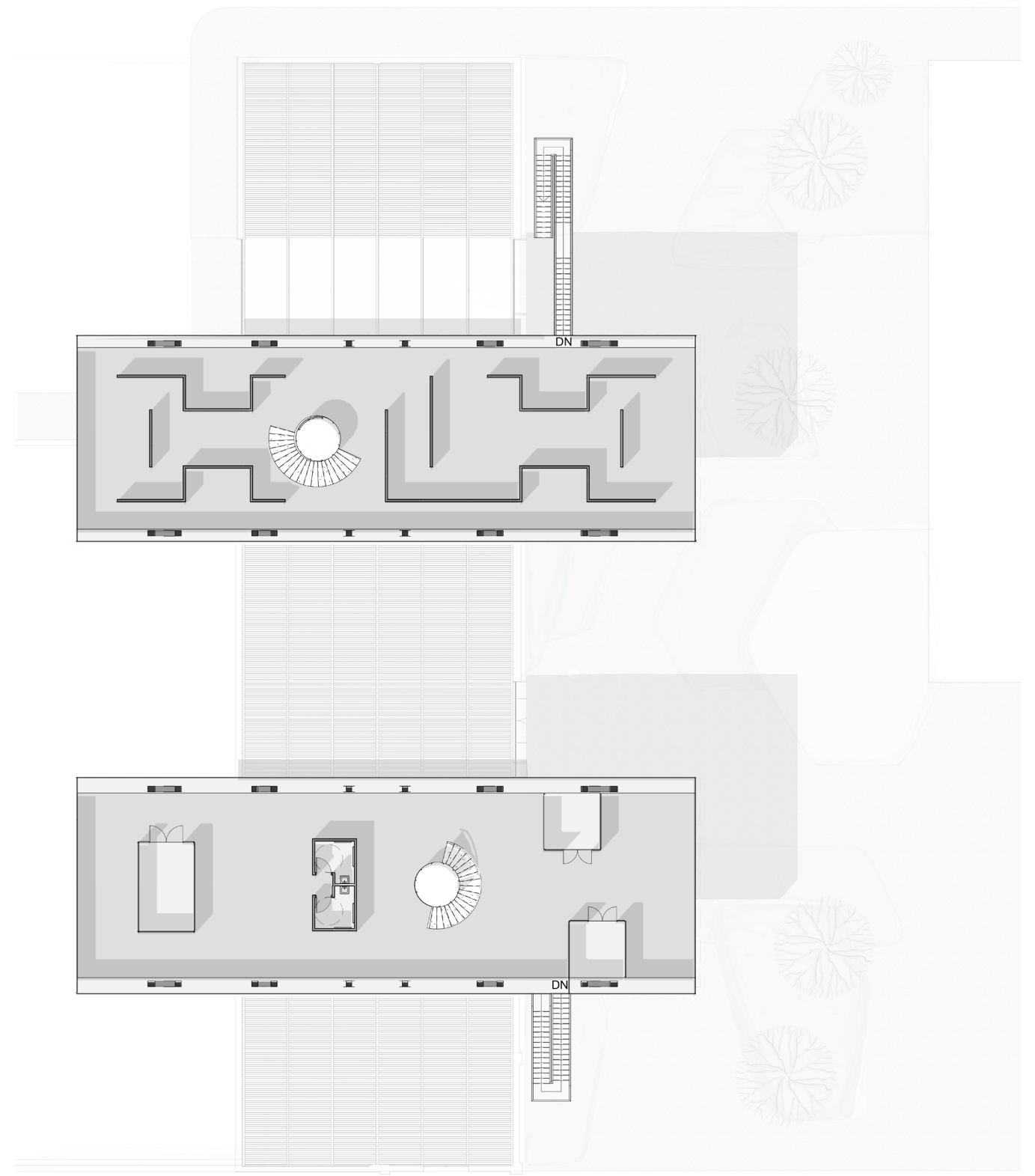


Floor 1



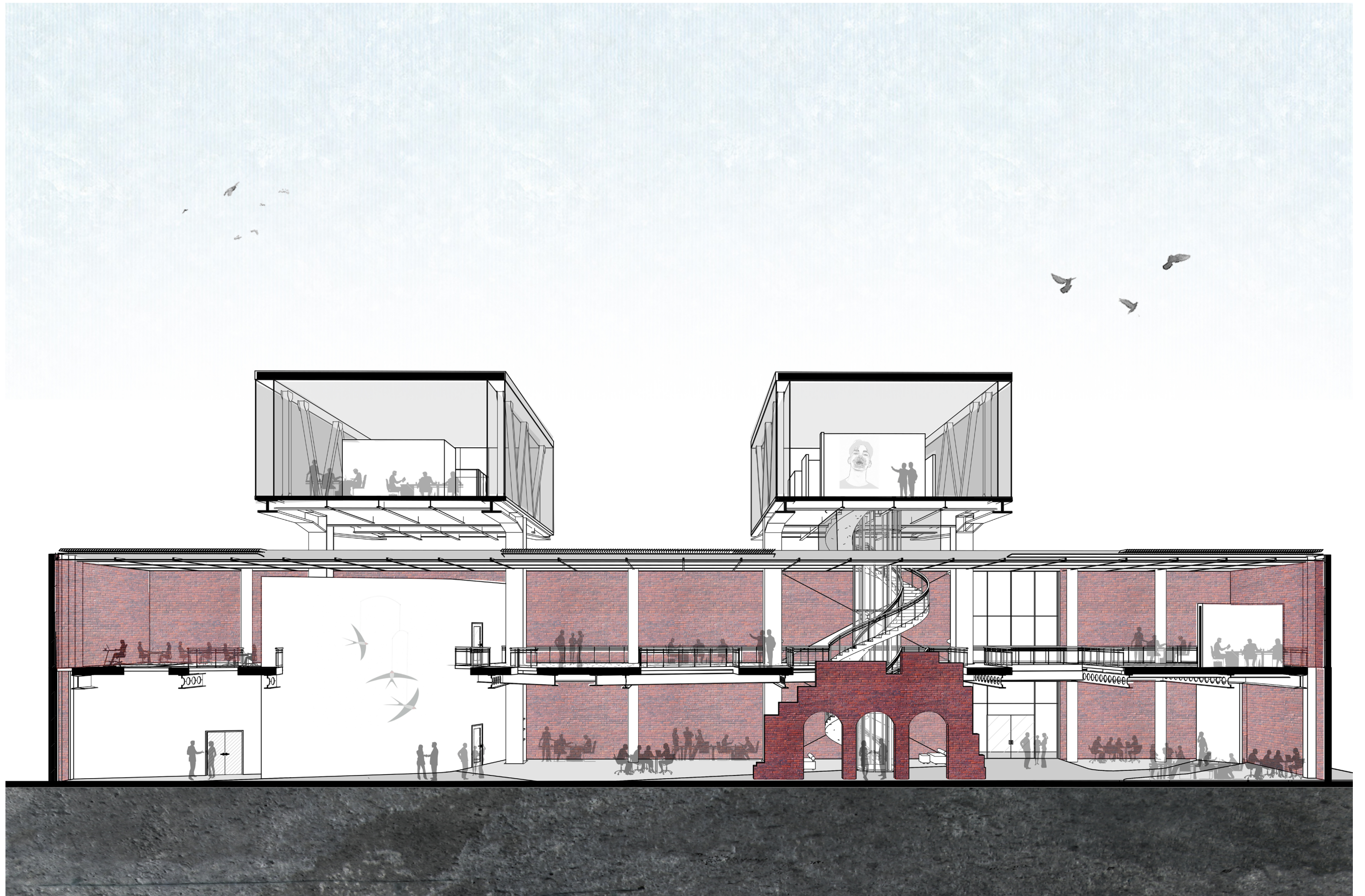


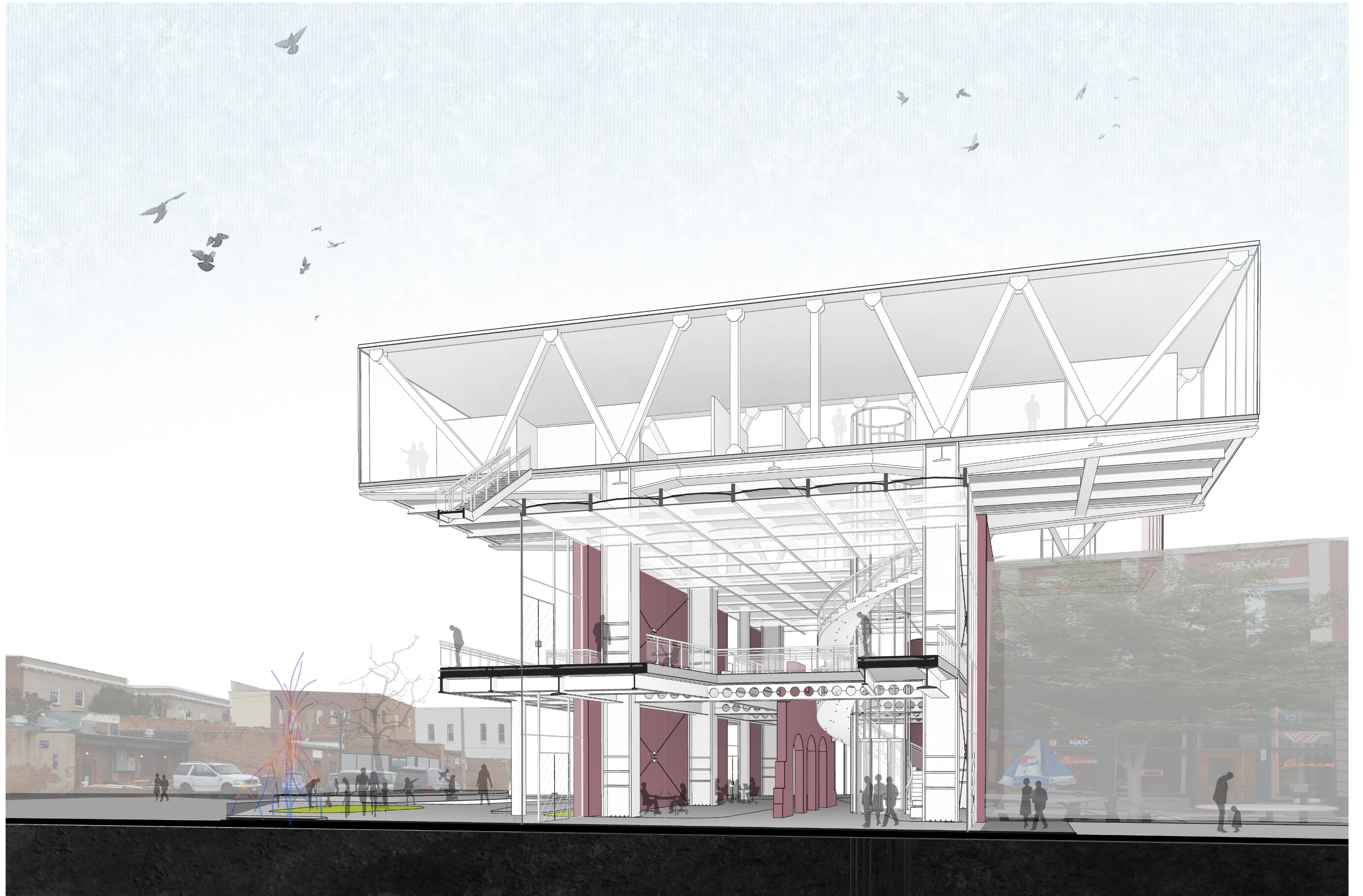
Floor 2

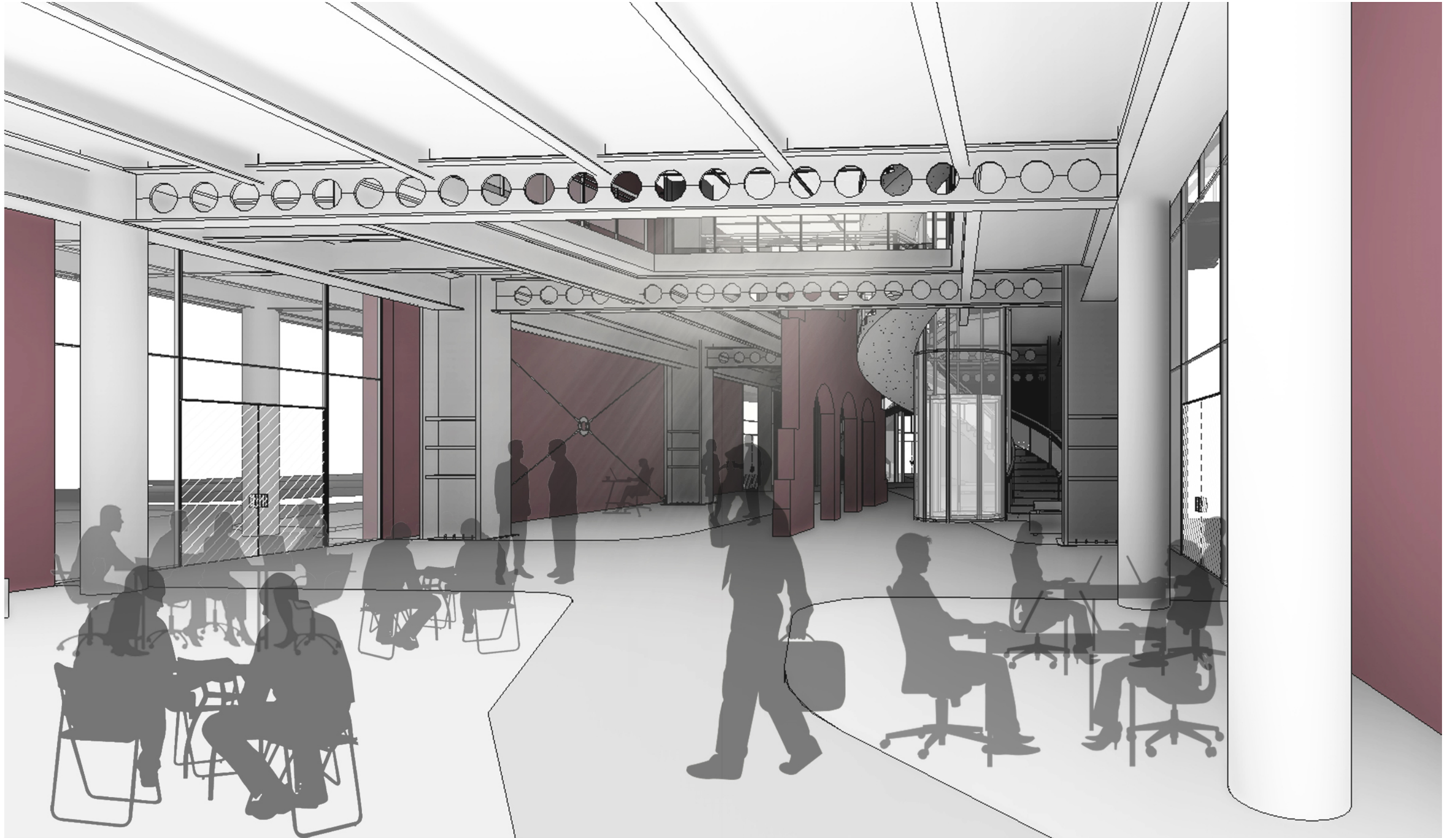


Floor 3

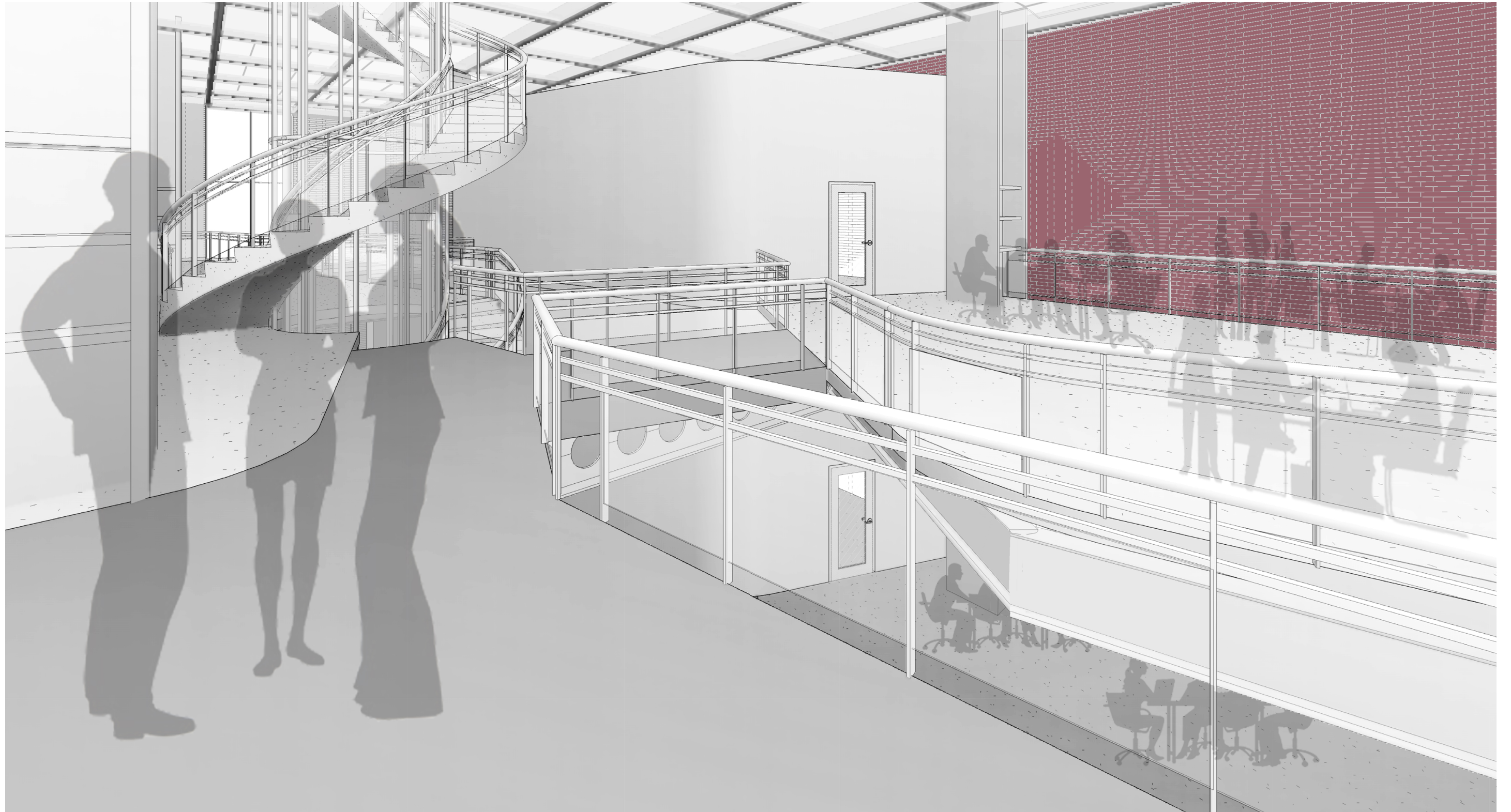
















Connection :: The Ones that Matter

Conclusion

The larger concern addressed in the thesis is the increasing disconnection in our society even though smartphones and social networking sites claim to promote greater connectivity. In 'The Disconnected Society', Tom Barker writes "The basic social fabric has become frayed, and our sense of place and community diluted. While allowing for greater freedom and choice in how we spend our time, anonymity and isolation from the communities we live in has become a pervasive and worrying characteristic of modern life. The privatization of time and space, facilitated in part by new digital devices, threatens to narrow rather than expand our horizons, shutting us off from novel encounters with the physical world and with other people – people and places just footsteps, rather than whole continents, away."

Workspaces today are a reflection of the society we live in. With the promulgation of interactions and collaborations, it is necessary that we don't lose track of "connections" that matter: the surroundings, nature and people around us. In this thesis, the architecture tries to remind us about these connections through various scales. It attempts to make a visitor enter in a meaningful dialogue with his/her context.

"The timeless task of architecture is to create embodied and lived existential metaphors that concretise and structure our being in the world. Architecture reflects, materialises and eternalises ideas and images of ideal life. Buildings and towns enable us to structure, understand and remember the shapeless flow of reality and, ultimately, to recognise and remember who we are. Architecture enables us to perceive and understand the dialects of permanence and change, to settle ourselves in the world, and to place ourselves in the continuum of culture and time. In its way of representing and structuring action and power, societal and cultural order, interaction and separation, identity and memory, architecture is engaged with fundamental existential questions."

- Juhani Pallasmaa
The Eyes of the Skin

Sources

References

Hill, David. Leftwich, Wayne. Downtown Roanoke Visit. Roanoke. 4 April 2018

Gehl, Jan. Life Between Buildings.

Barker, T. (n.d.). The Disconnected Society. Retrieved from <https://distilled.pm/the-disconnected-society>

Zumthor, Peter. Thinking Architecture. Birkhäuser Architecture, 2006.

Lindsay, Ben WaberJennifer MagnolfiGreg, et al. "Workspaces That Move People." Harvard Business Review, 31 Oct. 2014, hbr.org/2014/10/workspaces-that-move-people.

Pallasmaa, Juhani. The Eyes of the Skin: Architecture and the Senses. Chichester: Wiley-Academy, 2005. Print.

Gehl, Jan et al. "Close encounters with buildings." Center for Public Space Research/Realdania Research. Institute for Planning, School of Architecture, The Royal Danish Academy of Fine Arts. Denmark, 2004. 15.

Bedard, Jean-Francois, et al. Carlo Scarpa, Architect: Intervening with History. New York, NY: The Monacelli Press, 1999. 14.

Ishigami, Junya. Another Scale of Architecture: [exposición]. Kyoto: Seigensha Art, 2015. Print.

Images

Google Earth Aerial Images.

All other work (photographs, sketches, models, and drawings) are the work of the author.

